

S90 Surface-mounted Centrifugal Fans



Meets the current Building Regulation requirements for bathrooms, toilets and common spaces

10 model control options for both surface-mounted and recessed fans

Options include SELV, Delay-on Timer and Humidistat/Timer versions

Humidistat and Timer fans feature unique manual override with automatic switch off

Suitable for all site conditions including ducted applications

Window, wall, ceiling or panel mounting

Easy to install and maintain

IP44 rated



SELV Transformer

S90 surface-mounted are available in 10 models providing a choice of single or dual speeds, overrun timer, humidistat and continuous running options for all applications. Their efficient centrifugal impeller means they are ideal for connecting to ductwork and other sites including high rise or exposed applications.

S90 fans are easy to install in conjunction with a wide range of ducting including ED1 Easyfix duct, Fast fix duct, Slimduct, GD4 Modular Ducting, Flexiduct or standard 110mm soil pipe. The versatile S90 fans can be installed through wall, ceiling, panel or double-glazed windows.

Can be operated via integral pull cord or by light/remote switch/sensor. Features include anti-backdraught damper, pull cord insulating link complying with BS3676.

For additional on site security and protection against damage on new build sites, S90 models feature a removable electrical connector. This allows the fan back plate to be fully installed before the fan and motor assembly are fixed, if so desired.

Authority

Exceed the requirements of the Building Regulations for bathrooms, toilets and common spaces. Designed to BS EN 60335-2-80. T, HT, and HTA versions with overrun timer meet Building Regulation requirements for internal toilets. Manufactured under BS EN ISO 9001. CE Marked. IP44 Rated.

Safety Extra Low Voltage (SELV) Options

SELV 12V models are available within the S90 range to meet the preferences of both specifiers and installers. The remotely mounted transformer contains switch line control. Humidistat with overrun timer, Timer and Pull Cord options are available.

To maintain the fans performance within 2% of the published figure, the following lengths of cable between the fan and transformer should not be exceeded:-

Conductor size (area ²)	Max. cable length
0.50	1.5m
0.75	2.3m
1.00	3.0m
1.50	4.5m

Physical Specification

Dimensions: 187mm wide x 160mm high x 130mm deep.

SELV Controller: 160mm wide x 111mm high x 67mm deep.

Exhaust: Ø100mm Utilises ED1 Easyfix Duct, GD4 modular ducting, Slimduct system 225, 100mm flexible ducting or 110mm soil pipe. Glazing hole: Ø108mm.

4 – 28mm double-glazing.

Weight: 1.3 Kg

Material S90: Satin finish white ABS plastic, with PVC exhaust seal.

Material SELV Controller: Satin finish white ABS plastic.

Electrical Specification

230V~50Hz Class II

Consumption: Normal speed 20W

Trickle speed (A & HTA) 10W. Motor thermally protected by overload fuse.

Cable: 1mm² max.

Fuse: 3 amp (when fan is supplied from a 5 amp lighting circuit no local fuse is required).

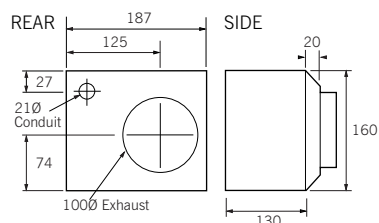
Wiring must comply with IEE Regulation, see wiring diagrams on page 93.

Specification Clauses

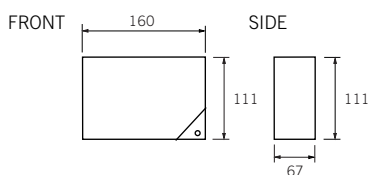
The wall mounted/window mounted/ceiling mounted* bathroom extract fan shall be surface mounted, IP44 rated, double insulated and meet the IEE wiring regulations and conform to BS EN 60335-2-80. The impeller is to be of centrifugal design. The motor shall have sealed self-lubricated bearings with thermal overload protection. The fan motor assembly shall be removable from the casing by means of a central retaining screw to allow first fix of the back plate only. The fan is to be capable of achieving the Building Regulation required extract rate of 15 litres a second at 20 Pascals. The casing is to be produced from satin finish white ABS plastic and be supplied with an integral anti-backdraught shutter, a PVC exhaust seal and fitted with a removable supply connector for ease of installation. As Greenwood Airvac S90 Range.

*Delete as appropriate.

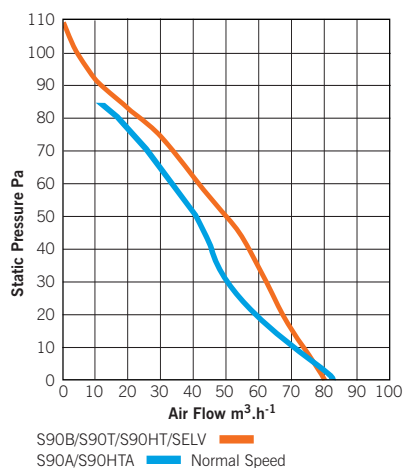
Dimensions (mm)



Transformer



Performance Graphs



Ancillaries

HP

Window baffle and adhesive glazing seal, required for 4–28mm single or double glazed window installations of S90 fans. See page 127.



LRB

Plastic wall baffle for low rise and sheltered sites. Available in various colours. See page 127.



EG1

Complementary fixed blade louvred grille in semi-matt ABS plastic, UV stabilised. Choice of white or brown grille. See page 127.



ESB

Wall baffle for exposed and high rise sites. Available in various colours. See page 127.



RAB

Plastic recessed air brick with integral housing and PVC duct seal. Available in various colours. See page 127.



ED1

Easyfix ducting plastic wall liner with integral screw-fixing channels for one visit installation. See page 122.



V4P/V6

Roof cowls for 100mm/150mm single exhausts. See page 128.



Flexiduct

Flexible 100mm PVC and aluminium ducting. See page 124.



Slimduct System 225

A slim profile ducting system for concealing within the building structure. See page 116.



FF100

Fast fix wall duct system allows installations to be made completely internally. Comprises 100mm PVC duct with external wall duct seal and external grille. See page 123.



GD4

Modular lightweight PVC Ducting system. See page 118.



GG42

External louvred wall vent available in white or brown. See page 118.



Installation diagrams – page 92

Model	Performance to BS 848 Pt1 in free air				Sound Pressure level @ 3m		Operation	Features
	Normal $m^3.h^{-1}$	Trickle $l.s^{-1}$	Trickle $m^3.h^{-1}$	Trickle $l.s^{-1}$	Normal dB(A)	Trickle dB(A)		
S90HT	75	21	-	-	41	-	Single speed with Humidistat/timer (adjustable 50 - 90% RH 20°C).	Manual override with automatic switch-off. Set back facility to help eliminate nighttime running. Manual operation available.
S90HTL	75	21	-	-	41	-	Single speed with Humidistat/timer.	Manual override with automatic switch-off. Set back facility to help eliminate nighttime running. Manual operation available. Running light.
S90DT	82	23	30	8	41	24	Dual speed with delay timer (adjustable up to 30 mins) at trickle speed.	Adjustable delay-on timer facility allows user up to 2 – 3 minutes before fan starts to operate
S90HTA	82	23	30	8	41	24	Dual speed. Continuous running. Humidistat/timer.	Automatic & manual operation. Manual override will automatically return to trickle ventilation.
S90T	75	21	-	-	41	-	Single speed with timer. (adjustable up to 30 mins).	Manual override with automatic switch-off. Operated by pull cord, light switch or remote switch.
S90A	82	23	30	8	41	24	Dual speed. Continuous running at trickle speed.	Operates between trickle / normal speeds by pull cord / light / remote switch or sensor.
S90B	75	21	-	-	41	-	Single speed.	Operation by pull cord, remote switch, light switch or remote sensor. Pull cord complies to BS3676.
S90SVIHT	75	21	-	-	41	-	Single speed. Humidistat/timer.	SELV Low Voltage – operation as S90HT.
S90SVIT	75	21	-	-	41	-	Single speed. Timer.	SELV Low Voltage – operation as S90T.
S90SVIB	75	21	-	-	41	-	Single speed.	SELV Low Voltage – operation as S90B.

See page 80 for full control option details.