

# Company Profile



**Vibratec**<sup>®</sup>  
akustikprodukter



## What we do?

Vibratec Akustikprodukter is one of Scandinavia's leading suppliers of noise and vibration solutions. Vibratec's ambition is to become the preferred choice for customers who need solutions to noise, vibration and shock problems.

Vibratec produce and store many products for damping / isolation of vibration, shock and noise over a wide range of applications:

- Mounts and Isolators for all types of machines, pipes and sensitive equipment
- Mufflers, catalytic converters and soot filters for diesel exhaust
- Soundproofing materials for building and construction sector, such as cinema halls, studios and buildings
- Solutions for insulation of railways

Vibratec Akustikprodukter is active in shipbuilding and offshore industry, construction, rail and track, emergency power and defense. The wide range of products ensures that everything from small engines, gas turbines, bridges, railways and complete buildings can be vibration isolated. Vibratec offers its customers complete solutions and implementation.

Vibratec is specialised in complete solutions for almost any application where noise, shocks or vibrations need to be reduced.

## Business Areas

We design, manufacture and implement systems for numerous applications and markets. Customised solutions, project management and complete installations can also be part of our commitment.

For more than 20 years our state of the art products and custom made solutions have been recognised for their reliable quality and high performance.





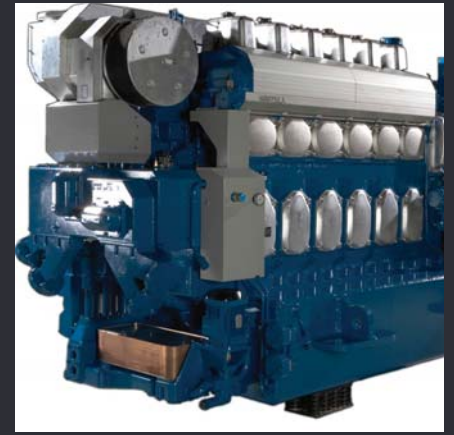
## Offshore

Vibratec can provide complete proposal and calculations for shock and vibration isolation of marine engines, generator sets, compressors, piping and sensitive equipment. Vibratec's all metal solutions are extremely durable in harsh conditions and our all metal solutions guarantee an unequalled service life. In addition to below standard range we can also provide customized products and solutions.



## Industrial

Vibratec does vibration and noise calculations for all types of industrial applications to ensure the use of correct product. Acoustic louvres, enclosures and exhaust silencers are parts of the range whereof the silencers can be complemented with spark arrestor, catalytic converter or sooth filter.



## Power Generation

Power generation is one of Vibratec's core areas where we supply vibration isolation, emission and noise solutions from small diesel emergency generation sets up to large gas turbines both onshore and offshore.

In this area we prefer to use our range of all metal mounts and our extensive knowledge of silencers and catalytic converters.



## Civil Engineering

Vibratec supplies solutions for Civil Engineering applications such as floating floors, elastically suspended ceilings, building base isolation, high performance sound doors and suspension of rotating machinery such as fans, coolers and similar.

The product range includes discrete bearings, strips, mats, spring isolators, fire resistant high performance sound doors and more.



## Track

Being CDM's Scandinavian partner, Vibratec has the expertise of materials and performances for all track systems. The required characteristics are individually calculated on a project by project basis.

When selecting a CDM Track system, apart from vibration isolation, major design factors are lateral stability of the rail, electrical isolation, cost of maintenance and replacement. CDM's solutions and systems meet all relevant standards and requirements.



## Military and Defence

Vibratec can provide different solutions to ensure protection from shock and vibration. With in-house design and production we can make custom made Wire Rope Isolators and prototypes for test on short notice. Our shock protection solutions can be found on mine clearing vehicles, mine sweepers, combat boats, frigates, helicopters, air crafts etc. Common applications for shock mounts are radar units, cabinets, monitors, floors, stretchers, pipes etc.

# Company History

To be a leading international supplier of technical solutions for noise, vibration and shock isolation.

**1988** – The company started in Stockholm under the name Vibratec Isolation AB by Lennart Söderman, Kjell Johnsson and Carl Sejersted Bødtker. The main focus by then was all metal solutions for marine applications due to Mr Lennart Södermans experience and expertise being a naval architect.

**1990** – Vibratec Isolation AB moved to Blidö, an island in the northern Stockholm archipelago. The company now employed 3 people and were housed in the facilities of BIHAB (Blidö Industrial House).

Under the coming years the company started its own production of spring isolators and pipe clamps and also had the first offshore projects with custom designed anti vibration mounts with springs.

**1998** – The real estate company BIHAB is acquired wherein Vibratec Isolation AB takes over the facilities housing offices, work shop and stock

**1999** – The machine shop Wannerstens Mekaniska is acquired as a result of the ambitions for more in-house production of vibration isolators. The same year

Vibratec Isolation AB also acquire 51% of the competitor company Akustikprodukter AB where the Norwegian subsidiary APN was included. Through the acquisition Vibratec increased the product range to also include exhaust silencers, wire rope isolators and rubber products. In the merging of the companies the name was changed into Vibratec Akustikprodukter AB (likewise Vibratec Akustikprodukter AS in Norway).

**2000** – The inventive founder Lennart Söderman tragically passed away in ALS. His co-founder Mr Kjell Johnsson takes over the CEO-chair.

**2003** – The company has grown rapidly, becoming a Gazelle company in 2003. A small agent network is taking form with Rickvin Trading Pte in Singapore being the first. 2004 – Vibratec further strengthened its dedication to being a technology stronghold by including Leif Kari, Professor in Engineering Acoustics, KTH (Royal Institute of Technology), Stockholm, into the Board of Directors.

This gives Vibratec a unique bridge between the industry and leading-edge

research through an in-depth cooperation with the Marcus Wallenberg Laboratory for Sound and Vibration Research at KTH.

**2005** – Vibratec Akustikprodukter becomes a Trademark in Sweden, Norway and China. 2007 – A new subsidiary company is started in Estonia: Akustikatooted OÜ.

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**2008** – A new subsidiary company is established in Denmark, Vibratec Akustikprodukter ApS, with Mr Anders Olsen as driving CEO. Svante Hägerstrand becomes new CEO for Vibratec Akustikprodukter AB.

**2009** – The remaining 49% of the Norwegian subsidiary Vibratec Akustikprodukter AS is acquired.

**2011** – The production of wire rope isolators is moved from Norway to Sweden – all production is now under the same roof.

# Organisation

The Vibratec Group comprises of four companies. We are active within all business areas in all four companies.

## Vibratec Group

### Sweden

Engineering

Sales

Production

Development

### Norway

Engineering

Sales

Development

### Denmark

Engineering

Sales

### Estonia

Engineering

Sales

Visit our website to learn more

[www.vibratec.se](http://www.vibratec.se)



# Support

Vibratec has an extensive experience, combined with the use of modern tools, when we design and manufacture tailor made solutions in all areas of vibration and noise reduction. Vibratec performs test to evaluate mechanical, physical and long term behaviour on materials as well as complete solutions.

## Installation

We can also offer installation on site of many of our products. This ensures correct installation and minimise the risk of performance loss due to lack of experience or the "human factor". Normally we limit our undertaking to installation of our products and systems, ie installation of gypsum board, mineral wool, reinforcement bars or casting of concrete is not done.

Typical installations offered:

- Floating floor systems, both light weight and heavy (concrete)
- Machine foundations
- Inner ceiling systems
- Building base isolation systems
- Ballast mats and slab track beds
- Q-track systems
- Tuned mass dampers (tuning of mass and stiffness)

## Production

Vibratec has its own production and assembly facilities on Blidö, Sweden. This is where we produce our all-metal marine and offshore isolators, spring packages and wire rope isolators. By having our own manufacturing we are able to take on customised products and special designs. Our equipment consists of high speed turning centres, 2 vertical milling CNC machines, 2 lathes, steel band saws, cranes, presses, grinding machine, TIG and MIG welds, industrial steel washing machine and painting box.

We work with LEAN and we strive for constant improvements of the work environment and efficiency.

Metal scrap is separated into aluminium, steel and stainless to simplify recycling and burnable waste is sent to closest possible incineration only 2 km away.

## Engineering

For custom designed isolators necessary calculations can include:

- Mechanical strength analysis by Finite Element Methods (FEM).
- Natural frequencies analysis & dynamic response analysis by Finite Element Methods (FEM).
- Load distribution calculations.
- Fatigue calculations.
- Calculation of fastening bolts or welds.
- Static & dynamic laboratory tests
- Preparation of 3D CAD drawings
- Analysis for attenuation, transmission and radiation of structure borne noise using Statistical Energy Analysis (SEA)

For suspension of hot pipes as for instance exhaust pipes typical technical proposal can include:

- Dimensioning and positioning of suitable support (hangers/fix points/pipe clamps)
- Calculation of thermal expansion
- Dimensioning and optimization of expansion joints (position and pre-tension)
- CAD-drawings with products at proposed positions and principal sketches

For exhaust silencer dimensioning typical calculations can include:

- Calculation of undamped exhaust noise spectra (if not available)
- Calculation of generated exhaust volume (if not available)
- Choice and calculation of suitable silencers to meet required noise reduction

• Calculation of distance attenuation based on free field

• Calculation of backpressure for the complete pipe system

For elastic suspensions with shock demands we can perform chock calculations:

• Shock calculations with six different pulse types: sine, half-sine, quadrilateral, sawtooth, reversed sawtooth and pulse train

• Optimisation of shock mount type to minimize rest chock

• Rest shock level in centre of gravity, each suspension mount or other critical point

• Drop calculations

For calculation of vibration isolation of track systems we provide:

• Insertion loss calculations for rail pads, under sleeper mats, ballast mats and slab track

• Necessary input data: boogie length, boogie load, speed, type of rail, type of rail fastener, type of sleeper, sleeper distance, height of ballast or slab, mechanical properties of underlaying soil or rock

• Lateral stability calculation

• Calculation of electrical resistance to stray currents (for embedded track)

• Detailed installation drawings, method statements, test certificates etc.

• Installation on site if required

Improving your  
enviroment!