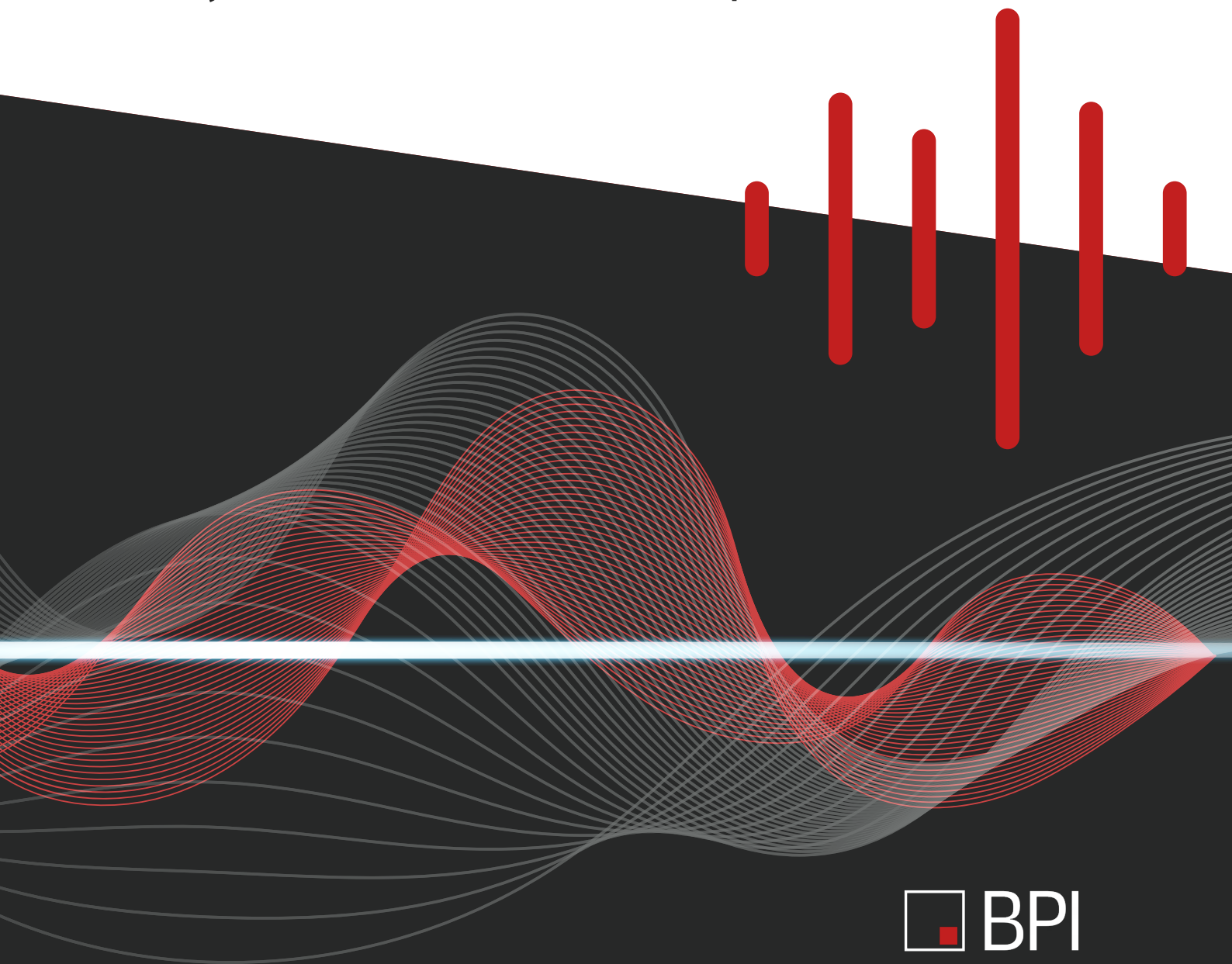


A guide for HVAC and electronic products

Three benefits with noise reduction of your HVAC or electronic product



Do you remember the last time you held a product in your hand that exceeded your expectations and radiated excellent quality?

Within many product categories, one or more companies manage to rise above the other manufacturers by giving their customers precisely that feeling of quality and of having gained something extra special – these are the companies who win most of the customers within a particular product category. It is almost guaranteed that you know the names of a handful of companies that do this in your segment.

Today, the noise level requirements in working environments and buildings are more stringent than ever before – it is both a challenge and an opportunity for you as a manufacturer. Today's trend is that companies develop small and compact devices that still have a high level of performance.

Often noise becomes the limiting factor. But by taking an analytical approach and choosing the right materials, which provide insulation as close as possible to the source of the noise, you can expand the limits of what is possible.

Design freedom is also often limited by noise. So, if you are in control of the level of noise early on in the process, you can achieve greater freedom with your design. This is where you can get ahead of the competition, by being one of the companies that rises above the others by exceeding your customers' expectations.

If you are interested in soundproofing and vibration damping your HVAC or electronic product, then read this guide. We give you the best advice about how to use the latest technology effectively to reduce your HVAC or electronic product's noise level and achieve three major benefits.

Enjoy the guide!

ELIMINATE WASTED WORKING HOURS WITH A ROOT CAUSE ANALYSIS

Engines, compressors and other moving mechanical components naturally have a high noise level, which is a major challenge to eliminate. But you can overcome this challenge by choosing the right solution.

However, before you can find the absolute best solution, you must first carry out a thorough root cause analysis, which identifies the noise levels and noise characteristics that your product generates.

Having a clear understanding of the noise frequencies and amplitudes that arise is a necessary starting point for the further work in noise reduction, which would otherwise be a form of guesswork and wasted working hours.

In our experience, a thorough analysis carried out by an acoustic specialist makes the whole subsequent process easier, faster and cheaper.

ARE YOU LOOKING TO ADD ANOTHER COMPETITIVE EDGE TO YOUR PRODUCT?

We have assembled a strong team of specialists at our top-of-the-line facilities with the latest technology to develop solutions for noise reduction and vibration damping.

We are ready to help you with:

- root cause analysis of your products
- tailor-made 3D design
- silent solution with documentation of improvements
- fast time to market

Click here to book an analysis of how we can improve your product with a customised solution for noise reduction and vibration damping.

[I'm interested in an analysis of my product](#)



AVOID ANNOYING THE END USERS AND RISE ABOVE THE COMPETITION

Once you have clarified what kind of noise profile your product has, the next step is to find the correct solution.

New types of PU foam are more effective than ever before at reducing and minimising vibrations, which means you do not need to compromise in relation to design or functionality when soundproofing your product.

Today it is possible to change the PU foam's chemical composition to make it suitable for the product's damping characteristics. You can now design the ideal degree of damping, elasticity and density – which eliminates precisely your product's specific noise frequencies effectively.

It is this chemical adaptation that is the crucial key to effective soundproofing and noise reduction, which makes PU foam the ideal solution when it comes to noise reduction in all frequency ranges.

Thanks to our unique additive manufacturing process, we can efficiently adapt our production for your design, so you are always ensured a fast and competitive time-to-market.

LET'S WORK TOGETHER TOWARDS CIRCULAR SOLUTIONS

At BPI, we work with a green mindset, and we aim to create scalable industrial solutions that lead the way towards a circular economy. The first step in this transformation away from fossil fuel is our two initiatives:

- biomass balance made from organic waste
- post-consumer Setex® made from discarded mattresses

Click here to book a review of how we might improve your sustainability with our environmentally friendly foam solutions.

Become more environmentally friendly with our foam solutions

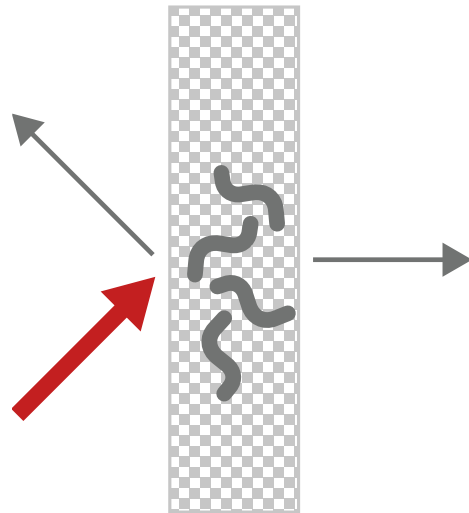


SOUND ABSORPTION

Sound absorption is best known for reducing echo. For example, you may want to improve the acoustics in a room by minimising the amount of sound that is reflected by hard surfaces.

Sound absorption is best implemented by custom-designing a product with specific absorption properties that affects the specific sound waves that are generated by your product.

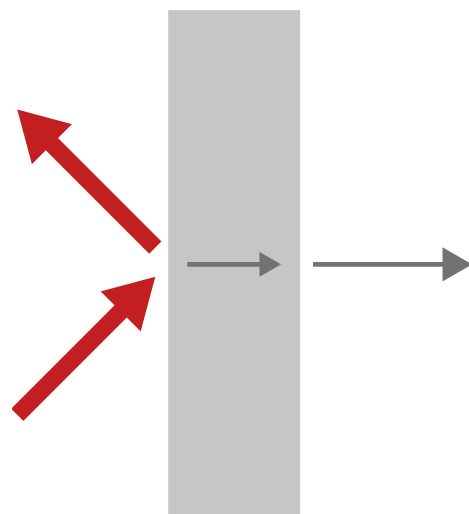
A good rule of thumb is that the layer of absorption should have a thickness that is at least $\frac{1}{4}$ of the wavelength of the noise. It is therefore difficult to absorb low frequencies with a thin layer of absorption and in such circumstances a new design of the specific product may be necessary.



SOUNDPROOFING

Soundproofing can either be active or passive. Active sound reduction is well-known in many electronic appliances today, for example in hearing aids.

Passive sound reduction is often the most effective method for sound proofing mechanical products.



ENSURE THAT YOUR PRODUCT MEETS REQUIREMENTS AND THAT IT CAN PASS REGULATORY TESTS

When finding the ideal solution, it is important that the process is logical, rational and documented. This means you will have clear figures for your product's performance, which you can use to ensure that your product later meets requirements and can pass regulatory tests set by authorities and institutions.

The documentation and measurable parameters are also crucial for achieving the goal of developing a low-noise product, which sets it apart from the competition. Ensure that you obtain test results documentation in relation to improved performance, so you can show that your product performs better than the competition.

If you reach your goal with this then you will have provided yourself with a strong sales argument and your customers will experience a unique feeling of quality when they use your product.



ABOUT BRAMMING PLAST-INDUSTRI A/S

Bramming Plast-Industri A/S produces foam solutions that reduce noise and raise the quality of your product in terms of customer experience, durability and sustainability.

We analyse and help you to find the right foam and the optimal and efficient production of soundproofing elements.

Together, we ensure that your product design realises its full potential using soundproofing foam of the highest quality, manufactured by production specialists using the latest technology.

Above all, we guarantee that we are a market leader in short time-to-market and stable deliverables combined with a large and flexible production capacity, thanks to our AMU, automated moulded unit, which ensures fast and scalable production.

