

Nidec PSA emotors Upgrade with advanced sound insulation

G+H Noise Control has clad a state-of-the-art semi-anechoic room for the acoustic testing of electric drive units in Poissy, France.



Insulation

Fire protection

Sound insulation

For the customer Nidec PSA emotors, specialised in the manufacture of automotive electric drive units, G+H Noise Control clad a semi-anechoic room for acoustic testing with modified ASONAD® wedge absorber technology. In buildings, this technology provides very high sound reduction and keeps the noise/hindrance level to a very low range. The customer requirement was for an acoustic free field with a minimum radius of 2.2 m inside the room in the frequency range from 200 Hz to 12.5 kHz.

CUSTOMER

AVL List GmbH
Nidec PSA emotors

CONSTRUCTION PERIOD

11/2020 – 09/2021

SERVICES

Cladding a semi-anechoic room, including crane system and lighting

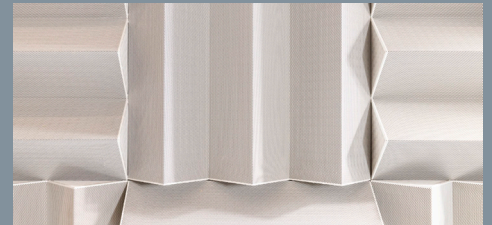
INSTALLED PRODUCTS

- ASONAD® MF wedge absorbers
- ASONAD® ML wedge absorbers
- SONEX® W absorbers
- Combined sound insulation and fire protection door TSS 6



A hybrid version of the proven G+H ASONAD® wedge absorber technology, consisting of both perforated sheet and mineral wool wedges, was used for the cladding of this semi-anechoic room, which offers a high degree of sound reduction. The perforated sheet wedges used for this were adapted to specific customer requirements. Using wedge absorbers attenuates sound reflections and significantly reduces the sound reverberation time. The G+H team additionally installed a combined sound insulation and fire protection door.

The crane system was clad with special soundproofing cushions based on ASONAD® MF. The scope of delivery also included the lighting and acoustic cladding of the dome protruding into the room with SONEX® W absorbers. After completion, the required acceptance measurement was carried out by the G+H Acoustic Competence Center and compliance with the specified customer requirements was fully demonstrated.



TASK

- Acoustic cladding of the room and noise level reduction
- Acoustic cladding of the dome
- Cladding of the crane track
- Compliance with fire protection regulations (sprinkler integration)

SOLUTION

- Erection of a semi-anechoic room
- ASONAD® MF and ML hybrid wedge absorbers for a nominal cut-off frequency of 160 Hz
- Acoustic cladding of the crane system using ASONAD® MF
- Installation of a combined fire protection and sound insulation door

BENEFITS

- Curbing sound reflections
- Reducing the noise/hindrance level
- Custom solutions for optimal sound insulation
- Verification measurement according to ISO 26101 and ISO 3745 by G+H employees