

ELECTRIC COLLECTION

A range of low energy innovative extractor fans,
electric towel rails and radiators

July 2019



Ventilation & Electric Radiators

Welcome to our Electric Collection brochure which features a range of ventilation and electrical heating products from marketing leading, Greenwood Airvac and Zehnder brands (brands of Zehnder Group UK Ltd).

In the ventilation section you will find a collection of low energy extractor fans designed for wet rooms that offer outstanding performance and flexible user control. Take note of the Greenwood SMART Technology that helps eliminate nuisance noise, nuisance running and reduces unnecessary energy consumption. Also included is the first ever Secured By Design Window Kit.

The electric heating collection combines a range of towel rails and room radiators in a range of sizes to suit varying applications. Efficient in performance and decorative in style, there is something to suit a wide range of interior decors, including different colour and control options – check out the Radio Frequency controller for easy programming and maximum comfort.

2 YEAR WARRANTY

2 YEAR WARRANTY

2 YEAR WARRANTY

5 YEAR WARRANTY

5 YEAR WARRANTY

Warranty

Electric Radiators

Colour

Delivery working days

The brand
with the best
indoor climate
solutions.

FOUR COMPLEMENTARY PRODUCT LINES

The broad and clearly structured portfolio from the Zehnder Group is split into four product lines. Consequently, we can provide the right product, the perfect system and the matching service for all types of projects – from new builds to renovations, single- or multiple-family homes, as well as commercial projects. This variety ensures that our wealth of experience is continuously expanding, providing tangible added value to our customers on a daily basis.



Decorative radiators

Our individual decorative radiators for living and bathrooms not only make a home warmer but also more attractive. Created by renowned designers, they impress with excellent functionality.



Comfortable indoor ventilation

Our comfortable indoor ventilation with heat recovery is energy-efficient and provides a healthy indoor climate. It promotes the well-being of the occupants and increases the value of the property.



Heating and cooling ceiling systems

Zehnder heating and cooling ceiling systems are convenient and energyefficient for heating and cooling. They are perfectly attuned to the relevant environment.



Clean air solutions

Clean air solutions from Zehnder reduce the level of dust in the air, create a healthier indoor climate and reduce the amount of cleaning required.

NUMBERS THAT SPEAK FOR THEMSELVES

MANUFACTURER OF THE

1ST

STEEL RADIATOR IN THE
WORLD

123

YEARS OF INNOVATIVE TRADITION

AROUND

3,000

EMPLOYEES

1895

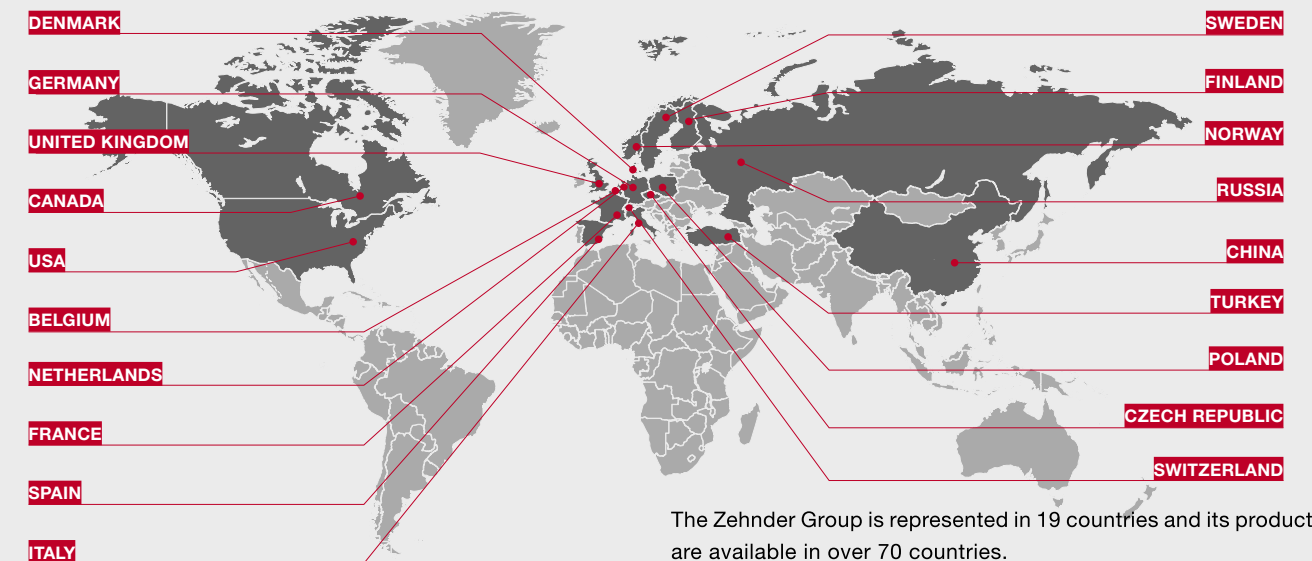
FOUNDING YEAR

19 **2,100,000**

REPRESENTED IN
COUNTRIES

TONNES OF CO₂ SAVED SINCE 2005

BEST CLIMATE IN THE WORLD



BRANDS THAT OFFER VARIETY

The Zehnder brand offers excellent indoor climate solutions within the sectors of decorative radiators, clean air solutions, comfortable indoor ventilation and heating and cooling ceiling systems.

zehnder

The Bisque brand offers beautiful but practical radiators in the most exciting styles, colours and shapes for homes and more.

BISQUE

The Greenwood Airvac brand offers a range of low energy, smart residential ventilation solutions from intermittent extract fans to whole house ventilation with heat recovery.

Greenwood

Intermittent Extract Ventilation

The method

Positioned in all wet rooms around the home, fans work intermittently, dependent on the control option selected, to extract stale or humid air.

Typically, operation is via a light switch or pullcord and fans can include adjustable timers and automatic humidity sensors.

Fresh air is supplied to the habitable rooms via background ventilators such as window vents. Building Regulations now call for high levels of background ventilation when using System 1 as the dwelling’s ventilation strategy.

Key benefits

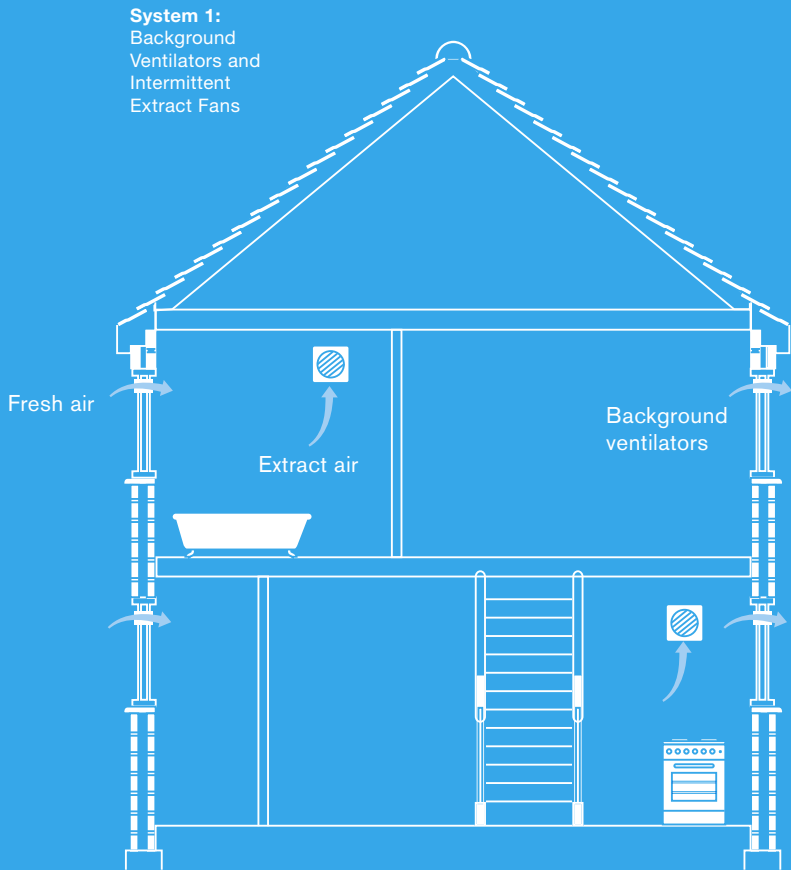
- 1. A wide and varied range of products to suit any installation requirement.
- 2. On-off ventilation through the day leads to low running costs.
- 3. Low energy consumption.
- 4. No over or under ventilation.
- 5. Simple, traditional ventilation strategy.

Building Regulations

Our intermittent fans comply with System 1 as outlined in Approved Document F 2010. Installed in each wet room throughout a property, they work intermittently (on and off) throughout the day as required

via occupant control or through automatic sensing.

All Greenwood fans comply with the airflow requirements as set out in current Building Regulations.



Control options

Mounting options	Page no.	B/PC	T/TR	SMT	HT/HTR	SMHT	MA	A	SV	Two room ventilation
Bathroom & kitchen fan										
Omunique OF100GIP	Wall/ window/ ceiling	11/27	•	•	•	•	•	•	•	•
Bathroom fans										
Samika LE100	Wall/ window/ ceiling*	8	•	•	•	•	•	•	•	•
Select AXS100	Wall/ ceiling*	9	•	•	•	•	•	•	•	•
Select SF90	Wall/ window/ ceiling	15	•	•	•	•	•	•	•	•
Select RF90	Wall/ ceiling	14	•	•	•	•	•	•	•	•
P Fan	Wall/ ceiling	13	•	•	•	•	•	•	•	•
Elite EL100	Wall/ window/ ceiling*	12	•	•	•	•	•	•	•	•
Kitchen fans										
Samika LE150	Wall/ window/ ceiling*	19	•	•	•	•	•	•	•	•
Select AXSK	Wall*	20	•	•	•	•	•	•	•	•
Elite EL150	Wall/ window	21	•	•	•	•	•	•	•	•

*Termination via external wall or soffit, not a roof tile vent, see individual product page for details.

B/PC - Basic / Integral pull-cord

- Single speed
- Operation by pullcord, remote switch, light switch or sensor
- Neon running light (some models)

T/TR - Timer / overrun timer

- Single speed
- Type 'T' operation by pullcord, light switch or remote switch
- Type 'TR' operation by light switch or remote switch
- Integral pullcord activates fan for preset overrun timer period
- Neon running light (some models)
- If wired into room light or remote switch, fan will operate when switch is on and then run for preset overrun timer period when room light or switch is turned off
- Adjustable overrun timer up to 30 mins
- Unique manual override with automatic shut off available (some models)

SMT - Greenwood TimerSMART™

- Single speed
- Operation by integral pullcord, remote switch or light switch
- Utilises duration of occupancy to determine overrun length
- See page 29 for full features and benefits

HT/HTR - Humidistat with timer / overrun timer

- Single speed, automatic humidity sensing control
- Fan should operate when the RH% exceeds the preset activation point, e.g. 65%. When

the RH is reduced back to the activation point, the overrun timer will continue to operate the fan for the preset time period to ensure the RH level is further reduced within the room and prevent “hunting”. Sensor also features a set back facility to eliminate nighttime running

- Neon running light (some models)
- If wired into room light or remote switch, the fan will operate whilst in the on position, once the fan is switched off the overrun timer will run for the preset period
- Humidistat available 50–90% RH @ 20°C
- Adjustable overrun timer up to 30 mins

SMHT - Greenwood HumidiSMART™

- Single speed
- Operation by integral pullcord, remote switch or light switch
- Monitors RH levels to determine normal ambient humidity levels
- Ensures that the fan only goes into boost mode when a man-made spike in RH is detected
- See page 29/45 for full details

MA - Dual speed humidistat timer

- Dual speed
- Automatic operation for slow speed and manual operation for normal speed
- Integral humidistat sensor operates fan at slow speed when RH% exceeds preset activation point, e.g. 65%)
- When RH is reduced to preset level, overrun timer continues fan at slow speed for preset period

- Manual operation by remote switch or light switch will operate fan at normal speed
- Humidistat adjustable between 50–90% RH @ 20°C
- Adjustable overrun timer up to 30 mins

A - Continuously running

SF90A

- Dual speed – continuously running at trickle speed
- Operation between trickle/normal speed by pullcord/light/remote switch or humidity sensor

P1

- Single speed
- Operation by room light, remote switch or remote sensor
- Operation with clip-in TA Timer – If connected to room light, fan operates when light is on. When light is off, overrun timer will run for preset period
- Adjustable timer up to 30 mins

PD1

- Duplicate fan with second standby fan and motor

SV - Safety Extra Low Voltage

- Provides an extra level of safety and protection
- Allows the fan to be installed safely within Zone 1 of a wet room when RCD is not present
- Separate remote transformer is supplied to be located outside of the wet room

Samika LE100

Low energy adaptive extraction for bathrooms and WCs



Features and benefits

- ø 100mm axial flow fans suitable for wall or window applications. Ceiling mounting with discharge via external wall or soffit incorporating one 90° bend. Not suitable for vertical duct installations via a roof tile vent or similar
- Four models with varying controls including SMART timer and humidity and SELV low voltage options
- Greenwood CommissionSMART™ - adaptive installed performance set up at the touch of a button!
- Secure and robust window kit designed in conjunction with social housing landlords
- Soft closing anti-backdraught shutters to prevent nuisance noise when the fan is not in use (remove for ceiling applications)
- Integral pullcord on all models



Greenwood SMART Technology



Models, control options and key data

*Sound pressure level measured @ 3 metres

				Performance (l/s)		Sound Pressure Level dB(A)*		Energy Consumption (W)		Price ex. VAT (£)
Product code	Control operation	Voltage	IP	WC	Bathroom	min	max	min	max	
LE100T	Single speed with SMART timer & pullcord	230	X4	6	15	25	45	1.6	7.1	£93.79
LE100HT	Single speed with SMART humidistat/timer & pullcord	230	X4	6	15	25	45	1.6	7.1	£111.89
LE100SVT	Single speed SELV with SMART timer & pullcord	24DC	X4	6	15	25	45	1.6	7.0	£120.98
LE100SVHT	Single speed SELV with SMART humidistat/timer & pullcord	24DC	X4	6	15	25	45	1.6	7.0	£139.30

Physical specification

All measurements in millimetres unless otherwise indicated

Weight: 100mm = 0.9kg
100mm SELV = 1.0kg

Materials: White satin finish
ABS Plastic

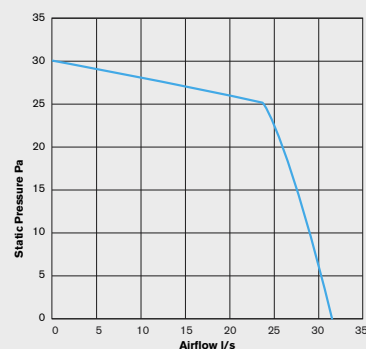
Ancillaries for Samika LE100

- ED1 Easyfix page 48
- FF100 Fastfix page 48
- GG42 page 49
- EWLE100 page 50
- EG1 grilles page 49

Installation

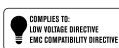
- Wiring:** fixed flat wiring 2 core 1mm², 3 core 1.5mm² max
- Cable:** 2 core Ø 1mm² max
3 core Ø 1.5mm² max
- Fuse:** 3 amp normally required (when fan is supplied from a 6A lighting circuit no local fuse is required)
- Exhaust:** Ø 100mm
- Electrical specification:** 220–240V~50Hz Class II
SELV 24DC Class III
- Glazing:** Suitable for 4–28mm
LE100 glazing hole Ø 118mm

Performance



Select 100

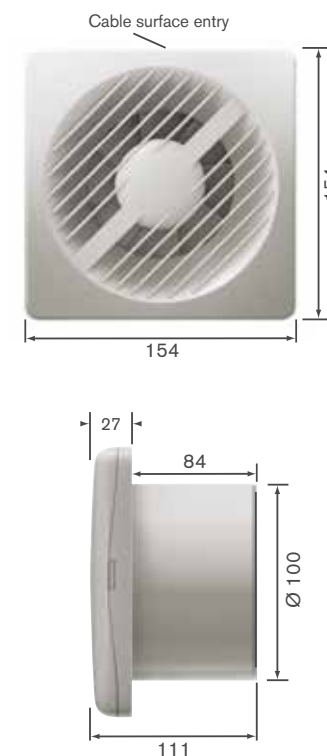
Axial flow bathroom fan



Features and benefits

- Classic ø 100mm axial flow fan that complies with current Building Regulations – widely specified in new houses
- ø 100mm axial flow fans suitable for wall or window application. Ceiling mounting with discharge via external wall or soffit incorporating one 90° bend. Not suitable for vertical duct installations via a roof tile vent or similar
- Wide range of control options including SELV (Safety Extra Low Voltage) for additional safety protection in wet rooms
- Built in guide vanes to improve installed airflow performance
- Includes anti-backdraught shutters to help reduce heat loss when not in operation (remove for ceiling applications)

- Clever spigot strengthener design helps to prevent crushing when attaching flexible ducting
- Axial impellor design has flat surfaces that do not clog easily reducing the impact any dirt or other airborne particles have on fan performance



Models, control options and key data

*Sound pressure level measured @ 3 metres

Product code	Control operation	Voltage	IP	Performance		Watts	dB(A)*	Price ex. VAT (£)
				m ³ /h	l/s			
AXS100	Single speed	230	X4	72	20	13.2	33	£26.88
AXS100PC	Single speed with pullcord	230	X4	72	20	13.2	33	£26.74
AXS100T	Single speed with overrun timer & pullcord	230	X4	72	20	13.6	33	£40.10
AXS100TR	Single speed with overrun timer & remote operation	230	X4	72	20	13.6	33	£40.10
AXS100HT	Single speed with humidistat/timer & pullcord	230	X4	72	20	16.8	33	£72.82
AXS100SVIT	Single speed SELV with overrun timer & pullcord	12	X7	72	20	17.8	33	£90.12
AXS100SVIHT	Single speed SELV with humidistat/timer & pullcord	12	X7	72	20	17.2	33	£112.33

Physical specification

All measurements in millimetres unless otherwise indicated

Weight: 0.54kg

Materials: White satin finish
ABS Plastic

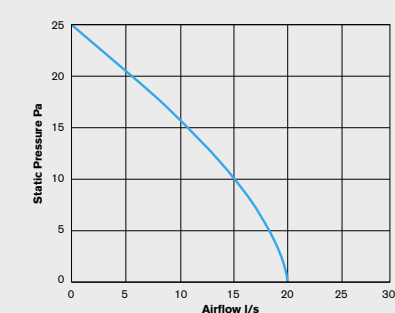
Ancillaries for Select 100

- ED1 Easyfix page 48
- FF100 Fastfix page 48
- GG42 page 49
- EG1 grilles page 48

Installation

- Wiring:** Must comply with IEE Regulations
- Cable:** Fixed flat: Ø 1.5mm² max
Circular: Ø 0.75mm² max
- Fuse:** 3 amp normally required (when fan is supplied from a 6A lighting circuit no local fuse is required)
- Exhaust:** Ø 100mm
- Electrical specification:** 230V ~ 50Hz Class II
- Consumption:** 14W (AXS100/PC/T/TR)
17W (AXS100HT)
18W (AXS100SVIT/SVIHT)

Performance



Omnique OF100

The only low energy fan you'll ever need



Features and benefits

With outstanding low energy performance, Omnique OF100GIP is a flexible and multifunction mixed flow fan ideal for all wet rooms, installation applications and control requirements.

- Can be fitted in wall, ceiling and window applications – available with the most safe and secure window kit on the market – designed in conjunction with social housing professionals
- Minimal heat loss – when the fan isn't operating, the unit is completely sealed and eliminates any draughts or noise transfer from outside whilst preserving the heat inside! (Intermittent mode only)
- With excellent pressure handling, Omnique OF100GIP can be installed in ducted applications and higher rise dwellings and still deliver correct levels of performance
- 100% adjustable airflow allows full flexibility during installation and is ideal for problem properties that may require a period of a higher rate of extraction to overcome issues
- Low energy – uses as little as 1.1 watt in operation and, therefore, has low running costs for homeowners
- Greenwood HumidiSMART™ and Greenwood TimerSMART™ use the installed environment to determine how and when the fan activates and overruns – SMART use of energy!

- ø 100mm spigot for easy replacement of both existing bathroom and kitchen fans in housing stock

- No tenant intervention required at all – low maintenance, fully guaranteed

- Widely specified amongst Local Authorities and Housing Associations in the UK



Offering both intermittent and continuous running modes, it can be used across a wide variety of refurbishment and new build projects with ease.



Omnique picture frame adaptor

Material: White satin finish, ABS plastic

Designed to provide a perfect aesthetic finish when an Omnique fan is used as a replacement in existing ø 150mm wall installations.

Product code	Width	Height	Depth	Price ex. VAT (£)
PFAOF100	256mm	287mm	23mm	£28.08



Multifunction: 6 in 1 fan

- Intermittent running mode
- Continuous running mode
- Greenwood HumidiSMART control
- Greenwood TimerSMART control
- Pullcord control
- SELV – Safety extra low voltage option

With large stocks of housing, you can simply set up the fan as required for the dwelling, number of occupants and lifestyle. One fan, one man, one van.

Greenwood SMART Technology



The UK's first and only Secured by Design Accredited window fan

- Intruder proof
- Privacy design
- GIP: ventilation performance

Secured by Design



Police Preferred Specification



Window kit models and key data

Ø Glazing hole (mm)	Glazing thickness (mm)	Width (mm)	Height (mm)	Depth (mm)	Weight (kg)
ø 118	up to 28	192	222	68	0.5

Models, control options and key data

*Sound pressure level measured @ 3 metres

Product code	Control	Preset rate, Performance (l/s)	Sound Pressure Level dB(A)*	Energy Consumption (W)		Price ex. VAT (£)
				min	max	
OF100GIP	Low energy intermittent fan model for all room types with optional SMART humidity and timer controls. One man, one van, one fan.	W.C. 6	7	1.1	25.8	£171.07
		Bathroom 15	31			
OF100SBD	Secured by Design Window Fan - intermittent model for all room types and with SMART humidity and timer controls. Low energy intermittent fan model for all room types with optional SMART humidity and timer controls. One man, one van, one fan.	Utility room 30	45			£209.63
		Kitchen 61.7	52			

Physical specification

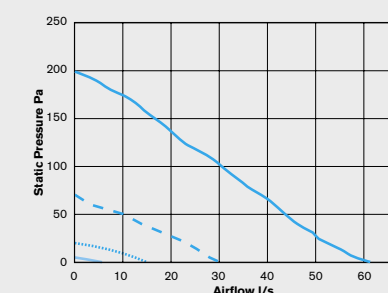
All measurements in millimetres unless otherwise indicated

Weight: 1.4kg
Materials: White gloss finish
ABS Plastic

Installation

Wiring: Must comply with IEE Regulations
Fuse: 3 amp normally required (when fan is supplied from a 6A lighting circuit no local fuse is required)
Electrical specification: 220–240V–50Hz Class II
SELV conversion Class III
Exhaust: Ø 100mm
Glazing: Suitable for 4–28mm
Glazing hole Ø 118mm
Application: Wall / window / ceiling
Cable: Fixed flat wiring 2 core 1mm², 3 core 1.5mm² max
Consumption: Min – 1.1W
Max – 25.8W

Performance



Key

Kitchen
Bathroom
Utility
W.C.

Elite 100

Axial flow bathroom fan



Features and benefits

- ø 100mm axial flow fans suitable for wall or window applications. Ceiling mounting with discharge via external wall or soffit incorporating one 90° bend. NOT suitable for vertical duct installations via a roof tile vent or similar
- ø 100mm axial flow fan that complies with Building Regulations – widely specified in social housing projects
- Robust window fixing kit with securing points inside the home – reducing the ability to tamper from the outside. EW100 details on page 50
- Wide range of control options including SELV (Safety Extra Low Voltage) and automatic humidity sensing for the continuous provision of good indoor air quality
- Top and back cable entry for simple installation in existing dwellings
- Modern styling for discreet finish
- Clever ‘non crush’ spigot design when connecting to ducting
- High quality electronically operated shutter design helping to reduce heat loss when the fan is not operating and improve security and privacy on low level installations
- Direct replacement for the NTX range



Models, control options and key data

Product code	Control operation	Weight kg	Voltage	IP	Performance		Watts	dB(A)*	Price ex. VAT (£)
					m³/h	l/s			
EL100	Single speed operation by light switch or remote switch	0.60	230	X4	96	26	17.2	39	£43.75
EL100PC	Single speed with pullcord	0.68	230	X4	96	26	17.2	39	£48.91
EL100TR	Single speed with overrun timer & remote operation	0.69	230	X4	96	26	17.9	39	£66.49
EL100HTR	Single speed with overrun timer / humidistat & remote operation	0.69	230	X4	96	26	16.5	39	£112.66
EL100SVTR	Single speed SELV with overrun timer & remote operation	1.402	12	X4	78	21	15.7	30	£120.81
EL100SVHTR	Single speed SELV with humidistat/timer & remote operation	1.415	12	X4	78	21	15.7	30	£149.79

Physical specification

All measurements in millimetres unless otherwise indicated

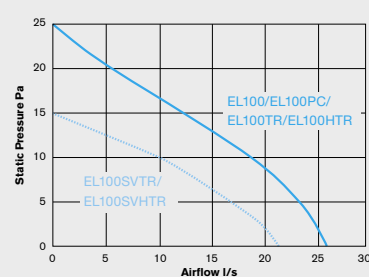
- Weight:** See table
- Materials:** White satin finish
ABS Plastic
SELV controller in satin finish white
ABS plastic

Ancillaries for Elite 100
EW100 page 50 • ED1 Easyfix page 48
FF100 Fastfix page 48 • Flexiduct page 48 • EG1 page 49 • GG42 page 49

Installation

- Wiring:** Must comply with IEE Regulations
- Cable:** Ø 1mm² max
- Fuse:** 3 amp normally required (when fan is supplied from a 6A lighting circuit no local fuse is required)
- Exhaust:** Ø 100mm
- Glazing hole:** Ø 118mm, 4–28mm double glazing
- Electrical specification:** 230V~50Hz Class II
SELV 12V ~ 50Hz Class III
- Consumption:** 17W (EL100/PC/HTR)
18W (EL100TR)
16W (EL100SVTR/SVHTR)

Performance



P Fan

Centrifugal surface mounted bathroom fan

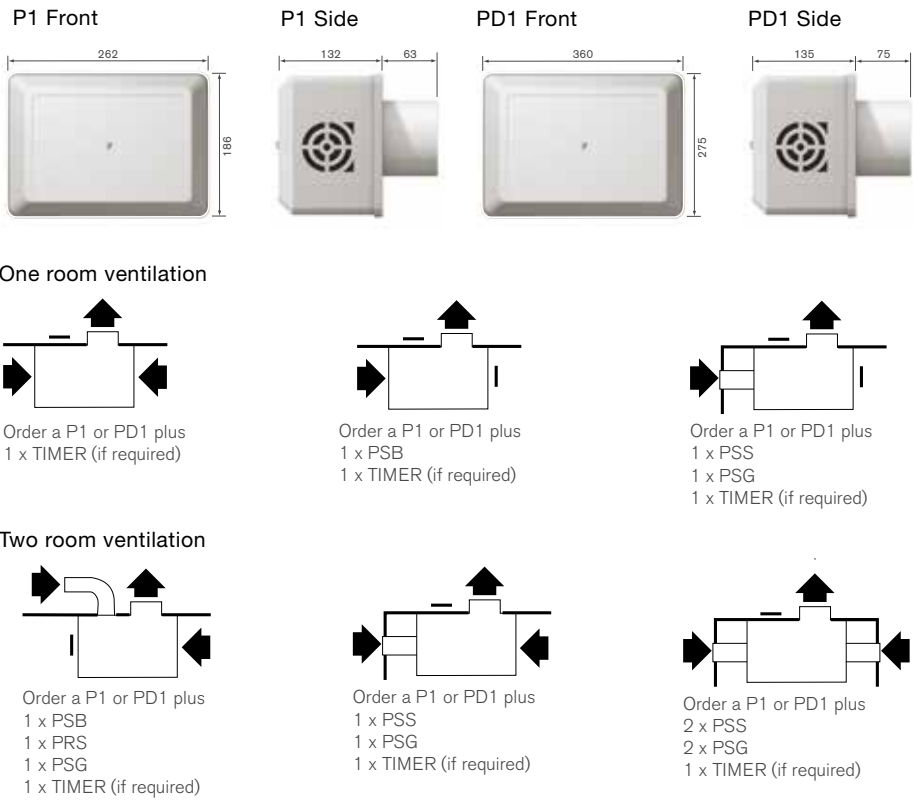


Features and benefits

- One fan suitable for up to two room ventilation – ideal for separate bathroom and WC rooms located next to each other
- Six options of exhaust configurations
- Versatile design for surface, ceiling and wall installation applications
- Self balancing double inlet impellor eliminates need for adjustment on-site irrespective of configuration
- Additional timer module available – can be fitted retrospectively if required
- Low running costs for occupants

Secondary extract ducts:
ø 63mm internal (nominal)

Note: Anti-backdraught shutter (PBDS) is available if required



Models, control options and key data

Model	Controls	Performance to BS 848 Pt1 in free air		Sound Pressure Level dB(A)*	Price ex. VAT (£)
		m³/h	l/s		
P1	Single speed, operation by room light/remote switch/remote sensor	103	29	40	£265.54
PD1	Single speed, duplicate fan with second standby fan & motor	93	26	44	£552.55
PBDS Anti-backdraught shutter	-	-	-	-	£6.52
PRS Rear spigot	-	-	-	-	£3.82
PSS Side spigot	-	-	-	-	£3.82
PSB Side blank	-	-	-	-	£4.60
PSG Secondary grille	-	-	-	-	£5.12
Timer	Built in overrun timer module for use with P1 & PD1 Fan	-	-	-	£93.49

Physical specification

All measurements in millimetres unless otherwise indicated

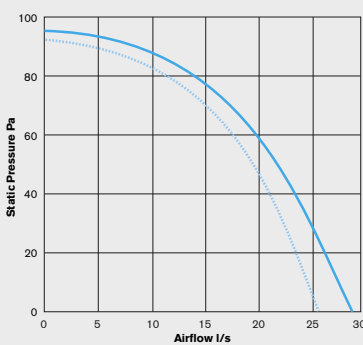
- Weight:** 2.1kg
- Materials:** White ABS plastic fan body with rubber mounting seal and adhesive foam seal for exhaust spigot

Ancillaries for P Fan
Flexiduct page 48 • FF100 Fastfix page 48
GG42 page 49

Installation

- Wiring:** Must comply with IEE Regulations
- Cable:** Ø 1mm² max
- Fuse:** 3 amp normally required (when fan is supplied from a 6A lighting circuit no local fuse is required)
- Electrical specification:** 230V~50Hz Class II
- Exhaust:** Ø 100mm
- Consumption:** 24W

Performance



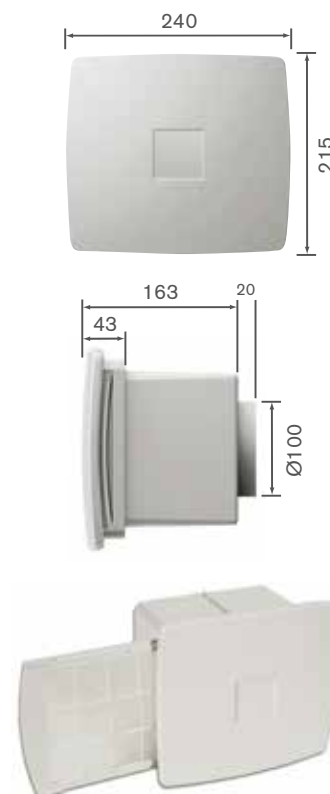
RF90

Centrifugal recessed bathroom fan with integral filter



Features and benefits

- Suitable for wall and ceiling mounted applications with discharge via wall/soffit and roof tile
- ø 100mm recessed centrifugal fan that complies with current Building Regulations – widely specified for social housing projects
- Full range of control options including automatic humidistat sensing and overrun timers
- Simple fuss-free 2 step installation – back plate can be installed prior to fan and motor assembly
- Simple screw fix design for fast ceiling installation
- Modern, stylish front fascia design
- Integral washable filter for motor protection – simply located at the front of the fan
- Low running costs for occupants – ventilation without the expense
- Direct replacement for R90



Models, control options and key data

*Sound pressure level measured @ 3 metres

				Performance to BS 848 Pt1 in free air				Sound pressure dB(A)*	Price ex. VAT (£)
Product code	Control operation	Voltage	IP	Normal		Slow			
RF90BW	Single speed with pullcord	230	X4	m³/h	l/s	m³/h	l/s	35	£68.34
RF90TW	Single speed with overrun timer & pullcord	230	X4	75	21	-	-	35	£85.87
RF90HTW	Single speed with humidistat timer, overrun timer & pullcord	230	X4	75	21	-	-	35	£123.99

Physical specification

All measurements in millimetres unless otherwise indicated

Weight: 1.3kg

Materials: Satin finish white ABS plastic, with PVC exhaust seal

Ancillaries for RF90

EG1 page 49 • ED1 Easyfix page 48 • Flexiduct page 48 • FF100 Fastfix page 48 • GG42 page 49

Installation

Wiring: Must comply with IEE Regulations

Cable: Ø 1mm² max

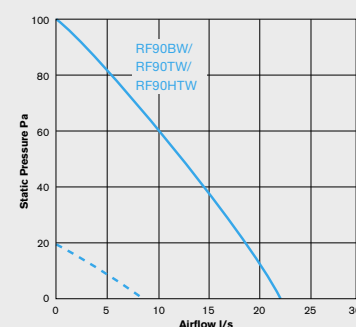
Fuse: 3 amp normally required (when fan is supplied from a 6A lighting circuit no local fuse is required)

Exhaust: Ø 100mm

Electrical specification: 230V~50Hz Class II

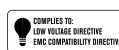
Consumption: 21W (RF90BW)
22W (RF90TW/HTW)

Performance



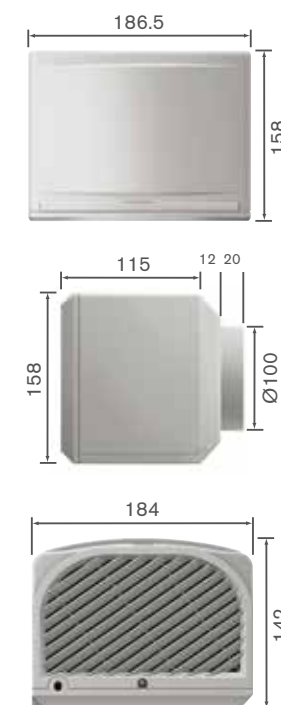
SF90

Centrifugal surface mounted bathroom fan with integral filter



Features and benefits

- Suitable for wall and ceiling mounted applications with discharge via wall/soffit and roof tile
- ø 100mm surface mounted centrifugal fan that complies with current Building Regulations – widely specified in new housing, both private and social
- Full range of control options for bathroom ventilation including SELV
- Anti-backdraught damper and pullcord insulating link
- Simple fuss-free 2 step installation where the back plate can be installed prior to fan and motor assembly
- Discreet styling for modern interiors
- Integral washable filter for motor protection – simply located at the front of the fan
- Continuously running model for whole house ventilation (not dMEV)
- Direct replacement for S90



Models, control options and key data

*Sound pressure level measured @ 3 metres

Product code	Control operation	Voltage	IP	Performance to BS 848 Pt1 in free air				Sound pressure level		Price ex. VAT (£)
				Normal		Slow		Normal	Slow	
SF90B	Single speed with pullcord	230	X4	75	21	-	-	37	-	£68.34
SF90T	Single speed with timer & pullcord	230	X4	75	21	-	-	37	-	£85.87
SF90HT	Single speed. Humidistat/overrun timer & pullcord	230	X4	75	21	-	-	37	-	£123.99
SF90SVIT	Single speed. SELV with overrun timer & pullcord	12	X4	75	21	-	-	37	-	£143.78
SF90SVIHT	Single speed. SELV with humidistat/timer & pullcord	12	X4	75	21	-	-	37	-	£162.44
SF90A	Continuously running at trickle speed Operates between trickle/normal speeds by pullcord, switch or sensor	230	X4	82	23	30	8	37	24	£132.96

Physical specification

All measurements in millimetres unless otherwise indicated

Weight: 1.3kg
SELV Controller – 1.173kg

Materials: Satin finish white ABS plastic, with PVC exhaust seal, SELV Controller – White satin finish, ABS plastic

Ancillaries for SF90

EG1 page 49 • ED1 Easyfix page 48 • Flexiduct page 48 • FF100 Fastfix page 48 • GG42 page 49

Installation

Wiring: Must comply with IEE Regulations

Cable: Ø 1mm² max

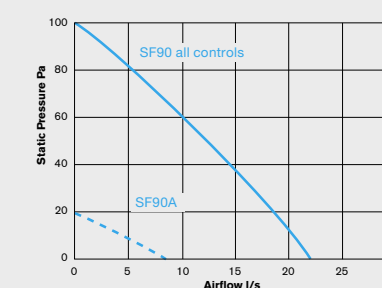
Fuse: 3 amp normally required (when fan is supplied from a 6A lighting circuit no local fuse is required)

Exhaust: Ø 100mm

Electrical specification: 230V ~ 50Hz Class II

Consumption: 21W (SF90B/T/HT/A)
29W (SF90SVIT/SVIHT)
10W (SF90A Trickle Speed)

Performance



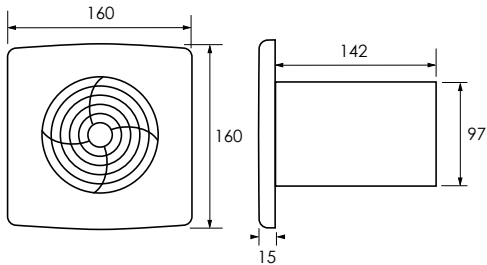
Silent Bathroom Fan

Bathroom fan



Features and benefits

- ø 100mm axial flow fans suitable for wall or window applications. Ceiling mounting with discharge via external wall or soffit incorporating one 90° bend. NOT suitable for vertical duct installations via a roof tile vent or similar
- Designed to offer discreet performance in the bathroom - up to 70% quieter than standard axial fans when operating if installed in a "through the wall installation"
- Basic and timer control options
- Low profile design for wall mounting
- Long life, ball bearing motor



Models, control options and key data

*Sound pressure level measured @ 3 metres

Product code	Control operation	Voltage	IP	Performance in free air		Sound pressure dB(A)*	Price ex. VAT (£)
				m³/h	l/s		
SR100	Basic fan. Remote operation. Single speed	230	X4	95	26	26.7	£44.72
SR100TR	Timer fan. Remote operation. Single speed	230	X4	95	26	26.7	£53.38
SR100HTR	Humidistat fan. Remote operation. Single speed	230	X4	95	26	26.7	£72.30

Physical specification

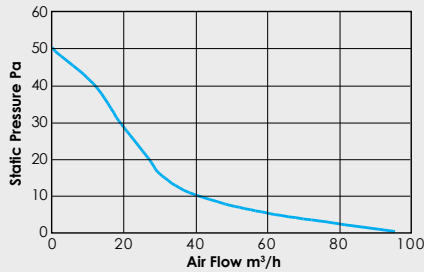
All measurements in millimetres unless otherwise indicated

Weight: 0.63kg
Materials: ABS plastic

Installation

Cable: 2 core Ø 1mm² max
3 core Ø 1/1.5mm² max
Electrical specification: 230V~50Hz Class II
Consumption: 100mm fan – 13W

Performance



Ancillaries for Silent Wall Fan
ED1 Easyfix page 48 • FF100 Fastfix page 48
• EG1 page 49

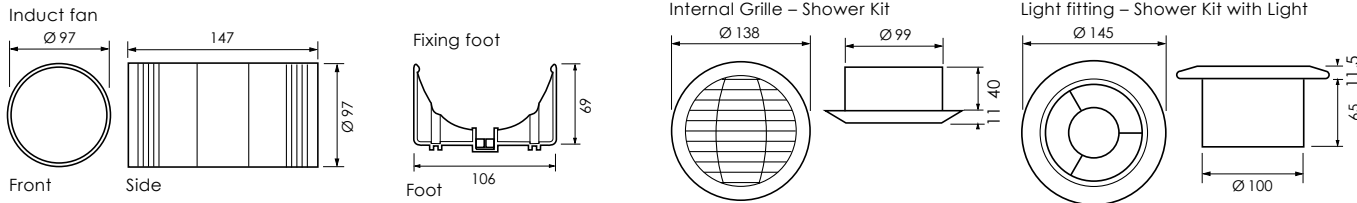
Silent Induct Fans and Shower Kits

Single speed silent shower fan



Features and benefits

- ø 100mm axial flow fans suitable for Ceiling mounting with discharge via external wall or soffit incorporating one 90° bend. NOT suitable for vertical duct installations via a roof tile vent or similar.
- Designed to offer discreet performance in the bathroom - up to 70% quieter than standard axial fans when operating
- Available as individual inline fan or as complete shower kit
- Basic and timer control options
- Shower kits – with or without 12V light



Models, control options and key data

*Sound pressure level measured @ 3 metres †Installed performance with 3 metres of flexiduct

Product code	Control operation	Voltage	IP	Performance in free air		Sound pressure dB(A)*	Price ex. VAT (£)
				m³/h	l/s		
SRD100	Basic induct fan. Single speed	230	X4	110	31	20	£43.54
SRD100T	Timer induct fan. Single speed	230	X4	110	31	20	£51.75
SR100BSK†	Basic shower kit. Single speed	230	X4	55	15	24	£63.06
SR100TSK†	Timer shower kit. Single speed	230	X4	55	15	24	£83.00
SR100LTSK†	Timer shower kit & light. Single speed	230	X4	55	15	24	£103.13

Physical specification

All measurements in millimetres unless otherwise indicated

Weight: Induct Fan – 0.61kg
Shower Kit – 1.3kg
Shower Kit & Light fitting – 1.7kg

Material: ABS plastic

Ancillaries for Silent Induct Fans and Shower Kits
GG42 page 49 • GFP4.3 page 49

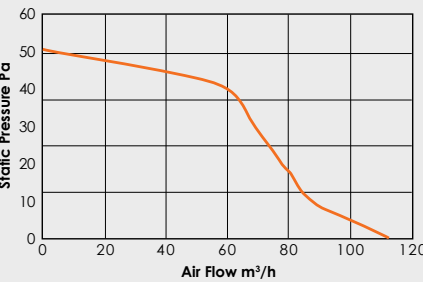
Installation

Cable: 2 core Ø 1mm² max
3 core Ø 1/1.5mm² max

Electrical specification: 230V~50Hz Class II

Consumption: 16W – fan
20W – light

Performance



Halo Range Shower Fan & Light Kit

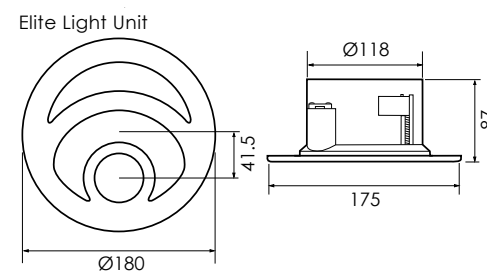
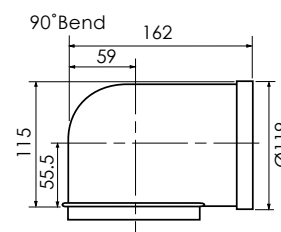
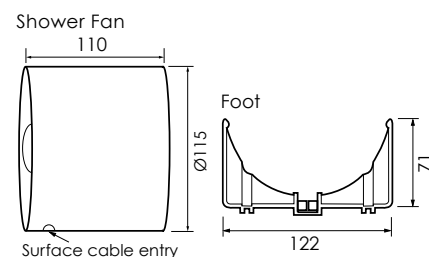
High performance ceiling fan for showers



Features and benefits

- ø 115mm axial flow fan which fits into ø 125mm ducting, suitable for Ceiling mounting with discharge via external wall or soffit incorporating one 90° bend. NOT suitable for vertical duct installations via a roof tile vent or similar
- Complete shower fan kit including with inline fan, ducting and light included
- Basic and timer options
- 90° bend included for installing between joists in ceiling voids

- Both light fitting and fan are IPX4 rated
- 12V (SELV) lamp
- Chrome grille option available (HCBC)



Models, control options and key data

*Sound pressure level measured @ 3 metres

Product code	Control operation	Voltage	IP	Performance in free air		Sound pressure dB(A)*	Price ex. VAT (£)
HC115BBK	Kit comprising basic induct fan, internal grille with 12V light unit, LV light transformer, 90° bend, 3 metres of Flexiduct, 4 fixing clips, outlet grille and fixing screws. Single speed	230	X4	200	56	31	£83.67
HC115TBK	Kit comprising induct fan with adjustable timer, internal grille with 12V light unit LV light transformer, 90° bend, 3 metres of Flexiduct, 4 fixing clips, outlet grille and fixing screws. Single speed	230	X4	200	56	31	£94.93
H115SL	Options to replace 12V light unit, LV light transformer and 90° bend	230	X4	-	-	-	£41.15
HCBC	Chrome internal grille	-	-	-	-	-	£10.26

Physical specification

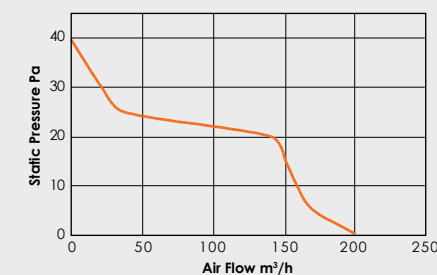
All measurements in millimetres unless otherwise indicated

Weight: 0.92kg
Materials: ABS white plastic
Ceiling Fixing Hole: 145mm diameter

Installation

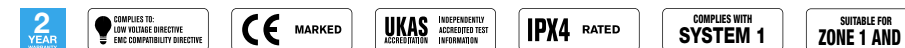
Shower Fan: 230V~50Hz class II
Consumption: 20W
12V Light: 12V~50Hz class II
Lamp: 12V diachronic lamp rated at 20W, 36° beam angle. GE Lighting Type: M269
Consumption: 20W (SELV)
Cabling: Ø 1.5mm² max

Performance



Samika LE150

Low energy adaptive extraction for kitchens and utility rooms



Features and benefits

- ø150mm axial fan kitchen and utility room applications. Ceiling mounting for Utility mode only and discharge via external wall or soffit not via the roof
- Wall mounted only in kitchen mode
- Two models with varying controls including SMART timer and humidity
- Greenwood CommissionSMART™ - adaptive installed performance set up at the touch of a button!
- Secure and robust window kit designed in conjunction with social housing landlords
- Soft closing anti-backdraught shutters to prevent nuisance noise when the fan is not in use (remove for ceiling applications)
- Integral pullcord on all models



Greenwood SMART Technology



Models, control options and key data

*Sound pressure level measured @ 3 metres

Product code	Control operation	Voltage	IP	Performance (l/s)		Sound Pressure Level dB(A)*		Energy Consumption (W)		Price ex. VAT (£)
				Utility	Kitchen	min	max	min	max	
LE150PC	Single speed with pullcord	230	X4	30	60	29	47.5	3	12.3	£127.19
LE150HT	Single speed with SMART humidistat & timer	230	X4	30	60	29	47.5	3	12.0	£147.11

Physical specification

All measurements in millimetres unless otherwise indicated

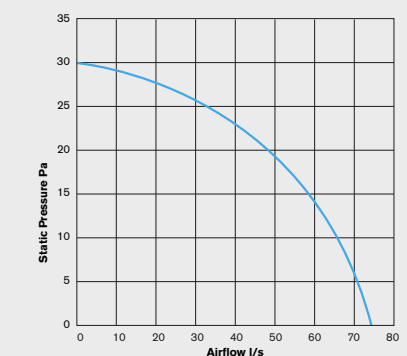
Weight: 1.2kg
Materials: White satin finish
 ABS Plastic

Ancillaries for Samika LE150
 ED150 Easyfix page 48 • Flexiduct page 48
 EG2 page 49 • GG84 page 49 • EWLE150 page 50

Installation

Wiring: Must comply with IEE Regulations
Cable: Ø 2 core 1mm² max
 Ø 3 core 1.5mm² max
Fuse: 3 amp normally required (when fan is supplied from a 6A lighting circuit no local fuse is required)
Exhaust: Ø 150mm
Electrical specification: 220~240V~50Hz Class II
 SELV 24DC Class III
Glazing: Suitable for 4~28mm
 LE150 glazing hole Ø 167mm

Performance



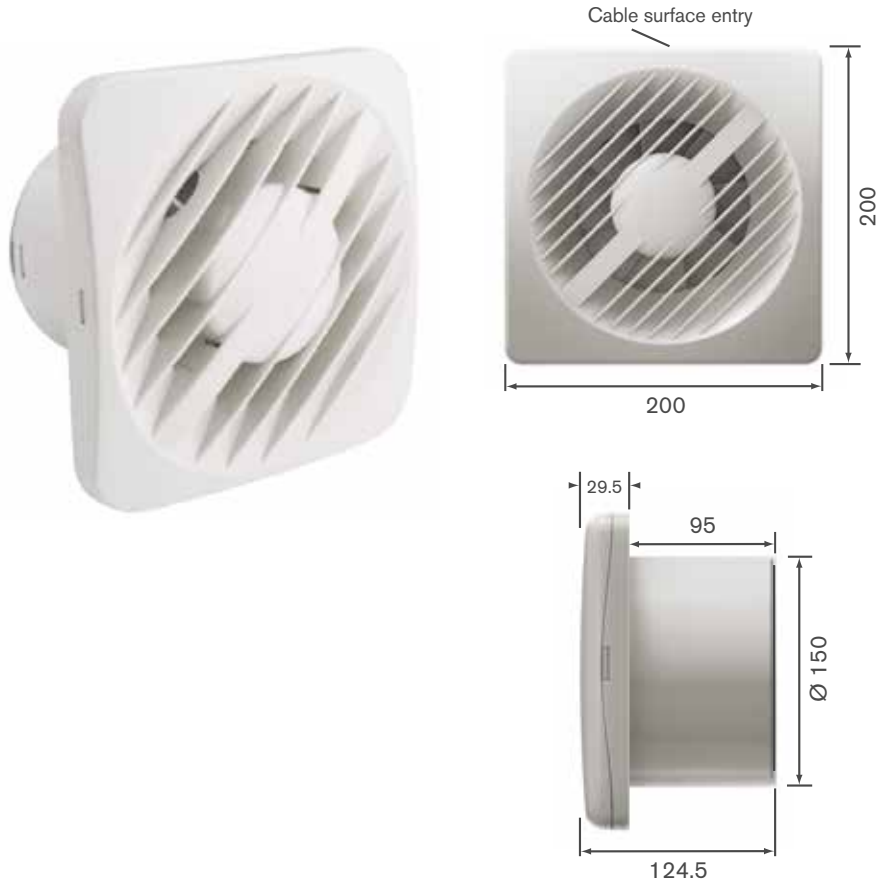
Select 150

Axial flow kitchen fan



Features and benefits

- Suitable for wall installation only. Built in guide vanes to improve installed airflow performance
- ø150mm axial impellor design has flat surfaces that do not clog easily reducing impact any dirt or particles have on fan performance
- Includes anti-backdraught shutters to help reduce heat loss when not in operation
- Clever spigot strengtheners to prevent crushing when attaching flexible ducting
- Classic styling for all modern interiors and easy to wipe clean as necessary



Models, control options and key data

*Sound pressure level measured @ 3 metres

Product code	Control operation	Voltage	IP	Performance				Sound pressure dB(A)*	Price ex. VAT (£)
				Normal	Slow	m³/h	l/s		
AXSK	Single speed with pullcord	230	X2	250	70	-	-	43	£54.51
AXSKMA	Dual speed with humidistat/timer & pullcord	230	X2	250	70	133	37	43	£133.21

Physical specification

All measurements in millimetres unless otherwise indicated

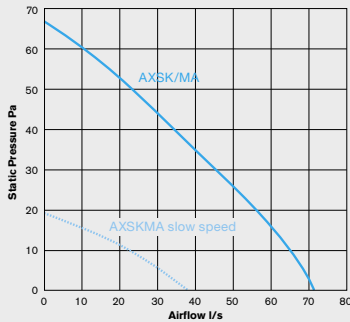
Weight: 0.99kg
Materials: White satin finish
ABS Plastic

Ancillaries for Select 150
EG2 page 49 • ED150 Easyfix page 48
Flexiduct page 48

Installation

Wiring: Must comply with IEE Regulations
Cable: Ø 1mm² max
Fuse: 3 amp normally required (when fan is supplied from a 6A lighting circuit no local fuse is required)
Exhaust: Ø 150mm
Electrical specification: 230V ~ 50Hz Class II
Consumption: 29W
15W – AXSKMA (slow)

Performance



Elite 150

Axial flow kitchen fan



Features and benefits

- Installation for windows and walls only, not suitable for ceiling mounting
- High quality electronically operated shutter design helping reduce unnecessary heat loss when the fan is off and enhance privacy and security in low level installations
- Top or back cable entry for simple cost effective installation
- Modern styling for discreet finish
- Axial impellor flat surface design that does not clog easily helping to maintain installed performance
- Window kits on page 50



Models, control options and key data

*Sound pressure level measured @ 3 metres

Product code	Control operation	Voltage	IP	Performance		Sound pressure dB(A)*	Price ex. VAT (£)
				m³/h	l/s		
EL150PC	Single speed with pullcord	230	X4	266	73	44	£76.36
EL150HTR	Single speed with humidistat/timer & remote operation	230	X4	266	73	44	£115.86

Physical specification

All measurements in millimetres unless otherwise indicated

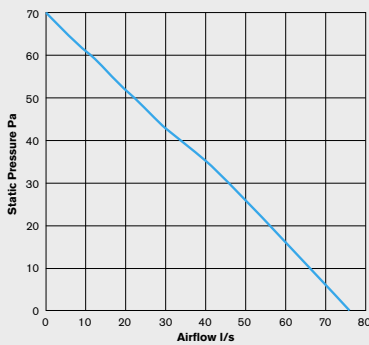
Weight: 0.98kg
Materials: White satin finish
ABS Plastic

Ancillaries for Elite 150
EW150 page 50 • ED150 Easyfix page 48
Flexiduct page 48 • EG2 page 48
GG84 page 49

Installation

Wiring: Must comply with IEE Regulations
Cable: Ø 1mm² max
Fuse: 3 amp normally required (when fan is supplied from a 6A lighting circuit no local fuse is required)
Exhaust: Ø 150mm
Glazing hole: Ø 167mm, 4-28mm double glazing
Electrical specification: 230V~50Hz Class II
Consumption: 25W – EL150 range
26W – EL150HTR

Performance



Continuous Extract Ventilation

The method

Positioned in bathrooms, WCs, kitchens and utility rooms, fans run continuously at very low speed to ensure a consistent level of extraction and indoor air quality.

Boost operation is commonly activated via the light switch, when short bursts of high extraction are required, or via the automated humidity and timer sensors.

For new build, habitable rooms feature background ventilators, usually in the form of a window vent. The continuous extraction eliminates the need for the high background ventilation rates associated with intermittent extraction. This principle also applies for refurbishment where low level continuous ventilation ensures the effective provision of good indoor air quality.

Key benefits

1. A simple and effective form of whole house ventilation.
2. Low energy consumption.
3. Complies with System 3 of the current Building Regulations.
4. Single fan for use in any application.
5. Extremely low running noise.

Building Regulations

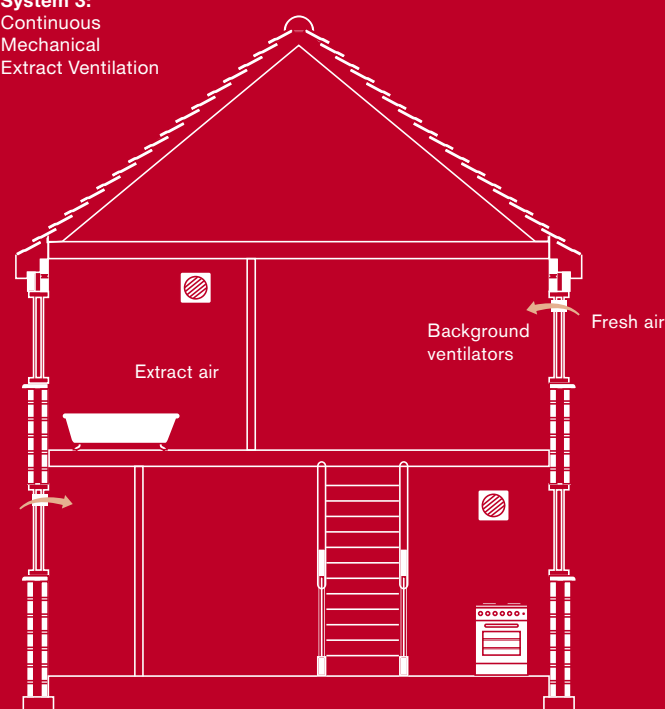
Our continuously running Unity fan complies with System 3 of the Building Regulations as a de-centralised Mechanical Extract Ventilator (dMEV).

Installed in each wet room throughout a property, the units run continuously between low and high speeds. High (boost) speeds are usually activated via

occupant control (light switch) or automatic sensing (humidity/timer).

Continuous ventilation offers an excellent solution for new and existing homes as it does not cost the earth to run – in fact it's less than a penny a day for 365 days of the year!

System 3:
Continuous
Mechanical
Extract Ventilation



The importance of correct ventilation installation – Did you know that the Building Regulations cover installation?

The Domestic Ventilation Compliance Guide

This published document brings together the first specific details of good practice installation.

Covering four ventilation systems, the document provides information and guidance on ducting connection, installation and commissioning.

To ensure that no nuisance noise is generated, which can have a negative impact on occupants, continuous fans need to comply with the installation requirements set out in the guide.



Important guidance

DO

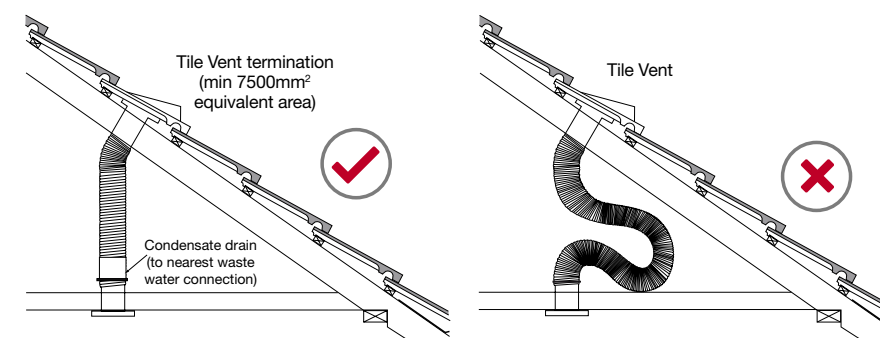
- Ensure the ducting takes the most economical route out of the building
- Ensure that duct is adequately supported
- Ensure that bends are sweeping to offer the least amount of resistance
- Ensure ducting is fully insulated
- Ensure all vertical duct installations incorporate a condensate trap
- Ensure condensate drain is insulated if terminated to atmosphere
- Follow guidance set out in the Domestic Compliance Guide

DON'T

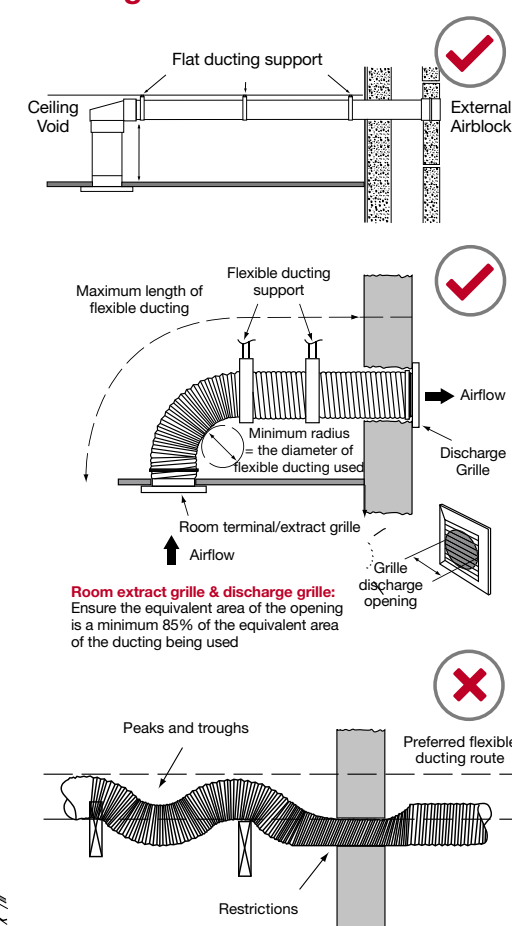
- Allow duct route to sag, causing peaks and troughs
- Pass duct through an opening that allows a restriction to form causing resistance
- Install ducting without proper insulation or condensate requirements

The Building Regulations have seen a new focus on installation practice and on-site performance certification. The Domestic Ventilation Compliance Guide sets out a clear path to classify ventilation as a controlled service.

Ceiling loft

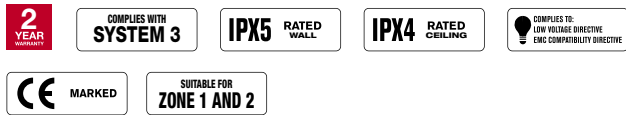


Ceiling void



Unity CV2GIP

Low energy – one fan, any room



Features and benefits

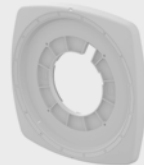
Unity's outstanding energy performance and in-built SMART technology provides the best answers for today's ventilation requirements in both new and refurbishment housing.

- One fan, any room, all applications - CV2GIP can be applied to all wet rooms and removes the need for large ducting networks and high background ventilation requirements
- Using as little as 1.1 watts, Unity's energy performance is ideal for directly reducing carbon emissions in SAP
- CV2GIP's short 68mm spigot design makes it perfect for application in shallow ceiling voids
- The unique 100% variable airflow feature offers peace of mind to Installers that Building Regulation compliance can be easily achieved
- CV2GIP's SMART technology features, including automatic humidity sensing and a logical approach to overrun timing, help to reduce heat loss and energy wastage
- The discreet and stylish design helps CV2GIP to blend in with its environment
- The SMART touchpad located on the front panel removes the need for battling with fiddly switches, often located at the back of the fan
- CV2GIP offers ultra-quiet ventilation as low as 10dB(A) in low speed mode once installed

- **The best of the rest - CV2GIP has a low energy EC motor, 9 registered design patents and a mixed flow backward curved impellor, increased performance, removing clogging as the rubber blade protectors attract duct**



Greenwood SMART Technology



Unity picture frame adaptor

Material: White satin finish, ABS plastic
Designed to provide a perfect aesthetic finish when the Unity fan is used as a replacement in existing Ø 150mm wall installations.

Product code	Width	Height	Depth	Price ex. VAT (£)
PFACV2	246mm	246mm	22mm	£25.36

Models, control options and key data

*Sound pressure level measured @ 3 metres

Product code	Control operation	IP	Voltage	Preset speed, 100% adjustable	Airflow performance (l/s)		Sound Pressure Level dB(A)*	Energy consumption (W)		Price ex. VAT (£)
					Trickle	Boost		Min	Max	
CV2GIP	Continuously running dMEV fan with automatic Greenwood HumidiSMART™ sensing and Greenwood TimerSMART™ overrun options (set up at installation)	X4 Ceiling X5 Wall	220 - 240V	Trickle	5	8	10.1 - 38.5	1.1	5.4	£103.34
				Boost	8	13				
				Min/Max	2	23				
CV2SVGIP	Continuously running SELV fan with automatic Greenwood HumidiSMART™ sensing and Greenwood TimerSMART™ overrun options (set up at installation)	X4 Ceiling X5 Wall	24V DC	Trickle	5	8	10.1 - 38.5	1.1	5.4	£133.58
				Boost	8	13				
				Min/Max	2	23				

Physical specification

All measurements in millimetres unless otherwise indicated

Weight: 1kg
Spigot: Ø 100mm
Materials: White satin finish
ABS plastic manufacture

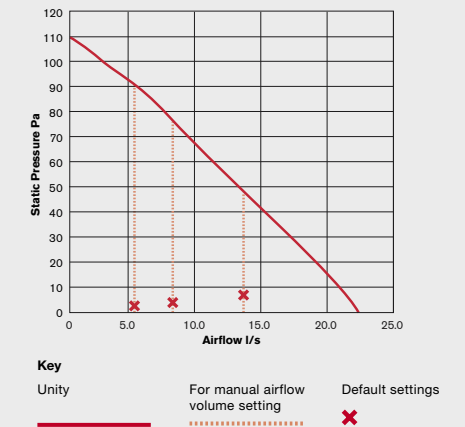
Ancillaries for Unity

Flexiduct page 48 • External grilles page 49
• FF100 Fastfix page 48 • PFA (picture frame adaptor) page 49

Installation

Wiring: Must comply with IEE Regulations
Fuse: 3 amp normally required (when fan is supplied from a 6A lighting circuit no local fuse is required)
Electrical specification: 220-240V-50Hz Class II
SELV Class III
Cable: Ø 1mm² max
Installation: Wall or ceiling
Consumption: Min 1.1W
Max 5.4W

Performance



Fuss-free installation

We have kept the installer firmly in the forefront of our mind whilst designing Unity.

A 'Twist-Lock' front fascia simply turns for removal. On the inside, screws can be undone but stay in place when you use the innovative 'stay open' internal hinge for easy wiring access and secure fixing, designed to reduce installed vibration. This means no need to hold or put down screws keeping everything within easy reach of the installer.

The touchpad

The innovative touchpad has been designed to help reduce set up and commissioning on-site. All of the set up features are located in one place which is easy to access once the fan is wired and installed.

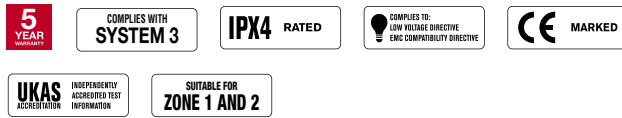
This helps ensure that the correct installation is achieved and once completed, the touchpad is locked to avoid unnecessary changes being made to the fan's running mode.



A one product concept - one fan, any room, all installations. Unity is the first continuously running fan to truly assist in the delivery of **Guaranteed Installed Performance.**

Omnique OF100

The only low energy fan you'll ever need



Features and benefits

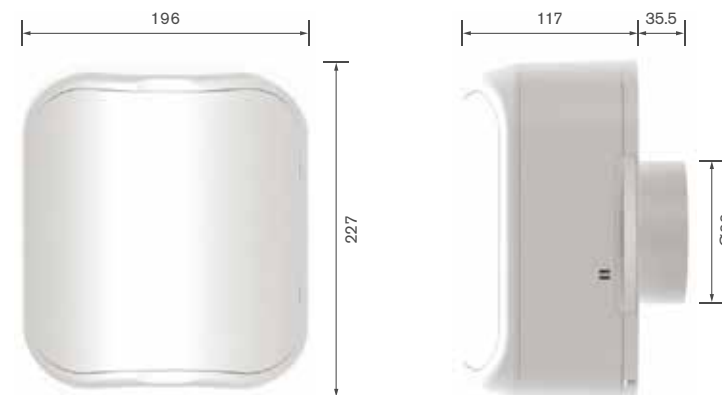
With outstanding energy performance, Omnique is loaded with Greenwood SMART Technology ensuring installer happiness and long term performance and reliability.

Offering both continuous and intermittent running, Omnique is the only true multifunctional fan that caters for all refurbishment and new build projects.


- Using as little as 1.1W in continuous running mode, Omnique costs less than a penny a day to run contributing to a reduction in fuel poverty in homes
- Being a versatile 6-in-1 fan means that Omnique will comply with regulations for any home, every time
- Omnique has been specifically designed to be maintained rather than replaced
- Contractor costs for planned and responsive maintenance can be substantially reduced as Omnique's multifunctionality is the perfect answer for any installation - inspection and installation can be completed in a single visit
- The SMART technology in Omnique removes the need for tenant intervention and always ensures the optimal indoor environment

- Omnique's 100% variable airflow is ideal for installations where there are existing gas appliances as the airflow rates can be reduced and tailored as necessary

- The highly robust window kit for Omnique has been designed in conjunction with the people responsible for advising on secure products in housing and has been awarded the Secured by Design Accreditation



Energy efficiency within all areas of housing stock is a cornerstone of Government policy. This policy has led to an increasing number of demands being placed on housing providers and their housing stock to meet a variety of targets.

Omnique picture frame adaptor				
 Material: White satin finish, ABS plastic Designed to provide a perfect aesthetic finish when an Omnique fan is used as a replacement in existing Ø 150mm wall installations.				
Product code	Width	Height	Depth	Price ex. VAT (£)
PFAOF100	256mm	287mm	23mm	£28.08



6 functions from just one product

1. Continuous running mode
2. Pullcord control
3. Intermittent running mode
4. Greenwood TimerSMART™ control
5. Greenwood HumidiSMART™ control
6. SELV – Safety extra low voltage option

Greenwood SMART Technology



The UK's first and only Secured by Design Accredited window fan

- Intruder proof
- Privacy design
- GIP: ventilation performance



Window kit models and key data

Ø Glazing hole (mm)	Glazing thickness (mm)	Width (mm)	Height (mm)	Depth (mm)	Weight (kg)
118	up to 28	192	222	68	0.5

Models, control options and key data

*Sound pressure level measured @ 3 metres

Product code	Control operation	IP	Voltage	Preset Speed	Airflow performance (l/s)		Sound Pressure Level dB(A)*	Energy consumption (W)		Price ex. VAT (£)
					Bathroom (default)	Kitchen (default)		Min	Max	
OF100GIP	Multifunctional fan with automatic Greenwood HumidiSMART™ sensing and Greenwood TimerSMART™ overrun options (set-up at installation)	X4	220-240V or 24V DC when converted to SELV mode	Low	6	8	7	1.1	3* *Maximum energy consumption for continuous mode	£171.07
OF100SBD	Secured by Design multi functional 100mm SMART fan and window kit Multifunctional fan with automatic Greenwood HumidiSMART™ sensing and Greenwood TimerSMART™ overrun options (set-up at installation) and window kit			High	8	13	19			£209.63

Physical specification

All measurements in millimetres unless otherwise indicated

Weight: 1.4kg
Materials: White gloss finish
 ABS plastic manufacture

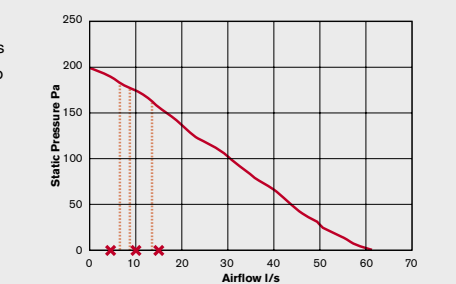
Ancillaries for Omnique OF100

- EG1 page 49
- FF100 Fastfix page 48
- GG42 page 49
- Flexiduct page 48
- PFA (picture frame adaptor) page 49

Installation

Wiring: Must comply with IEE Regulations
Fuse: 3 amp normally required (when fan is supplied from a 6A lighting circuit no local fuse is required)
Electrical specification: 220-240V~50Hz Class II
 SELV Conversion Class III
Glazing: Suitable for 4-28mm
 Glazing hole ø 118-130mm
Application: Wall / window / ceiling
Cable: ø 1mm² max
Consumption: Min 1.1W
 Max 25.8W

Performance



Key
 Maximum (red line)
 Manual airflow volume setting (dashed line)
 Default settings (red X)

IP requirements

For installations of fans in bathrooms and showers

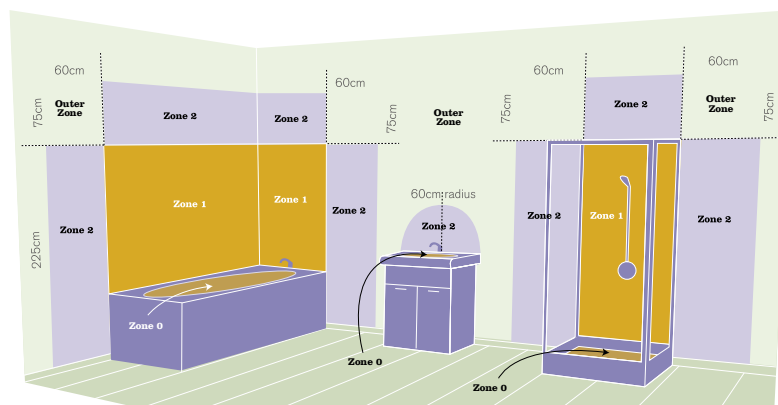
As a result of European standardisation, Amendment 1 of the 17th edition of the IEE Wiring Regulations (BS7671) came into effect in July 2011. This outlined the new zoning and ingress protection criteria for bathroom fans, having effect on product safety and installation location. To achieve IP ratings, fans are rigorously tested using a series of graded water tests. Location advice (i.e. zone 0, 1 or 2) ensures installers and users are not at risk of installing and operating products in unsuitable areas.

I	P	X	X
Ingress	Protection	First Number Protection of equipment Ingress of solid objects	Second Number Protection of persons Electrical safety
		0 Non-protected 1 > 50mm diameter 2 > 12.5mm diameter 3 > 2.5mm diameter 4 > 1.0mm diameter 5 > Dust protected 6 > Dust tight	0 Non-protected 1 Vertically dripping 2 Dripping 15° tilted 3 Spraying 4 Splashing 5 Jetted 6 Power jetting 7 Temporary immersion 8 Continuous immersion

IP ratings: IPX4

IPX4 RATED

To achieve the electrical protection level equivalent to level 4, a fan is continuously sprayed with fine water jets for 10 minutes while constantly running. The fan is then left running for a further 10 minutes after which it is checked for water ingress. If siting IPX4 rated products in zone 0, additional protection may be required. Therefore, guidance within BS7671 should be followed.



Bathroom zones

In addition to product safety, the standards have an effect on where products are located within the bath/shower room area. The standards clarify the current confusion regarding the siting of electrical appliances and reduce the risk to end users operating within these zones. The new regulations divide the location containing the bath or shower into three areas – **zones 0, 1 and 2**.

The following descriptions are extracted from amendment 1 of the 17th addition of the IEE Wiring Regulations.

Regulation 701.32.2

Description of zone 0. Zone 0 is the interior of the bath tub or shower basin.

For showers without a basin, the height of zone 0 is 0.10m and its surface extent has the same horizontal extent as zone 1.

Regulation 701.32.3

Description of zone 1. Zone 1 is limited by:

- The finished floor level and the horizontal plane corresponding to the highest fixed shower head or water outlet or the horizontal plane lying 2.25m above the finished floor level, whichever is higher.
- The vertical surface:
 - Circumscribing the bath tub or shower basin.
 - At a distance of 1.20m from the centre point of the fixed water outlet on the wall or ceiling for showers without a basin.

Zone 1 does not include zone 0.

The space under the bath tub or shower basin is considered to be zone 1.

However, if the space under the bath tub or shower basin is only accessible with a tool it is considered to be outside the zones.

Regulation 701.32.4

Description of zone 2. Zone 2 is limited by:

- The finished floor level and the horizontal plane corresponding to the highest fixed shower head or water outlet or the horizontal plane lying 2.25m above the finished floor level, whichever is higher.
- The vertical surface at the boundary of zone 1 and the parallel vertical surface at a distance of 0.60m from the zone 1 border.

For showers without a basin, there is no zone 2 but an increased zone 1 is provided by the horizontal dimensions of 1.20m mentioned in Regulation 701.32.3(ii).

Anything outside zones 0, 1 and 2 is treated as 'outside of zones', therefore has no IP requirement.

Greenwood SMART Technology

Easier, better, smarter

We have been designing SMARTer ventilation products and solutions for new and existing homes. Our SMARTer ventilation products offer savings for the installer, the homeowner and the environment...

- ✓ **They can be commissioned on-site** in the quickest time and most fuss-free way (no more fiddly switches to set up different speeds).
- ✓ **They help reduce problems** often associated with some ventilation products – nuisance noise (especially in the middle of the night) and unnecessary heat loss.
- ✓ **They work in harmony with the environment** because they work by sensing the environment around them and react because of it, not because of a generic setting (which is often incorrect!).
- ✓ **When operating, they help save more energy.** Less electricity is being used having a positive impact on your bills, and they contribute even further to reducing the carbon footprint of the home (because they do what they need to do in the actual environment).

SMART touchpad – provides the simplest and easiest commissioning, an example of Greenwood CommissionSMART™ technology



Greenwood HumidiSMART™

A revolutionary way of using humidity levels to provide effective ventilation in domestic properties all year round.

Greenwood TimerSMART™

A logical approach to timer operation used in domestic ventilation fans and whole house systems – put a stop to nuisance running in the middle of the night!

Greenwood CommissionSMART™

Innovative design controls and features on Greenwood products that are simply there to make on-site set up and commissioning the easiest it can be.

Greenwood CarbonSMART™

An innovative combination of the most efficient components and design means these products are among the top performing products in their class/ventilation method when compared against standard market alternatives.

Commercial Ventilation

Pub, club, restaurant – these fans will create a fresh environment throughout the day and night. Loads of control options from air quality to temperature sensors, make this range common sense for all commercial environments.

Complying with Building Regulations and performance requirements

The Building Regulations require ventilation in all new-build or refurbishment commercial premises, where planning permission is required.

They work by identifying the technical requirements for:

- Rapid ventilation, such as opening windows.
- Background ventilation using window ventilators, airbricks, etc.
- Mechanical Extract Ventilation by extractors operated mechanically and automatically.

Complying with Building Regulations

For maximum efficiency, careful planning for the installation, size and number of fans is required. This can be calculated by the following advice:

Performance requirements:

- Calculate the volume of room (length x width x height) in cubic metres.
- Identify the room usage in the list below for the recommended number of air changes per hour.
- Multiple the room volume by the number of air changes to obtain the required air extract rate (m3/h).
- Select the fan model that has a performance at least equal to this extract rate from the Commercial range.
- If no single fan meets the required extract rate, divide the rate by the performance of selected fans to establish the quantity of fans required.

Commercial Fan Pricing per Fan (Pages 32-37)

Product code		Price ex. VAT (£)
CD6	Commercial 6" fan	£350.62
CD9	Commercial 9" fan	£382.53
CD12	Commercial 12" fan	£414.95



Offices: Table 6.1a ADF 2010 extract ventilation rates

Room	Extract rate
Rooms containing printers and photocopiers in substantial use (greater than 30 minutes per hour)	Air extract rate of 20 l/s per machine during use. Note that if the operators are continuously in the room, use the greater of the extract and whole building ventilation rates.
Office sanitary accommodation and washrooms	Intermittent air extract rate of: <ul style="list-style-type: none">▪ 15 l/s per shower/bath▪ 6 l/s per WC/urinal
Food and beverage preparation areas	Intermittent air extract rate of: <ul style="list-style-type: none">▪ 15 l/s with microwave and beverages only▪ 30 l/s adjacent to the hob with cooker(s)▪ 60 l/s elsewhere with cooker(s)▪ All to operate while food and beverages preparation is in progress
Specialist buildings and spaces (e.g. commercial kitchens, fitness rooms)	See Table 6.3 of ADF 2010

Offices: Table 6.1b ADF 2010 whole building ventilation rate for air supply to offices

Supply rate	Extract rate
Total outdoor air supply rate for offices (no-smoking and no significant pollutant sources)	10 l/s per person

Ventilation of other buildings and spaces is detailed in Table 6.3 of ADF 2010, where reference is made to additional Regulations and guidance notes, e.g. CIBSE Guide B: 2005

CD
Window fans

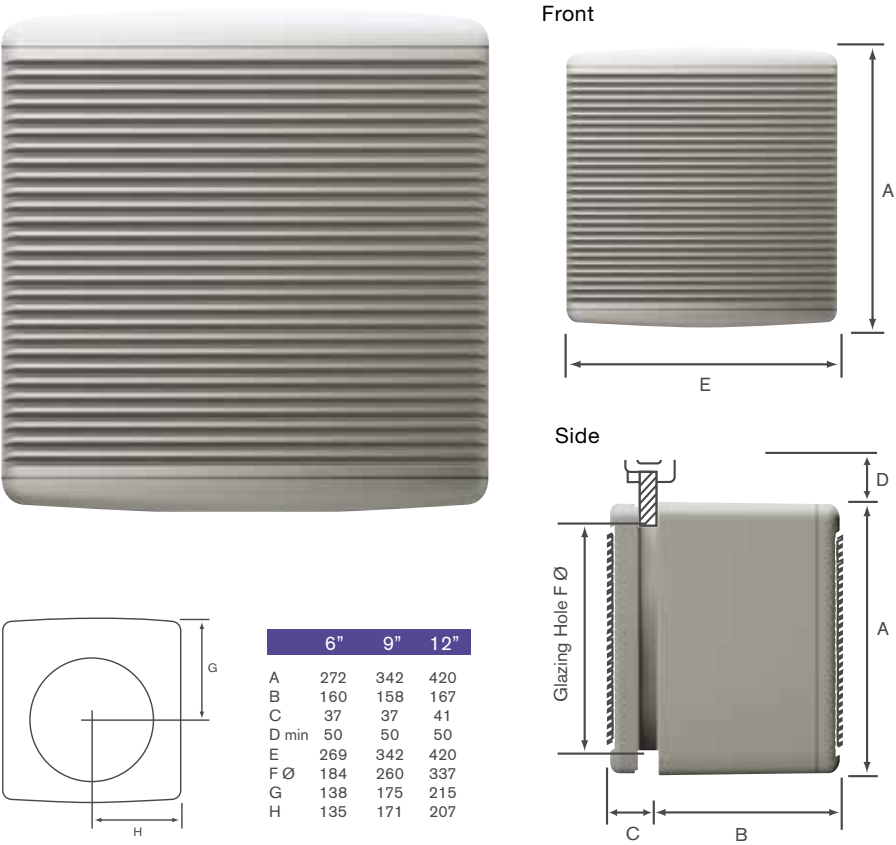


Features and benefits

- Self-adhesive external plate allows easy one person fix on-site
- Thermo-actuated backdraught shutters ensure silent operation and positive closure when fan is off
- Reversible supply or extract, variable speed operation
- Choice of controllers, remote and integral sensors
- Suitable for glazing thicknesses of up to 32mm and wall/panels of 360mm
- Low noise levels
- 6", 9" and 12" models available

Window Kit Specification Components - For Full Kit

Size	Fan	Price ex. VAT (£)	Window Kit	Price ex. VAT (£)
6" Window Kit	CD6	£350.62	EW6	£230.51
9" Window Kit	CD9	£382.53	EW9	£262.15
12" Window Kit	CD12	£414.95	EW12	£297.75



CD
Wall fans

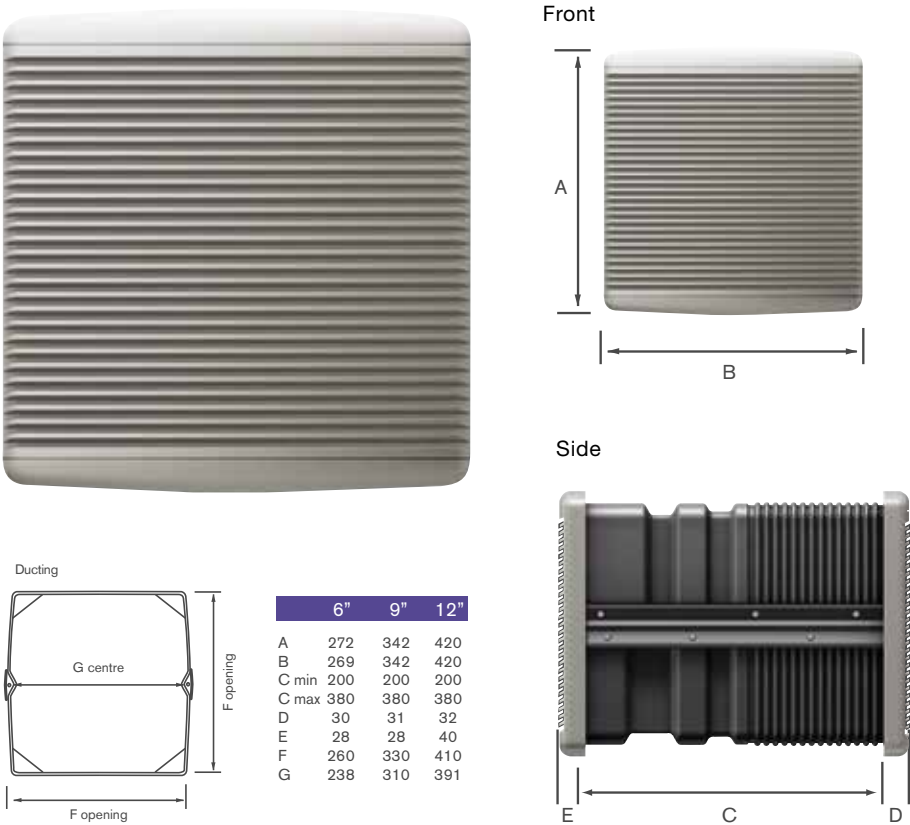


Features and benefits

- Models include screw holes to allow easy fix of fan to duct and one person fix
- Thermo-actuated backdraught shutters ensure silent operation and positive closure when fan is off
- Reversible supply or extract, variable speed operation
- Calibration at 10mm intervals on wall duct to aid cutting to correct length
- Suitable for installation into walls up to 380mm
- Choice of controllers, remote and integral sensors
- Low noise levels
- 6", 9" and 12" models available

Wall Kit Specification Components - For Full Kit

Size	Fan	Price ex. VAT (£)	Wall Duct	Price ex. VAT (£)	External Grille	Price ex. VAT (£)
6" Wall Kit	CD6	£350.62	ED6	£36.41	EG6	£61.37
9" Wall Kit	CD9	£382.53	ED9	£46.28	EG9	£78.00
12" Wall Kit	CD12	£414.95	ED12	£57.37	EG12	£96.46



Models, control options and key data

*Sound pressure level measured @ 3 metres **See components table above Note: figures are extract only

Product code		Performance to BS 848 Pt1 in free air (m³/h)		Sound pressure level dB(A)*		Consumption (W)	
		Boost	Eco	Boost	Eco	Boost	Eco
CD6	6" commercial fan - installed within a window kit specification**	419	227	45	28	38	20
CD9	9" commercial fan - installed within a window kit specification**	830	724	50	43	50	37
CD12	12" commercial fan - installed within a window kit specification**	1690	1228	51	44	100	70

FOR SINGLE PRICE FAN PLEASE REFER TO PAGE 30

Physical specification for complete CD window fan kit

All measurements in millimetres unless otherwise indicated

Weight: 3.6kg
5.2kg
7.4kg

Materials: ABS plastic

Ancillaries for CD
For details of remote or integral sensor options/ switches see page 39. For full kit accessories EW6, EW9, EW12 see page 40

Installation

Wiring: Must comply with IEE Regulations

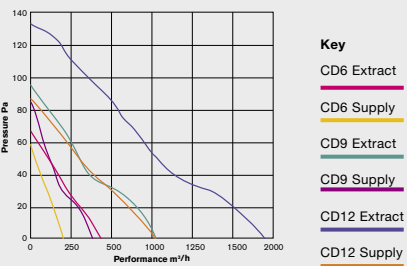
Cable: Ø 1mm² max or min

Fuse: 3 amp (when fan is supplied from a 6A lighting circuit no local fuse is required)

Electrical specification: 230V~50Hz Class I

Consumption: Boost = 38W, Eco = 20W
Boost = 50W, Eco = 37W
Boost = 100W, Eco = 70W

Performance



Models, control options and key data

*Sound pressure level measured @ 3 metres **See components table above Note: figures are extract only

Product code		Performance to BS 848 Pt1 in free air (m³/h)		Sound pressure level dB(A)*		Consumption (W)	
		Boost	Eco	Boost	Eco	Boost	Eco
CD6	6" commercial fan - installed within a wall kit specification**	445	245	45	27	38	20
CD9	9" commercial fan - installed within a wall kit specification**	918	820	49	46	50	37
CD12	12" commercial fan - installed within a wall kit specification**	1820	1341	51	45	100	70

FOR SINGLE PRICE FAN PLEASE REFER TO PAGE 30

Physical specification for complete CD wall fan kit

All measurements in millimetres unless otherwise indicated

Weight: 3.85kg
5.5kg
8.1kg

Materials: ABS plastic

Ancillaries for CD
For details of remote or integral sensor options/ switches see page 39. For full kit accessories ED6, ED9, ED12, EG6, EG9, EG12 see page 40.

Installation

Wiring: Must comply with IEE Regulations

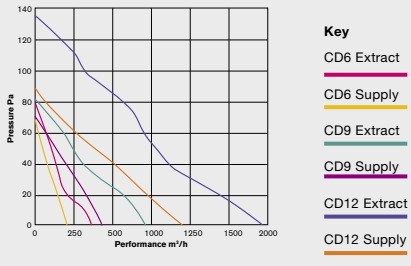
Cable: Ø 1mm² max or min

Fuse: 3 amp (when fan is supplied from a 6A lighting circuit no local fuse is required)

Electrical specification: 230V~50Hz Class I

Consumption: Boost = 38W, Eco = 20W
Boost = 50W, Eco = 37W
Boost = 100W, Eco = 70W

Performance



CD

Refurbishment wall fans



Features and benefits

- Designed to fix to existing T Series or Greenwood ED ducting
- Thermo-actuated backdraught shutters ensures silent operation and positive closure when fan is off
- Reversible supply or extract, variable speed operation
- Choice of controllers, remote and integral sensors
- No drilling or plugging required
- Can utilise existing T series, Rangemaster or Ecotronic controllers
- 6", 9" and 12" models available

Refurb Wall Kit Specification Components - For Full Kit

Size	Fan	Price ex. VAT (£)	Picture Frame	Price ex. VAT (£)
6" Refurb Wall Kit	CD6	£350.62	PFA6	£62.36
9" Refurb Wall Kit	CD9	£382.53	PFA9	£79.27
12" Refurb Wall Kit	CD12	£414.95	PFA12	£97.71



Models, control options and key data

*Sound pressure level measured @ 3 metres **See components table above Note: figures are extract only

Product code		Performance to BS 848 Pt1 in free air (m³/h)		Sound pressure level dB(A)*		Consumption (W)	
		Boost	Eco	Boost	Eco	Boost	Eco
CD6	6" commercial fan - installed within a refurbishment wall kit specification**	445	245	45	27	38	20
CD9	9" commercial fan - installed within a refurbishment wall kit specification**	918	820	49	46	50	37
CD12	12" commercial fan - installed within a refurbishment wall kit specification**	1820	1341	51	45	100	70

FOR SINGLE PRICE FAN PLEASE REFER TO PAGE 30

Physical specification for complete CD refurbishment wall fan kit

All measurements in millimetres unless otherwise indicated

Weight: 3.7kg
5.13kg
6.85kg

Materials: ABS plastic

Ancillaries for CD

For details of remote or integral sensor options/switches see page 39. For full kit accessories PFA6, PFA9, PFA12 see page 40.

Installation

Wiring: Must comply with IEE Regulations

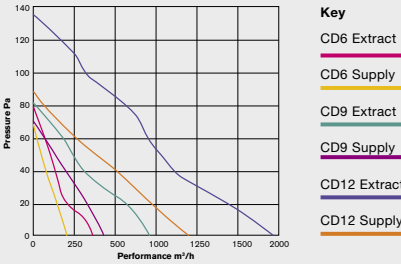
Cable: Ø 1mm² max or min

Fuse: 3 amp (when fan is supplied from a 6A lighting circuit no local fuse is required)

Electrical specification: 230V~50Hz Class I

Consumption: Boost = 38W, Eco = 20W
Boost = 50W, Eco = 37W
Boost = 100W, Eco = 70W

Performance



Key
CD6 Extract
CD6 Supply
CD9 Extract
CD9 Supply
CD12 Extract
CD12 Supply

CD

Ceiling fans

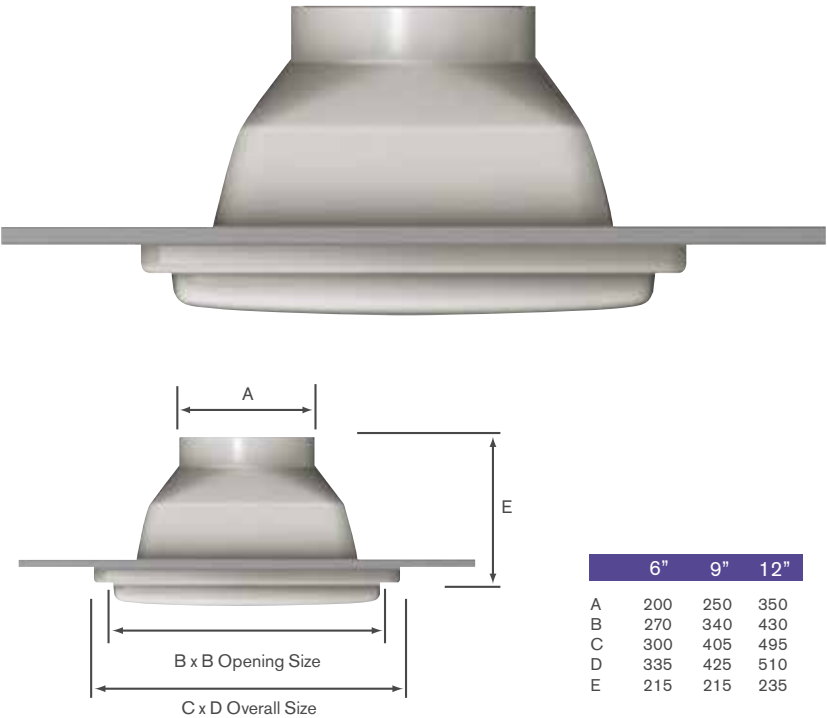


Features and benefits

- Designed for ceiling installation
- Picture frame adaptor for retro fit installation
- Thermo-actuated backdraught shutters ensures silent operation and positive closure when fan is off
- Choice of controllers, remote and integral sensors
- Fan can be disconnected with ease for replacement
- 6", 9" and 12" models available

Ceiling Fan Kit Specification Components - For Full Kit

Size	Fan	Price ex. VAT (£)	Ceiling Adaptor Kit	Price ex. VAT (£)
6" Ceiling Kit	CD6	£350.62	CK6	£153.07
9" Ceiling Kit	CD9	£382.53	CK9	£183.75
12" Ceiling Kit	CD12	£414.95	CK12	£215.74



Models, control options and key data

*Sound pressure level measured @ 3 metres **See components table above Note: figures are extract only

Product code		Performance to BS 848 Pt1 in free air (m³/h)		Sound pressure level dB(A)*		Consumption (W)	
		Boost	Eco	Boost	Eco	Boost	Eco
CD6	6" commercial fan - installed within a ceiling kit specification**	470	222	47	30	38	20
CD9	9" commercial fan - installed within a ceiling kit specification**	933	804	48	44	50	37
CD12	12" commercial fan - installed within a ceiling kit specification**	1836	1395	50	43	100	70

FOR SINGLE PRICE FAN PLEASE REFER TO PAGE 30

Physical specification for complete CD ceiling fan kit

All measurements in millimetres unless otherwise indicated

Weight: 2.6kg
3.7kg
5.2kg

Materials: ABS plastic

Ancillaries for CD

For details of remote or integral sensor options/switches see page 39. CK6, CK9, CK12 see page 40.

Installation

Wiring: Must comply with IEE Regulations

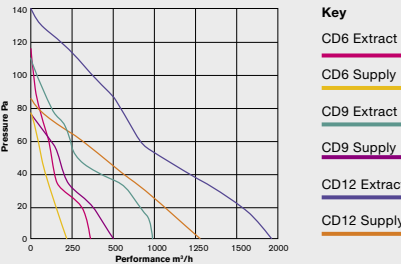
Cable: Ø 1mm² max or min

Fuse: 3 amp (when fan is supplied from a 6A lighting circuit no local fuse is required)

Electrical specification: 230V~50Hz Class I

Consumption: Boost = 38W, Eco = 20W
Boost = 50W, Eco = 37W
Boost = 100W, Eco = 70W

Performance



Key
CD6 Extract
CD6 Supply
CD9 Extract
CD9 Supply
CD12 Extract
CD12 Supply

CD
Pitched roof fans

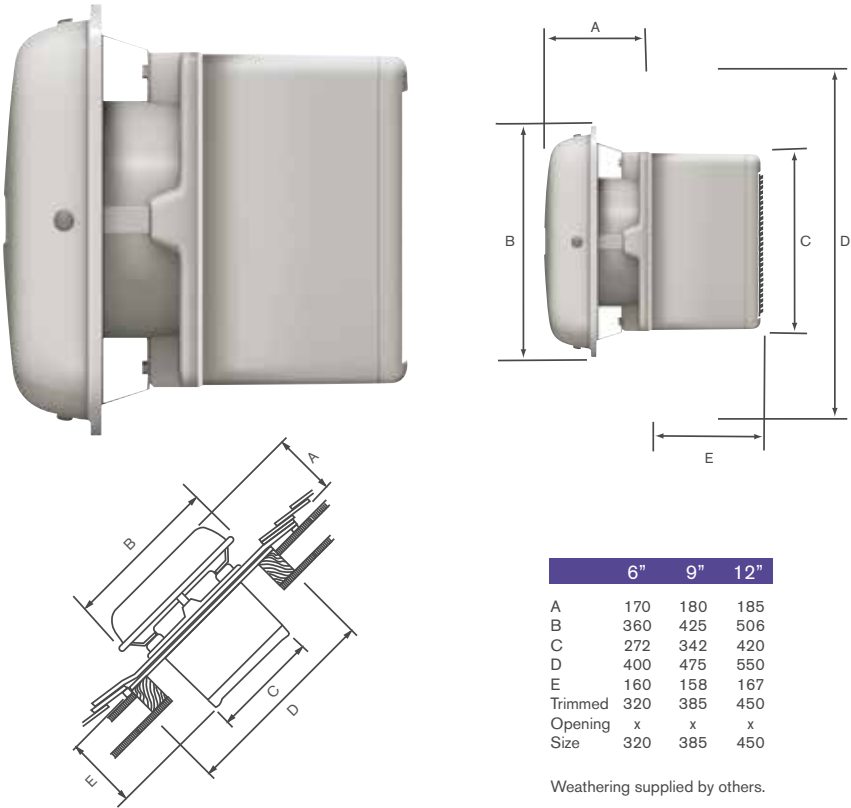


Pitched Roof Fan Kit Specification Components - For Full Kit

Size	Fan	Price ex. VAT	Window Spacer	Price ex. VAT	Weather Terminal	Price ex. VAT	Wall Fixing Plate	Price ex. VAT
6" Pitched Roof Kit	CD6	£350.62	WS6	£38.57	WT6	£212.30	WFP6	£52.27
9" Pitched Roof Kit	CD9	£382.53	WS9	£49.02	WT9	£227.86	WFP9	£64.07
12" Pitched Roof	CD12	£414.95	WS12	£60.26	WT12	£257.59	WFP12	£78.24

Features and benefits

- Reversible supply or extract, variable speed operation
- Thermo-actuated backdraught shutters ensures silent operation and positive closure when fan is off
- Choice of controllers, remote and integral sensors
- 6", 9" and 12" models available



	6"	9"	12"
A	170	180	185
B	360	425	506
C	272	342	420
D	400	475	550
E	160	158	167
Trimmed	320	385	450
Opening	x	x	x
Size	320	385	450

Weathering supplied by others.

CD
Flat roof fans

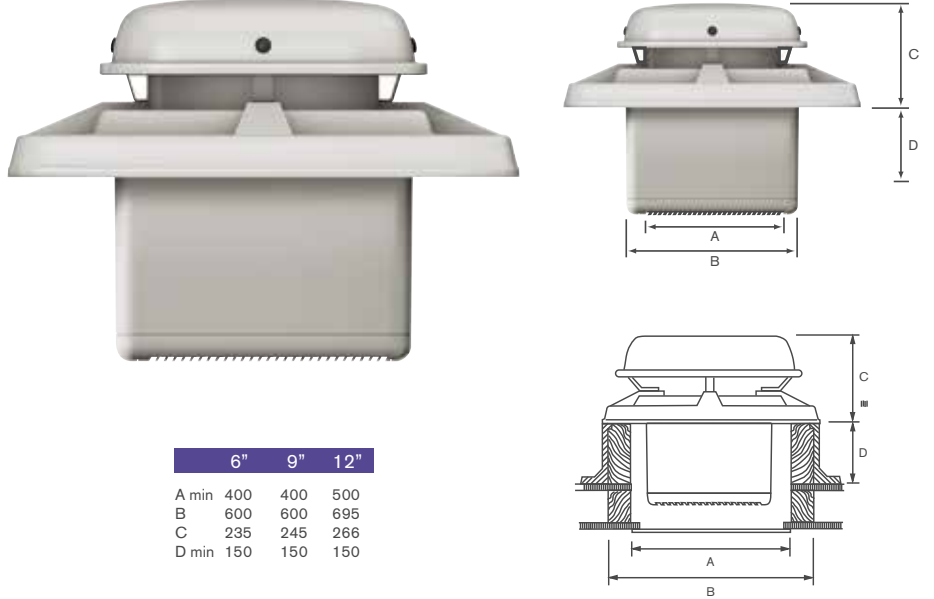


Flat Roof Fan Kit Specification Components - For Full Kit

Size	Fan	Price ex. VAT	Wall Spacer	Price ex. VAT	Roof Terminal	Price ex. VAT
6" Flat Roof Kit	CD6	£350.62	WS6	£38.57	RT6	£323.80
9" Flat Roof Kit	CD9	£382.53	WS9	£49.02	RT9	£361.79
12" Flat Roof Kit	CD12	£414.95	WS12	£60.26	RT12	£414.26

Features and benefits

- Reversible supply or extract, variable speed operation
- Thermo-actuated backdraught shutters ensures silent operation and positive closure when fan is off
- Choice of controllers, remote and integral sensors
- 6", 9" and 12" models available



	6"	9"	12"
A min	400	400	500
B	600	600	695
C	235	245	266
D min	150	150	150

Models, control options and key data

*Sound pressure level measured @ 3 metres **See components table above Note: figures are extract only

Product code		Performance to BS 848 Pt1 in free air (m³/h)		Sound pressure level dB(A)*		Consumption (W)	
		Boost	Eco	Boost	Eco	Boost	Eco
CD6	6" commercial fan - installed within a pitched roof kit specification**	394	202	47	30	38	20
CD9	9" commercial fan - installed within a pitched roof kit specification**	700	597	48	44	50	37
CD12	12" commercial fan - installed within a pitched roof kit specification**	1149	775	48	32	100	70

FOR SINGLE PRICE FAN PLEASE REFER TO PAGE 30

Physical specification for complete CD pitched roof fan kit

All measurements in millimetres unless otherwise indicated

Weight: 4.0kg
8.9kg
11.8kg

Materials: ABS plastic

Ancillaries for CD

For details of remote or integral sensor options/ switches see page 39. For full kit accessories WS6, WS9, WS12, WT6, WT9, WT12, WF6, WF9, WF12, WFP6, WFP9, WFP12 see page 40.

Installation

Wiring: Must comply with IEE Regulations

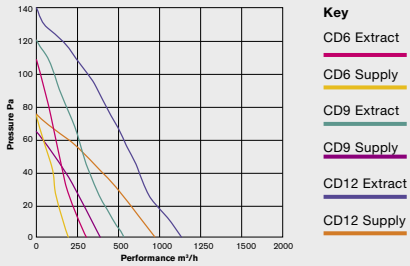
Cable: Ø 1mm² max or min

Fuse: 3 amp (when fan is supplied from a 6A lighting circuit no local fuse is required)

Electrical specification: 230V~50Hz Class I

Consumption: Boost = 38W, Eco = 20W
Boost = 50W, Eco = 37W
Boost = 100W, Eco = 70W

Performance



Key
CD6 Extract
CD6 Supply
CD9 Extract
CD9 Supply
CD12 Extract
CD12 Supply

Models, control options and key data

*Sound pressure level measured @ 3 metres **See components table above Note: figures are extract only

Product code		Performance to BS 848 Pt1 in free air (m³/h)		Sound pressure level dB(A)*		Consumption (W)	
		Boost	Eco	Boost	Eco	Boost	Eco
CD6	6" commercial fan - installed within a flat roof kit specification**	394	202	47	30	38	20
CD9	9" commercial fan - installed within a flat roof kit specification**	700	597	48	44	50	37
CD12	12" commercial fan - installed within a flat roof kit specification**	1149	775	48	32	100	70

FOR SINGLE PRICE FAN PLEASE REFER TO PAGE 30

Physical specification for complete CD flat roof fan kit

All measurements in millimetres unless otherwise indicated

Weight: 6.15kg
9.10kg
11.0kg

Materials: ABS plastic

Ancillaries for CD

For details of remote or integral sensor options/ switches see page 39. For full kit accessories WS6, WS9, WS12, RT6, RT9, RT12 see page 40.

Installation

Wiring: Must comply with IEE Regulations

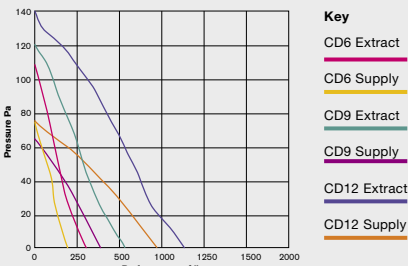
Cable: Ø 1mm² max or min

Fuse: 3 amp (when fan is supplied from a 6A lighting circuit no local fuse is required)

Electrical specification: 230V~50Hz Class I

Consumption: Boost = 38W, Eco = 20W
Boost = 50W, Eco = 37W
Boost = 100W, Eco = 70W

Performance



Key
CD6 Extract
CD6 Supply
CD9 Extract
CD9 Supply
CD12 Extract
CD12 Supply

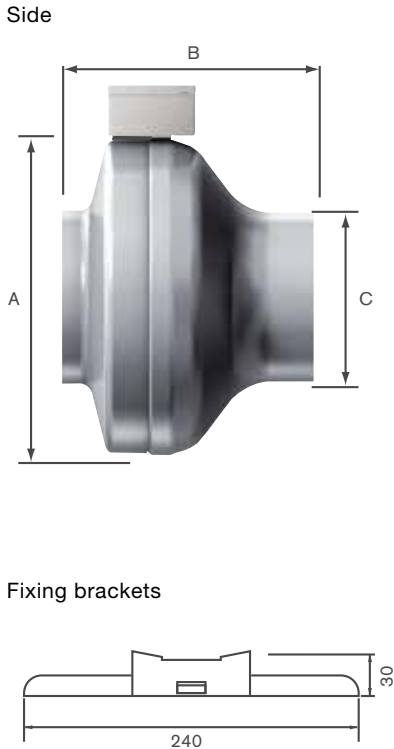
SD

Superduct centrifugal induct fans



Features and benefits

- High performance straight-flow centrifugal induct fans
- Superduct fans complement both Greenwood Airvac domestic fan ranges and commercial fan ranges
- Range of four Superduct fans available to suit all design requirements
- Designed for high pressure and long ducting systems
- SDC controllers and TAR overrun timer control option
- Ultra quiet operation and easy installation compared to the CD fan range.
- Constructed from galvanised steel to withstand high running temperatures
- Moisture proof units, IP44 rated



	SD100	SD150	SD200	SD250
A Ø	242	272	344	344
B	170	170	204	200
C Ø	100	150	200	250

Models, control options and key data

*Sound pressure level measured @ 3 metres Note: figures are extract only

Product code	Performance to BS 848 Pt1 in free air		Sound pressure level dB(A)*	Consumption (W)	Amps	Price ex. VAT (£)
	(m³/h)	(l/s)				
SD100	298	83	44	41	0.18	£149.26
SD150	540	150	52	71	0.31	£169.94
SD200	1044	290	58	115	0.50	£213.35
SD250	1260	350	60	185	0.81	£298.47
SDC1	-	-	-	-	1	£84.59
SDC2	-	-	-	-	2	£86.74

Physical specification

All measurements in millimetres unless otherwise indicated

Weight: SD100 = 2.5kg, SD150 = 2.8kg
SD200 = 4.1kg, SD250 = 4.9kg

Materials: Galvanised steel

Ancillaries for SD

RC4 remote switch page 39 • HHR remote humidity sensor page 39 • AQR remote air quality sensor page 39 • PIRR remote PIR sensor page 39 • THR remote temperature sensor page 39 • TAR remote overrun timer page 39

Installation

Wiring: Must comply with IEE Regulations

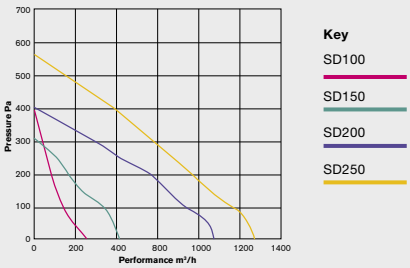
Cable: Ø 1mm² max or min

Fuse: 3 amp (when fan is supplied from a 6A lighting circuit no local fuse is required)

Electrical specification: 230V~50Hz Class I

Consumption: SD100 = 41W
SD150 = 71W
SD200 = 115W
SD250 = 85W

Performance



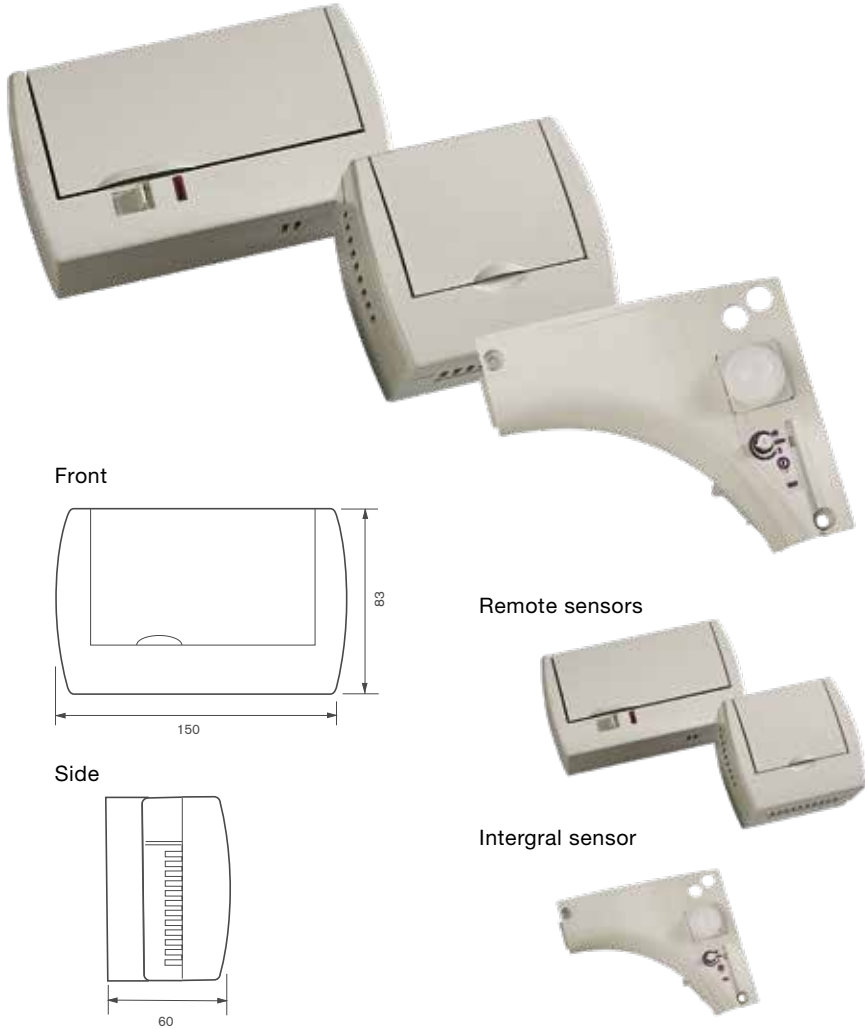
Sensors & switches

Range of integral and remote sensors and switches



Features and benefits

- Designed to control fan efficiently in response to changes in environment (depending on sensor selected) including Humidity, Air Quality, Passive Infrared, Temperature and Timer versions
- Switch options work in conjunction with integral and remote sensors including Forward/Reverse, Variable, Eco setting and Auto/Manual options
- Remote sensors are controlled by Eco switches and still allow fan to operate in response to changes in environment when sited in discreet locations
- Maximum operating temperature 45°C
- Ability to control multiple fans, depending on sensors and fan type
- More than one remote sensor can be connected to a fan
- Sensors fitted with adjustable overrun timers (temperature sensor has preset 2 minute overrun timer)



Remote sensor options

Product code	Function	Detail	Overrun	Sitting	Price ex. VAT (£)
HHR	Humidity	30–90% RH	2–40mins	Mid wall height	£86.38
AQR	Air quality	Hydrogen, CO, Methane, Ethanol, Iso-butane	2–40mins	Head height	£206.48
PIRR	Passive infrared	Up to 7m detection	2–40mins	Max. 2.2m high	£124.38
THR	Temperature	5–35°C	2mins	Head height	£70.80
TAR	Timer	-	2–40mins	Anywhere	£56.38

Switch options

Product code	Function	Detail	Overrun	Price ex. VAT (£)
RC4	Various	On/Off, eco, forward/reverse, auto/manual	-	£109.41
HH6/HH9/HH12	Integral humidity sensor	30–90% RH	2–40mins	£82.26
AQ6/AQ9/AQ12	Integral air quality sensor	See AQR	2–40mins	£196.64
PIR6/PIR9/PIR12	Integral passive infrared sensor	Up to 7m detection	2–40mins	£118.46
TH6/TH9/TH12	Integral temperature sensor	5–35°C	2mins	£67.43
TA6/TA9/TA12	Integral overrun timer	-	2–40mins	£55.27

Accessories

Commercial Ventilation range

Window installation accessories

Product code	Application	Dimensions	Price ex. VAT (£)
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Window kit

Used when installing eco fans into single or double glazed windows up to 32mm thick. Comprising spacer and external grille with unique self-adhesive pads. For glazing 4mm to 32mm. Spacer manufactured from ABS. Grille manufactured from ASA.

EW6	For use with 6" fans	271 x 271 x 155mm, window hole: Ø 184mm	£230.51
EW9	For use with 9" fans	341 x 347 x 151mm, window hole: Ø 260mm	£262.15
EW12	For use with 12" fans	425 x 425 x 176mm, window hole: Ø 337mm	£297.75

Window spacer

Used for exposed site window installation. Comprising one spacer. For use in conjunction with weather terminals. Manufactured from ABS.

WS6	For use with 6" fans	271 x 271 x 126mm	£38.57
WS9	For use with 9" fans	341 x 347 x 123mm	£49.02
WS12	For use with 12" fans	425 x 425 x 135mm	£60.26

Weather terminal

Used for exposed site window installations. Comprising one weather terminal. For use in conjunction with window spacers. Manufactured from HIPS.

WT6	For use with 6" fans	360 x 360 x 170mm	£212.30
WT9	For use with 9" fans	425 x 425 x 180mm	£227.86
WT12	For use with 12" fans	506 x 506 x 185mm	£257.59

Extended fixing rods

For glazing over 32mm and up to 360mm thick. May also be used for adapting wall ducts to fit walls from 390mm to 750mm wide. Comprising four rods 400mm long with M5 thread which can be cut to suit application. Manufactured from steel. Used in conjunction with window kits, window spacers and wall ducts.

EFR	For use with all Eco fans		£46.63
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Roofing installation accessories

Product code	Application	Dimensions	Price ex. VAT (£)
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Roof terminals

For use in flat roof applications. Comprising one roof cowl and mounting plate. Used in conjunction with flexible ducting for flat roof termination and with window spacers for flat roof upstand (not ducted). Manufactured in HIPS.

RT6	For use with 6" fans	657 x 657 x 235mm	£323.80
RT9	For use with 9" fans	657 x 657 x 245mm	£361.79
RT12	For use with 12" fans	742 x 742 x 266mm	£414.26



Wall installation accessories

Product code	Application	Dimensions	Price ex. VAT (£)
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Wall duct

Unique one piece Easyfix wall duct with cutting guide for cutting on-site. Used in conjunction with external grilles. Manufactured in HDPF.

ED6	For use with 6" fans	249 x 249 x 390mm	£36.41
ED9	For use with 9" fans	320 x 322 x 390mm	£46.28
ED12	For use with 12" fans	400 x 402 x 390mm	£57.37

External grille

Used for external brick wall applications. Comprising one external grille. Used in conjunction with wall ducts. Manufactured in ASA.

EG6	For use with 6" fans	271 x 271 x 26mm	£61.37
EG9	For use with 9" fans	341 x 347 x 30mm	£78.00
EG12	For use with 12" fans	425 x 425 x 41mm	£96.46

Wall fixing plate

Used for timber and thin walls, pitched roof and above ceiling applications comprising one fixing plate. Used in conjunction with window kits, spacers and/or weather terminals. Manufactured in aluminium.

WFP6	For use with 6" fans	400 x 400 x Ø 185mm	£52.27
WFP9	For use with 9" fans	475 x 475 x Ø 260mm	£64.07
WFP12	For use with 12" fans	550 x 550 x Ø 337mm	£78.24



Ceiling/panel installation accessories

Product code	Application	Dimensions	Price ex. VAT (£)
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Ceiling adaptor kits

Complete kits used for ducted ceiling applications. Kit comprises one ceiling kit duct, two mounting plates, two mounting screws, two M5 screws and two lock nuts. Manufactured in HIPS.

CK6	For use with 6" fans	300 x 335 x 215mm. Ø 200mm spigot	£153.07
CK9	For use with 9" fans	405 x 425 x 215mm. Ø 250mm spigot	£183.75
CK12	For use with 12" fans	495 x 510 x 235mm. Ø 350mm spigot	£215.74

Picture frame adaptors

For panel or ceiling applications and for retro fit installations where uneven wall installations need to be concealed. Comprising one picture frame adaptor. Manufactured in HIPS.

PFA6	For use with 6" fans	330 x 335 x 20mm	£62.36
PFA9	For use with 9" fans	405 x 425 x 20mm	£79.27
PFA12	For use with 12" fans	495 x 510 x 20mm	£97.71



Heat Recovery Ventilation MVHR

Heat Recovery Ventilations is the cutting edge energy efficient solution, which ensures indoor comfort all year around. The continued focus and drive to build highly insulated dwellings, Heat Recovery Ventilation remains the optimal solution for many homes for energy performance and the provision of good indoor air quality throughout the year.

The objective

On average, we spend 90% of our time indoors so a constant supply of fresh air in the homes and buildings is vital to our health. New energy rules and regulations for new build and refurbished buildings means they have become more increasingly airtight, thereby making the provision of effective ventilation an essential element for today's homes.

The method

As stale air is extracted from the wet rooms, up to 95% of the heat is recovered by the heat exchanger before the air is exhausted into the atmosphere.

Meanwhile, fresh air is drawn from outside and filtered to remove pollutants then passed to the heat exchanger to take on the recovered heat before being supplied to the habitable rooms.

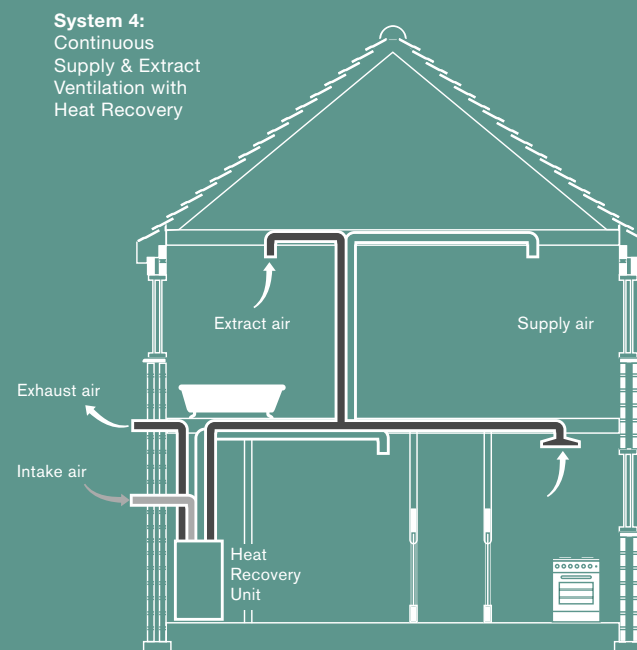
In warmer months when heat recovery is not required, extracted air by-passes the heat exchanger but continues to be filtered before it enters the home. This ensures that a balanced whole house system is still provided.

The outcome

1. Balanced whole house ventilation.
2. Constant supply of fresh, clean air Cost savings due to recycled heat use.
3. No background ventilation required.
4. Odours and contaminants are quickly removed from the dwelling.
5. Year-round comfortable, healthy and energy efficient indoor climate.

Building Regulations

Our MVHR products comply with System 4 of the Building Regulations under supply and extract ventilation with Heat Recovery. These products are installed and run continuously between low and high speeds, supplying air to habitable rooms whilst extracting moist, stale air from wet rooms.



Vireo Range HR155WM/HR155CM/HR185WM

The Vireo range of MVHR units are suitable for small and medium sized homes and offers excellent airflow and energy performance for new build dwellings. Loaded with SMART Technology,

- Specific fan power as low as 0.60 w/l/s
- Heat Recovery Efficiency up to 93%
- Suitability for dwellings up to 120m²
- Compact options which can be installed in standard kitchen cupboards (HR155WM)
- Ceiling/Inline options (HR155CM)
- Filtered Summer By-Pass
- Supplied with G3 filters
- Greenwood SMART Technology for efficient operation throughout the year
- Simple set up with Greenwood CommissionSMART™ wizard

Refer to individual product specifications at www.greenwood.co.uk



ComfoAir Range CA160/CA180/CA200/CA350/ CAQ350/CAQ450/CAQ600

The ComfoAir Range of MVHR units are suitable for a wide range of dwelling sizes and offer outstanding heat recovery efficiency and innovative comfort features to ensure the delivery of good indoor air quality to the home.

- Specific fan power as low as 0.53 w/l/s
- Heat Recovery Efficiency as high as 96%
- Suitable for dwellings up to 350m² (Q600 model)
- Includes Passivhaus Accredited Models
- Supplied with G4 Filters with optional F7
- Filtered, modulating summer by pass technology (new ComfoAir Q Range)

Refer to individual product specifications at www.greenwood.co.uk

Continuous Mechanical Extract Ventilation (MEV)

A powerful centralised extract ventilation that is not only discreet but energy efficient for the whole house. A single loft or cupboard mounted unit extracts humid, stale air from wet rooms around the clock.

The objective

A system that provides dedicated extraction from the areas around the home where moisture is generated. A discreet, centrally positioned fan works around the clock to exhaust stale air to the outside whilst keeping nuisance running noise to a minimum.

The method

A central unit is positioned in a loft or cupboard space and ducted throughout the home to each wet room. Fans run continuously at very low levels to ensure a consistent level of extraction. High speed operation is generally activated via a light switch and can include adjustable overrun timer options. Automatic humidity sensing can also be used to protect the dwelling from high levels of moisture. Habitable rooms contain passive ventilation, usually in the form of window ventilators, which are equally installed around the property in accordance with current Building Regulations.

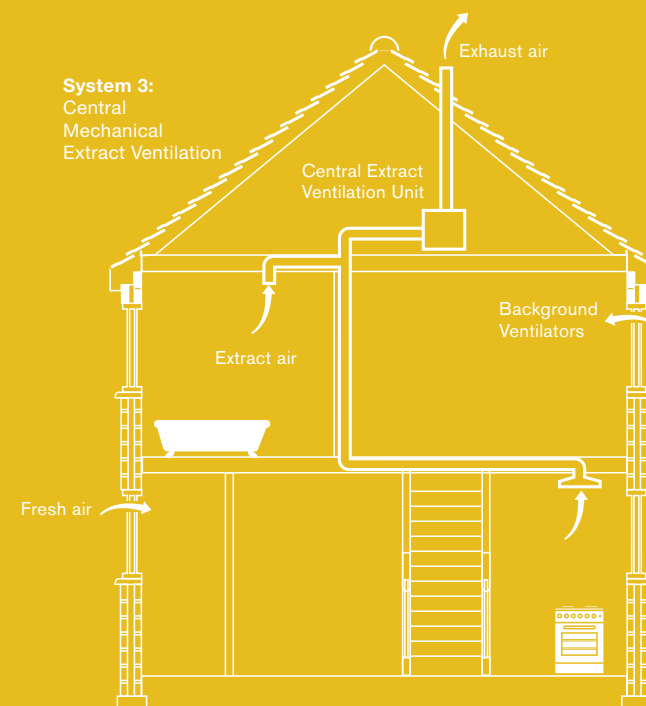
The outcome

1. An easy-to-install central extract system to comply with System 3 of the Building Regulations.
2. Continuous low level background ventilation for optimised indoor air quality.
3. Ultra-simple operation with limited intervention required from occupants.
4. Low energy use and low running noise.
5. Compact and discreet system which is suited to both houses and apartments.

Building Regulations

MEV products comply with System 3 of the Building Regulations under Mechanical Extract Ventilation. These products continuously extract humid, stale air from a home's wet rooms to one discreet, centralised unit mounted in a loft or cupboard and exhaust it to the outside.

Fresh air is supplied to the habitable rooms around the home via background ventilators such as window vents.



Centair Range CMEV.4e/CMEV.4eHT

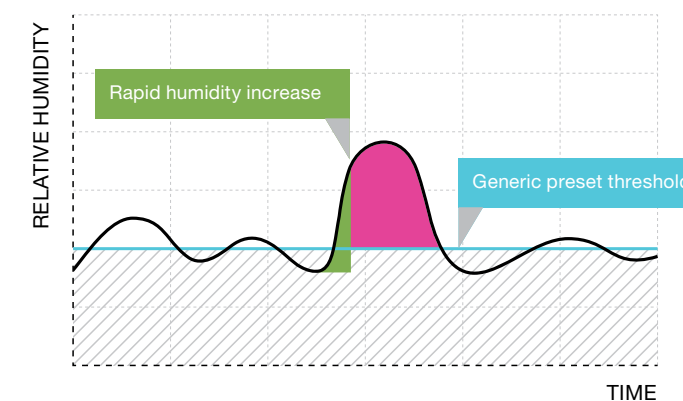
The Centair range offers efficient whole house extract ventilation for houses and apartments

- One of best energy efficiency performances on the market with an SFP as low as 0.16 w/l/s
- EC Motor Technology for low energy consumption and low running costs for end users
- Low running noise within the home
- Discreet ventilation – concealed in loft space or cupboard
- 4th Extract ports with options for 5th if required in larger properties
- CMEV.4e/HT Model Includes Greenwood SMART Technology such as SMART humidity sensing and timer control to reduce nuisance noise, nuisance running and energy wastage

Refer to individual product specifications at www.greenwood.co.uk

Greenwood HumidiSMART™

- Fan in Trickle mode (continuous) or Off (intermittent) mode
- Fan in Boost mode



Greenwood HumidiSMART™ looks for a rapid increase in humidity and only then changes to boost mode.

Fan uses real time monitoring to know what the 'normal level' of humidity is in the home.

The real time monitoring is looking for man-made rapid increases in humidity that are created from showers, cooking and hanging washing.

Once a spike in humidity is sensed from the normal level it will activate the fan.

This eliminates any nuisance running, unnecessary heat loss and energy usage associated with ambient humidity rises throughout the day and night.

- ✓ No set up required by installer
- ✓ No tampering by occupant to turn off the humidity sensing
- ✓ No nuisance running or noise from ambient humidity sensing
- ✓ No unnecessary heat loss from homes due to overventilation
- ✓ No energy wastage to occupant

Ancillaries

A vital part of installing ventilation products in buildings is that the ancillaries are mounted and ducted throughout properly. It doesn't matter if they are through wall, windows, in ceiling or loft they need to meet the requirements of 'Guaranteed Installed Performance as a part of Building Regulations'. It ensures no energy is being wasted by incorrect equipment being fitted to the ventilation unit.

Each of these products have been designed to be fitted in perfectly for the best performance.

Picture frame adaptor/decorative cover for the Unity/Omnique fan ensures a perfect aesthetic finish even if the fan is to replace an existing Ø 150mm wall fan.

The Easy Fix and Fast Fix Ducting Systems have been designed with installers in mind and offer quick, easy and effective installation of extractor fans in new build and refurbishment applications.

Fastfix	page 48
Easyfix.....	page 48
Flexiduct.....	page 48
Picture frame adaptors	page 49
Fan filters.....	page 49
External terminals	page 49
Window kits.....	page 50

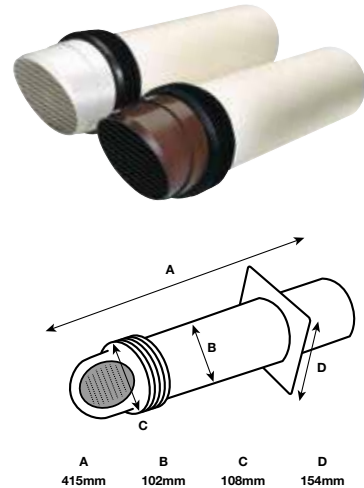


Fastfix

PVC fast fix ducting system

Features and benefits

- Comprises \varnothing 100mm PVC duct with external wall duct seal and external grille
- Designed to save time and improve safety by allowing installations to be completed internally
- Seal between external grille and duct provides watertight seal



Models and prices

Code	Product	Price ex. VAT (£)
FF100B	Brown external grille	£15.23
FF100W	White external grille	£15.23

Physical specification

All measurements in millimetres unless otherwise indicated. Ducting Material: Rigid PVC

Installation

Push through \varnothing 110-115mm diameter core drilled hole with external grille situated to outside of building.

Easyfix

PVC easy fix duct

Features and benefits

- Efficient one-visit system designed to save installation time and storage cost
- Integral screw holes ensuring rapid fixing and secures fan direct to duct
- No need to drill and plug fixing holes
- Simply cut on-site to length required for installation



Models and prices

Code	Product	Price ex. VAT (£)
ED1	\varnothing 100mm, length 375mm	£6.33
ED150	\varnothing 150mm, length 375mm	£6.95

Physical specification

All measurements in millimetres unless otherwise indicated. Materials: Rigid black PVC to BS4514

Installation

Cut duct to the length required. Install and make good. Fix fan and grille direct to duct. ED1 hole size required: \varnothing 125mm. ED150 hole size required: \varnothing 170mm

Flexiduct

Flexible PVC and aluminium ducting

Features and benefits

- Lightweight – available in PVC and aluminium
- Range of diameters and lengths to suit a variety of installations
- Robust construction



Models and prices

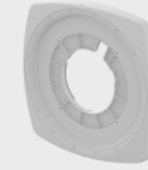
Code	Product	Price ex. VAT (£)
GFP4.3	\varnothing 100mm, length 3m	£8.17
GFP6.3	\varnothing 150mm, length 3m	£11.01

Application

- Ideal for refurbishment or short lengths in loft spaces
- Centrifugal and inline fans where ducting is required
- Axial fans with a maximum of 1.5m of ducting (unless otherwise specified)

Picture frame adaptors

Providing a perfect aesthetic finish



Unity picture frame adaptor

Material: White satin finish, ABS plastic
Designed to provide a perfect aesthetic finish when the Unity fan is used as a replacement in existing \varnothing 150mm wall installations.

Product code	Width	Height	Depth	Price ex. VAT (£)
PFACV2	246mm	246mm	22mm	£25.36



Omniquest picture frame adaptor

Material: White satin finish, ABS plastic
Designed to provide a perfect aesthetic finish when an Omniquest fan is used as a replacement in existing \varnothing 150mm wall installations.

Product code	Width	Height	Depth	Price ex. VAT (£)
PFAOF100	256mm	287mm	23mm	£28.08

Fan filters

For optimised comfort and performance



RF90 single filter

Code	Product	Price ex. VAT (£)
RF90FIL	Washable	£2.51

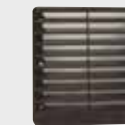


SF90 single filter

Code	Product	Price ex. VAT (£)
SF90FIL	Washable	£2.12

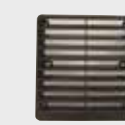
External terminals

To suit all building styles and ventilation requirements



Fixed blade louvred grille - \varnothing 100mm W 134 x H 142 x D 20mm. For use with ED1

Code	Product	Price ex. VAT (£)
EG1W	White ABS plastic	£3.48
EG1B	Brown ABS plastic	£3.48



Fixed blade louvred grille - \varnothing 150mm W 199 x H 215 x D 20mm. For use with ED150

Code	Product	Price ex. VAT (£)
EG2W	White ABS plastic	£6.18
EG2B	Brown ABS plastic	£6.18



Louvred external vent - \varnothing 100mm W 155 x H 155

Code	Product	Price ex. VAT (£)
GG42W	White ABS plastic	£3.48
GG42B	Brown ABS plastic	£3.48



Louvred external vent - \varnothing 150mm W 184 x H 184

Code	Product	Price ex. VAT (£)
GG84W	White ABS plastic	£7.89
GG84B	Brown ABS plastic	£7.89

Window kits

Safe, secure and more

Materials

ASA and polycarbonate

The best choice for windows

Secure extractor fan installations are crucial in window applications as they may be targeted as a means to gain access to a property.

Following consultation with Local Authorities, Housing Associations and those responsible for secure designs in housing, we offer a unique window kit with a dual-layered secure design and manufactured from a mix of durable materials.

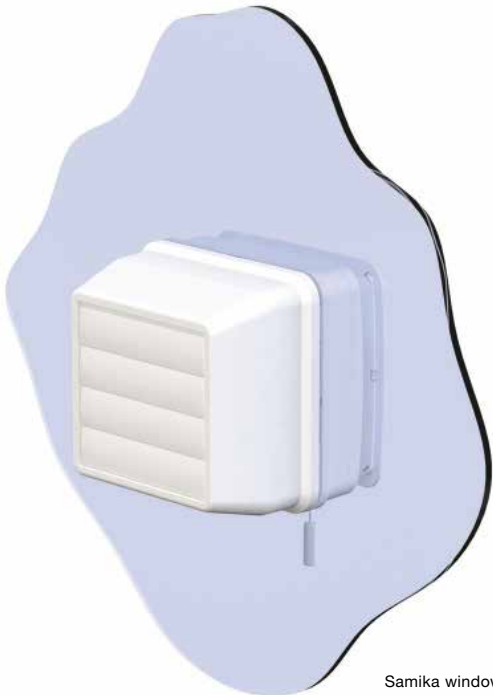
Elite specific benefits

- Unique window fixing kit with internal securing points gives a robust installation and reduces tamper ability once installed
- Comprises external louvred grille and window spacers



Samika specific benefits

- Angled edge design helps deflect any external impact forces
- Louvered shutters prevent any backdraught, and their soft closing designs mean no ‘clackety-clack’ nuisance noise



Samika window kit

Secured by Design



Police Preferred Specification

Omnique window kit is part of the Secured by Design (OF100SBD) bundle featured on pages 11/27

Window kit models and key data

Product code	Fits with	Ø Glazing hole (mm)	Glazing thickness (mm)	Width (mm)	Height (mm)	Depth (mm)	Weight (kg)	Price ex. VAT (£)
EWLE100	Samika LE100	118	up to 28	167	167	86	0.5	£32.68
EWLE150	Samika LE150	167	up to 28	207	207	86	0.8	£36.98
EW100	Elite EL100	118	up to 28	150	150	60	0.2	£9.89
EW150	Elite EL150	167	up to 28	200	200	75	0.3	£14.39

Quality guaranteed every time

Our reputation for quality long-lasting products is credit to our 140 year history and continued specification amongst the UK’s new build, refurbishment and retail sectors.

Product guarantees

Did you know that fewer than a quarter of 1% of our fans are ever returned to us through manufacturing fault? This is something that we are very proud of. Each range of products is guaranteed as follows:

Intermittent Extract Fans

2 year guarantee	5 year guarantee
Samika	Omnique
Select 100	Elite 100
Select 150	Elite 150
P Fan	
SF90	
RF90	

Continuous Extract Fans

2 year guarantee	5 year guarantee
Unity	Omnique
Central Extract MEV	This does not affect your statutory rights. Full details of our guarantees including braille and large format versions are available on request.
2 year guarantee	
Heat Recovery Ventilation MVHR	
2 year guarantee	
Commercial Ventilation	
2 year guarantee	

Terms of Business

A handling charge of £15 will be applied to all orders less than £350 net.

All standard Greenwood Airvac products are available on a 3 day lead time unless specifically stated.

Comfosystems lead times

Ancillaries
2 weeks

ComfoAir and ComfoAir Q units
3-4 weeks

Deliveries of ducting may be subject to additional delivery times depending on volume and weight. This will be advertised at the time of ordering.

Window vents lead times and order quantities

Slotvent range has a minimum order requirement of 50 per size and colour

Permavent range
up to 10 working days

Framevent range
up to 10 working days

Morning and overnight deliveries are available subject to conditions and will incur a £25 minimum additional charge. Orders must be placed before 11am to be eligible for overnight delivery.

Orders can be delivered to site providing a signed acknowledgement has been received. Greenwood Airvac does not accept responsibility for any items lost or damaged if the consignment note has been signed.

Goods can be returned within 6 months from date of delivery, if un-opened and in a resalable condition-images must be provided before we can approve the return.

50% restocking fee applied to complete return value.

This will reduce to 15% if the return request accompanied with a compensating order 1.5 times the value of the return value.

Damages to be reported within 3 days of delivery to the customer.

All quotations are valid for 30 days.

The basis for our offer, acceptance of orders, order confirmations or sales contracts is the current valid price list.

Sales are subject to our standard terms and conditions which are available on request.

Due to our policy of continuous change and improvement, product specification, price and availability may be subject to change without prior notice.

For full terms and conditions, please visit www.zehnder.co.uk/company/legal

ELECTRIC RADIATORS & TOWEL WARMERS



Symbol Key



Warranty



Electric Radiators



Colour





Delivery working days
**applies to stock items only*

*Delivery weeks applies to
non-stocked items*

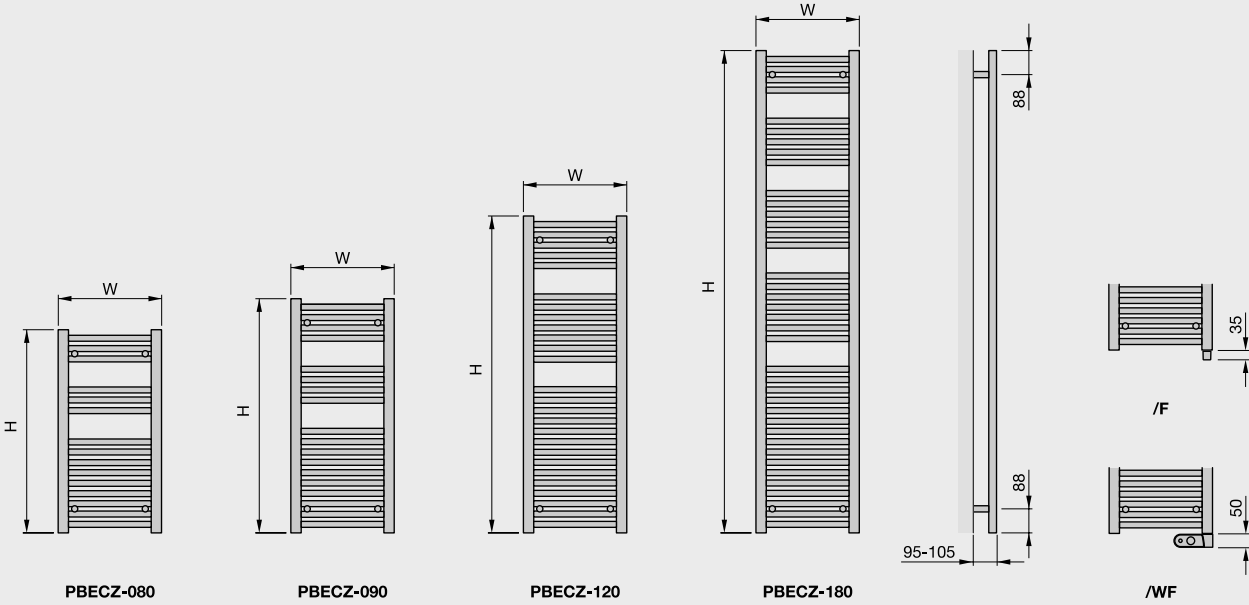


All products are CE approved.

All products listed in **bold black type** are stocked items

Electric Heating Model	Height mm	Width mm	Finish	Simple electric immersion heater Class II IPX4, Zones 1 and 2	RRP (ex VAT)	RRP (inc 20% VAT)
 Zehnder Aura Electric 22mm tube						
PBECZ-080-40/F	821	400	chrome	150	£243	£291.60
PBECZ-090-50/F	941	500	chrome	200	£249	£298.80
PBECZ-120-50/F	1261	500	chrome	300	£292	£350.40
PBECZ-120-60/F	1261	600	chrome	400	£296	£355.20
PBECZ-180-50/F	1901	500	chrome	500	£364	£436.80
Electric Heating Model	Height mm	Width mm	Finish	Adjustable thermostatic controller Class II IPX4 with 7 day programmer	RRP (ex VAT)	RRP (inc 20% VAT)
 Zehnder Aura Electric 22mm tube						
PBECZ-120-50/WF	1287	500	chrome	300	£340	£408.00
PBECZ-120-60/WF	1287	600	chrome	400	£343	£411.60
Height measurements of electric models include electric heaters						
Optional wall brackets					RRP (ex VAT)	RRP (inc 20% VAT)
Model						
926588					£28	£33.60
Set of 4 replacement brackets in chrome for PBECZ models						

Tube: Horizontal Ø 22mm
Tube: Vertical D Profile 30 x 40mm
All dimensions in mm



Zehnder Aura Electric



A classic yet stylish chrome electric towel radiator which is perfect for modern homes. Choose from a factory-fitted simple immersion heater or an adjustable thermostatic controller.




Simple Immersion heater



Adjustable thermostatic controller.
Eco Design compliant with only the adjustable thermostatic controller



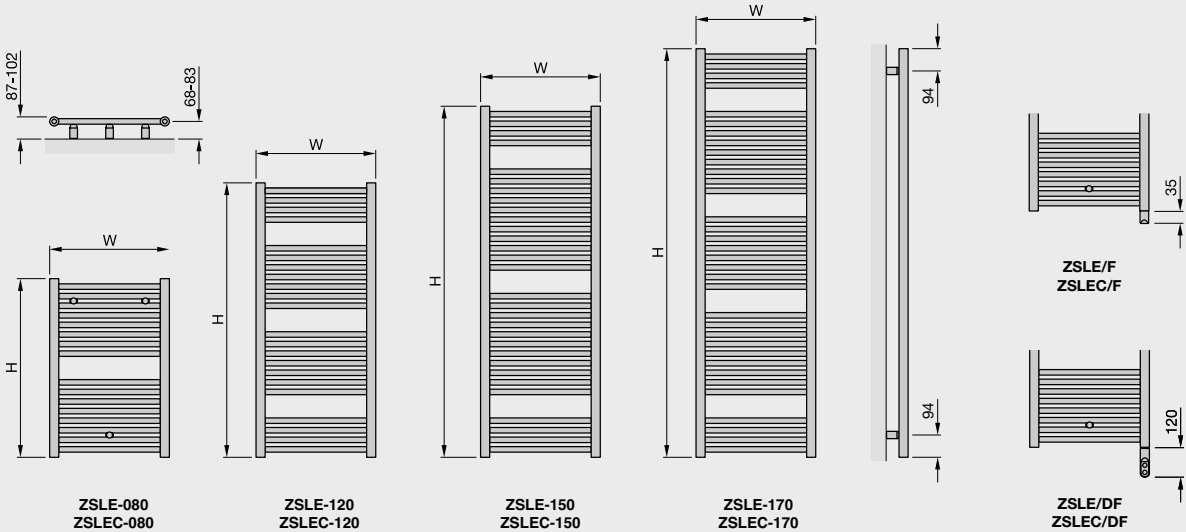
PBECZ-120-50/WF CHROME 0008

Height mm	Width mm	Finish	Simple electric immersion heater Class II IPX4 Zones 1 and 2				DBM immersion heater Class II IPX4 Zones 1 and 2			
			Model STOCK listed in black	Electric rating	RRP (ex VAT)	RRP (inc 20% VAT)	Model STOCK listed in black	Electric rating	RRP (ex VAT)	RRP (inc 20% VAT)
 Zehnder Klaro electric only models (with a choice of either a simple immersion heater (no controls) or the DBM immersion heater)										
748	450	white	ZSLE-080-045/F	200	£260	£312.00	ZSLE-080-045/DF	300	£320	£384.00
748	500	white	ZSLE-080-050/F	400	£263	£315.60	ZSLE-080-050/DF	300	£324	£388.80
748	600	white	ZSLE-080-060/F	400	£272	£326.40	ZSLE-080-060/DF	300	£333	£399.60
1148	500	white	ZSLE-120-050/F	400	£287	£344.40	ZSLE-120-050/DF	500	£347	£416.40
1148	600	white	ZSLE-120-060/F	500	£302	£362.40	ZSLE-120-060/DF	600	£362	£434.40
1708	500	white	ZSLE-170-050/F	600	£348	£417.60	ZSLE-170-050/DF	750	£410	£492.00
1708	600	white	ZSLE-170-060/F	600	£356	£427.20	ZSLE-170-060/DF	900	£416	£499.20
748	500	chrome	ZSLEC-080-050/F	200	£379	£454.80	ZSLEC-080-050/DF	200	£468	£561.60
748	600	chrome	ZSLEC-080-060/F	200	£402	£482.40	ZSLEC-080-060/DF	300	£491	£589.20
1148	500	chrome	ZSLEC-120-050/F	400	£450	£540.00	ZSLEC-120-050/DF	300	£539	£646.80
1148	600	chrome	ZSLEC-120-060/F	400	£475	£570.00	ZSLEC-120-060/DF	300	£564	£676.80
1708	500	chrome	ZSLEC-170-050/F	400	£600	£720.00	ZSLEC-170-050/DF	500	£691	£829.20
1708	600	chrome	ZSLEC-170-060/F	500	£641	£769.20	ZSLEC-170-060/DF	600	£729	£874.80

The immersion heater is fitted to the right hand header.
Note: Height does not include the immersion heater. (See diagrams below)

🎨 **Colour finish:** Standard colours from the Zehnder colour chart including matt white finish are priced at: RAL 9016 + 25%. Colour finish and non-stock products delivery: 3-5 weeks.

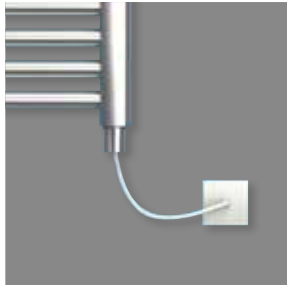
H = height
W = width
Tube: Horizontal Ø 23mm
Tube: Vertical Ø 38mm
All dimensions in mm



Zehnder Klaro



The Zehnder Klaro electric range with its choice of immersion heaters and availability of colours offers a flexible solution to your bathroom heating requirements.



Simple immersion



DBM Immersion.

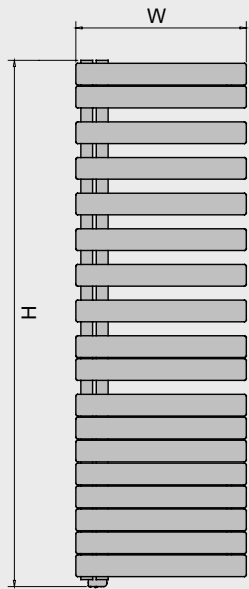


ZSLEC-120-050/DF CHROME 0008

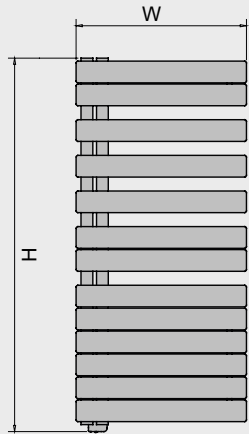
Electric Heating Model STOCK listed in black	Height mm	Width mm	Finish	Watts Radio frequency remote programmer IPX4 Zone 1 Bath, Zone 2 Shower, Class II	RRP (ex VAT)	RRP (inc 20% VAT)
⚡ Zehnder Roda Spa Asym Electric						
ROFEL-080-55/GF	828	550	white	500	£529	£634.80
ROFEL-120-55/GF	1206	550	white	750	£652	£782.40
ROFEL-170-55/GF	1699	550	white	1000	£768	£921.60
ROFER-080-55/GF	828	550	white	500	£529	£634.80
ROFER-120-55/GF	1206	550	white	750	£652	£782.40
ROFER-170-55/GF	1699	550	white	1000	£768	£921.60

Note: Height includes immersion heater (See diagrams below).

🎨 **Colour finish:** Standard colours from the Zehnder colour chart including matt white finish are priced at: RAL 9016 + 25%. Colour finish and non-stock products delivery: 3-5 weeks.



ROFER-170-55/GF



ROFER-120-55/GF



ROFER-080-55/GF

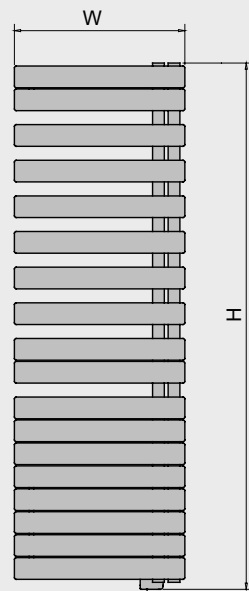
H = height
W = width
Tube: Dimensions: 70mm x 11mm
Tube: Vertical tubes: Ø 38mm
Immersion heater: 23
All dimensions in mm



ROFEL-080-55/GF



ROFEL-120-55/GF



ROFEL-170-55/GF

Zehnder Roda Spa Asym



The Roda Spa Asym in it's electric form is a firm favourite due to its overall functionality and style.



Electric receiver



Electric Option
Radio frequency remote programmer.



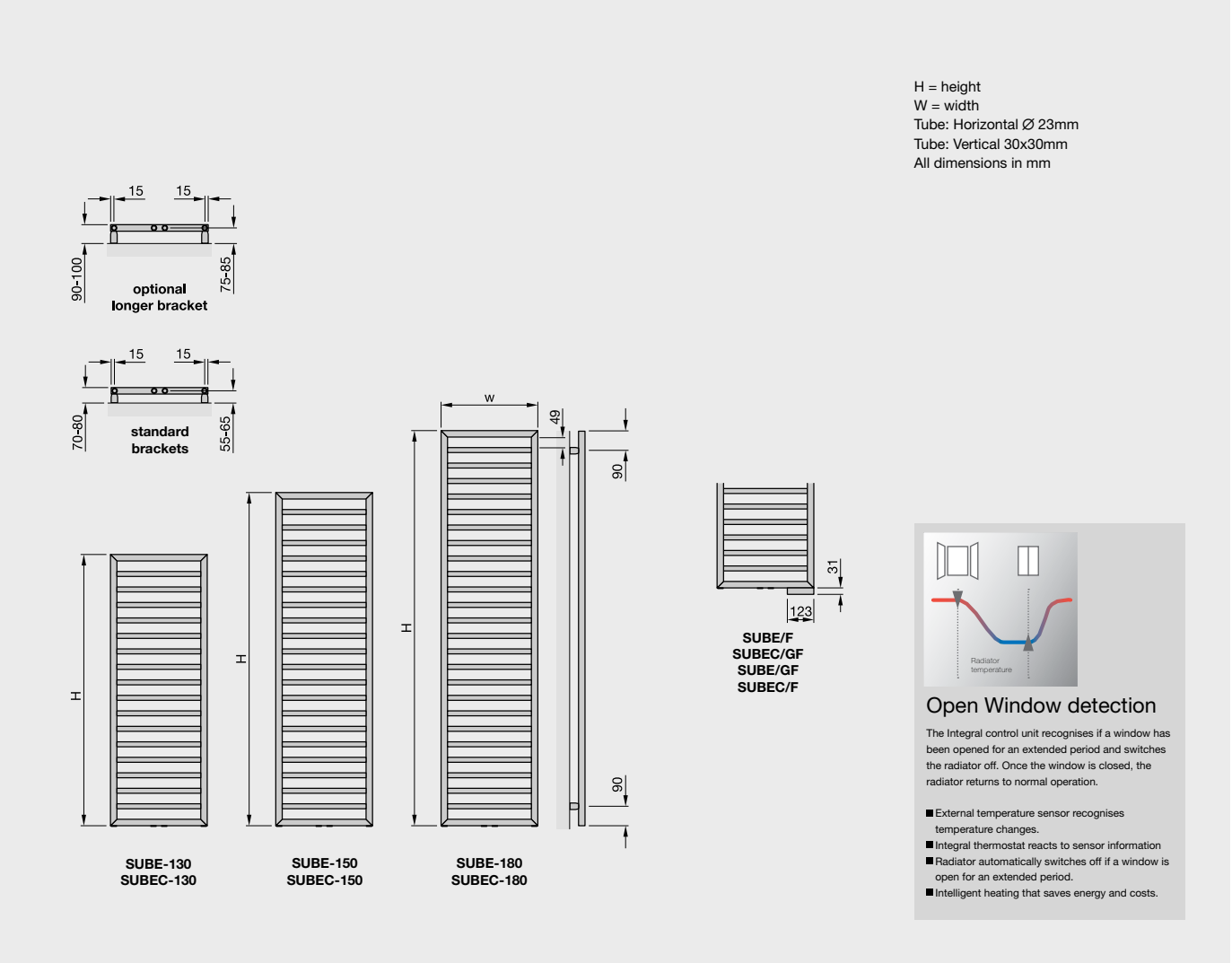
ROFER-120-55/GF VOLCANIC 0336

Electric Heating Model STOCK listed in black	Height mm	Width mm	Finish	Simple Electric Immersion heater Rating Watts Class II IPX4 Zones 1 and 2	RRP (ex VAT)	RRP (inc 20% VAT)
⚡ Zehnder Subway Electric						
SUBE-130-045/F	1261	450	white	500	£312	£374.40
SUBE-150-045/F	1549	450	white	600	£361	£433.20
SUBE-150-060/F	1549	600	white	750	£394	£472.80
SUBE-180-060/F	1837	600	white	900	£438	£525.60
SUBEC-130-045/F	1261	450	chrome	300	£712	£854.40
SUBEC-150-045/F	1549	450	chrome	300	£834	£1,000.80
SUBEC-150-060/F	1549	600	chrome	500	£922	£1,106.40
SUBEC-180-060/F	1837	600	chrome	600	£1,025	£1,230.00

Electric Heating Model	Height mm	Width mm	Finish	Watts Radio frequency remote programmer IPX4 Zone 1 Bath, Zone 2 Shower, Class II	RRP (ex VAT)	RRP (inc 20% VAT)
⚡ Zehnder Subway Electric						
SUBE-130-045/GF	1261	450	white	500	£586	£703.20
SUBE-150-045/GF	1549	450	white	600	£638	£765.60
SUBE-150-060/GF	1549	600	white	750	£699	£838.80
SUBE-180-060/GF	1837	600	white	900	£758	£909.60
SUBEC-130-045/GF	1261	450	chrome	300	£1,017	£1,220.40
SUBEC-150-045/GF	1549	450	chrome	300	£1,178	£1,413.60
SUBEC-150-060/GF	1549	600	chrome	500	£1,294	£1,552.80
SUBEC-180-060/GF	1837	600	chrome	600	£1,408	£1,689.60

The immersion heater is fitted to the right hand header.
Note: Height does not include the immersion heater. (See diagrams below)

🎨 **Colour finish:** Standard colours from the Zehnder colour chart including matt white finish are priced at: RAL 9016 + 25%. Colour finish and non-stock products delivery: 3-5 weeks.



Zehnder Subway



The simple elegance of the Subway in its electric form is maintained with either a simple immersion heater or a radio frequency remote programmer.




SUBE-150-045/GF PURE WHITE 9010



Electric Option
Radio frequency remote programmer.

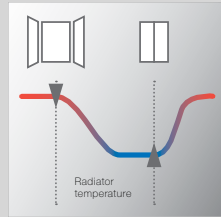
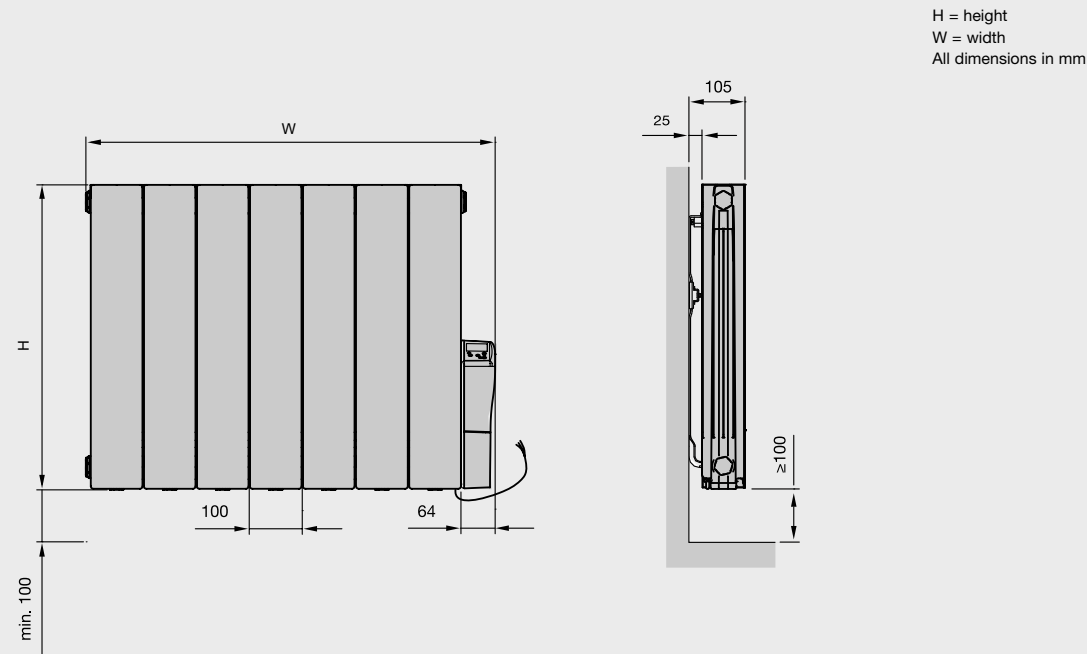


SUBE-150-045/GF CHROME 0008

Electric Heating Model STOCK listed in bold	Height mm	Width mm	Finish	No. of sections	With factory fitted controls, Class II IPX4 Electric Rating (Watts)	Weight kg	RRP (ex VAT)	RRP (inc 20% VAT)
 Zehnder Alura Electric								
ALE-050-036/F	575	372	white*	3	500	7	£293	£351.60
ALE-075-046/F	575	472	white*	4	750	9	£320	£384.00
ALE-100-056/F	575	572	white*	5	1000	11	£361	£433.20
ALE-125-076/F	575	772	white*	7	1250	15	£423	£507.60
ALE-150-086/F	575	872	white*	8	1500	17	£469	£562.80
ALE-200-116/F	575	1172	white*	11	2000	23	£575	£690.00

*white (RAL 9010)

Temperature controller: Backlit LCD digital display screen gives complete control. Temperature can be adjusted in 0.5°C increments. 3 pre-set programmes and 5 mode settings. Open window detection system and parental lock.



Open Window detection

The Integral control unit recognises if a window has been opened for an extended period and switches the radiator off. Once the window is closed, the radiator returns to normal operation.

- External temperature sensor recognises temperature changes.
- Integral thermostat reacts to sensor information
- Radiator automatically switches off if a window is open for an extended period.
- Intelligent heating that saves energy and costs.

Zehnder Alura



This fast response electric aluminium radiator has a high output in relation to its size. Its weight and size makes this radiator easy to install, and the straightforward digital controls make it easy and economical to use. H shaped mounting bracket with removable spirit level and locking system included.



Temperature Controller.

eco
DESIGN



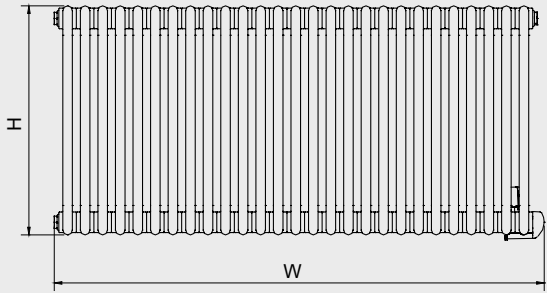
ALE-100-056/F PURE WHITE 9010

Electric Heating Model STOCK listed in black	Height mm	Width mm	number of sections	Finish	Watts Radio frequency remote programmer IPX4 Zone 1 Bath, Zone 2 Shower, Class II	Weight kg	RRP (ex VAT)	RRP (inc 20% VAT)
⚡ Zehnder Charleston Electric								
NZ-060-053/GF	600	530	10	white	500	27.0	£501	£601.20
NZ-060-062/GF	600	622	12	white	750	30.0	£584	£700.80
NZ-060-076/GF	600	760	15	white	1000	41.0	£632	£758.40
NZ-060-089/GF	600	898	18	white	1250	47.0	£738	£885.60
NZ-060-103/GF	600	1036	21	white	1500	58.0	£796	£955.20
NZ-060-131/GF	600	1312	27	white	2000	70.0	£958	£1,149.60
⚡ Zehnder Charleston Plinth Electric								
NZ-030-100/GF	300	962	20	white	1000	42.4	£832	£998.40

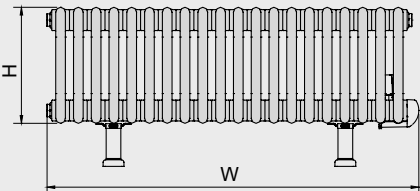
🎨 Colour finish: Standard colours from the Zehnder colour chart including matt white finish are priced at: RAL 9016 + 25%. Colour finish and non-stock products delivery: 3-5 weeks.

Accessories				RRP (ex VAT)	RRP (inc 20% VAT)
Model					
601020		Lambswool cleaning brush		£58	£69.60
966018		Charleston towel bar 368mm		£144	£172.80
966028		Charleston towel bar 918mm		£160	£192.00

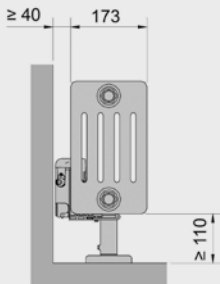
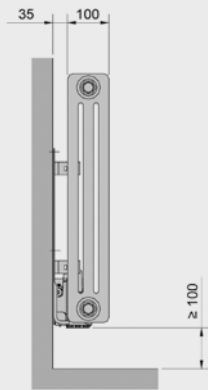
H = height
W = width
Width includes controller
All dimensions in mm



Charleston Electric



Charleston Plinth



Zehnder Charleston & Charleston Plinth





The Zehnder Charleston is an electric, oil-filled multi-column radiator available in 6 sizes ideal for installation in loft conversions. The complementary Zehnder Charleston Plinth low level model is perfectly suited to conservatories and in front of low-level windows.

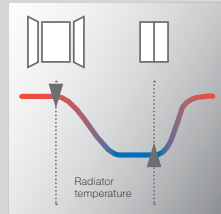
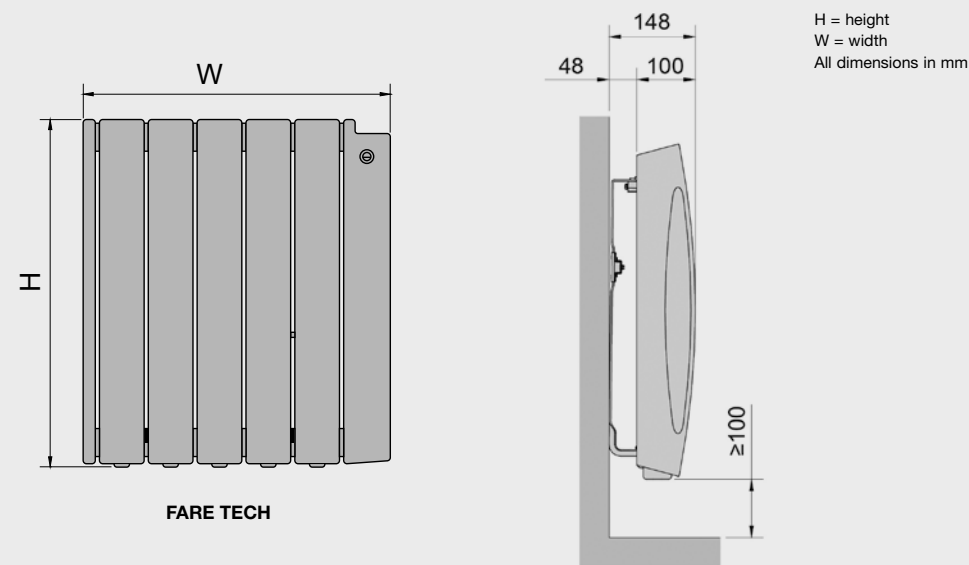


Electric Option
Radio frequency remote programmer.



NZ-060-089/GF TRAFFIC WHITE 9016

Electric Heating Model STOCK listed in bold	Height mm	Width mm	Finish	No. of sections	With factory fitted controls, Class II IPX4 Electric Rating (Watts)	Weight kg	RRP (ex VAT)	RRP (inc 20% VAT)
 Zehnder Fare Tech Electric								
TAD-057-041/CF	575	429	white*	4	500	9	£380	£456.00
TAD-057-049/CF	575	509	white*	5	750	11	£400	£480.00
TAD-057-065/CF	575	669	white*	7	1000	14	£434	£520.80
TAD-057-081/CF	575	829	white*	9	1250	17	£487	£584.40
TAD-057-089/CF	575	909	white*	10	1500	18	£528	£633.60
TAD-057-129/CF	575	1309	white*	15	2000	26	£639	£766.80
Projection from wall to front of radiator: 148mm max. *white (RAL 9010)								
 Colour finish: Standard colours from the Zehnder colour chart including matt white finish are priced at: RAL 9016 + 25%. Colour finish and non-stock products delivery: 3-5 weeks.								



Open Window detection

The Integral control unit recognises if a window has been opened for an extended period and switches the radiator off. Once the window is closed, the radiator returns to normal operation.

- External temperature sensor recognises temperature changes.
- Integral thermostat reacts to sensor information
- Radiator automatically switches off if a window is open for an extended period.
- Intelligent heating that saves energy and costs.

Zehnder
Fare Tech



The Zehnder Fare Tech electric radiator combines beauty and brains. Manufactured from aluminium, its unique, elegantly curved shape allows comfortable radiant heat to disperse optimally throughout the room, whilst the unit's smart integrated control panel allows the room temperature to be easily set and energy consumption controlled.



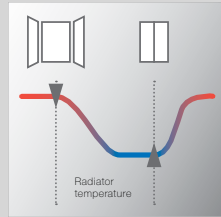
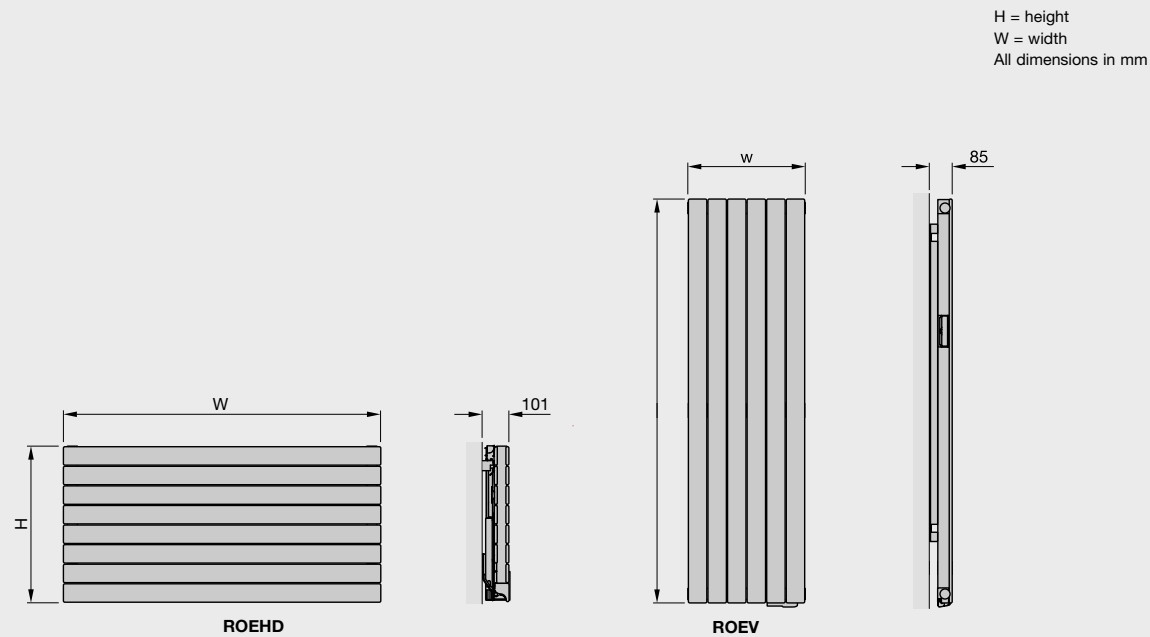
Temperature Controller.



TAD-057-089/CF VOLCANIC 0336

Electric Heating Model STOCK listed in black	Height mm	Width mm	Finish	Watts Radio frequency remote programmer Zone 1 Bath, Zone 2 Shower, Class II	Weight kg	RRP (ex VAT)	RRP (inc 20% VAT)
⚡ Zehnder Roda Electric Vertical							
ROEV150-040/GF	1517	370	white	750	24	£902	£1,082.40
ROEV180-045/GF	1817	444	white	1000	32	£977	£1,172.40
ROEV180-060/GF	1817	592	white	1500	40	£1,070	£1,284.00
⚡ Zehnder Roda Electric Horizontal							
ROEHD040-080/GF	444	800	white	750	21.5	£754	£904.80
ROEHD060-080/GF	592	800	white	1000	28.7	£792	£950.40
ROEHD040-110/GF	444	1100	white	1000	28.3	£853	£1,023.60
ROEHD060-110/GF	592	1100	white	1250	38.5	£806	£967.20
ROEHD040-150/GF	444	1500	white	1500	37.7	£859	£1,030.80
ROEHD060-130/GF	592	1300	white	1500	44.8	£898	£1,077.60
ROEHD060-150/GF	592	1500	white	2000	50.4	£935	£1,122.00

🎨 Colour finish: Standard colours from the Zehnder colour chart including matt white finish are priced at: RAL 9016 + 25%. Colour finish and non-stock products delivery: 3-5 weeks.



Open Window detection

The Integral control unit recognises if a window has been opened for an extended period and switches the radiator off. Once the window is closed, the radiator returns to normal operation.

- External temperature sensor recognises temperature changes.
- Integral thermostat reacts to sensor information
- Radiator automatically switches off if a window is open for an extended period.
- Intelligent heating that saves energy and costs.

Zehnder Roda



Electric Zehnder Roda radiators are efficient decorative radiators, available as horizontal or vertical, perfect for all living areas.



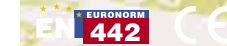
ROEHD040-110/GF VOLCANIC



Electric Option
Radio frequency remote programmer.



ROEV150-040/GF PERGAMON 0081



Eco Design

Regulations for electric heating



Since 1st January 2018, all electric local space heaters manufactured for sale in the EU must comply with a minimum efficiency standard under Lot 20 of the Energy Efficiency Directive. This is one of the biggest changes the electric heating industry has experienced in decades.

What exactly is Lot 20?

The directive comes from: The European Ecodesign Directive (2009/125/EC)

"The aim of this legislation is to rule out inefficient technologies and reduce the energy used by the products that heat our homes, helping to achieve our national carbon reduction targets."

The Regulation will affect;

- Storage heaters
- Direct acting heaters
- Portable heaters
- Radiant heaters
- Electric fires

How does this change impact products?

To comply with the Lot 20 Regulations, all local space heaters **have to meet a minimum efficiency rating that is measured as a percentage.**

Electric radiators, infrared heaters and panel heaters are all classed as 'fixed electric local space heaters', and they **must have at least a 38% efficiency rating if they have a nominal heat output above 250W.**

Towel warmers (less than 250W) are not included in the scope of the directive.

As a result of these efficiency targets, products must include energy saving features such as better controls for end users.

What are the benefits of this Directive?

Overall, the aim of the directive is Energy Saving. It ensures more efficient electric radiators with following benefits;

- **Cost Savings** to the end user as the radiator will perform more efficiently in the home
- **Carbon Emission Reduction** helping protect our environment for the future
- **Improved customisation and control for end users** as a result of more interactive and programmable capabilities in the products to help reduce unnecessary energy wastage

What about Zehnder electric products?

As part of the changes, new features that offer benefit to end user to maximise efficiency and control will be included;

- Low energy consumption when on stand-by
- Programmable operation (weekly)
- Open window detection
- Presence Detection

Electric heating control details are included on each product page.



Showing wireless radio frequency pad for simple control and programming by end user.

Zehnder Radio Frequency Control

As part of the Eco Design Directive improvements, a Radio Frequency control is now available with a number of products offering;

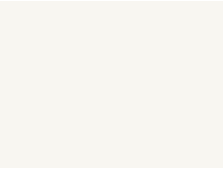
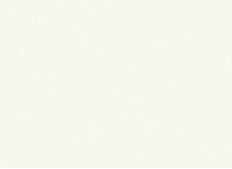
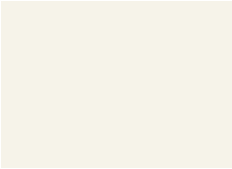


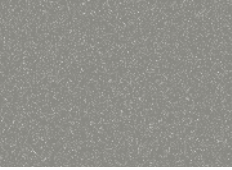
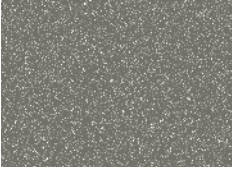
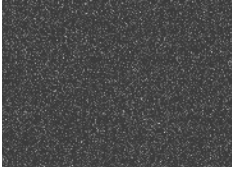


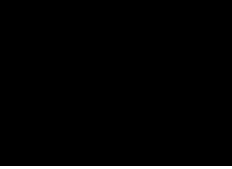
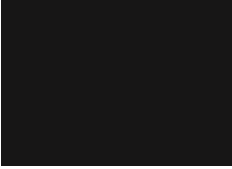
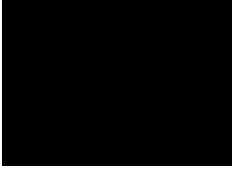

- Wireless control of radiator to end user - range of up to 30 metres in open space and up to 10 metres between rooms (one wall)
- A choice of pre-set programmes - working from a set '**comfort temperature**' by the end user
- Full customisation of weekly programme e.g. choose comfort temperature and time during the day to work between eco and comfort settings.



SUBE-150-045/GF TRAFFIC WHITE

Colour System

Architectural

				
White Matt 0556	White Quartz 0521	Pure White RAL 9010 / 9010*	Inox Look 0332*	
				
White Aluminium 9006*	Titane 0335*	Grey Aluminium 9007*	Anthracite 0346	Volcanic 0336
				
Anthracite Grey RAL 7016 / 7016*	Traffic Black RAL 9017 / 9017*	Jet Black RAL 9005 / 9005*	Black Matt 0557	Black Quartz 0550

Tonic

				
Lemon 0515*	Traffic Yellow RAL 1023 / 1023*	Orange Quartz 0528	Flame Red RAL 3000 / 3000*	Ruby Red RAL 3003 / 3003*
				
Mauve 0517*	Violet 0518*	Strawberry NCS-S-2065-R20B / 3770	Dark Purple 0848	Amethyst Quartz 0516
				
Lichen NCS-S-2010-G60Y / 8723	Spring Green 0846	Pacific Blue 0519	Horizon Blue 0520*	Prussian Blue 0555*

* These colours have a glossy finish, all others are matt.
Some colours/surface finishes are only available for selected products.
Deviations are possible (shade and shine) due to the different manufacturing techniques used for the original colours. RAL and NCS are manufacturer designations.

This colour chart only represents the range of Zehnder colours available. It is not representative of the actual colour finish.
Please ask for a colour chart from which to confirm your selection before placing your order.

Natural

				
Edelweiss 0067	Cream RAL 9001 / 9001*	Pergamon 0081*	Jasmin 0072	Oyster White RAL 1013 / 1013*
				
Grey White RAL 9002 / 9002*	Chinchilla 0064	Manhattan 0077*	Natura 0035*	Bahama 0054*
				
Petal 0510*	Sand Quartz 0522	Beige Quartz 0523	Caramel Quartz 0511	Terracotta Quartz 0512
				
Gold Look 0514*	Brown Quartz 0529	Dark Brown 0847	Chocolate Brown RAL 8017 / 8017*	

Standard


Traffic White RAL 9016 / 9016*

Traffic White RAL 9016 - matt version (incurs +25% colour surcharge)

Please note that all standard white radiators come in a gloss finish.

Surfaces

	
Chrome 0008	Stainless Steel Only available for stainless steel radiators

Heat loss calculator

This easy-to-use heat calculator can work out the heat requirements for your room.

Stage 1 Take the room dimensions in metres

Width m Length m Height m
calculate the volume (W x L x H) = cubic metres

Stage 2 Heating requirements per room type

Living Room / Dining Room / Bathroom volume
multiply volume as calculated in Stage 1 by 50 =
 Watts required

Bedroom volume
multiply volume as calculated in Stage 1 by 40 =
 Watts required

Kitchen / Hallway volume
multiply volume as calculated in Stage 1 by 30 =
 Watts required

Stage 3 Other factors for consideration

Is the property exposed?	<input type="text"/> a
Does the room have large areas of glazing?	<input type="text"/> b
Are the windows double glazed?	<input type="text"/> c

If factor 'a' applies, increase the Watts required at Stage 2 by 15%
If factor 'b' applies, increase the Watts required at Stage 2 by 20%
If factor 'c' applies, decrease the Watts required at Stage 2 by 10%
If factor 'a' and 'b' apply, increase the Watts required at Stage 2 by 35%
If factor 'a' and 'c' apply, increase the Watts required at Stage 2 by 5%
If factor 'b' and 'c' apply, increase the Watts required at Stage 2 by 10%
If factor 'a', 'b' and 'c' apply, increase the Watts required at Stage 2 by 25%

Please note that this calculator is provided as a guide only.

To convert Watts to BTUs, multiply by 3.412.

For an approximate conversion from ΔT50°C to ΔT60°C,
multiply the ΔT50°C output by 1.2.

Bathroom zones

The diagram below shows a bathroom divided into four clear zones: 0, 1, 2 and outside zones. Please note, the diagram is only a guide and is NOT to scale. Please refer to I.E.E Wiring Regulations (BS 7671:2008) for detailed information.

Zone 0: Inside the bath.

Zone 1: Area above bath / shower tray to a height of 2.25m. Minimum rating of IPX4 should be used unless water spray will be present. In this case, a rating of IPX5 should be used.

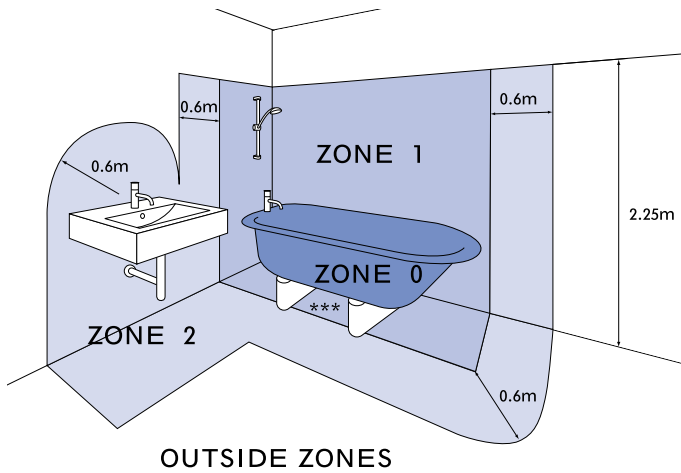
Zone 2: Area stretching 0.6m from zone 1. Minimum rating of IPX4 should be used here.

Outside Zones: No water spray is likely to be used here, therefore, no IP rating is required.

IP Rating: "X" denotes level of security against dust particles. Second digit denotes level of "watertightness".

IPX5: Protected against low pressure water jets.

IPX4: Protected against splashing water.



Frequently asked questions

Can I hang items on my electric radiator to dry?

Electric towel drying radiators are designed for items such as towels to dry when placed on or over them.

Living room electric radiators should not be used to hang items of clothing as this can cause overheating which may result in the electrical element burning out.

What are Zehnder electric radiators filled with?

Zehnder electric radiators are filled with oil* and will arrive ready to install and use within the home.

How long is the cable supplied with Zehnder electric radiators?

All electric radiators are supplied with a cable.
>= 1 metre

*with the exception of Zehnder Aura which is water and glycol (10%) filled.

Terms & conditions

A complete copy of the company's terms and conditions of trading are available on our website www.zehnder.co.uk
In addition to the Terms and Conditions, please note the following:

- All delivery times quoted are estimates only. Prices quoted include free delivery to the UK mainland for radiators and towel rails. Orders for valves, fans, elements and accessories with a net order value under £100 are subject to a processing charge of £10 + VAT.
- Returned goods for credit will only be accepted by prior arrangement (confirmed in writing), within 8 weeks of the date of despatch, where the goods are part of our stock range and where the goods are as fit for sale on their return as they were on delivery. If goods have been fitted this is deemed as acceptance of their quality. We cannot accept the return of non-stock goods.
- Damaged products are to be reported to us within 3 days of delivery. Zehnder cannot be held responsible for any damage after onward delivery. Faulty products are to be reported to us as soon as possible. If the items have been installed, you are in acceptance of it's condition and Zehnder reserve the right to refuse credit.
- You are responsible for ensuring the suitability, conformity and interoperability of the goods or indicative system design suggestions provided by us with your heating system and your design requirements. It is important that you undertake such verification with an appropriately qualified expert third party
- Where a radiator is returned as no longer required and an alternative radiator is not ordered a 25% restocking fee plus a £10 administration fee will be charged (unless the goods were defective when delivered). If a radiator is no longer required but an alternative radiator is ordered, either a restocking fee of £25 or 25% of the value (whichever is the lower) will be charged, but the administration fee will be waived.
- We warrant the goods for a period of 2 years for radiator electrical componentry and 3 years for extractor fans, from the date of delivery. The warranty is subject to correct installation to current standards/water treatments and use.

- Radiators with steel components (other than stainless steel) must not be installed on a domestic hot water circuit. If a stainless steel or brass product is to be installed on the domestic hot water circuit, a check should be made with the local water authority to ensure that dezincification is not a common occurrence.
- Artificially softened water should not be used to fill radiators. For FAQ radiator/water-related information, visit www.fernox.com.
- All measurements given in this brochure are nominal dimensions only.
- All brochures, catalogues and other promotional materials are to be treated as illustrative only. Their contents form no part of any contract between us and you should not rely on them in entering into any contract with us. Any typographical, clerical or other error or omission in any literature, quotation, price list, or other document issued by us will be subject to correction without liability being incurred by us.
- All single point extract ventilation fans returned under warranty as 'faulty' will be subject to testing and inspection before a credit can be issued. Where no fault on the product(s) can be determined, or the failure of the product is attributed to factors specifically excluded under the warranty conditions, customers will be notified giving the reason for rejecting the claim. The product(s) may then either be returned to sender on payment of a delivery charge or disposed of by ourselves and no credit will apply. If no instruction is received within 10 working days of notification of rejection under warranty, the products will be disposed of. Please note that all product warranties are valid from the date of manufacture of the product as determined by the serial number printed on the product. Any product outside of this period will not be covered by the manufacturer's warranty.

- All VAT calculated at 20%



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All information believed to be correct at the time of going to press. E&OE. All goods are sold according to Zehnder Group UK Ltd's Standard Conditions of Sale (available on request). All dimensions are in millimetres unless otherwise shown. Zehnder Group UK reserves the right to change specifications and prices without prior notice.

Zehnder Group UK Ltd

Registered office: Concept House,
Watchmoor Point, Camberley,
Surrey GU15 3AD
Registered in England No. 2296696

Greenwood Airvac

is a division of Zehnder Group UK Ltd.

Head Office: Customer Services: 01276 408404
Technical Services: 01276 408402

Email: orders@greenwood.co.uk
technical@greenwood.co.uk

Web: www.greenwood.co.uk

www.zehnder.co.uk