

Building & Industry

NOVENCO

SCHAKO Group

Heinenoord Tunnel renovation – NOVENCO® fans ensure safety and reliability

The Heinenoord Tunnel on the A29 opened in 1969 measuring 614 meters, and underwent a major renovation in 2023–2024. The modernisation included new technical systems and a central escape passage that meets the latest safety requirements. With these upgrades, the tunnel is prepared to serve road users safely and reliably for decades.

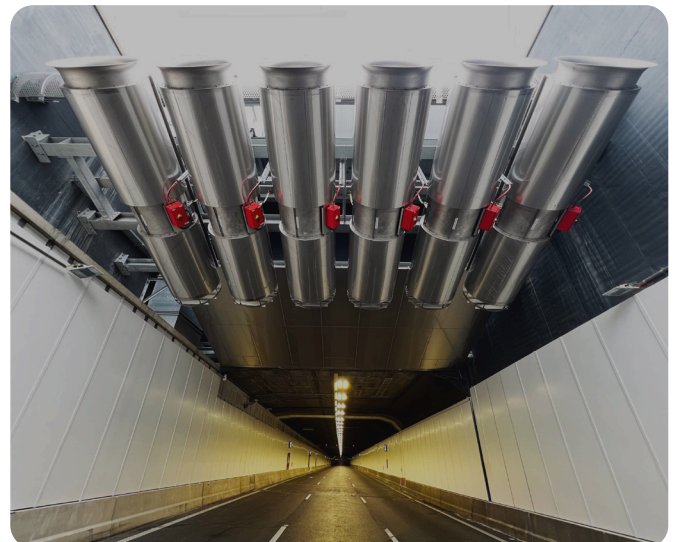
The project

The Heinenoord Tunnel is a key link between Rotterdam and the Zeeland and South Holland islands. Rijkswaterstaat upgraded the aging systems of the tunnel to improve safety, reliability and operational performance, including the addition of a secure escape route between the two tubes.

The challenge

The tunnel required a complete ventilation and pressurisation system to secure safe evacuation

and ensure effective smoke control. The outdated infrastructure demanded reliable, high-performance fans to meet contemporary strict safety standards and operate efficiently in challenging conditions.



Safety and reliability start at the tunnel entrance



Heinenoord Tunnel, The Netherlands

The solution

NOVENCO Building & Industry supplied advanced tunnel ventilation solutions tailored to the project.

Tunnel ventilation and smoke control

19 × AUR-1250 jet fans with 55 kW motors, installed throughout the tunnel.

Escape tunnel pressurisation

- 2 × AZN-1250 fans with 55 kW motors
- 2 × AZL-1000 fans with 30 kW motors

Facts:

- Efficient ventilation and smoke control throughout the tunnel
- Fully pressurised escape tunnel
- Extended operational life of the tunnel

Both AZN and AZL fans are part of NOVENCO's ZerAx fan range, known for high efficiency and reliability. The AUR jet fans are built on the NovAx™ range and offer outstanding efficiency compared to alternatives.

NOVENCO designed, supplied and installed the systems, ensuring seamless integration with the renovated tunnel infrastructure while maximising safety, performance and energy efficiency.



Installation of NOVENCO fans along the tunnel ceiling for ventilation and smoke control



Reliable ventilation supporting safe tunnel operation

The results

With NOVENCO's systems in place, the Heinenoord Tunnel meets the highest standards of safety and reliability. The pressurisation system keeps the escape tunnel safe and clear for evacuation, and the jet fans deliver effective ventilation and smoke control throughout the tunnel. These upgrades extend the lifespan of the tunnel and strengthen its role as a critical regional artery.

The project shows NOVENCO's ability to deliver dependable, energy-efficient ventilation solutions for complex infrastructure.



Last inspections underway before operational use

"The renovation of the Heinenoord Tunnel was a complex project with strict safety and reliability requirements. NOVENCO's ventilation solutions have been essential in meeting these goals. The jet fans provide reliable ventilation and smoke control, and the pressurisation system ensures a safe evacuation route. With NOVENCO's support, we can now operate the tunnel with confidence in that it meets the highest safety standards and will serve road users reliably for many years to come."

*Jurgen van den Bos & Rick Schreurs,
Operational Manager & Design Leader/Technical
Manager, SPIE Nederland B.V.*