



DESCRIPTION

The JIU-CPCEC series of JetVent fans feature advanced digital EC motor technology with integrated speed control that eliminates the need for external VSDs, current overloads and motor phase protection. This Digital EC system will vary the operating speed of the impulse fan units and therefore the ventilation rate, according to the CO or NO_x pollutant levels in the space.

The series features ComLink, an innovative digital communication system between JetVent fans, sensors and the pre-configured Digital EcoVent Zone Controller. The result is a very simple control wiring scheme that is easy to install and easy to commission while providing the ultimate in energy efficiency and system monitoring.

Typical Applications

Enclosed or semi-enclosed spaces that contain harmful vehicle exhaust pollutants. These spaces include commercial and residential car parks, loading bays, drive through facilities and indoor go-kart tracks. Can also increase cross-flow ventilation in open car parks.

Features

- An energy efficient ventilation system that provides the ventilation rate according to the CO or NO_x pollutant levels in the space.
- JetVent's unique ComLink system provides a simple control wiring scheme that is easy to install and easy to commission
- EC motor features reverse polarity protection, locked rotor protection and soft start.
- EC motor technology eliminates the need for external VSDs, current overloads and motor phase protection
- Highly efficient, aerodynamically designed internal flow elements
- Compact low profile design makes it suitable for applications with low ceiling heights
- Fantech supplied CO/NO_x sensors and integrated smoke detectors require no additional power supply

Integrated Smoke Detection Kit

Digital EC JetVent fans can be ordered with a factory fitted and fully integrated smoke detection kit that ensures a simplified installation and reliable operation. This innovative feature allows the Fantech EcoVent intelligent car park controller or BMS to monitor for smoke and respond accordingly.

Construction

Low-profile galvanised steel housing with aerodynamically designed internal flow elements. Light grey powder coated finish as standard. Impellers are backward-curved centrifugal design and are manufactured from durable aluminium.

Motors

Type - Electronically commutated (EC) Motor.
 Electricity supply - 380V-480V, three-phase, 50/60 Hz.
 Bearings - sealed-for-life ball.
 See page O-7 for details on motors.
 Integrated EC-Controller providing infinite speed control.
 Integrated EC speed control over analogue 0-10V or 4-20mA, PWM or MODBUS High Level Interface over RS485.

Internal Thermal Protection

Integral thermal overload protection is supplied as standard.

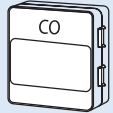
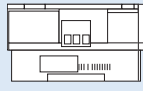
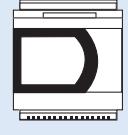
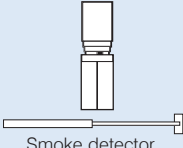

Testing

Thrust-air performance based on tests to BS848 Part 10,1999: "Fans for general purpose - Performance testing of jet fans."
 Noise data based on tests to BS848:Part 2,1985.

Wiring Diagram

Scan the QR code on page F-11 to view the wiring diagram online.

Ancillary equipment

 CO/NO _x Sensor <i>Ref. Page F-13</i>	 BMS interface cards <i>Ref. Page F-13</i>	 EcoVent Controller <i>Ref. Page F-12</i>
 Smoke detector commissioning kit <i>Ref. Page F-13</i>	 Variable Speed Drives <i>Ref. Pages M-8/13</i>	

Special Note

Jet fans should be treated as an Alternative Solution within the National Construction Code (NCC)(formerly the BCA) from a fire and smoke control perspective (in addition to the ventilation requirements). Therefore the fire engineer on the project would need to add the car park ventilation design into their fire engineering report for the project and ensure that they meet the relevant BCA performance clauses. For more information please refer to the JetVent "Practical Guide for Selection and Application" or the Fantech website.

Control systems

There are two types of Digital EC control systems used with the JetVent JIU-CPCEC Series:

- Analogue VSD control of supply and exhaust fans (See page F-16)
- Digital VSD control of supply and exhaust fans utilising ComLink communication system (See page F-17)

HOW TO ORDER

Step 1

Select the digital EC JetVent fan model

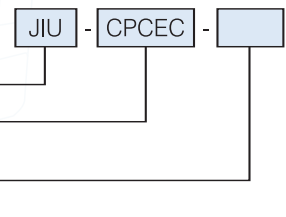
JIU - JetVent Induction, Uni-directional

CPCEC - Car Park Centrifugal, EC Motor

HP - High Performance


SD - Standard Height

LH - Low Height



Step 2

Select isolator or smoke detection kit

Isolator Kit 

JIU-ISOLATORKIT

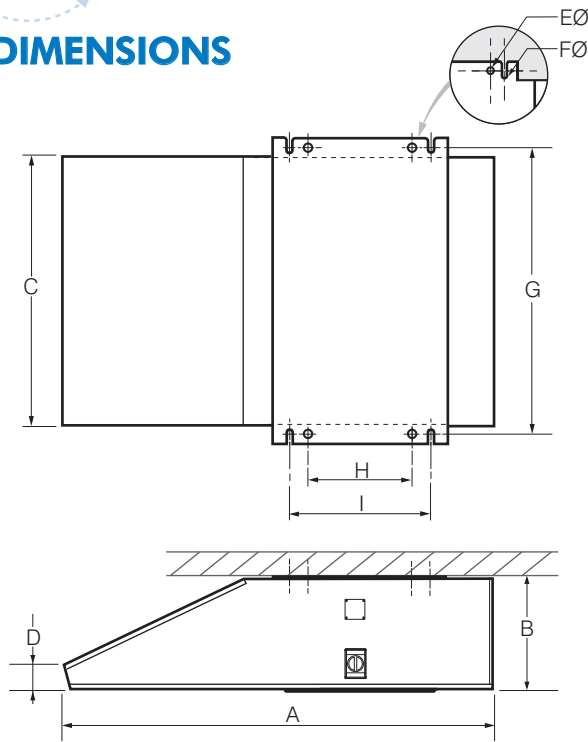
or

Smoke Detector Kit 

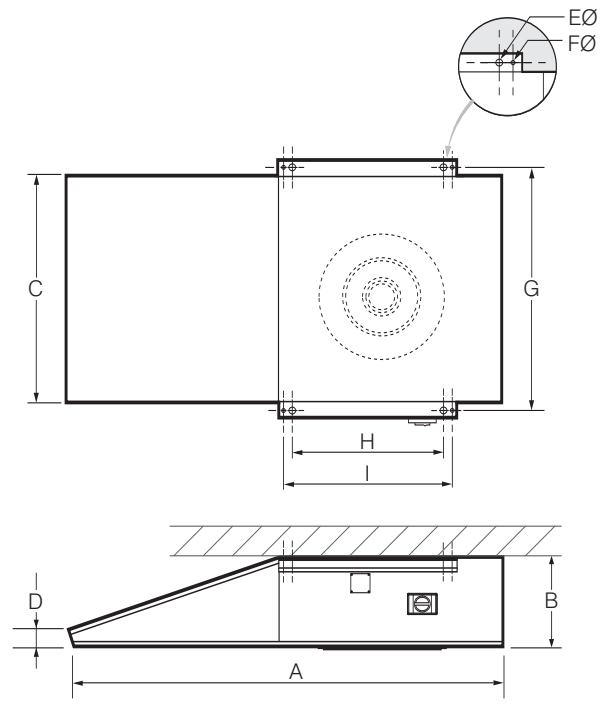
JIU-SMOKEKIT

JETVENT CAR PARK FANS - JIU-CPCEC DIGITAL EC SERIES

DIMENSIONS



JIU-CPCEC-HP



JIU-CPCEC-SD/LH

Model	Dimensions, mm									Approx. wt. kg
	JIU-CPCEC-...	A	B	C	D	E	F	G	H	
HP	1807	492	1151	110	30	16	1240	450	600	160
SD	1745	370	906	68	25	13	973	605	675	89
LH	1745	322	906	68	25	13	973	605	675	89

SUGGESTED SPECIFICATION

The high velocity jet fans shall be of the JetVent JIU-CPCEC Series as designed and manufactured by Fantech Pty Ltd and be of the model numbers shown on the schedule/drawings. Impellers shall be made from aluminium, be of backward-curved centrifugal design and be driven by EC external rotor motors with integrated EC-Controller and integral thermal overload protection. They shall be pre-configured to suit CO/NO_x sensors and the required applications.

The housing shall be of galvanised steel with a light grey powder coated finish as standard. They shall incorporate mounting feet and aerodynamically designed internal flow elements.

Performance data shall be based on tests to BS848:Part 10,1999 for thrust and BS848:Part 2, 1985 for noise.

TECHNICAL AND NOISE DATA

Model	Fan Speed rev/sec	Free Air m ³ /s	Thrust N	JIU-CPCEC-...			Car park Installed Noise Levels dB(A)#	Free-field Noise Rating dB(A) @ 3m**	Sound Power Levels L _w dB re 1pW								
				3 ph. kW	Max. Amps	Max. °C			63	125	250	500	1k	2k	4k	8k	
HP	High speed	21	2.90	98.0	2.8	4.2	40	75.2	66	83	89	85	81	80	81	75	72
	Pre-set speed *	14	1.95	49.0	1.0~	1.6	40	65.0	57	77	81	77	73	73	68	65	59
SD	High speed	30	1.64	52.2	1.7	2.5	40	72.4	64	79	80	83	81	79	78	74	74
	Pre-set speed *	22	1.20	28.4	0.7~	1.1	40	65.0	57	74	79	73	72	72	71	67	63
LH	High speed	30	1.50	46.8	1.7	2.6	40	76.4	69	82	85	91	83	84	82	80	74
	Pre-set speed *	19	0.93	18.9	0.4~	0.8	40	65.0	57	74	82	73	71	71	73	65	56

Car park installed noise levels apply 8m away from the fan with multiple fans operating.

**Free-field noise rating applies 3m away from the fan with multiple fans operating. Contact your nearest Fantech office to confirm if this is applicable to your installation.

~ Estimated power consumption.

*Pre-set speed so fan does not operate above the AS2107:2000 recommended noise level of 65dB(A) 8m.



Scan the QR Code to view the wiring diagram or more information online.

