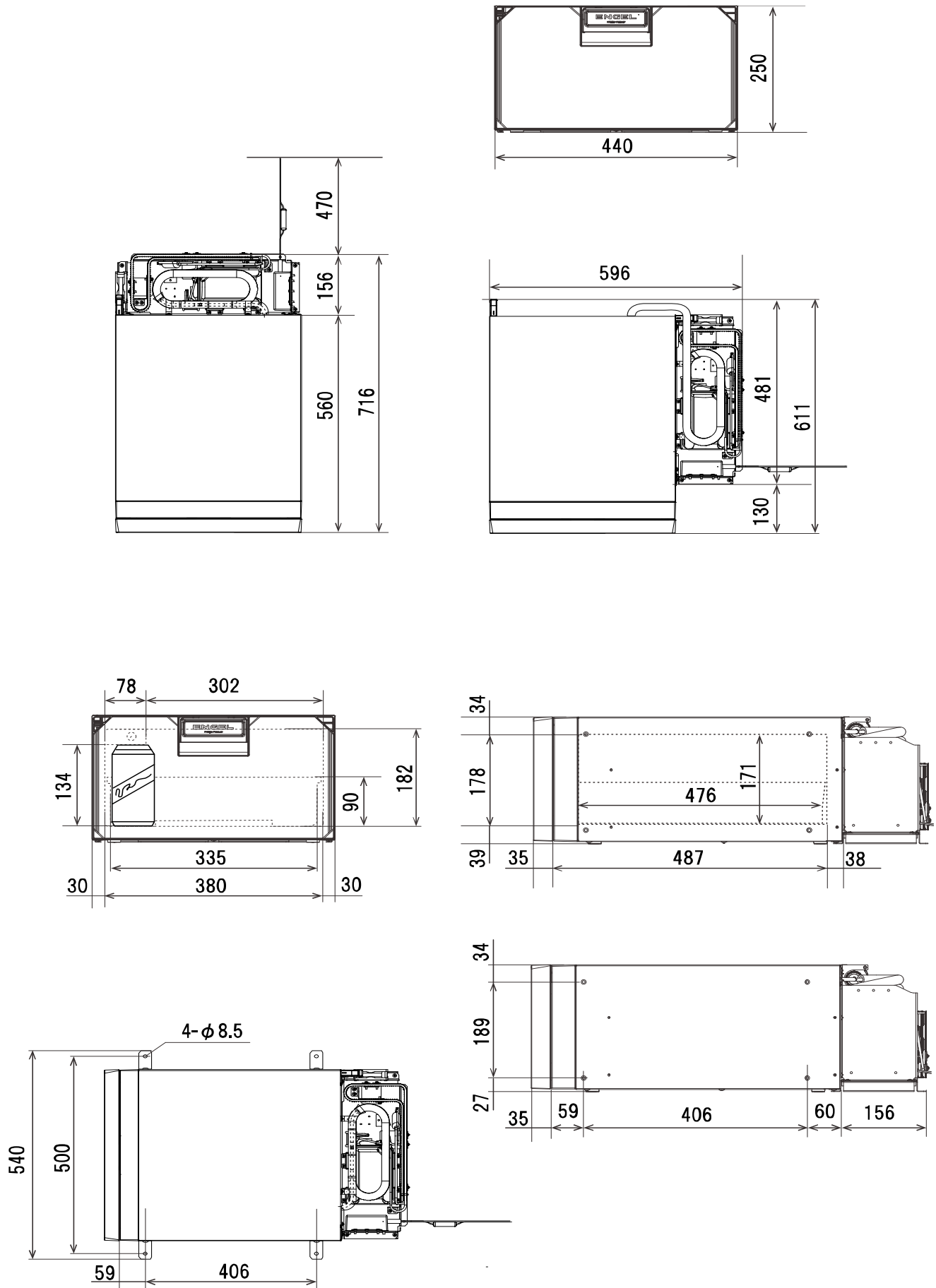


1. SPECIFICATIONS

■ Dimensions

※ Tolerance is omitted Unit (mm)



ENGEL

DC REFRIGERATOR

MODEL

SB30G

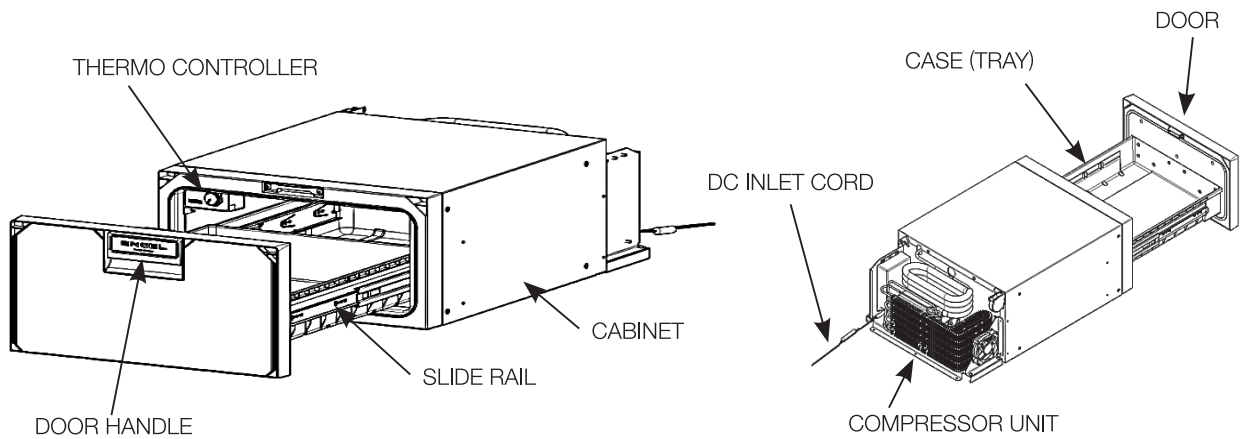
OWNER'S MANUAL

SAWAFUJI ELECTRIC CO., LTD.
3,NITTAHAYAKAWA-CHO,OTA-CITY,
GUNMA 370-0344, JAPAN
TEL: +81(0)276-56-7139
FAX: +81(0)276-56-6075

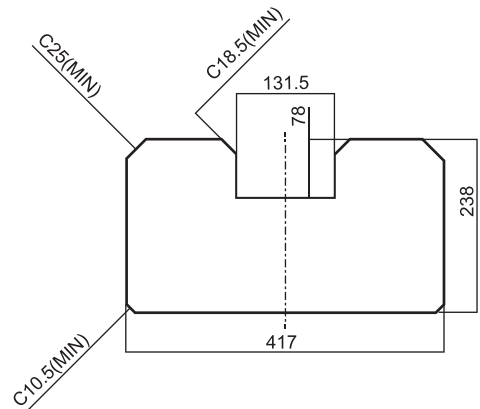
SPECIFICATION

MODEL SB30G
NET VOLUME..... 30L
INPUT RATING DC12V 2.7A / DC24V 1.5A
REFRIGERANT HFC-134a
WEIGHT APPROX.19kg

DESIGNATION OF PARTS



※ To customize the drawer front please use these measurements to cut your panel or sticker for best fit.

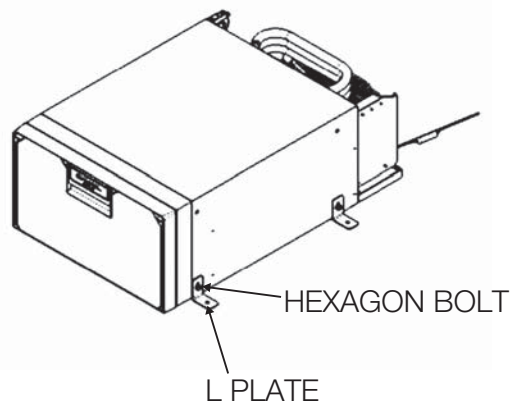
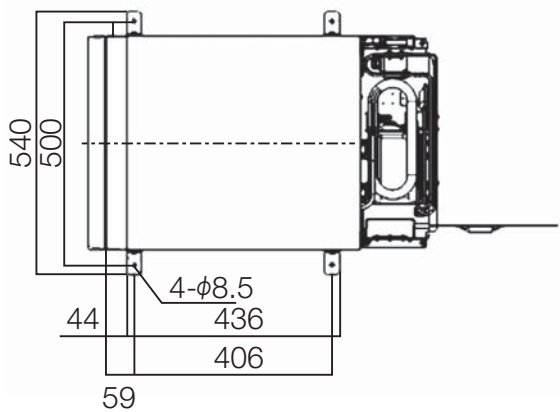
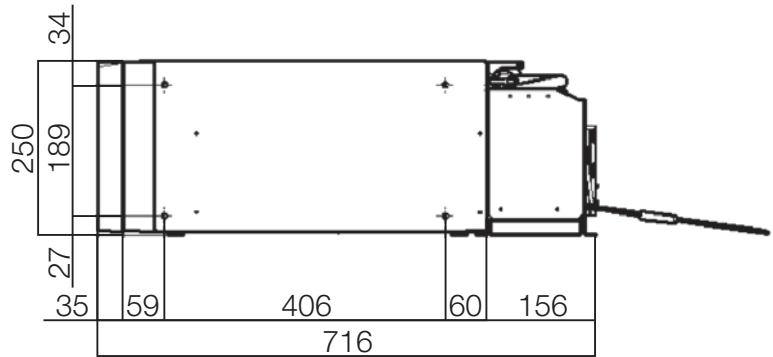
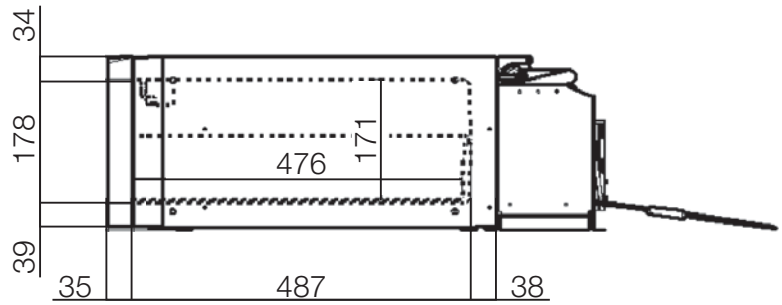
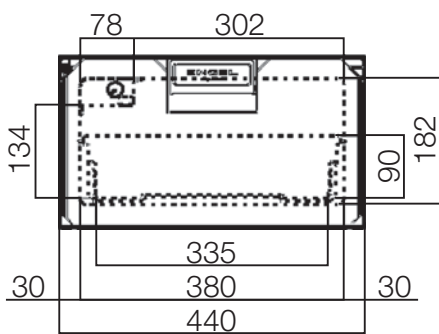
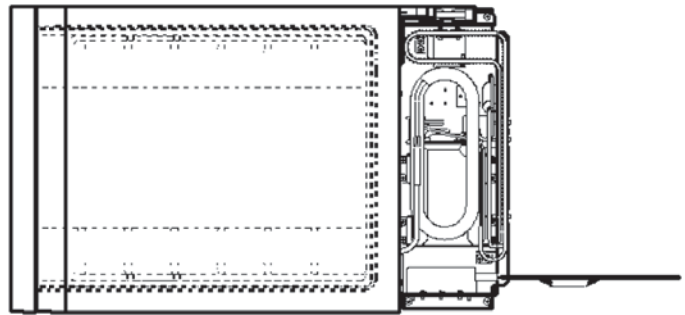


ALSO INCLUDED

- ① THERMO CONTROLLER EXTENSION CORD : 1
- ② FAN MOTOR EXTENSION CORD : 1
- ③ THERMISTOR EXTENSION CORD : 1
- ④ L PLATE (for anchoring refrigerator) × 4
- ⑤ HEXAGON BOLT (for anchoring refrigerator) × 4

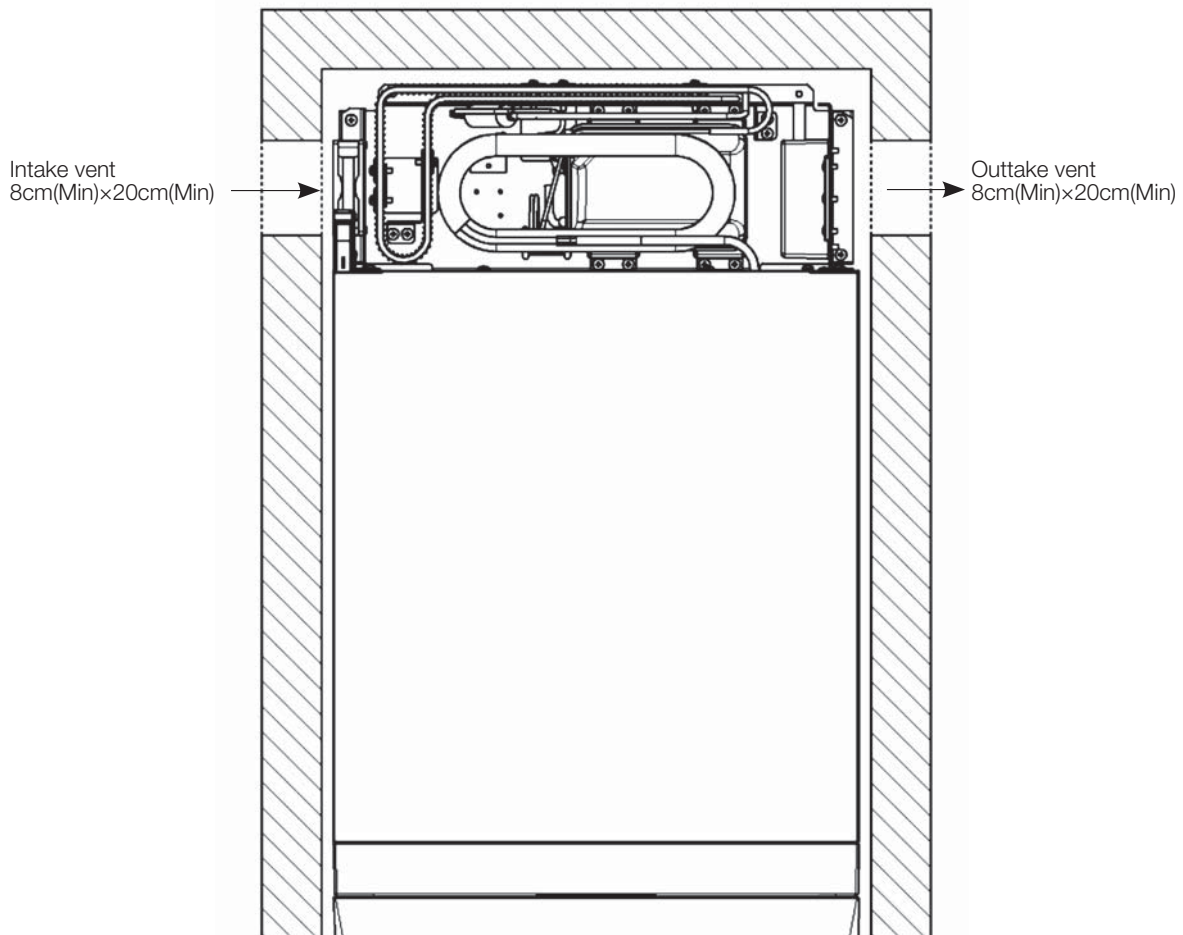
REFRIGERATOR DIMENSION

※The figure below is reference dimensions.

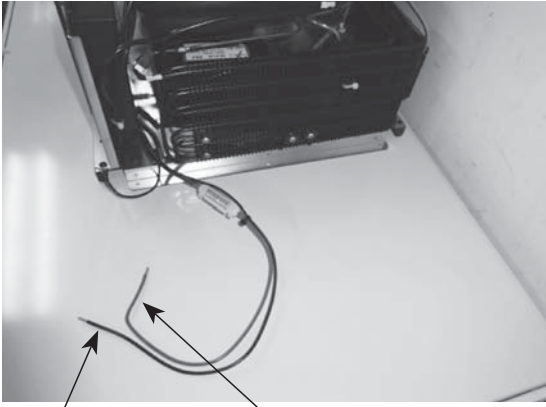


INSTALLATION

- 1) Make sure the refrigerator is fitted horizontally.
When installing in the Vehicle or Boat, make sure the refrigerator is not fitted to an unstable position.
- 2) Make sure to install the refrigerator where air flow is available.
If the cooling unit air flow is contaminated, the cooling system will be degraded.
- 3) Avoid direct Sunlight, heat from a stove, or anything related to heat.
If you install the refrigerator near a gas stove, a heater, or any other heat generating appliances, or place in direct sunlight, the cooling performance will be affected. And there is a risk of discoloration or deformation.
- 4) Avoid installing the refrigerator close to a kitchen sink or water faucet.
If installed in locations subject to water the electrical circuits and other parts may be effected.
- 5) To achieve good cooling performance and less current consumption, adequate ventilation for the refrigerator is needed
 - a) In the drawing below: the ventilation air will flow in the direction of the arrow.
 - b) Make sure NOT to block the intake vent and outtake vent of the compressor unit.
 - c) Recommended vent size : vertical length of 8 cm and side length of 20cm
If blocked, the cooling performance will be affected.
And there is a risk of the failure of the cooling system.



Refrigerator DC cord Connection



- = Black Cord + = Red Cord

=CAUTION=

- * Never use the refrigerator to store gasoline or other inflammable vapors and liquids as these may cause explosion.
- * Do not touch the evaporator and other metal parts of the cabinet with wet hands, as this may cause frostbite.
- * Do not remove or modify any of the electrical parts as this may cause electric shock or damage to the refrigerator.
- * Do not use the refrigerator inside the vessel's bridge, in close proximity to receiving antennas or near navigation and radio-communication equipment.

- * Acoustic Noise information 3. GSGV
The sound pressure level is 70dB (A) or less according to ISO 7779.

ELECTRIC POWER SOURCES

The refrigerator operates on a 12 or 24 volt battery.

If the voltage is too high it will damage the refrigerator. If it's too low, the cooling efficiency will be reduced, the running time will increase and the battery will be subjected to an increased load.

DIRECT WIRING FOR PERMANENT VEHICLE INSTALLATION (OPTIONAL)

① TWIST THE LEAD WIRE

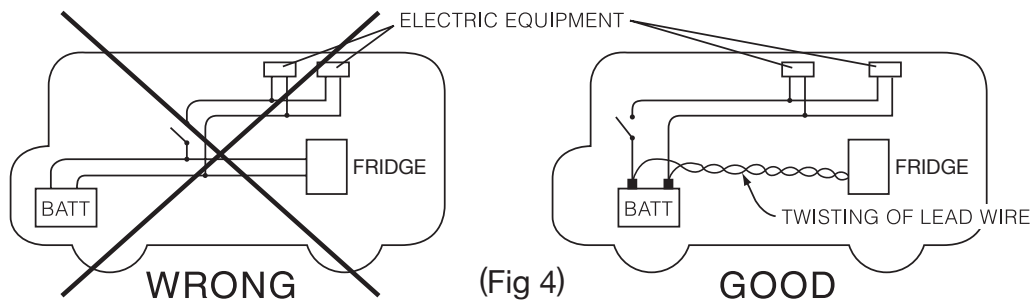
To further reduce the radio interference during DC operation, twist the negative and positive cables (use separate cables) together into a spiral form, between the battery and the DC outlet socket (see Fig 4)

② CONNECT PRODUCT DIRECT TO BATTERY

Any switches and lead wires for other electrical equipment should not be shared with the wiring between the product and battery. (Other equipment can generate high voltage pulses which may cause transistor damage to the product power supply.)

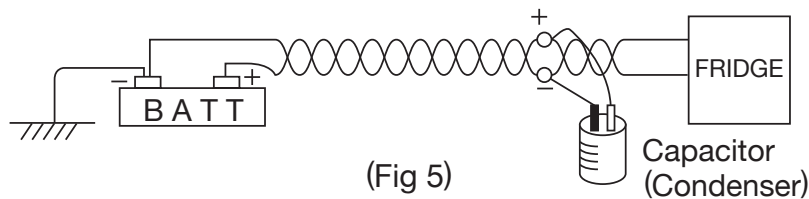
③ TO PREVENT RADIO NOISE AND AVOID ABSORBING HIGH SURGE FREQUENCY.

Insert a capacitor. (10000 μ F) (see Fig 5)



(Fig 4)

GOOD



(Fig 5)

④ WIRE GAUGE IS IMPORTANT TO AVOID "VOLTAGE DROP"

Connect the product to the battery as follows:

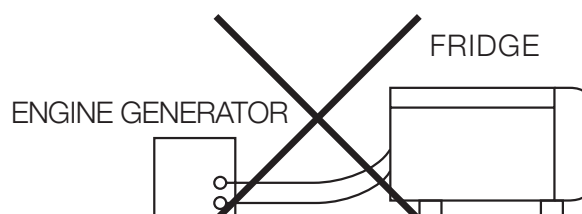
Distance between product and battery	Wire Gauge	
	DC 12 VOLT USE	DC 24 VOLT USE
Less than 6m (19ft.)	SWG#16 (AWG#14) / 2.1mm ²	AWG#16 / 1.25mm ²
From 6m (19ft.) to 10m (32ft.)	SWG#14 (AWG#12) / 3.3mm ²	AWG#14 / 2.1mm ²
More than 10m (32ft.) (Not recommended, too long)	SWG#12 (AWG#10) / 5.3mm ²	AWG#12 / 3.3mm ²

⑤ INSTALLING A FUSE IN THE WIRING CIRCUIT

To avoid burn out of wiring from battery to the product in the event of a short circuit, install 10A fuse in the wiring circuit, as close to the battery as possible.

⑥ NEVER CONNECT THE PRODUCT DIRECTLY TO AN ENGINE GENERATOR.

The product will be damaged by high voltage and high surge pulse from the power source, please utilize an automatic voltage regulator for the product. Please contact your ENGEL dealer if there are any questions regarding engine generators and the product compatibilities.



TEMPERATURE SETTING

Temperature Control

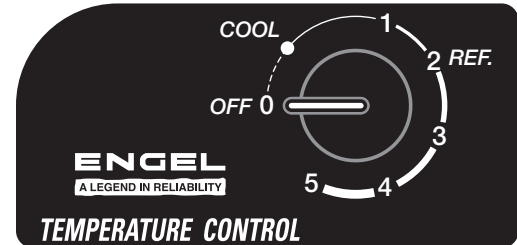
When using the refrigerator, please turn the dial in order to adjust the Temperature.

Inside Temperature varies, depending on the outside Ambient Temperature.

To adjust the Dial : when outside Temp 30°C

Dial Location	Approx. Temperature
OFF	shut OFF
1	Approx. 8 °C
3	Approx. -2 °C
5	Approx. -8 °C

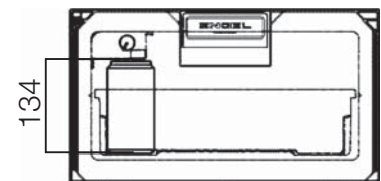
※ If the Outside Temperature decreases, the inside refrigerator Temperature may be affected.



TEMPERATURE CONTROL

When storing Food and Beverages

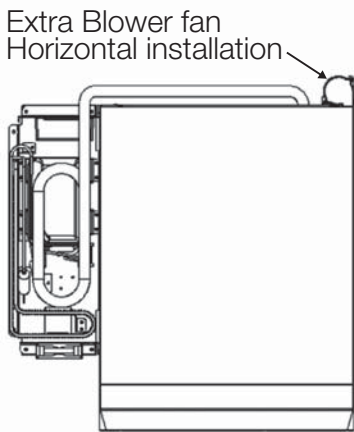
- 1) Please do not overload the refrigerator. Try to have some space between the goods when loading into the refrigerator. If overloading occurs some items may not cool efficiently.
- 2) Please do not store warm or heated foods or beverages.
(Make sure to cool the foods and beverages before storing into the refrigerator)
- 3) Watery goods or strong smell food store should be wrapped.
- 4) The refrigerator has been thoroughly cleaned prior shipment from the factory. However, it is advisable to clean the interior once again before use.
Clean the interior with a damp cloth in warm water, and wipe with a dry cloth.
- 5) The temperature control is located on the upper left side in the refrigerator compartment.
The space between the bottom of the controller and the bottom of the tray is less than 134mm.
Please note so the controller is not damaged.



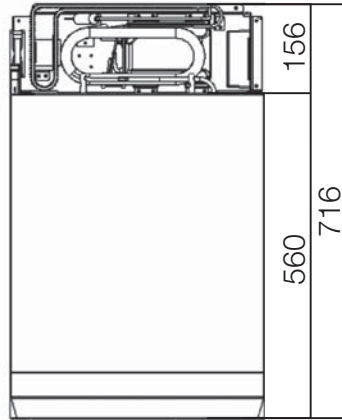
- 6) Please wipe the bottom of tray with a soft, dry cloth regularly.
If the door does not open because of ice between tray and cabinet, you may need to power off the refrigerator to allow the ice to thaw.

RELOCATING THE COMPRESSOR UNIT

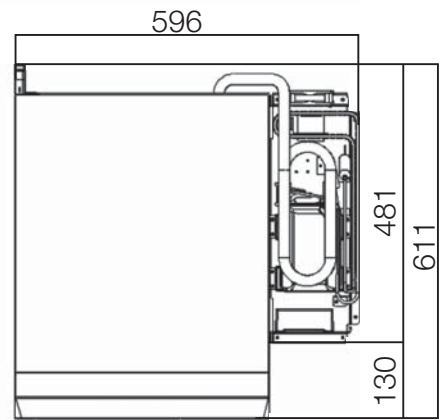
This refrigerator's compressor unit can be located, to 3 different locations.



a. Compressor unit located on the Left side.



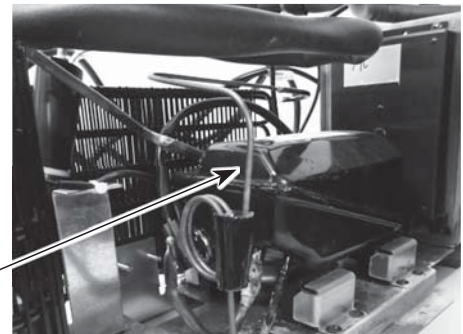
b. Compressor unit located on the end.



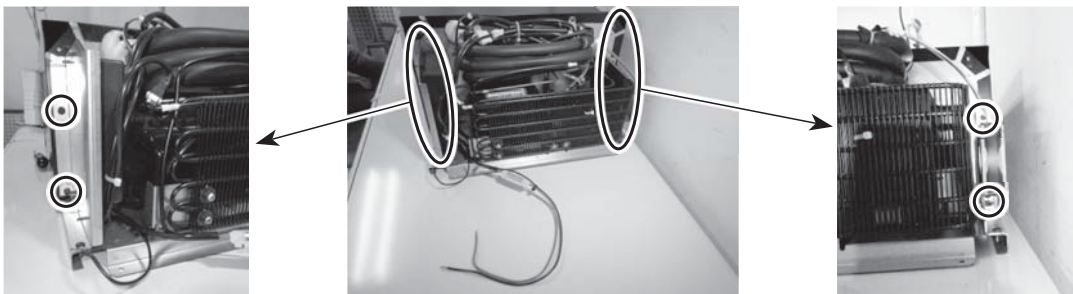
c. Compressor unit located on the right side.

Preparation:

 CAUTION	At this time, Use the hand gloves to avoid injury.
 CAUTION	Do not move the DAMPER PIPE.

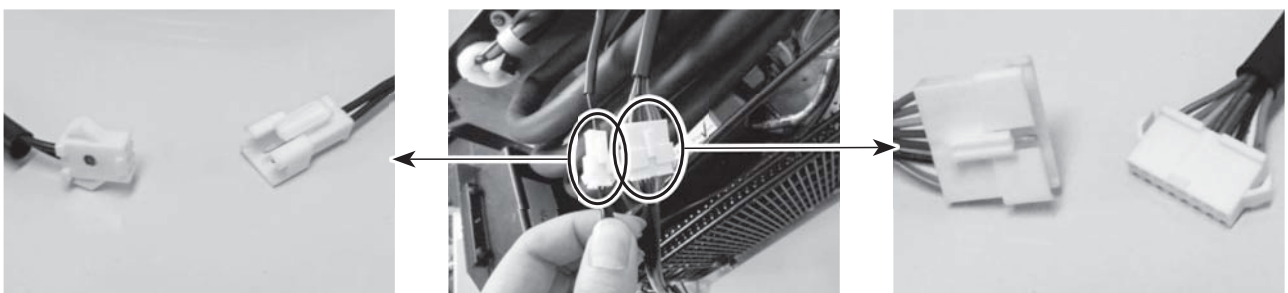


1. Remove 4 screws with a screwdriver.



2. Cut fasteners.

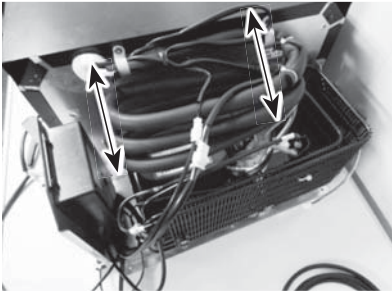
3. Remove 2 couplers. Press the stopper of the coupler to release.



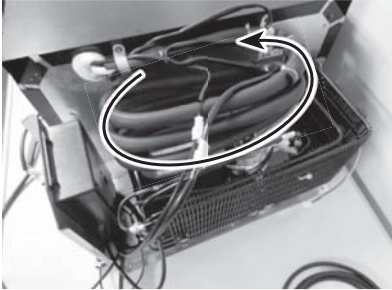
THERMISTOR

THERMO CONTROLLER

4. Separate a cabinet and Compressor unit.



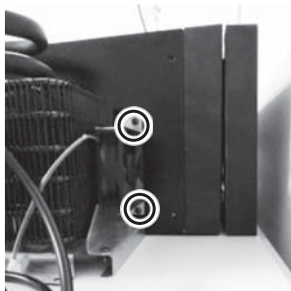
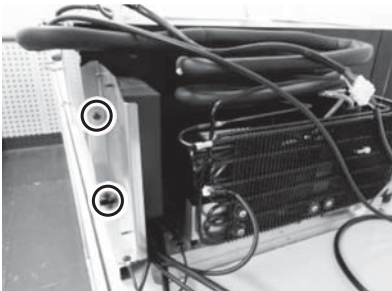
5. Bend the SUCTION PIPE straight, turn in the direction of the arrow.



6. Move the Compressor unit to the desired side of the cabinet.

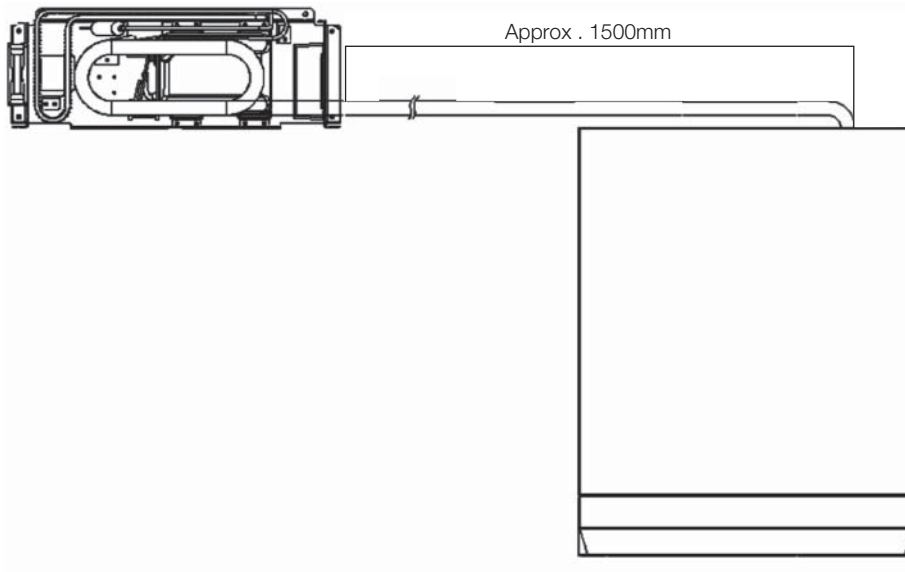


8. Fix 4 screws by using a screwdriver. (approx. $1.18\text{N} \cdot \text{m}$)





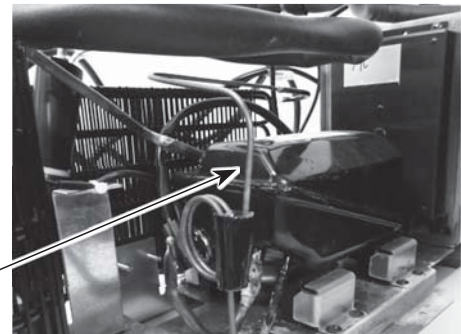
PLACING THE COMPRESSOR UNIT AWAY FROM THE REFRIGERATOR

You can move the Compressor unit up to 1.5m away from the refrigerator.



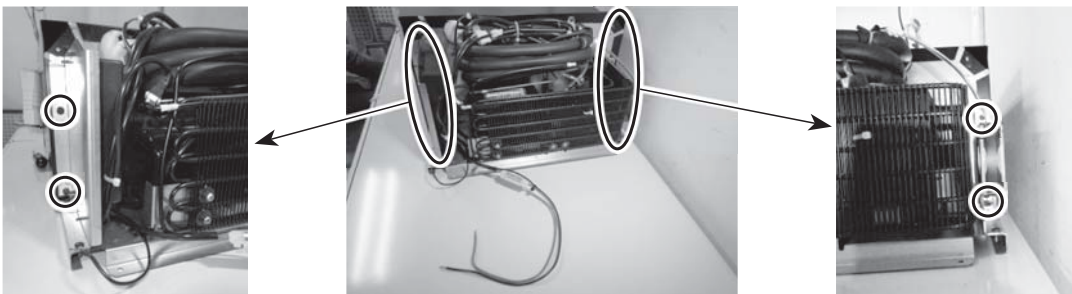
Preparation:

- | | |
|--|--|
| 
CAUTION | At this time, Use the hand gloves to avoid injury. |
| 
CAUTION | Do not move the DAMPER PIPE. |



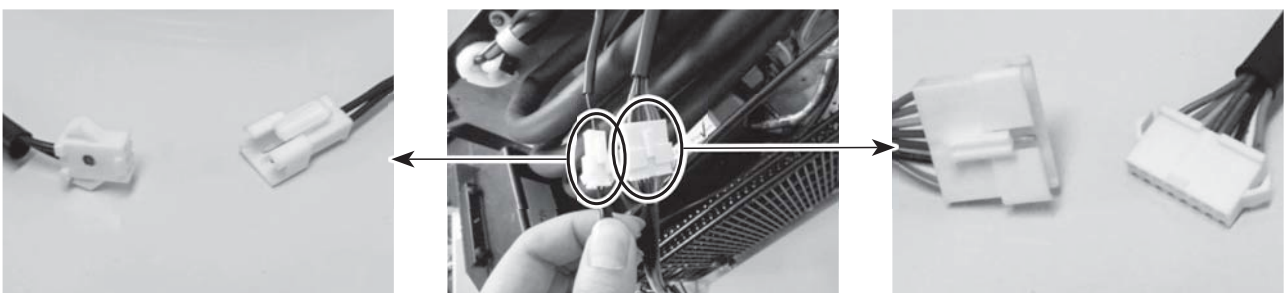
DAMPER PIPE

1. Remove 4 screws with a screwdriver.



2. Cut fasteners.

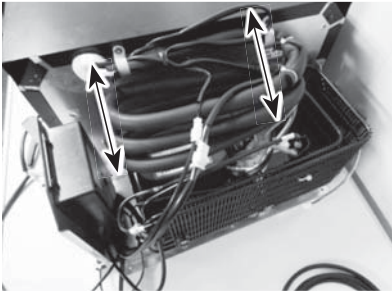
3. Remove 2 couplers. Press the stopper of the coupler to release.



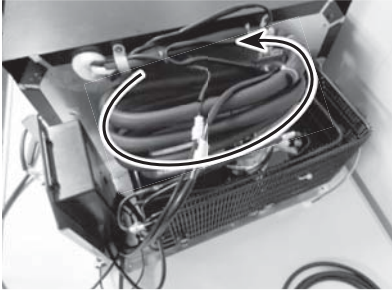
THERMISTOR

THERMO CONTROLLER

4. Separate a cabinet and Compressor unit.



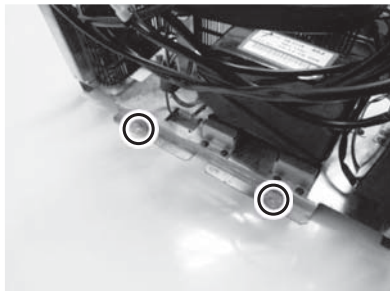
5. Bend the SUCTION PIPE straight, turn in the direction of the arrow.



6. Move and anchor the Compressor unit in a well ventilated, level position.



7. Connect the 2 extension cords supplied.



8. Fix 4 screws by using a screwdriver.



【AGENT in AUSTRALIA and NEW ZEALAND】

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