

Vibratec Akustikprodukter AB Offshore

Vibratec[®]
akustikprodukter



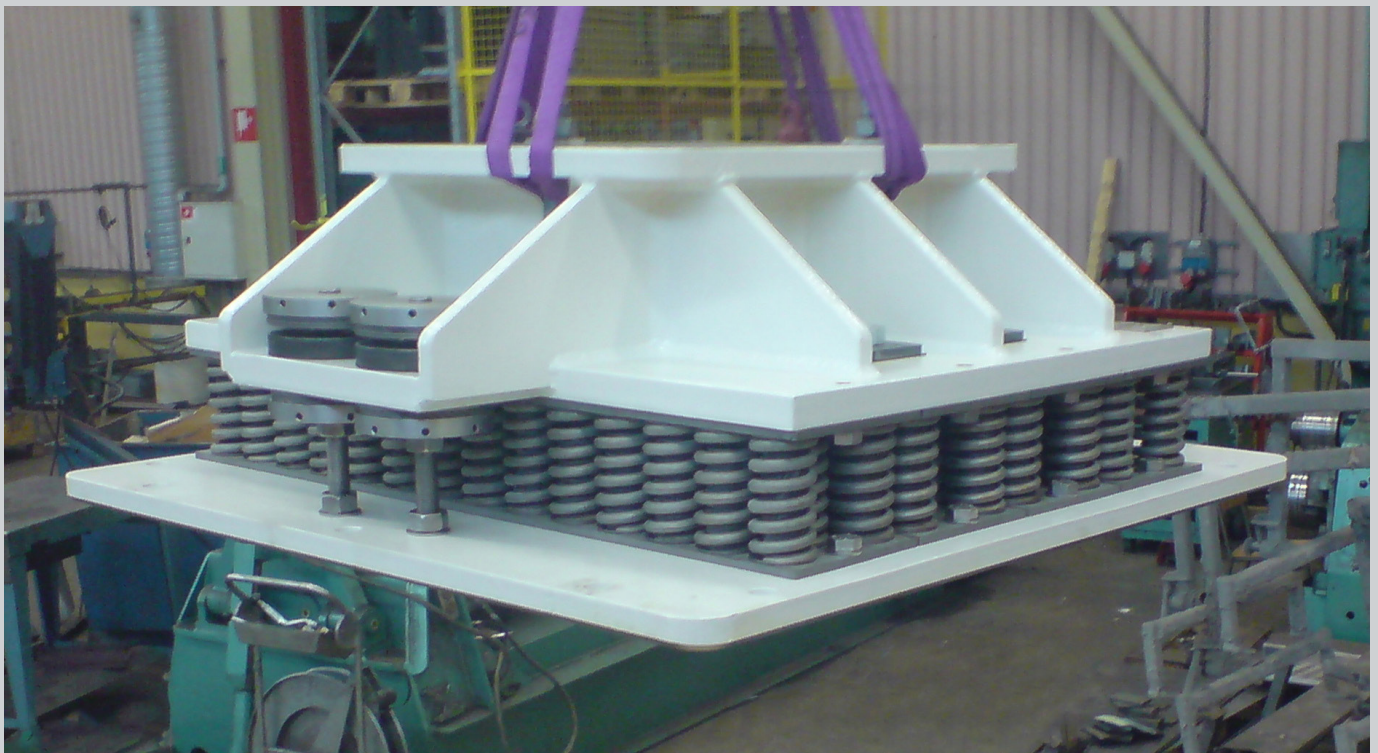
Vibratec Akustikprodukter AB

Offshore

Vibratec is specialized in anti-vibration, damping, noise and shock protection for different offshore applications such as vibration isolation of turbo compressors, turbine generators, accommodation modules and piping. We also do on-site surveys, specially designed noise enclosures and tuned mass dampers.

We provide:

- Engineering
- Custom designs
- Manufacturing and stock
- Installations
- Documentation
- Control measurements

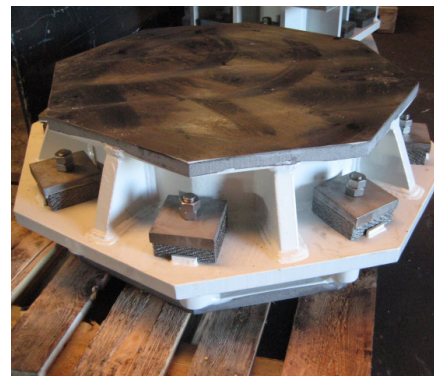




Spring Anti-Vibration Mount



Cushion Anti-Vibration Mount



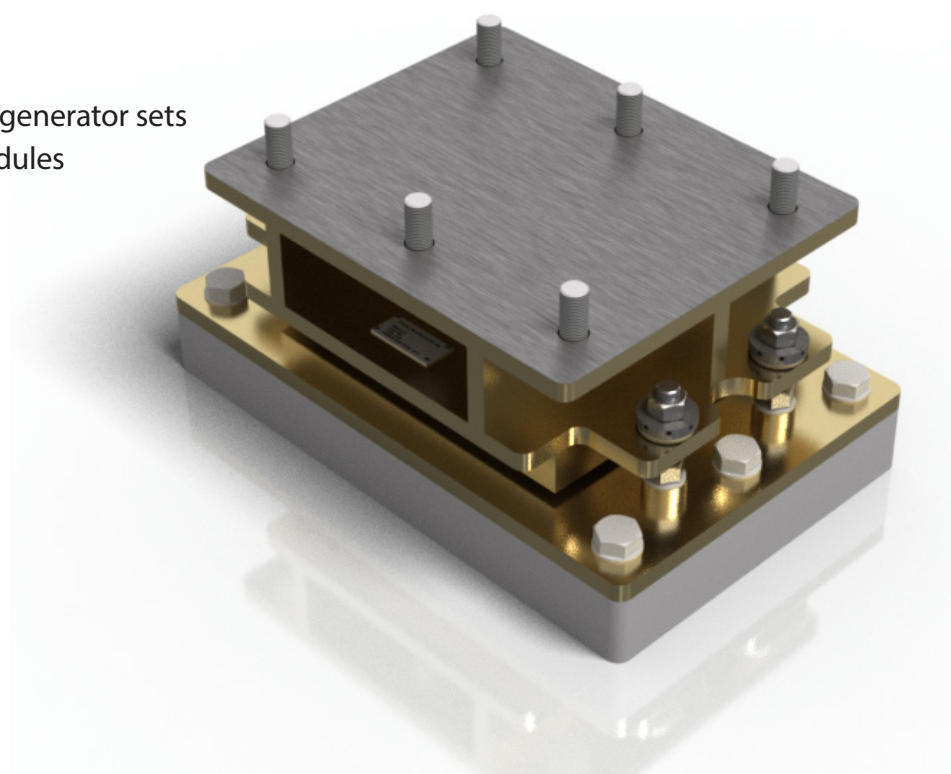
AVM for Office Module

Vibration isolation

Due to the varying rigidity in skids and decks the problem of vibration isolation is normally more complex offshore than in land based applications. Vibratex designs Anti-Vibration Mounts (AVM's) taking all known parameters into account to find the optimal solution using only durable materials that can cope with the harsh environment without any changes to the characteristics. We use springs and all-metal elastic elements, often in combination, to customize the AVM's to the specific demands of the project. In addition to the vibration isolation features the AVM's are designed to withstand forces due to different limit states.

Typical applications are:

- * Turbo-compressor sets and generator sets
- * Accommodation or office modules
- * Crane boom rest cradles
- * Pumps



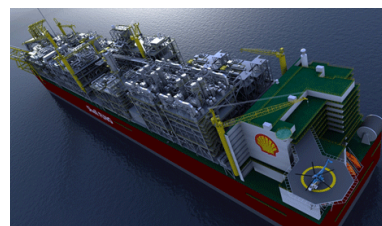
Selected references:



FPSO Aoka Mizu, Bluewater



Jack-up Haven, Master Marine



FLNG Prelude, Shell



Enclosure



Echast silencers



Ventilation silencer

Noise attenuation

Vibratec offers custom design and manufacturing of noise enclosures for isolation of airborne noise from equipment on offshore units. Solutions are engineered and manufactured completely in 316L steel including locks, bolts, rivets etc. Acoustic insertion loss is estimated including leakage from pipe penetrations, cable trays, seals and lock systems.

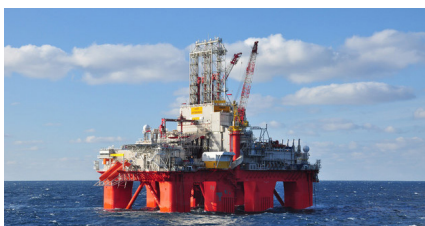
Typically there are strict requirements for isolation of airborne noise, but also for ventilation noise and the radiation of structure-borne noise from panels. Vibratec can also design ventilation silencers and acoustic louvres. These are used to attenuate noise when a machine moves large volumes of air in or out of a room or restricted space.



Selected references:



Enclosure for the Edvard Grieg project



16 silencers in AISI 316 for Rolls Royce engine, Aker H6e rig



AISI 316 silencers on rig Transocean Searcher



Suspension of gas turbine pipe



Pipe clamp



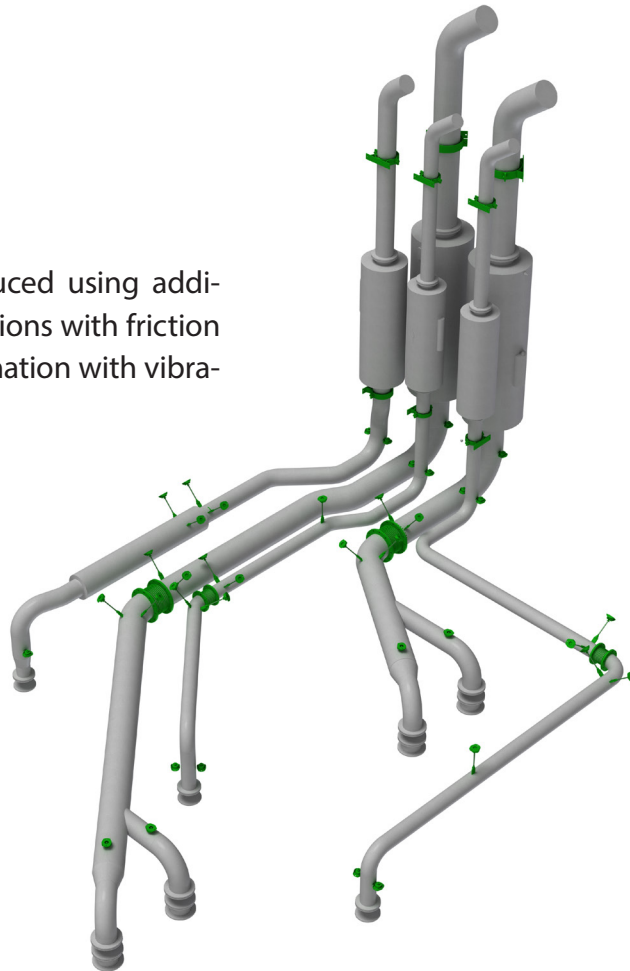
Rectangular expansion joint

Pipe Suspension

Vibrations in pipe systems can lead to resonant problems and fatigue in pipes and structures. These problems can be prevented by correctly dimensioned and positioned supports and bellows. Vibratec can supply different types of vibration isolated pipe supports completely in AISI316 or higher quality if needed:

- * Fixed and sliding supports
- * Pendulums
- * Pipe clamps
- * Expansion joints

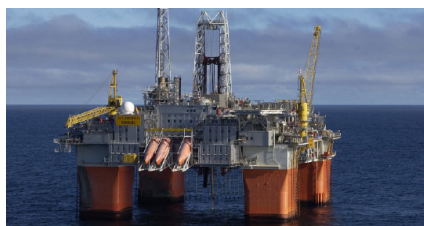
The pipe vibrations may be further reduced using additional pipe dampers. Vibratec offers solutions with friction dampers, that also can be used in combination with vibration isolators.



Selected references:



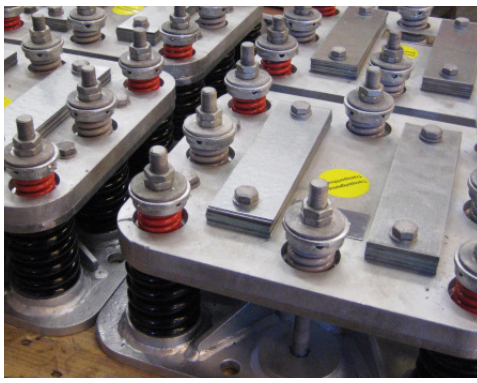
Kristin, StatoilHydro



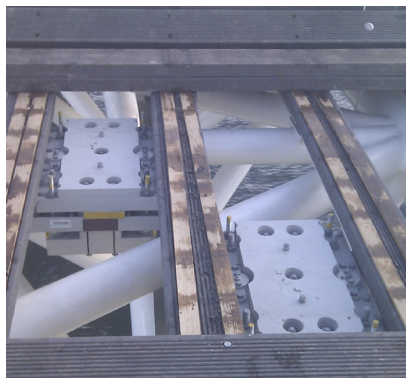
Snorre B, Statoil



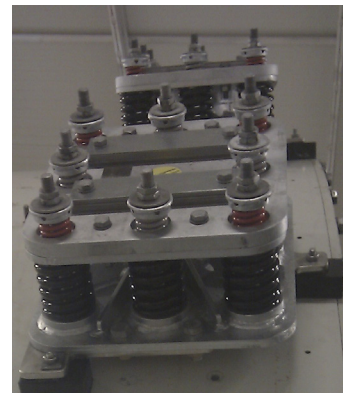
FPSO Papa Terra, BW Offshore



TMD in production



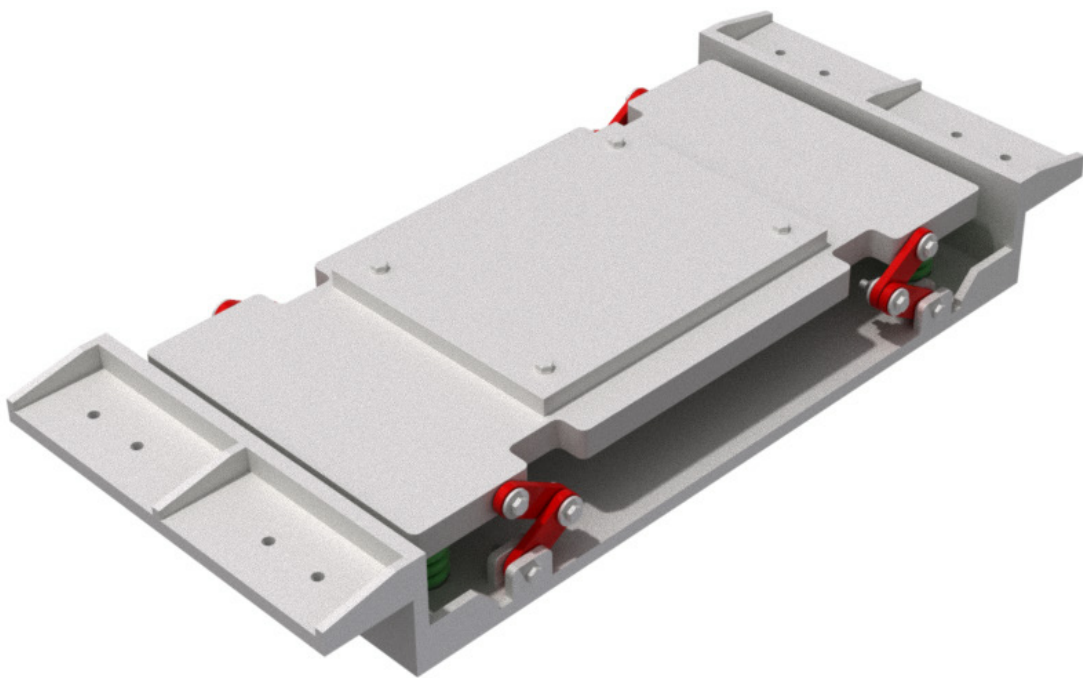
Installation under bridge



On rotation machinery

Tuned Mass Dampers

Tuned mass dampers stabilize against motion caused by harmonic vibration. A TMD is tuned to move the main mode away from a troubling excitation frequency and it also adds damping. TMD's are typically concrete blocks or steel bodies mounted elastically by means of springs, and tuned to move in opposition to the resonance frequency of the structure to be damped. Vibrattec designs and manufacture TMD's for both low and high harmonic vibrations. Typical low frequency applications are pedestrian bridges and skyscrapers whereas wind turbines are considered a high frequency application. Vibrattec can also support with installation and measurements if wanted.



Selected references:



Bagers Bro (Malmö)



Siemens Wind Power

Measurements, surveys and installations

Vibratec has a number of employees that can undertake various installation jobs, measurements and surveys on offshore units. Thorough investigations and skilled personnel are vital for a correct design and installation, and in the end optimal function.

Typically Vibratec undertakes jobs within noise & vibration control as complete projects involving AVM's, exhaust & ventilation silencers, damping treatment of steel decks, pipe dampers, noise enclosures and TMD's (Tuned Mass Dampers).

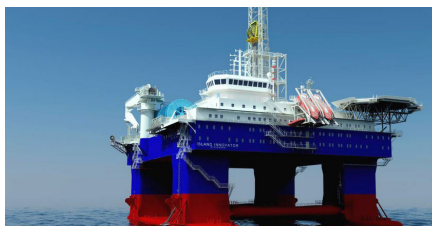
A site survey prior to a project or preparation of budget for executing can also be performed by Vibratec. If additional measurements of noise and vibration are required Vibratec can perform vibration and sound measurements for internal use for engineering purposes or for control of obtained noise reduction.



Selected references:



Site survey on Hanjin Heavy Industry for MacGregor/Specma



Island Innovator, Odfjell Drilling



FPSO for Presalt project, Petrobras



Sweden

Tel: +46 176 20 78 80

www.vibratec.se

info@vibratec.se

Norway

Tel: +47 33 07 07 50

www.vibratec.no

info@vibratec.no

Denmark

Tel: +45 49 13 22 44

www.vibratec.dk

info@vibratec.dk

Estonia

Tel: +372 56 66 29 93

www.vibratec.ee

info@vibratec.ee