



Tunnel portal Mebo



Entry and exit ramps at the railway station Meran



Underground roundabout, exit to the railway station



Fire test during commissioning

## Description

In order to reduce the surface traffic in Meran, Alto Adige, a North-West-Bypass shall be built. A bi-directional traffic tunnel of 3.25 km length will connect the SS44 from the northern Passeier valley to the Vinschgau road SS38 from Meran to Bozen.

The realisation of the project is divided into two stages. The first stage includes a 1 km long tunnel between the portal “Mebo” and the railway station. This first section was opened to traffic in 2013. The second stage includes the tunnel section between the station and the portal “Zenoberg”. It will be 2.25 km long. The completed bypass shall be opened to traffic in 2020.

The tunnel ventilation concept consists of section-wise longitudinal ventilation for normal operation. For smoke control and in special operation regimes, a local extraction through remote controlled dampers is used. The mechanical ventilation equipment consists of 4 exhaust fans, 40 smoke dampers and 35 jet fans.

## Services

- Evaluation of tunnel ventilation concept for all tunnel sections
- Air dispersion calculation, assessment of air pollution in the vicinity of the tunnel portals
- Detailed ventilation design for normal operation, smoke control and special operation regimes
- Ventilation design in consideration of all intermediate stages of project delivery
- Technical specification of ventilation equipment
- Tunnel ventilation control system functional description prepared as scoping document for the control system supplier
- Numerical calculation CFD for an assessment of jet fan efficiency on exit ramps with limited space
- Numerical calculation CFD for the assessment of smoke control in the special tunnel section near the exit ramps
- Technical consultancy services during project delivery and commissioning