POLLUTION SOLUTION

TECHNICAL SPECIFICATION

Roadvent

A patented system that captures and cleans road based emissions at the point of release, at traffic hotspots, before they are breathed in.



91%
reduction in exposure, measured at a child's face height at UTAC Millbrook Proving Ground

>98.8%
tested minimum average efficiency, ESP + HEPA combined, 0.3–1.0 µm particles

21
patent territories

HOW IT WORKS

Roadvent channels set into the carriageway draw in air at the road surface, close to the exhaust source. A central extraction pipe carries it to a purification cabinet beside the road, where it passes through electrostatic precipitators (ESP), HEPA filters and carbon filters before clean air is released.

The system is modular, so coverage can be matched to the length of road. Our patented technology, built to capture road based emissions where they are released.

CONTROLS & MONITORING

- Automatic shut-down on vehicle impact, vandalism or serious system fault
- Fans increase speed as filters load, to hold suction constant
- Remote monitoring over a 4G connection, for diagnostics and maintenance scheduling

FILTRATION PERFORMANCE

PARTICLE SIZE	ESP	ESP + HEPA
0.3–1.0 µm	76%	**>98.8%**
1.0–3.0 µm	92%	**>99.6%**
3–10 µm	99%	**>99.95%**

Minimum average efficiency, factory test of the ESP units and H11-class HEPA for a 10 m Roadvent section. Factory test, October 2022.

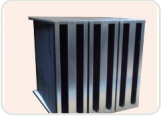
PURIFICATION CABINET (PEC-5053)

FAN	
Fan motor	**11 kW, 3~ 400/690 V D/Y, 50 Hz**
Fan weight	**172 kg**
ELECTROSTATIC PRECIPITATOR (3 × ESP6000)	
Efficiency	**up to 98%**
Power (each)	**50 W max, 220/240 V, 50 Hz**
Dimensions (each)	**1800 × 630 × 640 mm**
Weight (each)	**135 kg**
Housing	**Epoxy-coated galvanised steel**
HEPA FILTER (9 × UHVS 242412N)	
Size (each)	**594 × 594 × 292 mm**
Grades	**H11 to H14**
CARBON FILTER (27 × PA240824)	
Size (each)	**594 × 594 × 597 mm**


Fan


Electrostatic precipitator


HEPA filter


Carbon filter

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