Positioning Fan

Ceiling Mounting

Fit a 24mm plywood support between joists as shown.

iCON15S

The iCON15S fan requires a 110mm diameter hole. The fan is fixed to the support with the two 5mm x 32mm pan head screws provided.

iCON30S Surface Mounting

The iCON30S Fan requires a 110mm diameter hole. The Surface mounting skirt is fixed to the support with the three 4mm x 32mm pan head screws and the fan is fixed to the skirt with the 3 x M3 x 8 flange head screws.

iCON30S Flush Mounting

The iCON30S Fan requires a 110mm diameter hole. The fan is fixed to the support with the three 4mm x 32mm pan head screws provided.

iCON SELV Domestic Fans

iCON SELV Base Units: iCON15S – 72591801 iCON30S – 72591901

Installation, Maintenance and Use

ICON SELV (Safety Extra Low Voltage) fans are available in 2 model sizes and can be fitted to a wall or ceiling. Each fan requires a suitable sized hole through the wall or ceiling structure which connects into a ducting system venting to the outside.

The ICON SELV transformer unit must be fitted outside of Zones 0, 1 and 2. It is usually installed outside the room.

Note: Switches for fans shall be selected and sited in accordance with electrical safety regulations and standards.

Whilst the ICON range can be used as a simple fan powered via the ICON transformer unit, and connected to either a switch or into a lighting circuit, each fan can also be fitted with an integral control module. The control function options include: timer, PIR, humidity, pull-cord and various standard combinations of these. Modules are available separately and can be fitted at the time of installation or retrofitted. [See: Modules for ICON SELV]

All Installation to be carried out by an approved electrician in accordance with part P Building Regulations

Safety Precautions and General Recommendations

- Observe all appropriate safety precautions when using steps and ladders.
- Wear eye protection when drilling, cutting or breaking out walls or ceilings.
- Check for buried cables or pipes before drilling or cutting walls or ceilings.

IMPORTANT: Read all instructions fully, in conjunction with the diagrams, before commencing installation.

- All relevant regulations and requirements must be strictly obeyed to ensure safe operation and maintenance of ICON domestic fans.
- The fan must be sited and connected in accordance with all current European regulations or appropriate National standards in other countries.
- ICON SELV fan units are not suitable for use in Zone 5. [See: also Installation].
- ICON SELV transformer unit (220-240V/12V DC) is not suitable for use in Zones 0, 1 or 2. It must be sited out of reach of anyone using the bath, shower or sink.
- The unit can be mounted on the side or top of a roof joist. [See also: Installation].
- ICON SELV transformer unit with thermal insulation or other materials, the recommended maximum length of cable between the ventilator and transformer is 5m for 1.5 mm² cables.
- Do not place the fan near direct heat sources, e.g. radiant heaters, or where temperatures can exceed 40°C (104°F).

Wall Mounting

iCON15S

The iCON15S Fan requires a 110mm diameter hole through the wall lined with 100mm id duct. Airflow Part 9201378. The fan is fixed to the wall with the two 5mm x 32 mm pan head screws and wall plugs.

iCON30S Surface Mounting

The iCON30S Fan requires a 110mm diameter hole through the wall lined with 100mm id duct. Airflow Part 9201378 and the Surface mounting skirt is fixed to the support with the three 4mm x 32mm pan head screws and wall plugs.

iCON30S Flush Mounting

The iCON30S Fan requires a 110mm diameter hole through the wall counter bored 160mm diameter to a depth of 75mm. The 110mm hole to be lined with 100mm id duct. Airflow part number 9201378.

Note: When ventilating through the roof void there may be condensation within the duct due to moist warm air coming into contact with the cold surface of the exhaust duct. This condensation may drip down into the fan unless a condensation trap is fitted as close to the fan as possible. Airflow Part 51978301 for iCON15 & 30. Lagging the duct will reduce the amount of condensate produced.

Positioning Transformer

The ICON SELV transformer unit cannot be fitted in Zone 0, 1 or 2 and must be sited out of reach of anyone using the bath, shower or sink. The units are usually installed outside the room or in an accessible loft or roof space with adequate circulation of air around the transformer unit to avoid overheating.

The unit can be mounted on the side or top of a roof joist. Note: Never cover the transformer unit with thermal insulation or other materials. The recommended distance between the transformer unit and the fan depends on the cable used. The maximum distance for a 1.5mm² cable is 5m; shorter for a smaller cable and longer for a larger cable.

Positioning Fan

Ceiling Mounting

Fit a 24mm plywood support between joists as shown.

iCON15S

The iCON15S fan requires a 110mm diameter hole. The fan is fixed to the support with the two 5mm x 32mm pan head screws provided.

iCON30S Surface Mounting

The iCON30S Fan requires a 110mm diameter hole. The Surface mounting skirt is fixed to the support with the three 4mm x 32mm pan head screws and the fan is fixed to the skirt with the 3 x M3 x 8 flange head screws.

iCON30S Flush Mounting

The iCON30S Fan requires a 110mm diameter hole through the wall counter bored 160mm diameter to a depth of 75mm. The 110mm hole to be lined with 100mm id duct. Airflow part number 9201378.

Note: When ventilating through the roof void there may be condensation within the duct due to moist warm air coming into contact with the cold surface of the exhaust duct. This condensation may drip down into the fan unless a condensation trap is fitted as close as the fan as possible. Airflow Part 51978301 for iCON15 & 30. Lagging the duct will reduce the amount of condensate produced.

iCON SELV Domestic Fans

iCON SELV Base Units: iCON15S – 72591801 iCON30S – 72591901

Installation, Maintenance and Use

ICON SELV (Safety Extra Low Voltage) fans are available in 2 model sizes and can be fitted to a wall or ceiling. Each fan requires a suitable sized hole through the wall or ceiling structure which connects into a ducting system venting to the outside.

The ICON SELV fans have IPX4 rated housings, they are double-insulated and are suitable for fitting in Zone 1, 2 or 3 of bathrooms, toilets, kitchens, utility rooms and inside shower cubicles.

The ICON SELV transformer unit must be fitted outside of Zones 0, 1 and 2. It is usually installed outside the room.

Note: Switches for fans shall be selected and sited in accordance with electrical safety regulations and standards.

Whilst the ICON range can be used as a simple fan powered via the ICON transformer unit, and connected to either a switch or into a lighting circuit, each fan can also be fitted with an integral control module. The control function options include: timer, PIR, humidity, pull-cord and various standard combinations of these. Modules are available separately and can be fitted at the time of installation or retrofitted. [See: Modules for ICON SELV]

All Installation to be carried out by an approved electrician in accordance with part P Building Regulations

Safety Precautions and General Recommendations

- Observe all appropriate safety precautions when using steps and ladders.
- Wear eye protection when drilling, cutting or breaking out walls or ceilings.
- Check for buried cables or pipes before drilling or cutting walls or ceilings.

IMPORTANT: Read all instructions fully, in conjunction with the diagrams, before commencing installation.

- All relevant regulations and requirements must be strictly obeyed to ensure safe operation and maintenance of ICON domestic fans.
- The fan must be sited and connected in accordance with all current European regulations or appropriate National standards in other countries.
- ICON SELV fan units are not suitable for use in Zone 5. [See: also Installation].
- ICON SELV transformer unit (220-240V/12V DC) is not suitable for use in Zones 0, 1 or 2. It must be sited out of reach of anyone using the bath, shower or sink. The units are usually installed outside the room or in an accessible loft or roof space with adequate circulation of air around the transformer unit to avoid overheating.

The unit can be mounted on the side or top of a roof joist. [See also: Installation].

Note: Never cover the transformer unit with thermal insulation or other materials, the recommended maximum length of cable between the ventilator and transformer is 5m for 1.5 mm² cables.

- Do not place the fan near direct heat sources, e.g. radiant heaters, or where temperatures can exceed 40°C (104°F).

Positioning Fan

Ceiling Mounting

Fit a 24mm plywood support between joists as shown.

iCON15S

The iCON15S fan requires a 110mm diameter hole. The fan is fixed to the support with the two 5mm x 32mm pan head screws provided.

iCON30S Surface Mounting

The iCON30S Fan requires a 110mm diameter hole. The Surface mounting skirt is fixed to the support with the three 4mm x 32mm pan head screws and the fan is fixed to the skirt with the 3 x M3 x 8 flange head screws.

iCON30S Flush Mounting

The iCON30S Fan requires a 110mm diameter hole through the wall counter bored 160mm diameter to a depth of 75mm. The 110mm hole to be lined with 100mm id duct. Airflow part number 9201378. Note: When ventilating through the roof void there may be condensation within the duct due to moist warm air coming into contact with the cold surface of the exhaust duct. This condensation may drip down into the fan unless a condensation trap is fitted as close as the fan as possible. Airflow Part 51978301 for iCON15 & 30. Lagging the duct will reduce the amount of condensate produced.

Positioning Transformer

The ICON SELV transformer unit cannot be fitted in Zone 0, 1 or 2 and must be sited out of reach of anyone using the bath, shower or sink. The units are usually installed outside the room or in an accessible loft or roof space with adequate circulation of air around the transformer unit to avoid overheating.

The unit can be mounted on the side or top of a roof joist. Note: Never cover the transformer unit with thermal insulation or other materials. The recommended distance between the transformer unit and the fan depends on the cable used. The maximum distance for a 1.5mm² cable is 5m; shorter for a smaller cable and longer for a larger cable.
Module Adjustment

DO NOT OPEN THE UNIT OR ADJUST THE CONTROLS UNLESS THE POWER TO THE UNIT HAS BEEN DISCONNECTED.

A module with a Timer or Humidity control is supplied preset, but may be adjusted by the installer.

Mounting Transformer

Unscrew the 2 retaining screws and remove the cover.

Using the transformer base, spot through the fixing holes (A, B or C). Lift the terminal block away from the fan housing.

Note: Choice of fixing positions (A, B or C) depends on the location.

Cabling or wall mounting. Drill to accept plastic wall plugs and then screw the transformer unit to the support using the 2 supplied screws (Pan head, M3 x 8 screws).

Loft or roof space. Screw the transformer unit to the support using the 2 supplied screws (Pan head, self tapping 4mm x 32mm long) supplied in the fixing kit.

Connect the cable, [See: Wiring Transformer].

Replace the transformer cover and secure with the two retaining screws.

Wiring

Wiring Transformer

The 220-240V mains cable can be routed into the transformer unit via the positions D (bottom), E (side) or F (side), whichever is most convenient.

E (bottom): Knock-out the plastic moulding, using a screwdriver.

D (bottom): Drip a 10mm Ø hole in the housing and fit the cable grommet supplied in the transformer fixing kit.

Pass cable into the transformer and allow sufficient cable inside the box to make the electrical connections to MAINS-side connector, [See: Wiring diagram].

Secure cable with the cable clamp (J) and 2 clamp screws (Pan head, self tapping. 4mm x 32mm long) supplied in the transformer fixing kit.

The output cable to the fan, typically 1.5mm² for a 5m cable run, can be routed into the transformer unit via the positions E (bottom), H (side) or I (side), whichever is most convenient.

E (bottom): Knock-out the plastic moulding, using a screwdriver.

H (side): Drill a 10mm Ø hole in the housing and fit the cable grommet supplied in the transformer fixing kit.

Pass cable into the transformer and allow sufficient cable inside the box to make the electrical connections to FAN-side connector, [See: Wiring diagram].

Secure cable with the cable clamp (K) and 2 clamp screws (Pan head, self tapping 3.5mm x 14mm long) supplied in the transformer fixing kit.

Passive Infra Red Humidity Timer Module PRHTS 3 wire connection L & N to transformer 12V & T between transformer and fan as diagram B.

The fan will switch on automatically on humidity or movement as with 2 wire connection above.

The fan will also run when power is applied to terminal LS and will run for a preset time when power is removed from LS. The run on time is set at 20 minutes but can be adjusted to run between 1 – 45 minutes after the last pull of the pull cord.

Pull Cord Adjustable Timer Module PCTS 2 wire connection L & N to transformer, 12V & 0V between transformer and module. As diagram C. Pull the pull cord on the module will trigger the run on timer. (This is a non latching switch and does not “click”). The run on time is set at 20 minutes but can be adjusted to run between 1 – 45 minutes after the last pull of the pull cord.

Pull Cord Adjustable Timer Module PCTS 3 wire connection L, N & LS to Transformer 12V & 0V between transformer and module as diagram B.

The fan requires a permanent supply to terminals L & N and a switched supply to terminal LS. The switched supply can be via separate switch or light switch. The fan will run for a preset time when power is removed from LS. The run on time is set at 20 minutes but can be adjusted to run between 1 – 45 minutes. The pull cord on the module should be cut off if not required.

Humidity Pull Cord Timer Module HTS, 2 wire connection L & N to transformer. 12V & 0V between transformer and module. As diagram A. The fan will switch on automatically when the humidity level rises above the setting on the dial and will continuously until the humidity falls to 5% below the preset. The lower the setting the longer the fan will run. In some cases, in a new house for example, the fan will continue to run for extended periods, as humidity will be high. Normally the setting should be set 70 to 80% but on humid summer days, ambient humidity may activate the fan and a higher setting may be preferable. The factory setting is 90%.

The pull cord will trigger the run on timer. (This is a non latching switch and does not “click”) The run on time is set at 20 minutes but can be adjusted to run between 1 – 45 minutes after the last pull of the pull cord. The pull cord on the fan should be cut off if not required.

Humidity Pull Cord Timer Module HTS, 3 wire connection L, N & LS to Transformer 12V & 0V & T between transformer and fan as diagram B. The fan will switch on automatically as with 2 wire connection above. The fan will also run when power is applied to terminal LS and will run for a preset time when power is removed from LS. The run on time is set at 20 minutes but can be adjusted to run between 1 – 45 minutes.

Passive Infra Red Humidity Timer Module HRTS 2 wire connection L & N to transformer 12V & 0V between transformer and module as diagram A. The fan will switch on automatically when the humidity level rises above the setting on the dial and will continuously until the humidity falls to 5% below the preset. The pull cord on the module will switch on, the fan will switch off automatically when the PIR sensor detects movement and will run for a preset time. The pull cord on the module will be cut off if not required.

Passive Infra Red Humidity Timer Module HRTS, 3 wire connection L, N & LS to Transformer 12V & 0V & T between transformer and fan as diagram B. The fan will switch on automatically as with 2 wire connection above. The fan will also run when power is applied to terminal LS and will run for a preset time when power is removed from LS. The run on time is set at 20 minutes but can be adjusted to run between 1 – 45 minutes. The pull cord on the module will be cut off if not required.

Note: When humidity controlled fans are first installed they can run continuously for several hours.

A. Control module with no external switching

B. Control module with external switching
For electrical connections to modules, [See: Modules].

Fan Front Cover Removal

The front cover of the unit has a bayonet-type fitting. Remove the retaining screw in the front cover using a screwdriver. Rotate the front cover a few degrees anticlockwise and remove.

Refitting

Reverse the removal procedure to refit the front cover. Rotate the cover unit until a “click” is heard. Replace the retaining screw.

Fixing Holes

Recessed Mount

1. Slide fan unit into the ducting in the wall or ceiling.
2. Check orientation is correct, i.e. for wall mount, the pull-cord slot is at bottom.
3. Spot through fixing hole positions (2 fixing holes for ICN15S; 3 fixing holes for ICN30S).
4. Drill holes suitable for wall plugs supplied in the fixing kit.
5. Secure fan unit to structure using screws supplied (two 5mm x 32mm for ICN15S; three 4mm x 32mm for ICN30S).

Surface Mount

1. Position slot over the hole in the wall or ceiling.
2. Check orientation is correct, i.e. pull-cord slot is at the bottom of the wall mounting. [See: Installation diagram].
3. Spot through fixing hole positions in fixtures.
4. Drill holes suitable for wall plugs supplied in the fixing kit.
5. Secure slot to wall or ceiling using screws supplied in fixing kit (three size 4mm x 32mm screws).
6. Fit fan unit into slot.
7. Check orientation is correct, i.e. align pull cord slots in fan and slot. [See: installation diagram].
8. Secure fan unit with three M3 x 8 screws.

A electrical installation to be carried out by an approved electrician in accordance with Part P Building Regulations.

Always isolate the transformer and fan units from the power supply before disassembling the equipment.

Fitting and Wiring

1. Remove the front cover. [See: Fan Front Cover - Removal].
2. Lift the terminal block away from the fan housing.
3. Push the two connector pins at one end of the module into the electrical terminal block and tighten with a suitable screwdriver. Ensure that the leads are under the retaining clip.
4. Fan is powered from a power connector and module into the location block in the fan housing.
5. Push module back into the fan body ensuring that the terminal block locates over the 2 retaining pillars.
6. For modules with pull-cords: ensure the pull-cord is properly located within the cord slot at the bottom of the fan housing.
7. For modules with PIR control: remove the cover from the fan housing. Mark the position of the cover to enable correct alignment. Push module back into the fan body ensuring that the terminal block locates over the 2 retaining pillars.
8. For connecting external DC cable into the fan: Fix the supplied sleeved grommet into the cable entry hole. Pierce the grommet to allow the mains cable to be pulled through while maintaining the integrity of the seal. Connect the cable to the transformer using a suitable connector (for details of the possible wiring schemes) ensuring that the supplied cable clamp is fitted.
9. Refit the front cover. [See: Fan Front Cover - Refitting].

Relative humidity (%RH): 40% to 90% (Factory set to approx. 90%RH)
Never clean any parts of the fan assembly by immersing in water or using a dishwasher.

Technical Specification

Features
Flexible operation for a range of domestic uses in bathrooms, shower cubicles, toilets, kitchens and utility rooms.
- Lubricated for life motor
- Double insulated Class II rated
- Fan housing IPX4
- Conforms to current building regulations.

Infrared sensor (PIR) detects someone in the room.

An iCON fan with a control module fitted starts either when the:
- infra-red sensor (PIR) detects someone in the room.
- unit is switched on (TIMER) and continues to work for a pre-set period.
- set period has elapsed (TIMER).

Units with a combination of these functions start when any one triggers.

Units with a combination of these functions stop when the last function no longer triggers and the set period has elapsed.

Operation with control modules varies with the particular one fitted.

1. Run on 2 - 45 minutes
2. Adjustable 40-90 %RH
3. Passive infra-red

Options and Spares

Description
ICON Model Part Number
ICON15S | ICON30S
---- | ----
72591801 | 72591901

Maintenance

ALWAYS ISOLATE THE TRANSFORMER AND FAN UNITS FROM THE POWER SUPPLY BEFORE REMOVING THE COVER.

Fixing the iCON fan to the wall
The iCON fan can be mounted either in a recess or on the surface. Please see the Installation instructions for recommendations.

Lubrication
The motor is lubricated for life and no further lubrication is required.

Troubleshooting

- Fan iris shutters do not open or shut immediately when fan is switched on or off.
  - A delay of approximately 45 seconds is normal operation for iCON Fans.

- Fan does not switch on
  - Check wiring to transformer.
  - Check external 3A fuse.
  - Check wiring to module.
  - Check PULL CORD on unit.

- Fan does not switch off
  - Check wiring connections to switch, unit and module.

- Fan continues to work for an excessively long time after leaving the room
  - Adjust modules. Reduce TIMER, increase HUMIDISTAT. [See: Fitting/Installation - Modules] When humidity controlled fans are first installed they can run continuously for several hours.

- Fan is not switched on
  - Check actuator lever is in position. (Spare provided)

- Fan Does not shut off
  - Remove and replace front cover. [See: Removing front cover/Reassembling].

- Fan iris shutters do not open or close
  - Contact AIRFLOW.

- Fan does not switch on
  - Contact AIRFLOW.

- Fan continues to work for an excessively long time after leaving the room
  - Adjust modules. Reduce TIMER, increase HUMIDISTAT.

- Fans do not work when set period has elapsed
  - Contact AIRFLOW.

- Fans do not work when mains power is switched off
  - Units with a combination of these functions stop when the last function no longer triggers and the set period has elapsed.

- Fans do not work when mains power is switched on
  - Units with a combination of these functions start when any one triggers.

- Fans do not work when mains power is switched on or off
  - Units with a combination of these functions stop when the last function no longer triggers and the set period has elapsed.

Safety

When installed according to these instructions the iCON range of fans are completely safe. The materials used do not constitute a hazard. The module covers are made of a flame retardant material.

Cleaning

To maintain optimum performance the ICON fan should be cleaned on a regular basis:

- The external housing of the fan can be wiped with a damp cloth. Do not use household cleaners containing abrasives.
- Cleaning of the internal parts such as the impeller should be carried out using a soft brush. Always ensure that the fan is isolated from the power supply before inserting the brush into the impeller duct.