

RM 184 EGI + EGP

**Installations- und
Gebrauchsanweisung
für
Einbauschränke**

**Operating instructions
for
built-in refrigerators**

**Mode d'emploi
pour
réfrigérateurs encastrés**



Dear customer,

Before using your refrigerator, please study the following instructions.

1. CLEANING THE REFRIGERATOR

Before using the refrigerator, you should wipe it inside and outside with lukewarm water containing a mild detergent. From time to time, the PVC-seal of the lid should be rubbed with a bit of talcum powder. The absorber mounted at the back side should be cleaned once a year with a brush or a smooth cloth.

2. INSTALLATION OF THE REFRIGERATOR

The appliance should be placed in a horizontal position although it is tilt insensitive. It must not be placed near heat-sources and direct sunlight should be avoided. This has a detrimental effect on the cooling performance and energy consumption.

A satisfactory circulation of air at the back of the unit is extremely important for the proper functioning of a refrigerator. Make sure that an adequate space (approx. 170 mm) is maintained between the wall and the back of the unit so that a heat build-up affecting performance is avoided. Great care must be taken to ensure correct ventilation when a refrigerator is installed in caravans or furniture. The installation must be done in such a manner that there is a sufficient supply of fresh air from underneath, and warm air can escape above the unit without a heat build up. The ventilation slots must not be obstructed (Fig. 1).

Installation of units powered by liquid gas

The installation of the refrigerator may be carried out only by an expert from a liquid-gas distributor, or by a specialist approved by the Liquid Gas Association in accordance with these instructions and must comply with the relevant technical regulations for liquid gas and any local requirements which may apply.

Installations in caravans and roadable vehicles must be carried out in accordance with the prescriptions and national regulations for liquid gas appliances and liquid gas heaters in vehicles.

The installation must be carried out in such a manner that easy access to the appliance shut-off valve is ensured.

The supply of combustion air and the escape duct for waste-gas should be close to where the refrigerator is placed. If no waste-gas duct to atmosphere is provided, non-closing ventilation-apertures of a least 10 sq. cm. free cross-section for air renewal must be available for each unit installed.

For the installation with waste-gas outlet to atmosphere, there are two alternative systems available (Fig. 3A + 3B).

You are supplied with a complete waste-gas tube and accessory fittings. When carrying out the installation, care is to be taken that the total length (1200 mm) of the flexible tube is not exceeded. Furthermore, the tube must be laid with a rise of at least 15° and is to be secured against shifting with the clips provided (Fig. 3A, 3B, 3C).

Should the operation of the unit after installation lead to a detectable rise in temperature of the walls or floor, these parts of the vehicle must be lined with effective thermal insulation material in the interests of fire-prevention.

3. OPERATION OF THE REFRIGERATOR

Your refrigerator is equipped with a newly developed absorber cooling unit which warrants good performance even when the vehicle travels or is parked on slopes up to 15 %, the same applies to parking on sloping lay-bys or car parks. This causes only a slight rise in the cooling chamber temperature. To improve the cooling performances when ambient temperature is high, a ventilator (0,6 Watts) is fitted under the cooling unit switched on automatically when the temperature around the condenser fins reaches 52° C and switches off again when it drops to approx. 45° C.

Note: The ventilator is connected to the 12 V- circuit so that it is operative also during the 220 V and gas operation.

a) Control panel - explanation RM 184 EGI (Fig. 4).

- 'A' - Push button for flame failure safety device.
- 'B' - Rotating button for electric-gas thermostat.
The combined electric-gas thermostat is used for mains operation as well as for gas operation, the 12 Volt circuit has no thermostat control. If the button is turned completely anticlockwise over the point where a slight resistance is felt, the mains operation is switched off. During gas operation the same position corresponds to MIN- position (gas operation is turned off only by closing the gas supply).
- 'C-E' - Push button voltage-selection switch with reciprocal release :
- 'C' - Push button for mains operation, marked by  or 220 V
- 'D' - Push button for 12 V operation, marked by  or 12 V
- 'E' - Push button for gas operation, marked by  or Gas
- 'F' - Red signal lamp

b) Control panel - explanation RM 184 EGP (Fig. 5).

- 'A' - Push button for piezo igniter
- 'B' - Push button for flame failure safety device
- 'C' - Rotating button for combined electric-gas thermostat.
(see also explanation RM 184 EGI)
- 'D' - Push button for voltage selection switch
 -  - position for 12 V operation
 -  - position for gas operation
 -  - position for mains operation
- 'E' - Flame indicator sight peep.

c) Mains current operation

Before using your refrigerator, check whether the mains-voltage at your home or at the camp-site is the same as that specified on the rating-plate. The rating-plate is located in the upper left corner of the interior of the refrigerator. The refrigerator must be properly earthed. Our units are fitted with an appropriate earthed plug for connection to a matching plug-socket.

When abroad, please use an adaptor for the power-sockets in use there.

IMPORTANT: The gas supply to the appliance must be turned off when it is operated on electricity.

d) Starting mains current operation;RM 184 EGI (Fig. 4).

1. Press in button  (C) of selection switch.
2. Turn the thermostat control knob (B) in the clockwise direction to maximum position.
3. To stop the refrigerator, turn the thermostat control knob (B) in the anti-clockwise direction to position  0 (a slight resistance will be felt) or lock out depressed push button  (C) by actuating button 'D' or 'E'.

e) Starting mains current operation;RM 184 EGP (Fig. 5).

1. Put voltage selection switch (D) to position .
2. Turn the thermostat control knob (C) in the clockwise direction to maximum position.
3. To stop the refrigerator, turn the thermostat control knob (C) in the anti-clockwise direction to position  0 (a slight resistance will be felt) and put switch (D) to position  (mid-position).

f) 12 Volts D.C. - car battery operation

When running on 12 V. your refrigerator is protected by a fuse installed in the general electrical circuit of the vehicle. The current intensity of the appliance is about 7 amps. In order to prevent the vehicle battery from being discharged a relay is installed in the 12 V circuit, by this the refrigerator will only operate when the engine of the vehicle is running.

IMPORTANT: The gas supply to the appliance must be turned off when it is operated on electricity.

g) Starting 12 Volts D.C. operation;RM 184 EGI (Fig. 4).

1. Press in button  (D) of selection switch before driving.
2. To stop 12 V- operation, lock out depressed push button  (D) by actuating button 'C' or 'E'.

h) Starting 12 Volts D.C. operation;RM 184 EGP (Fig. 5).

1. Put voltage selection switch (D) to position .
2. To stop 12 V - operation, put switch (D) to position  (mid- position).

i) Operation by liquid gas.

The refrigerator can be operated by gas also during driving. The appliance is designed only for operation with propane/butane gas. It has been set for use at a specific gas-pressure - this is indicated on the rating plate. It is important that a non-adjustable pressure-regulator should be used to reduce the cylinder-gas pressure to the working-pressure indicated on the rating plate. The appliance must not be operated at any other pressure. The refrigerator is not designed for connection to mains-gas or natural gas systems.

Connection of gas supply

Connect your refrigerator in the following sequence and make sure that the joints are properly tightened.

Gas-cylinder - pressure-reducer - shut-off-valve - refrigerator

The gas connection union at the back of the unit is made of 8 mm O.D. steel tubing and accepts a threaded metal-seal type counterpart. The technical regulations for Liquid Gas strictly prohibit the use of a naked flame for the detection of leaks in gas connections and appliances of any kind. These regulations apply to all types of gas cylinders and liquid gas.

The regulations recommend the use of foam-forming agents such as hand-washing liquids, liquid soap, etc. for the detection of leaks. For your personal safety, all parts carrying gas and connections in particular should be checked in this way, i.e. by coating them with a soapy film.

The gas system equipment consists of a combined electric-gas thermostat, flame failure safety device, gaslighter and the burner.

j) Lighting the gas burner; RM 184 EGI (Fig. 4).

1. For lighting the gas burner, the refrigerator must be connected to the 12 V circuit.
2. Turn on gas supply (open gas cylinder valve and refrigerator shut-off valve).
3. Turn the thermostat control knob (B) in the clockwise direction to maximum position.
4. Press in button ① (E) of selection switch. The red pilot lamp (F) is flashing, when the electronic igniter sparks.
5. Press in button of safety device (A) and keep it down, the burner lights now automatically after 20 - 30 seconds. The light (F) stops flashing - this is the proof that the burner is alight. Keep the safety device knob (A) pressed down for another 15 - 20 seconds, after this the thermoelectric safety device (A) maintains gas supply automatically. With the door open, the igniting process and the flame can also be seen through the pilot sight hole on the left inside the cabinet. If, for any reason - except when the gas-cylinder is empty - the gas flame goes out, the gas burner is at once re-ignited. If, because of a fault, the burner does not light, the safety device comes into action and automatically shuts off the gas supply.
6. To stop the refrigerator turn off gas supply to the appliance and lock out depressed push button ① (E) by actuating button 'C' or 'D'.

k) Lighting the gas burner; RM 184 EGP (Fig. 5).

1. Put voltage selection switch (D) to position ① (centre position)
2. Turn on gas supply (open gas cylinder valve and refrigerator shut-off valve).
3. Turn the thermostat control knob (C) in the clockwise direction to maximum position.
4. Press in button of safety device (B) and keep it down (for about 20-30 seconds) so that the gas tube to the burner is vented.
5. Only gas is emitted now. Press in button of piezo igniter (A) several times rapidly in succession. As soon as the flame is burning and if the refrigerator is equipped with a flame indicator (E) the red pointer moves from the white field into the green field. If the pointer remains in the green field, keep button (B) pressed down for another 15-20 seconds. After this the thermoelectric safety device (B) maintains gas supply automatically. With the door open, the igniting process and the flame can also be seen through the pilot sight hole on the left inside the cabinet. If, for any reason, the gas flame extinguishes, the safety device is working automatically and shuts off gas supply.

6. To stop the refrigerator turn off gas supply to the appliance.

1) Regulation of temperature with gas and mains current operation.

The cooling performance of the refrigerator can be adjusted at the combined electric/gas thermostat. After a sufficient period of maximum cooling the thermostat control knob (B) can be turned anticlockwise to obtain the degree of cooling desired.

ATTENTION ! IMPORTANT NOTE
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Safety regulations prohibit the use of this unit in a closed room with gas unless sufficient ventilation is provided. Please take care that the unit is not fed by two sources of energy at the same time, i.e. with 220 V and 12 V or gas. It will not function properly in this case and damage may be caused. Damage caused in this manner is not covered by the guarantee.

4. DEFROSTING OF THE REFRIGERATOR

Too thick a layer of ice on the evaporator causes a deterioration in the efficiency of the refrigerator. This is why defrosting is necessary at certain intervals. Under no circumstances must the layer of ice on the evaporator exceed 3-4 mm.

For defrosting, cut off the supply of energy. In the case of gas operation, turn off the gas; for electrical operation, turn the thermostat knob as far as possible in the anticlockwise direction or pull out the plug from power-point. The defrosting water is collected in the drip tray which can be pulled out and emptied. After defrosting has been completed, it is advisable to thoroughly clean the evaporator and the interior of the refrigerator. Never use a heating appliance to accelerate the defrosting process since this can cause damage to the refrigerator.

The door of your refrigerator is fitted with a PVC- seal to ensure satisfactory closure. Clean this seal thoroughly with clean water only and never use any chemical additives.

If necessary, the interior of the refrigerator and the evaporator may be cleaned with a weak soda solution in lukewarm water.

5. WHAT TO DO WHEN REFRIGERATOR IS NOT TO BE USED FOR A LONG TIME

If you are not going to use your refrigerator for some time, turn off the energy supply (gas or electricity) and empty the refrigerator of its contents.

Defrost refrigerator and carefully clean and dry refrigerator.

To prevent any unwanted odour from forming in the interior, it is advisable to leave the door of the refrigerator slightly open.

6. MAINTENANCE OF THE REFRIGERATOR

a) Cleaning of gas-burner jet (Fig. 6).

(only a specialist approved by the Liquid Gas Association is permitted to do this work).

1. Unscrew burner guard from rear panel
2. Unscrew union nut (part 1) with a 10 mm forked spanner.

3. Slacken counter-nut (part 2) of jet with 14 mm forked spanner and take out guard (part 3).
4. Unscrew locking-plate (part 4) of burner-tube (part 5), slide burner tube forward and take out jet (part 6) from duct.
5. The jet has a very small orifice and only cleaning petrol must be used to clean it. After washing, blow through jet. Inspect jet against the light to check that it is really clean. Under no circumstances must hard objects, such as needles, wire-brushes etc. be used to clean it.
6. Reassemble in the reverse order and then check unions for satisfactory sealing in accordance with the safety regulations for liquid-gas installations. When the burner-tube has to be changed, care is to be taken that the burner-slits point in the direction of the gas heating-tube, i.e. upwards, and that the burner-tube is prevented from shifting by the locking-plate. When the lower part of the gas-burner casing has to be stripped, care has to be taken during the subsequent re-assembly that the inspection-window for checking the gas-flame is fixed in the direction of the light-conductor rod (towards the back of the casing).

b) Replacement of gas filter

The cellulose gas-filter is located at the front in the connection-union. When the gas-filter has to be replaced, remove it from union and fit new filter.

AFTER SALES SERVICE

Should there be any fault in the functioning of your refrigerator, first check for the following causes since you may be able to remedy the fault yourself without having to take it to the after-sales service agent.

- a) Is the vehicle standing at an excessive angle ?
- b) Is the energy supply in order ? Is there voltage at the power-point? Is there a satisfactory supply of gas ? Is the gas-burner alight?
- c) Is the cooling unit properly ventilated? The ventilation grill and the hot-air outlet at the back above the cabinet must be completely clear. Ensure that the living area of the vehicle is well ventilated in hot weather.
- d) Is the thermostat correctly set ?
- e) In the case of gas operation and when turning on the refrigerator, did you release the knob of the safety device too soon ?
- f) Check the type and quantity of the food and drink in the refrigerator, it should be so placed that a good circulation of air is ensured inside the refrigerator. Please check that the door is well sealed when closed. In the connection, remember that a thick layer of ice on the evaporator has a negative effect on the cooling performance and that defrosting must be carried out at certain intervals of time. Always make sure that the refrigerator is properly closed and that food and liquids are only placed in closed receptacles in the refrigerator. A high relative air humidity will cause ice to form on the evaporator which will act as an insulation layer and affect the cooling performance. Do not place hot food in the refrigerator.

If, in spite of these checkings, you can't get a good functioning of your refrigerator, please contact after sales service, indicate nature of trouble, type and serial number of appliance.

TECHNICAL DATA

Gas operation

Nominal thermal loading : 190 W
Minimal loading : 70 W
Connection value-gas : 15 g/h
Connection pressure : Cat. 1₃ liquid gas :
50 mbar or 28 mbar
Temperature class : N

Electric operation

220 V 50 cycles (Hz) 85 W
12 V 85 W
Capacity : 41 litres gross (1,45 cu. ft.)
Refrigerant : 0,32 kg NH₃ absorber

