

# AXICENT

## Central Tunnel Fans





*4m dia Axial Fans supplied to the Channel Tunnel. Motor Power 900kW. Air Flow 300 m<sup>3</sup>/sec. Blade pitch control during operation. 100% reversibility.*

# AXICENT - Axial Flow Fan for Central Tunnel Ventilation

The AXICENT range of axial fans, specially developed for tunnel ventilation applications, combines 70 years of experience in advanced air handling with the very latest fan technology.

Advanced blade geometries and structural fan design ensure maximum fan performance as well as low sound power and high efficiency.

Aerodynamic and acoustic characteristics have been thoroughly analysed and verified by testing in ABB Ventilation Products AB, Division Fläkt Industris AMCA registered industrial fan laboratory.

AXICENT is available in 3 Base Versions:

## *Unidirectional Vane Axial Fan*

incorporating peak performance optimized for the highest aerodynamic efficiency in one direction at low sound power. This fan will give up to 60% in reverse flow. Reverse flow by changing direction of rotation. Blade pitch adjustment with the fan at rest.

## *Blade Reversing Vane Axial Fan*

with blade pitch adjustment during operation for flow variation and up to 90-100% reversibility.

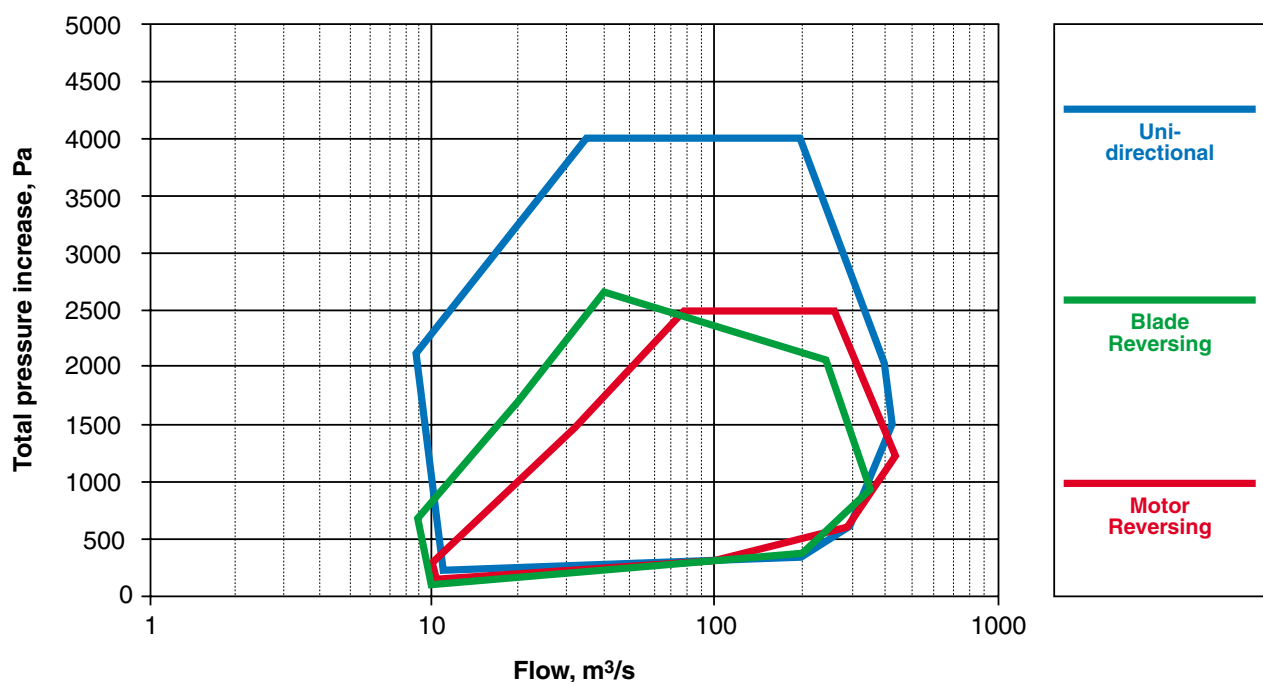
## *Motor Reversing Tube Axial Fan*

blades profiled to give 90-100% reverse flow by changing direction of rotation whilst maintaining the best forward flow efficiency. Blade pitch adjustment with the fan at rest.

## ANTI-STALL RING

All the above AXICENT fans are available with the ABB ANTI-STALL RING as an optional extra.

## AXICENT Performance Range



# ***AXICENT - the axial fan for***

## ***Road Tunnels***

AXICENT is the fan for road tunnel ventilation systems.

The fan with the possibility for unidirectional or bidirectional flow is suitable for all types of road tunnel ventilation systems and can be used as both supply and exhaust fan.

AXICENT is designed for use in transverse and semi transverse ventilation systems and also in combination with ABB AXIJET Jet Fans in longitudinal ventilation systems.

With its design flexibility AXICENT can be placed horizontally or vertically.

Designed and tested for elevated temperature conditions AXICENT meets the requirements for fan operation during emergency conditions.



# ***Central Tunnel Fan applications***

## ***Rail Tunnels and Metro Systems***

Equipped with the ANTI-STALL RING the AXICENT range of fans is the perfect choice for rail tunnels and metro systems.

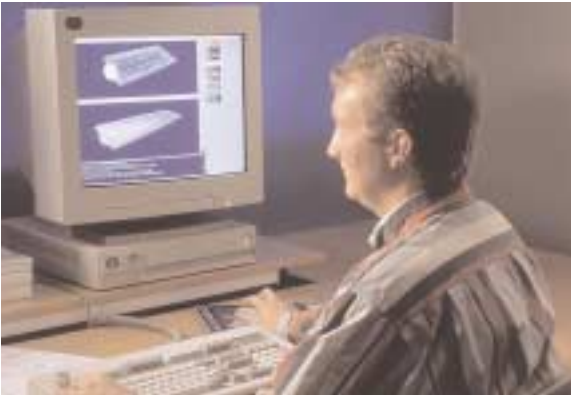
The piston effect of tight fitting trains in tunnels and the resulting pressure transients present arduous and difficult conditions for the ventilation fans.

AXICENT is designed to withstand these conditions and the ANTI-STALL RING will ensure stable flow conditions at all times.

AXICENT can be used in both supply and extract air conditions.

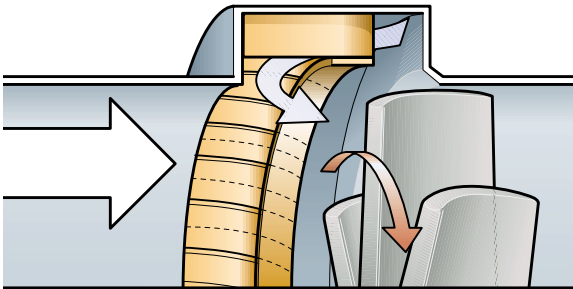
Designed and proved for elevated temperature conditions AXICENT meets the requirements for fan operation during emergency conditions.





All over the world Road Tunnels, Train Tunnels and Metro Systems are handling rising volumes of traffic. This has created an ever increasing demand for better air quality and safety conditions for those travelling in tunnels.

Fans which are the centre of every ventilation system must also guarantee safety in the event of Fire by ventilating and exhausting emissions effectively. Extensive design experience in Aerodynamics, Acoustics and Controls ensures the optimum solution for tunnel ventilation systems.



Tunnel Fans are very often subjected to severe aero-dynamic loads in the form of pressure transients generated by train movement in the tunnel. Anti-Stall ring diverts and stabilizes turbulent air streams and returns them to the direction of the main air flow.

An ANTI-STALL Fan will ensure stable operation under all conditions.

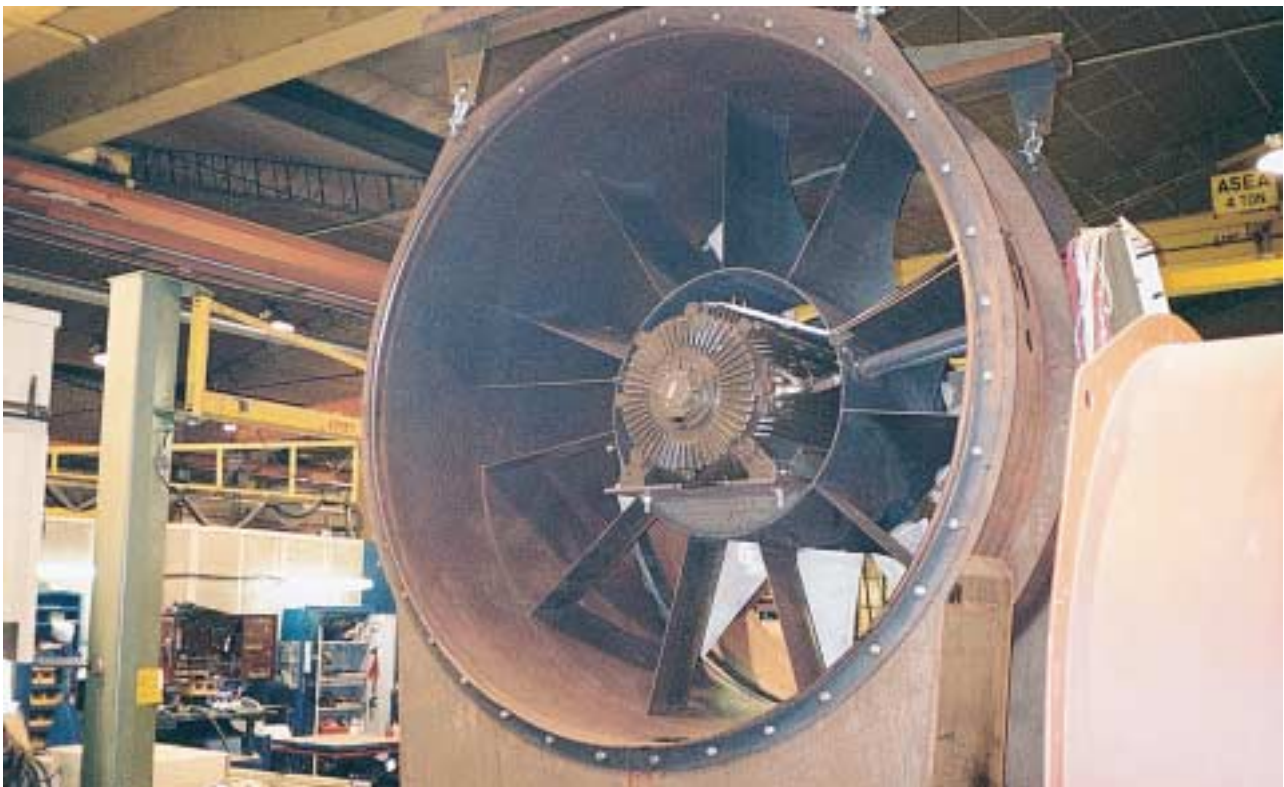


AMCA registered industrial fan laboratory is one of the most highly accredited in the world.

The Technical Centre performs tests and measurements in accordance with ISO 5801 as well as continuous aerodynamic and acoustic research and development.

# ***The first choice for your tunnel ventilation system***

- 70 years of experience in advanced air handling technology.
- Comprehensive system know how.
- Complete product range.
- AMCA registered technical centre and laboratory.
- ISO 9001 quality assurance certificate.
- Reliable solutions for high system availability.
- Optimized total operating economy.
- Financial resources of a large organization.
- Worldwide presence.



Fan after elevated temperature test of 250°C for 1 hour.  
Most fans used in tunnel applications have an elevated temperature operation requirement.

Test for fans up to 3.5m dia.

