

## INSTRUCTION MANUAL FOR MODELS RM 275, RM 275 A

### General instructions

This dual temperature absorption refrigerator has a wide freezer compartment ( $-12^{\circ}\text{C}$ ) and a standard refrigerated compartment ( $+5^{\circ}\text{C}$ ) each of which is equipped with its own evaporator.

The model is fitted with a special design refrigerating unit for ensuring that the refrigerator will continue to operate even when tilted to a maximum of  $6^{\circ}$  in any direction.

The correct location of an absorption refrigerator is of the utmost importance. It should never be placed near a source of direct heat or in the sun, and a perfectly level installation will produce maximum efficiency.

We recommend to clean the refrigerator inside with luke warm water before switching it on for initial operation. (Never use scouring powder for cleaning.)

### Installation of the refrigerator

The drawing shows how to install the refrigerator in a kitchenette recess. Take care to fix the aerating grids true to given size for ensuring that the cross-section required for an adequate circulation of air is adhered to. Refer to section A-A for installing the flue pipe.

Take care to adhere to the "technical regulations issued for the application of liquefied petroleum gas (TRF)", if the refrigerator is intended for installation indoors and/or recommendations G 607 issued by the German gas and water trades (or the equivalent domestic regulations) if installation is intended in a vehicle or a mobile home.

### Initial operation

#### A) Electrical operation

Before switching on, check to make sure that the voltage specified on the rating plate inside the unit and the local mains voltage coincide.

The refrigerator is designed for two supply voltages i. e. 220V and 12V (standard model). There are two rocker switches for switching on the separate heating circuits, and the red 12V switch is lit when on the "ON" position (EIN). Both rocker switches must be switched off i. e. in the "0" position, for operating the refrigerator on gas.

The 220V lead may only be plugged into a correctly earthed wall socket answering regulations, unless the refrigerator is connected up permanently to an earthed outlet (in which case the installation may only be carried out by a qualified electrician).

The 12V lead is intended for bringing up to a two-pole terminal strip or a motorcar plug-socket. This circuit must be protected by a 16A fuse. Never run the lead over the unit and make sure that the voltage and earthing both correspond with the vehicle's electric system.

#### IMPORTANT (does not apply to RM 275 A).

The refrigerator must, by all means, be connected up to a 12V d.c. supply circuit and due attention paid the "+" and "-" pole markings on the 12V lead ends. Automatic re-ignition of gas operated refrigeration cannot function, unless this voltage is present (refer also to section B below).

The thermostatic control is not operative during 12V operation. Current should only be drawn from the car battery while the engine is running, i.e. the dynamo is charging, as the battery would otherwise be bled. The battery should furthermore be in a good working order. The cables used should not be longer than necessary and should have a minimum cross section of  $1.5\text{mm}^2$ , better even  $2.5\text{mm}^2$ . Dual heating, e.g. using both gas and electric current should be avoided as any excessive heating — particularly in conjunction with high ambient temperatures — will bear on the cooling capacity.

#### B) Liquid gas operation (do not use town or natural gas)

Check first of all whether the 220V and 12V switches are in the "0" (OFF) position. The gas supply union is made with a G 8-L gas-thread connection answering regulations (e.g. ERMETO) to the 8mm pipe socket located on the upper right side of the gas regulator. (Refer to the technical regulations for LPG and the recommendations issued by the gas and water trades.)

The gas supply connection to the refrigerator must be rigid (flexible hose is not permissible), and this connection may only be made by a qualified expert. The bottle outlet pressure aft of the pressure reducing valve must be 50 mbar (FRG) and/or 30 mbar. This gas pressure is specified on the rating plate. The shut-off valve wants to be supplied by the customer and installed so as to be readily accessible.

The gas fittings comprise ignition safety device, thermocouple, gas regulator, burner, electrode and (for the RM 275) an electronic re-igniter and an ON/OFF tumbler switch with indicator light.

The RM 275 A has a piezoelectric lighter. There is a gas filter in the supply pipe, upstream of the gas regulator. This filter can readily be changed but this should only be done by qualified personnel.

#### Lighting the RM 275 (not applicable to the RM 275 A)

1. Open stopcock on gas bottle and stopcock in pipe to appliance. (Check whether there is enough gas in the bottle.)
2. Check whether 12 V cable is correctly connected (+ ve to + ve) to 12 V supply. (The burner cannot be lit if a 12 V supply is not available.) Set ON/OFF switch in control panel (top right) to position "1". A "ticking" noise should now be heard and the indicator light of the switch should be blinking.
3. Set regulator knob to position "MAX" and push knob in. Gas will now flow to the burner. But first the air has to escape from the gas supply pipe. The duration of this deaeration process depends on the length of the pipe (from gas bottle to refrigerator).
4. The gas regulator knob must remain pushed in during the ignition process. Hold it in this position for 10–15 seconds, until the ignition safety valve is held open by the thermal stress. When the gas flame has been lit, the indicator light of the switch goes out and the "ticking" noise stops.  
Should the gas flame go out, for any reason at all, it is automatically re-ignited by the electronic ignition system. But the ignition process will work only as long as the ignition safety valve is held open by the thermal stress. If the gas flame has been out for some time, it is therefore necessary to push in the regulator knob. Turning the regulator knob to the closed ("0") position stops the supply of gas to the refrigerator. At the same time, set the tumbler switch to "0" so as to open the 12 V circuit. If the refrigerator is to be out of use for some time, close also the stopcock at the appliance and (if possible) also the stopcock at the gas bottle.

#### How to ignite the RM 275 A

1) Open bottle shut-off valve and main shut-off valve to refrigerator after having checked the contents of the bottle.

2) Turn regulating knob in the "MAX" position and press down. This will cause gas to flow to the burner. Allow the air trapped in the supply pipe to escape first. The time required for evacuating the pipe depends on the pipe length (i.e. from gas bottle to refrigerator).

3) Now press the button for igniting the gas (GASANZÜNDER) twice in rapid succession applying some force. This will cause the burner to be kindled by the high tension spark. Keep the gas regulator button pressed down for some 10 to 15 seconds until the safety pilot valve is retained by the thermoelectric cell voltage. Check whether the flame is burning by opening the refrigerator door. The flame will be visible on the left hand side inside the refrigerator. If the flame is not lighted, repeat the igniting procedure.

For turning off the gas supply, turn the gas regulating knob into the closed "0" position. If you intend to close down the refrigerator for a longer period of time, turn off the shut-off valve to the unit and also the bottle shut-off valve.

#### Regulation with liquid gas operation

The gas supply may be reduced after the refrigerator has been in operation for 24 hours in the "MAX" setting and refrigeration is found to be adequate. A temperature of 6 °C inside the refrigerating compartment is generally found to be most suitable. Adjustments may range from "MIN" to "MAX".

#### Servicing the gas system

Any trouble arising in conjunction with the gas system may be attended to only by our after-sales service, or by a qualified gas man.

#### In the event of trouble

If the gas supply piping and fittings have not been made accessible by a special equipment, then the refrigerator will have to be moved. Before doing so, shut off the gas valve on the unit and detach the G 8-L gas thread union (ERMETO) on the 8mm pipe socket.

#### Clogged gas burner nozzle

Unscrew the burner housing first and detach the screw fastening the burner to the flue pipe. Now detach the union nut on the gas supply pipe to the burner and withdraw the pipe. A conical nipple with a cap nozzle on top will become visible. Remove the nozzle and wash it in petroleum ether or methylated spirits. Never attempt to scrape the nozzle holes with a pin or a pointed tool, as this will affect the cross-sections and interfere with the correct combustion.

Reverse the procedure for reassembly. It is advisable though, to take this opportunity for cleaning the flue pipe.

No further servicing is required as long as the system is working properly.

#### How to produce ice cubes

Fill the ice tray with water and place in the deep freeze compartment. Adjust the regulator to the highest setting for speeding up the process. Hold the ice tray under the water tap for removing the ice cubes.

#### Defrosting

The moisture inside the refrigerating compartment is bound to condense and form a layer of frost or ice on the evaporator. This layer will insulate the evaporator and cause thermal transfer to be poor.

The re- evaporator in the refrigerating compartment is defrosted automatically. This takes place as long as the refrigerator is adjusted to position 5 of the thermostat control while the unit is operated on 220V or 110V, whereas with gas operation, the regulator wants to be placed in the "MIN" position. The condensate is then evaporated in a special basin. Should the thermostat control be adjusted to a higher setting, turn down to the above indicated adjustment for defrosting the evaporator.

The freezer compartment need only be defrosted after longer intervals. This, however, requires turning off the refrigerator altogether and mopping up the condensate with a cloth. Place all controls in the "0" position when the unit is off service, and make sure to shut off all supply valves. Keep the refrigerator slightly ajar for preventing a musty smell from accumulating inside.

#### How to change around the door

The door can be hinged either on the right or the left hand side. Remove the hinge pins and fasten same on the other side. Then change around the door catch to the opposite side. The refrigerator door facade is replaceable. The strip at the bottom of the door can be detached by removing two screws; draw out the board by sliding it down and out.

The refrigerator can be fastened in place by screwing the side panels to the adjoining kitchen furniture.

#### Technical data

Model	RM 275, RM 275 A	Propane/Butane	50 mbar (72.5psi)
Net capacity	70 Litres	Design heat load	232W
Useful capacity	60 Litres	Min. heat load	116W
Voltage	220V 50 Hz	Connected load	18 g/h
Voltage	10 to 12V		

#### General instructions

- Check whether the refrigerator is connected up to a 12V outlet for ensuring ignition of the gas (only RM 275).
  - Check whether the bottle shut-off valve and the shut-off valve to the unit have been opened and check the contents of the gas bottle. Check whether the electric power supply has been switched on.
  - Check whether the regulator knob has been adjusted to the highest setting.
  - Check whether the air trapped in the gas supply pipe has been properly evacuated.
  - Check whether the aeration of the unit has been properly installed and the ducts are not blocked by dirt.
- IMPORTANT! Never store any explosives, e.g. lighter fuel, petrol ether or similar in the refrigerator.

#### Unpacking

While removing the wrapping, check the unit for any damages.

#### Transport damages

Report any transport damages found directly to the carrier.

#### After-sales service and spare parts

are available from the after-sales service. For ordering spare parts, please indicate the serial number and model as shown on the rating plate.