

# JETVENT CAR PARK FANS - JV SERIES



## Description

The JV Series of JetVent axial fans have been designed to provide effective ventilation in most spaces that contain harmful vehicle exhaust pollutants. They can be supplied for unidirectional or truly reversible airflow and are available in 2 sizes, 315mm and 400mm diameter. Units approved to AS4429:1999 for high temperature smoke exhaust are also available.

## Typical Applications

Enclosed or semi-enclosed spaces that may 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

- Available with single (high) or 2 speed (high/low) motor.
- Integral aerodynamically designed silencers provide quiet operation.
- Bell mouth inlet and outlet optimises performance.
- Units can be speed controlled using Variable Speed Drives.
- Can be supplied for uni-directional or truly reversible airflow.
- Fitted with a high performance aerofoil impeller.
- Durable galvanised steel housing with light grey powder coated finish as standard.
- Integral mounting feet allows unit to be easily mounted to ceiling.
- Electrical isolator fitted on ambient temperature units.

## Construction

Galvanised steel housing with integral aerodynamically designed silencers. Light grey powder coated finish is standard. Axial flow aerofoil impellers manufactured from aluminium.

## Motor

Type - squirrel cage induction motor.

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

Bearings - sealed-for-life, ball.

Single or 2-speed as nominated.

Speed controllable using Variable Speed Drives.

Standard motors are suitable for ambient conditions up to 40°C. Units for high temperature conditions, such as smoke-control, are available.

See pages O-3/4 for details on these motors.

## Internal Thermal Protection

Thermistors can be provided on all motors except where Standards prohibit their use.

## Wiring Diagram

See page N-6, diagrams DD1, 2, 3.

## 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.

## Smoke-Spill Applications

Smoke-spill models have been fully tested to meet the air performance and high temperature requirements of Standards AS/NZS1668.1:1998 and AS4429:1999. In the case of a fire occurring, smoke-spill models will stop operating for a predetermined time to allow occupants to escape the building. After this time the fan will commence operation again.

## Control System

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

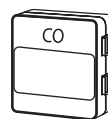
- Two speed system using relays to drive contactors connected to the fans (See page F-14).
- Variable speed system using 0 to 10 Vdc outputs to proportionally drive VSDs (See page F-15).

## Suggested Specification

The high velocity axial jet fans shall be of the JetVent JV 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 aluminium axial impellers of aerofoil design and aerodynamically engineered silencers. They shall be single or 2-speed as nominated.

Performance data shall be based on tests to BS848:Part 10,1999 for thrust and BS848:Part 2, 1985 for noise. Units for smoke-spill applications shall be tested to AS4429:1999.

## Ancillary Equipment



CO/NO<sub>x</sub> Sensor  
Ref. Section F-13

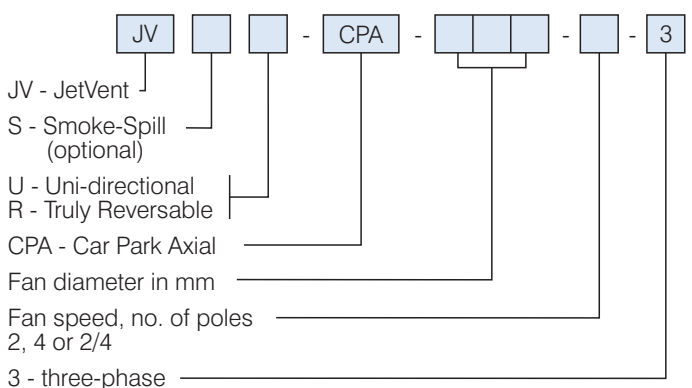


EcoVent Zone  
Controller  
Ref. Section F-12



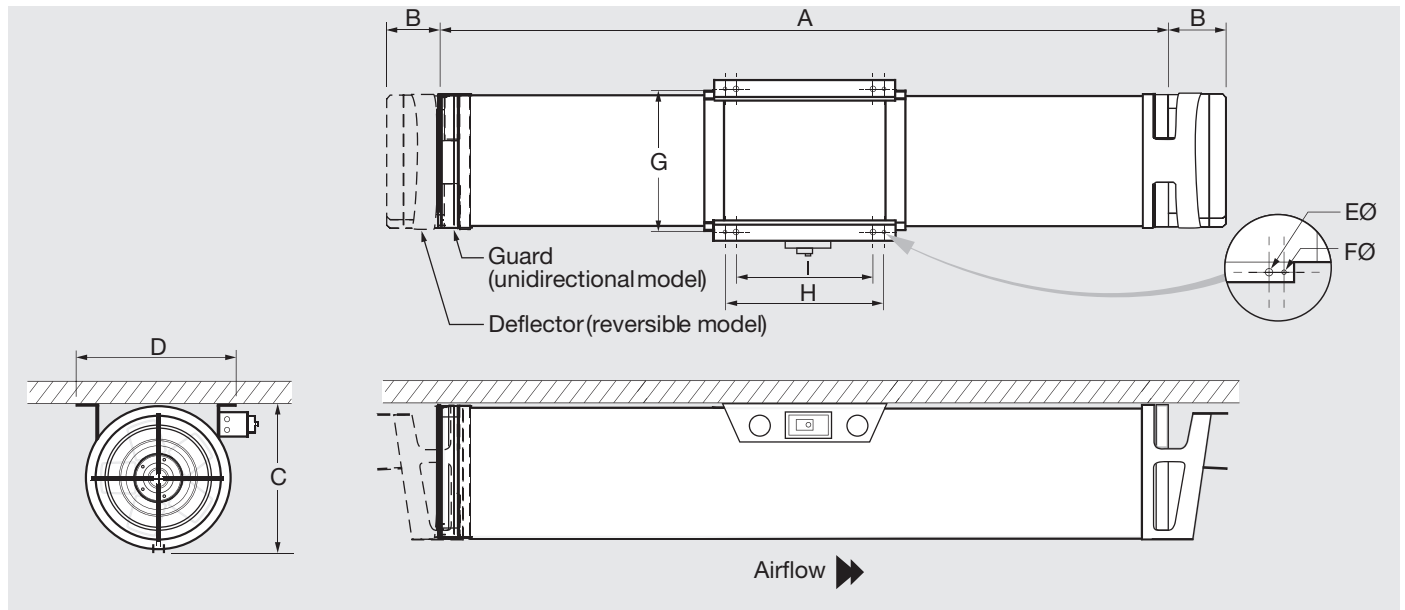
Variable Speed Drives  
Ref. Section M-8/13

## How To Order



# JETVENT CAR PARK FANS - JV SERIES

## Dimensions



| Model       | Dimensions, mm |     |     |     |    |    |     |     |     | Appro. wt. kg |
|-------------|----------------|-----|-----|-----|----|----|-----|-----|-----|---------------|
|             | A              | B   | C   | D   | EØ | FØ | G   | H   | I   |               |
| JVU-CPA-315 | 1808           | 142 | 336 | 417 | 25 | 13 | 367 | 420 | 360 | 62            |
| JVU-CPA-400 | 2660           | 145 | 423 | 471 | 25 | 13 | 421 | 420 | 360 | 71            |

## Technical Data And Noise Levels

| Model<br>JV../JVS.. | Speed Setting | Fan Speed rev/sec | Free Air m³/s | Thrust N | JV... kW | 3ph Amps | Max. °C | Free-field Noise Rating dB(A) @ 3m | Sound Power Levels L <sub>w</sub> dB re 1pW |     |     |     |    |    |    |    |
|---------------------|---------------|-------------------|---------------|----------|----------|----------|---------|------------------------------------|---|-----|-----|-----|----|----|----|----|
|                     |               |                   |               |          |          |          |         |                                    | 63  | 125 | 250 | 500 | 1k | 2k | 4k | 8k |
|                     |               |                   |               |          |          |          |         |                                    |   |     |     |     |    |    |    |    |
| U-CPA-315-2-3       | -             | 48                | 0.96          | 20       | 0.55     | 1.35     | 40*     | 59                                 | 73  | 79  | 86  | 77  | 70 | 65 | 64 | 60 |
| U-CPA-315-4-3       | -             | 24                | 0.48          | 5        | 0.55     | 1.4      | 40*     | 49                                 | 61  | 72  | 66  | 68  | 63 | 61 | 57 | 52 |
| U-CPA-315-2/4-3     | High          | 48                | 0.96          | 20       | 0.8      | 1.9      | 40*     | 59                                 | 73  | 79  | 86  | 77  | 70 | 65 | 64 | 60 |
|                     | Low           | 24                | 0.48          | 5        | 0.16     | 0.4      | 40*     | 49                                 | 61  | 72  | 66  | 68  | 63 | 61 | 57 | 52 |
| U-CPA-400-2-3       | -             | 48                | 1.95          | 50       | 1.5      | 2.9      | 40*     | 62                                 | 86  | 81  | 88  | 79  | 70 | 69 | 70 | 68 |
| U-CPA-400-4-3       | -             | 24                | 0.97          | 12       | 1.1      | 2.6      | 40*     | 47                                 | 72  | 80  | 69  | 63  | 55 | 54 | 55 | 49 |
| U-CPA-400-2/4-3     | High          | 48                | 1.95          | 50       | 1.7      | 3.5      | 40*     | 62                                 | 86  | 81  | 88  | 79  | 70 | 69 | 70 | 68 |
|                     | Low           | 24                | 0.97          | 12       | 0.34     | 0.8      | 40*     | 47                                 | 72  | 80  | 69  | 63  | 55 | 54 | 55 | 49 |
| R-CPA-315-2-3       | -             | 48                | 0.97          | 20       | 0.55     | 1.35     | 40*     | 61                                 | 73  | 82  | 87  | 79  | 74 | 69 | 67 | 64 |
| R-CPA-315-4-3       | -             | 24                | 0.49          | 5        | 0.55     | 1.4      | 40*     | 50                                 | 61  | 71  | 68  | 72  | 62 | 60 | 57 | 52 |
| R-CPA-315-2/4-3     | High          | 48                | 0.97          | 20       | 0.8      | 1.9      | 40*     | 61                                 | 73  | 82  | 87  | 79  | 74 | 69 | 67 | 64 |
|                     | Low           | 24                | 0.49          | 5        | 0.16     | 0.4      | 40*     | 50                                 | 61  | 71  | 68  | 72  | 62 | 60 | 57 | 52 |
| R-CPA-400-2-3       | -             | 48                | 1.99          | 50       | 1.5      | 2.9      | 40*     | 63                                 | 88  | 83  | 89  | 80  | 73 | 73 | 74 | 70 |
| R-CPA-400-4-3       | -             | 24                | 1.00          | 12       | 1.1      | 2.6      | 40*     | 54                                 | 73  | 89  | 72  | 70  | 58 | 56 | 55 | 53 |
| R-CPA-400-2/4-3     | High          | 48                | 1.99          | 50       | 1.7      | 3.5      | 40*     | 63                                 | 88  | 83  | 89  | 80  | 73 | 73 | 74 | 70 |
|                     | Low           | 24                | 1.00          | 12       | 0.34     | 0.8      | 40*     | 54                                 | 73  | 89  | 72  | 70  | 58 | 56 | 55 | 53 |

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

\* Smoke-spill model can operate at 300°C for 2 hours and has an ambient maximum temperature of 70°C



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