

#### Do's and Don'ts

- Do read the entire instruction leaflet before commencing installation.
- Do install each fan with a means for disconnection in all poles in the fixed wiring.
- Do make sure the mains supply is switched off before attempting to make electrical connections or carry out any maintenance or cleaning.

#### Guarantee.

##### UK only:

We, Applied Energy Products Ltd., provide a guarantee against faulty parts and manufacture for a period of 3 years from the date of purchase. In the unlikely event of a product breakdown during the guarantee period the product should be returned to the place of purchase or to Applied Energy Products Ltd.

##### Exclusions:

- This guarantee does not cover compensation for the loss of the product or consequential loss of any kind.
- Damage or defects to the product arising from incorrect installation or lack of maintenance.
- Transportation costs.

This guarantee does not affect your statutory rights

#### Technical advice and service

Customers outside UK - see international below.

##### United Kingdom

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) 844 372 7766
- By fax on Techfax: +44 (0) 844 372 7767
- At the address below

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

Applied Energy Products Ltd, Morley Way, Peterborough, PE2 9JJ England

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<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.

## Installation and Maintenance Instructions

**Xpelair SL100 / SL150**

Standard

**Xpelair SL100P / SL150P**

Pull Cord

**Xpelair SL100T / SL150T**

Timer

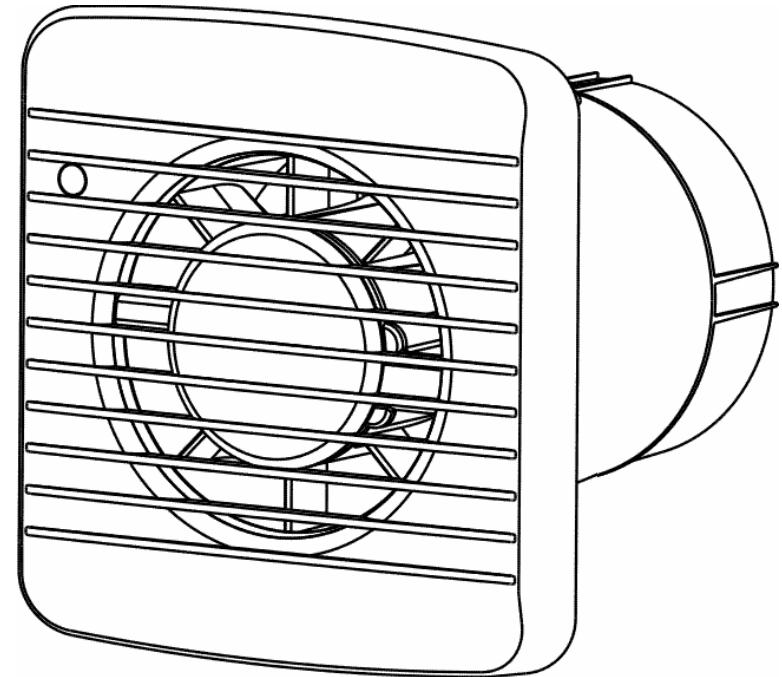
**Xpelair SL100HT / SL150HT**

Humidistat, Timer and Pull Cord

**Xpelair SL100PIR / SL150PIR**

Integral Body Movement Sensor

### *Toilet / Bathroom 100mm and 150mm AC Slimline Fan Range*

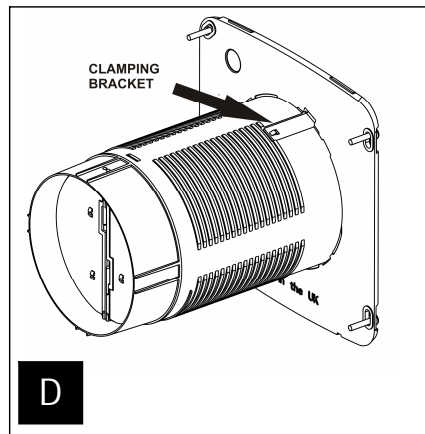
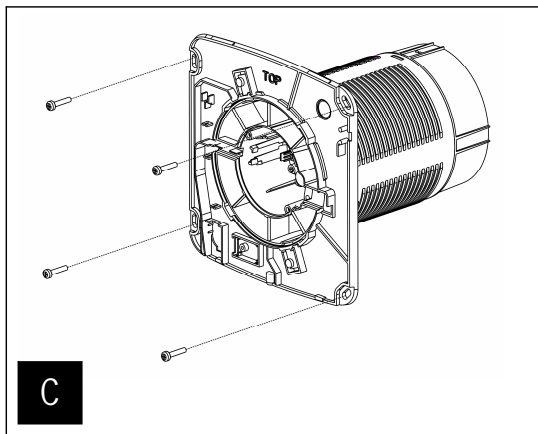
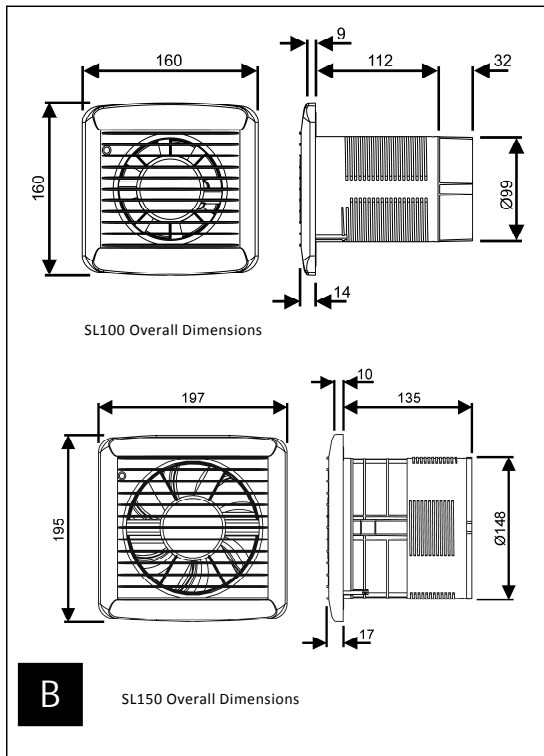
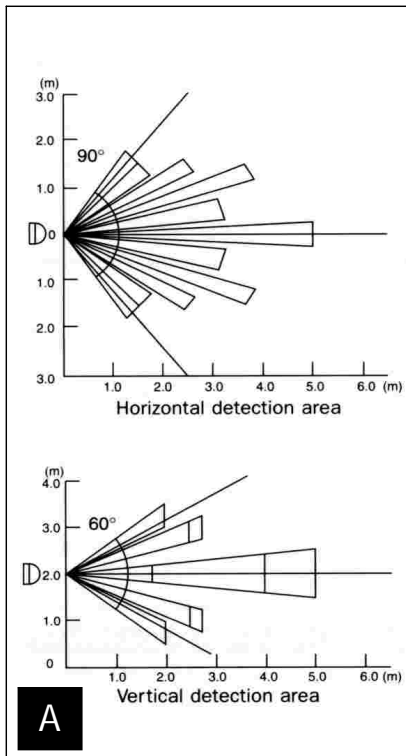


applied energy



Part No: 24117AA  
(Revision A)





### Setting the fan.

#### SL100T / SL100PIR / SL150T / SL150PIR Only.

- To adjust the over-run period turn the control (T) clockwise to increase and anti-clockwise to decrease – see Figure F.

#### SL100HT / SL150HT Only – see figures F and G.

- The pre-set humidity operation is factory set at approximately 75% Relative Humidity (RH), but can be adjusted between 65% and 85% RH by control H.
- The over -run timer can be adjusted up to 30 minutes by control T – see Figure F.
- Turn the controls clockwise to increase RH or time and anti-clockwise to decrease – see Figure F.

The fan can be set so that there is a 2-minute time delayed start to its operation when used with an external on/off switch.

To set the time delay start to ON (fan does not start for 2 minutes) set the jumper switch to position shown in figure F.

To set the time delay start to OFF (fans starts immediately) set the jumper switch to position shown in figure F.

### Using the fan.

#### SL100 / SL150 Only

- Operate the fan using the on/off switch. Repeat to switch off.

#### SL100P / SL150P Only

- Operate the fan by pulling and releasing the cord. Repeat to switch off.

#### SL100T / SL150T Only

- Operate the fan using an on/off switch (not supplied). When the switch is turned off, the fan continues to operate for the set time delay. To adjust the over-run period, turn the control “T” clockwise to increase and anti-clockwise to decrease – see Figure F.

#### SL100HT / SL150HT Only – see Figures F and G.

- Automatic mode** - The fan automatically adjusts to slow changes in natural humidity levels without operating the fan. If the humidity levels increase at a rate slower than 5% RH in 5 minutes, up to the pre-set humidity level, the fan will not be triggered by humidity. This is to prevent nuisance triggering of the fan. If humidity levels increase quicker than 5% RH in 5 minutes the fan will operate. When relative humidity drops the fan continues to operate for the adjustable time delay.
- Manual mode** - Use the integral pull cord switch. When the fan is switched off, it goes into automatic mode. Light flashes when the fan is operating in manual mode.
- External operation** - Use the external on/off switch. When the fan is switched off, the fan continues to operate for the adjustable time delay then goes into automatic mode. The fan can be set so that there is a 2-minute time delayed start to its operation when used with an external on/off switch.

#### SL100PIR / SL150PIR Only

- The sensor detects movement in the room and activates the fan. When movement is sensed, the fan will run for a pre-set overrun period and any further movement sensed will re-start the sequence. This ensures that the room is only ventilated after use.

When the fan is first installed there will be a stabilising period of approximately five minutes. During this time the fan will run for up to 2 minutes.

#### All Fans

Re-fit the front cover by hooking in the top corners first, and then swing the cover down to fit the bottom corners. Re-fit the screw.

Re-fit the electrical cover.

#### Cleaning (recommended once a month).

- Before cleaning, isolate the fan completely from the mains supply.
- Remove the front cover by removing the screw from the underside of the cover and pulling off the cover from the bottom corners first.
- To clean the front cover, either wipe it with a damp, lint free cloth or wash it with warm soapy water. Thoroughly dry the front cover and refit.
- Do not immerse the fan in water or other liquids to clean any other parts of the fan.
- Do not use strong detergents, solvents or chemical cleaners
- Allow fan to dry thoroughly before use.
- Apart from cleaning, no other maintenance is required.

### Preparing the hole.

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

WARNING: EYE PROTECTION MUST BE WORN DURING ALL DRILLING AND CHISELLING OPERATIONS.

#### 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. If in doubt, seek professional advice.
2. Mark on the wall the centre of the duct hole.  
For SL100 range the centre of the hole should be at least 110mm away from the edge of the mounting surface,  
For the SL150 range the centre of the hole should be at least 145mm away from the edge of the mounting surface.
3. Use this centre to mark a circle  $\varnothing 100\text{mm}$  for SL100 range /  $\varnothing 150\text{mm}$  for SL150 range (or to suit the wall duct  $\varnothing 115\text{mm}$  for SL100 range /  $\varnothing 165\text{mm}$  for SL150 range).

*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 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 ceiling.

1. Check there are no buried pipes or cables in the ceiling/joists etc. If in doubt, seek professional advice.
2. Cut a hole  $\varnothing 100\text{mm}$  for SL100 range or  $\varnothing 150\text{mm}$  for SL150 range.

### Preparing the fan for installation.

Remove the front cover by removing the screw from the underside of the cover and pulling off the cover from the bottom corners first.

Remove the electrical cover by removing the 2 screws.

Mount the fan in the hole

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

#### If installing in a wall or ceiling.

Mark the position of the backplate

1. Hold the backplate so that the word "TOP" marked on it is orientated correctly.
2. Carefully insert the lip into the wall duct/ceiling.
3. Adjust the position of the backplate until it is level.
4. Mark on the wall/ceiling the positions of the fixing holes in the backplate.
5. Remove the back plate from the ducting.
6. Drill screw holes in these positions if necessary, and fit wall plugs if necessary.

#### Mount the backplate.

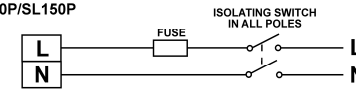
1. If installing in a ceiling, appropriate termination ancillaries are required. Follow instructions provided.
2. Remove knockout. Feed the mains cable through the cable entry hole in the back plate to the terminals.
3. Insert the lip of the backplate into the wall duct/ceiling as before.
4. Fasten the backplate to the wall/ceiling using appropriate fasteners. See figure C.  
If using screws, do not over tighten.

The fans may also be fixed to the interior of the ceiling using the clamping brackets. Tighten the screws until the fan is firmly fixed within the hole - see figure D.

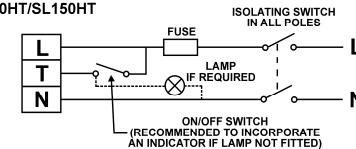
### Wire the electrical connections.

1. Make sure the mains supply is isolated,
  2. Wire the fan as shown in figure E. Check the fan model to diagram, feeding the cable to terminal block.
  3. Switch off the mains electrical supply and remove fuses
  4. 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.

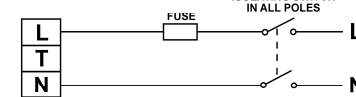
SL100/SL150  
SL100P/SL150P



SL100T/SL150T  
SL100HT/SL150HT



SL100PIR/SL150PIR

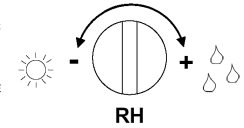


E

### IMPORTANT - PLEASE READ

#### Adjusting the humidity setting

Fan switches on at lower level of condensation (anti-clockwise)

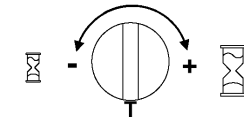


Fan does not switch on until higher level of condensation (clockwise)

LESS SENSITIVE (RH = 95%)

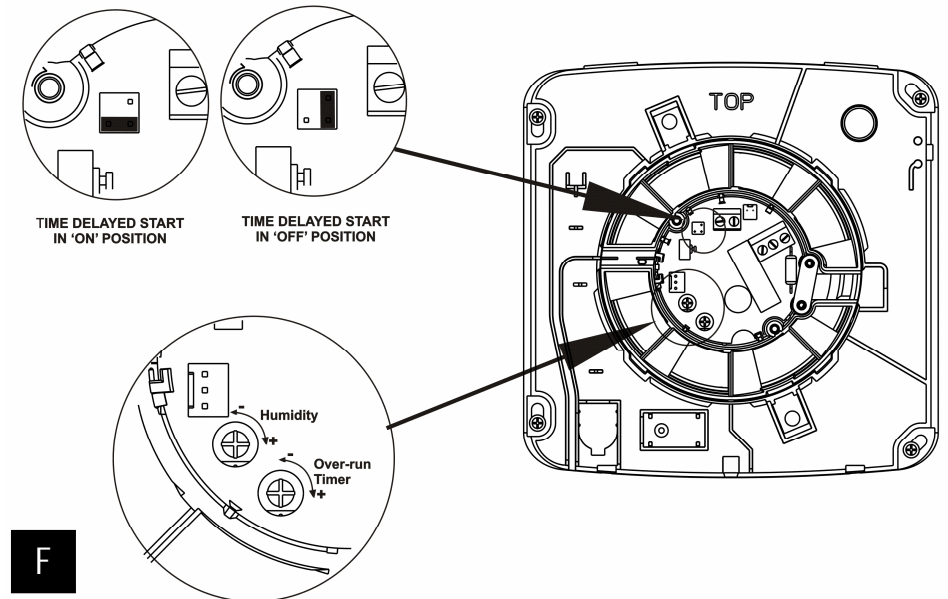
#### Adjusting the run on timer setting

Fan runs on for a shorter time when the external switch is turned off



Fan runs on for a longer time when the external switch is turned off

G



F

## Xpelair SL100 / SL100P / SL100T / SL100HT / SL100PIR

## Xpelair SL150 / SL150P / SL150T / SL150HT / SL150PIR

*Slimline Range of Toilet / Bathroom Fans*

*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 each fan matches the mains supply.

**THESE APPLIANCES ARE DOUBLE INSULATED AND DO NOT REQUIRE AN EARTH CONNECTION.**

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).

**This appliance is not intended for use by persons (including children and the infirm) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure they do not play with the appliance.**

If you have any queries before installing these products or after they have been installed, call the Xpelair Technical Hotline +44 (0) 844 372 7766. Our engineers are there to help you during normal office hours (UK only) and may be faxed at all other times on +44 (0) 844 372 7767.

Customers outside the UK should contact your local Xpelair distributor.

### Description.

All Slimline fans have the following features:

- Single speed extraction
- Built-in back draught shutter

*SL 100/SL 150*

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

*SL 100P/SL 150P*

- Operate the fan using an integral pull-cord.

*SL 100T/SL 150T*

- Built-in timer operates fan for a preset delay of up to 30 minutes.

*SL 100HT/SL 150HT*

- Operates when triggered automatically by the humidity sensor, using an external on/off switch or using the integral pull cord switch (light flashes when the fan is operating in manual mode).

**In automatic mode:** the built-in timer automatically operates the fan for a pre-set delay time of up to 30 minutes once humidity drops below the pre-set Relative Humidity (RH) value.

**In manual mode:** when the fan is switched off, it goes into automatic mode. Light flashes when the fan is operating in manual mode.

**External operation:** The fan can be set so that there is a 2-minute time delayed start to its operation when used with an external on/off switch. When switched off using the external on/off switch the fan continues to run for the preset delay of up to 30 minutes.

*SL 100PIR / SL 150PIR*

- An integral body movement sensor operates the fan as long as movement is detected.

Built-in timer automatically operates fan for a preset delay of up to 30 minutes.

### What the installer will need.

- A means for disconnection in all poles must be incorporated in the fixed wiring in accordance with wiring regulations (wall or ceiling mounted).
- **If metal switch boxes are used, earthing regulations must be followed.**
- Suitably rated 2-core cable – SL100 / SL100P / SL100PIR / SL150 / SL150P / SL150PIR.
- Suitably rated 3-core cable – SL100T / SL100HT / SL150T / SL150HT.
- 3mm electrician's screwdriver and No.1 or 2 Pozidrive screwdrivers.
- A wall or ceiling on/off switch – SL100T / SL100HT / SL150T / SL150HT.
- It is recommended to use a switch with an indicator light.
- To prevent a possible hazardous situation from water ingress, an appropriate condensation trap must be fitted as close as possible to the fan in all situations where any section of the duct work is positioned higher than the fan itself.

*FOR SL 100 Range: If wall mounting the fan, you will also need:*

- SLWK10 Wall Kit, or alternatively, an appropriate Wall Grille and Ø100mm ducting.
- A Masonry drill, hammer & chisel (or core drill equipment if available).
- Mortar to make good the hole around the ducting.

*FOR SL 100 Range: If ceiling mounting the fan,*

You will need the use of appropriate ancillaries for termination. These items are available from Xpelair:

1. WT10 – Termination ducting kit.
2. FD100 – Flexible Ducting.
3. XCT100 – Condensation Trap.

*FOR SL 150 Range: If wall mounting the fan, you will also need:*

- SLWK15 Wall Kit, or alternatively, an appropriate Wall Grille and Ø150mm ducting.
- A Masonry drill, hammer & chisel (or core drill equipment if available).
- Mortar to make good the hole around the ducting.

*FOR SL 150 Range: If ceiling mounting the fan,*

You will need the use of appropriate ancillaries for termination. These items are available from Xpelair:

1. WT15 – Termination ducting kit.
2. FD150 – Flexible Ducting.

### Where to locate the fan.

- Locate it as high as possible.
- For the SL100 range At least 110mm from the edges of the mounting surface to the centre of the hole.
- For the SL150 range At least 145mm from the edges of the mounting surface 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 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 out Technical Service Department. (For overseas markets contact your local Xpelair distributor).**
- **SL100PIR / SL150PIR Only – Siting must ensure detection of movement. Care should be taken to avoid obstruction that may affect detection beams. See figure A.**

### Installing the isolating switch and cables.

1. **Check that the electrical rating shown inside the backplate matches your mains 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). If in doubt, seek professional advice.**
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.  
**Warning: Do not make any connections to the electrical supply at this stage.**
6. Install the isolating switch and on/off switch (if required).
7. Make all connections within the isolating switch and the on/off switch (if required).

**Note: on/off switch must be situated so that it 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.**

**If in doubt, seek professional advice.**

*For Australia Only - SL 100 / SL 100P / SL 100PIR  
SL 150 / SL 150P / SL 150PIR*

*Connection to the supply can be made by a flexible 2-core cable complete with 3 pin plug 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 - SL 100T / SL 100HT / SL 150T / SL 150HT*

*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.*