

# GX12

*Installation and  
operating instructions*

Retain for future reference

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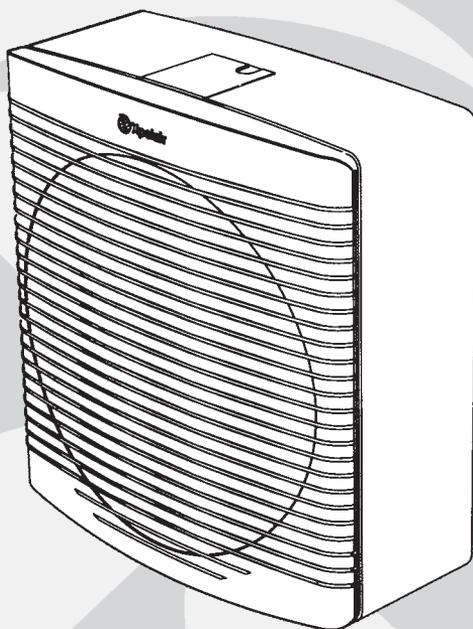
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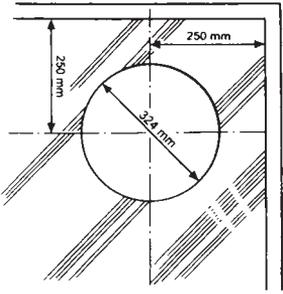
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 **Xpelair<sup>®</sup>**



(Fig. 1)

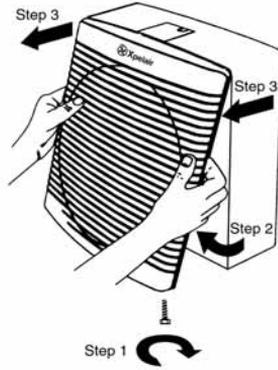
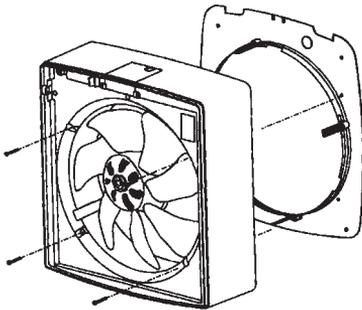
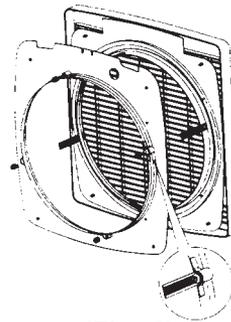


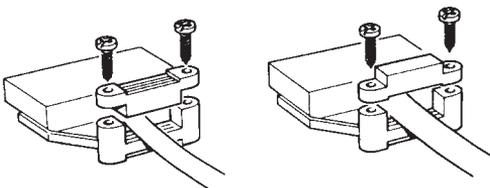
Fig. 2



(Fig. 3)

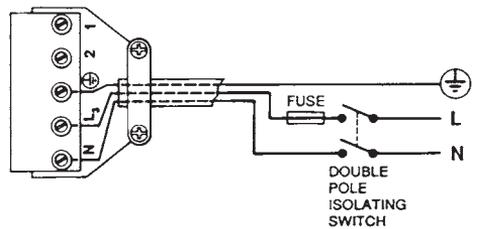


(Fig. 4)

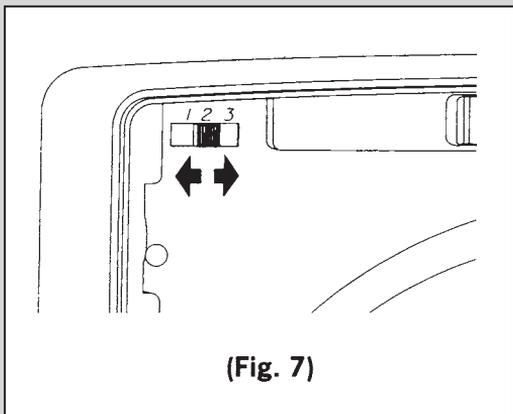


(Fig. 5a)

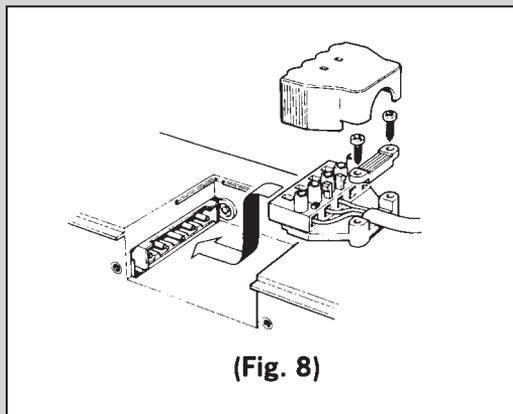
(Fig. 5b)



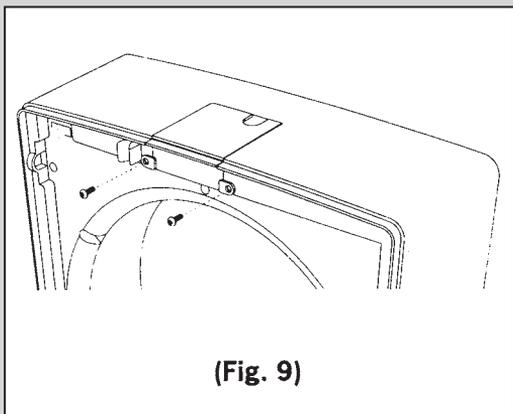
(Fig. 6)



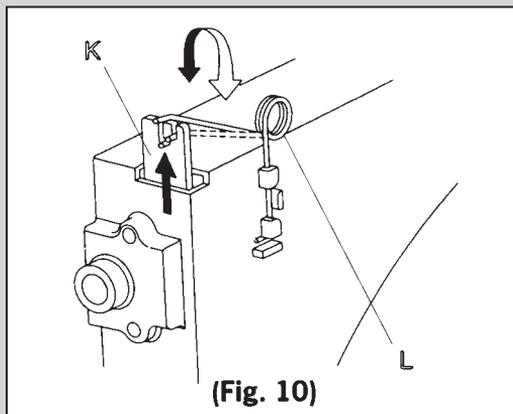
(Fig. 7)



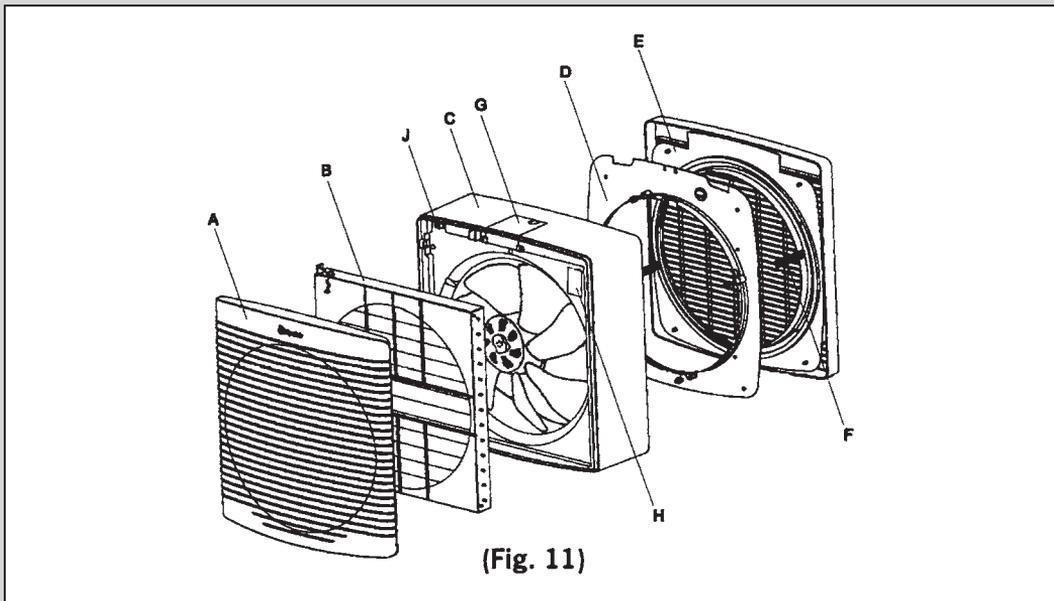
(Fig. 8)



(Fig. 9)

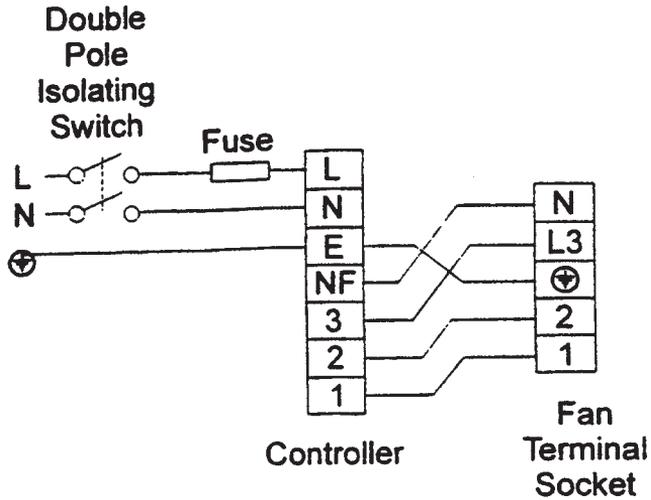


(Fig. 10)

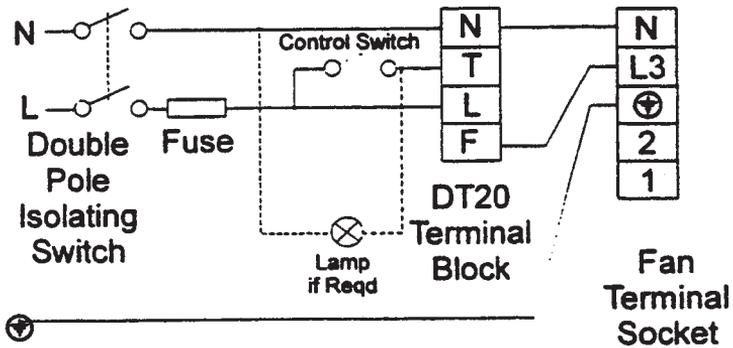


(Fig. 11)

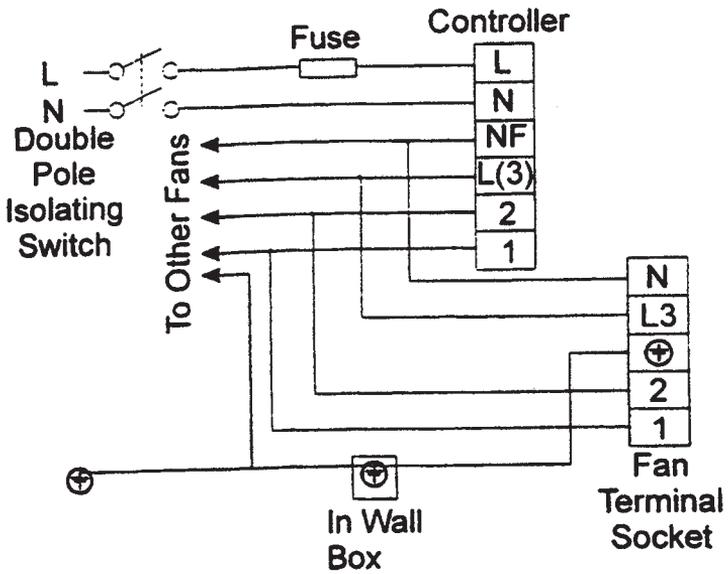
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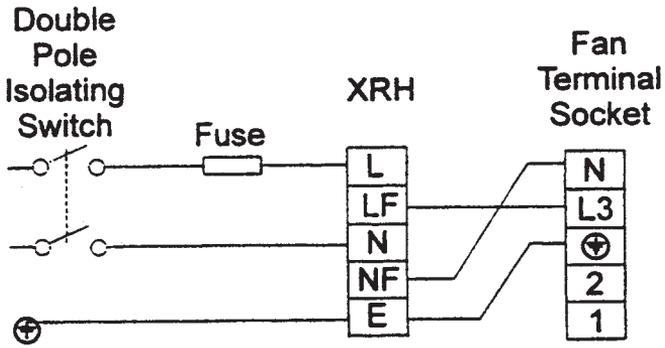
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# Xpelair GX12 Installation and Operating Instructions

LEAVE THIS INSTRUCTION LEAFLET WITH THE FAN, FOR THE BENEFIT OF THE USER.

## INSTALLING THE FAN

This appliance is intended for connection to fixed wiring. Check that the electrical rating shown on the fan matches the mains supply.

**WARNING: THIS APPLIANCE MUST BE EARTHED.** All installations must be supervised by a qualified electrician. Installations and wiring must conform to current IEE Regulations (UK), local or appropriate regulations (other countries). If you have any queries before installing these products or after they have been installed, call the Xpelair Technical Hotline 08709 000430. Our Engineers are there to help you during normal office hours (UK only) and may be faxed at all other times 08709 000530.

Customers outside the UK may contact your local Xpelair distributor.

### 1 Description

The GX12 fan has the following features:

- ◆ Window, wall, panel or roof mounted (see section 2).
- ◆ Fitted with silent operation back draught shutters.
- ◆ The GX12 can extract, intake or "open shutter only", using an integral Fan Selector Switch.
- ◆ Trickle Ventilation setting.
- ◆ Removal of the Inner Grille isolates the fan mechanically.
- ◆ Can be installed with a controller.

*If used with a speed controller, the fan can intake or extract at selected speeds or at variable speed depending on the type of controller. If used with an on/off switch, the fan will intake or extract at high speed only.*

### 2 What the installer will need

- ◆ A double pole isolating switch with a minimum contact gap of 3mm (Wall or Ceiling mounted).
- ◆ **If metal switch boxes are used, earthing regulations must be followed.**
- ◆ Suitably rated 3-core cable.
- ◆ 6mm Blade Large Screwdriver, 3mm Blade Electricians Screwdriver, Nos. 1 & 2 Pozidriv Screwdrivers.

*If window mounting the fan, you will also need:*

- ◆ A single glazed non-opening window with a minimum glass thickness of 4mm.

*If wall mounting the fan, you will also need:*

- ◆ Masonry drill, Hammer & Chisel (Core Drill equipment if available).
- ◆ Mortar (to make good the hole).
- ◆ Wall Kit WK12/8 or WK12/11 (Available from Xpelair) or a tube 31.5mm internal diameter.

*If roof mounting the fan, you will also need:*

- ◆ Roof Cowl RC12 (Available from Xpelair)
- ◆ Roof Mounting Plate XRP9/12 (Available from Xpelair) for flat roof installation.

*If installing the fan with an on/off switch:*

- ◆ On/off switch.

*If installing the fan with a controller:*

- ◆ 5-core cable (Available from Xpelair). Note: Please check the instructions for the controller.

### 3 Where to locate the Fan

- ◆ Locate it as high as possible.
- ◆ At least 250mm from the edges of the wall or window frame to the centre of the hole.
- ◆ As far away as possible from and opposite to the main source of air replacement to ensure airflow across the room (e.g. opposite the internal doorway).
- ◆ Near the source of steam or odours.
- ◆ Not where ambient temperatures are likely to exceed 50°C.
- ◆ **If installed in a kitchen fans must not be mounted immediately above a cooker hob, or eye level grill.**
- ◆ **If installing in a room containing a fuel burning device which has a non-balanced flue, it is the installers responsibility to ensure that there is enough replacement air to prevent fumes being drawn down the flue when the fan is operating up to maximum extract.**

Refer to Building Regulations for specific requirements. Exhaust air must not be discharged into a flue used for exhausting fumes from appliances supplied with energy other than electric. Requirements of all authorities concerned must be observed for exhaust air discharge and intake flow rates.

- ◆ If the fan is intended to intake air, the inlet grille should be sited at a distance of at least 0.5 metre from the discharge outlet of a flued heating or cooking appliance.
- ◆ When intended for use in possible chemical corrosive atmospheres, consult our Technical Service Department. (For overseas markets contact your local Xpelair distributor).

- ◆ This electrical product, if installed in a shower room or bathroom must be so situated that it cannot be touched by persons making use of the bath or shower.

### 4 Installing the Isolating Switch and Cables

1. Check there are no buried Pipes or Cables e.g. Electricity, Gas, Water behind the Switch location (in the Wall or above the Ceiling).



(Continued)

2. Lay in the Cable from the Isolating Switch to the Fan location via the on/off switch or controller.
3. Lay in the Cable from the Isolating Switch to the point of connection to the Mains Supply.
4. Install the Isolating Switch, and the on/off switch or controller.
5. Make all connections within the Isolating Switch.

**WARNING: Do not make any connections to the Electrical Supply at this stage.**

**For Australia only:** Connection to the supply can be made by a flexible 3-core cable complete with 3 pin plug top for insertion into an approved 10 amp GPO or directly wired through an approved 10A wall mounted surface switch with at least 3mm clearance between contacts.

## 5 Preparing the hole

If working above Ground Floor level, appropriate safety precautions must be observed.

**Warning: eye protection must be worn during all drilling and chiselling operations.**

If installing in a window:

◆ Get a ready-cut pane with the hole dimensions given in Fig. 1.

If installing in a wall:

1. Check there are no buried pipes or cables in the wall or obstructions on the outside e.g. Electricity, Gas, Water.

2. Mark on the wall the centre of the hole making sure that it is located at least 250mm from the edges of the wall.

If core drill equipment is available:

3a. Use as directed by Core Drill manufacturer.

If core drill equipment is not available:

3b. Drill a centre hole right through the wall.

4. Draw a circle on the centre to suit the wall duct.

5. Cut the hole. Do not cut right through the wall.

(The recommended method is to drill a series of holes, close together, around the edge of the cutting line and remove the brick between the holes with a chisel).

6. Go outside and cut a hole in the outer wall, repeating the process described above.

7. Fit the ducting. Ensure that the duct slopes down away from the fan to allow drainage of any incoming rain water to the outside.

8. Make good the hole. Allow the Mortar to set before continuing the fan installation.

## 6 Separate the Fan from the Inner Clamp Plate

1. Remove the inner grill and back draught shutter by first removing the screw from the underside of the grille then unclipping the bottom of the grille, the top of the grille can then be released by unclipping the top corner. The shutter can then be unclipped.

NOTE: The top of the grille can only be released when the screw is removed and the bottom of the grille has been released (Fig. 2).

2. Unscrew the four cross-headed screws and lift-off the Fan (Fig. 3).

## 7 Mount the Fan in the hole (Fig. 4)

If working above Ground Floor level, appropriate safety precautions must be observed.

If installing the fan in a window, fix the three rubber edge protectors (packed separately) at equal distances around the lip of Outer Clamp Plate.

1. Attach the Ladder Strips (packed separately) to the Outer Clamp Plate.

2. Hold the Outer Grille up to the outside of the wall or window so that the lip of the Outer Clamp Plate protrudes into the hole.

3. Hold the Inner Clamp Plate to the inside of the wall or window and guide the Ladder Strips from the Outer Clamp Plate through the slots in the Inner Clamp Plate.

4. Insert the slotted screws (packed separately) into the pockets around the Ladder Strip slots. Centralise the Inner and Outer Clamp Plates.

5. Tighten the screws carefully to make a good seal.

**Do not overtighten.**

6. Trim the Ladder Strips back to the required length, if necessary remove any sharp edges.

## 8 Refit the Fan to the Inner Clamp Plate

1. Fit the Fan Assembly onto the Inner Clamp Plate (Fig. 3).
2. Make sure that the Ladder Strips go inside the Fan Assembly so they will not get caught in the blades.
3. Tighten up the four screws. **Do not overtighten.**

## 9 Wire the electrical connections

1. The Fan Connector Assembly parts are packed separately.
2. Remove the two cable clamp screws (Fig. 5a and 5b).
3. If required, feed the cable through the grommet in order to fit to the cable entry of the Connector Plate.

◆ If installing with an on/off switch:

1. Wire the Fan Connector as shown in Fig. 6.
2. Set the Fan Selector Switch to Position 1 for intake, Position 2 for extract or Position 3 for "open shutter only" (Fig. 7).

◆ If installing with a controller:

1. Refer to the installation instructions for the controller.
2. If wiring to an existing controller, contact Xpelair Technical Services or in the export markets, the Xpelair distributor.
3. Set the Fan Selector Switch to Position 3 if using a controller providing variable speed and/or direction. Otherwise, set the Fan Selector Switch to Position 1 for intake, Position 2 for extract or Position 3 for "open Shutter only".

## 10 Fitting the Cable Clamp

For cable up to 8mm diameter, clamp the cable as shown in Fig. 5a. For cable equal to or greater than 8mm and up to 11.5mm diameter, clamp the cable as shown in Fig. 5b. For cable greater than 11.5mm diameter use the conduit entry provided (Europe only).

## 11 Fitting the Connector to the Fan

1. Ensure the cable is firmly retained by the clamp.
  2. Assemble the Fan Connector by snapping the Cover over the Connector (Fig. 8).
  3. Plug the Fan Connector into the Fan Assembly.
  4. Fit the Connector Plate (packed separately) as shown in Fig. 9.
  5. Refit the Backdraft Shutter.
  6. Refit the Inner Grille.
  7. **Switch off the mains electrical supply and remove fuses.**
  8. Connect the cable from the isolation switch to the electrical supply wiring.
  9. Replace the fuses, and switch on the mains electrical supply.
- ◆ For fixed wiring circuits the protective fuse for the appliance must not exceed 5A.

## USING YOUR FAN

### 12 Operating the Fan

Switch operated:

To switch on and off, use the switch on the wall or ceiling.

Controller operated:

Refer to the instructions for the controller.

◆ The shutters are operated by a silent thermo-actuator which has a time delay on opening (30-50 secs) and closing (3 mins).

### 13 Trickle Ventilation

◆ Trickle Ventilation is equivalent to that provided by an air brick or similar device.

1. Remove the inner grill and back draught shutter by first removing the screw from the underside of the grille then unclipping the bottom of the grille, the top of the grille can then be released by unclipping the top corner. The shutter can then be unclipped.

NOTE: The top of the grille can only be released when the screw is removed and

◆ To allow trickle ventilation:

2. Release the Shutter Return Spring as shown in Fig. 10.
3. Re-position the Shutter Return Spring into the L-shaped slot.
4. Raise the Operating Bar to latch into position.
- ◆ To fully close the shutters and stop any backdraught:
  2. Unlatch the Shutter Return Spring and re-position into the short slot.
  3. Refit the Back Draught Shutter and Inner Grille.

## LOOKING AFTER YOUR FAN

### 14 Cleaning

1. Before cleaning, isolate the fan from the mains supply. Allow 3 minutes for the impeller to stop rotating and the powered shutter to close.

2. Remove the inner grill and back draught shutter by first removing the screw from the underside of the grille then unclipping the bottom of the grille, the top of the grille can then be released by unclipping the top corner. The shutter can then be unclipped.

NOTE: The top of the grille can only be released when the screw is removed and the bottom of the grille has been released (Fig. 2).

3. Remove the impeller by unscrewing the knob at the front of the impeller anticlockwise.

4. Clean the inner grille, back-draught shutter and impeller by immersing in warm soapy water. Dry thoroughly.

**Do not immerse the fan in water or other liquids to clean any other parts of the fan.**

5. Refit the impeller by locating it over the motor shaft and aligning the arrow on the impeller with the white dot on the motor. Make sure the impeller is seated correctly.
6. Refit the knob making sure the ratchet at the rear of the knob is fully engaged.

◆ **Never use strong solvents to clean the fan.**

◆ Apart from cleaning, no other maintenance is required.

### KEY (For Fig. 10 and Fig. 11)

Inner Grille .....	"A"	Connector Plate .....	"G"
Back Draught Shutter .....	"B"	Rating Plate .....	"H"
Fan Assembly .....	"C"	Selector Switch .....	"J"
Inner Clamp Plate .....	"D"	Operating Bar .....	"K"
Outer Clamp Plate/Grille .....	"E"	Shutter Return Spring .....	"L"
Ladder Strips .....	"F"		