



Why deal
with the symptoms,
when we can
eliminate the source!

G&O Vibration Compensator

A world of possibilities

Gertsen & Olufsen A/S is situated north of Copenhagen and has since 1945 been one of the largest suppliers of equipment and systems to the marine industry.

With this comprehensive line of products Gertsen & Olufsen has established itself as a major player and supplier of specialised products to the international marine markets. Our business philosophy is to offer competent advice and service by a dedicated and competent staff with a profound knowledge of our customers and their needs and the solutions provided by our products and systems.

Worldwide service

Through an extensive international network of agents, Gertsen & Olufsen A/S ensures the highest service level. Just one phone call, fax or e-mail and you will be in touch with someone who will be delighted to assist you.

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Gertsen & Olufsen's products and services



G&O Vibration Compensator



G&O Microbac Bioreactor



G&O Survey Water Monitor

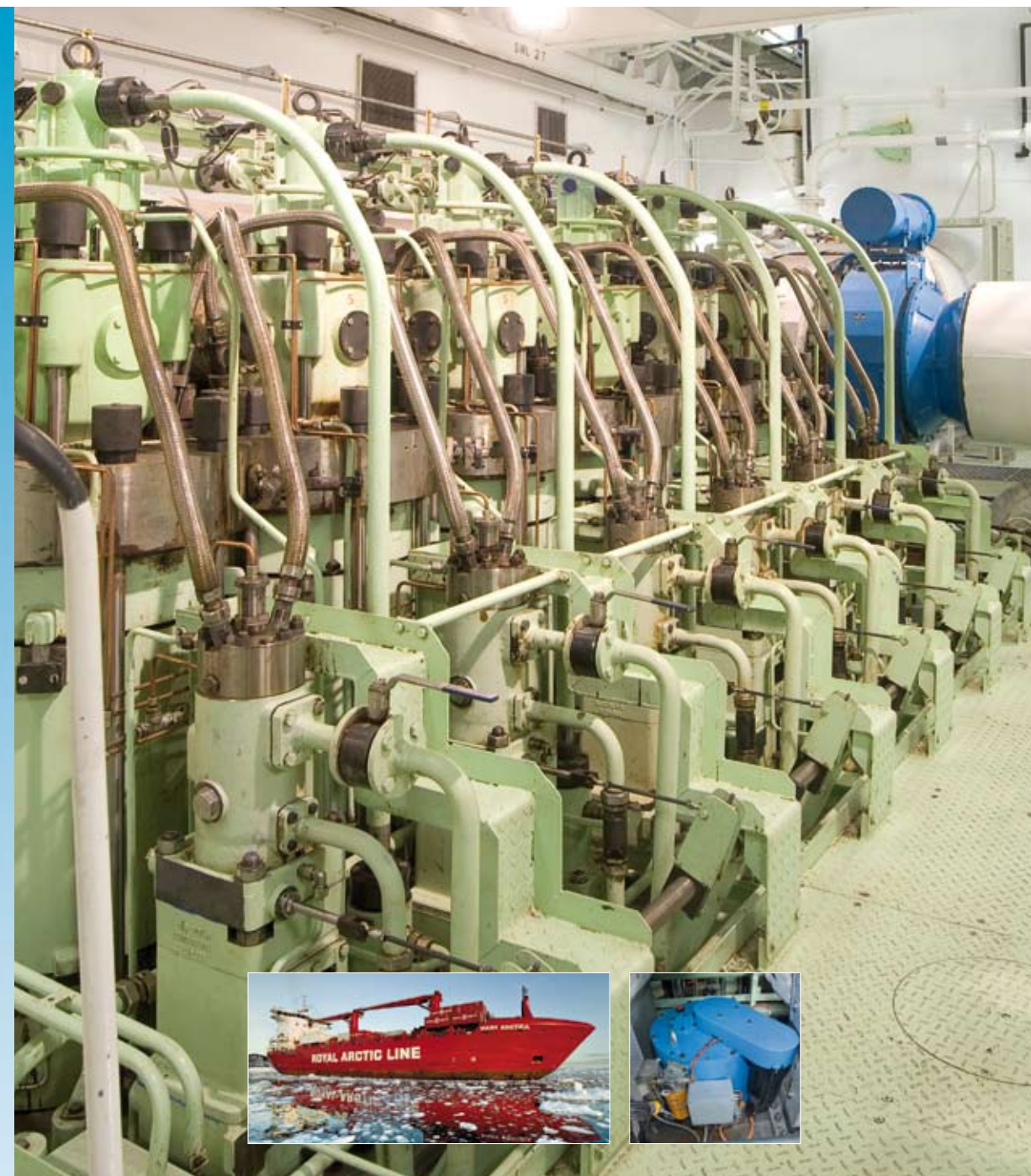


G&O SafePage 3000™



G&O Boiler Dosing

and various Electronic
Systems and Consultant
Engineering Services



GIVING GOOD VIBRATIONS

G&O Vibration Compensator

Eliminate the source of vibrations in ships and power plants

Reduced maintenance costs
Improved engine performance
Improved crew comfort
Improved economy



Vibration Problems

Guide force moments, unbalanced moments, axial thrust, structural- and propeller induced vibrations are all unavoidable characteristics of the low speed two stroke diesel engine. Most vibration problems are reduced by adequate conventional countermeasures such as reinforced hull structure, stays and dampers. However, these only reduce the symptoms, they do not eliminate the source of the vibrations.

The G&O Vibration Compensators eliminate the source of the vibration problem. The most common vibration related problems and damage types are:

- Limitation of engine performance and hence operational economy
- Cracking and reduced mechanical strength of superstructures, stays and tanks
- Leaking, cracking and reduced mechanical strength of fuel- and lube oil piping
- Abnormal wear on rotating machinery and components
- Decreased failure rate of electronic- and electric components

Vibration problems do not occur until after the completion of a specific ship design or when the vessel is taken into service.

Eliminate the source of vibrations

The G&O servo-driven moment compensator reduces or even eliminates the source of vibrations due to the unique and patented technology that creates an exact opposing sinusoidal varying force whose size and direction outbalance the source of vibration.

The G&O VC deals with the following different fields of vibrations:

- External Unbalanced Moments
- Guide Force Moments
- Axial Vibrations
- Structural and Propeller thrust vibrations

Whether or not a resonance is present, reduction of external moments and guide force moments means better and smoother running engines. A G&O VC can therefore be used as a preventive maintenance tool reducing wear on most engine-related equipment as well.

G&O Vibration Compensators are world leaders in eliminating unwanted vibrations and improving the performance and comfort of ships and power plants. More than 200 G&O VCs have been successfully installed by leading ship owners, engine producers and shipbuilders worldwide.



The G&O Vibration Compensators are supplied as both horizontal and as vertical unit types.



The compensator works only when needed

The system works independently of the main engine and can consequently be operated automatically at pre-selected engine speeds and load conditions. On e.g. tankers the natural hull frequency changes dramatically when the vessel is in either full load or ballast condition. By using the independent and electrically driven G&O VC the system only operates when needed.

Save on engine configuration

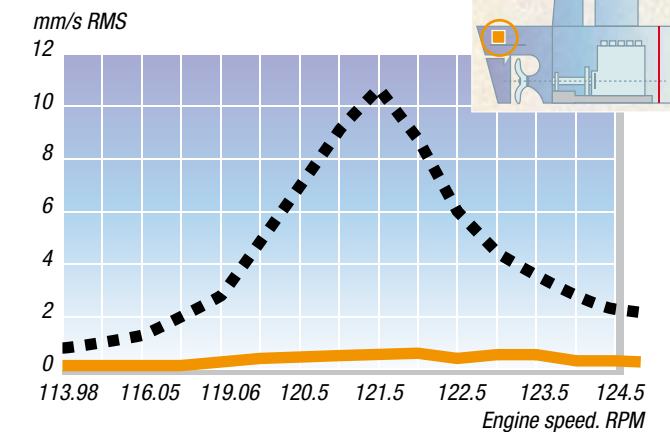
In general the use of a G&O Compensator gives a *moment free* engine and thereby enables the designers to deliver the optimum designed vessel – the Vibration Compensator can be considered as a kind of *steel saver*. By using a compensator on four and five cylinder engines the guide force moments will no longer be of significance. This enables owners and designers to make use of the many advantages of an engine with a low number of cylinders. Such as better fuel economy, shorter footprint and fewer components.

Easy installation and operation

Installing the G&O Vibration Compensator is a relatively simple project that does not interfere with the operation of the vessel. G&O can act as responsible project manager throughout the entire installation, from exciter test to fine tuning of the system. Once a G&O VC is installed no further adjustments or operational attendance are required. MBTO is 25,000 hours.

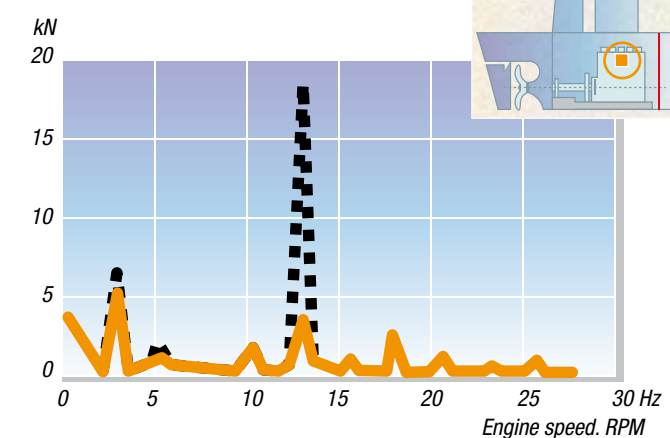
External order moments

Tending to rock aft ship and superstructure



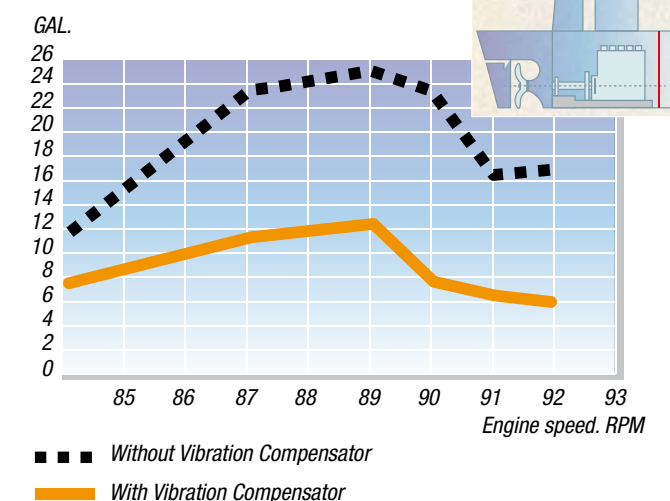
Guide force moments

Tending to rock the entire engine structure



Structural vibrations

Initiating the superstructure and hull to vibrate



G&O VIBRATION COMPENSATOR - GIVING GOOD VIBRATIONS