

JETVENT CAR PARK FANS - JISU SERIES



Description

The JISU Series of JetVent Fans are available in 50 and 100N thrust capacities. This range is suitable for ambient and also high temperature applications as required in fire/smoke control applications. All models feature a low profile housing that is suitable for car parks with low ceiling heights. These units may be used in conjunction with Variable Speed Drives (VSD) for efficient speed control.

Typical Applications

Enclosed or semi-enclosed spaces that contain harmful vehicle exhaust pollutants and require fire/smoke control. 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

- Highly efficient, aerodynamically designed internal flow elements.
- Available with powerful 50 or 100N thrust capacities.
- Engineered for smoke-spill applications and suitable for ambient operating temperatures up to 80°C.
- Compact low profile design makes it suitable for applications with low ceiling heights.
- Durable galvanised steel fan housing with light grey powder coated finish as standard.
- Integral mounting feet allows unit to be easily fitted to the ceiling.

Smoke-Spill Standards

- Designed to comply with the air performance and high temperature requirement of Standards AS/NZ1668.1:1998 and AS4429:1999. Both Standards are mandatory for smoke-spill installations.
- Tests up to 200°C for 2 hours and 300°C for 30 minutes have been successfully concluded.

In the case of a fire occurring, JetVent smoke-spill models will stop operating for a predetermined time to allow occupants to escape the building. After this time the JetVent fan will commence operation again.

Construction

Low profile galvanised steel housing with aerodynamically designed internal flow elements. Light grey powder coated finish as standard. Backward curved centrifugal impeller manufactured from durable aluminium.

Motors

Type - external rotor, squirrel cage induction motor.

Electricity supply - 415V, three-phase, 50Hz.

Bearings - sealed-for-life, ball.

Speed controllable using Variable Speed Drives which must be bypassed in smoke control mode. Sinusoidal filters are required for Variable Speed Drive control.

Motors are suitable for ambient conditions as well as high temperature conditions required for smoke-control applications.

Maximum ambient temperature 80°C.

See pages O-2/3 for details on these motors.

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.

High temperature requirements tested to AS4429:1999.

Wiring Diagram

See page N-9, diagram ER9

Additional Information

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 Elta Fans website.

Control Systems

There are two types of analogue control systems used with the JetVent JISU Series:

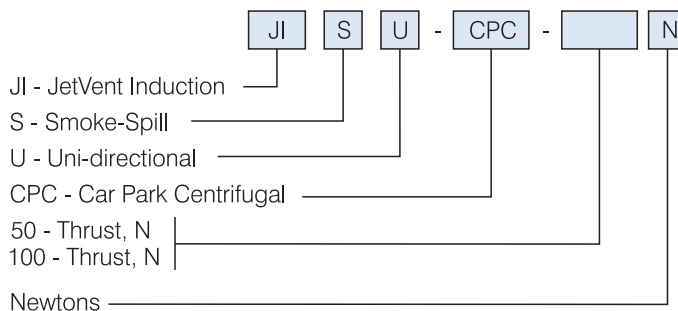
- Two speed system using relays to drive contactors connected to the fans (See page F-14).
- Variable speed system using 0 to 10 Vdc outputs to proportionally drive VSDs (See page F-15).

Ancillary Equipment



Variable Speed Drives
Ref. Section M

How To Order



Suggested Specification

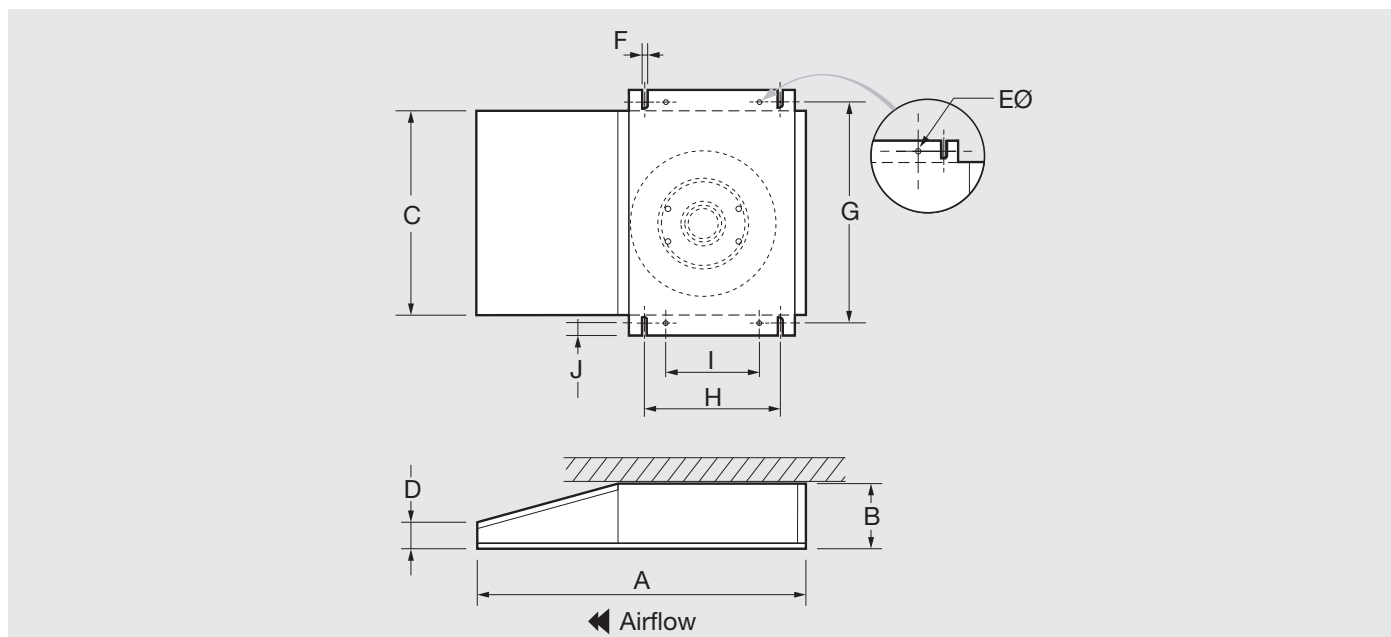
The high velocity jet fans shall be of the JetVent JISU Series as designed and manufactured by Elta Fans and be of the model number shown. The housing shall be of galvanised steel with a light grey powder coated finish as standard.

They shall incorporate mounting feet, aerodynamically designed internal flow elements and impellers of backward-curved centrifugal design manufactured from aluminium. They shall comply with the air performance and high temperature requirement of Standards AS/NZ1668.1:1998 and AS4429:1999 and shall be tested up to 200°C for 2 hours and 300°C for 30 minutes.

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

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Dimensions



Model FPMD...	Dimensions, mm										Approx. wt. kg
	A	B	C	D	EØ	F	G	H	I	J	
JISU-CPC-50N	1262	250	790	102	30	16	890	607	427	60	85
JISU-CPC-100N	1832	320	1150	69	30	16	1240	600	450	50	184

Technical And Noise Data

Model JIU-..	Fan Speed rev/ sec	Free Air m³/s	Thrust N	JISU... 3 ph.			Car park Installed Noise Levels dB(A)#	Free-field Noise Rating dB(A) @ 3m	Sound Power Levels L _w dB re 1pW							
				kW	Amps	Max. °C			63	125	250	500	1k	2k	4k	8k
JISU-CPC-50N	23(H)	1.63	50	1.42*	2.8	40	78	69	78	94	89	88	82	81	77	69
	15(L)	1.06	20	0.37*	1.8	40	68	68	68	84	79	78	72	71	67	59
JISU-CPC-100N	21(H)	2.39	100	2.60*	4.6	40	77	68	86	93	88	86	83	82	76	67
	14(L)	1.59	44	0.77*	3.0	40	68	59	75	82	77	75	72	71	65	56

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

* Estimated power consumption.



Elta Fans Malaysia Sdn Bhd (714973-T)

Tel **+603 7846 0340**

Fax **+603 7842 1132**

Email **info@eltafans.asia**

Web **www.eltafans.asia**

No. 147, Jalan TUDM Kampung Baru Subang
40150 Shah Alam, Selangor West Malaysia, Malaysia

Elta Fans India Pvt. Ltd.

Tel **+(91) 33 2498 8126**

Fax **+(91) 33 2498 8126**

Email **info@eltafans.in**

Web **www.eltafans.in**

165, Bakhrahat Road, Post - Joka, Hanspukur,
Kolkata - 700104 West Bengal, India

Branches

Mumbai **+(91) 22 2683 2155**

New Delhi **+(91) 88 0043 4400**

Bengaluru **+(91) 80 4113 2524**