

IAC Acoustics

Corporate Overview

Passionate
Collaborative
Innovative
Trusted
Empowered
Energised

www.iac-gmbh.de



making the world a quieter place

Introduction

Founded on an unrivalled history of engineering with some of the most pioneering discoveries in the industry, the IAC Acoustics brand is synonymous with technological innovation.

From controlling noise at a power station to tuning the sound in a TV or radio studio, IAC Acoustics has had a positive impact on society and helped to shape what can be achieved to make speech more intelligible, music more enjoyable, reduce the impact of industrial noise and protect people's sense of hearing.

The continual success of our products and services over the decades has brought the brand a reputation for quality and reliability among customers, whether they are multinational corporations or independent family businesses. This is supported by the expertise and passion of our workforce, the people behind the products, including designers, engineers and industry specialists.

To face the ever increasing noise reduction demands of the future, we will strive to further enhance our ability to reduce excessive noise. We aim to focus on developing tomorrow's solution today, innovating faster and delivering solutions that meet the requirements of the next generation. In doing so, we will stay true to our key values and founding philosophy to make the world a quieter place.



Our Fields

Power & Energy



Page 4 Power & Energy

We engineer, develop, manufacture and install innovative solutions to solve noise related issues resulting from power generation. From exhausts for diesel and gas generators, to tailored acoustic packages for gas turbines and fossil fuel extraction, we can provide a complete solution to reducing the noise impact on neighbouring communities.

Engineering Services



Page 6 Engineering Services

In addition to providing the best possible products for reducing noise, we can also analyse and recommend solutions to noise through simulation and acoustic analysis. By monitoring industrial sites such as process plants or airports, we can provide the best possible advice on how to address noise complaints and through the use of advanced software, analyse noise to determine their source.

Acoustic Test Facilities



Page 8 Acoustic Test Facilities

Our acoustic test facilities perform exactly how they are specified. To produce consistent results, no matter what the test subject, to ensure our clients can make reliable and accurate measurements to enhance their products. We do this safe in the knowledge that all our facilities are constructed using our own range products, each with an individually certified acoustic performance rating.

Aviation



Page 10 Aviation

Facilities for testing aero-engines and aircraft are not only complex, involving data acquisition, aerodynamics and specialist materials, but also need to be quiet. We can provide the optimum solution to aviation testing, whether the engines are on or separate from the aircraft.

Commercial Construction



Page 12 Commercial Construction

All modern commercial buildings have an element of acoustic treatments applied. Whether its dealing with noise associated with air handling systems, reducing the echo of large open spaces or containing sound within certain rooms or zones, we can help.

Sound Proof Rooms and Booths



Page 14 Sound Proof Rooms & Booths

Sometimes, specific acoustic environments are required for testing, singing, filming or even interviewing. From audiology booths, to music practice rooms, broadcast studios and police questioning rooms, we can help you choose the exact acoustic requirements to suit your needs. Plus we will adhere to any legislation needed before commissioning.

Mining



Page 16 Mining

Reducing the noise impact on neighbouring communities and protecting the hearing of on-site personnel is a major concern for mining organisations. By ensuring the large machinery used is as quiet as possible, complaints are reduced from those living nearby allowing larger areas can be excavated, maximising efficiency.

Key Products for the following applications:

Gas Turbines

- Exhaust silencers
- Intake silencers
- Ventilation silencers
- Acoustic enclosures
- Filtration systems
- Complete packaging service available

Diesel / Gas Reciprocating Engines

- Exhaust silencers
- Ventilation packages
- Acoustic enclosures
- Acoustic ISO containers
- Catalytic converters (SCR)
- Silencer accessories

HRSG / Process Plants

- Acoustic enclosures
- Vent / blow-down silencers

Power & Energy

For quieter electricity generation.

Power & Energy is the largest division of IAC Acoustics and offers a unique proposition to generator manufacturers and engine packagers as we are able to offer a truly global service. No matter what engine, whatever the acoustic requirements, wherever the generator will be sold. Because of our global coverage both commercial and operations, we are able to offer the best possible solution, whether that be supplied at the point of manufacture, or retrofitted once installed on site.

In recent years we have acquired some of the best exhaust manufacturers worldwide including GT Exhaust, Maxim, Silex, Boet-Stopson and Colpro. These product ranges now mean we are able to offer the widest possible choice to our customers and enhance our relationships with end users through our local sales support network. If the need arises, we can always engineer a bespoke solution to a particular noise problem. We've been around for over 60 years as a group and some of our acquired organisations have been established even longer, so rest assured that you're in good company.



Acoustic diesel generator enclosure



Gas turbine acoustic container package

Key Services Offered:

Acoustic Testing

- Independent acoustic laboratories for product testing

Environmental Analysis

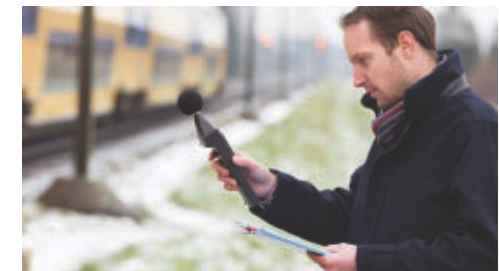
- Audibility testing
- Wind farm impact assessments
- Acoustic measuring
- Acoustic monitoring
- Acoustic surveys of industrial sites
- Alarm audibility testing for critical buildings such as nuclear plants
- Pulsation and vibration analysis of pipelines
- Acoustic data processing / noise detection

Aerodynamic Analysis

Engineering Services

Measuring unwanted noise, and calculating the best solution to solve it.

In addition to producing some of the best performing products to reduce unwanted noise, we can also aid in measuring the effectiveness of current sound proofing and recommend alternative solutions. By analysing and modelling the noise from industrial buildings, power plants, wind farms and airports, we can determine what actions are needed to reduce noise and make predictions for new sites to ensure potential noise is catered for prior to completion. Our unique software which utilises over 20 years of past data is able to determine the source of noise at certain frequencies, meaning we can tell if noise complaints actually relate to a particular problem or not. In addition to field based analysis and measurement, we also have the ability to carry out acoustic testing in our independently accredited aero-acoustic laboratories.



Acoustic Test Facilities

World-class testing facilities for acoustic R&D and certification.

Acoustic test facilities by their very nature are typically very quiet spaces. We've delivered some of the quietest ones across the world and made some discoveries along the way that have changed the industry. From the first metal-encased anechoic wedge to a complete acoustic air-handling control system, we are continually improving the way our facilities are constructed, enabling our clients to make the most accurate measurements for their own product improvement. Whether it be pinpointing noise sources in a diesel generator or testing the effectiveness of acoustic door seals, we can design the best possible facility for your needs.

Everything from the wall linings, doors, windows, floors and ceilings are all manufactured by us, meaning we can rely on their performance and our clients can rest assured that their facility will perform as specified. For some of our larger facilities, we can even supply our own ventilation system, meaning subjects like engines can be cooled whilst on test to improve efficiency and create a better simulation.



Facilities offered:

Automotive

- Pass-by chambers
- VSAC (Vehicle Semi-Anechoic Chambers)
- ESAC (Engine Semi-Anechoic Chambers)
- Powertrain rooms
- Listening rooms
- Quiet rooms
- Driveline chambers
- NVH laboratories
- Modal analysis facilities
- Shake and rattle chambers
- Airbag testing rooms

OEM / Industrial

- Anechoic chambers
- Hemi-anechoic chambers
- Reverberation rooms
- Mini / mobile anechoic chambers
- Transmission suites

Education / Acoustic Research

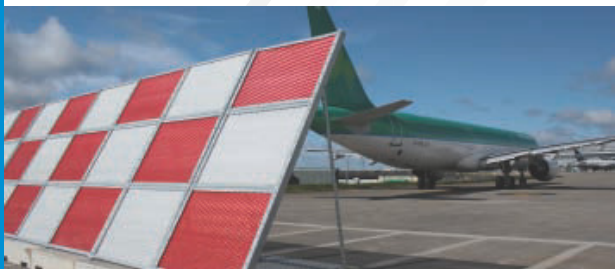
- Anechoic chambers (broadband)
- Anechoic chambers (puretone)
- Hemi anechoic chambers

Right:
Volvo hemi-anechoic Chamber

Below left:
Lorient transmission suite for acoustic seal testing



Aviation



Left:
Dublin Airport angled
mesh jet wash deflector

Right:
British Airways 747 on test
in Code F sized Ground
Run-up Enclosure (GRE)

From A380s to APUs, our facilities cater for all kinds of aero-engine testing. Whether testing an engine from a military helicopter or doing a full power ground test of an A380, we can provide the perfect facility to carry out all your testing needs. For aero-engine testing, we can provide anything from an acoustic package to make your facility quieter, to a full turnkey solution. Working closely with you, we can design the best possible facility to suit your budget, safe in the knowledge that it will perform aerodynamically and be as quiet as possible. Once facilities are up and running, we can also help to support, maintain and carry out calibration if required.

When testing aircraft on the ground, special attention needs to be paid, not only to the resulting noise, but also the damaging effects of jet wash. Our Ground Run-up Enclosures provide a safe environment to test aircraft of any size. By reducing the noise impact of ground running and ejecting the thrust up and away from the facility, aircraft can be tested more often, increasing efficiency. We can also aid in reducing jet thrust with a range of blast barriers for protection against taxiing aircraft for better utilisation of apron space. Our barriers enable aircraft to manoeuvre closer to buildings, roads, people and vehicles without causing damage or injury.



Facilities offered:

Aero-engine

- Aero-engine test facilities
- APU test cells
- Data acquisition
- Mobile engine test facilities
- Facility management, support and maintenance

Airports

- Ground Run-up Enclosures (GRES)
- Jet blast deflectors / barriers
 - Mesh angled
 - Mesh vertical
 - Solid angled
 - Solid vertical
- Acoustic barriers
- Acoustic head-of-stand cabins



Right:
Multi-engine aero-engine
test facility for H+S Aviation



Commercial Construction

Key Products:

Doors & Windows

- Architectural acoustic doors from 47dB – 64dB noise reduction
- Acoustic windows
- Acoustic sliding doors
- Acoustic partition systems

HVAC

- Duct silencers
- Acoustic louvres
- Acoustic air handling units (AHUs)
- Acoustic splitters

Acoustic Panels

- Rugged tuning panels
- Foam absorber panels
- Acoustic walls, barriers & screens

High performance components for all kinds of commercial building.

Our range of acoustic products for commercial buildings can be used individually or as part of a complete package to minimise noise. Air handling systems can be quietened using our comprehensive range of duct silencers to reduce the noise from fans, chillers and pumps. Mechanical plant can also be shielded using barriers and acoustic louvred screens. These products not only serve a functional purpose, but are also aesthetically pleasing. Noise-lock™, our range of acoustic doors and windows is the ideal solution to shielding unwanted noise or containing sound within a room or space whether they be for internal or external use, architectural or industrial. Complementing our doors and windows is Moduline™, our range of acoustic construction panels to ensure an effective acoustic performance between rooms.



Double acoustic doorset installed at IMG

Soundproof Rooms & Booths

Specialist environments for testing, broadcasting and recording.

Our audiology facilities cater for all kinds of hearing examinations. Whether it is a booth used for regularly testing people working in noisy environments or a high performing room to diagnose a hearing problem, we can help. From creating quiet environments to containing noisy ones, we can provide standalone or integrated music practice rooms to allow aspiring pianists and drummers to work alongside each other in adjoining rooms without interference. We have also provided some of the best acoustic studios, voiceover booths and control rooms to the world's leading broadcasters. From the BBC to Bollywood, we have tuned, shielded and enhanced the acoustic performance of recording spaces around the globe.

Below left:
250 Series Mini
audiology booth

Right:
Acoustic voiceover
booth



Key Products:

Audiology

- Audiology booths
- Audiology rooms
- Mobile audiology facilities
- Facility refurbishment

Media

- Acoustic studios
- Voiceover booths
- Music practice rooms
- Acoustic wall linings

Mining

Reducing the noise impact of mining machinery.

Mining by its very nature causes many different forms of unwanted noise. As fresh sources of coal, minerals and other raw materials are discovered, the impact of noise on people living nearby increases. With mines getting closer to populated areas, the need to reduce noise wherever possible is required to not only obtain planning consents but also reduce complaints.

Mining machinery such as excavators, haul trucks and loaders can all be given various treatments to reduce their noise impact. From silenced exhaust systems, to acoustically lined air intake attenuators and splitters, we can help reduce noise and also improve efficiency for workers, enabling them to operate in a quieter environment. In addition to making mines quieter, we can also improve safety by using internally lined pipework and thermal insulation blankets to reduce the contact temperature of exhausts, minimising the risk of fire.

Key Products:

- Exhaust systems
- Thermal insulation blankets
- Internally lined pipework
- Air intake splitters and attenuators



Acoustic air intake attenuators and exhaust system

Contacts

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