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 *MANUAL FOR INSTALLATION
INSTRUCTIONS FOR USE*

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Manual for Installation
Instructions for Use

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MANUAL FOR INSTALLATION

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1 Introduction

- The installation and maintenance of air conditioners of this type can be hazardous as they contain cooling gas under pressure and live electric parts.

It is therefore advisable for installation, first startup and maintenance to be performed exclusively by trained, qualified personnel who have read the manual carefully and fully understood its contents. In case of doubts, do not hesitate to contact the Customer Service Department.

- The simpler operations of maintenance, like cleaning and/or filter replacement can be carried out by the user as they are not particularly difficult or hazardous.
 - During assembly and all operations of maintenance, it is important to use the precautions indicated in this manual and on the labels applied to the inside of the devices, as well as any other precautions suggested by good common sense and the safety regulations in effect in the place of installation.
- It is also necessary to wear gloves and goggles at all times when operating on the cooling side of the equipment.
- Welders should take care not to burn themselves when doing any possible welding.

IMPORTANT: To prevent any risk of electrocution it is indispensable to open the main circuit breaker before making any electrical connections or performing any maintenance on the equipment.

- For repairs, use only Original Replacement Parts, available from the supplier.
- The air conditioner must be installed only in locations that are free of hazardous or explosive gasses.
- The equipment is provided with IP 00 protection from moisture, and must not, therefore, be installed in locations where there is a possibility of the formation of condensate (laundries and ironing-shop, etc.).
- To ensure constant good performance of the air conditioner, it should be fully inspected at least once a year by personnel from one of our specialized service centres.
- Take special care not to position the equipment in any way that could hinder normal air circulation through its external pipeline and internal gratings.

2 Technical Data

This part of the manual contains all the data to which reference should be made for proper installation of the device.

Technical Features		Version R22				Version R410a			
		8500	11000	8500HP	11000HP	8500	11000	8500HP	11000HP
Cooling power	BTU	8.150-2.390	10.300-3.020	8.150-2.390	10.300-3.020	8.200-2.405	10.400-3.050	8.200-2.405	10.400-3.050
Heating power HP	BTU			8.150-2.390	10.300-3.020			8.360-2.452	10.500-3.090
Environment air capacity	MC/h	350	390	350	390	350	390	350	390
External air capacity	MC/h	480	550	550	580	480	550	550	580
Noise (minimum)	DbA (press.)	37	39	37	39	37	39	37	39
Coolant	tipo	R22	R22	R22	R22	R410a	R410a	R410a	R410a
Power absorbed	W	850	1090	850/820	1090/1050	920	1230	920/890	1230/1190
COP	WW	2,81	2,77	2,81	2,77	2,61	2,48	2,61	2,48
Power supply	V/Hz	230/50	230/50	230/50	230/50	230/50	230/50	230/50	230/50
Dimensions WXHxD	mm	870X400X280	870X400X280	870X400X280	870X400X280	870X400X280	870X400X280	870X400X280	870X400X280
Weight	Kg	43	46	43	46	43	46	43	46
Diameter of holes in wall MIN.	mm	153	153	153	153	153	153	153	153

Note: The capacities indicated are referred to the following conditions:

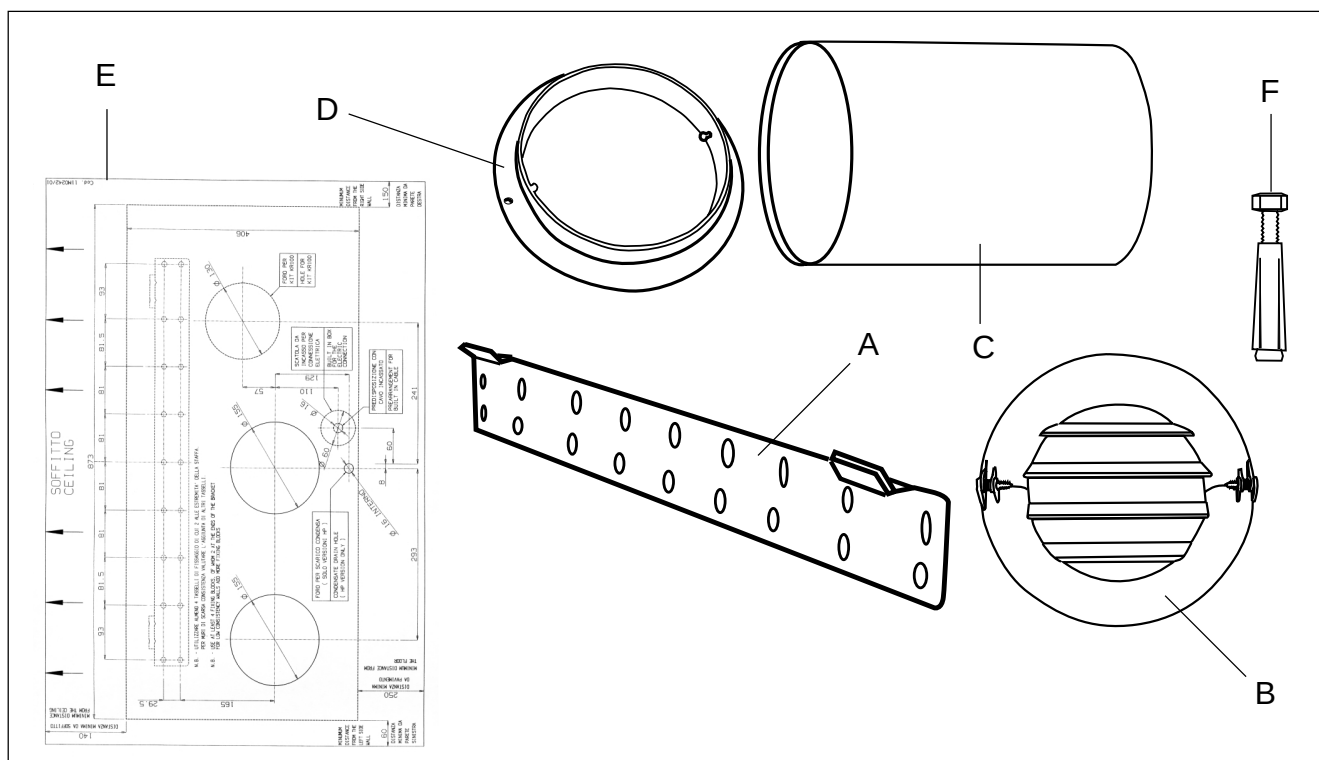
For cooling and dehumidification: Internal unit incoming air 27°C b.s. and 19°C b.u. with incoming air to external unit 35°C b.s.

For heating: Internal unit incoming air 21°C b.s. with external unit incoming air 7°C b.s. and 6°C b.u.

2.1 List of parts supplied

The supply includes the parts listed in the table below. Before beginning to assemble the unit, make sure all the parts are within easy reach.

DESCRIPTION	QUANTITY
A Wall fastening bracket	1
B External gratings for air entrance and exit	2
C Pipes to fit in holes in wall	2
D Pipe fastening inner flange	2
E Paper template for drilling holes	1
F Kit of screws and anchor bolts	1



3 Installation Procedure

For best results, follow the instructions for installation provided in this part of the manual. Failure to follow the instructions could cause the equipment to malfunction for reasons other than its quality and would also invalidate the manufacturer's warranty.

3.1 Dimensions and features of site where air conditioner is installed

Before installing the air conditioner, it is essential to make an accurate calculation of the heat load in summer (and cold load in winter for models with heating pump) at the site of installation.

The more accurate this calculation is made the better the air conditioner will be able to do its job.

To make these calculations, refer directly to the regulations in effect (UNI ref. Law 10/91) or to the tables, both printed and computerized, based on those regulations.

For particularly significant applications, we recommend contacting expert heating engineers.

As far as possible, in any case, it is important to try and reduce major thermal loads by the following means:

Large glass panes exposed to sunlight should be provided with curtains on the inside or shades on the outside (Venetian blinds, verandas, refracting films, etc.)

The air-conditioned room should be closed as much of the time as possible.

Halogen spotlights or other electrical equipment with high power consumption should not be used in the room (toasters, steam irons, hot plates for cooking, etc.).

3.2 Choice of best position for installing the air conditioner

The air conditioner must be installed on a wall that communicates with the outside.

To prevent bothersome drafts (GB DRAUGHTS) the air conditioner should be installed in positions where the air coming out of the grating does not flow directly toward the zones used by the people in the room (beds, desks, dining tables, armchairs, sofas, etc.) .

CAUTION: After determining the best place for installation as described above, check to make sure that the wall can be drilled in that point without interfering with other structures or installations (beams, piers, pipes, wires, etc.).

Check again to make sure there are no obstacles to air circulation through the holes to be drilled due to plants and their leaves, slats or panelling, blinds, gratings or grids too dense, etc.).

3.3 Drilling the wall

This operation should be carried out using the proper tools to facilitate your work and prevent excess damage or disturbance to your client. The best tools for drilling large holes in walls are special drills called core borers with very high twisting torque and adjustable rotation speed depending on the diameter of the hole to be drilled.

To prevent the creation of large amounts of dust and rubble due to drilling, the core borer can be fitted with a vacuum system applied by means of suction cups to the drilling zone. Our Service Department can give you all necessary information to enable you to find these devices.

To drill the holes, proceed as follows:

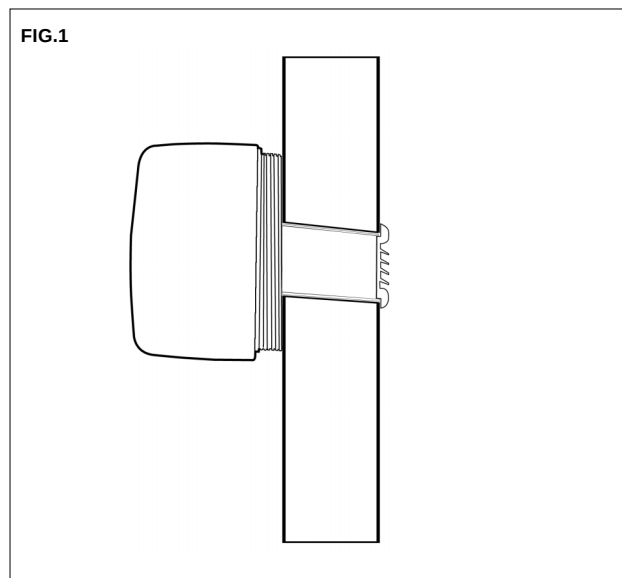
Fasten the drilling template to the wall leaving the necessary space from the ceiling, floor and side walls as shown on

the template. Use adhesive tape to fasten it in place.

Use a small drill or punch to mark, with extreme care, the exact centre of each of the holes to be drilled.

Using a core boring head measuring at least 154 mm to drill the two holes for entry and exit of the air.

Note: The holes should have a slight outward inclination to prevent any backflow of water from the pipes (see fig.1).



Most of the material removed will be expelled outward, so make sure it cannot fall and injure people.

To prevent damage to the masonry on the outside of the building, proceed with care to drill the last part of the hole, reducing the pressure on the drill.

Next, drill the holes for anchoring the fastening brackets to the wall using as a first option the 4 holes on the ends of the bracket as shown on the drilling template (see fig. 2). If the wall is not very solid, it is advisable to use some extra anchor bolts. As you can see, the bracket can be fastened in a number of different ways and positions. The air conditioner is heavier on the left-hand side, so it is best to make sure of a solid anchorage on that side. The anchor bolts provided require holes with a diameter of 10 mm. In any case, the wall should be inspected carefully to determine the best possible anchorage and type of bolts suitable for particular situations.

Warning: The manufacturer is not liable in case of underestimation of the structural consistency of the anchorage made at the time of installation. We therefore recommend that you perform this operation with the maximum care as, if not done properly, it can cause serious damage to persons and property.

When installing models equipped with heating pump, if no drainage well for condensate has been provided built into the wall (see paragraph 3.4), it will be necessary, to allow for drainage of the condensate, to drill a hole through the wall measuring 16 mm in diameter in the position shown on the template (see fig.2).

3.4 Provision for draining condensate for machines with heat pump.

When the machine is heating, it produces condensate that has to be eliminated through a specific drain line, otherwise the machine will not work. Drainage occurs by gravity. For this reason, it is essential for the drain line to have a minimum inclination of at least 3% throughout its length. The pipe can be rigid or not, with a minimum internal diameter of 16 mm.

If the line drains into a sewer system, it should be provided with a trap ahead of the main outlet.

The trap should be at least 300 mm lower than the inlet opening on the air conditioner (fig. 3).

FIG. 2

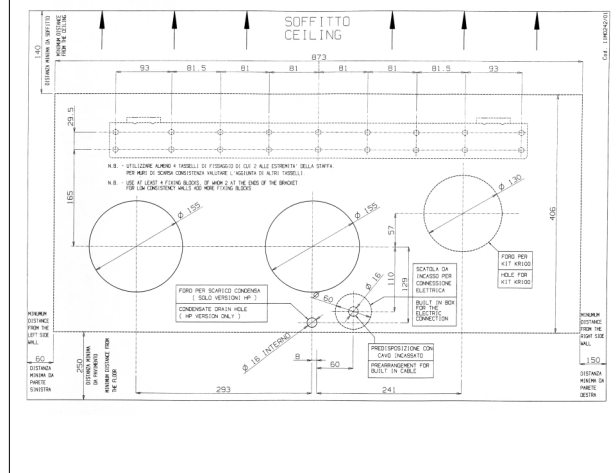
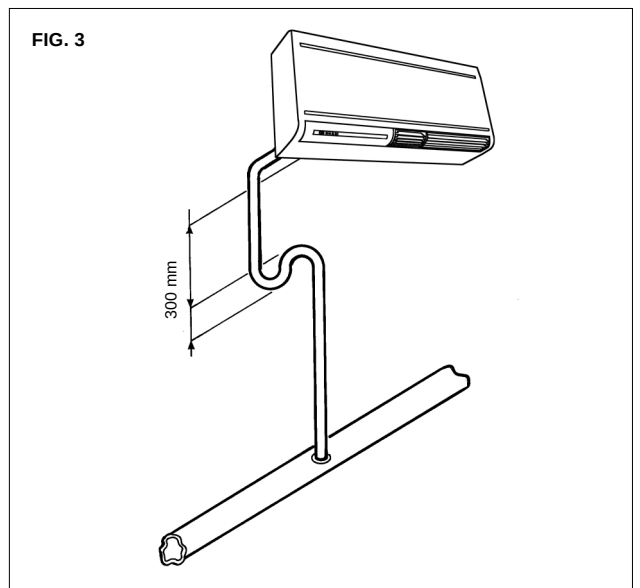
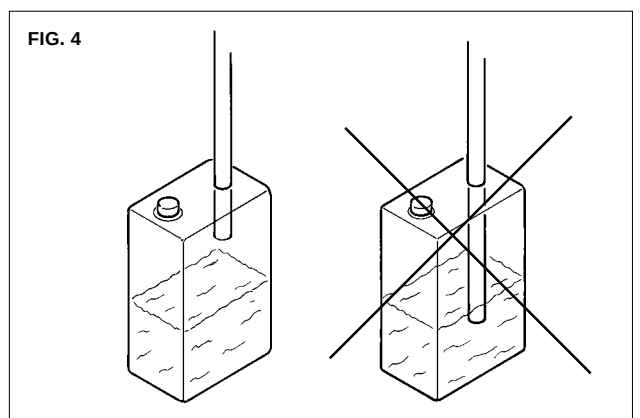


FIG. 3



If the drainpipe drains into a vessel (tank or other container), this container should not be sealed and the drainpipe should not remain immersed in the water (see fig. 4).

FIG. 4



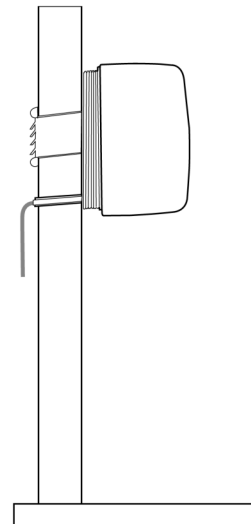
The correct position for the pipe inlet on the machine is shown on the template for drilling and positioning the machine (see also fig. 2).

The air conditioner is equipped with a pipe with an external diameter of 14 mm for drainage of condensate. This pipe protrudes from the machine for a length of about 400 mm. The pipe should be fitted inside the one provided by you for a distance of at least 200 mm, without any sharp bends that could obstruct it.

When draining toward the outside, the pipe can be inserted through the wall (always making sure to give it a suitable inclination) (see fig. 5).

CAUTION: make sure, in this case, that the water expelled outward does not damage or disturb persons or property. During the winter this type of drainage may cause sheets of ice to form.

FIG. 5

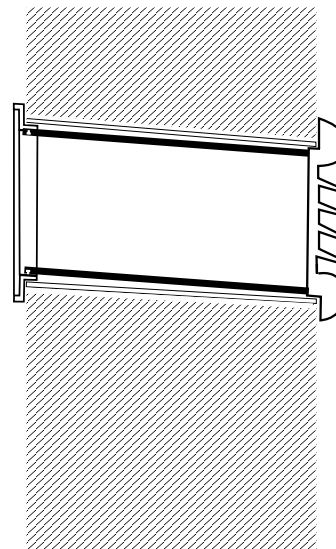


3.5 Installation of air pipes and external gratings

After drilling the holes, the plastic pipes supplied with the air conditioner have to be fitted through them. The pipe with insulation on the inside has to be fitted in the right-hand hole with the insulated part toward the inside as indicated on the label applied to it. **The length of the pipes should be 55 mm less than that of the wall.** To cut the pipe, a normal handsaw can be used. After cutting the pipes, fit the ends into the two internal anchoring flanges (fig. 6).

Next, fit the pipes into the holes in the wall and fasten the flanges with 4 anchor bolts with diameter 6, taking care to keep the two fastening holes in a horizontal position.

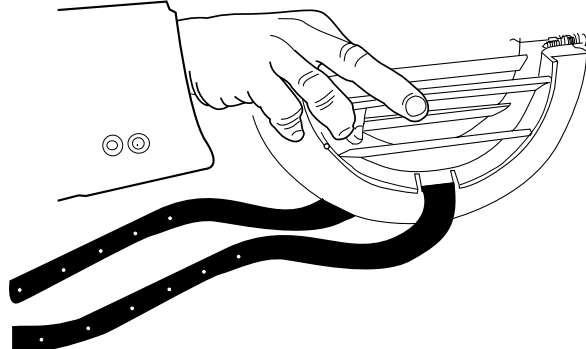
FIG. 6



To position the external grating, proceed as follows:

- Grasp the two rubber belts attached to the grating in one hand.
- Fold the outer gratings in half by grasping them with your free hand along the fold line and inserting your fingers inside the fins (fig. 7). Insert your arm inside the pipe until the grating protrudes all the way outside.

FIG. 7



- Let the grating open, but keep your fingers inside the fins.
- Turn the grating so that the fins are perfectly horizontal with the inclination toward the outside (fig. 8).
- Pull the grating toward you.
- Tighten the rubber belts and fasten them to the two pins on the inner flange.
- Cut the excess part of the belt.

WARNING: If the external grating is accessible, to prevent the hazards resulting from its possible removal (insertion of the hands into the pipes and touching moving or powered parts) it is absolutely essential to fasten it to the wall with 4 anchor bolts with a diameter of 6 mm.

3.6 Power supply connection

The air conditioner is equipped with a power supply cable and plug.

If it is installed near an outlet, you need only plug it in. In this case, it is important to make sure the outlet to which you are plugged in is effectively grounded and connected to the mains by wiring of adequate size (minimum 1.5 sq.mm. cross section).

To make an electrical connection with the shielded cable (recommended for installations high on the wall) proceed as follows:

Install a shunt box in the wall in the position shown on the installation template (fig. 2), where you should provide a power cable with a cross-section (two poles plus ground wire) of 2,5 sq.mm.

WARNING: The external power line should be provided with an overload circuit breaker with suitable capacity for the rating of the machine.

Make all connections in compliance with the laws in effect. Close the shunt box with its cover after drilling a hole in it for passage of the cable.

Alternatively, you can use a cable in the wall in the position shown on the template, for making the connection. In this case, remove the casing (as described in paragraph 4.1) and connect the cable to the power terminal board.

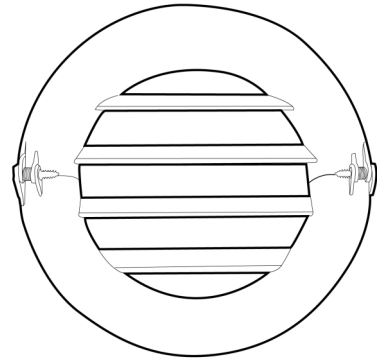
CAUTION: these operations should be performed with the machine already positioned on the bracket. Read the instructions carefully before completely the electric connection.

4 Preparation for installation of conditioner at the top of the wall (with downward projection of the air)

The air conditioner is assembled in the factory ready to be installed low on the wall. The air outlet, in this case, is at the top of the air conditioner with the recycle grating and control panel.

To prepare the air conditioner for installation at the top of the wall, proceed as follows:

FIG. 8

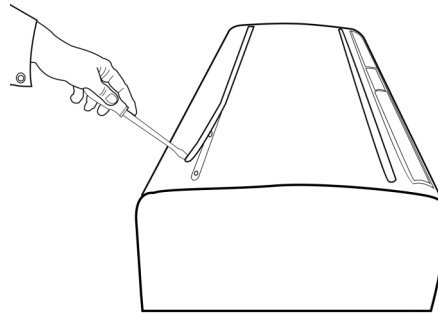


4.1 Removal of front casing

NOTE: if the air conditioner has not been installed on the wall yet, place it on its back. To not apply heavy pressure to the bottom of the device as this could dent or scratch the casing.

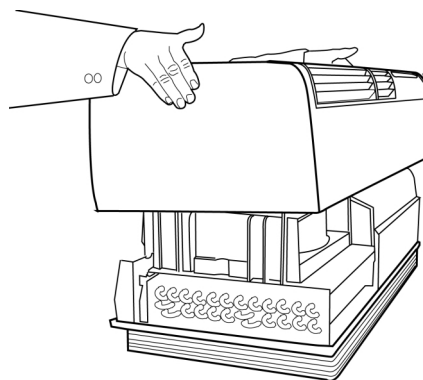
Use a small blade screwdriver to remove the horizontal strips on the casing, applying gentle leverage in the slits along the sides. (see fig. 9). Take care not to scratch the strips or casing with the screwdriver point.

FIG. 9



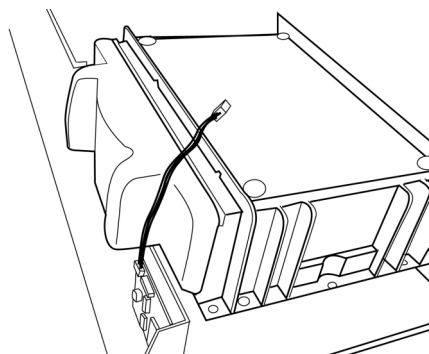
Unscrew the 8 self-threading screws that fasten the casing to the air conditioner. Lift the casing off carefully, pulling it toward you by about 50 cm (see fig. 10).

FIG. 10



Disconnect the fastener on the right that fastens the wires to the airflow deviation baffle adjustment motor (see fig. 11). Now you can remove the casing completely.

FIG. 11



4.2 Preparation of unit

Unscrew the bracket supporting the small circuit board with display leds and reinstall it on the bottom opposite, where you will find two holes on the base (see fig. 12-13).

FIG. 12

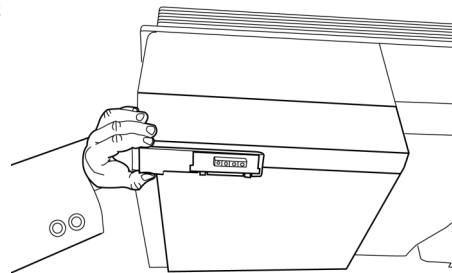
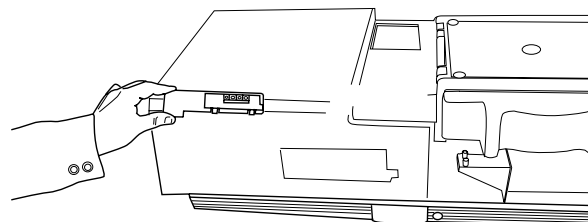


FIG. 13



Make sure the connection plate is securely fastened on the inside of the air conditioner, and apply some insulating tape if necessary. Remove the styrofoam enclosure on the lower right-hand side under the air recycle fan and fit it against the opening above the fan (see fig. 14-15).

FIG. 14

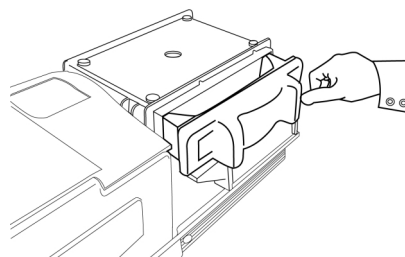
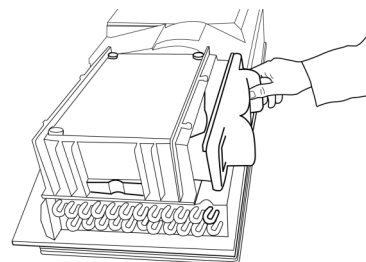


FIG. 15

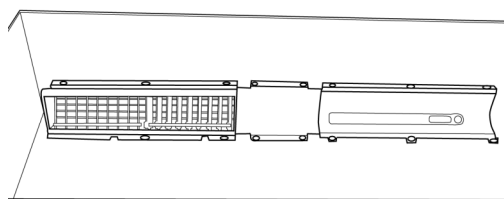


Remove the air outlet grating by removing the fastening screws. Remove the control panel (see fig. 16).

When performing this operation place the casing on a secure surface so as not to scratch or dent it. Remove the plastic plate with the logo and transparent screen for display of the leds from the control panel by pressing on the hooks at the rear. Turn it over (rotate by 180°) and reinstall it on the panel. Reassemble the parts in the opposite position from the original installation, reversing the air outlet grating with the control panel grating.

Turn the casing over so that the air outlet grating is on the lower right-hand side of the device. Connect the plug on the step-step motor of the grating. Fit the casing back on the air conditioner carefully, taking care to hold the wires for the step-step motor to one side so that they do not interfere with the inner part of the air outlet grating. Check

FIG. 16



that all the coupling references of the casing with the rear frame are fully inserted so that the casing is fitted smoothly and evenly all around. Fasten the casing with its eight screws and replace the strips in their slots.

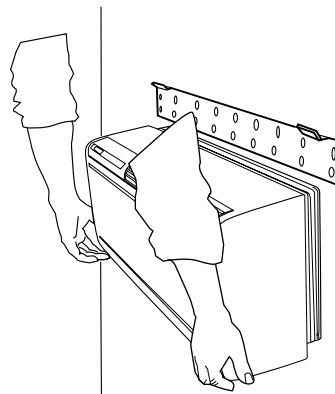
After completing installation, the electronic parts of the air conditioner have to be configured so as to take into account the stratification of heat in the room. This procedure is outlined in paragraph 6 (Operating tests and diagnosis of possible malfunctions).

5 Fitting the unit on bracket

After checking again that the fastening bracket is securely fastened to the wall, and that any necessary preparations for electric connection and condensate drainage have been made, you can fasten the air conditioner to its supporting bracket. Lift it up holding the sides of the bottom (see fig. 17).

To facilitate the operation of fastening it to the bracket, tilt it slightly toward you.

FIG. 17

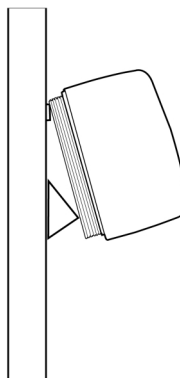


To make the electrical connection and fasten the drainpipe, place a wedge between the air conditioner and the wall (see fig. 18).

After these operations have been carried out, the air conditioner can be pushed firmly against the wall so that the bottom hook catches.

When you have finished, inspect carefully to make sure there are no fissures at the back of the air conditioner (the insulating gasket must fit firmly against the wall) particularly in the zone where air enters and leaves the machine.

FIG. 18



6 Working tests and identification of possible malfunctions

The program introduced in the microprocessor of this device makes it possible to run a brief self-test to ensure that the machine functions normally by starting each of its internal components.

To run the self-test, proceed as follows:

- Power the air conditioner and make sure it is on stand-by.
- Use a sharp object to press the microkey located under the hole on the left of the control panel for at least 4 sec.
- At the beginning and end of the self-test procedure the status of configuration of the machine will be displayed for a few seconds as follows:

red led (filter): off = UNICO
on = UNICO HP (with heat pump)

green led (compr.): off = with correction of room temperature
on = without correction of room temperature

yellow led (timer): off = without correction of room temperature

green led (power): on = with correction of room temperature
off = stand-by in case of black-out
on = restart in case of black-out

- Check after a few seconds to see whether the equipment heats normally (if equipped with heat pump function) for about 2 minutes and then, after a few seconds, that it cools for another 2 minutes. Before concluding the self-test, the electronic part tests the temperature probes to make sure they are operating normally. If any of these should not be working, the corresponding signal led remains lit for 20 sec. (see table on next page).

Starting from the left:

CODE ALARM	DESCRIPTION	green LED POWER	orange LED TIMER	green LED COMPR.	red LED FILTER
1-FS	dirty filter				O
2-HTI	internal battery overheat			O	
3-HTE	external battery overheat			O	O
4-LT	internal battery low temp.		O		
5-HP	high pressure		O		O
6-CF/RL	batt. temp. not reached		O	O	
7-OF	water level		O	O	O
8-CKS	eeeprom parameters not valid		O		
9	-	O			O
10-TSF	short on room sensor	O		O	
11-TSF	room sensor disconnected	O		O	O
12-TSF	short on evaporator sensor	O	O		
13-TSF	evap. sensor disconnected	O	O		O
14-TSF	short on condenser sensor	O	O	O	
15-TSF	condenser sensor disconnected	O	O	O	O

The end of the self-test will be signalled by all the leds lighting up at once and blinking ten times, as well as by an acoustic signal.

At this time, you can adjust the temperature reading on the room temperature sensor. This correction is important if the air conditioner is installed high on the wall in a room where the warm air tends to stratify upward (as in rooms with high ceilings or other sources of heat besides the air conditioner). The sensor will read a temperature 3°C lower than the effective one, in this case, to compensate for the difference between the lower inhabited part of the room and the temperature at the height of the sensor.

To enter or remove this correction proceed as follows:

- 1 Check the status of the machine as described previously, and if no correction has been made, press the button on the console while the acoustic signal is on at the end of the self-test.
- 2 To remove the correction, press the button while the acoustic signal is on at the end of the self-test. The machine is set in the factory without correction of the temperature.

In addition to the self-test (**that can be made under any conditions of room temperature**) we recommend that you also test the product in the various operating modes accessible to the user (see the user manual). One important test you should make concerns regular evacuation of condensation water on the models with heat pump. To check this, keep the machine running for at least 4-5 hours in the heating mode. If the water does not drain, there should be an "overflow" alarm.

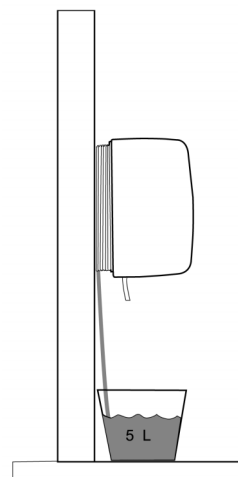
6.1 Evacuation of condensation water in case of emergency

If there should be a malfunction in the condensation water drain system, the air conditioner stops working and signals, with flashing yellow and green lights (the second and third leds from the left), the alarm status.

To enable the air conditioner to work temporarily until the service personnel arrives, you can drain the water out by following these simple instructions:

- Grasp the rubber cap on the bottom centre of the air conditioner behind the edge of the frame facing the wall between your thumb and forefinger.
- Pull the rubber tube closed by the cap out by a few centimetres.
- Remove the cap after placing a bucket or other container underneath it (at least five litter capacity) to collect the water (see fig. 19).
- After eliminating the malfunction the service personnel will take care of closing the evacuation tube.

FIG. 19



7 Periodical maintenance

Air conditioners of this type do not require any particular routine maintenance except:

- Cleaning or washing the room air filter when the red led lights up (see user manual).
- Cleaning of "external air" battery, to be done as needed, depending on the amount of dirt in the external air, once or twice a year. To do this, you must, of course, open the air conditioner by removing its casing and the noise insulation on the inside.
- Cleaning can be done using a vacuum cleaner or soft brush, taking particular care not to damage the aluminium heat exchanger baffles. It may be necessary to use water and detergents to remove heavily encrusted dirt.

NOTE: after cleaning the battery replace the noise insulation carefully matching the edges and gaskets with their reference markings.

8 Recommendations

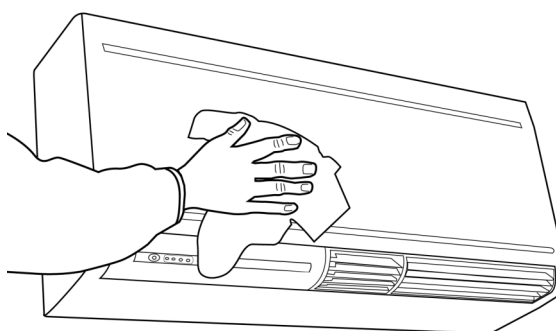
Before you leave the site of installation you should gather up all packing material and use a damp cloth to remove any traces of dust that may have deposited on the machine during assembly (fig. 20).

These operations, though certainly not essential, have a beneficial effect as they enhance the professional image of the installer in the eyes of the client.

To prevent unnecessary calls by the user, before you leave the site of installation it is also a good idea to:

- Explain the contents of the Instruction Manual to the user.
- Show him how to clean the filter.
- Explain when and how he should contact the Service Department.

FIG. 20



INSTRUCTIONS FOR USE

INSTRUCTIONS FOR USE

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1 Presentation

First of all, we want to thank you for choosing our air conditioner.

As you will discover, you have made a winning choice because you have purchased a product that represents the state of the air in home air conditioning technology.

This manual has been drawn up to provide you with all the explanations you need to manage your air conditioning system in the best possible way. We ask you to read it carefully before you use the equipment.

By following the instructions in the manual you can be sure of obtaining the best results with your air conditioner for years of comfort with the lowest possible costs in terms of energy consumption.

2 IMPORTANT RECOMMENDATIONS

1) Installation and connection of the air conditioner should be carried out by specialized personnel in possession of the qualifications specified in Law 46/90. The instructions for installation are provided in the specific manual.

2) No structural object (furniture, curtains, plants, leaves, blinds, etc.) should ever obstruct the normal flow of air from either the internal or external gratings.

3) Never lean or, worse yet, sit on the casing of the air conditioner as this could cause serious damage to the external parts.

4) Do not turn the horizontal airflow baffles by hand. Always use the remote control to adjust baffle position.

5) If the unit leaks water, switch it off immediately and disconnect it from the power mains. Call the nearest service centre.

6) When the air conditioner is heating, it has to periodically eliminate any ice that could form on the external battery. While it is doing this, the machine keeps running but does not heat the room. This lasts for a brief period of time, from 3 to a maximum of 10 minutes.

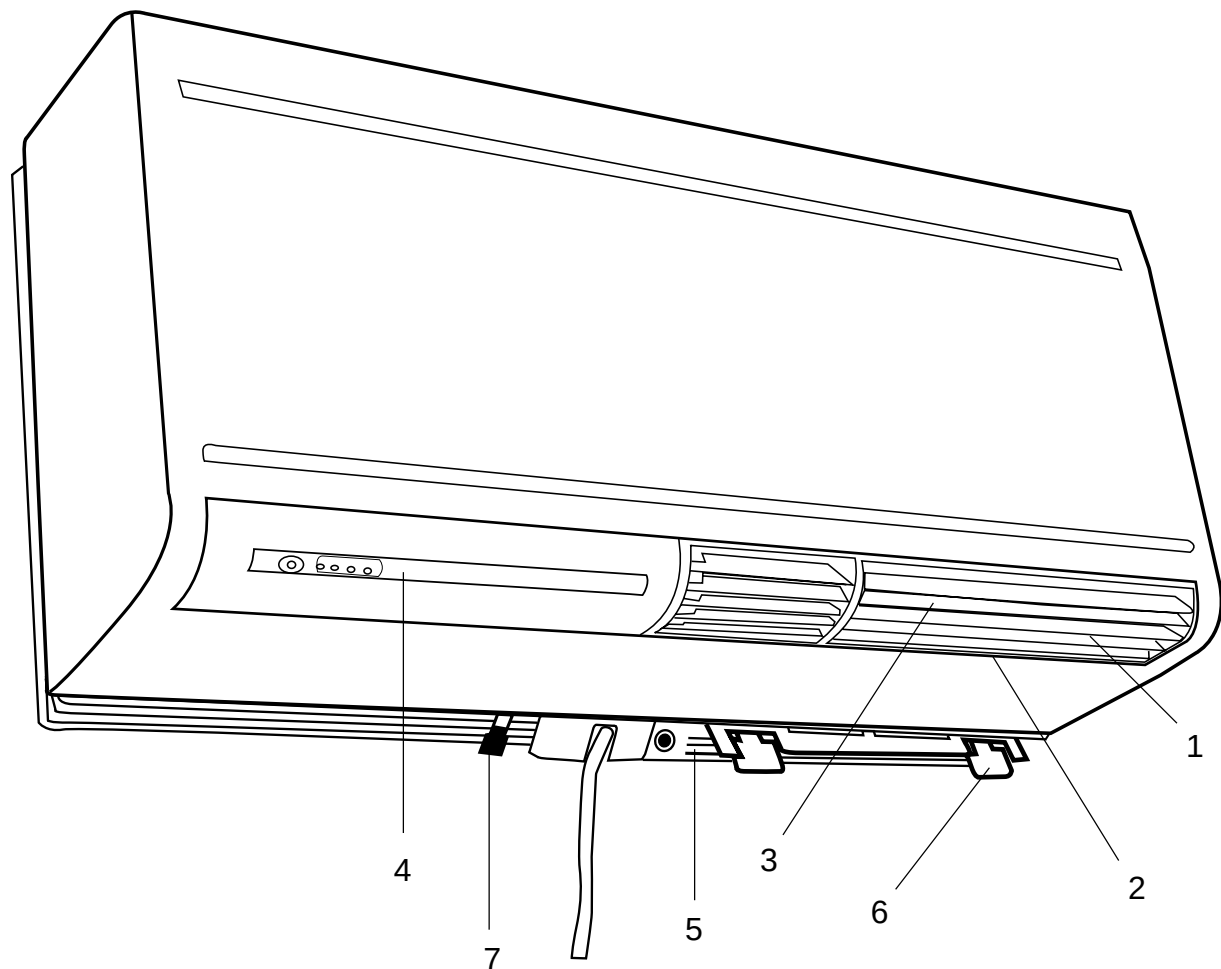
7) The air conditioner must not be installed in rooms where explosive gasses develop or where there are conditions of heat and humidity beyond the maximum limits indicated in the installation manual.

8) Clean the air filter periodically, as described in the specific paragraph.

2.1 Names of parts

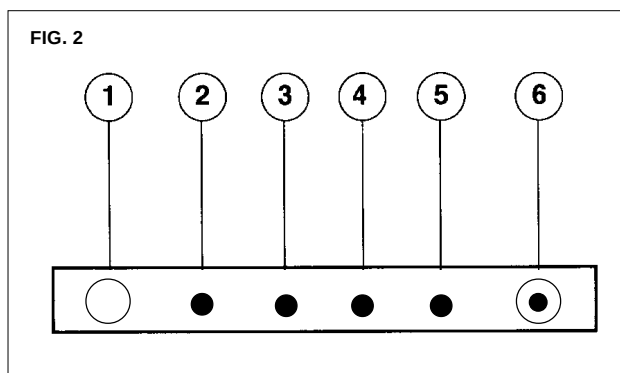
- 1) Air outlet grating.
- 2) Cursors for lateral adjustment of airflow.
- 3) Motor-operated air baffles for upward airflow
- 4) Alarm display console.
- 5) Air intake grating.
- 6) Grips for removal of air filter.
- 7) Rubber hose with cap on end for evacuation of condensation water in case of emergency.

FIG. 1



3 Description of signal console

- 1) Transparent zone of receipt of remote control signal.
- 2) Green led indicating machine is running (When the machine is on stand-by this light is off).
- 3) Yellow led indicates on/off programming is in use.
- 4) Green led indicates cooling compressor is on.
- 5) Red led indicates air filter clogged.
- 6) Service microkey.



4 Technical Data

Technical Features		Version R22				Version R410a			
		8500	11000	8500HP	11000HP	8500	11000	8500HP	11000HP
Cooling power	BTU	8.150-2.390	10.300-3.020	8.150-2.390	10.300-3.020	8.200-2.405	10.400-3.050	8.200-2.405	10.400-3.050
Heating power HP	BTU			8.150-2.390	10.300-3.020			8.360-2.452	10.500-3.090
Environment air capacity	MC/h	350	390	350	390	350	390	350	390
External air capacity	MC/h	480	550	550	580	480	550	550	580
Noise (minimum)	DbA (press.)	37	39	37	39	37	39	37	39
Coolant	tipo	R22	R22	R22	R22	R410a	R410a	R410a	R410a
Power absorbed	W	850	1090	850/820	1090/1050	920	1230	920/890	1230/1190
COP	W/W	2,81	2,77	2,81	2,77	2,61	2,48	2,61	2,48
Power supply	V/Hz	230/50	230/50	230/50	230/50	230/50	230/50	230/50	230/50
Dimensions WXHxD	mm	870X400X280	870X400X280	870X400X280	870X400X280	870X400X280	870X400X280	870X400X280	870X400X280
Weight	Kg	43	46	43	46	43	46	43	46
Diameter of holes in wall MIN.	mm	153	153	153	153	153	153	153	153

Note: The capacities indicated are referred to the following conditions:

For cooling and dehumidification: Internal unit incoming air 27°C b.s. and 19°C b.u. with incoming air to external unit 35°C b.s.

For heating: Internal unit incoming air 21°C b.s. with external unit incoming air 7°C b.s. and 6°C b.u.

5 Control of Air Conditioner using the remote control unit

The remote control supplied with the air conditioner is designed to be extremely sturdy and to ensure excellent performance in use, but it should nevertheless be handled with some care.

For example, do not:

- leave it out in the rain, spill water on its keyboard or drop it into water.
- subject it to impacts or drop it onto hard surfaces.
- leave it exposed to direct sunlight.
- place obstacles between the remote control and the air conditioner while using it.

Furthermore:

- if other devices operated by remote control (TV, radio, stereo systems, etc.) are located in the same room as the air conditioner, there may be interference,
- electronic and fluorescent lighting may interfere with communications between the remote control and the air conditioner,
- remove the batteries in case of prolonged disuse of the remote control.

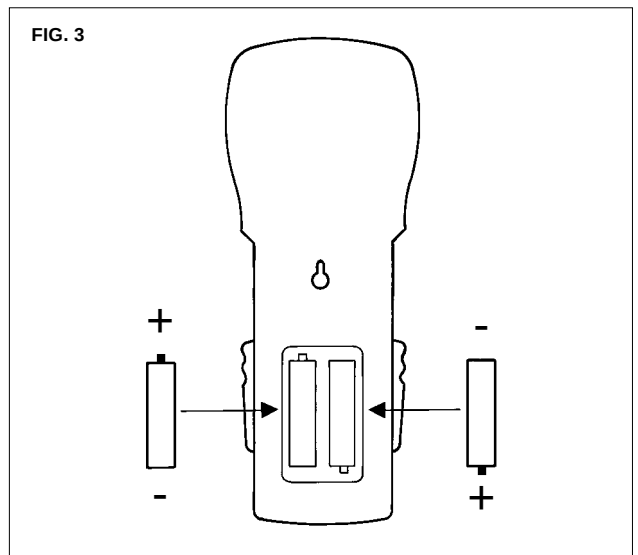
Insertion of batteries

Use only 2 dry cell batteries type LR03 with 1,5 V (supplied with the remote control unit). Dispose of used batteries only at the special collection points provided by the local authorities for this type of waste.

Replace both batteries at the same time. To insert the batteries remove the spring-latch cover on the back of the remote control.

The batteries have to be inserted according to the positive and negative pole markings in the bottom of the battery compartment.

Close the spring-latch cover after inserting the batteries.



Configuration of remote control unit

The remote control is the interface between the user and the air conditioner. It is therefore particularly important to familiarize yourself with the parts of the remote control that relate to this interface.

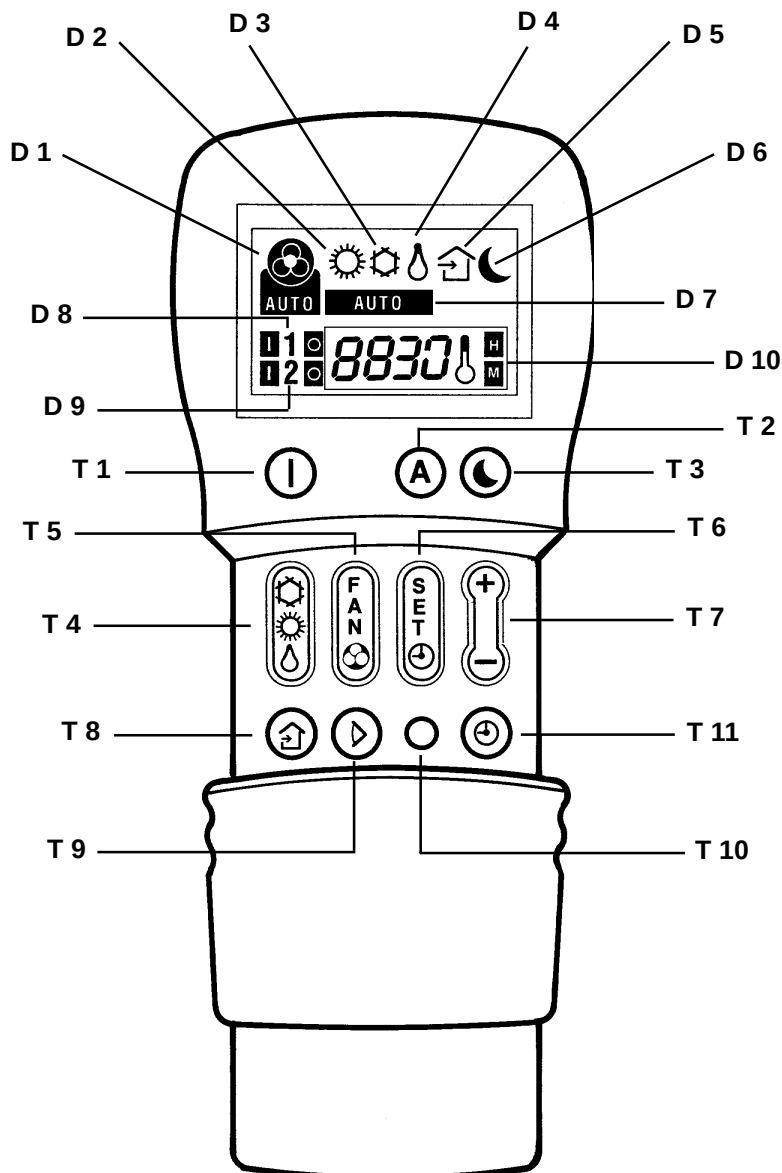
- T1 On/Off.
- T2 Automatic operation.
- T3 Night operation.
- T4 Operating mode selector.
- T5 Fan speed selector.
- T6 Button for setting timer and programs.
- T7 Button for increasing (+) or decreasing (-) the temperature/time settings.
- T8 Button to start external air intake (functions only if the air conditioner is equipped with this accessory).
- T9 Movable baffle adjustment On/Off button.
- T10 Reset button.
- T11 Program start button.
- D Display: shows operating status and settings as they are made.

- D1 Fan speed or automatic operating mode indicator (AUTO).
- D2 Heating.
- D3 Cooling.
- D4 Dehumidifier only.
- D5 External air intake switch.
- D6 Night operation switch.
- D7 Automatic operation switch.
- D8 First operating program switch.
- D9 Second operating program switch.
- D10 Temperature indicator (thermometer) or time indicator (H M).

The remote control is also equipped with a cover with a cursor that can be positioned so as to permit access only to the ON/OFF, AUTOMATIC MODE and NIGHT MODE buttons.

With the cover in this position the air conditioner can be used but none of the settings can be tampered with.

FIG. 4



Switching on and control of operation

To control the air conditioner by means of its remote control device, you must first:

- a) close the main circuit breaker installed on the power line (the personnel responsible for installation will show you where it is), or insert the plug in the socket.

After carrying out the above operations the remote control can be used to control the air conditioner, as follows.

To send commands to the air conditioner, point the front of the remote control toward the air conditioner control panel. The device emits a beep when it receives a command.

The maximum distance for transmission of commands is about 8 meters.

5.1 Switching the unit on and off (button T1)

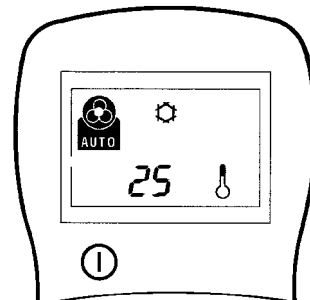
Use this button to switch the air conditioner on or off.

The control system is equipped with a non-volatile memory, so it does not “forget” the settings you have made when you switch it off using this button: they will be called up and applied again when you switch it back on.

This button serves to switch the air conditioner on or off for brief periods of time.

In case of prolonged disuse of the machine, shut it down by opening the main circuit breaker (or cutoff switch) or remove the plug from the socket.

FIG. 6



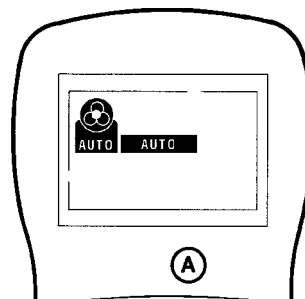
5.2 Automatic Operation (button T2)

This button can be used to operate the air conditioner in the automatic mode so that it automatically keeps the room at optimal temperature and humidity conditions.

The microprocessor on the printed circuitry of the air conditioner has a function that, depending on the temperature in the room, starts the appropriate function of the air conditioner (cooling, dehumidifying, or heating, if equipped with a heat pump) and adjusts the fan speed (except when the dehumidifier is functioning) so as to compensate for the difference between the room temperature and the temperature set on the microprocessor.

This enables it to reach the set temperature more rapidly.

FIG. 7



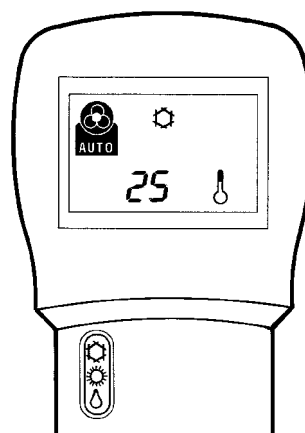
5.3 Cooling function

When used in this mode, the air conditioner dehumidifies and cools the room.

Button T4 is used to select the operating mode. Press until the snowflake symbol appears on the display. First set the desired temperature and fan speed (see the relative paragraphs).

After three minutes (maximum time), the compressor should start up and the air conditioner should start cooling the room. When the compressor starts you will see a green LED light up on the control panel.

FIG. 8



5.4 Dehumidifier only

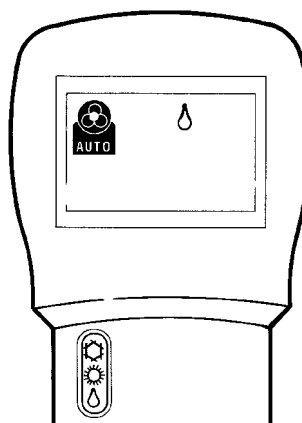
When used in this mode, the air conditioner only eliminates the humidity in the room, practically without changing the temperature. This function can be extremely useful between seasons, particularly on rainy days when the temperature is not uncomfortable but the excess humidity feels unpleasant.

When used in this mode, the air conditioner ignores the temperature and fan speed settings, which are not shown on the display in this case.

To operate the air conditioner in this mode, press Button T4 until the droplet symbol appears on the display with automatic ventilation.

In this operating mode it is normal for the air conditioner to function intermittently.

FIG. 9



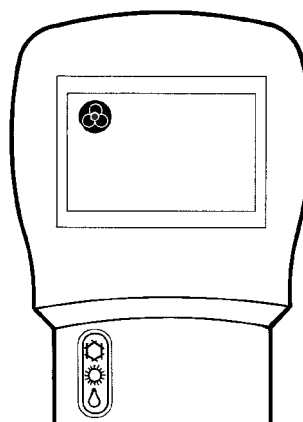
5.5 Fan only

When used in the mode the air conditioner does not act on either the temperature or the humidity in the room, but only keeps the air in circulation.

This operating mode is selected by pressing button T4 until the fan symbol appears on the display.

At this stage you can select the fan speed (see paragraph 5.8).

FIG. 10



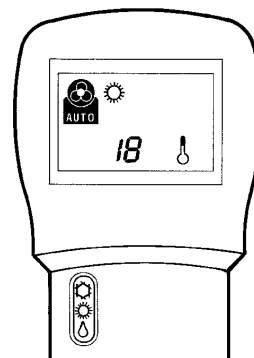
5.6 Heating function (only models with heat pump)

When used in this mode the air conditioner heats the room. This function is only available on models with a heating pump (HP).

To select this mode press button T4 (operating mode selection switch) until the sun symbol appears on the display. First set the desired temperature and fan speed (see the specific paragraphs). After three minutes (maximum time) the compressor should start and the air conditioner starts heating the room. When the compressor starts you will see a green LED light up on the control panel.

NOTE: The air conditioner has to defrost its battery periodically (about once every half hour). During this operation (about 3-8 minutes) the air conditioner does not heat the room, though its internal parts remain on except for the room air fan. When the outdoor temperature is very low, there may be a slight delay (about three minutes) for passage from the minimum to the medium or maximum speed from when the command is sent to the machine with the remote control.

FIG. 11



5.7 Control of air flow direction

The airflow can be controlled in both its horizontal and vertical direction. Control of the horizontal direction cannot be carried out with the remote control and must be made manually by adjusting the position of the fins on the outlet opening.

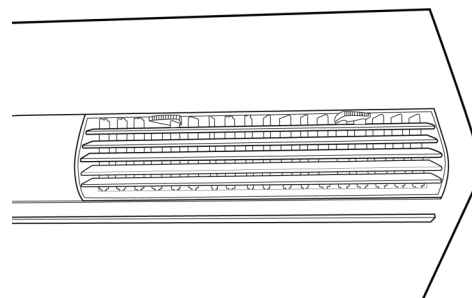
IMPORTANT: Adjustment of horizontal airflow should only be made when the movable grating is not moving.

To adjust vertical airflow you can operate in two ways:

- continuous oscillation of airflow, obtained by pressing button T9 which starts and stops the movable grating. This enables the fins on the grating to turn completely around.
- stop the movable grating in the desired position by pressing button T9 again while the fins are in motion. Pressing button T9 will start automatic turning of the baffle.

IMPORTANT: The baffle must not be turned by hand.

FIG. 12



5.8 Control of fan speed

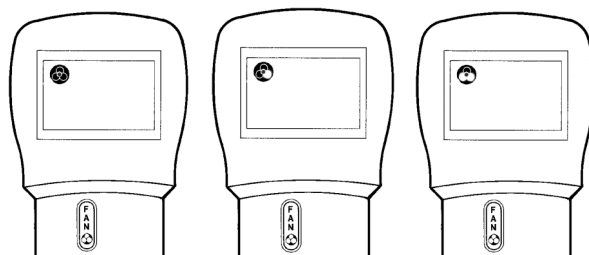
Fan speed is controlled by button T5. Pressing this button gives the following sequence: once=Low, twice=Medium, three times=High, four times=Automatic.

The higher the speed setting, the greater the output of the air conditioner but also the louder its operation. If you select Automatic mode, the microprocessor in the air conditioner adjusts the speed automatically, keeping it as high as needed to reach the temperature setting with respect to the effective room temperature.

As the room temperature nears the setting, fan speed is reduced automatically.

When the unit is operating in dehumidification mode, fan speed adjustment is not possible as it can only function at low speed.

FIG. 13

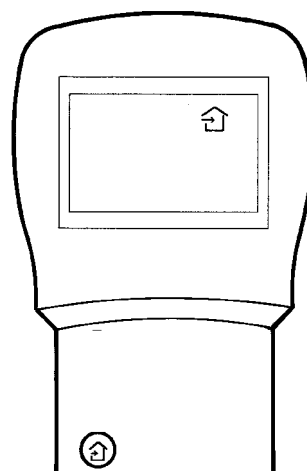


5.9 External air intake

This function is available only on devices equipped with the optional external air intake, that is an exclusive feature for this type of air conditioner.

Press button T8 once to start the microfan on the external air intake and open the shutter to refresh the air in the room. Press button T8 again to close the shutter. It should be borne in mind that opening the external air intake reduces the cooling effect of the air conditioner. This is also true of the heating effect for machines equipped with a heat pump. For this reason, if you want to maintain a constant flow of external air with the air conditioner in operation, you should first make sure your unit is powerful enough to operate this way. If not, you should close the external air intake when the temperature outside is extreme.

FIG. 14



5.10 Night operation

Use button T3 to select Night Operation Mode, which includes the following functions:

- Gradual increase of the temperature set for cooling.
- Gradual reduction of the temperature set for heating (only HP models).
- Reduction of noise level.
- Lower energy consumption at night.

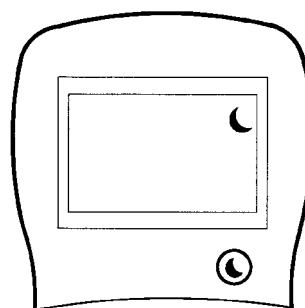
To select Night Mode press button T3 after selecting the operating mode using button T4 and setting the temperature using button T7.

Ideally, you should start night mode operation just before you fall asleep.

In cooling mode, the set temperature is held for one hour after starting Night Mode operation. For the next hour, the setting is allowed to increase gradually up to 2°C over the original setting, while the fan speed setting is low. After the second hour, the temperature and fan speed settings are not changed.

In heating mode, the set temperature is held for one hour after starting Night Mode operation. For the next hour the setting is lowered gradually to 4°C below the original while

FIG. 15



the fan speed setting is low. After the second hour, the temperature and fan speed settings are not changed. Night Mode operation is not available for dehumidifying only. Night Mode operation can be halted at any time (ideally when you wake up in the morning) by pressing button T3 again. At this stage the temperature and fan speed settings made prior to starting Night Mode operation go back into effect.

5.11 Setting programs for operation

The air conditioner logic provides the user with a choice of two operating programs that can be set to start and stop at programmed times, for example you might want the air conditioner to start shortly before you return home so that it is cool when you get there.

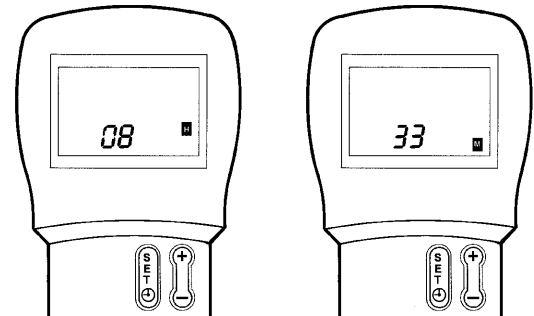
To use these functions it is first necessary to set the exact time on the remote control and then set the time for the programs to start.

Setting the exact time.

To set the exact time proceed as follows:

- Press button T6 Time and Program Setting, as many times as necessary to display the hour indicator (H).
- Press the toggle button T7 to increase or decrease the numerical display until it shows the exact hour.
- Press button T6 again to display the minute indicator (M).
- Press toggle button T7 to increase or decrease the numerical display until it shows the exact time in minutes.

FIG. 16



Setting of time schedules for 1st and 2nd Operating Program (PROGR. 1 and PROGR. 2)

To set the times for starting and stopping the two air conditioner programs, proceed as follows:

- Press button Time and Program Setting, as many times as necessary to display the PROGR. 1 ON indicator (Time to start 1st program).
- Press toggle button T7 to increase or decrease the numerical display of the time when you want program 1 to start. Every time you press one end of the toggle button the time setting increases or decreases by 30 minutes.
- Press button T6 Time and Program Setting, as many times as necessary to display the PROGR. 1 OFF indicator (Time to stop 1st program).
- Press toggle button T7 to increase or decrease the numerical display of the time when you want program 1 to stop. Every time you press one end of the toggle button the time setting increases or decreases by 30 minutes.
- Press button Time and Program Setting, as many times as necessary to display the PROGR. 2 ON indicator (Time to start 2nd program).
- Press toggle button T7 to increase or decrease the numerical display of the time when you want program 2 to start. Every time you press one end of the toggle button the time setting increases or decreases by 30 minutes.
- Press button T6 Time and Program Setting, as many times as necessary to display the PROGR. 2 OFF indicator (Time to stop 2nd program).
- Press toggle button T7 to increase or decrease the numerical display of the time when you want program 1 to stop. Every time you press one end of the toggle button the time setting increases or decreases by 30 minutes.

FIG. 17

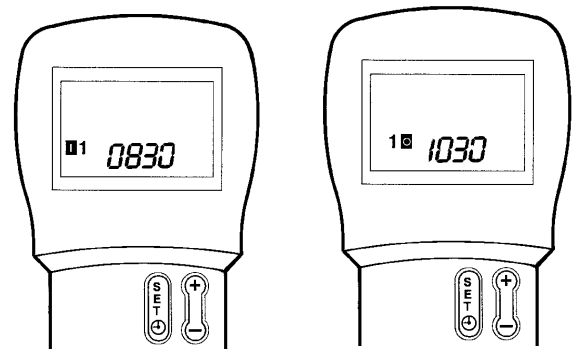
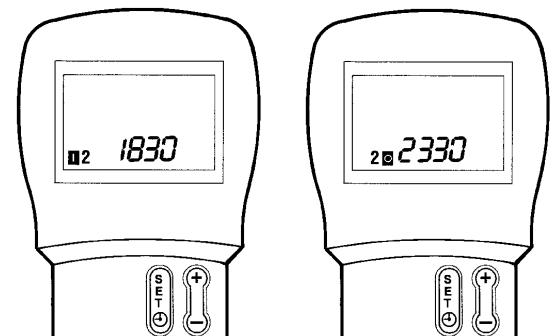


FIG. 18



minutes.

- i) To return to the normal operating mode just press button T6 as many times as necessary to cancel the program indications from the display.

5.12 Starting and stopping operating programs

After making the settings for the operating programs, they can be used or not, as needed.

Either or both of the programs can be used.

In particular, when you press T11 to run the programs, the following things occur:

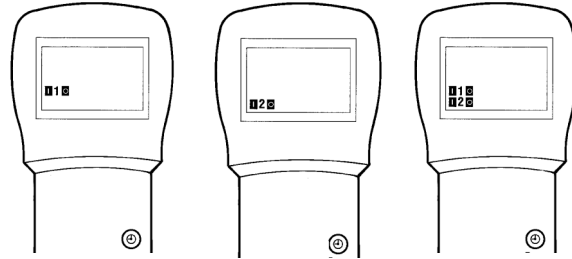
Use of Program no. 1 only

Use of Program no. 2 only

Use of Programs 1 and 2

Disuse of both programs.

FIG. 19



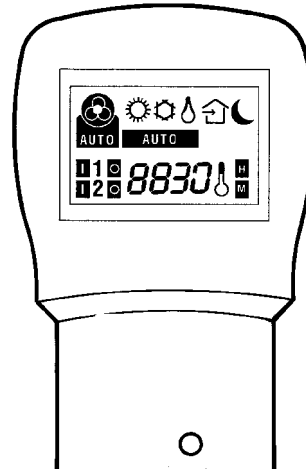
5.13 Resetting all functions of remote control

Press button T10 to reset all the settings on the remote control.

This will cancel all the settings of the timer and the remote control will use the default settings.

In addition, by pressing T10 you will display all possible indications so that you can verify the proper conditions of the display.

FIG. 20



5.14 Control of Air Conditioner if remote control is not available

If you lose the remote control unit, or the batteries are dead or it is not working for any other reason, you can still control the air conditioner in the automatic mode using the microswitch on the console, that is the same switch that has to be used to reset the clogged filter alarm light.

To do this, proceed as follows:

- Make sure the red clogged filter alarm LED is not on. If it is on, clean the filters and reset the indicator light as described in § 6.1 Cleaning of air filter.
 - Use a sharp object to press the microswitch located under the hole on the console.
 - The air conditioner will function in "AUTO" mode.
- To restore normal operation under the control of the remote control unit, you need only give any command with the remote control unit when it becomes available again.

6 Maintenance

Your air conditioner has been designed to reduce operations of routine maintenance to a minimum and ensure that they can be performed easily by any user. The only operations required are the three types of cleaning illustrated below.

6.1 Cleaning air filter

To ensure effective internal air filtration and satisfactory operation of your air conditioner, the air filter has to be cleaned periodically.

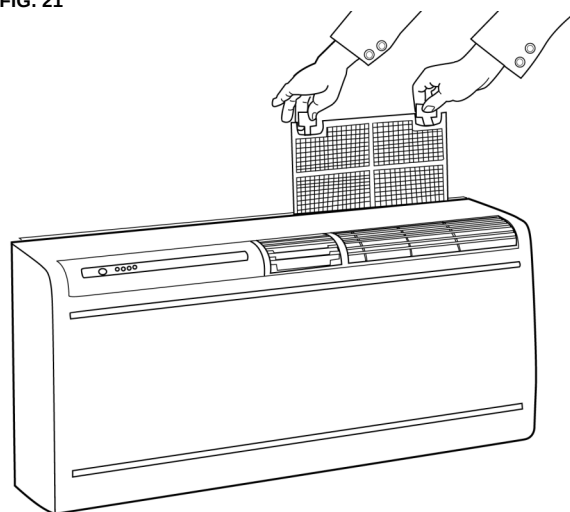
The need to perform this important operation is signalled after a prolonged period of use by a red led lighting up on the control panel. The filter is located on the front of the air intake grating on the back of the machine.

To remove it, press on the two fastening hooks and pull the filter toward you. Wash the filter by forcing a jet of water in the opposite direction from that of dust accumulation.

In case of dirt that is hard to remove (such as grease or other encrusted dirt) you may have to soak the filter first in a solution of water and neutral detergent. Before replacing the filter shake it to eliminate the wash water.

The last part of this operation consists of briefly pressing, with a sharp object, the microkey located on the control panel. The red led goes off and lights up again after the air conditioner has been in operation for a few days.

FIG. 21

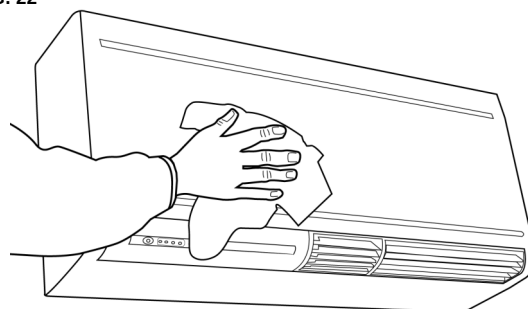


6.2 Cleaning casing

The casing on the unit should be cleaned with a soft cloth moistened with a solution of water and mild liquid detergent. Rinse immediately after, using a damp cloth moistened with clean water.

Never use abrasive solvents or pastes to clean the casing.

FIG. 22



7 Troubleshooting

It is extremely important for the user to know when behaviour that seems like a malfunction really isn't.

Among these are some (that we will indicate) that the user can easily correct following our simple instructions, while in other cases it is necessary to get in touch with our service personnel.

We also wish to remind you that any attempts to repair the equipment made by unauthorized personnel will immediately invalidate the warranty.

7.1 Functional aspects that should not be mistaken for malfunctions

The compressor does not start up again immediately after a stop (it takes about three minutes to start again).

The operating logic of the device provides for a delay between stoppage of the compressor and starting up again. This is to safeguard the compressor.

- When heating, on versions with the heating pump, the machine does not start emitting heat until a few minutes after the compressor starts.

If the fan should go into operation at the same time as the compressor, for the first few minutes it would emit cold air into the room (and this could disturb the occupants) as the heating function needs some time to warm up.

This is why the fan startup is delayed until after the compressor has started.

7.2 Identification and management of malfunctions

- The air conditioner does not switch on. This may be due to:

- lack of power;

what to do:

- Make sure power is being supplied (by switching on a light in the house, for example).
- Make sure the main circuit breaker is closed and the fuse is not burnt out (replace the fuse if necessary. If instead of a circuit breaker you have installed a cutoff switch, make sure it has not been tripped (reset it if necessary). If the problem persists, contact our Service Department and do not try to start the air conditioner.
- The batteries in the remote control are dead.
If the batteries are dead you will notice the absence of indications on the display and the failure of the air conditioner to beep when you try to send it a command. In this case, replace the batteries.
- The device no longer cools satisfactorily (or does not heat, in the case of models with heat pump (HP),

this could be due to:

- The temperature set on the remote control being too high or too low (for models with heat pump);

what to do:

check and, if necessary, correct the temperature setting on the remote control.

- The air filter is clogged before the alarm indicator lights up.

what to do:

- check and clean if necessary.
- Something is obstructing the airflow to the inside or to the outside;

what to do:

remove anything that could obstruct airflow.

- There has been an increase in the heating or cooling load (for example a door or window has been left open or a device that dissipates a large amount of heat has been installed in the room);

what to do:

make sure the doors and windows are closed; if a heat source has been installed in the room that raises the temperature excessively and for which the air conditioner is unable to compensate, the only solution is to install another air conditioner or replace the existing one with a more powerful model.

- The air conditioner stops and the second and third led from the left on the control panel (yellow and green lights) start flashing;

If there should be a malfunction in the condensation water drain system, the air conditioner stops working and signals, with flashing yellow and green lights (the second and third leds from the left), the alarm status.

To enable the air conditioner to work temporarily until the service personnel arrives, you can drain the water out by following these simple instructions:

- Grasp the rubber cap on the bottom centre of the air conditioner behind the edge of the frame facing the wall between your thumb and forefinger.
- Pull the rubber tube closed by the cap out by a few centimetres.
- Remove the cap after placing a bucket or other container underneath it (at least five litter capacity) to collect the water.
- After eliminating the malfunction the service personnel will take care of closing the evacuation tube.

IMPORTANT: If you are unable to classify the problem as one of those described above, you should immediately get in touch with our Service Department without attempting to make any repairs yourself.