

# Xpelair Centrifugal Ducted Fans

◆ **DX200** Remote Switched

◆ **DX200T** Timer

*Installation and maintenance instructions*

Retain for future reference

GB

F

D

NL

N

P

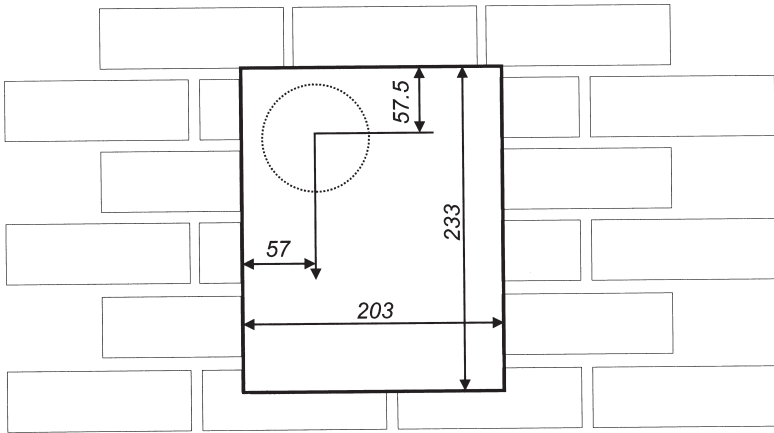
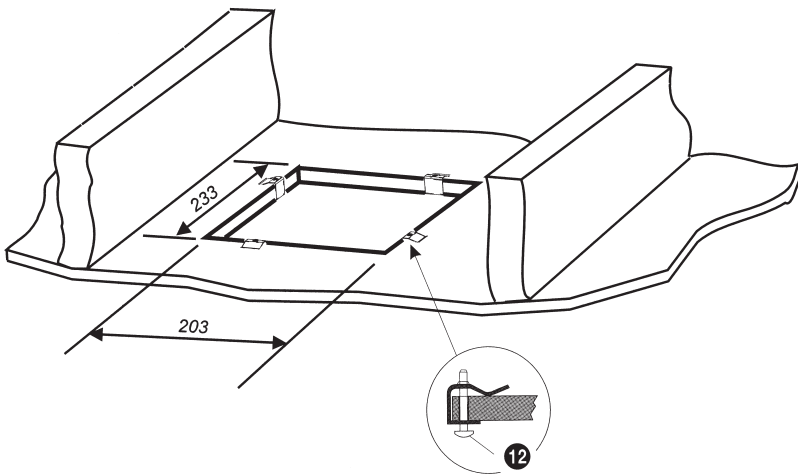
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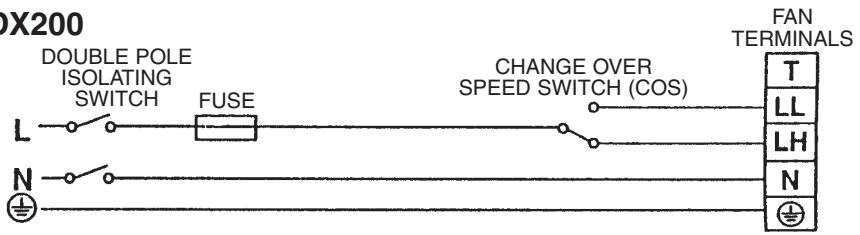


 **Xpelair**  
*Premier*

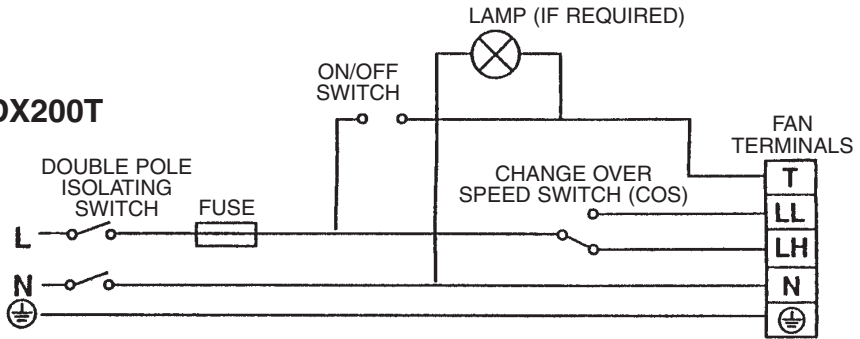
**A****B**

**C**

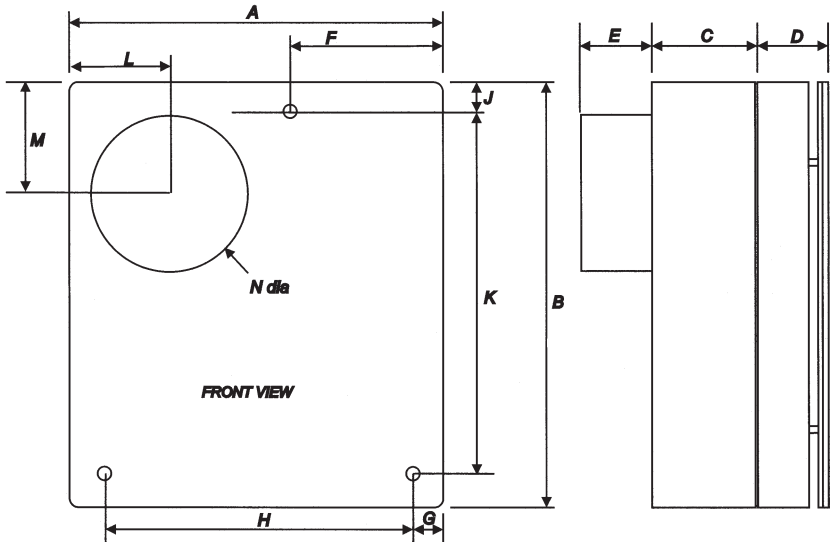
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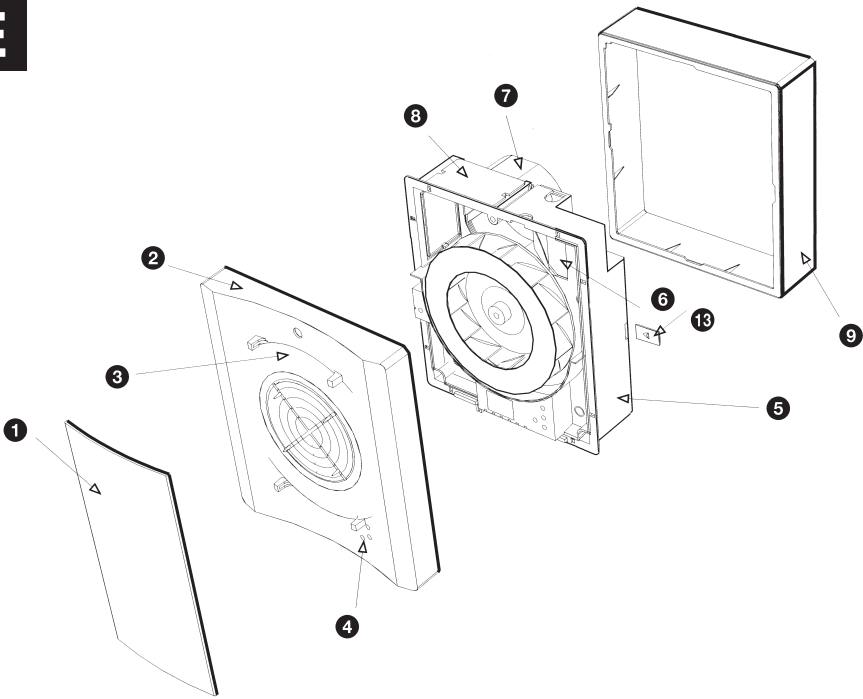
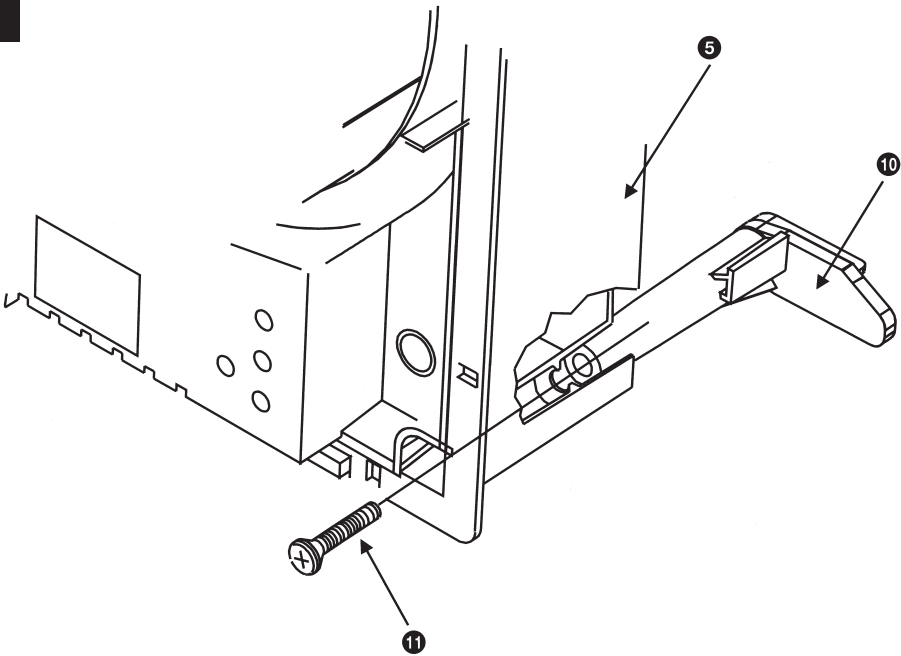
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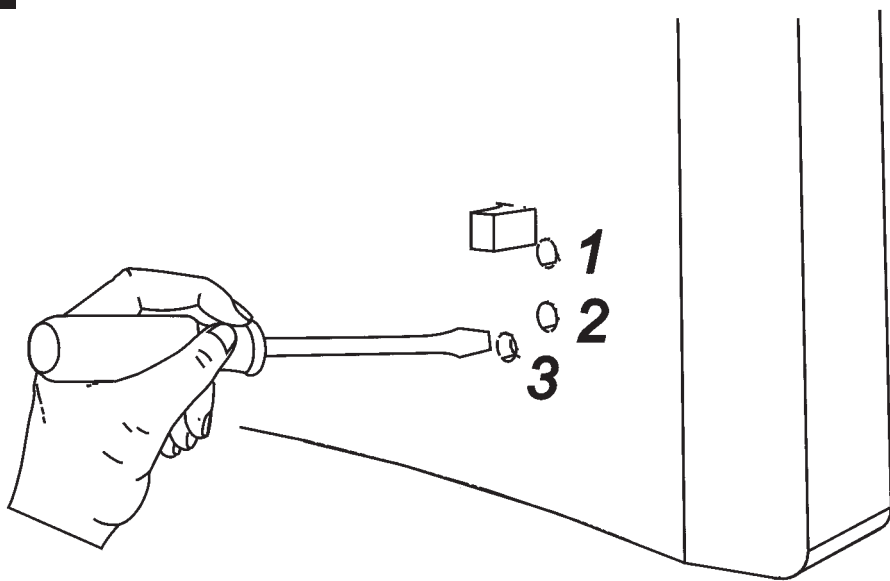
**D**



DIM	A	B	C	D	E	F	G	H	J	K	L	M	N
mm	220	250	62	42.5	42.5	95	19	182	19	212	65	85.5	92

**E****F**

**G**





# Xpelair Centrifugal Ducted Fans

## Premier DX200 & DX200T

### Installation and operating instructions

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

#### 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 may contact your local Xpelair distributor, details of which are available from the UK office.

#### Description

- ♦ All fans have the following features:
- ♦ Wall mounting.
- ♦ Ceiling mounting using appropriate ancillaries (available from Xpelair).
- ♦ Glass mounting using Glass Mounting Kit (GMK available from Xpelair).
- ♦ Surface and flush mounting options.
- ♦ Intended for ducted installations.
- ♦ Choice of extract spigots for 100mm internal diameter ducting (wall duct WD100 available from Xpelair) or flat ducting (flat ducting adaptor FDA available from Xpelair).
- ♦ Two speed operation. This allows economical use of energy, and low sound levels. High speed operation at 110m<sup>3</sup>/h allows conformance to UK Building Regulations for utility rooms. Low speed operation at 85m<sup>3</sup>/h allows conformance to UK Building Regulations for toilet and bathrooms.

#### DX200

- ♦ Operate the fan using an on/off switch (not supplied).

#### DX200T

- ♦ Built-in timer automatically operates fan for an adjustable over-run period of up to 20 minutes.

#### 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 (DX200).
- ♦ Suitably rated 4-core cable (DX200T).
- ♦ 3mm electrician's screwdriver and no. 1 and 2 Pozidriv screwdrivers.
- ♦ A wall or ceiling on/off switch (DX200T).
- ♦ To prevent a possible hazardous situation from water ingress, a condensation trap (Xpelair no. XCT100) must be fitted as close as possible to the fan in all situations where any section of the ductwork is positioned higher than the fan itself.

#### If wall mounting the fan, you will also need

- ♦ Masonry drill, hammer & chisel (or 117mm core drill equipment if available).
- ♦ Mortar to make good the hole if required.
- ♦ Wall tube for cavity walls. WD100 available from Xpelair for walls up to 280mm (11") thick, or a length of 100mm internal diameter ducting.
- ♦ Suitable exterior wall grille. (KHWG or CFWG100 available from Xpelair).

#### If glass mounting the fan

- ♦ Glass Mounting Kit (GMK, available from Xpelair). Please refer to separate instruction leaflet for glass mounting kit.

#### If ceiling mounting the fan

- ♦ You will need to use the appropriate ancillaries for termination.
- ♦ These items are available from Xpelair.
  - 1 WT10 - Termination ducting kit.
  - 2 CFWG100 - Soffit board termination grille (white or grey).
  - 3 FD100/3 and FD100/6 - Flexible ducting.
  - 4 XCMK - Ceiling Mounting Kit.
- ♦ Appropriate ceiling fixings and screws.

#### Where to locate the fan

- ♦ Locate it as high as possible.
- ♦ 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 of 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.

- ♦ When intended for use in possible chemical corrosive atmospheres, consult our Technical Service Department. (For overseas markets contact you 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.

## Installing the isolating switch and cables

If installing with a controller please refer to Controller's installation instructions.

- 1 Check that the electrical rating shown **3** matches your main supply.
- 2 **Check there are no buried pipes or cables e.g. electricity, gas, water behind the switch location (in the wall or above the ceiling.)**
- 3 **Isolate the mains supply.**
- 4 Lay in the cable from the isolating switch to the fan location via the on/off switch (if required).
- 5 Lay in the cable from the isolating switch to the point of connection to the mains supply.
- 6 Install the isolating switch and on/off switch (if required).
- 7 Make all connections within the isolating switch and on/off switch (if required).

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

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

### For Australia only (DX200)

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

### For Australia only (DX200T)

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.

### 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.**

A hole cutting service is available from Xpelair. Contact Technical Services for details (UK only).

## If installing in a wall (surface mounting)

- 1 **Check there are no buried pipes or cables in the wall or obstructions on the outside e.g. electricity, gas, water. Check the orientation of the fan **E**.**
- 2 Mark on the wall the centre of the duct hole **D**. Allow adequate clearance from the wall edges.
- 3 Use this centre to mark a circle to suit the wall duct (117mm diameter).

**If core drill equipment is available:**

- 4a Use as directed by core drill manufacturer.
- If core drill equipment is not available:**  
4b Drill a centre hole right through the wall.

- 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 Cut ducting to the correct length if required.
- 8 Fit the ducting. Ensure that the duct slopes down away from the fan to allow drainage of any incoming rain water to the outside.
- 9 Make good the hole. Allow the mortar to set before continuing the fan installation.

## If installing in a wall (flush mounting)

- 1 **Check there are no buried pipes or cables in the wall or obstructions on the outside e.g. electricity, gas, water. Check the orientation to the fan **E**.**
- 2 Mark on the wall the centre of the duct hole **D**. Allow adequate clearance from the wall edges.
- 3 Use this centre to drill a small hole right through the wall.
- 4 Use the centre hole to mark a rectangular hole for the inner wall using the dimensions **A**.
5. Cut the rectangular hole through the inner 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 117mm diameter hole in the outer wall using the small hole as the centre, repeating the cutting process described above, or using core drill equipment if available.
- 7 Measure the wall thickness.
- 8 Cut the wall tube so that it is 64mm less than the wall thickness.

## If installing in a ceiling (surface mounting)

This method requires a space above the ceiling, such as a loft or attic, to provide access for 100mm internal diameter ducting.

- 1 Mark on the ceiling the centre of the duct hole **D**. **Check there are no ceiling support beams above the ceiling in the path of the ducting.**
- 2 Cut a 117mm diameter hole using the marked centre.

## If installing in a ceiling (flush mounting)

For 100mm diameter ducting:

- 1 **Check there are no ceiling support beams above the ceiling in the path of the ducting or in the area of the fan box **5**.**
- 2 Mark a rectangular hole using the dimensions **B**.
- 3 Cut the hole.

For flat ducting:

- ◆ This fan can be installed within a 47mm void without the circular spigot **7**. Flat ducting adaptor (FDA, available from Xpelair is required. Please refer to separate instruction leaflet for Flat ducting adaptor.

## Preparing the fan for installation

- 1 Remove the baffle plate **1** by unclipping it, using a sideways action.
- 2 Unscrew the front cover **2** and remove by allowing it to hinge down from the top and un-hook from the bottom.
- 3 Fit the foam tape supplied around the circular spigot **7**.

## Mount the fan in the hole

### If installing in a wall or ceiling (surface mounting)

- 1 Place the ducting into the hole and align to the required position. If wall mounting, ensure that the ducting slopes down away from the fan to allow drainage of any incoming water to the outside.

- 2 Mark on the wall or ceiling the positions of the three fixing holes **D** in the fan box **5**.
- 3 If wall mounting, drill three holes 5.5mm diameter for wall plugs (supplied). If ceiling mounting, use appropriate fasteners.
- 4 Snap the surround support plates **13** to the fan box **5**.
- 5 Cut out the cable inlet hole in the surround **9**, if required. Slide the surround **9** over the fan box **5**.
- 6 Pass the electrical cables into the fan box **5** through the rear cable inlet hole.
- 7 Offer the fan box **5** up to the wall or ceiling making sure the circular spigot **7** enters the ducting.
- 8 Fix the fan box **5** to the wall using screws **11** or to the ceiling using appropriate fasteners (not supplied).

### *If installing in a wall (flush mounting)*

The surround **9** is not required for this installation. Fit the ducting to the circular spigot **7**.

*If the hole size is as recommended:*

- 1 Assemble the three fan body clamps **10** to the fan box **5** using screws **11**.
- 2 Pass the electrical cables into the fan box **5** through the front cable inlet hole.
- 3 Offer the fan box **5** up to the wall making sure the ducting enters the outer wall. Ensure that the ducting slopes down away from the fan to allow drainage of any incoming water to the outside.
- 4 Tighten up the three screws **11** until the fan is clamped to the inner wall. The fan body clamps **10** will rotate to an automatic stop position. Do not overtighten.

*If the hole size is larger than recommended i.e. larger than the flange on the fan box **5**.*

- 1 The fan body clamps are not suitable.
- 2 Construct a wooden frame of internal dimensions 203 x 233mm. Depth should be at least 50mm.
- 3 Fit the wooden frame in the internal wall and make good the hole.
- 4 Offer the fan box **5** up to the wall making sure the ducting enters the outer wall. Ensure that the ducting slopes down away from the fan to allow drainage of any incoming water to the outside.
- 5 Allow the mortar to set before continuing the fan installation.
- 6 Screw the fan box **5** to the wooden frame using the slots in the flange (screws not supplied).

### *If installing in a ceiling (flush mounting)*

- 1 The surround **9** is not required for this installation.
- 2 Insert the fan box **5** into the hole and mark four positions using the slots in the flange **B**.
- 3 Remove fan box **5** from ceiling and fit the four ceiling clips (supplied) over the edge of the hole, so that the clips align with the marks on the ceiling **B**.
- 4 Make a pilot hole 3.5mm diameter through the hole of each clip. Ensure not to damage the clip.
- 5 Fit the ducting to the circular spigot **7**.
- 6 Offer the fan box **5** up to the ceiling.
- 7 Pass the electrical cable into the fan box **5** through the front cable inlet hole.
- 8 Using the screws **12**, fix the fan box flange to the ceiling clips.

### *Terminating the ducting*

- 1 Make good the outer hole if required. Allow the mortar to set before continuing the fan installation.
- 2 Fit the outer grille to the outer wall or for ceiling mounting the appropriate terminations.

### *Wire the electrical connections*

- ◆ If installing with a controller please refer to Controller's Installation instructions.
  - ◆ **Make sure the mains supply is isolated.**
  - ◆ **Before making electrical connections pierce grommet with No. 2 pozi-drive screwdriver. DO NOT REMOVE GROMMET.**
- 1 Remove the retaining screw of the terminal cover **6** and let the cover swing out.
  - 2 If wiring via cable clamp, remove the cable clamp.
  - 3a Wire the fan as shown in **C**. Check fan model to diagram.
  - 3b For dual speed operation, you will need a COS (Change Over Speed Switch), available from Xpelair.
  - 3c For single speed operation at high speed, connect the live supply to the LH terminal.
  - 3d For single speed operation at low speed, connect the live supply to the LL terminal.
  - 4 If wiring via cable clamp, replace the cable clamp and two screws. Ensure the cable is firmly retained by the clamp.
  - 5 Replace the terminal cover **6** and fasten the retaining screw.
  - 6 **Switch off the mains electrical supply and remove fuses.**

- 7 Connect the cable from the isolating switch to the electrical supply wiring.

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

### *Re-fitting fan covers*

- 1 Refit front cover **2** by placing the lower lugs into the apertures on the fan box flange and pivoting upwards over the fan box **5**. Fix with screw.
- 2 Fit spindle plugs **4** onto the front cover **2**.
- 3 Fit baffle plate **1** onto the front cover **2** by locating the clips and carefully snapping into position.

### *User adjustments*

- 1 **Before making any adjustments, isolate the fan completely from the mains supply.**
- 2 Remove the baffle plate **1** by unclipping it using a sideways action.
- 3 Lever out the spindle plugs **4** with an electrician's screwdriver.
- 4 Using an electrician's screwdriver, turn clockwise to increase setting or anti-clockwise to decrease setting.

### *DX200T*

Timer over-run is approximately 2 minutes minimum to 20 minutes maximum. Use position **1 C**.

### *Using the fan*

#### *DX200*

- ◆ For single speed operation, the fan will operate at the speed selected during installation.
- ◆ For dual speed operation, the fan will operate at the speed selected on the COS switch.
- ◆ Operate the fan using the isolating switch. Repeat to switch off. (Light indicates when fan is switched on).

#### *DX200T*

- ◆ For single speed operation, the fan will operate at the speed selected during installation.
- ◆ For dual speed operation, the fan will operate at the speed selected on the COS switch.
- ◆ Operate the fan using the on/off switch. When the switch is turned off, the fan continues to operate for the adjustable timer over-run period. (Light indicates when fan is operating in manual mode).



## ***Electrical safety components***

- ◆ Baffle plate **1** must always be fitted when the fan is operational.
- ◆ Blanking plates **8** must not be removed unless directed to do so when the flat ducting adaptor is fitted.

Before making electrical connections pierce grommet with No. 2 pozi-drive screwdriver.

**DO NOT REMOVE GROMMET.**

## ***Maintenance***

### **A QUALIFIED ELECTRICIAN MUST CARRY OUT ALL CLEANING.**

- ◆ **Before cleaning, isolate the fan completely from the mains electricity supply. Allow 3 minutes for the impeller to stop rotating.**
- 1 Remove the baffle plate **1** by unclipping it using a sideways action.
  - 2 Clean the baffle plate **1** by immersing in warm soapy water. Dry thoroughly.
  - 3 The front cover **2** and surround **9** should be wiped clean with a damp cloth.
  - 4 Refit the baffle plate **1** onto the front cover **2** by locating the clips and carefully snapping into position. Do not immerse the fan in water or any other liquids. The bearings are lubricated and sealed during manufacture and require no further attention. Regular cleaning of your product is recommended.
- ◆ **Never use strong solvents to clean the fan.**
  - ◆ **Apart from cleaning, no other maintenance is required.**
  - ◆ **Do not immerse the fan in water or other liquids to clean any other parts of the fan.**

## ***Terminating the ducting***

### **For **E** and **F****

- 1** Baffle Plate
- 2** Front Cover
- 3** Rating Plate
- 4** Spindle Plugs
- 5** Fan Box
- 6** Terminal Cover
- 7** Circular Spigot
- 8** Rectangular Blanking Plate - 2 off
- 9** Surround
- 10** Fan Body Clamps - 3 off
- 11** Clamps Screws and Wall Plug Screws  
40mm long - 3 off
- 12** Ceiling Screws 25mm long - 4 off
- 13** Surround Support Plates - 3 off

## ***Do's***

- ◆ Do - Read all the instructions before commencing installation.
- ◆ Do - Install each fan with a double pole isolation switch.
- ◆ Do- Make sure that the mains supply is switched off before attempting to make electrical connections or carry out maintenance or cleaning.

## ***Guarantee***

**Customers outside UK - see International below.**

- ◆ UK: The fan is guaranteed against defects for 3 years from the date of purchase.
- ◆ Xpelair reserve the right to repair or replace at their option.
- ◆ 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.

## ***Head Office, UK Sales Office and Spares***

GDA Applied Energy Ltd, Morley Way, Peterborough PE2 9JJ England.

Telephone: **+44 (0)1733 456789**

Fax: **+44 (0)1733 310606**

Sales/Spares Hotline: **+44 (0)8709 000420**

Sales/Spares Faxline: **+44 (0)8709 000520**

<http://www.xpelair.co.uk>

## ***International***

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



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