



FAIST Anlagenbau

**Full Power
No Noise**
Noise Control
for Power Plants



Gas and Steam Turbines The Silent Giants

State-of-the-art soundproofing enclosures perform many functions. The distinctive design of the enclosures enables the reduction of noise levels emitted by power plants - such as gas or steam turbines, diesel engines and power units - to meet legal requirements.

FAIST provides these state-of-the-art solutions in noise control based upon many years of experience in the field of noise control for power generation. FAIST looks at every aspect of the noise solution. We have created very effective noise insulation systems to meet the high standards of our customers. For instance: each panel can be easily repositioned as required. This is a prerequisite for easy turbine maintenance and the exchange of large components.

FAIST engineers use 3D computer simulations that allow the customer to see the resulting characteristics of the enclosure. Customers can customize their noise control needs in the design stage.

Enclosure ventilation is a very important aspect in the treatment of power plant enclosures. Ventilation air must be carefully determined and treated to meet equipment requirements in normal as well as extreme ambient air conditions. Ventilation system silencer design and selection provide matching noise control as well as correct air volumes to stay within the required room air temperatures to insure smooth equipment operating conditions.



Right: View into filter house for gas turbine generator set GPB80 of KAWASAKI Gas Turbine Europe



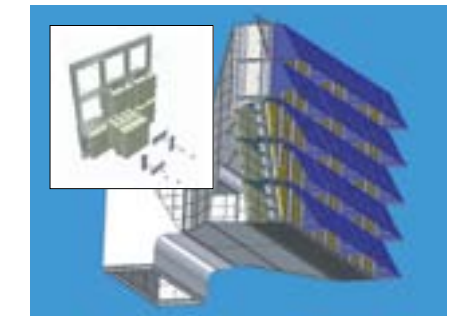
Air Intake Systems High Efficiency Modular Systems + Easy Shipping

FAIST's optimized air intake filters and silencers are designed as standard modules that can be modified to meet the customer's needs. Our goal is easy and safe shipping in containers resulting in quick on site assembly.

FAIST has developed a standard module, which enables the construction of most filter arrangements, regardless of turbine manufacturer or size. This design flexibility is possible for multistage

(static) filters with compact pre-filter and fine filter or self-cleaning pulse filter systems.

FAIST air intake silencers use our special baffle design to significantly reduce pressure drop with improved noise reduction. Lower pressure drop means higher gas turbine output and higher unit profits.



Above: Air Intake with weather hoods and multi stage filter (combi filter)
Left: Noise enclosure for gas and steam turbines, Siemens AG, project Sloe Centrale, NL
Right: Noise enclosure for open cycle power plant, SGT5-4000F, Siemens AG, project Mortlake, Australia



Left: Outdoor noise enclosure for gas turbine GT 13; Alstom AG, project Colongra, Australia
Right: Noise and weather enclosure for gas turbines; Roshcon, project Ankerlig

Compact Packages and Noise Enclosures for Compressor Stations
Quiet Neighbours

Compact packages are the best solutions for power plants in the lower power output range. This type of sound enclosure offers FAIST customers two vital advantages.

First, all hardware can be installed on site within three working days, because all of the components are pre-assembled at our plant.

Second, the sound hood and filter housing mechanical acceptance check is conducted in our shop. Startup is rapid and simple thanks to the pre-fitted gas turbine enclosure and air intake connections. This saves significant cost for the completed package.

Skilled FAIST technicians optimize the ventilation systems to minimize pressure loss.

FAIST takes our customer's safety requirements very seriously. We exclusively use explosion proof components for the compact packages.

FAIST air intakes are designed to create clean room conditions in the area between the filter housing and sound hood minimizing turbine inhalation of unwanted dirt and debris which greatly reduces the possibility of turbine damage.

Benefit from our experience and know-how to improve efficiency and become a quiet neighbour, too.



Above: Sound enclosure for transformer station, project E.ON, Germany
 Left: Noise enclosure and filter house for gas turbine generator set GPB 80 of KAWASAKI Gas Turbine Europe
 Right: Air flow concept of GT compact package unit MAN Diesel & Turbo SE



General noise concept for cogeneration plant; Wärtsilä Power Plants; project Aulnay-sous-Bois, France

Cogeneration Plants
Ecologically Friendly with High Efficiency

Combined generation of electrical energy and heat improves the total efficiency of an installation by up to 90%.

The FAIST compact sound enclosure, which also provides heat protection, is integrated into this concept. The design of our sound enclosure has to meet various requirements:

- > Quick access
- > Easily removable panels
- > Tailored ventilation
- > Oscillation damping
- > Acoustic optimization

FAIST technicians determine the acoustic hardware layout based on the existing conditions and the frequency ranges of the individual components. We will be happy to design an economic and environmentally-friendly solution to meet your specific requirements.



Below: Noise enclosure for compressors, Gas-to-Liquid-Plant; Linde AG; project Pearl Qatar



Splitter silencers for cooling towers; GEA Energietechnik GmbH, project Mellach, Austria



Acoustic Enclosure for THM Gas Turbine; MAN Diesel & Turbo SE, project Villarpipe, Spain



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