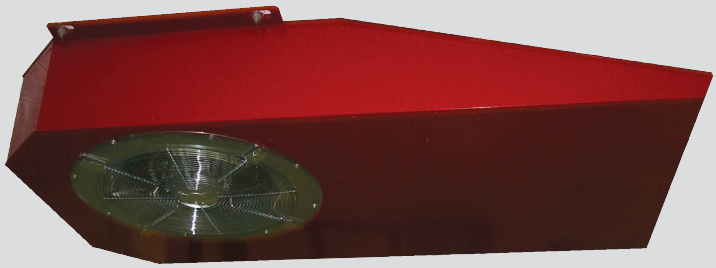
Cyclone

Car Park Ventilation



Data Sheet

Colt Cyclone is a low profile, high velocity induction fan intended to control air movement and direct polluted air and smoke towards the extract positions in a car park.

CAR PARK VENTILATION SYSTEMS

Car park ventilation systems are required to achieve two objectives.

Firstly, when the car park is in general use, it is important that the exhaust fumes produced by vehicles are effectively removed and that there are no stagnant pockets of harmful gases.

Secondly, in the event of a fire, assistance needs to be given to the Fire Service to clear smoke from the car park during and after the fire.

In addition, car park ventilation systems may be designed to provide clear, smoke free access for fire fighters to tackle the fire, or alternatively to protect means of escape from the car park.

SCHEME DESIGN

Each car park is different and Colt will provide a scheme designed to suit the exact requirements of the project.

Colt car park ventilation systems include one or more of the following elements:

- Inlet either naturally through the entrance/exit ramps/fixed ventilation louvres, or mechanically via supply fans.
- A mechanical system with dual fans discharging to atmosphere.
- Air distribution and mixing within the car park by a network of Cyclone Induction fans and/or Jetstream Impulse fans.

As part of a designed scheme involving detection, controls and extract units, the Cyclone fan adds momentum to the air to drive it towards an extract point.

In day to day operation the control system monitors the carbon monoxide levels within the car park and adjusts the ventilation rate accordingly, helping reduce energy use. Should a fire signal be received, the ventilation switches to the fire affected floor and the flow rates are increased.

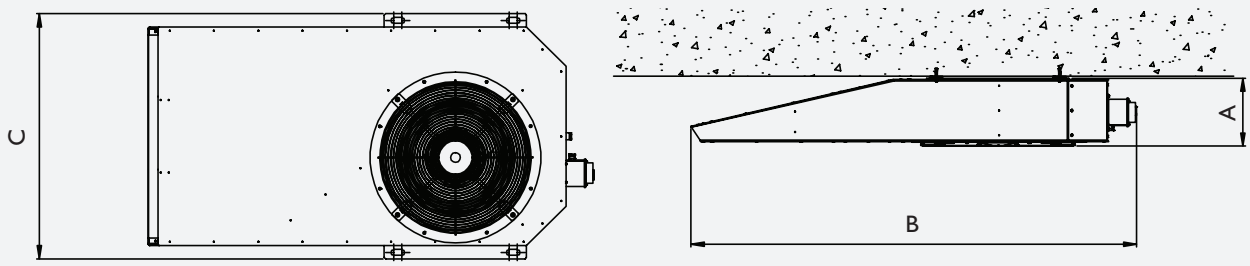
FEATURES AND BENEFITS OF COLT CYCLONE

- Slimline Design – Only 314mm or 258mm deep.
- CE Marked.
- Independently Tested – Certified to EN 12101-3 class F300.
- Durable – Hot dipped galvanized casing with the option of polyester powder coating to any RAL colour.
- Inlet Guard.
- Low Maintenance – No distribution ductwork to clean.
- High Thrust – Fewer units than conventional impulse fans.
- Inspection Hatch – Easy access for service and maintenance.
- Suitable for two speed or variable speed operation.
- Cyclone units are provided with a protective coating to ensure their durability in the environments for which they are installed, with optional RAL colours available if required.

Architectural Solutions
Climate Control
Smoke Control
Service and Maintenance

Colt International Limited
New Lane Havant
Hampshire PO9 2LY
Tel +44(0)23 9245 1111
Fax +44(0)23 9245 4220
info@coltgroup.com
www.coltinfo.co.uk

TECHNICAL SPECIFICATION



	100N Class F300	50N Class F300
Thrust	100 N / 25 N	50 N / 12 N
Discharge Velocity	30 m/s / 16 m/s	23 m/s / 11 m/s
Air Flow	2.7 m^3/s / 1.28 m^3/s	1.6 m^3/s / 0.8 m^3/s
Motor Power (two speed operation)	2.6 kW / 0.55 kW	1.4 kW / 0.3 kW
Running current	5.6 A / 2 A	3.3 A / 1.5 A
LpA@3m free field full/half speed	71 dBA / 55 dBA	70 dBA / 53 dBA
Unit height A	320 mm	260 mm
Unit length B	2020 mm	1690 mm
Unit width C	1280 mm	930 mm

INDUCTION VENTILATION SYSTEMS

Induction ventilation is a further enhancement of the impulse ventilation concept.

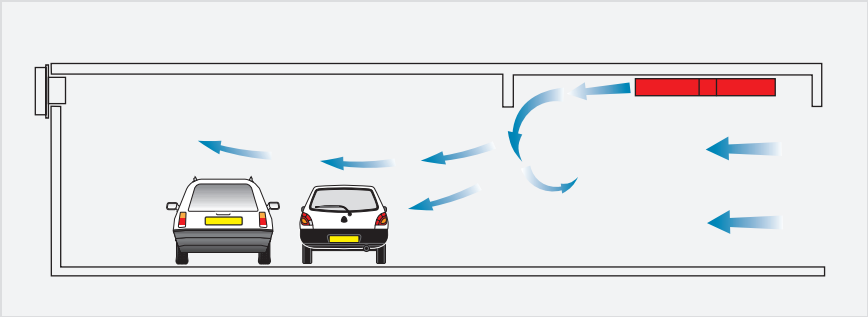
Using the same principles as impulse ventilators, induction fans are generally slimmer and more effective. A typical induction fan has an effective throw of approximately 50m, compared to 30m for an impulse fan. Due to this increased power, each fan is able to ventilate a significantly greater floor area, therefore reducing the number of units required.

The slimmer units also allow lower car park heights and therefore reduce excavation costs.

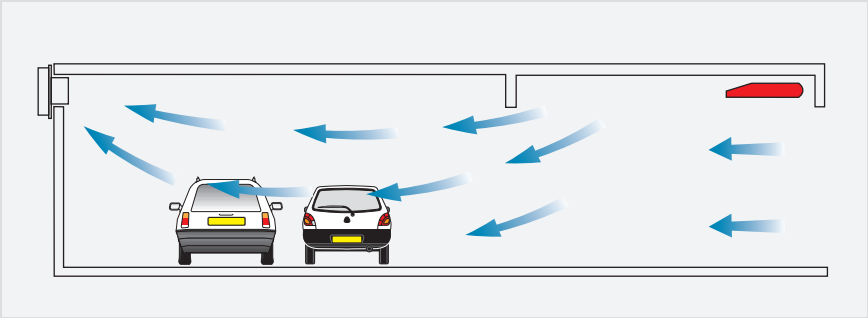
For comparison purposes, a typical Impulse Unit such as the Colt Jetstream is 434mm deep, a Colt Cyclone 100 is 320mm deep and a Colt Cyclone 50 is 260mm deep. Ducted systems are often deeper in places and need to be run under any downstand beams, whereas fans can be located between them. This demonstrates the potential savings for the developer and contractor both in excavation and in building height.

Fewer units mean lower cabling and control requirements as well as lower installation and maintenance costs.

In addition, the units can be inverter controlled therefore reducing the amount of power consumed.



Air turbulence created by the downstands when using a typical impulse fan



Air turbulence is dramatically reduced when using a Colt Cyclone CPV fan