

Important Safe-guards

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- This appliance has been manufactured to cool and de-humidify domestic environments and should not be used for other purposes.
- It is dangerous to alter or modify the unit's characteristics in any way.
- The appliance must be installed in conformity with the relevant national legislation.
- Should repairs be necessary, contact the nearest authorised Repair Service Centre. Unauthorised servicing can be dangerous.
- This appliance is to be used by adults only; keep children away from it.
- Always ground the appliance. Have the electrical system checked by a qualified electrician.
- Avoid using extension leads with the unit.
- Before cleaning or maintenance operations, always unplug the unit from the socket.
- Do not pull on or place strain on the power cable when moving the appliance.
- The appliance should not be installed where the atmosphere may contain combustible gases, oil or sulphur, or near heat sources.
- If the appliance is utilised in areas where there is no ventilation of air, it is necessary to take precautions to avoid that the refrigerant gases that may leak from the appliance do not remain in the room, thereby causing a fire hazard.
- This appliance must be utilised and installed only in rooms with a total volume of 15 cubic metres or greater (31m³ for model FX400ECO).
- Do not rest hot or heavy objects onto the appliance.
- Clean the anti-bacterial filters at least once a week.
- Avoid using heaters near the unit.
- The unit should be transported in a vertical position. If this is not possible secure the unit at an angle, do not lie horizontally. Before transporting the unit drain the condensation collecting-tray and tank. Avoid transportation, wait at least 1 hour before switching on the unit.
- The packaging materials can be recycled. You are therefore recommended to place them in the special containers for differentiated waste collection.
- Keep the unit at least 50 cm away from inflammable substances (alcohol etc) or pressurised containers (eg. aerosol cans).
- The appliance must be used only as indicated in this manual. These instructions are not intended to cover as many as possible conditions and situations which may arise. As with all household appliances installation, operation and conservation should be carried out prudently and following common sense.
- In the case that the power cable becomes damaged, this must be substituted only by specialised personnel authorised by the manufacturer.
- Do not cover this appliance with bags when is not in use.
- R290 is a refrigerant complying with european directives relative to the environment. Do not perforate any component of the refrigerating circuit.
- Unventilated area where the appliance using flammable refrigerants is installed shall be so constructed that any leaked refrigerants will not stagnate so as to cause a fire or an explosion hazard caused by igniting stagnant refrigerants from other source such as electric heater, stove and similar home applications.

How does your pinguino work

During the summer, optimum comfort is achieved with a temperature of between 24 and 27°C and about 50% relative humidity.

An air conditioner removes moisture and heat from the room where it is located. One advantage of portable air conditioning units over fitted models is that they can be moved from one room to another in the home or even transferred between different buildings.

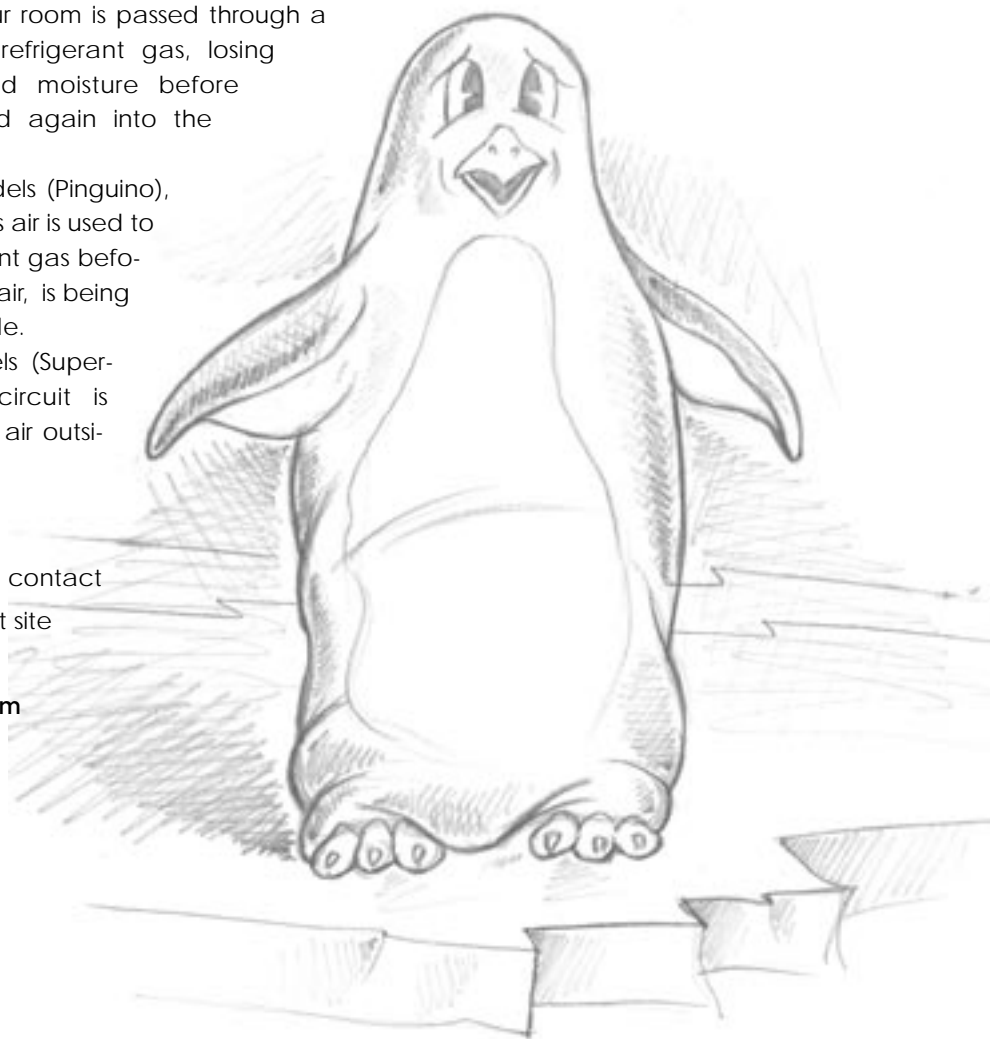
The hot air in your room is passed through a coil cooled by refrigerant gas, losing excess heat and moisture before being discharged again into the room.

In single unit models (Pinguino), a small part of this air is used to cool the refrigerant gas before, hot and moist air, is being discharged outside.

In suitcase models (Super-Pinguino), the circuit is cooled using the air outside.

For more details, contact
or visit our Internet site

www.delonghi.com



Description of the appliance

DESCRIPTION MODEL FX160ECO

- 1) Air discharge grill
- 2) Control Panel
- 3) Wheels
- 4) Handles
- 5) Housing for air exhaust hose
- 6) Cord winder
- 7) Air intake grill
- 8) Rating plate
- 9) Water collection tank
- 10) Water drain tube
- 11) Stopper for drain tube
- 12) Power cord

Description of the Accessories

- 13) Stopper and flange
- 14) Air exhaust hose
- 15) Air exhaust attachment
- 16) Suckers
- 17) Wheel locks

DESCRIPTION MODEL FX400ECO

- 1) External Unit
- 2) Air discharge grill
- 3) Control Panel
- 4) Internal/external unit connection sheath
- 5) Wheels
- 6) Handles
- 7) Rating plate
- 8) Air intake grill
- 9) Power cord
- 10) Stopper for drain tube
- 11) Water drain tube

Description of Accessories

- 1) Wall brackets
- 2) Support blocks for external unit
- 3) Belts
- 4) Eyes
- 5) Screws and plugs
- 6) M6 and M4 screws
- 7) Condensate drain coupling
- 8) Suckers
- 9) Wheel locks
- 10) Wheels for external unit
- 11) Sheath frame

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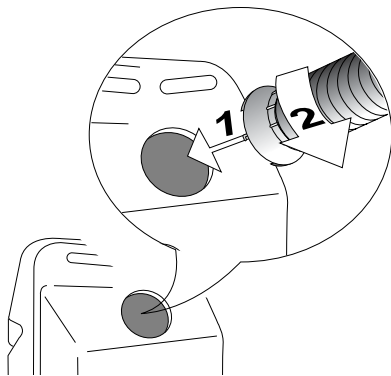
Setting up (Mod. FX160ECO)

When positioning the appliance, always ensure that nothing obstructs the intake and discharge of air

AIR CONDITIONING WITHOUT PERMANENT INSTALLATION

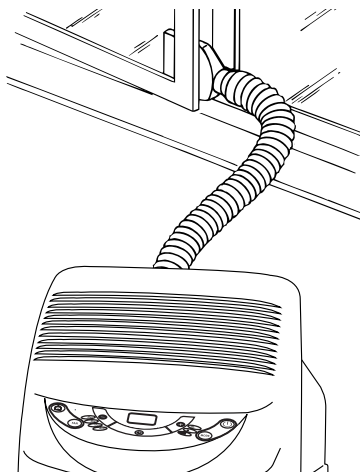
Only a few simple steps are necessary to obtain the comfort offered by Pinguino.

- Fit the air exhaust hose (14) in its housing (5) at the rear of the appliance as shown in fig.1

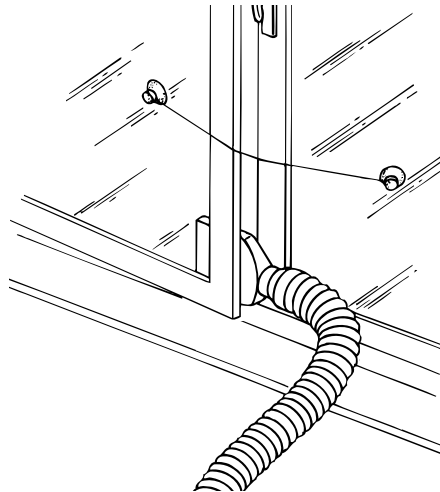


1

- Fit the window discharge attachment (15) to the end of the hose (14)
- Place the air-conditioning unit at a window or French window
- Open the window a little and position the attachment (15) as shown in fig. 2.



2

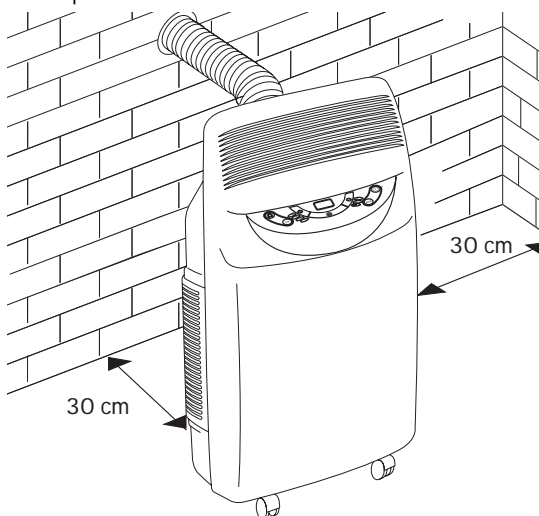


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Setting up (Mod. FX160ECO)

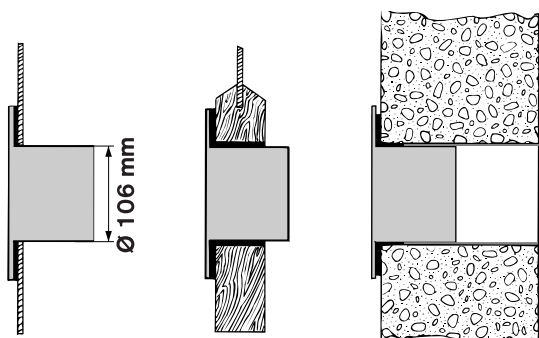
AIR CONDITIONING WITH SEMI-PERMANENT INSTALLATION

If desired, Pinguino can also be installed on a semi-permanent basis.



In this case it will be necessary to:

- Drill a hole in a perimeter wall or in a window pane. Observe the height limits (fig. 5) and the dimensions of the hole given in fig. 4.



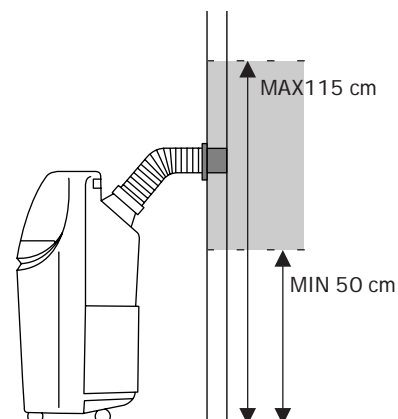
In the window-pane

In the base of the window frame

In the wall: we advise you to insulate the section of the wall with appropriate insulation material.

4

- Fit the flange (13) supplied to the hole.
- Fix the hose (14) in the housing at the rear of the appliance (fig. 1)
- Fit the end of the hose to the flange (15) as shown in fig. 5.



5

When the hose (14) is not connected, the hole can be closed off with the flange stopper (12).

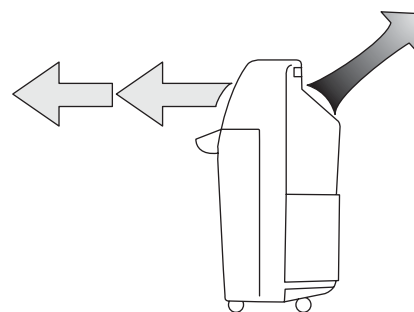
N.B.

When operating the appliance with semi-permanent installation, it is advisable to leave a door slightly ajar (even only 1cm), to ensure free circulation of air.

DEHUMIDIFICATION

Position the appliance in the room without inserting the air exhaust hose (14); this ensures that the dehumidified air will be released directly into the atmosphere.

The air emitted through the front grill will be cold while the air from the rear will be warm (fig. 6) thus ensuring that the room is dehumidified without variation in temperature.



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Setting up (Mod. FX400ECO)

PREPARING THE INTERNAL UNIT (1)

Install the appliance inside the room to be air conditioned, usually near a window or a perimeter wall.

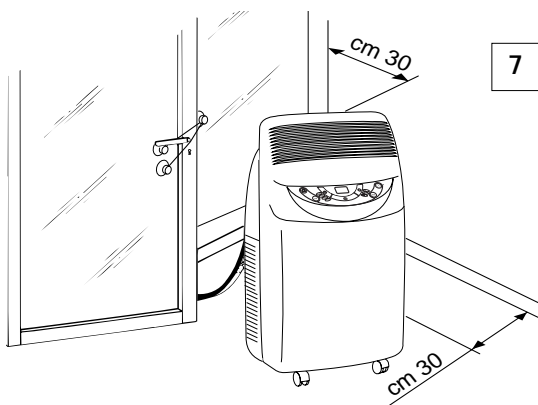
The internal unit must be positioned level. Use the wheel blocks (20) supplied. The intake zone (intake grill (8)) and the discharge zone (discharge grill (2)) must be kept clear of obstacles.

NB: Leave at least 30 cm between the wall and the appliance.

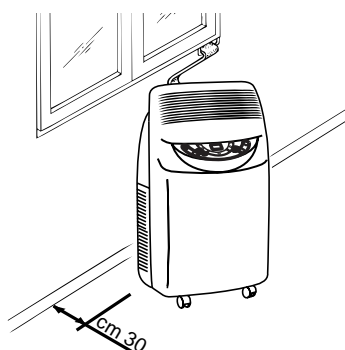
POSITIONING THE CONNECTING SHEATH

The sheath connecting the external and internal units can be passed:

- Through the gap in a window or door left ajar; use the suckers (20) to prevent opening further (fig. 7).



- Through a small hole made in the bottom of a door or the frame of a window, using the sheath frame (22) supplied (fig 8).

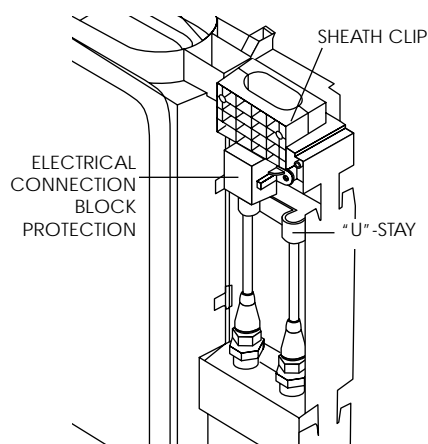


USING THE QUICK COUPLINGS

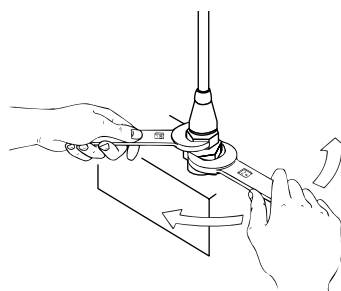
As an alternative to the methods described above, the sheath connecting the external and internal units can be passed through a 6 cm diameter hole in an perimeter wall.

In this case, the external unit couplings must be disconnected as follows:

- Unplug the appliance from the mains supply.
- Remove the handle by removing the screw covers and unscrewing the two fixing pins and the two metric screws; then remove the front panel.



- Remove the "U" stay by unscrewing the two metric screws (fig 9).
- Remove the sheath clip (fig 9).
- Using a 24 mm spanner, undo the rotating connection on the coupling. At the same time, using a 21 mm spanner, hold the end of the flexible tube (fig10). (repeat for the second connection using a 24 mm and a 19 mm spanner)
- Disconnect the condensate tube from the pipe fitting.



Setting up (Mod. FX400ECO)

- 7) Undo the two self tapping screws holding the guard and remove the electrical connection block.

AVOID TIGHT CURVES IN THE CONNECTION SHEATH

Reconnecting the sheath

To reconnect the ends of the connecting sheath to the internal unit, repeat operations 1, 2, 3, 4, 5, 6 and 7 in reverse order, observing the following precautions:

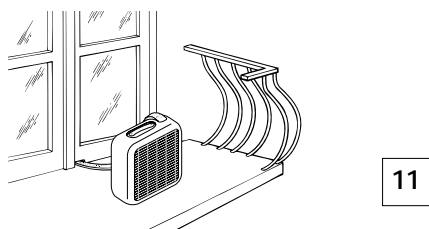
- Before passing the sheath through the hole in the wall, it is advisable to protect the threaded ends of the quick couplings with insulating tape or similar.
- Fit the two top refrigerant couplings to the bottom two and hand tighten them, checking to ensure that they fit well. Tighten properly with the spanners used previously.
- After connecting the two refrigerant couplings, attach the stays.
- Check the refrigerant connections for leakage by covering the joints with some soapy water. No soap bubbles should form.

Attention

We recommend that disconnection and reconnection of the quick couplings be carried out by qualified personnel.

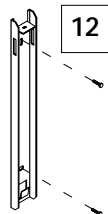
PREPARING THE EXTERNAL UNIT

The external unit can be placed on a terrace or balcony. (fig 11). In this case the brackets should not be used.

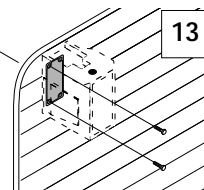


The external unit can also be hung on a wall using the brackets (12). Proceed as follows:

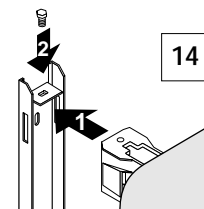
- 1) Fix the bracket to the wall taking care to position it as indicated in fig. 12. (For the holes, use the jig on the cover of the polystyrene packaging);



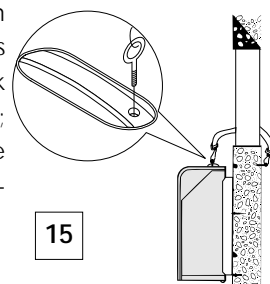
- 2) Screw the support blocks (13) to the external unit using the M4 screws (17) (taking care to position them with the hole for the screw on top).



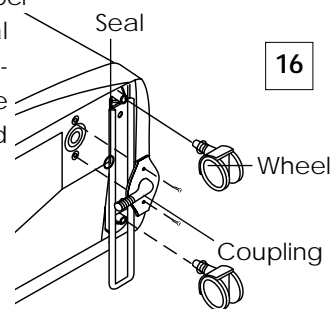
- 3) Attach the external unit to the brackets, fixing it with the M6 screws. (17)



Alternatively, for temporary installation, the external unit can be suspended as shown in fig. 15. In this case, use the belts (14) supplied; hook these to the eyes (15); before inserting the eyes, remove the rubber seals.



The external unit may be installed above or at the same level as the internal unit, provided that the difference in level is not greater than 1.5m. the air intake and discharge of the external unit must be kept clear of obstacles. Leave at least 6 cm between the wall and the appliance. Condensation forming during operation is eliminated via evaporation from the external unit. In particular cases, if there is excessive humidity, to eliminate condensation the drain coupling must be used. This should be mounted on the base of the external unit (see fig. 16) after removing the rubber seal. The external unit should be protected from the sun, rain, snow and drips from the roof.



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Description of the control panel

THE DISPLAY

- A. **ON/OFF Button**
- B. **Function Button**
Air-conditioning, dehumidifying, ventilation
- C. **Air-conditioning indicator**
- D. **dehumidifying indicator**
- E. **Purification indicator**
- F. **Increase temperature button / increase operating time button**
- G. **Decrease temperature button / Decrease operating time button**
- H. **Display**
Displays the temperature selected, time programmed and (Model FX400ECO only) the room temperature.
- I. **Timer button**
- L. **Timer operation indicator**
- M/N/O/P. **Fan speed indicator**
- Q. **Fan speed button**
- R. **Display room temperature button**
(FX400ECO)

ELECTRICAL CONNECTION

Before plugging in check that:

- the mains supply corresponds to the value shown in the specifications table;
- the socket and the mains lead correspond to the power requirements of the appliance;
- the socket is suited to the plug, otherwise have the socket replaced;
- the socket is properly grounded. **The manufactures cannot be held responsible for any damages due to failure in following normal safety procedures.**

Replacement of the power cable must be carried out by qualified personnel.

Operation

SWITCHING THE APPLIANCE ON

Connect the appliance to the mains supply.
On the display two lines will appear indicating Stand-by mode



Press the ON/OFF button (A) and then the MODE button until the relevant function indicator appears viz.:

Indicator C ✕ : air-conditioning

Indicator D 💧 : dehumidifying

Indicator E ~ : purification/ventilation

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AIR-CONDITIONING FUNCTION

This function is ideal in hot, humid weather conditions when the atmosphere requires to be cooled and dehumidified.

To ensure proper function of the appliance, after selecting the air-conditioning function, press buttons + (F) or – (G) until the desired temperature appears on the display.

The temperatures most suited to the atmosphere in summer vary between 24 and 27°C. We do not advise selection of temperatures much lower than those outside.

Select fan speed by pressing the "FAN" button (Q) until the fan speed indicator appears:

MAX (P): if you want the maximum power of the air-conditioner to reach the desired temperature as quickly as possible.

MIN (O): if you want to reduce the level of noise and still maintain a good level of comfort.

SILENT (N): when minimum noise is required,

AUTO (M): if you prefer the appliance to select the fan speed for the temperature selected on the display panel.



DEHUMIDIFYING FUNCTION

This function is ideal for reducing humidity in the atmosphere while avoiding increases or decreases in temperature (in between seasons, damp places, wet spells of weather).

When you select the dehumidifying function, the letters "dh" will appear on the display.

Model FX160ECO: the water is collected in the tank at the rear of the appliance.

When the tank is full, the appliance will stop working and the display will show the letters "FL" (Full Tank); the tank must then be emptied. When it is re-inserted, the appliance will re-start automatically. N.B. remove the air exhaust hose (13).

Mod. FX400ECO: the water is eliminated via evaporation in the external unit. However, we recommend fitting the drain coupling to the external unit as shown in fig. 16

Once the dehumidifying function has been selected, the fan speed cannot be changed. The appliance will automatically select the correct fan mode.



Operation

VENTILATION/PURIFICATION

This is ideal for dusty or polluted areas; in effect, the appliance recycles and purifies the air using the dust filters and 3M Filtrete™ electrostatic filters fitted. Adjust the fan speed by pressing the "FAN" (Q) button, as illustrated in the air conditioning function.

Bear in mind that the higher the speed, the greater the volume of air filtered; by selecting the "Silent" speed, less air is filtered, but the noise level is low.

"AUTO" function cannot be selected in this mode.

The display will show the fan speed selected.

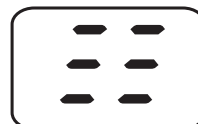
"Silent"
speed



"Min"
speed



"Max"
speed



PROGRAMMING THE TIMER

The timer programs the appliance to switch on and switch off. This will save electrical energy by optimizing the operating times. The timer is set using the buttons + (F) or – (G); these increase and decrease by one hour at a time, but if pressed for more than 2 seconds will automatically change the time more quickly, up to a maximum of 24 hours.

How to set the delayed start function

- Connect the appliance to the mains supply and press ON/OFF button: next, select the required operating mode (temperature, fan speed etc.)
- Press the ON/OFF button again: the appliance will go into stand-by mode.
- Press the timer button (1): on the display the two central segments will start to flash.
- Set the number of hours after which the appliance should switch on, by pressing the + or – buttons.

The indicator (L) on the display will continue to flash until the appliance starts operating.

The appliance can be programmed for up to 24 hours in advance.



How to set the delayed stop function

- The appliance can be programmed for delayed stop from any of the operating modes (air-conditioning/dehumidifying/purification/ventilation).
- Press the Programmer button (1): on the display the two central segments will start to flash.
- Set the number of hours after which the appliance should switch off by pressing the + or – buttons.

The indicator (L) on the display will continue to flash until the appliance switches itself off. It will then go into Stand-by mode.



Operation

ROOM TEMPERATURE BUTTON (MODEL FX400ECO)

When pressing this button (R), the room temperature is shown on the display for a few seconds. It then reverts to showing the current mode. The room temperature cannot be displayed while in Stand-by mode.

SELF-DIAGNOSIS

The appliance is equipped with a self-diagnosis system which identifies any operating problems.

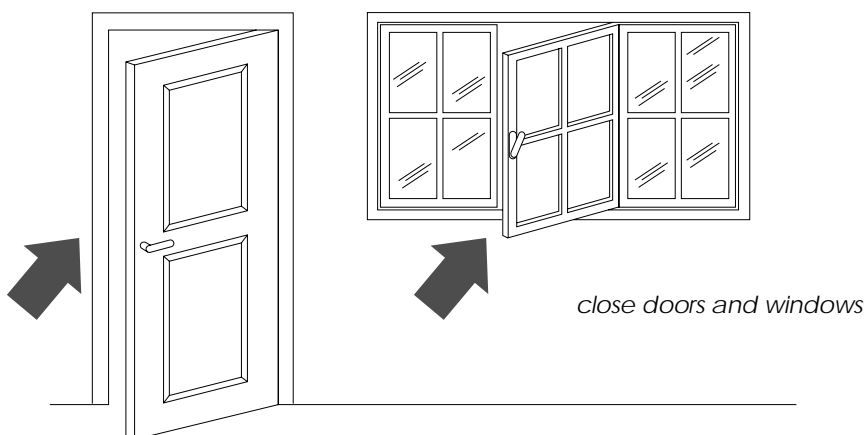
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IF THE DISPLAY SHOWS...WHAT SHOULD YOU DO?
HP HIGH PRESSURE	Insert and re-insert the plug. If the problem persists, call the service centre.
LT LOW TEMPERATURE	If the machine is operating as an air-conditioner or dehumidifier, this will prevent the formation of ice. The appliance will start up automatically once the defrosting process has ended.
FF FAN FAILURE PF PROBE FAILURE	If either of these messages appears, call the service centre.
FT FULL TANK	FX160ECO Empty the tank at the rear of the appliance and reposition correctly. FX400ECO Empty the internal tank (not visible) through the small drain tube (11); replace the rubber stopper.

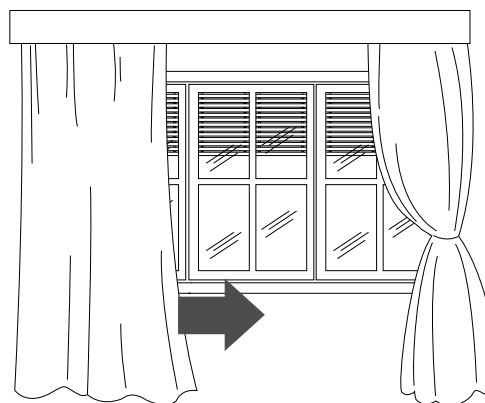
Recommendations

Follow these recommendations to achieve maximum efficiency from your air conditioning unit:

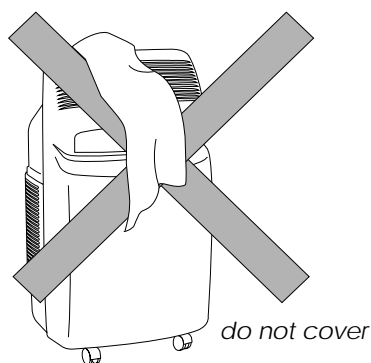
- Close the doors and windows in the room where the unit is functioning. The only exception is in the case of installation through a hole in the wall. In this case, you are recommended to allow a small amount of air to enter through a door or window to guarantee an adequate exchange of air.
- Do not install the heater in humid environments.
- Do not use the appliance outdoors.
- Keep the appliance a safe distance from combustible surfaces



- Protect the room from direct exposure to the sun's rays by drawing the curtains and/or partially lowering the blinds so as to maximise energy savings.
- Do not rest objects on the air conditioning unit.
- Do not obstruct the air intake or outlet.
- Make sure there are no heat sources in the room.



lower the blinds or draw the curtains



Cleaning

Before cleaning or maintenance, switch off the appliance by pressing the ON/OFF button (A) and always unplug it from the mains supply.

CLEANING THE EXTERNAL UNIT

We recommend cleaning the appliance with a slightly damp cloth. It should then be dried. For safety reasons, do not wash the air-conditioner with water.

Precautions

Never clean with benzene, alcohol or solvents. Never spray with liquid insecticide or similar.

CLEANING THE AIR FILTERS

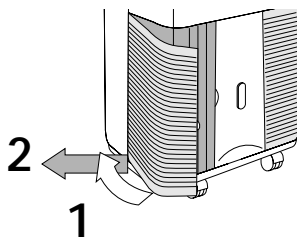
To maintain the air-conditioning unit at peak efficiency, we advise you to:

1. Clean the dust filter weekly.
2. Replace the air filters at the end of each season or when necessary (follow the instructions on the appliance near the filter).

The filters are located behind the two intake grilles. The grilles contain the filters.

To clean the filters:

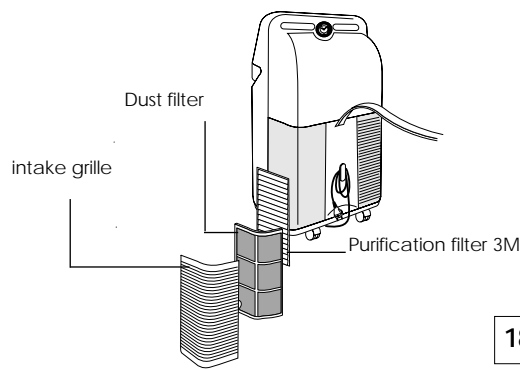
1. Remove the intake grilles by rotating them outwards. (fig 17)
2. Remove the 3M purification filter (white).



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3. Remove the dust filter by detaching it from the external grill.

To remove the dust deposited on the anti-



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bacterial filter, use a vacuum cleaner. If very dirty, immerse in warm water (not more than 40° C) and rinse thoroughly. Allow the filter to dry. To replace, fit the filters to the intake grill and attach to the appliance.

Do not try to clean the 3M filter as this could result in a reduction of filter capacity.

BEGIN OF SEASON CHECKS

Check that the power cord and plug are undamaged and that the appliance is properly earthed.

The installation instructions should be observed meticulously.

END OF SEASON OPERATIONS

Empty the water from the tank.

Mod. FX160ECO:

Remove the tank (9) and empty it. To drain any residual water from the internal circuit, remove the stopper (11) from the drain tube (10) and drain completely. Re-insert the stopper and re-position the tank correctly(9).

Mod. FX400ECO:

Empty the internal tank (not visible) through the small drain tube (10); replace the rubber stopper (11).

Clean the anti-bacteria filters and dry well before replacing.

Troubleshooting

PROBLEM	CAUSES	REMEDY
The air-conditioner does not work	<ul style="list-style-type: none"> the power is off the appliance is not plugged in 	<ul style="list-style-type: none"> Plug it in
(Mod. FX160ECO). The air-conditioner works only for a short time	<ul style="list-style-type: none"> The exhaust hose is twisted The exhaust hose is blocked The exhaust hose is bent 	<ul style="list-style-type: none"> Position exhaust hose correctly Check for obstacles blocking the exhaust system Straighten the hose
The air-conditioner works but does not cool the room.	<ul style="list-style-type: none"> a window is open there is a source of heat in the room (lamp, burner etc.) or there are many people in the room. the thermostat is set too high air filters are dirty the capacity of the air-conditioner is not adequate for the conditions or the dimensions of the room. 	<ul style="list-style-type: none"> close the window eliminate source of heat set the thermostat to a lower temperature clean/replace filters
Strange odour in the room	<ul style="list-style-type: none"> air filters are dirty 	<ul style="list-style-type: none"> clean/replace filters
Leaking condensate from the unit	<ul style="list-style-type: none"> appliance incorrectly installed condensate collection tank is full 	<ul style="list-style-type: none"> see instructions for correct installation of appliance Mod. FX160ECO: empty the tank Mod. FX400ECO: drain the water through the drain tube found at the rear of the appliance.
The unit does not work for about 3 minutes after turning on the appliance.	<ul style="list-style-type: none"> The safety mechanism has been activated 	<ul style="list-style-type: none"> wait for 3 minutes

See paragraph "Self diagnosis" if the following messages appear on the display: FF, HP, LT, FT, PF.

Technical specification

FX160 ECO OPERATING LIMITS

Room temperature	21 - 35°C
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FX400 ECO OPERATING LIMITS

Room temperature	21 ÷ 32°C
Outside temperature	21 ÷ 43°C

TECHNICAL SPECIFICATION

Power supply see rating plate

Max. absorbed power in air conditioning "

Max. absorbed power when dehumidifying "

Refrigerating capacity* "

Number of fan speeds 2 + silent

Max. air flow 460 m³/h

Dimensions of internal unit:

- width 452 mm
- height 800 mm
- depth 455 mm
- weight 33 kg

Dimensions of external unit (*only FX400 eco*):

- width 570 mm
- height 480 mm
- depth 260 mm
- weight 18 kg

* Standard conditions:

Room temperature 27°C

47% relative humidity

Outside temperature 35°C

41% relative humidity

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ELECTRICAL CONNECTION (U.K. ONLY)

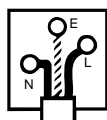
- A) If your appliance comes fitted with a plug, it will incorporate a 13 Amp fuse. If it does not fit your socket, the plug should be cut off from the mains lead, and on appropriate plug fitted, as below. warning: Very carefully dispose of the cut off plug after removing the fuse: do not insert in a 13 Amp socket elsewhere in the house as this could cause a shock hazard. With alternative plugs not incorporating a fuse, the circuit must be protected by a 15 Amp fuse. If the plug is a moulded-on type, the fuse cover must be re-fitted when changing the fuse using a 13 Amp Asta approved fuse to BS 1362. In the event of losing the fuse cover, the plug must NOT be used until a replacement fuse cover can be obtained from your nearest electrical dealer. The colour of the correct replacement fuse cover is that as marked on the base of the plug.
- B) If your appliance is not fitted with a plug, please follow the instructions provided below:

WARNING - THIS APPLIANCE MUST BE EARTHED


IMPORTANT

The wires in the mains lead are coloured in accordance with the following code:

Green and yellow Earth
Blue Neutral
Brown Live



As the colours of the wires in the mains lead may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The green and yellow wire must be connected to the terminal in the plug marked with the letter E or the earth symbol  or coloured green or green and yellow.

The blue wire must be connected to the terminal marked with the letter N or coloured black.

The brown wire must be connected to the terminal marked with the letter L or coloured red.