

Product Manual

EN



Titon Ultimate® dMEV

TP 640

Decentralised Ventilation Unit

Titon Ultimate® dMEV H

TP 640H

Decentralised Ventilation Unit with Humidity Control

Titon Ultimate® dMEV HD

TP 640HD

Decentralised Ventilation Unit with Humidity Control & Data Logging



 **Titon**®
ventilation systems

Warnings, Safety and Guidance

Important Information

Read these instructions fully before the installation of this appliance

1. Installation of the appliance and accessories must be carried out by a qualified and suitably competent person and be carried out in clean, dry conditions where dust and humidity are at minimal levels.
2. All wiring must conform to current I.E.E. Wiring Regulations and all applicable standards and Building Regulations.
3. Units are suitable for 220-240V~ 50-60Hz single phase.
4. Stationary appliances not fitted with means for disconnection from the supply mains having a contact separation in all poles that provide full disconnection under over voltage category III, the instructions state that means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.
5. If supply is a 6 amp lighting circuit a local fuse is not required.
6. If supply is not via a 6 amp lighting circuit, a localised 3 amp fuse must be used.
7. The unit must be stored in a clean and dry environment.
8. Ensure that external grilles are located away from any flue outlet, in accordance with relevant Building Regulations.
9. The terminal marked with the earth symbol is for parking only and non-functional. As the fan is a class II appliance no connection to earth is required.

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10. Do not install the appliance in areas where the following may be present or occur;
 - Excessive oil or a grease laden atmosphere,
 - Corrosive or flammable gases, liquids or vapours,
 - Ambient temperatures above 40°C or below -5°C,
 - Humidity levels above 90% or is a wet environment.
 11. This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
 12. Children should be supervised to ensure that they do not play with the appliance.
 13. Precautions must be taken to avoid the back-flow of gases into the room from the open flue of gas or other fuel-burning appliances
 14. Ensure all ducting is free from debris and blockages before switching on the unit.
 15. Horizontal ducts should be arranged to slope slightly downwards away from the fan.
 16. Ensure there is adequate access for commissioning and optimal unit operation.
 17. Ensure adequate air return into the room in compliance with existing regulations in order to ensure proper device operation.
 18. Cleaning and user maintenance shall not be made by children without supervision.

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Explanation of symbols on the appliance

Symbol	Definition
	Read instruction Manual.
	Risk of Electric Shock.
	Disconnect the mains supply before removing this cover.

Product Overview

This manual is for the range of Titon Ultimate® dMEV Decentralised Extract ventilation units. All units are designed for continuous extract ventilation of a single room, for example bathroom, kitchen, toilet or utility area. The units use an efficient DC motor and bespoke impeller/guide vane combination to produce high flow rates & pressure.

The unit's controller self-commissions the unit to required set points in both wall and ceiling mounted systems and reacts to increased external pressure maintaining air flow rate.

The range consists of:

- Titon Ultimate® dMEV TP 640
Decentralised Ventilation Unit
- Titon Ultimate® dMEV H.....TP 640H
Decentralised Ventilation Unit with Humidity Control
- Titon Ultimate® dMEV HD.....TP 640HD
Decentralised Ventilation Unit with Humidity Control & Data Logging

Package Contents

- dMEV Unit.
- Fixing Pack x1 (Wall Plugs x4 & Screws x4)
- Product Manual.

All shortages or damage must be immediately reported to the supplier.

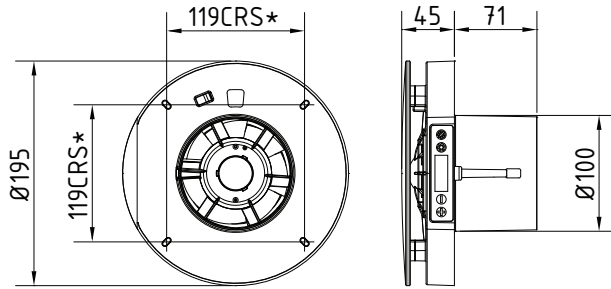
Accessories

(not supplied)

TP645/BR	Telescopic Wall Kit (Brown)	8960102	Louvre Grille (Brown)
TP645/BE	Telescopic Wall Kit (Beige)	8960103	Louvre Grille (Beige)
TP645/TC	Telescopic Wall Kit (Terracotta)	8960104	Louvre Grille (Terracotta)
TP645/WH	Telescopic Wall Kit (White)	8960105	Louvre Grille (White)
TP646.....	IPx4 Ceiling Kit		
TP647.....	Decorative Frame		

Dimensions

This diagram details the overall size of the unit



*Fixing Holes

Component Identification

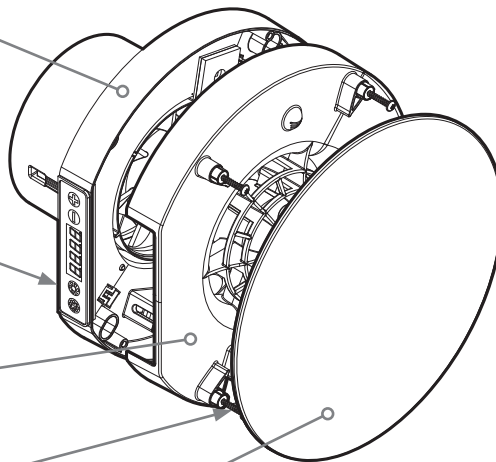
Base

Controls

Top

Top Retaining Screw x 4

Fascia



Patent applied for APPLICATION NUMBER 2004732.0

Product Features

Continuous Speed

The normal running speed of the unit.

Boost Speed

Boost Speed is an increased speed providing higher extract air flow.

High Boost Speed

Maximum running speed to rapidly remove humidity & VOC's in the dwelling.

Boost Switching

The Boost Speed can be enabled via a switch live input wired into the lighting circuit or independent switch. A second OFF/ON cycle of this switch live input within 5 seconds switches the fan to High Boost.

Boost/High Boost Overrun Timer

The timer delays the time in which the Boost/High Boost Speed is engaged when the switch live signal has been enabled for a specific time variable between 0 and 60 minutes.

Constant Flow

The units are fitted with an integrated Flow Sensor. This continuously monitors the air flow through the unit. If the sensor detects a reduction in air flow then the fan speed increases to maintain required flow rate.

Data Logging

TP 640HD only: The unit records the length of time it has been in powered use and the average humidity on a Daily/Monthly/Annual basis. The results can be recalled via the unit's digital display.

Calibration

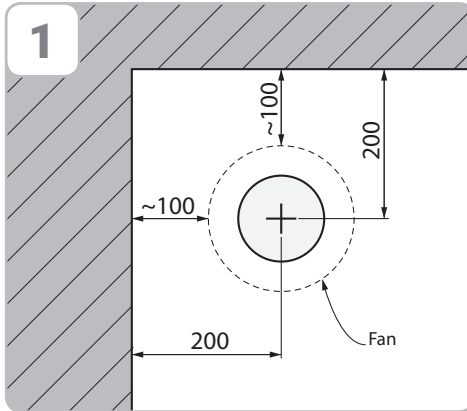
The unit is tested and tuned by UKAS calibrated equipment during manufacture. The details of the equipment and certification can be found on the inside of the fan.

Product Fiche

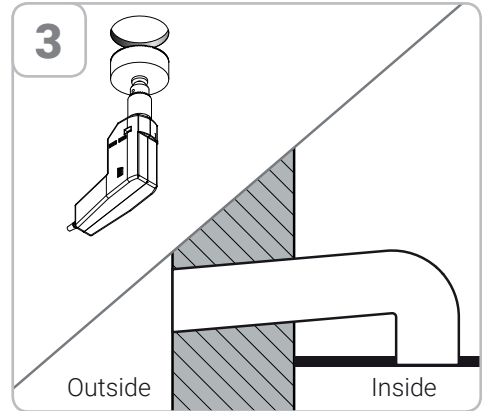
Item	TP640			TP640H / TP640HD		
	C	A	W	C	A	W
Specific Energy Consumption Class (Cold, Average, Warm)	B	E	F	A+	B	E
Declared Typology	Uni Directional			Uni Directional		
Type Of Drive Installed	Variable Speed Drive			Variable Speed Drive		
Type Of Heat Recovery System	None			None		
Thermal efficiency of heat recovery [%]	0			0		
Maximum flow rate [m ³ /h]	72			72		
Effective Power Input [W]	2.7			2.7		
Sound Power Level [dB]	49			49		
Reference Flow Rate [m ³ /s]	0.0147			0.0147		
Reference Pressure Difference [Pa]	10			10		
SPI [W/(m ³ /h)]	0.0518			0.0518		
Ventilation Control Factor	1.00			0.65		
Declared Maximum Internal Leakage Rate [%]	0			0		
Declared Maximum External Leakage Rate [%]	3			3		
Mixing Rate of Non-Ducted BVU	NA			NA		
Visual Filter Warning Position	NA			NA		
Unidirectional Installation Requirements	Regulated supply/exhaust grilles (for example, background ventilators) must be installed in the façade for natural air supply/extraction.					
Pre/dis-assembly instructions	www.titon.co.uk			www.titon.co.uk		
Non-Ducted Units Airflow Sensitivity to Pressure Variations [%]	+20Pa 6%	-20Pa 6%		+20Pa 6%	-20Pa 6%	
Non-Ducted Units Indoor / Outdoor Air Tightness [m ³ /h]	NA			NA		
SEC Specific Energy Consumption [kWh/(m ² .a)] (Cold, Average, Warm)	C -31.9	A -15.5	W -6.1	C -54.7	A -27.6	W -12.1
AEC Annual Electricity Consumption [kWh/a]	0.6	0.6	0.6	0.3	0.3	0.3
AHS Annual Heating Saved [kWh]	33.6	17.2	7.8	55.4	28.3	12.8

Installation

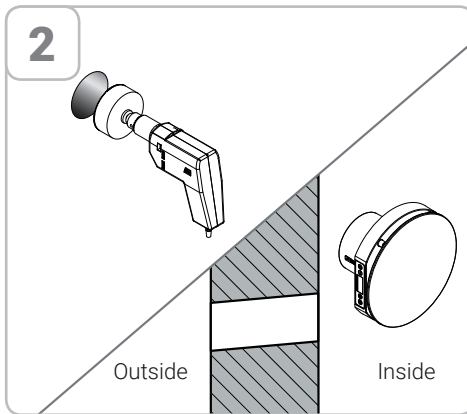
Fixing



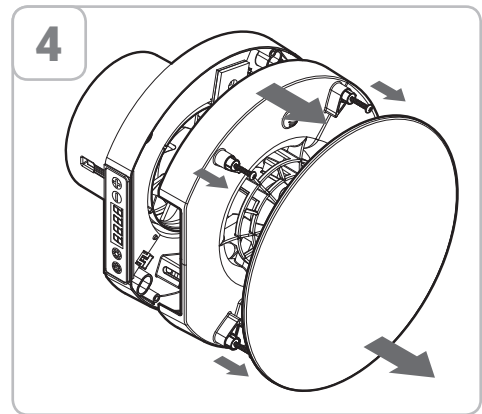
Centre of Hole for fan must be positioned a minimum of 200mm away from any adjacent wall/ceiling.



Hole in ceiling ($\varnothing 105\text{mm}$) with ducting, slope ducting away from fan to Outside

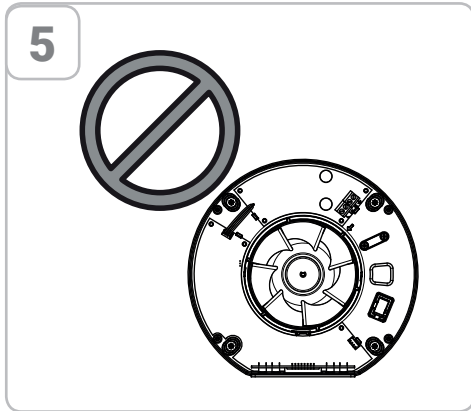


Hole in wall ($\varnothing 117\text{mm}$). Slope away from fan to Outside. Make provision for cable.

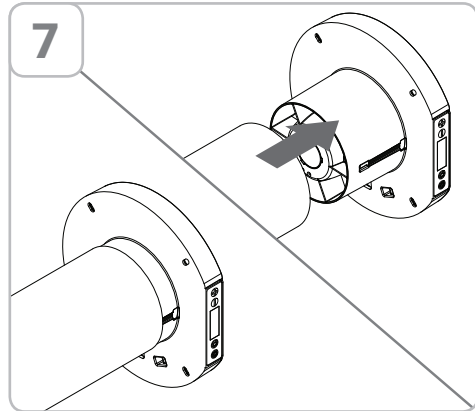


Removal of fascia, loosen retaining fixings & top section.

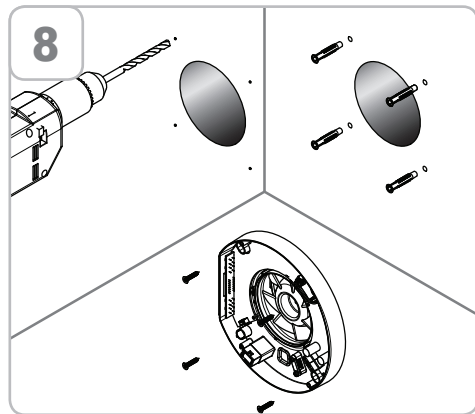
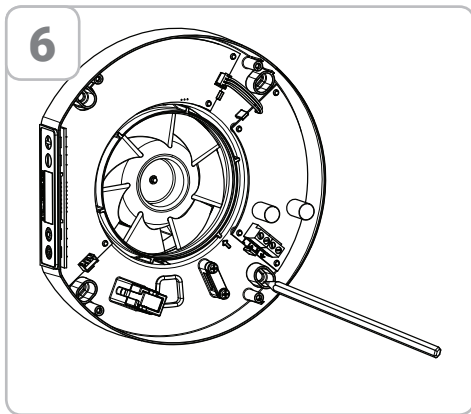
Fill in any gaps with mortar or expanding foam and make good. Ensure that ducting retains its original shape



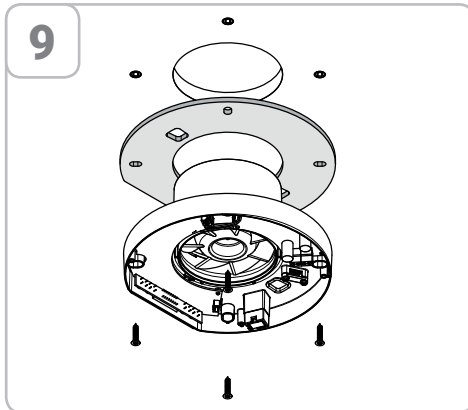
When wall mounted, do not fit fan with display at the bottom of the unit.



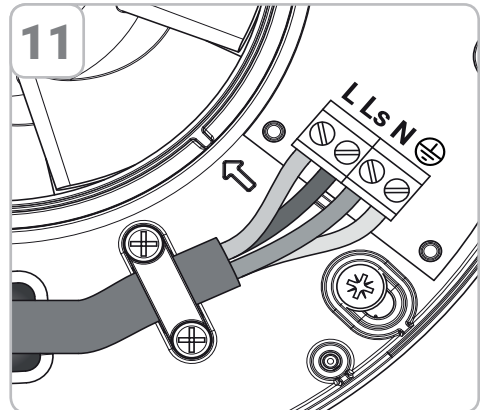
Mark up fixing holes and cable entry.



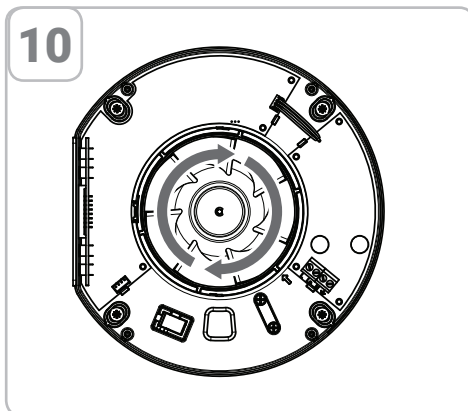
Attach ducting as required.



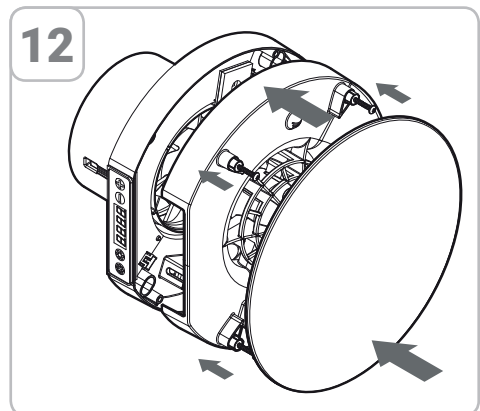
9
Drill, plug and screw into position.
See Dimensions for fixing centres.



11
Ensure impeller rotates freely.



10
When fan is fitted to a ceiling, TP646
IPx4 Ceiling Kit (not supplied) must be
used.



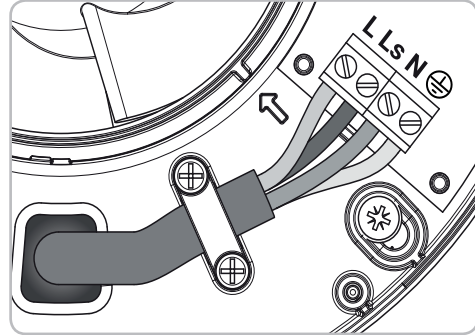
12
Wire the fan (see wiring diagrams).
Replace top section, tighten fixings
and replace fascia

Wiring

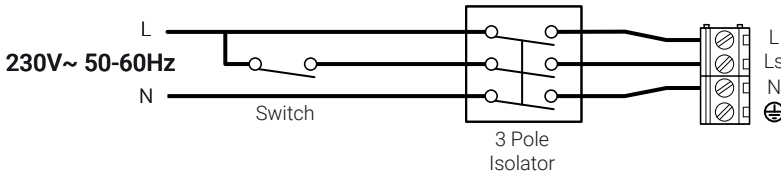
The supply connection to the unit is via a PCB mains terminal block. This is accessed by loosening the retaining screws (x4) and removing the Top of the unit. When connections have been made then the unit cable clamp must be used to firmly hold the cable in position.

When supplied from a 6 amp lighting circuit no local fuse is required. If electricity is not supplied via the lighting circuit, a localised 3 amp fuse must be used.

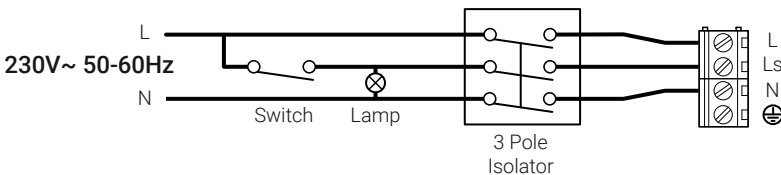
The terminal marked with the earth symbol is for parking only and non-functional. As the fan is a class II appliance no connection to earth is required.



Supply Wiring Cable Clamp



Supply Power & Boost Switching via Independent Live Switching



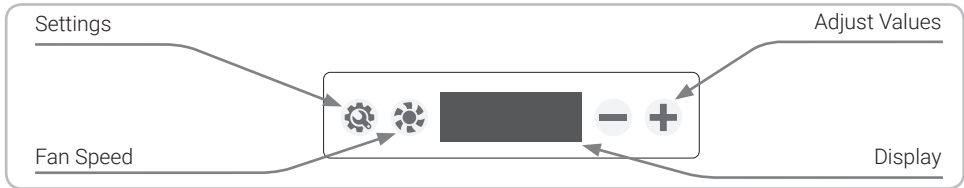
Supply Power & Boost Switching via Lighting Circuit Live Switching

Commissioning

Fascia must be fitted prior to commissioning or operating fan.

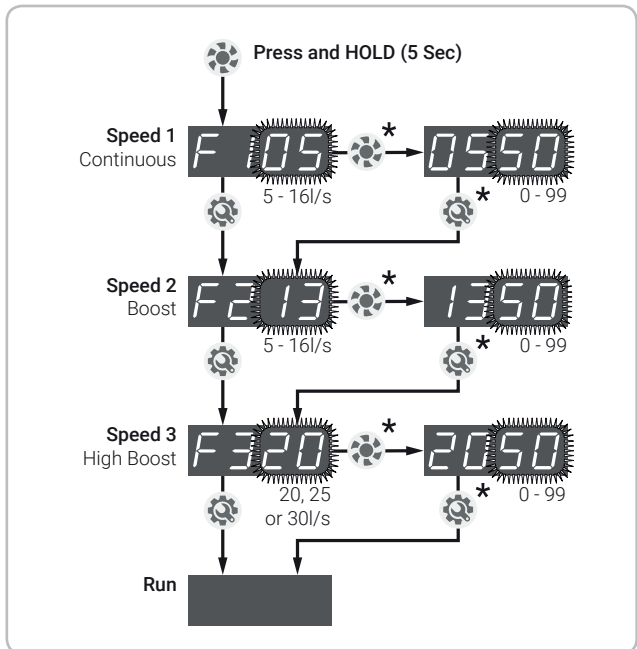
Control Panel

The unit commissioning and operation is made via the control panel. The panel consists of 4 buttons; Settings, Fan Speed and Plus/Minus adjustment buttons. The panel also has a 4 digit display which is visible when buttons are activated or to show an error present with the unit.



Fan Speeds

The unit Continuous, Boost and High Boost set values can be adjusted via the control panel. The unit also has a function to fine tune these flow rates when commissioning with the use of a cone anemometer. When a chosen set flow rate is made then the fan speed can incrementally be increased or decreased to achieve the exact flow rate required.



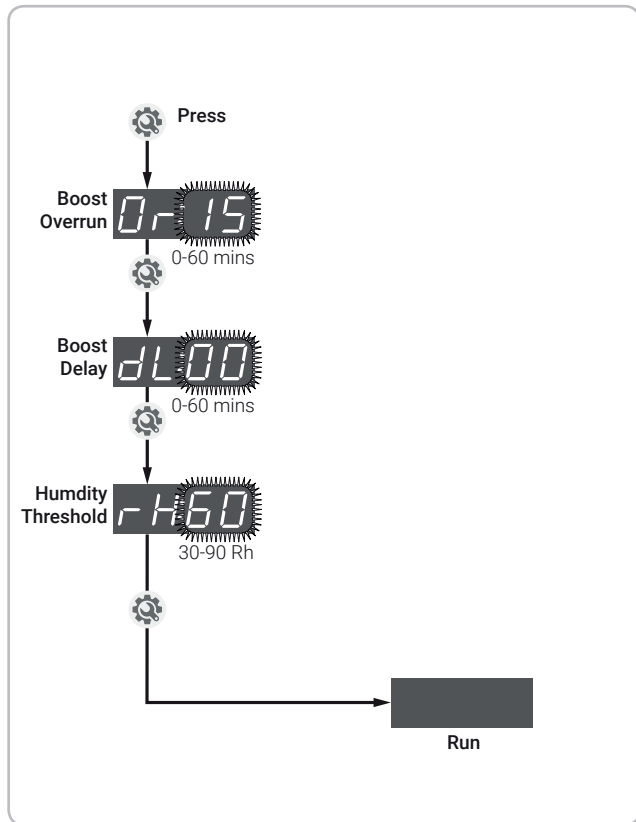


Unit self calibrating

* During adjustment the fan will self calibrate, while the unit is calibrating four decimal points will be displayed and the indicated buttons will be deactivated.

Timers/Humidity

The unit Boost Overrun Timer, Boost Delay Timer, and Humidity Threshold settings are adjusted using the buttons on the control panel.



Operation

Fascia must be fitted prior to commissioning or operating fan.

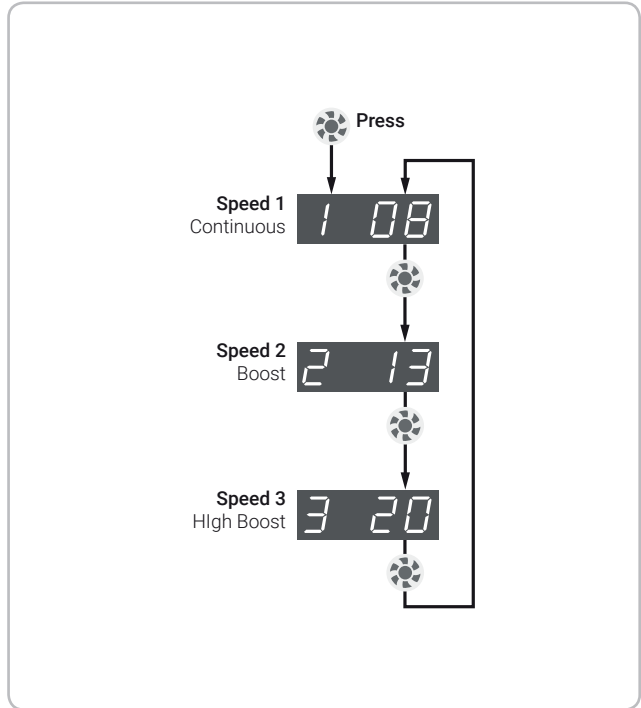
Manual Speed Control

When unit is in operation the fan speed can be manually changed. With either a remote Live Switch or the buttons on the fan.

Operation of the Live Switch will activate Boost. A second OFF/ON cycle of the switch within 5 seconds switches the fan to High Boost.

Alternatively the buttons on the fan can be pressed as illustrated.

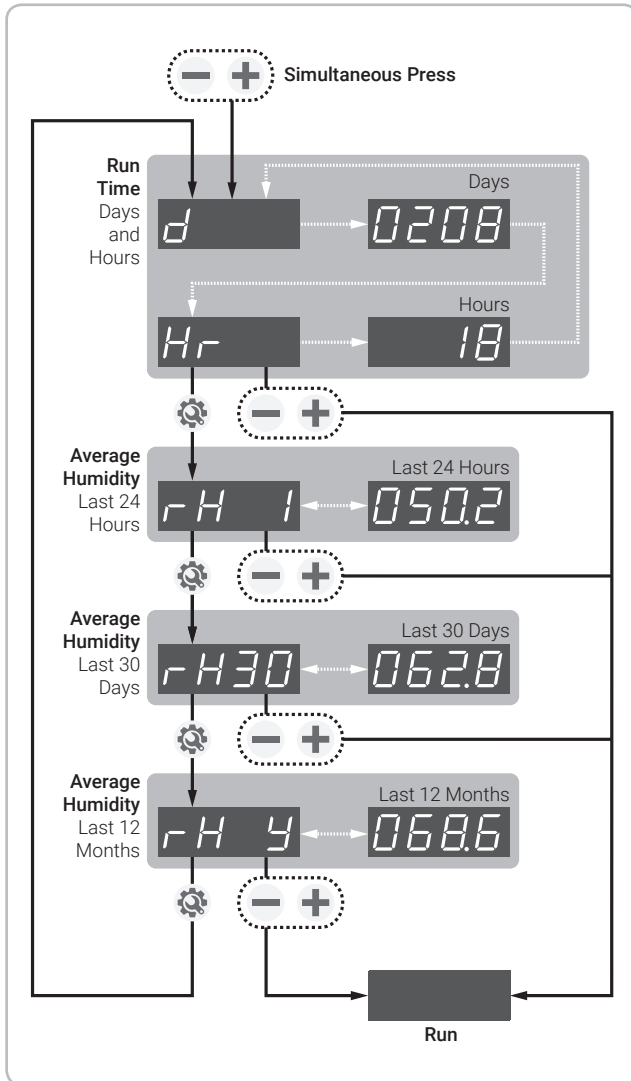
When the unit is manually put into Boost or High Boost the unit will run for 60 minutes then return to Continuous. If an independent Boost switch is being used and is on, then High Boost will return to Boost after the 60 minutes.



Display Logged Data

TP 640HD only: The unit records the length of time it has been in powered use and the average humidity on a Daily/ Monthly/Annual basis.

This menu is used to display the recorded data.



Maintenance

WARNING: The unit uses a 230V~ supply and contains rotation mechanical parts. ISOLATE the unit from mains power supply and allow sufficient time for all moving parts to stop before undergoing any Servicing or Maintenance.

Cleaning Exterior

For best results remove fascia and clean with a damp cloth with a warm mild detergent solution. Do not use solvents or abrasive cleaners.

Clean the top of the unit with a dry cloth or vacuum cleaner. Ensure flow and humidity sensor areas are cleared of all dust.

DO NOT remove the top of the unit for cleaning.

Routine maintenance

All ventilation units require periodic maintenance. Routine maintenance must only be carried out by a suitably qualified and competent person.

The Titon Ultimate® dMEV must be periodically cleaned internally. The dMEV includes an airflow sensor which monitors the flow rate and adjusts the speed to maintain this flow

Excessive dust or other contaminants may impair the sensor accuracy. Cleaning (e.g. Vacuum clearer) is recommended to remove dust from the fan housing and flow sensor.

The sensor is a plug in service replaceable part, running issues due to sensor clogging are not therefore covered under the product warranty.

Troubleshooting

Error Messages

The Display will alternately flash the messages to indicate a problem. If the fan appears to be continually running fast see Routine Maintenance.

Fault checking must be carried out by a suitably qualified and competent person

A digital display showing the text 'FAN' on the left and 'FAIL' on the right, with a double-headed arrow between them. The text is white on a dark background.

Fan fault. Check for blockage.

A digital display showing the text 'SENS' on the left and 'FAIL' on the right, with a double-headed arrow between them. The text is white on a dark background.

Humidity sensor Fault.
Service replaceable part

A digital display showing the text 'PSU' on the left and 'FAIL' on the right, with a double-headed arrow between them. The text is white on a dark background.

Power supply fault.
Check fan cable connection to PCB.

A digital display showing the text 'HI -1' on the left and 'FAIL' on the right, with a double-headed arrow between them. The text is white on a dark background.

Motor current too high. Contact
manufacture or its service agent

Installer Information

Installed by

In the event of any queries please contact the installer. Ensure this booklet is passed to the householder once installation & commissioning of the ventilation system is complete. This Product Manual must be kept in the Home Information Pack.

Installed by:

Important environmental information about this product.



This symbol on this unit or the package, indicates that disposal of this unit after its life-cycle could harm the environment.

Do not dispose the unit as unsorted municipal waste; it should be disposed by a specialized company for recycling. This unit should be returned to your distributor or to a local recycling service.

Respect the local environmental rules.

If any doubt contact your local authorities about waste disposal rules.



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