



## Cooling tower silencers and noise barriers

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# Cooling tower silencers

Noise control for power plants  
and other industries

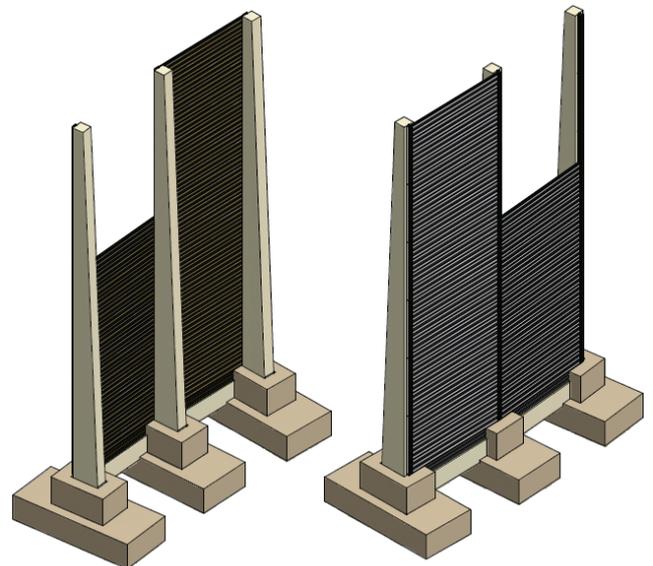


## BBM Akustik Technologie cooling tower silencers

As a leading supplier of industrial silencers and enclosures BBM Akustik Technologie supplies silencers for water re-cooling systems based on wet cooling, dry cooling, fresh-water cooling or any combinations of these. These silencers are used in cooling towers that work by natural draught or by forced air. Moreover, we provide the design and supply of noise barriers for cooling towers.

In natural draught wet-cooling towers the noise is caused mainly by the impact of the cooling water falling on the surface of the water basin. The spectral components that control the A-weighted level are usually above 500 Hz. The sound pressure level at the air intake is 80 dB(A) or higher.

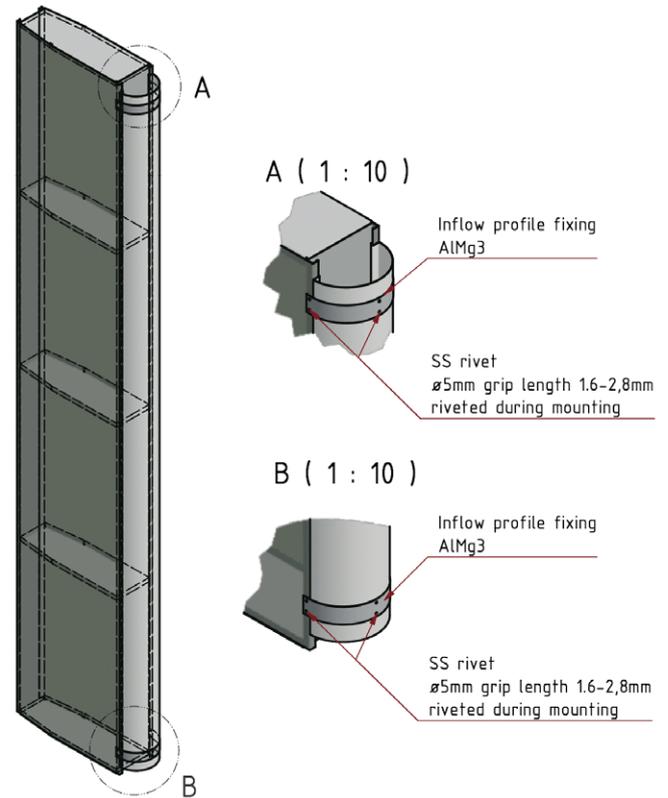
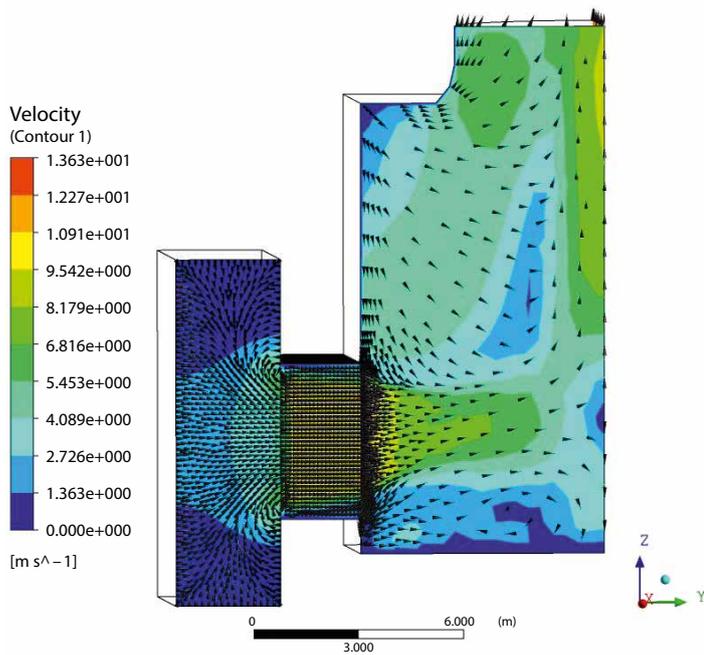
In the case of fan-operated wet-cooling towers, the fan is the dominant source of noise in the frequency range up to 500 Hz. However, in the frequency range between 500 Hz and 4 kHz the water noise becomes dominant.



Depending on the level and spectral distribution of the noise, as well as on the distance to the nearest residential area, the noise is most efficiently attenuated by barriers when the required insertion loss is below 15 dB. Splitter type silencers can provide an insertion loss of up to 40 dB. Sound protection hoods for the fan drive units or other aggregates, as well as elastic supports, complete the product range for noise control measures in cooling towers.

## Acoustic and fluidic design

Our silencer design, with respect to acoustic and fluidic design, represents a balanced compromise between the initial cost and subsequent operating costs.



BBM Akustik Technologie has several testing labs, as well as the most modern measuring, analysing and data processing equipment, to optimise both the acoustic and aerodynamic performance of our cooling tower silencers. The know-how gained from numerous delivered projects enables us to implement the highest acoustic requirements.

## Manufacturing

The splitter silencers for cooling towers are manufactured at our plant in Germany using state-of-the-art equipment. The splitter frames are usually made of salt-water resistant aluminium in unibody construction for heights up to 12 m. The necessary static and dynamic stability of the silencer is obtained by optimal forming and by connecting several splitters to create a very stable splitter block.



## What's in it for you?

- Acoustic design of the silencer or noise barrier
- Optimisation of silencers' pressure loss and acoustic requirements under economic aspects
- Structural design, CFD and FEM calculations on request
- Verification of attenuation and of pressure loss in our own testing labs
- Access to the full know-how of the Müller-BBM Group
- Manufactured in Germany at our own workshop
- Mounting included on request
- Site coordination, monitoring and management according to the highest safety standards
- Supervision of your mounting or manufacturing procedures, if required
- Technical support with acceptance procedures
- Guarantee on acoustic and aerodynamic performance
- Complete documentation according to your requirements

## Installation

BBM Akustik Technologie has developed special mechanical and hydraulic driven hoisting gears. Together with a stacker/lift truck, they ensure accurate and cost effective on-site assembly of our cooling tower silencers. Our procedures and equipment are deployed worldwide in the field of large silencers and noise barriers, and have proven successful in many major large scale projects. Staff deployed on these projects is SCC-qualified.

**We will accompany you  
throughout the entire project**



## Solving industrial noise problems for 40 years.

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

**EN ISO  
9001  
certified**

### Our products

#### 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



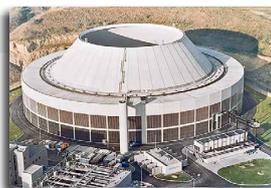
#### Condensate systems

- 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



#### Air intake systems

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



[www.bbm-akustik.com](http://www.bbm-akustik.com)

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