

The Corona ViCount 180 Smoke System



- Smoke Temperature Resistant to 200°C
- Extremely Persistent Smoke
- Recommended for all fixed BA applications and large volume smoke logging / tunnel testing
- Splash Proof Switching
- IP 65 Microprocessor
- Machined Heater block, guaranteed for life
- Continuous Smoke Output

General Specification (approx)	ViCount1300	ViCount 5000
Size (cm)	35 x 19 x44	55 x 19 x 44
Weight ((kg)	13	20
Heat Exchanger (w)	1100w or 2200w	1100w or 2200w
Power Supply	110vAC, 50-60Hz	110vAC, 50-60Hz
Optional	230vAC, 50-60Hz	230vAC, 50-60Hz
Warm up time from cold (min)	4	4
Duration at max output before refill (minutes)	40 (1100w) 22 (2200w)	145 (1100w) 85 (2200w)
Smoke Reservoir capacity (nominal ml)	1300	5000
Smoke output (m ³ /min @ 1m visibility) 1.1kw	0-150	0-150
Smoke output (m ³ /min @ 1m visibility) 2.2kw	0-290	0-290
Smoke Particle dia (micron, mass median dia)	0.2	0.2
Remote operation	Included with every model	Included with every model

The ViCount is one of the world's most capable smoke systems.

The unit produces a food quality oil based smoke entrained in an inert carrier gas stream. The smoke produced is resistant to temperatures of up to 200°C before layering occurs, (compared to 40-50°C for most water based smoke systems) enabling dense smoke concentrations to be achieved and maintained in hot fire simulators throughout the world.

The smoke produced by the ViCount is also extremely persistent, dramatically outlasting even the best water based smokes in ambient temperature conditions. This makes the ViCount the smoke system of choice for large, fixed BA complexes, with or without heat, as well as for a major outdoor / external smoke effect

As with all Corona mains powered systems, the smoke from the ViCount is controllable, from a small wisp to a large plume, and it can be passed through flexible ducting if required.



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Professional Smoke Simulation

The Urban Search and Rescue Training Facility at the UK's Fire Service College called for smoke to be emitted from a rubble pile measuring some 100m x 40m.

We specified the appropriate equipment, recommended the fan specification and ducting configuration, and supervised the commissioning of the smoke system prior to the application of the 100's of tons of rubble.

The finished effect, achieved across the surface area of the rubble pile, is shown in the adjacent photograph.



Serviceability

The ViCount smoke system is virtually maintenance free. At the end of every smoke operation the heat exchangers and filters are automatically purged with a small amount of inert gas, ensuring consistent performance, day in, day out.

All of the components specified in the ViCount have been selected to provide optimum long term performance and reliability, and the heat exchanger within all ViCount systems is switched via a solid state relay. Proportional temperature control minimizes overshoot and undershoot, and maximizes heater life.

Temperature Resistance

ViCount 180 smoke was designed to fulfill the temperature resistant smoke requirement in the latest generation of LPG fuelled hot fire training simulators. Although smoke layering occurs, it starts above 200C, therefore enabling "Hot Fire" and "Smoke" training to be carried out simultaneously



Hot Fire and Smoke Training at HMS Excellent
Courtesy of the Royal Navy

Inert Gas Supply

We recommend the use of CO₂ or N₂ as the propellant gas for these systems. For fixed installations the generators can be run from large capacity freestanding cylinders, which give many hours of continuous operation, are readily available from industrial gas suppliers, and for which the cost of gas is negligible. For portable use, the ViCount is normally supplied with a 2kg CO₂ cylinder and regulator.

Safety

The smoke produced by the ViCount has been rigorously tested by independent laboratories (including the UK's Health and Safety Executive) with regard to both toxicity and flammability (a particularly important aspect given the use of the system in hot fire trainers) to ensure that the resulting smoke is safe. Copies of Concept's Health and Safety Information Packs are available on request.

Running Costs

Since the smoke produced by the ViCount 180 is dramatically more persistent than water based smokes, (a hang time index of 12 applying to the ViCount Smoke, as opposed to 1 for typical water based smokes) the actual volume of smoke produced by these systems is truly exceptional. Normally 1 litre of Smoke Oil 180 can produce the equivalent volume of smoke of 10 litres of typical water based smoke chemicals.

An example; 2 x 5000/180/2.2kw systems would smoke log **the entire length** of a typical road tunnel with smoke (250,000m³ plus). Hence, ViCounts are often specified and used in large scale emergency exercises.

Supplied with

All ViCounts are supplied with a 5 meter Remote Control, regulator, gas connection hose and Operating/Maintenance Instructions.

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