

# Ventex 450CF in action

## Ventilating enclosed spaces

The question of air quality should always be considered when working in tunnels, basements and similar sites where the supply of fresh air is limited. Very often, the work being carried out will further reduce air quality by adding dust or fumes to the air, and these must be dispersed if serious health hazards are to be avoided.

## The risks of working in poor quality air

Working without an adequate supply of fresh air carries many threats. Breathing problems, asthma, lung and heart diseases can all follow if workers breathe air containing harmful gases or dust particles, especially for anyone already susceptible to such conditions. In addition, a deficiency of oxygen in the air causes physical and mental fatigue, increasing the likelihood of accidents.



## The VENTEX 450CF centrifugal fan

A powerful unit ideal for sites where workers are operating in enclosed spaces without good ventilation, it can be used to supply fresh air or extract harmful fumes

- + Skid mounted 415v centrifugal fan
- + Airflow rating of 20,500 m<sup>3</sup> /hr
- + Effective through long lengths of flexible ducting
- + Centrifugal design enable safe extraction of hot/flammable fumes

Case study overleaf >>

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## Solving a complex ventilation problem

Scabbling inside a tunnel in Manchester would inevitably generate a large amount of airborne dust, significantly impairing the air quality for the workers. Ventilation was therefore essential, but had to be set up in such a way that access in and out of the tunnel was not impaired, either for workers or for engineering trains. Although not a particularly long tunnel, strong local air currents further complicated the problem and would need to be allowed for.

RVT were called in to design and implement a ventilation solution that would allow work to proceed without the site workers being at risk.

## VENTEX 450CF fans deliver

Two Ventex 450CFs were sited just outside the tunnel mouth and ducting fed about 15 metres into the tunnel. This created a 'Venturi effect', whereby the air ducted into the tunnel mouth moved with such pressure that other air was drawn into the flow, effectively turning the entire tunnel into a duct, and ensuring a steady airflow was maintained throughout its whole length.

In addition, the two groups of three operatives at work were each issued with a Dustex Mini-Dustmaster to capture as much dust as possible close to its source.

- Two Ventex 450CF fans were positioned either side of the tracks, enabling unimpeded access to the tunnel during site operations



VENTEX®



## 450CF

The Ventex 450CF provides a consistent flow of fresh air over long duct runs.



To find out more, contact us on **0808 178 3286** or [info@rvtgroup.co.uk](mailto:info@rvtgroup.co.uk)