

Do's and don'ts

- Do read the entire instruction leaflet before commencing installation.
- Do install each fan with a double pole-isolating switch.
- Do make sure the mains supply is switched off before attempting to make electrical connections or carry out any maintenance or cleaning

Guarantee

Customers outside UK – see international below.

- UK: The fan is guaranteed against defects for 2 years from the date of purchase.
- Please keep your purchase receipt.
- If you have any problems, contact Xpelair's Head Office at the address shown below.

Technical advice and service

Customers outside UK – see international below.

UK: Xpelair have a comprehensive range of services including:

- Free technical advice help-desk from Engineers on all aspects of ventilation
- Free design service, quotations and site surveys
- Service and maintenance contracts to suit all requirements.

Please ask for details:

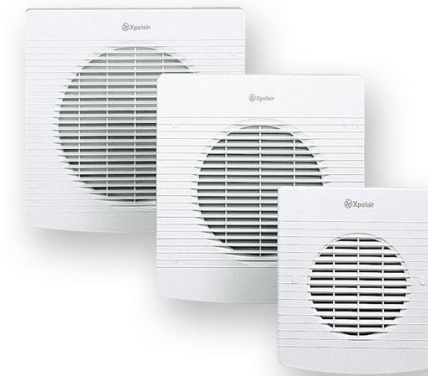
- By telephone on Techline:+44 (0) 8709 000430
- By fax on Techfax:+44 (0) 8709 000530
- At the address below

International

- Guarantee: Contact your local distributor or Xpelair direct for details.
- Technical Advice and Service: Contact your local Xpelair distributor



PX6, PX9 and PX12 Commercial ceiling fans



Applied Energy Products Ltd
Morley Way
Peterborough
PE2 9JJ

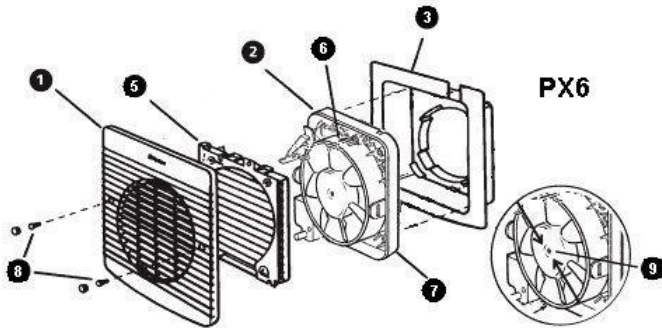
t 01733 456789
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www.applied-energy.com

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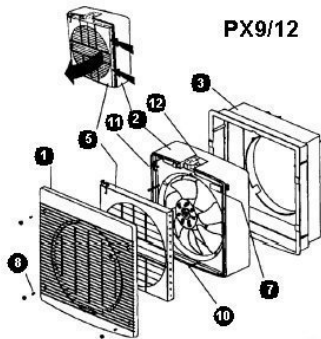
(Booklet No. 22721AA)

Installation and maintenance instructions

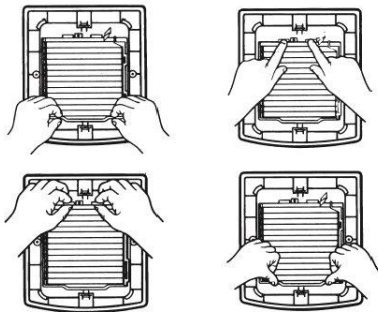
G1



G2



H



Installing the Fan

These appliances are intended for connection to fixed wiring. Check that the electrical rating shown on the fan matches the mains supply.

WARNING: THESE APPLIANCES 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). It is the installer's responsibility to ensure that the appropriate Building Codes of Practice are adhered to. If you have any queries before installing these products or after they have been installed, call the Xpelair Technical Hotline +44 (0) 8709 000430. Our engineers are there to help you during normal office hours (UK only) and may be faxed at all other times +44 (0) 8709 000530.

Customers outside the UK please contact your local Xpelair distributor.

1. Description

The PX6/9/12 models have the following features:

- Can be flush mounted in a Ceiling or Panel.
- Trickle ventilation setting.
- Fitted with silent operation back draught shutters.
- For remote switch operation.

PX6

- Single speed extract operation.

PX9/12

- The PX9/12 fans can extract, intake or 'open shutter only' using an integral Fan selector switch.
- Can be installed with a controller.

If used with a speed controller, these fans can intake or extract at selected speeds or at variable speeds depending on the type of controller. If used with an on/off switch, these fans 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 (Ceiling or Panel mounted).
- If metal switch boxes are used, earthing regulations must be followed.
- Suitably rated 3-core cable (see 'Installing switches and cables' section).
- 6mm blade large screwdriver, 3mm blade electrician's screwdriver and No. 1 & 2 Pozidriv screwdrivers.

If installing the fan with an on/off switch:

- On/Off switch

If installing the fan with a controller (PX9/12 only):

- Suitably rated 5-core cable. Note: Please check instructions for the controller.

3. Where to locate the fan

- Locate it as high as possible.
- At least 200mm from the edge of the wall or ceiling to the centre of the hole.
- At least 255mm from the edge of the wall or ceiling to the centre of the hole.

If installing a PX12:

- At least 280mm from the edge of the wall or ceiling 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 installer's 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 meters 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 market contact your local Xpelair distributor).

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

4. Installing the switches and cables

1. Check there are no buried pipes or cables e.g. electricity, gas, water behind the switch location (In the panel or above the ceiling).

2. Lay in the cable from the isolating switch to the fan location via the on/off or controller if required.

3. Lay in the cable from the isolating switch to the point of connection to the mains supply.

WARNING: DO NOT MAKE ANY CONNECTIONS TO THE ELECTRICAL SUPPLY AT THIS STAGE.

4. Install the isolating switch and the on/off switch or controller if required.

5. Make all connections within the isolating switch and the on/off switch if required.

Note: Switches must be so situated that they cannot be touched by persons making use of the bath or shower.

For Australia only
These models are permanently connected to the supply and operation is controlled by a remote switch. They should be directly wired to the supply 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 OPERATIONS.**

For Installing in a panel /ceiling

1. Check there are no buried pipes or cables behind the panel or obstructions on the outside e.g. electricity, gas, water.

If installing a PX6:

2a. Make sure that the centre of the hole is located at least 200mm from the edge of the wall or ceiling.

If installing a PX9:

2b. Make sure that the centre of the hole is located at least 255mm from the edge of the wall or ceiling.

If installing a PX12:

2c. Make sure that the centre of the hole is located at least 280mm from the edge of the wall or ceiling.

3. Mark the outline of the hole on the wall (for hole dimensions see Fig A).

4. Drill pilot holes around edge of the cutting line.

5. Cut through the panel or ceiling using a jigsaw.

6. Separating the inner grille and fan from mounting box

If installing a PX6:

1. Remove the inner grille assembly by removing the 2 screws G1 (8) securing the inner grille assembly to the fan mounting box.

2. Remove the two screws securing the fan assembly to the fan mounting box.

If installing a PX9/12:

1. Remove the inner grille by removing the 4 screws G2 (8).

2. Remove the back draught shutter by unclipping it G2 (5).

3. Unscrew the 4 cross-headed screws and lift off the fan assembly G2 (2)

7. Mounting the fan mounting box.

If working above ground floor level, appropriate safety precautions must be observed.

1. Offer up the fan mounting box to the panel or ceiling face and mark the position of the 4 mounting holes.

2. Drill holes and fit appropriate plugs.

3. Screw fan mounting box to panel or ceiling (If necessary apply a sealing mastic to the flanges of the fan mounting box. This will provide additional seals and take out any unevenness on both faces).

4. Ducting and appropriate terminations can be attached to the fan box as required.

5. Position and secure the fan duct assembly into the fan mounting box, using the fixing screws. **Do not overtighten the screws.**

8. Wire the electrical connections

If installing a PX6:

1. Wire the switch cable into the fan's terminal connector as shown in diagram B2.

2a. If the Fan is wired from above, remove the fan's Terminal cover and feed the cable through the top cable entry. Ensure the outer sheath of the cable is retained in the labyrinth B1.

2b. If wiring from the rear, remove the fan's terminal cover and rear entry knockout, feed the cable through the knockout.

3. Refit and secure the terminal cover.

4. Refit the inner grille to the fan mounting box, using fixing screws G1 (8). **Do not overtighten screws.**

5. Insert two colour matching screw covers in the fixing holes in the inner grille. When removing the covers, place a 3mm blade electrician's screwdriver into the slot and lever off the cover.

6. **Switch off the mains electrical supply and remove fuses.**

7. Connect the cable from isolation switch to the electrical supply wiring.

8. Replace the fuses, and switch on the mains electrical supply.

For fixed wiring circuits the protective fuse for the appliance must not exceed 5A.

If installing a PX9/12:

1. The fan connector parts are packed separately.

2. Remove the two cable clamp screws (fig. C1 and C2).

3. If required feed the cable through the grommet in order to fit the cable entry of the connector plate.

If installing with an on/off switch:

1. Wire the fan connector as shown in fig. B3

2. Set the Fan Selector Switch to position 1 for Intake, Position 2 for Extract or Position 3 for 'open shutter only' (Fig. D).

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 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' (fig. D).

Fitting the cable clamp (PX9/12):

For cable up to 8mm diameter, clamp the cable as shown in Fig. C (1).

For cable equal to or greater than 8mm and up to 11.5mm diameter, clamp the cable as shown in Fig. C (2).

For cable greater than 11.5mm diameter use the conduit entry provided (Europe only).

Fitting the Connector to the fan (PX9/12):

1. Ensure the cable is firmly retained by the clamp.

2. Assemble the Fan Connector by snapping the Cover over the Connector (Fig. E).

3. Plug the Fan Connector into the Fan Assembly.

4. Refit the Backdraught Shutter.

5. Refit the Inner Grille.

- Insert four screw covers (packed separately) in the fixing holes in the Inner Grille. When removing the covers, place a 3mm blade electrician's screwdriver into the slot and lever off the cover.
 - Switch off the mains electrical supply and remove fuses.**
 - Connect the cable from isolation switch to the electrical supply wiring.
 - Replace the fuses, and switch on the mains electrical supply.
- For fixed wiring circuits the protective fuse for the appliance must not exceed 5A.**

9. Operating the fan

Switch operated:

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

Controller operated (PX9/12 only):

- Refer to the instructions for the controller.

- The shutters have a time delay of up to 1 minute on opening, and up to 3 minutes on closing. Activated by operation of the switch, the delay ensures quiet operation.

For Australia only:

WARNING – Children should not play with the appliance. Young children and the infirm should be supervised

Trickle ventilation

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

1. Remove the Inner grille and back draught shutter (see 'Mounting the fan in the hole' section).

To allow trickle ventilation (PX6):

2. **HOLD THE SHUTTER VANES FULLY OPEN.**

3. Push down firmly on the trickle vent catch until it clicks into position then release the shutter vanes. (See Fig.F1).

To allow trickle ventilation (PX9/12):

2. Release the Shutter Return Spring as shown in Fig. F2

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 back draught (PX6)

5. Pull the trickle vent catch towards you until it clicks into position.

6. Refit the Inner grille and back draught shutter, ensuring that the actuator lever is in the "fully down" position.

To fully close the shutters and stop any back draught (PX9/12)

5. Unlatch the Shutter Return Spring and re-position into short slot.

6. Refit the Backdraught Shutter and Inner Grille.

Maintenance

NOTE: A QUALIFIED ELECTRICIAN MUST CARRY OUT ALL CLEANING.

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

2. Remove the inner grille and back-draught shutter (see section 6)

WARNING: Fan will still operate when the inner grille is removed.

To remove the impeller (PX6):

3. Unscrew the central screw and remove it together with the washer. Place screw and washer to one side G1 (9).

To remove the impeller (PX9/12):

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

4. Clean the back draught shutter, inner grille 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.

To refit the impeller (PX6):

5. Refit the impeller and replace the screw and washer ensuring that they are securely fitted.

To refit the impeller (PX9/12):

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.

7. Refit the back draught shutter and inner grille assembly and secure with the 2 fixing screws.

Do not overtighten the screws.

8. Refit the screw covers.

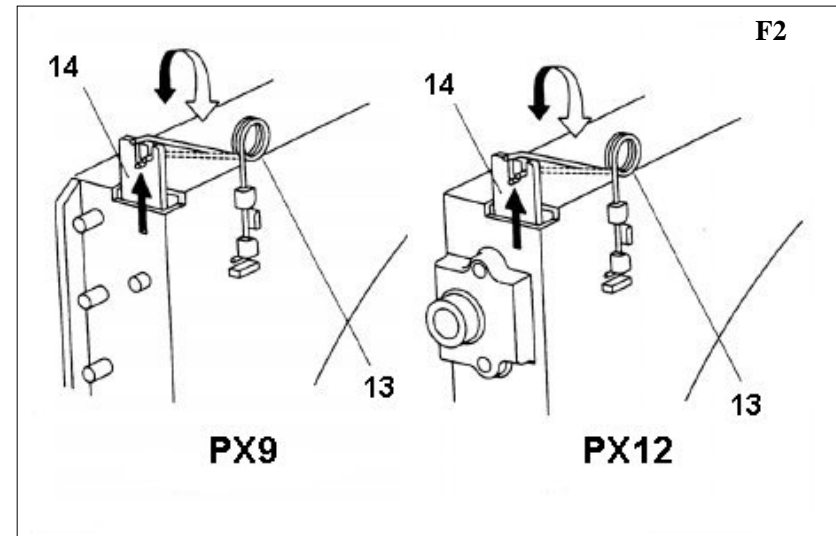
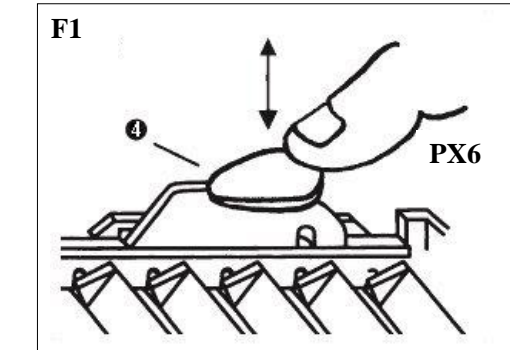
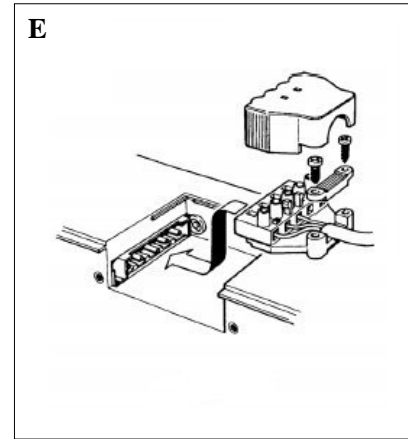
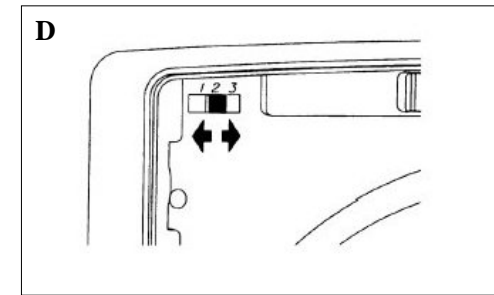
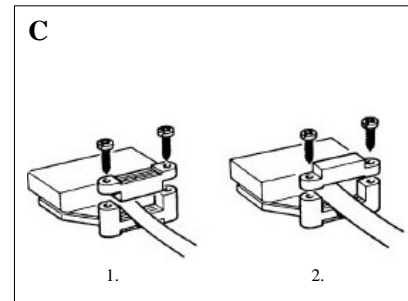
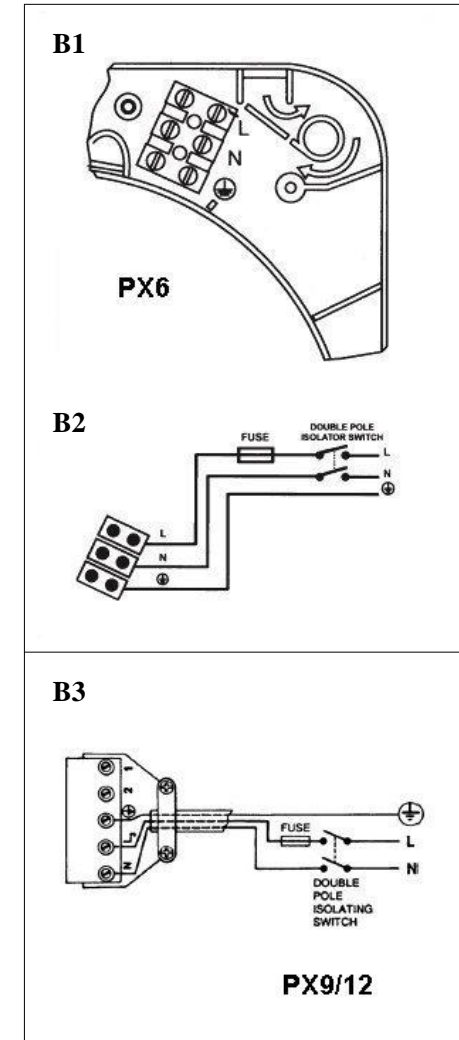
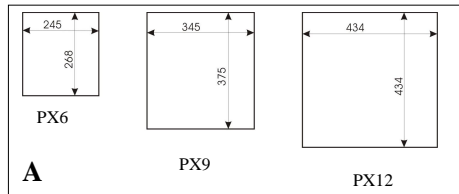
NOTE: THE FAN WILL CONTINUE TO OPERATE WITH THE INNER GRILLE ASSEMBLY REMOVED, HENCE IT MUST BE ISOLATED COMPLETELY FROM THE MAINS BEFORE ANY WORK IS CARRIED OUT.

- Never use strong solvents to clean the fan.

- Apart from cleaning, no other maintenance is required.

Components

- | | |
|-------------------------|-------------------------------|
| 1. Inner Grille | 8. Screws (M4 x 10mm long) |
| 2. Fan assembly | 9. Impeller screw |
| 3. Fan mounting box | 10. Screws (No.8 x 55mm long) |
| 4. Trickle vent catch | 11. Selector switch |
| 5. Back draught shutter | 12. Customer connector |
| 6. Terminal cover | 13. Shutter return spring |
| 7. Rating Plate | 14. Operating bar. |



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