

Product development

Sound & Vibration



Innovation by experience





The demand for better sound quality has never been greater. Traffic and industry are required to generate as little noise as possible. We understand that quiet living and working conditions are decisive in achieving comfort and efficiency.

Helping you create a competitive edge for your product – right from the start



Listen. Feel. Each and every product affects us in many ways. Is your computer nice and quiet? Does the power drill make your hands shake? How about your camera – does it have the right click?

Industrial products designed to keep sound and vibration under control have a competitive advantage on the world market. They keep hearing disorders and vibration injuries to a minimum. They help increase machine availability. And they most certainly boost your product and company image. Through ingenious sound and vibration design, ÅF can help you increase product value and customer satisfaction.

World-class sound and vibration competence

ÅF is one of the world's premier sound and vibration consultants. We support you throughout the entire product development process to create customized and cost-efficient solutions to whatever noise or vibration challenge you face.

Our experience covers every aspect of sound and vibration control. We know your product's application, and we let the end-user's demands and opinions guide our work.

Early involvement – best end-result

At ÅF, we understand that product development is a complex process with a multitude of interests and trade-offs. And that the success of any new product depends on a creative interaction between a company's marketing and engineering department. That's why it's important to involve our expertise right from the start, to assist already at the brainstorming and specification stage. We will help you answer questions like: Is it technically possible to meet new, even more stringent customer demands? Can economically viable sound and vibration solutions be found?

We then follow the product development all the way to its completion, verifying that the product's sound and vibration performance meets the specified criteria. As an extra bonus our legislation and standards know-how will keep you away from costly mistakes. ÅF has the knowledge and experience to help you define today's limits and tomorrow's possibilities.

Complete range of sound and vibration services



From idea to completed product

ÅF can take full responsibility for a product's sound and vibration performance. We start by defining sound and vibration goals. During the actual design phase, we can help you determine which parts will generate sound and vibration. With state-of-the-art technology, we can also simulate the impact on the products and the surrounding environment. Understanding these factors intimately, we can provide you with cost-efficient solutions, including overall design principles, and damping and isolation concepts.

At the prototype stage we can measure the product's acoustic and vibration performance to ensure that the design meets the specified demands.

Finally, when the design is decided, we will verify and certify that the product meets expectations and standards. With careful quality tests, measurements and analysis, we will ensure that sound and vibration is under control. After all, that's what ultimately matters when your product reaches the market.

Trouble-shooting

Sometimes designs just don't live up to expectations. But there is help. ÅF will go to the root of the problem. For us, trouble-shooting is no trouble at all.

First, one must quickly understand the origin of the wrong sound or excess vibration. Therefore, we go to great lengths to measure sound quality and vibration on both an overall product level and on a component level. This generates a clear picture of what's wrong, and a starting point for corrective action. ÅF will help you find cost-effective solutions. In some cases a simple gasket will do the trick.

More complex faults may require a more comprehensive redesign. We back up what we suggest, by rigorously verifying that our solutions meet the required demands. We measure, test, and control vibration levels and sound quality until there is no doubt that we have reached your goal.

Education

ÅF regularly runs a basic sound and vibration course program for all levels of your staff, including managers, product designers, marketing people and procurement personnel. For your acoustics experts, there's even more to be found, like tailor-made courses in the latest findings, measurement and analyses methods.

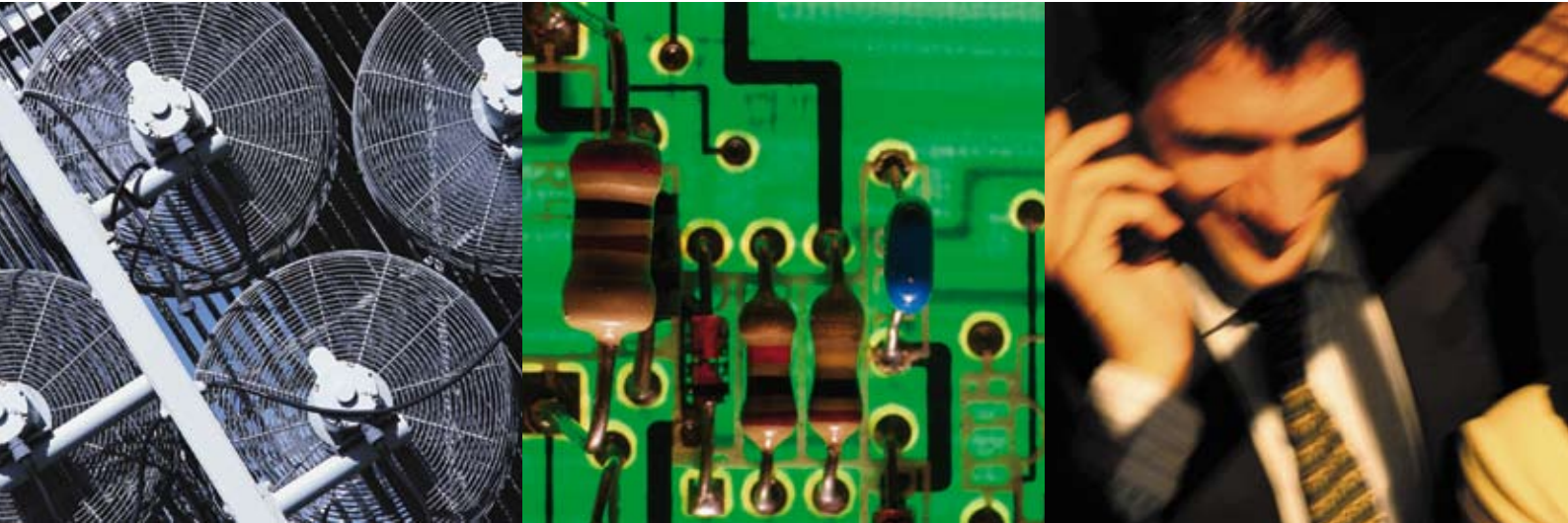
On top of that, we offer special courses for all staff involved in product development projects. A basic sound and vibration knowledge has proven to be one of the best shortcuts to an optimized product design.

Expertise for hire

At ÅF we strive to work in close contact with our customers. You can hire our highly experienced acoustics experts for shorter or longer time periods. This comes in handy when your own staff could benefit from additional skills, when you need to meet increased demand for sound and vibration competence, and for specific product development projects where sound and vibration control is vital.



Resources based on 50 years' experience



ÅF has unsurpassed experience in every aspect of sound and vibration engineering in the product development process. We can help you create the right acoustic performance, reduce machine vibrations, and make sure your product can withstand the impact of shocks and vibrations caused by environmental factors.

Highly qualified personnel

ÅF has a unique and highly qualified staff of more than 120 competent sound and vibration engineers. Most have at least a Master of Science degree from a technological university, and we are also proud to offer the competence of doctors and university professors. Just one example of our know-how is that we are often asked to take active part in forming new legislation and international standards in the sound and vibration field.

State-of-the-art tools and methods

ÅF constantly keeps up-to-date with the latest developments. We employ serviceproven as well as the most advanced measurement equipment and analyses methods. This means that you get access to both a broad spectrum of basic sound and vibration techniques, and spearhead technology for testing, calculation, simulation, prototyping and verification. We assure you that our solutions rest on solid ground.





The ÅF Group is a leader in technical consulting, with expertise founded on more than a century of experience. We offer highly qualified services and solutions for industrial processes, infrastructure projects and the development of products and IT systems. We are also one of the leading names in certified third-party testing and inspection work. Today the ÅF Group has more than 3,500 employees. Our base is in Europe, but our business and our clients are found all over the world.

