

MINIFLOW
SMF



Roof Mounted **Ventilation**

Miniflow SMF

Features & Benefits



The Miniflow SMF range is an axial powered roof extract unit specifically developed to meet the airflow requirements of small to medium sized applications.

- 3 standard sizes, 130mm to 300mm.
- Air Volume flow rates of up to 0.59 m³/sec.
- Static Pressures of up to 200 Pa.
- Can be mounted at angles up to 30°.
- Motors are IP44 with Class B insulation.
- Supply air units can be supplied.
- Unit can be supplied as cowl only.
- Motors and impeller balanced to quality class G6.3.
- Steel components have a corrosion resistant finish.
- Cowls are of UV stabilized plastic.
- Motors are squirrel cage induction type.
- Suitable for operating temperatures of up to 50° C.

Features & Benefits

Reliability – Motors have sealed for life bearings.

Performance – All SMF axial fans are powered by an external rotor motor.

Motor protection – The SMF132 is impedance protected. All other models SMF202 – SMF306 have integral thermal overload protection which prevents the motor from overheating.

Speed controllable – Each fan is suitable for speed control with an electronic controller, which means the airflow can be altered to suit site conditions.

Mounting – Designed for roof mounting, SMF units can be mounted on roof slopes of up to 30°.

Material finish – SMF cowls are manufactured from UV-Stabilized plastic with built in terminal box, providing durability and strength, with all steel components, including fan, fan housing and brackets in a corrosion resistant finish.

Full Ancillary range – Speed controllers, backdraught shutters and cowl only.

Tested to the very latest standards – SMF units are tested to ISO 5801:1997 (airside performance) and to BS 848 Pt 2:1985 (sound performance) meaning accurate, up to date information on performance and noise data that can be relied upon.

Quality assurance – All units are designed and manufactured with procedures as defined in BS EN ISO 9001: 2000.

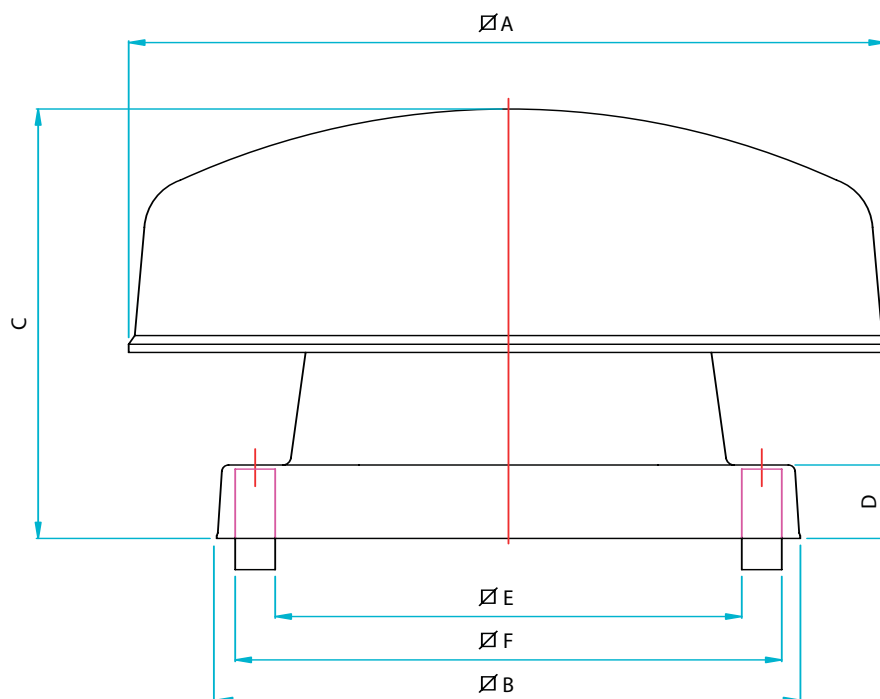
Warranty – Each SMF has a 12 month warranty.

Applications

Changing rooms, toilets, bathrooms and shower rooms.

Miniflow SMF

Dimensional Data



Product Code	Cowl Only	A	B	C	D	E	F	Weight kg
SMF132E	SMF13	310	276	200	30	200	250	1.9
SMF204E								4.5
SMF202E								4.6
SMF254E								6.1
SMF252E	SMF20/30	570	430	350	60	350	410	5.9
SMF306E								6.5
SMF304E								6.5
SMF302E								6.9

N.B. Weights include miniflow roof unit and fan.

ROOF MOUNTED

Accessories



Miniflow SMF

Performance & Electrical Data



SINGLE Phase - 220V-240V / 50Hz

Product Code	Speed r/min	Airflow m ³ /s @ Static Pressure Pa.										Motor Electrical Data		Speed Control	Sound Level dBA @ 3m
		0	25	50	75	100	125	150	175	200	FLC Amps	Input Watts			
SMF132E	2760	0.08	0.08	0.06	0.05	0.03						0.25	40	EL31	42
SMF204E	1440	0.09	0.07	0.04	0.02							0.13	30	EL31	37
SMF202E	2580	0.22	0.20	0.16	0.12	0.10	0.09	0.07	0.06			0.35	70	EL31	52
SMF254E	1380	0.25	0.21	0.16	0.11	0.06						0.29	58	EL31	42
SMF252E	2520	0.39	0.35	0.31	0.27	0.22	0.19	0.15	0.12	0.08		0.54	118	EL31	50
SMF306E	960	0.28	0.23	0.13	0.04							0.23	45	EL31	38
SMF304E	1320	0.43	0.34	0.26	0.19	0.13	0.07					0.45	50	EL31	43
SMF302E	2460	0.59	0.57	0.53	0.49	0.43	0.37	0.30	0.24	0.16		0.71	160	EL31	55

Sound levels are average spherical free field values at 50% peak pressure for comparative purposes only.

ROOF MOUNTED

Pressure Recovery

DO NOT!

To determine the system resistance the discharge losses have to be added before selecting the fan.

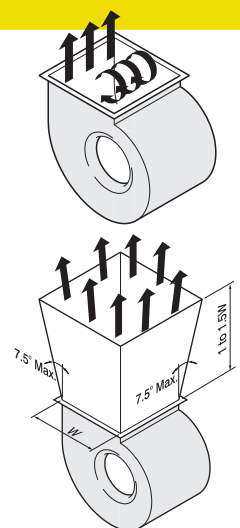
Discharge losses are highest in this arrangement and are equivalent to one velocity head.

DO!

With a correctly designed discharge diffuser the pressure recovery in the diffuser will reduce the system total pressure.

Included angle of diffuser to be 15° or less.

Discharge losses reduced by up to 75° in this arrangement.



Miniflow SMF

Sound Data



SMF - SINGLE Phase

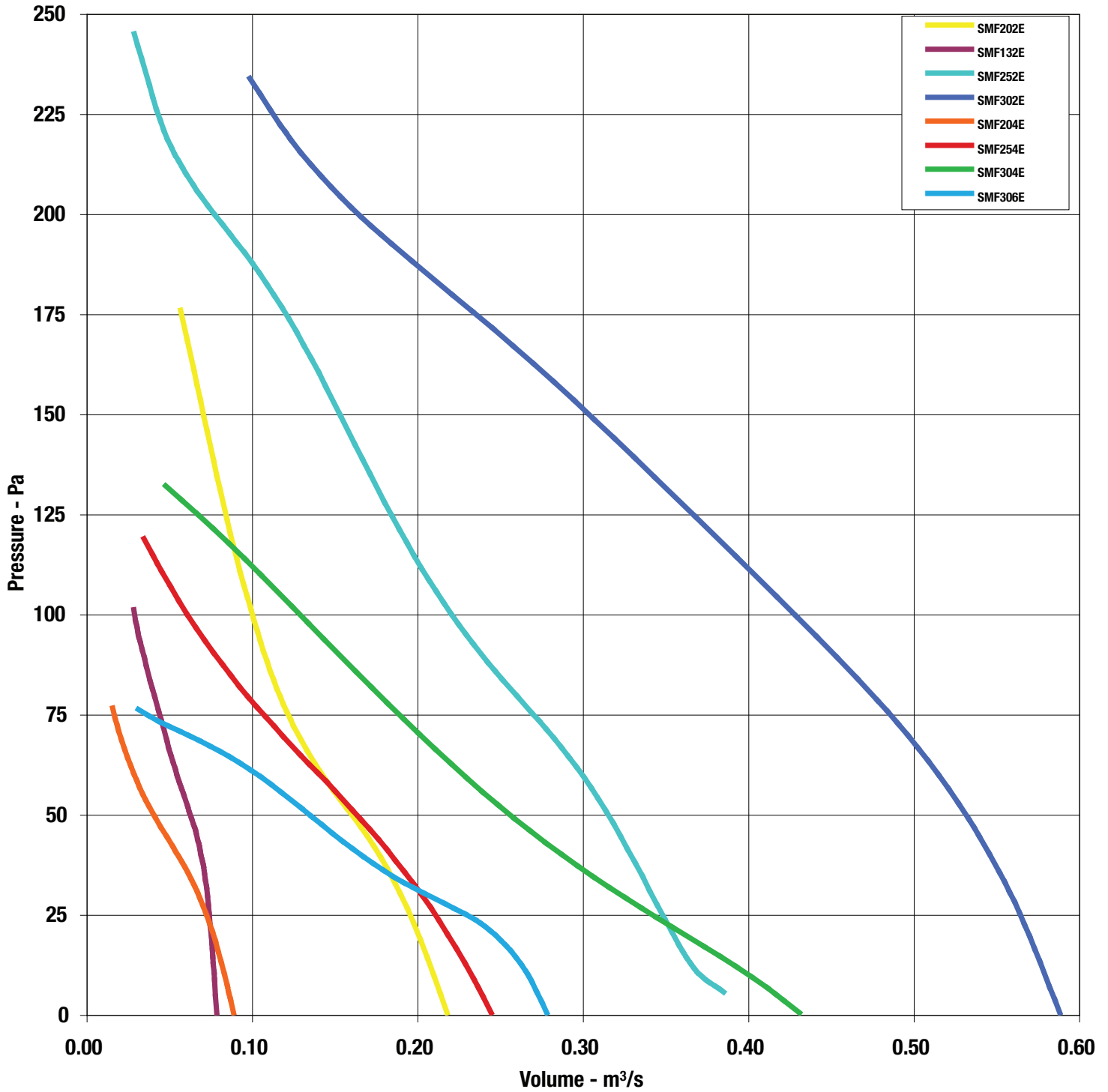
Product Code	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dBA @ 3m
SMF132E	51	51	59	55	57	58	56		42
SMF202E	67	69	73	71	66	65	59		52
SMF252E	66	72	73	69	65	63	58		50
SMF302E	67	74	74	74	70	67	64		55
SMF204E	53	65	59	57	52	47	39		37
SMF254E	62	67	67	60	56	52	45		42
SMF304E	66	67	67	63	58	54	49		43
SMF306E	58	64	64	54	47	53	39		38

Miniflow SMF

Performance Curves



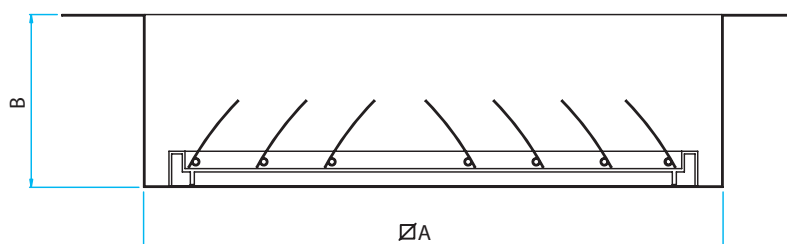
SMF



Miniflow SMF Accessories



Backdraught Shutters



Unit Size	Product Code	A	B	Weight kg
SMF20/30	SKCBD-B	300	65	3.0

- For SMF13 contact Elta Fans

- Prevents backdraught and reduces heat loss from building
- Polypropylene shutter in pre-galvanised steel frame

Motor Overload Protection

All wiring must be carried out in accordance with the latest electrical regulations and by suitably qualified and competent personnel.

It is a requirement of the Electrical Regulations to provide a means of protection against overload of a motor with a motor rating exceeding 0.37kW.

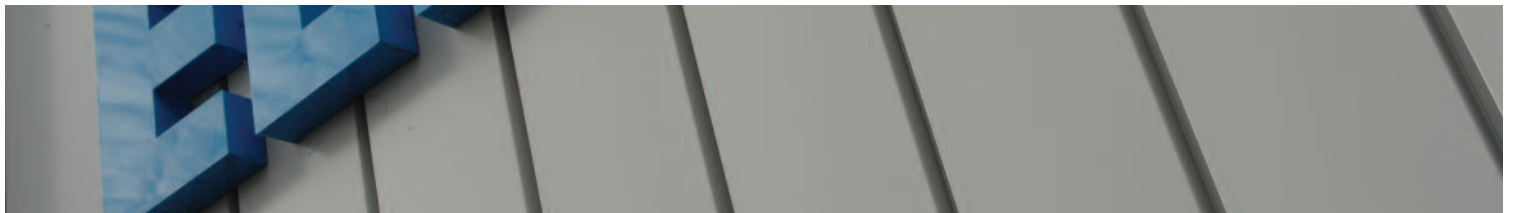
Due to the costs associated with replacing a motor and the on site down time, motor protection is of prime importance. Increased temperatures within the motor windings can result in damage to the insulation and a reduction in life expectancy; this can be reduced by as much as 50% for a small rise in temperature.

Typical causes of overheating are phase reversal, single phasing (the loss of one phase to a motor from a three phase supply), unbalanced voltages, overloading from excessive circuit current, abnormal increase in ambient temperature, vibration and stalling.

There are now many methods to provide protection to a motor; however the most common remains the use of a thermal overload relay, this contains a bi – metal or fusible device which open the contacts of a contactor to remove the power supply to the motor.

An improved method is to use a thermal device imbedded in the motor windings. This provides added protection against overheating which is not based on an increase of current. Examples being a reduction of airflow across the motor, detritus accumulating on the motor and excessive air temperature across the motor.

It must be noted that fuses / circuit breakers are used to provide short circuit protection; a motor overload will provide protection at lower currents that would not be detected by a short circuit protection device but still a high enough current to damage the motor.



Elta Fans Ltd - Applied Technology

17 Barnes Wallis Road,
Segensworth East Industrial Estate,
Fareham, Hampshire, P015 5ST, United Kingdom.

Visit: eltafans.com

e-mail: mailbox@eltafans.co.uk

Applied Technology:

Tel: +44 (0) 1489 566500

Fax: +44 (0) 1489 566555

Building Services:

Tel: +44 (0) 1384 275800

Fax: +44 (0) 1384 275810

Export:

Tel: +44 (0) 1489 566500

Fax: +44 (0) 1489 566555