



TOUGHVENT



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RUGGED & DURABLE UNDERGROUND VENTILATION FANS

Toughvent fans are a purpose-built range of underground mining ventilation fans and products that would be strong enough to withstand the most adverse, corrosive underground conditions. The Toughvent range was designed and developed to answer the need of the mining industry for a hardwearing, cutting-edge product. With a design based on the latest ventilation technology, the Toughvent range offers performance and efficiency with a robust, durable approach.

The Toughvent fan range has been designed for use with ABC flexible ducting for best results. Toughvent fans have stable performance curves with predictable duty points due to the exact tolerances applied during the manufacturing process.

In highly corrosive, abrasive and demanding underground Mining Operation Environments, Toughvent fans are rugged, durable and long wearing enough to meet the challenge, offering you the toughest ventilation solution.

THE TOUGHER ADVANTAGE

TECHNOLOGY

Toughvent's aerodynamic performance is optimised using a proprietary computational fluid design (CFD) code developed specifically for fans by the University of Cape Town.

EFFICIENCY

Toughvent's aerodynamically tested and optimised design provides a ventilation solution that delivers maximum air power at the highest energy efficiencies.

SAFETY

The Toughvent range has been designed according to accepted engineering industry practices and complies with all mining and legislative safety requirements. All Toughvent fans are equipped with heavy duty safety screens and luminous safety enhanced paint.

PERFORMANCE

ABC Ventilation offers a turnkey solution to underground ventilation challenges. Rather than being just a seller of ducting and fans, we aim to combine numerous disciplines to provide a total system solution.

MAINTENANCE

The Toughvent fan range is designed to be manufactured using an all-steel process in order to offer an extended mean time between service intervals.

SERVICE

ABC Ventilation carries stock of all critical components and will engage with approved service providers in remote regions to ensure that our products continue running to OEM specs.

THE TOUGHVENT RANGE

The Toughvent range is suitable for use in auxiliary applications and includes booster fans and bulk air cooler fans for use in underground operations.



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Toughvent Products

- 305mm Jet fan (0.75kW)
- 406mm Auxiliary fan (4kW)
- 406mm Jet fan (4kW)
- 572mm Jet fan (7.5kW, 11kW, 15kW & 18.5kW)
- 572mm Auxiliary fan (7.5kW, 11kW, 15kW & 18.5kW)
- 762mm Jet fan (22kW, 45kW)
- 762mm Auxiliary fan (22kW, 45kW)
- 915mm Auxiliary fan (45kW & 55kW)
- 1016mm Auxiliary fan (75kW, 90kW & 110kW)
- 1200mm Auxiliary fan (55kW, 75kW, 90kW & 110kW)
- 1400mm Auxiliary fan (90kW, 110kW & 160kW)
- 1600mm Booster/BAC fan (110kW, 160kW, 185kW, 200kW & 225kW)
- Downstream air straighteners
- Self-closing doors
- Inlet bell mouth
- Spacer ducts with access doors
- Bifurcations and Trifurcations
- Fan connectors

Toughest components for reliable performance:

- Integral inlet guide vane and aerofoil impeller nose cone.
- Variable pitch full aerofoil section cast steel blades.
- Fabricated steel hub assembly.
- Steel aerofoil section rotor nacelle assembly.
- Heavy duty rollover terminal box to IP65.

Innovative design to meet the ventilation needs of underground mining operations:

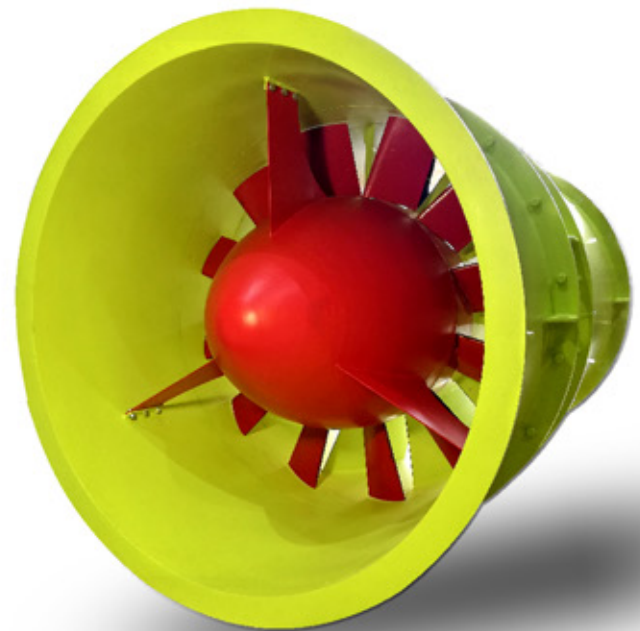
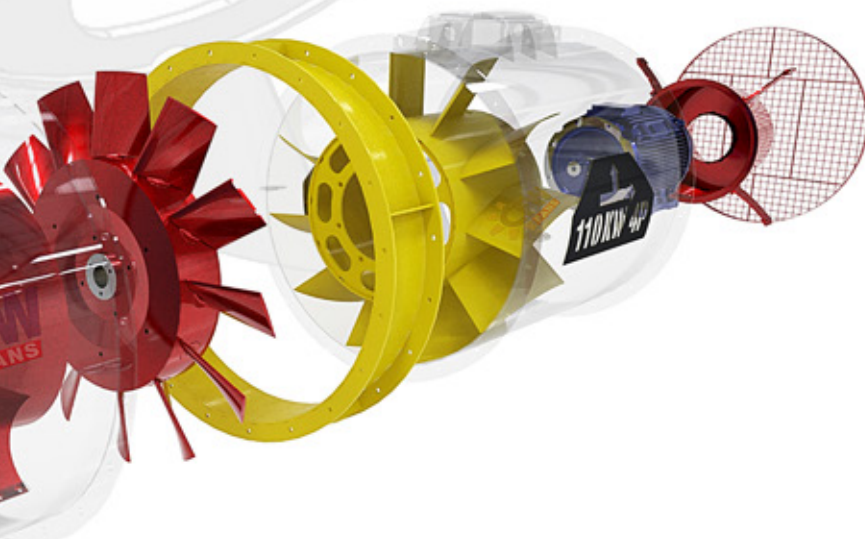
- Upstream guide vane to pre swirl air onto impeller.
- CAD enhanced nose cone on the impeller for improved efficiency.

- Variable pitch steel impeller allowing for task-specific duty application.
- Steel rotor assembly fully welded to the inside of the casing and onto a motor mount nacelle adding structural strength.
- Modular impeller track providing double protection for the fan on this critical area.
- Motor is flange mounted at the drive end bearing, onto a machined surface on the nacelle and also has fabricated struts, supporting the back of the motor.
- An optional air straightener can be fitted down stream of the impeller to prevent air swirl onto flexible ducting.

MAINTENANCE & WARRANTIES

The Toughvent range carries an 18 month mechanical warranty and 12 month electrical warranty excluding damage caused by mishandling or electrical reticulation faults from the incoming supply.

The Toughvent range is fully supported and backed up by ABC Ventilation Systems. We have a comprehensive repair facility carrying stock of all critical spares and components. All repairs on Toughvent products are done in accordance with OEM specifications giving the end user peace of mind that a repaired product will perform as well as a new one.





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TOUGHVENT



+13066534303

info@abcventilation.com

www.abcventilation.com

ABC Ventilation Systems

1802 Quebec Avenue, Saskatoon, Canada S7K 1W2

ABC
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LEADERS IN FAN TECHNOLOGY
CFW
FANS