



Ventilator with Snorkel

CX3, KH150, NL150

Introducing a breath of fresh air to confined space work. Ozone's extensive range of purpose built Ventilators and accessories reduces the risks associated with confined space entry, by providing a constant source of clean, breathable air. Practical, safe and reliable. *Ozone Ventilators - an essential component of every confined space entry kit.*

Petrol/Gasoline Model

CC4

The unique CC4 Ventilator features a fully enclosed combustion motor. Coupled with heavy duty isolation feet, the motor is fully protected from the typical knocks and bumps caused during transportation and site work. All the components are located inside the case.

Strength and reliability are matched by its heavy duty performance. The high flow *and* high pressure design rotor generates exceptional air flow, even through long lengths of small diameter flexible hose. The 2 metre long stainless steel manifold hose keeps exhaust gases away from the clean air intake.



CC4

All Ozone Ventilators are equipped with an impressive array of standard features:

- Connections for both outlet and inlet hose - equally suited to blowing fresh air into or extracting polluted air out of a confined space.
- Finger-proof mesh guards on inlet and outlet.
- Removable spigots, with various diameters available. Ventilators with just the one spigot attached are compact and easy to handle.
- High pressure centrifugal rotors.
- Polymer-coated, genuinely industrial design.
- Reflective safety strips for roadside utilities.



CC4, KH200

Confined Space Ventilators

For personnel entering tanks, roadside pits and other confined work spaces

Confined Space Ventilators

Electric Models

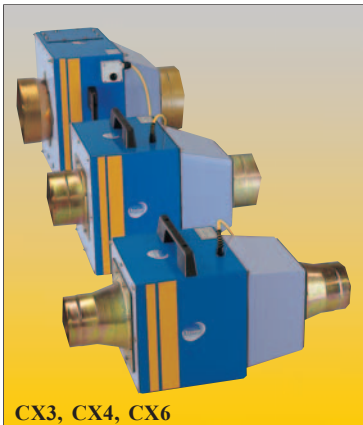
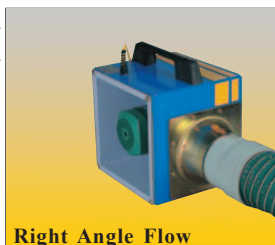
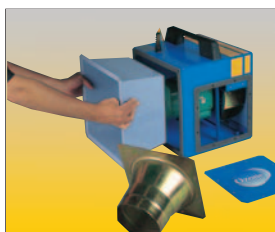
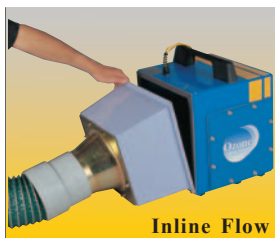
CX3, CX4, CX6

What are the differences between centrifugal and axial ventilators ?

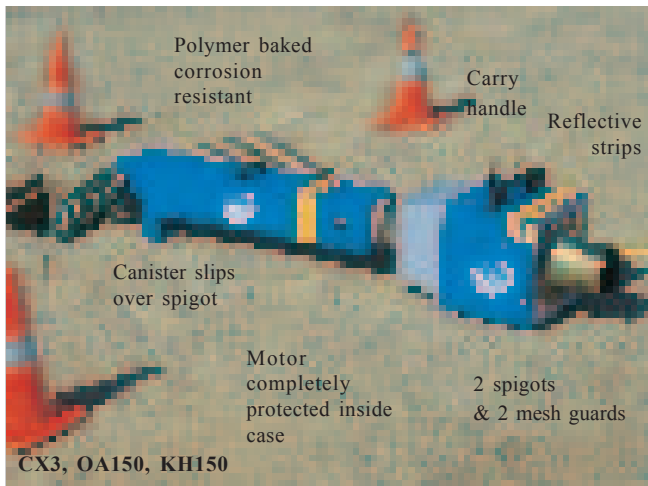
Axial products are compact, with the motor enclosed within the case. They deliver good flow rates, but only through large diameter (eg 300 mm) hose. Often this means having to remove the hose from the confined space entrance whilst personnel move in and out, which is not a safe work procedure.

As the motor is within the airstream, axial products are not suitable for extracting explosive, flammable or corrosive pollutants. Because of their low pressure, the flow stops if the hose is "pinched".

Traditional centrifugals work with smaller hoses with the motor located out of the airstream. However the motor is not protected and is easily damaged.



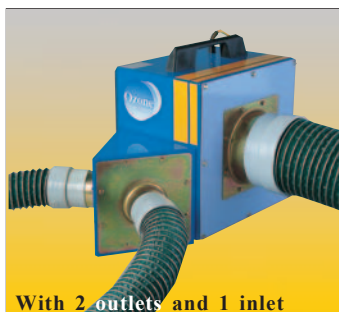
The Ozone Advantage	
Ask your Ventilator supplier these 5 important questions	Ozone (all-in-one product)
Is the rotor a high pressure centrifugal?	✓
Is the motor completely hidden inside the case ?	✓
Can the flow be – in line – or right angle ?	✓
Can the motor be out of the airstream ?	✓
Can Hose Canister and Snorkel be connected ?	✓



Ozone has set the new benchmark in confined space ventilation by combining the best features of both. The patented **dual flow** system allows the Ventilator to be easily converted to either inline flow (compact and quiet) or right angle flow (motor out of the airstream).



Either way, the motor remains fully protected within the rugged case.



The Ozone Canister stores a full 5m of 150mm compressible hose. The cuff on the end of the Canister simply slips over the Ventilator spigot. The Canister is easily removed from the spigot, to carry it in one hand and the Ventilator in the other. The Canister pays for itself with increased productivity, portability and longer hose life.

Thanks to the interchangeable spigots, ventilation systems can be tailored to suit any application. For instance, the SD150 accessory allows two inlet or outlet hoses to be connected simultaneously.

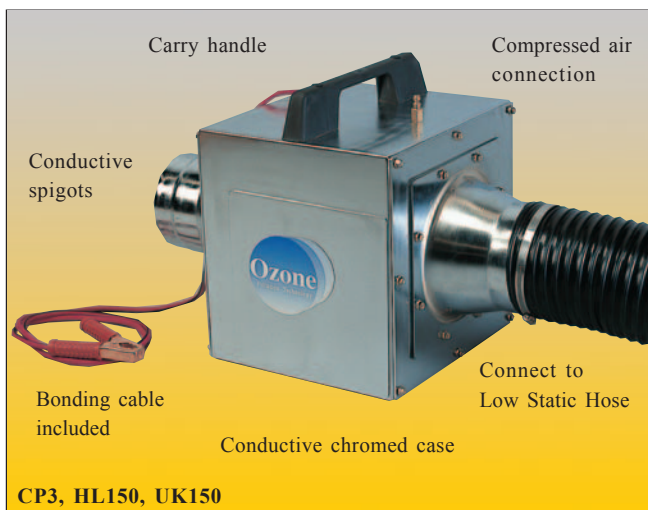
Pneumatic Model

CP3

The compressed air driven CP3 is intrinsically safe and is also conducive for dissipation of static charges.

The advanced design is vastly superior to conventional air driven motor/rotors as there are absolutely no moving parts. No risk of bearing sparks or particulate sparking on rotors. No maintenance necessary. No oiling requirements and no danger of over-pressurising.

Ozone Low Static Hose is lightweight and very flexible. Being carbon impregnated it has much higher static protection than hoses with internal earth wires. Unlike coated hoses, its conductivity remains high over its lifetime. Other accessories include the EP5 Controller (with filter and regulator), for the supply air, and the EL3 Ohm meter to check your system.



Snorkel

NL150

Four alternative spigot connections, so highly versatile (see Application sketches 2, 4, 11 & 15).

No separate 90° bend required

Bracket slips under manhole lid

Handle

Two Snorkels can be joined for long chimneys (see Application sketch 12).

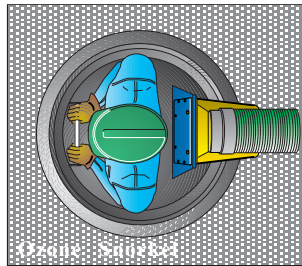
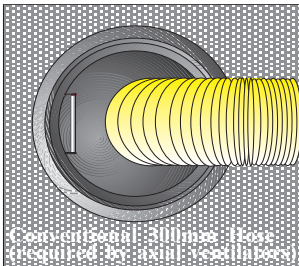
Spigots suit 150mm or 200mm hose

NL150

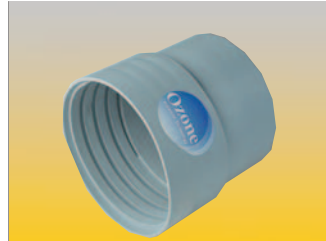
The Ozone Snorkel is a critical component where access into the confined space is restricted.

The profiled shape takes up a mere 100mm of space, whilst the smooth surface ensures operator's apparel does not become caught.

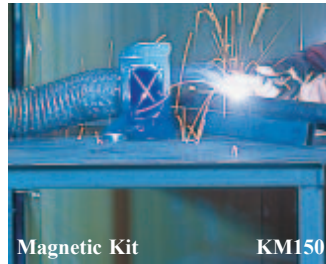
The unique design incorporates four alternate inlet/outlet holes, allowing the system to suit the application and to minimise hose bends.



Couplings, Kits and Hose



Screw-on polymer Hose Cuffs are available in various sizes and guarantee a perfect seal. Ideal for off-site work where hose has to be removed on a regular basis.



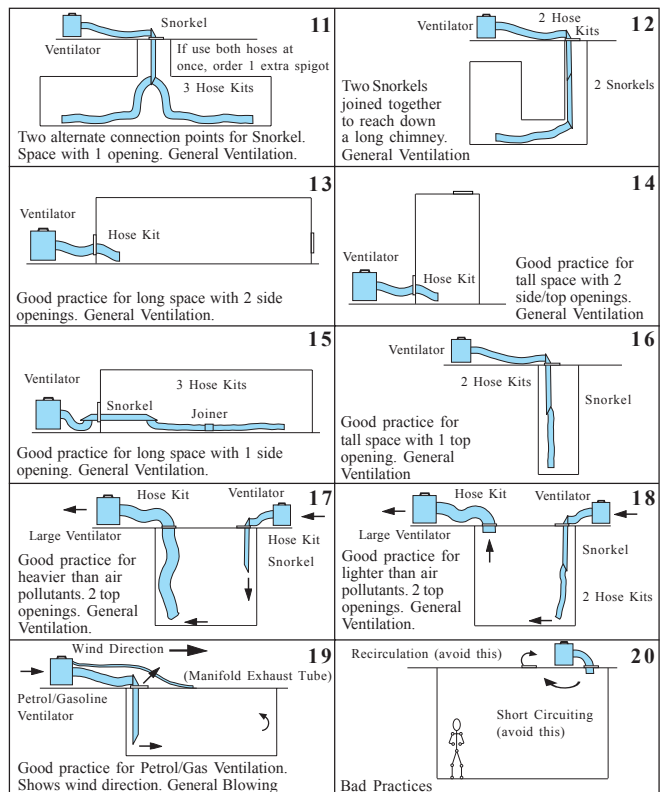
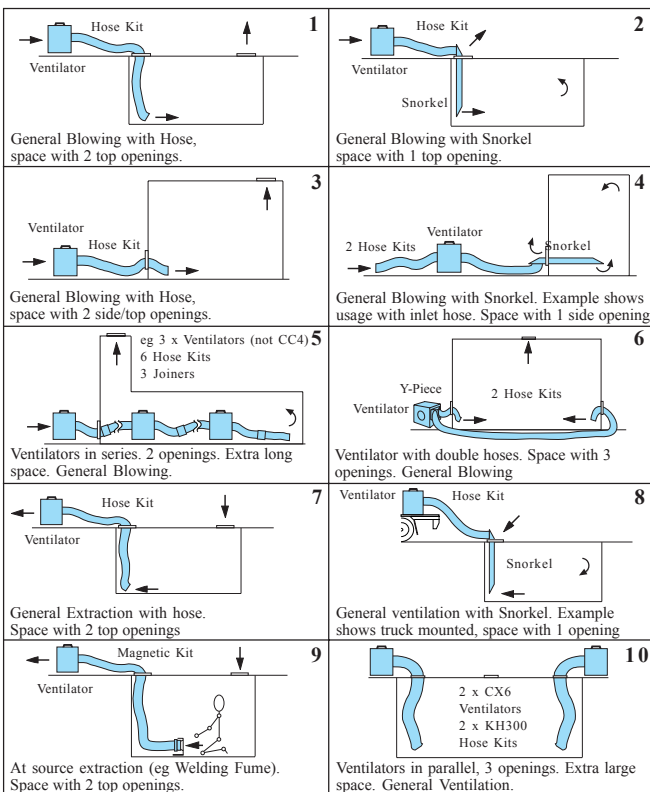
Magnetic Hose Kits are available for extracting pollutant, such as welding fume, at its source.

Four grades of flexible hose add to the versatility of the Ozone range. Regular Duty is compressible and commonly used for blowing fresh air. Heavy Duty hose is typically used for extracting welding fume. Low Static hose is genuinely conductive, whilst the 250°C rated Thermal Duty hose is suitable for hot surfaces.



Applications

Examples of "best practice" for Confined Space Ventilation



Ozone products are shown in blue. All necessary connections are included with the products so they simply bolt together. The "words" in each box fully describe the set of Ozone products to be ordered for a complete system. See Accessories section for codes.

Data Table

Ventilator Code →	CC4	CX3	CX4	CX6	CP3
Type	Petrol/Gasoline	Electric (continuous duty, TEFC, IP55 motor)			Pneumatic (air)
Power (kW)	1.1	0.6	1.1	2.2	Intrinsically safe
Includes 2 spigots, to suit standard hose diameter (mm)	200	150	200	300	150
Dimensions as standard – Width W (mm)	460	360	460	600	360
(case only, no spigots) – Length L (mm)	325	325	325	315	325
– Height H (mm)	460	360	460	600	360
Weight, case only, no spigots (kg)	35	21	30	52	19
Sound Pressure Level, 1 m front, ducted inlet/outlet, inline flow (dBA)	Varies (with rpm)	63	67	74	Varies (with air supply)
Dual Flow Feature (Right Angle or In-line Flow)	Right Angle	Dual Flow	Dual Flow	Dual Flow	In-Line
Can connect Canister	No	Yes	No	No	Yes (not low static)
Maximum Flow when blowing, free inlet/outlet (l/s)	750	450	750	1500	450
Flow with 5m hose (diam in brackets), straight (l/s)	610 (200)	350 (150), 490 (200)	610 (200)	1300 (300)	350 (150)
Flow with 5m hose (diam in brackets) & 2 x 90° bends (l/s)	560 (200)	320 (150), 450 (200)	560 (200)	1200 (300)	320 (150)
Maximum output pressure (Pa)	1600	800	1600	1600	800
Motor completely hidden. Rotor is high pressure centrifugal	Yes	Yes	Yes	Yes	–
Finish: Polymer baked over zinc steel	Yes	Yes	Yes	Yes	Chromed
↓ Options					
– Electrics – Single phase (10m flex, plug)	–	Standard	Standard	Standard	–
3 – Three phase (bare motor terminal)	–	Option	Option	Option	–
– Mounting – Portable: 4 rubber feet, handle	Standard	Standard	Standard	Standard	Standard
S – Mobile: 4 castor wheels, handle	–	Option	Option	–	–

How To Order Ventilators

Options

Choose Ventilator from above table

Extractors: Leave blank if standard, or 3 if three phase

Mounting: Leave blank if standard, or S if mobile castor wheels

Then choose Accessories from the diagrams opposite

Example 1 : Application 16 on previous page, where require Electric Ventilator. Order: CX3, NL150, 2 x KH150

Note: if ordering for overseas, also specify phase, voltage and frequency.

How To Order Accessories

Includes 2 spigots, bracket, handle

Suits 150mm or 200mm Hose Kit or Magnetic Kit

Handheld Canister Suits KH150, KM150, Regular Duty hose

Snorkel NL150

Canister OA150

Diameter Code Standard for Ventilator

150mm	KH150	CX3, CX4, CC4
200mm	KH200	CX4, CC4
300mm	KH300	CX6

Includes 5m Regular Duty Hose and 2 Couplings

Suits CX3, as standard

Hose Kits

Magnetic Kit KM150

Diameter	Clamps	Cuffs	Joiner
150mm	UK150	UC150	UJ150
200mm	UK200	UC200	UJ200
300mm	UK300	UC300	UJ300

Couplings and Joiners

Includes 5m Heavy Duty Hose, 2 Couplings, Magnetic Nozzle

Bolts to any Ventilator inlet or outlet. Suits 150 or 200 Hose Kits

Y Piece SD150

Sliding Damper DS200

Diam (mm)	Spigot Code	CC4	CX3	CX4	CX6	CP3
150	SS150	Option	Std (2)	Option	Option	Std (2)
200	SS200	Std (2)	Option	Std (2)	Option	Option
300	SS300	Option	Option	Option	Std (1)	Option
300	SS302	–	–	–	Std (1)	–

Spigots

Includes Filter and Regulator

Pneumatic Controller EP5

Ohm Meter EL3

Use with low static system

Includes Filter and Regulator

Use with low static system

Ohm Meter EL3

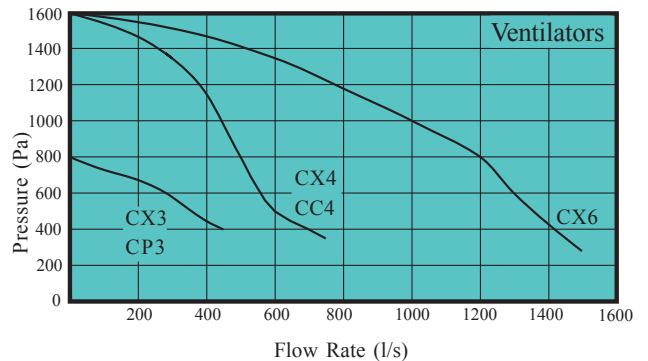
All 5m lengths

Diameter	Regular Duty	Heavy Duty	Low Static	Thermal Duty
150mm	HR150	HH150	HL150	HT150
200mm	HR200	HH200	–	HT200
300mm	HR300	HH300	–	–

Flexible Hose

Technical and Safety notes

- When blowing, locate hose outlet/s near the operator/s and generally 300mm above floor. This helps avoid short circuiting of fresh air supply. Locate inlet of all Ventilators upwind and/or a reasonable distance away from the space opening. (Connect hose to Ventilator inlet, if necessary). If using model CC4, also connect manifold hose and locate its outlet downwind of Ventilator and away from space opening. These practices help avoid displaced gases from confined space or exhaust gases from manifold being recirculated back to Ventilator inlet.
- Monitoring procedure: (a) monitor/test the air before ventilating, (b) begin ventilation far enough in advance so the air will be safe before entering, (c) monitor/test the air just before entry, (d) during occupancy continue ventilation and monitoring/testing.
- Use model CP3 with HL150 and UK150 if intrinsic safety required. Use Heavy Duty Hose if welding. Do not position model CC4 in hazardous area or inside a confined space. If using electric models, and extracting potentially explosive/corrosive/hot pollutants, then configure to right angle flow (so motor out of airstream), ensure no particulate enters the inlet, and fit both inlet and outlet hose.
- If requiring a low static system: order low static hose, electrically bond between ventilator/spigot/hose/snorkel/confined space at all connections, then earth. Check bonding/earthing periodically with Ohm Meter.
- Read Instruction Manual provided before operating products.
- Any request for non-standard Ventilators or Ventilators to be used in hazardous areas or with pollutants which are explosive/flammable/combustible, must be clearly stated in writing on customer's final order and, if accepted, will be restated on Ozone's invoice.
- It is impossible to list all the potential safety issues associated with ventilation. Ozone is a supplier of standard products: not a consultant or contractor. We rely on the customer and their agents to safely select products, design connected systems, and install/operate/maintain these products and systems to suit their pollutant. Customers should consult and comply with all National and State laws/regulations/standards.
- Extractor patents are pending.



Curves show fan total pressure. Set equal to total system losses. This equals internal system losses (hose + bends) plus outlet loss (velocity pressure at system outlet). Tested with diffuse, guarded inlet, CP3 inline flow, other models right angle flow, hose on unguarded outlet (CX3, CP3 150mm diameter, CX4, CC4 200mm, CX6 300mm), CC4 at 2800rpm, AMCA or BS type B.

Useful Conversions

- 1m = 1000mm = 3.38 feet
- 1kg = 1000g = 2.20 pounds
- 1Pa = 0.102mm water = 0.004 inches water
- 1L/s = 3.60m³/hr = 2.12cfm
- 1kW = 1000W = 1.34hp

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