

DESCRIPTION

The ECOtronic EC Series of square plate axial fans combines an IE5* rated Electronically Commutated (EC) shaft motor with a high performance Aerofoil "Series 1" impeller. This delivers ultra energy efficient operation with the benefit of in-built variable speed control. Via a range of common control signals, the ECOtronic can be easily designed into a Demand Control Ventilation system without the need for a VSD and motor overload protection. The ECOtronic EC fans are a simple "plug and play" system which means installers do not need to have specialised control programming knowledge. The series is available in 8 sizes ranging from 250 to 630mm diameter.

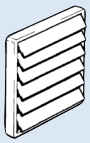
Typical Applications

The ECOtronic square plate range is most efficient in applications where conditions vary during the course of the day such as switch rooms, data centres, food storage, substations and cleanroom applications.

Features

- Ultra energy efficient by combining aerofoil "Series 1" impeller blades and IE5* rated EC motor
- EC motor features reverse polarity protection, locked rotor protection and soft start
- Additional protection, such as those required for motor overload, is not required
- Can be manually speed controlled by pressing 2 internal motor buttons
- Can be remote speed controlled with the following input signals: 2-10V, 4-20mA, or frequency duty cycle 10-95% (80Hz, 10-24Vpk)
- Can be run as an independent ventilation source or integrated into most building management systems
- Maximum operating speed can be adjusted from 1800rpm to 200rpm
- On board fault identification LED will flash according to fault type
- Integrated "Fire Mode" function forces motor to continue working under adverse conditions (at set speed)
- Guard is incorporated as standard.
- Units are light weight and can be mounted at any angle.
- Robust galvanised steel construction with polyester epoxy finish.
- Operating temperature: -20 ^{O}C to +60 ^{O}C when air velocity exceeds 5 m/s, otherwise -20 ^{O}C to +40 ^{O}C

ANCILLARY EQUIPMENT

 WSK - Backdraft shutter *Ref. Section L*	 DG - Finger Guards *Ref. Section J*	 DCV - 0-10V EC, *Speed Controller, Ref: Section M*

Construction

The ECOtronic square plate is manufactured from durable galvanized steel with a high quality polyester epoxy finish. Impellers have GRP blades as standard; aluminium blades are an optional extra.

Motors

Type - electronic commutated (EC) motor.
Electricity supply - 220-277V single-phase, 50/60Hz.
Bearings - sealed-for-life, ball.
See page *O-7* for details on motors.
IP55 rating.

Internal Thermal Protection

Motor overload protection is supplied as standard.

Testing

Air flow tests to ISO5801: 2007
Noise tests to ISO 13347-2: 2014

Special Notes

EC motors should be directly connected to their appropriate AC supply. EC motors should not be regularly power cycled.

Reverse flow: Derate the air flow by at least 25% if the air flow direction is reversed from standard. Add the suffix "R" to fan code.

* The IE5 Efficiency level is not currently defined by the IEC Standard, however the intent is for IE5 motors to have approximately a 20% reduction in losses against IE4 motors.

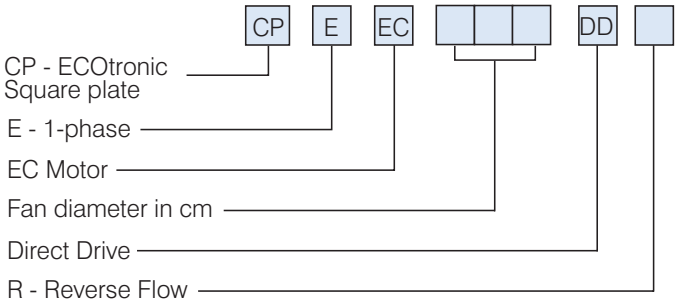
SUGGESTED SPECIFICATION

The square plate wall mounted axial fans shall be of the ECOtronic EC Series as designed and manufactured by Fantech Pty Ltd and be of the model numbers shown on the schedule/ drawings.

They shall be driven by an EC shaft motor with integrated speed controller and motor overload protection. Motors shall have an IP55 rating and can be manually speed controlled via 2 internal buttons. Motors shall also include a "Fire Mode" function and an on board fault identification LED. Square plates shall be galvanised steel with a polyester epoxy finish.

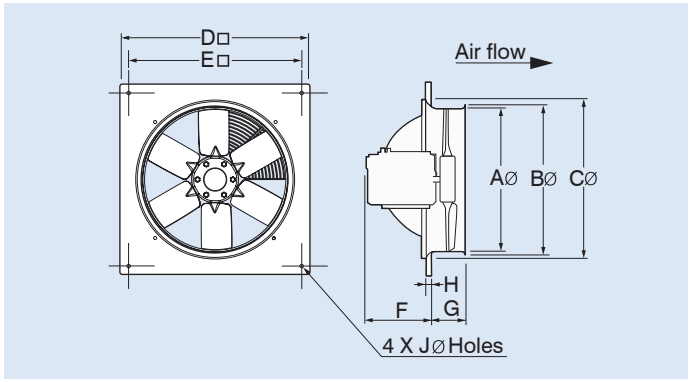
All models shall be fully tested to ISO5801:2007 for air flow and to ISO 13347-2: 2014 for noise.

HOW TO ORDER



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DIMENSIONS



Model Number CPEEC..	Dimensions, mm AØ	BØ	CØ	D□	E□	F	G	H	JØ	App wt. kg
25DD	250	263	285	370	320	197	74	15	6	10
31DD	315	325	330	430	380	201	85	10	9	11
35DD	350	360	370	485	435	194	85	10	9	11
40DD	400	410	420	540	490	170	95	12	9	13
45DD	450	460	470	575	535	198	95	12	11	15
50DD	500	510	535	655	615	231	100	15	11	21
56DD	560	575	600	725	670	247	100	15	11	24
63DD	630	645	670	805	750	251	105	20	11	27

TECHNICAL DATA

Model Number CPEEC..	Max.Fan Speed rev/sec*	Max Air flow @ 0Pa m^3/s	Avg.dB(A) @ 3m Inlet	Outlet	kW#	Peak Amps
25DD	30	0.24	45	44	0.06	0.53
31DD	30	0.52	52	52	0.11	1.03
35DD	30	0.76	56	55	0.18	1.54
40DD	30	1.14	60	59	0.26	2.61
45DD	30	2.04	60	60	0.42	3.99
50DD	30	2.22	63	63	0.64	5.29
56DD	30	2.98	67	67	0.93	7.55
63DD	30	4.16	66	69	1.34	10.45

* The fan will maintain the set speed whether run on 50 or 60Hz supply.
# At best efficiency point.

PERFORMANCE CURVE

