SERVICE MANUAL

REFRIGERATION

RAPID

DRINK COOLER

FACTORY: HUY

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CONTENT

1 INTRODUCTION

This manual describes the RAPID DRINK COOLER inserted into the appliances produced in the Nyíregyháza factory called HUY.

The device allows to cool the drinks positioned inside rapidly.

The operation of the device is based on the principle that the forced cold ventilation cools the drinks more rapidly.

Its capacity is big enough to insert 33 cl bottles till 2 litre bottles.

The device is inserted into the specific appliances directly in factory and cannot be installed freely in any appliance since it needs specific constructive characteristics.

The risk to freeze the drinks is avoided if the device is used properly.

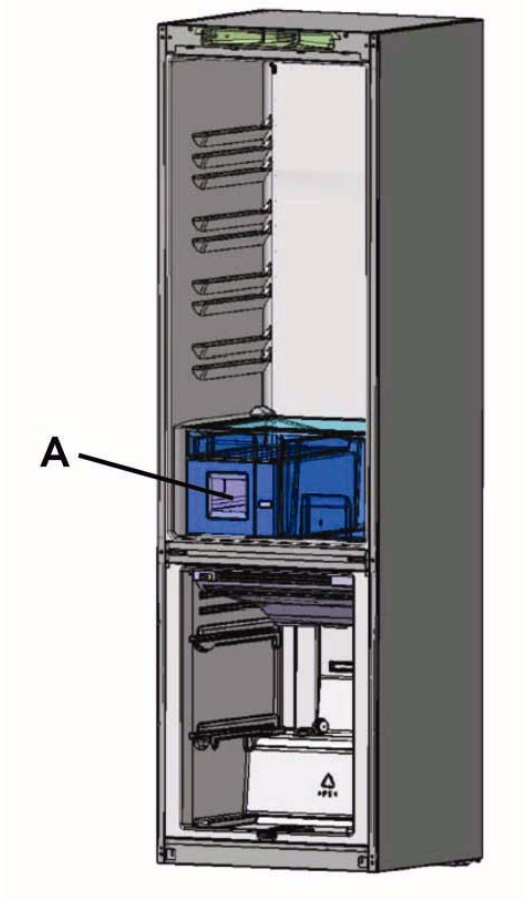
The controls are to be found at the side of the cooler.

The electronic board is ERF T100.

The electronic board of the cooler communicates with the main electronic board of the appliance in order to show the user the correct operation of the device.

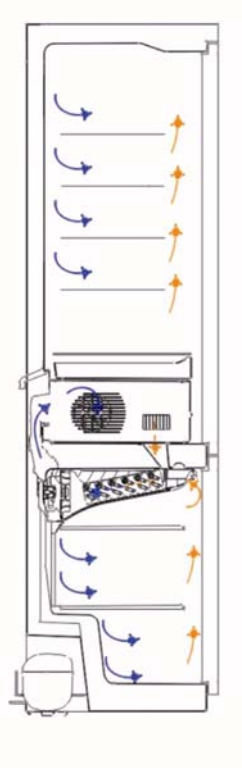
The rapid drink cooler is inserted into the cooler compartment:

Key:
A = Rapid drink cooler

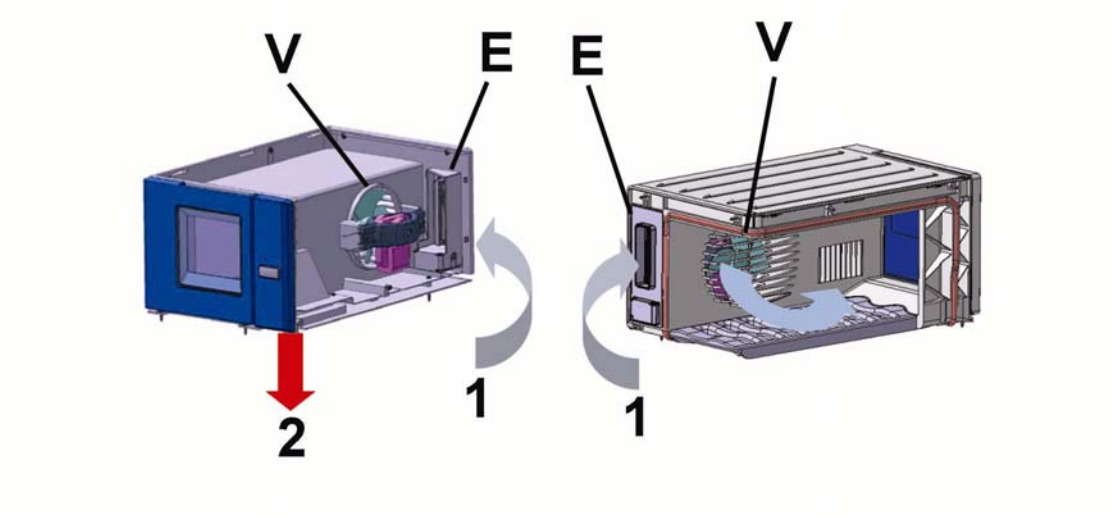


2 AIR CIRCULATION

The cold air that circulates inside the device comes from the cold module positioned in the freezer compartment.



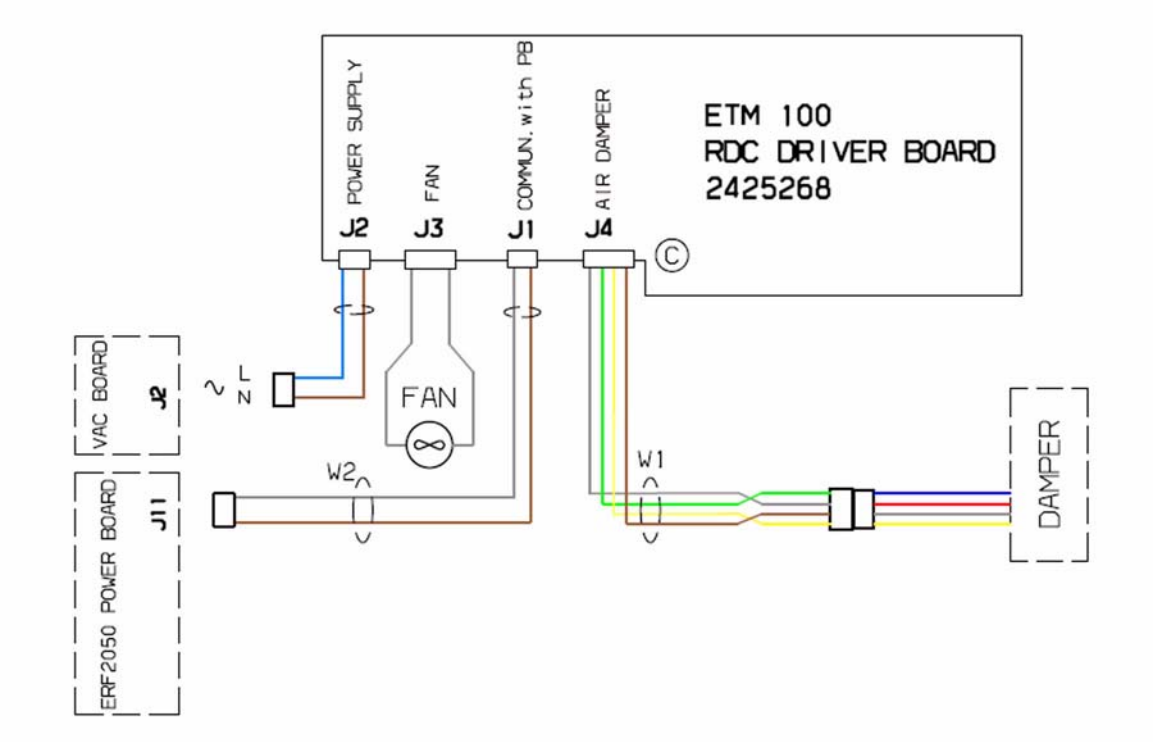
When the rapid drink cooler is activated, the damper E opens the flap and allows the aspiration of the cold air 1 from the freezer through the switching on of the fan V located inside the device.



The air 2 that is not cold anymore exits from the rapid drink cooler and returns to the freezer.

3 ELECTRIC WIRING

(Check the specific diagram for each model!)

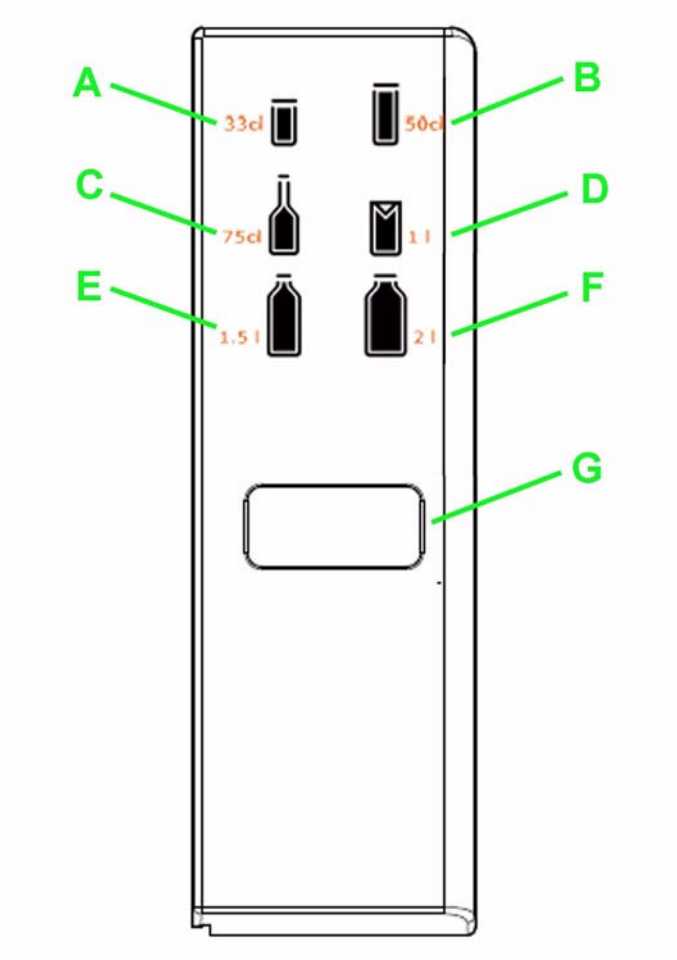


Key:

SYMBOLS	DESCRIPTION
POWER SUPPLY	POWER SUPPLY 220V-AC
FAN	FAN
COMMUN. with PB	COMMUNICATION with power board
AIR DAMPER	AIR FLOW REGULATOR (Damper)
ETM 100 RDC DRIVER BOARD	ETM 100 board RAPID DRINK COOLER
VAC BOARD	VAC board
ERF 2050 POWER BOARD	ERF 2050 power board

4 COMPONENTS

4.1 Control panel



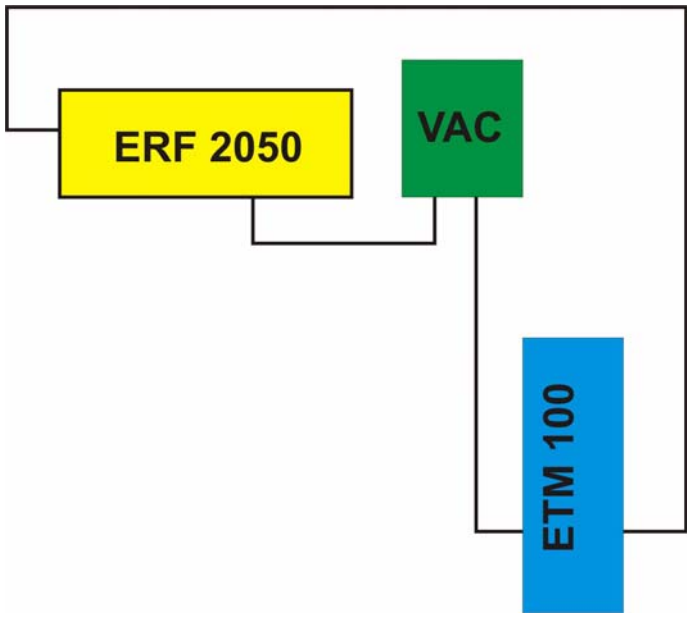
Key:

A. LED for drink type: 33 cl
B. LED for drink type: 50 cl
C. LED for drink type: 75 cl
D. LED for drink type: 1 l
E. LED for drink type: 1,5 l
F. LED for drink type: 2 l
G. ON/OFF button

4.2 Electronic board ETM 100

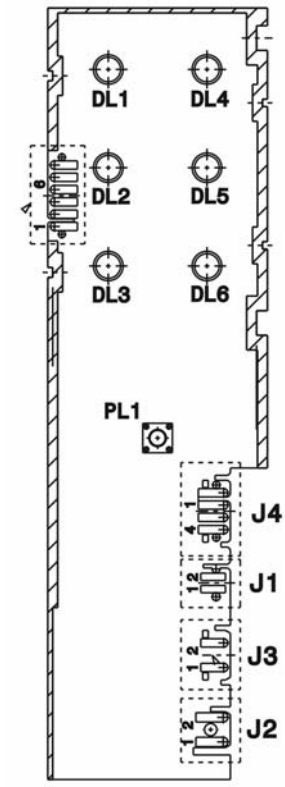
For the correct operation of the rapid drink cooler and of the appliance into which it is inserted, the ETM 100 board is powered by the VAC board (controlled by the ERF2050 power board) because if the refrigerator is off, then also the rapid drink cooler must be off.

Moreover, the ETM 100 board of the rapid drink cooler must be connected to the ERF 2050 board to communicate to this one that the device is operating.

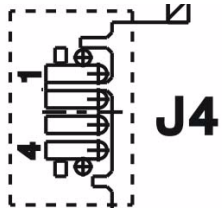
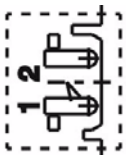
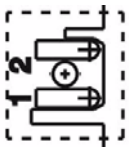


The electronic board of the rapid drink cooler is of the ETM 100 type.

Key:

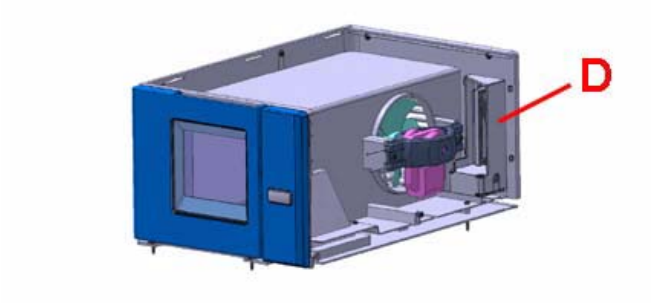


DL1	LED
DL2	LED
DL3	LED
DL4	LED
DL5	LED
DL6	LED
PL1	ON/OFF button
J1	Connector for communication ERF 2050 power board
J2	Connector for power supply from VAC board
J3	Connector for fan
J4	Air flow regulator (damper)

	1. Damper 2. Damper 3. Damper 4. Damper
	1. Output (-) for ERF 2050 power board 2. Output (+) for ERF 2050 power board
	1. Fan neutral 2. Fan line
	1. Line from VAC board 2. Neutral from VAC board

4.3 Air flow regulator (damper)

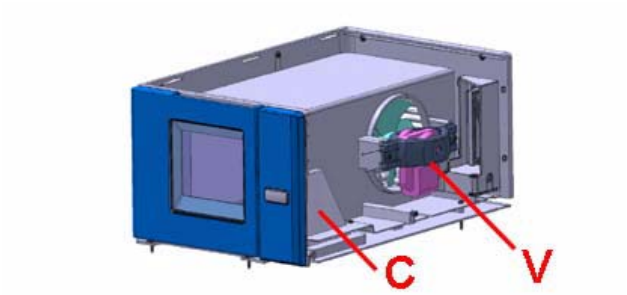
The passage or not of cold air from the freezer compartment depends on the damper D, which can have only 2 fixed positions, opened or closed.



The damper consists of a door and a direct current stepping motor and it is connected to the ETM 100 board by means of a 4-pole connector.

4.4 Fan

The cold air coming from the freezer compartment is sucked in by the fan V and returns to the cold module by means of the C duct.



5 MAIN FUNCTIONS

5.1 Normal

Warning: Unplug the appliance before operating.

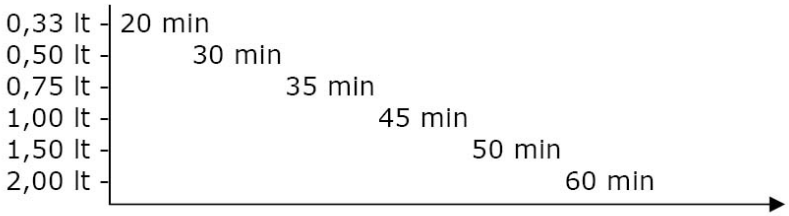
The rapid drink cooler functions only if the refrigerator is on.

To activate the device:

- push ON button
- the LED corresponding to the drink type 33 cl lights up
- select the desired drink type pushing the ON button (if the last drink type is overcome, the rapid drink cooler switches off)
- wait about 3 seconds, then the device will start the automatic cooling

Once the rapid drink cooler has been activated:

- the air flow regulator (damper) is opened
- the fans of the device and the cold module operate
- the compressor is on
- the timer in the ETM 100 board starts the count down according to the following time table



- a logic signal is sent to the ERF 2050 power board to signal the operation of the device
- the signalling to the user, that the device is operating, occurs through the switching on of the relative symbol (highlighted in red) on the display board

At the end of the count down:

- a logic signal is sent to the ERF 2050 power board to signal that the device has terminated its function
- the LED corresponding to the drink type selected remains on
- the air flow regulator (damper) is closed
- the fan of the device is off
- the buzzer of the ERF 2050 display board emits a signal which lasts 1 second every 10 seconds (for a max. time of 30 minutes)
- the signalling to user, that the device has terminated its function, occurs through the flashing of the relative symbol (highlighted in red) on the display board

To switch off the device:

- push the ON/OFF button of the device (in any case, after 30 minutes the device switches off automatically)

When the device switches off:

- the buzzer switches off
- the LED corresponding to the drink type switches off
- a logic signal is sent to the ERF 2050 power board to signal that the device is off

IMPORTANT NOTE:

The operation of the rapid drink cooler has the priority on the cooler operation.

Actually, if the rapid drink cooler is used during the defrosting phase of the refrigerator, then the defrosting procedure is interrupted and the compressor is actioned together with the two fans.

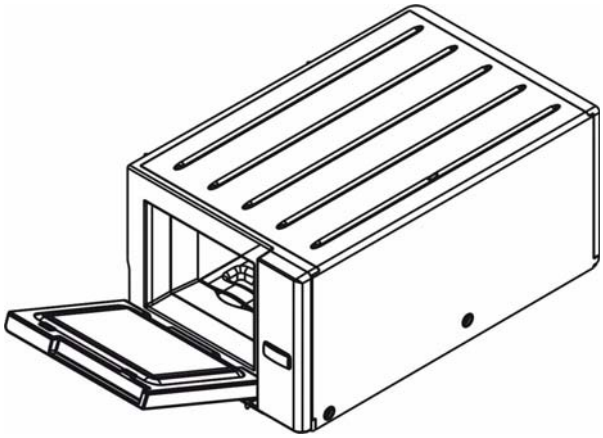
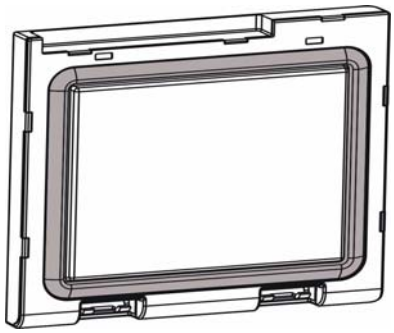
5.2 Device in stand-by

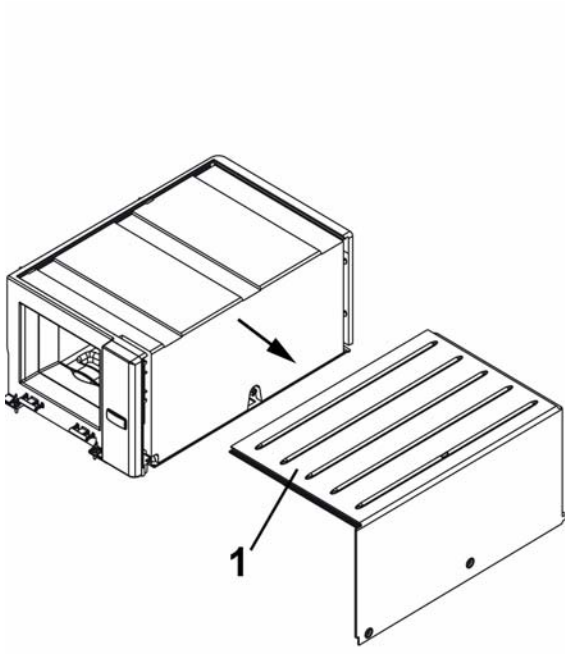
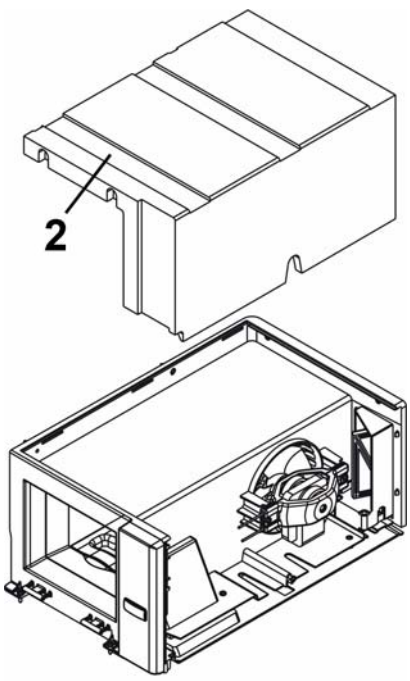
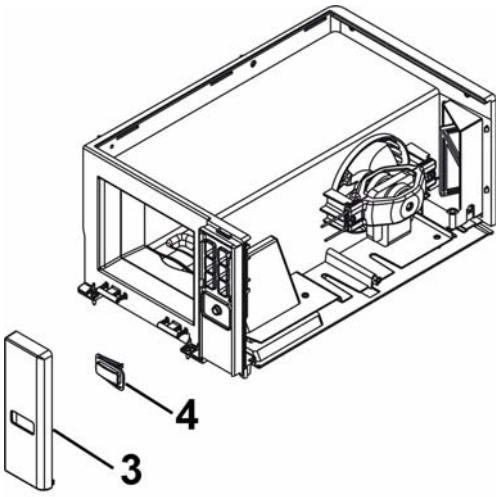
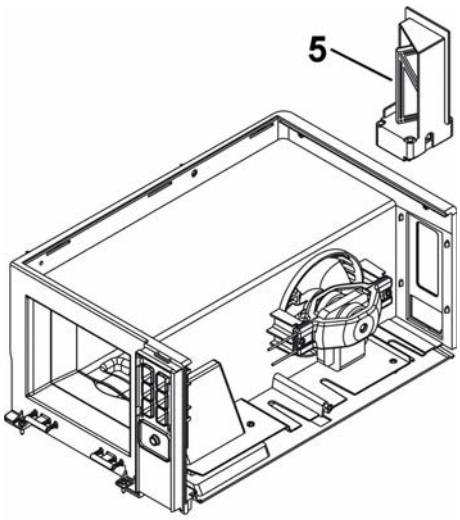
If the rapid drink cooler is not used to cool drinks, then it can be used as drawer to preserve food, since the inside temperature is the same as the temperature of the drawer at the side.

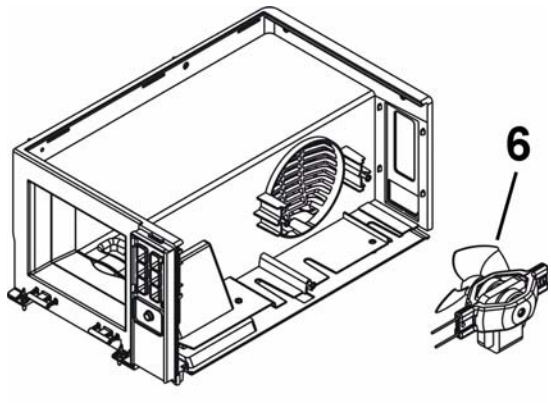
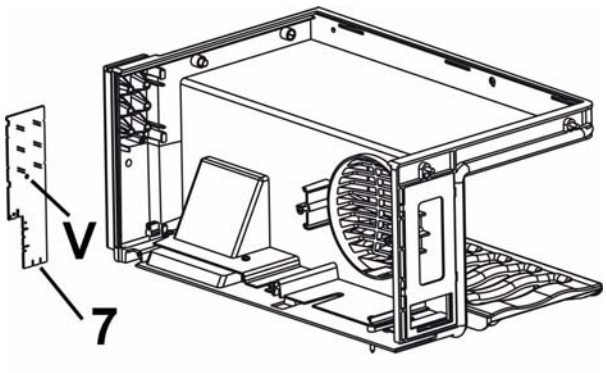
6 ACCESSIBILITY

Warning: Unplug the appliance before operating.

To access the internal components of the device (electronic board, fan and damper) perform the following operations in sequence:

	
a. Open the door of the rapid drink cooler and release it from the 2 hooking pins as described below	b. The door magnetic gasket (highlighted in grey) can be replaced because it is fixed
	
c. Insert a screwdriver keeping the door inclined at 45°	d. Turn the screwdriver to release the door from the hook

	
e. Remove the cover (1) from the device following the arrow direction	f. Remove the insulation (2) from the device
	
g. Remove the programme plate (3) and the ON/ OFF button (4)	h. Detach the electric connectors, remove the fixing screws and extract the complete device then remove the air flow regulator (damper) (5)

	
i. remove the fan (6) unscrewing the fixing screws	j. remove the ETM 100 electronic board (7) unscrewing the fixing screw V

7 TROUBLESHOOTING

Warning: Unplug the appliance before operating.

7.1 Rapid drink cooler does not activate

If the device does not activate:

- verify that the connection cable between the ETM 100 board and the VAC board is connected directly as indicated in the wiring diagram
- verify that the connection cable between the ERF 2050 board and the VAC board is connected directly as indicated in the wiring diagram

If the above mentioned connections are correct, then replace the ETM 100 and VAC boards.

If the problem persists, then replace the ERF 2050 board.

7.2 Rapid drink cooler activates but does not cool

If the device activates but does not cool:

- verify that the connection cable between the ETM 100 and ERF 2050 boards is connected correctly as indicated in the wiring diagram
- during the normal operation of the appliance verify that the damper is open, on the contrary, replace the faulty component
- during the normal operation of the appliance, verify that the fan of the device is activated and that the air is sucked in as indicated in the chapter “Air circulation”, on the contrary, replace the faulty component
- verify the effective closure of the device door and its seal, on the contrary, replace the faulty component