

# Lo-Carbon Energy Saver MX Roof Fans (MX)

## Features and Benefits

- Reduces your carbon footprint
- Three stylish diagonal discharge models
- 70% energy savings
- Customised performance from 2200m<sup>3</sup>/h to 6700m<sup>3</sup>/h
- Can be remotely monitored
- Designed for easy inspection access for cleaning, maintenance or servicing
- Long life DC motor

The Lo-Carbon MX Roof Range offers longer life, lower maintenance and energy savings to a variety of commercial and industrial applications. Three stylish diagonal discharge models MX10, MX20 and MX30 offer customised performances up to 5,500m<sup>3</sup>/h.

The units are moulded in tough recyclable material, fully UV stabilised and are suitable for arduous external conditions. The design features a mixed flow impeller with the motor out of the airstream and a slanted diagonal discharge pattern which creates an upwardly spiralling discharge pattern. Suitable for horizontal mounting only (max. of 3° from horizontal).

## Motors

At the heart of the range is the latest Lo-Carbon energy saver DC technology, eliminating the need for expensive transformer controllers to achieve customised duties. Due to the Lo-Carbon DC design, the motors run cooler, prolonging the life of the bearings and motor lubricants. The motor is integral to the mixed flow impeller and is designed for ambient duct temperatures up to +80°C.

MX motors are up to 80% efficient in converting energy into rotation, providing large energy savings throughout the speed range. They are also precisely controllable, typically offering energy savings of 40-60% compared with AC equivalents.

## On Board Control

The electronics in the Lo-Carbon MX range offer the possibility of setting any working point/speed whenever required without a controller. The standard unit is ready to connect to a single phase electrical supply. However, an ideal working point can be set either at the factory or on site to suit a system duty. If the system resistance or volume requirement changes, the fan duty can be re-programmed to meet this new performance on site. Traditional AC products are tied to 4, 6 and 8 pole models and costly transformers - the Lo-Carbon MX is simply set up at the desired speed and, if required, can be controlled using inexpensive switches connected by four core low voltage wire. The Lo-Carbon DC system can be controlled down to much lower speeds than AC motors providing very quiet performance when required.

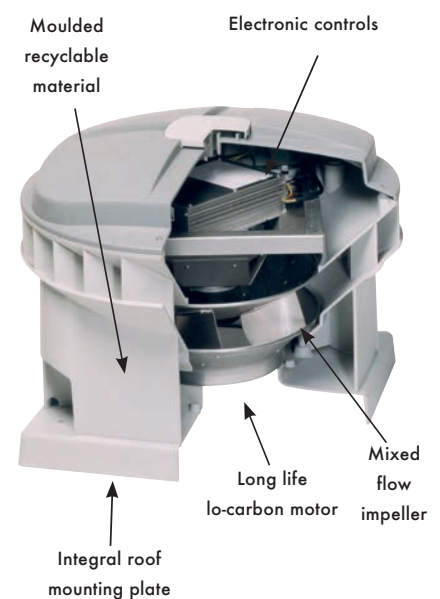
## Maintenance

Vent-Axia Lo-Carbon MX units have a built in fault diagnosis system. An installation of several units can be interconnected using simple two core wire to form a BUS network for flexible remote maintenance monitoring tailored to meet your needs. Vent-Axia MX maintenance software is available, the installation can be used on a laptop/PC. Alternatively a hand held diagnostics/programmer is available for on site use. Lo-Carbon MX units have their own encoded signature, allowing ease of identification and full performance history access.

Vent-Axia's Lo-Carbon MX range is designed for easy inspection access for cleaning. Four screws secure the main cover. Disconnect the internal mains plug and four bolts release the chassis holding the fan/motor assembly and the electronic module.

The Lo-Carbon MX range is constructed from fully recyclable plastics. The diagonal vortex discharge pattern throws air and sound upwards and away from the roof surface.

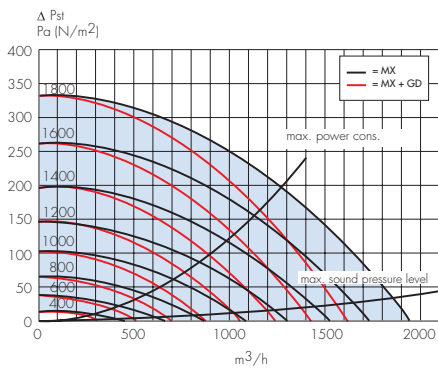
## Lo-Carbon MX Sectional View





### Performance

#### MX 10/10



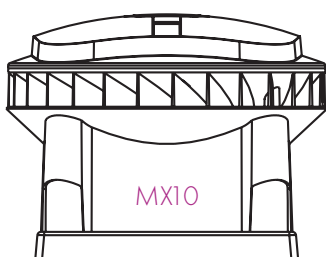
MX 10/10 - Stock Ref No: 45 46 12

max. 2000 rpm/2200 m<sup>3</sup>/h

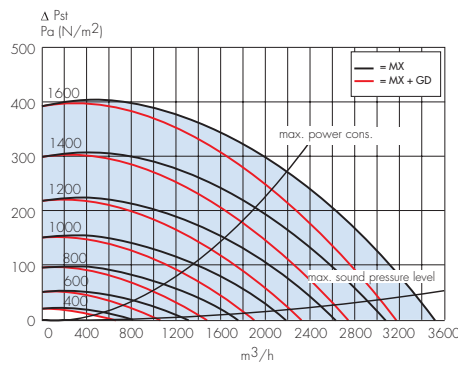
Speed rpm	Current A	Power Watts	del. dB(A)	Sound level	
				intake dB(A)	intake* dB(A)
1800	0.76	174	57	72	63
1600	0.55	125	54	70	61
1400	0.39	87	50	66	58
1200	0.26	60	46	63	55
1000	0.17	39	41	58	51
800	0.12	27	36	56	49
600	0.09	19	30	49	42
400	0.07	12	24	41	35

\* with GD silencer

max. 2000 rpm/2200 m<sup>3</sup>/h



#### MX 20/10



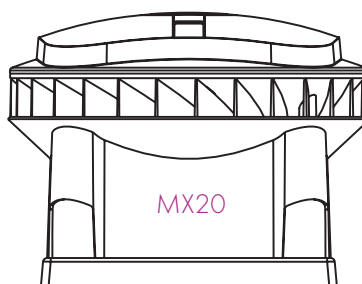
MX 20/10 - Stock Ref No: 45 46 13

max. 1600 rpm/3600 m<sup>3</sup>/h

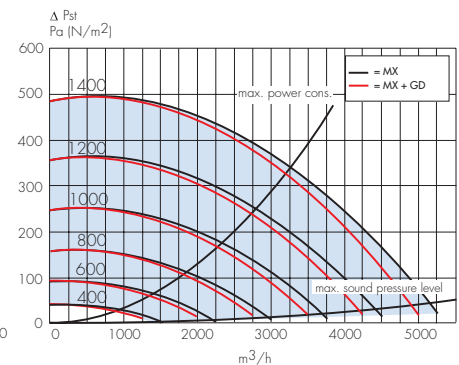
Speed rpm	Current A	Power Watts	del. dB(A)	Sound level	
				intake dB(A)	intake* dB(A)
1600	1.8	409	62	77	64
1400	1.16	266	58	74	62
1200	0.73	169	53	69	57
1000	0.44	100	48	65	54
800	0.25	57	42	59	49
600	0.14	31	36	55	45
400	0.09	17	28	48	39

\* with GD silencer

max. 1600 rpm/3600 m<sup>3</sup>/h



#### MX 30/20



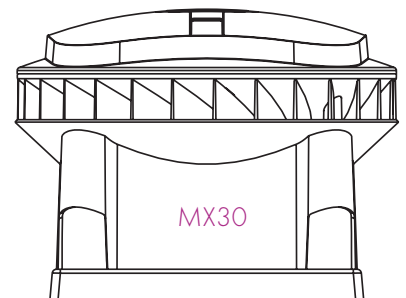
MX 30/20 - Stock Ref No: 45 46 14

max. 1500 rpm/6700 m<sup>3</sup>/h

Speed rpm	Current A	Power Watts	del. dB(A)	Sound level	
				intake dB(A)	intake* dB(A)
1200	1.9	433	60	75	65
1000	1.1	250	56	71	61
800	0.59	135	50	66	56
600	0.28	64	43	60	50
400	0.11	24	34	51	42

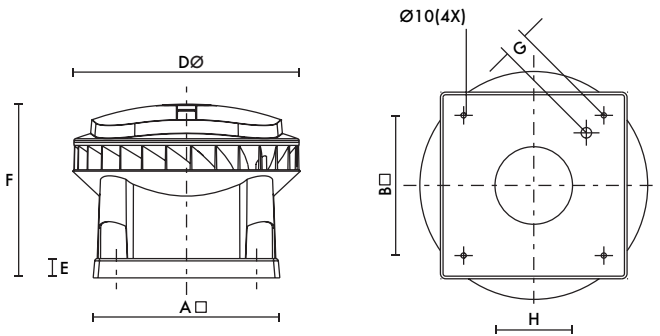
\* with GD silencer

max. 1500 rpm/6700 m<sup>3</sup>/h



# Lo-Carbon Energy Saver MX Roof Fans (MX)

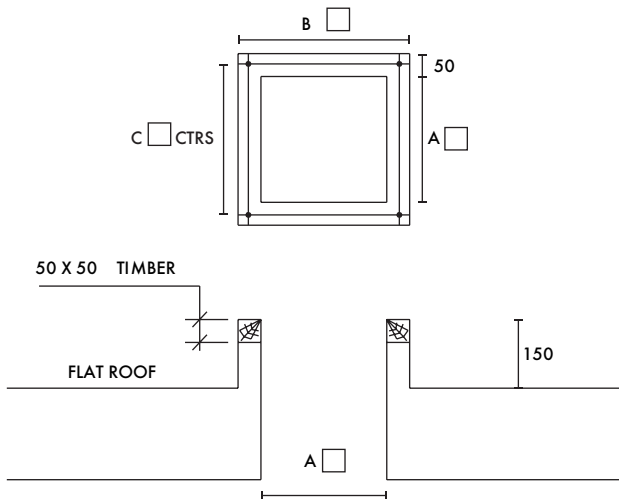
## Fan Dimensions (mm)



Model	MX10/10	MX20/10	MX30/20
A □	460	580	665
B □	330	450	535
D ∅	575	708	863
E	60	60	60
F	473	540	601
G	44	48	64
H	196	241	302

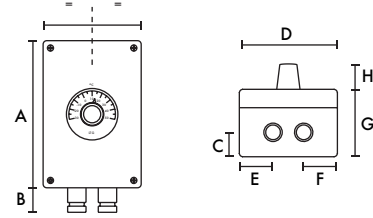
## Upstand Dimensions

Model	A □	B □	C □
MX 10/10	275	375	330
MX 20/10	400	500	450
MX 30/20	485	585	535



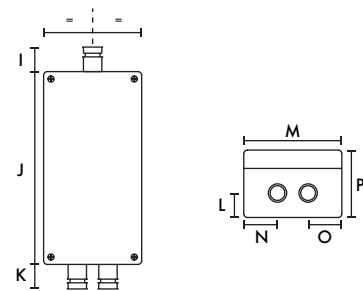
## LTG Temperature Sensitive Speed Controller

LTG  
DIMENSIONAL  
DETAILS



## VG 31 Multi Unit Controller

VG 31  
DIMENSIONAL  
DETAILS



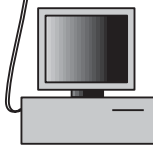
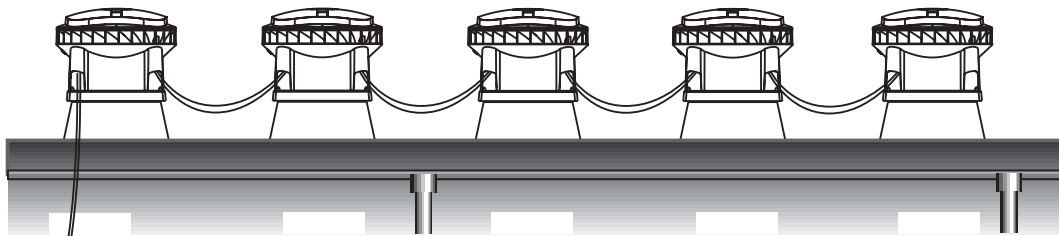
The LTG is an air temperature sensitive speed controller, which can be set between 20°C and 50°C. The controller is suitable for controlling up to 5 MX units when used in conjunction with a VG31 Multi Unit Controller.

The fan will run at a minimum speed, until the air temperature reaches the set point on the controller. When the set point is reached the controller will gradually increase the speed of the fan until the fan has reached its maximum speed. The fan speed gradient (min/max bandwidth), can be set from between 0.5°C and 10°C by adjusting a potentiometer within the controller housing. A probe fixed within the fan housing measures the air temperature.

A	120
B	28
C	28
D	80
E	27.5
F	27.5
G	60
H	20
I	20
J	180
K	20
L	20
M	80
N	27.5
O	27.5
P	60

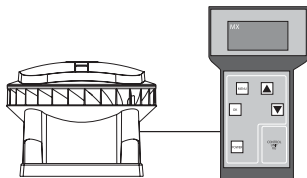
### Lo-Carbon MX Roof Range Alternative Management Controls

Easy to monitor and maintain



BMS OR REMOTE LOCATION - CONNECT UP TO 31 UNITS

NOTE: Please enquire as to the compatibility of an existing or proposed BMS. A BMS programme is available on request.



**HAND HELD PROGRAMMER**  
(Available upon request)

**PC SOFTWARE**  
(Available if required)

### Lo-Carbon MX Roof Range Fan Controls



#### SAG 0-2

2-step controller step 1 and 2 are separately adjustable  
**Stock Ref**  
**454616**



#### SAG 0-5

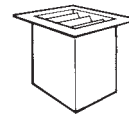
5-step controller adjustable maximum capacity  
**Stock Ref**  
**454617**



#### SAG 0-M

Infinitely variable controller adjustable maximum capacity  
**Stock Ref**  
**454618**

### Accessories



Model Ref.	Fan Controls			DNG 31	LTG	Roof Attenuators		
	SAG 0-2 Stock Ref.	SAG 0-5 Stock Ref.	SAG 0-M Stock Ref.	2 Speed Stock Ref.	Temperature Stock Ref.	600mm Stock Ref.	900mm Stock Ref.	1200mm Stock Ref.
MX 10/10	454616	454617	454618	456930	456931	-	-	-
MX 20/10	454616	454617	454618	456930	456931	10520315	10521315	10522315
MX 30/20	454616	454617	454618	456930	456931	-	-	-