Air intake and cooling systems for power plants and other industries
BBM Gerber Technologie is the leading expert for complete acoustical solutions and high efficiency filtration and cooling systems for gas turbine intake with more than 50 years of experience. By offering customized high-quality products incorporating the latest technology, we set benchmarks in the fields of air intake and cooling systems and technical noise control.

Our global activities comprise individual control systems and air intake and cooling systems for gas turbines for industrial plants. We handle either the entire project or provide individual components for existing and new plants as well.

Your BBM Gerber sales consultants are skilled engineers, supported by our research & development department and quality assurance. Embedded in the powerful corporate network of the Müller-BBM Group, BBM Gerber is your reliable partner.

Intake systems
- In-house laboratory (ARAMCO)
- Own cooling technology
- Own filter technology

Noise control
- Project specific solutions
- Easy maintenance
- Acoustic expertise
- In-house acoustic laboratory

Research & Development
- Innovative
- In-house test facilities
- Scientific cooperations

Consulting
- Client-focused
- Qualified
- Reliable
BBM Gerber develops, designs, supplies and assembles filter systems for gas turbine compressors, ventilation, noise control enclosures and generators.

BBM Gerber offers solutions for filter systems suitable for all environmental conditions and other specifications such as acoustical requirement. Generally, we distinguish between conventional static filter systems and self-cleanable pulse filter systems.

BBM Gerber has been engineering the most significant parts of filter systems to ensure the highest performance and best quality.
Air intake systems

Our features are listed below:

- **Anti-icing-systems**
  - Compressor bleed air or exhaust
  - Heat exchangers
  - Infrared systems

- **Static air intake systems**
  Our static air intake system comprises bag filters and fine filters as well as weather protection hoods, droplet separators, bird screens, anti-icing-systems, inertial separators, control systems for monitoring the pressure drop of the filter systems, bypass flaps, shut-off louvers, roller shutters and other ancillaries.

- **Mist eliminators**
  We use filter elements in classes G9 to F9 in accordance with EN 779. Special gas turbine types are also equipped with EPA or HEPA filter elements up to E10 – E13 or H13 according to EN 1822. Especially concerning efficiency, maximum power load and endurance we recommend the use of our specially developed gas turbine BBM Gerber filter cells (M5 – M6, F7 – F9, E10 – E13, H13).

- **Self-cleaning pulse filter systems**
  Our typical self-cleaning pulse filter system consists of weather hoods, droplet separation and single stage pulse filter elements. On demand it is also equipped with e.g. high efficiency safety barriers filters. The necessary compressed air cleaning components include manifolds, valves, blowpipes and pulse controls.

- **Retrofits**
  Obsolete filter technology, degeneration or installation of bigger gas turbines cause increased demands on turbine efficiency. BBM Gerber offers a broad range of retrofit and upgrade solutions.

- **ARAMCO test stand**
  Our special test rig enables the investigation and development of air inlet filters, especially the testing of semi-automatic gas turbine inlet filters according to the ARAMCO standard (32-SAMSS-008).

  Due to various and flexible features of our test rig, it is possible to determine the filtration characteristics of all kinds of air-filtration elements in any environmental conditions.
Cooling

■ UpStream Cooling System [UpS]

This system is perfect for retrofit installations. Often there is not enough room in the existing air intake to install an adequate and efficient cooling system. Filter house modifications are expensive and result in a long downtime for the GT. Or modifications are in all prohibited due to warranty contracts. No water treatment on site is needed.

The UpStream Cooling system is installed outside the air intake in front of the weather hoods. The system can be installed and maintained from the outside without disturbing the GT operation.

No risks of water or other foreign objects inside the air intake that may damage the compressor. No demineralized water needed. The UpS system mesh will additionally filter the air from large particles for an air washing effect and longer air filter lifetime. Easy installation and maintenance.

Features
- Adiabatic cooling: > 93% efficiency
- Wide range of water quality can be used
- Additional air washing effect
- No water inside air intake
- Easy retrofit solutions
- No GT Shutdown required for installation

Technical details
- Power gain: 0.6 – 1% per 1°C of cooling
- Differential pressure loss < 50PA
- Negligible power consumption
- Installed down- or upstream of air filters

■ Evaporative Cooling System [EVAP]

This system is commonly installed after the first air filter stage. Water is distributed over a special media/pad with a very large surface. The air is lead through the pads where it cools down adiabatically.

Demineralized water is recommended but is not mandatory depending on the pad material and site conditions.

Features
- Adiabatic cooling: > 90% efficiency
- Wide range of water quality can be used
- Simple cooling technology

Technical details
- Power gain: 0.6 – 1% per 1°C of cooling
- Differential pressure loss < 75PA
- Negligible power consumption

■ High Fogging System [HFOG]

This system sprays the water directly before the compressor. Therefor the majority of the fine water spray will enter the compressor and evaporate there. This is also called »Compressor Inlet Cooling« or »Wet Compression«.

The advantage of this system is to give the GT an additional power boost whenever needed and without being dependent on ambient conditions. Even in tropical regions with high humidity you can get an important power increase whenever needed.

Features
- Wetcompression up to 2% water flow
- All droplets evaporate inside the compressor
- Not dependent on ambient weather conditions
- NOx reduction
- AxE Nozzles match GT outage intervals

Technical details
- Power gain: 5% per 1% of water flow
- Differential pressure loss < 100PA
- Negligible power consumption
- Installed upstream of GT compressor

Location

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3

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Solving industrial noise problems for more than 50 years.

BBM Gerber Technologie – a leading supplier of industrial silencers, enclosures, exhaust systems and air intake systems

Our products

Air intake systems
- Full-scale air intake systems
- Multi-stage static filter systems
- Self-cleansing pulse filter systems

Flue-gas silencers
- Bypass silencers
- Gas turbine silencers
- HRSG ducts

Steam silencers
- Vent silencers
- Start-up silencers
- Blow-off silencers

Acoustic enclosures and claddings
- Facades and shrouds
- Partial HRSG enclosures
- Steam and gas turbine enclosures

Exhaust systems
- Exhaust ducts
- Silencers and stacks
- Retrofits

Engine exhaust silencers
- Intake and exhaust flow silencers
- For diesel and gas engines
- DNV certified spark arrestor

Condensate systems
- Complete system design
- Condensate tanks and flash tanks
- Piping and blow-off silencers

Cooling tower silencers
- Natural draught cooling towers
- Forced air cooling towers
- Cell cooling towers

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