



## Skymetro Zurich Airport (CH) Design and realisation of fire ventilation system



Skymetro in station



Reversible ventilator



Roof cover for inlet and exhaust

### Description

The Skymetro or Personal Transport System (PTS) connects the newly built terminal E of Zurich International Airport with the Air Side Center. It was taken into service in 2003.

The Skymetro commutes between the terminals in two 1 km long parallel tunnel tubes.

The risk of fire in the Skymetro has been minimised, using air-cushion wagons driven by cable drives and built by using non-flammable materials.

In case of fire in the tunnel, the safety concept guarantees that passengers can escape through a smoke-free zone. This is accomplished by moving the smoke in the tunnel into one direction using a fire ventilation fan. The passengers are directed in the opposite direction.

By means of the fan, a sufficient flow velocity to avoid back-layering is reached. The control of the fire ventilation system takes into account the air velocity and direction in both tunnel tubes, the position and velocity of the trains and the position of the fire.

### Services

HBI Haerter Consulting Engineers was responsible for the following services:

- Definition of ventilation objectives
- Ventilation concept
- Numerical check of efficiency
- Detailed planning of control-system equipment and interfaces
- Preparation of tender documents
- Evaluation of offers
- Management and supervision of construction works
- Site acceptance tests