



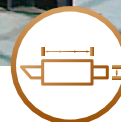
APPLICATIONS

**ENERGY – INDUSTRY – RAILWAYS – MILITARY – MARINE – MOBILE - STANDBY
NUCLEAR – COGENERATION – BIOGAS – METHANE – UPS**

- From 10 to 60 dB(A)
- Innovative design
- Qualified by 3D digital simulation
- Standard or customised solutions
- Improved engine efficiency
- Quick delivery/
standard silencers in stock
- Reduced weight and size
- SM EVO® interchangeable with SM
- Complies with REACH/ROHS
- Quality certified ISO 9001:2015



from 10 to 60 dB



Bespoke
solution



Interchangeable



From stock

PRESENTATION OF THE SM EVO® RANGE

- Our silencers are designed to reduce the noise generated by the exhaust gases of internal combustion engines.
- Our new generation of EVO® silencers have been optimised by our aero-acoustic engineers. Using the latest generation of finite element software, this optimisation has enabled us to numerically validate the very complex behavior of aero-acoustic phenomena in our silencers. Our numerical models have been qualified by dynamic tests in our laboratory and on an industrial site.
- Our SM EVO® silencers are fully welded in carbon steel, with internal and external protection ensured by a high temperature heat resistant black paint. Lower surface temperatures are achieved due to internal insulation.
- Our standard silencers are available from stock for quick delivery.
- The flow direction of the gases must be respected. Our silencers can be placed horizontally or vertically depending on the available space and the layout of the exhaust pipework. Before installation, it is important to read our OMM-SM Installation, Operation and Maintenance Manual.
- All our silencers over 50kg weight are equipped with welded lifting lugs.
- **Qualification of our products :**

ex : **SM 30 EVO DN 50**

SM



Product Family Engine Silencers

10, 20, 30, 40, 50



Acoustic performance

EVO



Evolution Series

DN



Nominal Diameter & Inlet Diameter

100, 125, 150, 200... 800



Dimension in mm of the inlet diameter

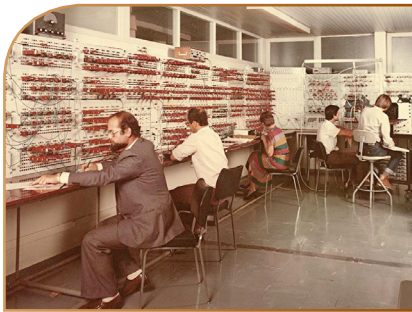
Our silencers are based on two principles of attenuation:

- Attenuation by dissipative effect
- Attenuation by reactive effect :
 - Impedance break: reflection of the wave
 - Quarter wave, resonator: phase shift of the signal



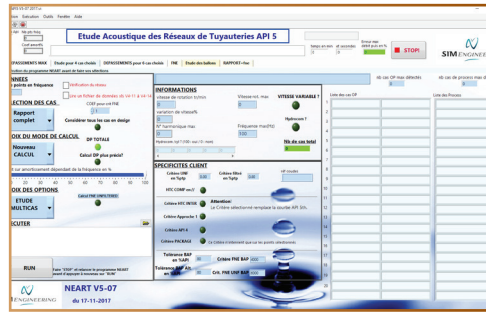
OUR EXPERTISE

BOËT StopSon has constantly developed new acoustic and aerodynamic simulation tools, from analog calculators from the 1970s to 100% digital 3D simulators today.



1970-1980

Analogue acoustic calculator (1D)



1990-2000

Digital acoustic simulator (1D)

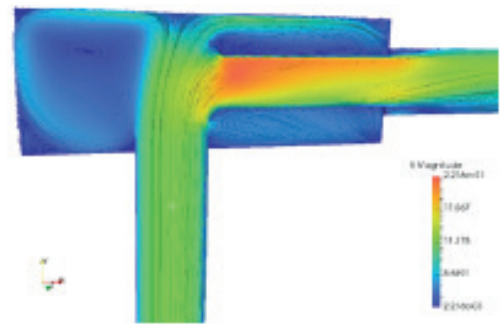
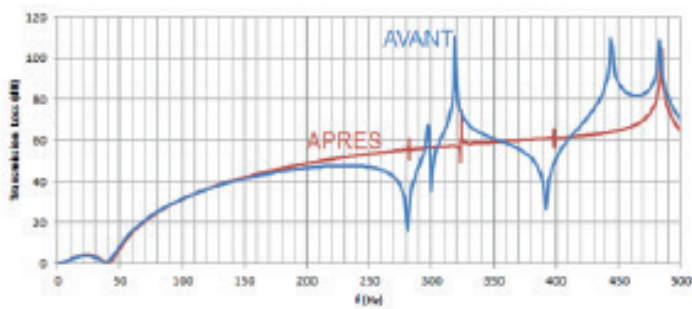


Today

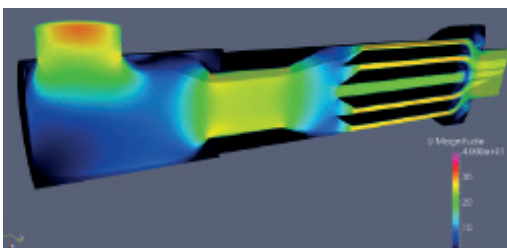
Digital acoustic simulator (3D)

Thanks to this technical expertise, BOËT StopSon is able to guarantee the acoustic and aerodynamic performance of our silencers:

- Attenuation is achieved in our products by a combination of techniques (complex geometries, choke-tubes, Helmholtz resonators, $\frac{1}{4}$ wavelength, Herschel Quincke)
- Optimisation of the reactive chambers of silencers by eliminating any interference that may be harmful in the overall performance of the silencers.
- Impact of the silencer structure (mechanical and acoustic coupling)
- Characterisation of the behavior and performance of low and high absorbent materials and temperature.
- Loss of pressure (CFD aeration calculations)



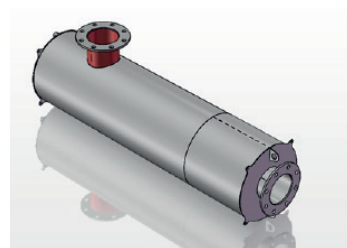
All our calculation tools have been qualified on static test bench and physical tests.



Acoustic simulation



Test bench



Design

TAILOR-MADE

Understanding the complexity of their clients' businesses, BOËT StopSon offers adaptable products.

Our professional expertise, combined with the latest calculation and simulation tools, allows BOËT StopSon to offer optimised silencers adapted to the specifications of the project. Our acoustic engineering and manufacturer approach gives you a complete solution to the noise problem of your exhaust system.

Other related functions such as gas treatment, spark arresters, chimneys, emission measuring points, etc ... can be integrated into our offer.

For specific projects, our team of experts provide you with a quick and adapted response. The proper integration of our customised products into your final installation is our main focus.

Our project engineers ensure the efficient management of the project to ensure total satisfaction of the customer.

We propose :

Catalytic silencer – Rectangular silencer – Oval silencer – Chimney insert silencer

ACCESSORIES

Outlets	 Raincaps	 Elbows	 Mitred Tailpipe	 Rain hood
	 Plain stubs	 Slotted stubs	 Flanges	 Drains
	 Type V	 Type VP	 Type H	 Type HC
	 Spark arrestor	 Explosion relief valve	 Anti-vibration mounts	 Catalyst

WHY CHOOSE BOËT STOPSON ?

BOËT StopSon is a dynamic P.M.E specialised in the design, manufacture and installation of acoustic solutions.

BOËT StopSon has over 60 years of experience with several thousand installations worldwide.

We ensure the supply of all types of silencers in the various materials: carbon steel, stainless steel, etc... for all types of gases and fluids, accompanied by a qualified manufacturing process.

Our skills allow us to provide products for all your installations in a wide power range, from a few kW up to 1500 kW for our standard exhaust silencers kept in stock, up to 10MW for our complete standard range. We can also supply custom silencers to meet your exact requirements. In this case, each project is carefully studied so that the product that we offer you is technically optimised and meets your requirements.

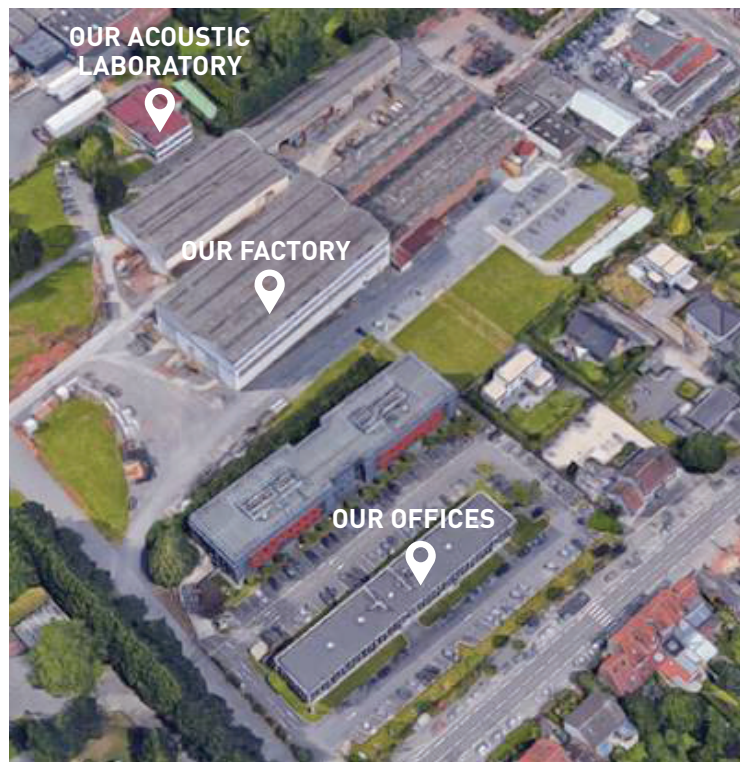
BOËT StopSon masters all the techniques specific to silencers, our acoustic engineering department is equipped with the latest finite element calculation technologies. Our laboratory has a static and dynamic test bench in order to qualify our designs. The permanent investment in R & D leads to continuous innovation.

The proper integration of our standard or tailor-made products into your final installation is our essential focus.

BOËT StopSon brings you all the skills of an experienced acoustic engineer and all the know-how of a manufacturer of silencers at the service of the customer and in compliance with our commitments.

STANDARDS AND QUALIFICATIONS

- Quality certification: ISO 9001:2015
- Test facilities and qualified products
 - Kundt tube
 - Anechoic and reverberant chambers
 - Static and dynamic test bench
 - Finite element calculation
- Design and construction codes
 - EN 13445
 - PED 2014 68 UE
 - CODAP & CODETI
 - RCC-M
 - ASME
- Non-destructive testing
 - Visual
 - X-ray
 - PMI
 - Ultrasonic
- Documentation

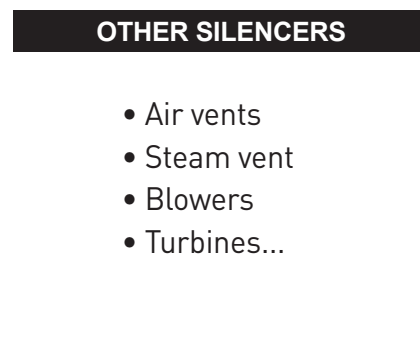
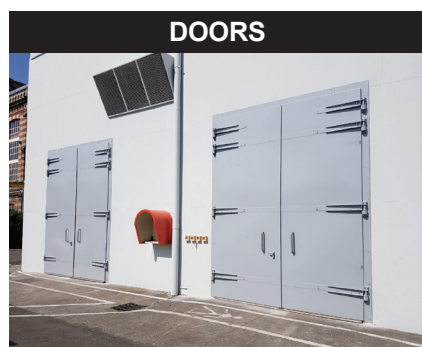


The industrial site of BOËT StopSon

THEY TRUST US



OTHER PRODUCTS FROM THE BOËT STOPSON RANGE




BOËT STOPSON
The Sound of Silence

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