

Noise protection hangar, Zurich Airport

Optimum reduction of engine noise

G+H constructed a new noise protection hangar on behalf of Zurich Airport to minimize the noise affecting the surrounding municipalities when conducting aircraft engine tests.



Insulation

Fire Protection

Noise Control

Following the construction of similar facilities in Munich, Hamburg and Leipzig (Germany), Zurich Airport (Switzerland) became the latest to receive its own noise protection hangar. It is designed to conduct engine tests without generating unacceptable noise levels that disturb the surrounding area. The closed hangar features state-of-the-art technology and is designed to accommodate all aircraft types up to the size of a Boeing 747-8 (wingspan up to 68.5 m).

CUSTOMER

Flughafen Zürich AG (Zurich Airport),
Switzerland

PROJECT

Construction of a noise protection
hangar

PERIOD OF EXECUTION

10/2012–06/2014

DIMENSIONS

Height: 24 m
Width: 82 m
Length: 126 m



The services provided by G+H Noise Control included the construction of the hangar as well as supplying the splitter silencers for the two 550 t hangar gates and the jet blast deflector, which directs the exhaust jet from the aircraft engines upwards and out of the rear of the hall. The roof is supported by an external steel framework construction consisting of spatial and flat sections as well as supporting elements over a maximum span of approx. 78 m. There are no supporting elements inside

the hangar. This special hangar design meets two key requirements. Firstly, the open structure lets in the large volume of air required during the engine tests without generating turbulence. Secondly, the closed hangar design significantly reduces noise levels outside the building. The noise protection hangar thus ensures optimum noise reduction to prevent disturbance of surrounding residential areas by jet engine tests.

TASK

- Comply with the acoustic and aerodynamic specifications
- Well-organized logistics processes for punctual delivery of the required components
- Implementation at low cost

SOLUTION

- Construction of a closed noise protection hangar
- Installation of splitter silencers for the two 550 t hangar gates and the jet blast deflector
- Installation of highly effective acoustic cladding

ADVANTAGES

- Noise reduction up to 30 dB
- Engine tests can be conducted 24/7 and in almost all wind conditions