

Less Motion...
More Ocean...



About VEEM LTD

Founded in 1968, VEEM is a sophisticated marine products manufacturer, operating from its dedicated head office and production facility in Western Australia.

They say every great company has a story – one that captures the essence of the business and its culture. VEEM Ltd is no exception. From modest beginnings as a small machine shop specialising in the repair and dynamic balancing of drive shafts and other rotating equipment, the company has grown to become a leading global manufacturer of sophisticated equipment for the aerospace, marine and oil and gas industries.

VEEM supplies critical components to the Royal Australian Navy, and manufactures technically intensive large stabilization hydrofoils for superyachts, commercial vessels and fast ferries. The company revolutionised fixed pitch propeller technology for boats and yachts with their 'Interceptor' propellers — which allow the propeller's pitch to be altered at any time by a diver, in a matter of minutes, without slipping the vessel.

The VEEM Gyro is a significant marine equipment offering that will change the way the superyacht industry thinks about roll stabilization.

*Welcome to a new era of superyacht stabilization.
Let us show you how you can be more comfortable.*



Being aboard a superyacht should be an enjoyable experience from the moment you arrive to the second you step back onto dry land. Regardless of whether you are at anchor or underway, the comfort of you and your guests is always important.

Wave motion is one of the few external forces which has the capacity to negatively impact your time on board, regardless of the size of

vessel. What's more, even the most sheltered harbours can suffer from unpleasant wave induced motion, causing discomfort and seasickness in many.

After six years of research and development we are delighted to be able to offer our customers the opportunity to enjoy the significant improvements in roll stabilization that the new VEEM Gyros provide.

Reflecting our unwavering passion for beautiful design and representing a combination of both engineering and manufacturing excellence, the new range offers a genuine step change in performance compared to existing systems and is truly a class-leading series of products.



More locations...

Some of the world's most incredible, unspoilt locations are only accessible by boat, while others are simply more impressive when viewed from the water. Some are found in tranquil inlets and coves, whereas others can be more exposed to waves and strong currents.

VEEM Gyros let you open up your anchorage options by eliminating annoying rolling motion, enabling you and your guests to focus on enjoying the idyllic surroundings.

More days of the year...

Letting poor sea conditions affect your schedule is now a thing of the past. With a VEEM Gyro installed you are able to relax with friends and guests for more months of the year – extending your season and increasing a vessel's potential charter revenue.

More enjoyment...

VEEM Gyros offer up to 95 per cent roll attenuation while at anchor – ensuring you get to dine in comfort; soaking in the view without the rolling motion ruining the experience for you and your guests.

More adventure...

VEEM Gyro gives you the freedom to explore every corner of the globe in total comfort and free from annoying rolling motion.

With a VEEM Gyro installation, being limited to common sailing routes and destinations is a thing of the past. You can now seek out those incredible, remote or exposed locations - safe in the knowledge that wherever you find anchorage, your adventure will be free from excessive rolling motion. Explore, experience and discover...comfortably.



More peace of mind...

Some of the most popular activities while on a superyacht involve enjoying the water around the vessel. Whether swimming, snorkelling or diving around the boat, whilst in the water the safety of your guests must be assured. This is especially important if the yacht is available for charter.

Unlike zero speed fin systems, with VEEM Gyro stabilization, the entire system is located within the yacht, with no large external appendages posing a potential danger to swimmers, divers or marine life in the vicinity.



safe for divers



safe for the environment



safe for swimmers





More memories...

Those moments of happiness, experienced whilst enjoying the hard won fruits of our endeavours, create lasting memories that we carry forever. You can now ensure that these experiences are enriched by the higher levels of safety and comfort that are provided by a VEEM Gyro.



More speed...

Less fuel...

More efficient...

The efficiency with which a yacht cuts through the water is becoming ever more critical to discerning owners as they strive to minimise impact on the environment, and manage rising fuel costs.

VEEM Gyros provide a powerful roll stabilizing torque without any additional drag. For many applications a significant top speed increase and fuel efficiency gain can be realised simply by selecting a VEEM Gyro rather than external fin based systems.

Considerable R&D effort and expense is often associated with propeller and shaft-line design, analysis and testing, in order to maximise efficiency.

The VEEM Gyro offers an exciting opportunity to realise propulsive efficiency gains whilst enjoying the best stabilization solution available.

More responsive...

Any reactive system which relies on sensing the rolling motion before responding will suffer from a lag as the system catches up with the forces being exerted upon it. This occurs at rest or underway. This lag results in small accelerations being introduced to the yacht's motion. It is these accelerations that allow experienced mariners to be able to 'feel' when fins based systems are in operation.

With a VEEM Gyro, the system is constantly active and performing its desired function from the moment you step on board. The result is a smoother ride, with no lag induced accelerations.

More powerful...

VEEM Gyro's patented 'Smart Torque' is designed to maximise roll reduction across almost all weather conditions, while guaranteeing safe operation in even the most powerful environments. The control software is so advanced that the requirement for a motion sensing system has been completely removed, eliminating a point of failure and providing a more robust solution.

VEEM Gyros have also been developed to integrate seamlessly with other motion stabilization systems, autopilots, dynamic positioning or heave compensation products, without any software interfacing.



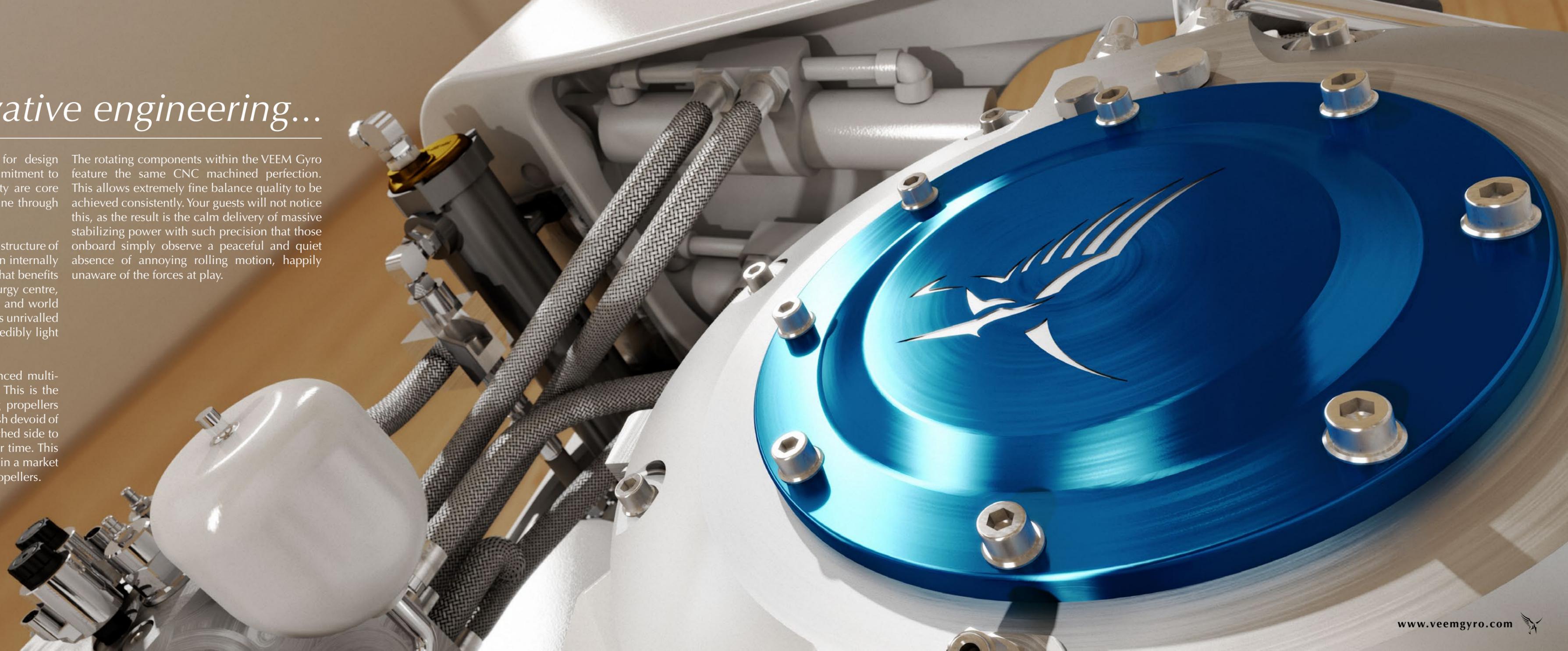
More innovative engineering...

Innovative engineering, a passion for design excellence and a demonstrated commitment to market leading manufacturing quality are core values at VEEM and these values shine through the VEEM Gyro products.

The vacuum chamber and base frame structure of the VEEM Gyro range are cast from an internally blended advanced aluminium alloy that benefits from the company's in-house metallurgy centre, certified materials testing laboratory, and world class non-ferrous foundry. The result is unrivalled structural integrity coupled with incredibly light weight.

VEEM has invested heavily in advanced multi-axis CNC and robot manufacturing. This is the key to the company's class leading propellers that are delivered with a polished finish devoid of surface imperfections, perfectly matched side to side, and totally repeatable time after time. This unmatched quality has placed VEEM in a market leadership position for fixed pitch propellers.

The rotating components within the VEEM Gyro feature the same CNC machined perfection. This allows extremely fine balance quality to be achieved consistently. Your guests will not notice this, as the result is the calm delivery of massive stabilizing power with such precision that those onboard simply observe a peaceful and quiet absence of annoying rolling motion, happily unaware of the forces at play.



Accumulator

Hyd Manifold

Grease Cannister

Spin Motor Drive

Cable Chain

Vibration Sensor

Coolant Lines

Vibration Mount

Vessel Hull Structure

Hyd Oil Cooler

Hyd Cylinders

Vacuum Chamber

Glycol Cooler

Base Frame

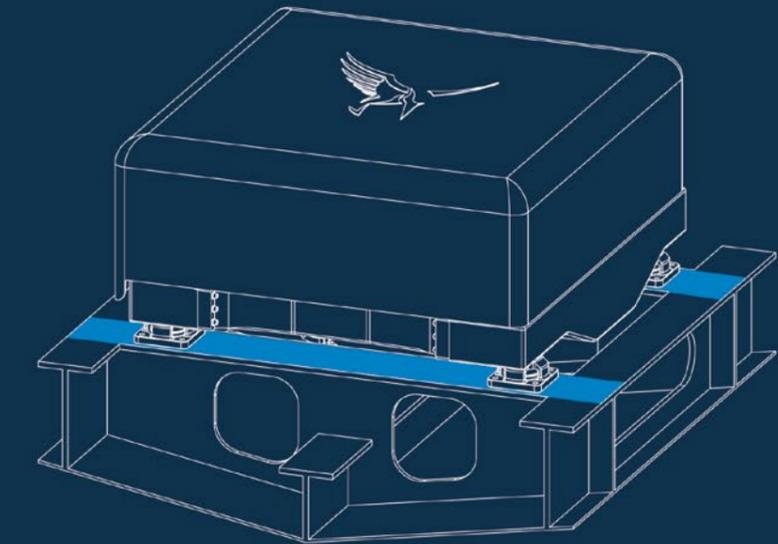
More flexible...

VEEM Gyros have been specifically designed to enable flexible placement within the vessel. Any number of gyros can be installed and they can be located anywhere with adequate structural support – typically on a longitudinal girder or a transverse frame. Unlike other gyrostabilization systems, VEEM's Gyros do not need to be located on the vessel's centreline or located low in the vessel. For the naval architect this provides flexibility on structural interfacing options. For the existing yacht owner looking to retrofit, this provides flexibility of gyro mount integration.

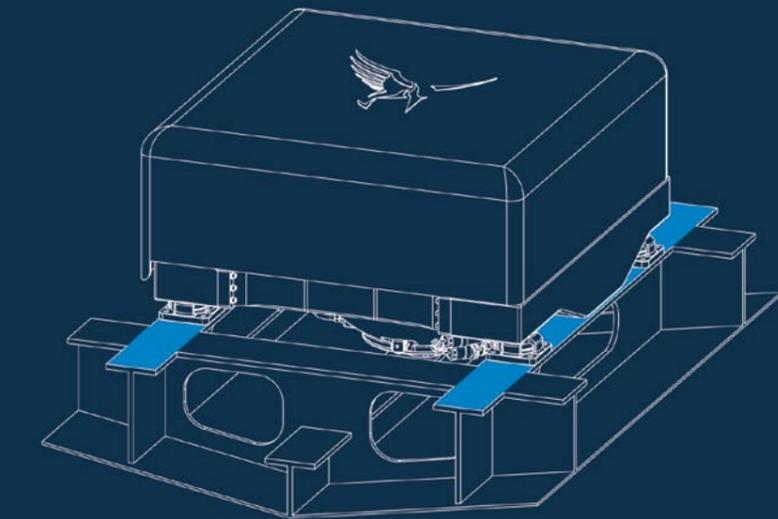
The VEEM Gyro can be installed so that the gyro swings just above the keel. This allows the unit to be located very low in the engine room layout, offering the possibility of bridging over the unit to further limit its impact on space.

VEEM Gyros are controlled by a full colour touch screen mounted on the unit, connected via Ethernet with POE. The easily read panel provides accurate motion data, as well as system health status and alarm messages - all reported in easily understandable graphic or data format.

For almost all superyacht installations, the gyro control should be via the glass bridge in order to avoid unsightly clutter. Unlike many gyro suppliers, VEEM Gyros provide a choice of digital comms interfaces to glass bridges and VEEM engineers will work with the yachts glass bridge integrator to ensure that the interface is implemented smoothly.



Gyro mounted on transverse frame



Gyro mounted on longitudinal girder



More technology...

VEEM Gyros are actively controlled vertical axis gyro stabilizers delivering excellent rolling motion attenuation while the vessel is at anchor, drifting, alongside, loitering or at transit speed. VEEM Gyros reduce rolling motions by up to an amazing 95% depending on the wave environment and vessel characteristics.

VEEM Gyros will work seamlessly with other motion stabilization systems, autopilot, dynamic positioning or heave compensation systems without any software interfacing.

The size and performance of the system depends upon the level of stabilization desired, the wave environment and the

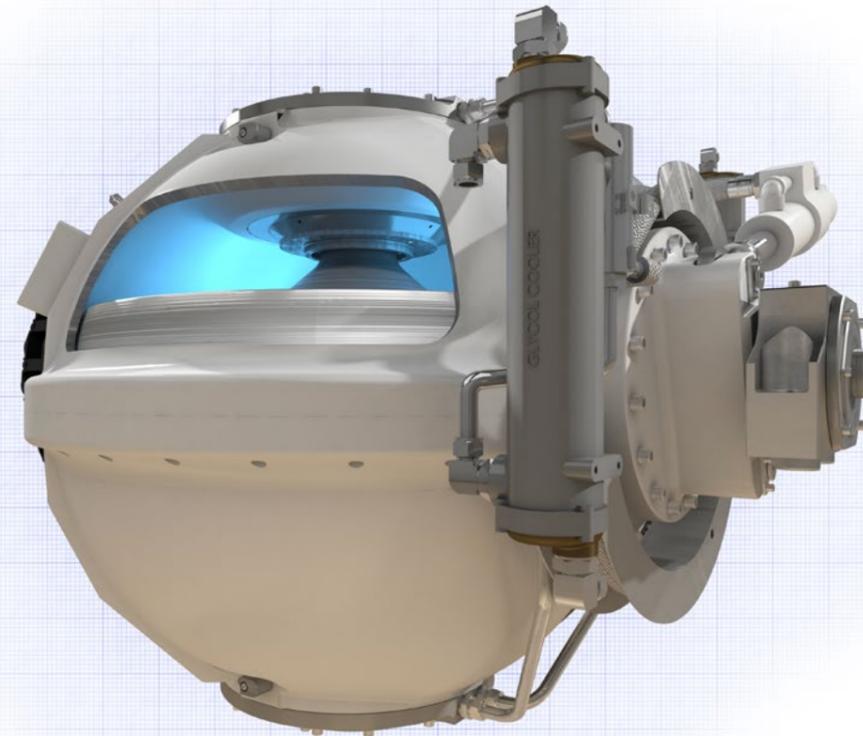
vessel characteristics. VEEM will provide a customised assessment of a suitable solution for your vessel once you have submitted an online enquiry form.

Interfacing to a VEEM Gyro is simple. It requires only electrical power and cooling seawater, in one location. This is a significant advantage either at new building or as a retro-fit as the impact on the vessel is minimal. Structural support, space, electrical power and cooling water availability will often result in a location below decks or on main deck, somewhere aft of midships, but other locations are possible.

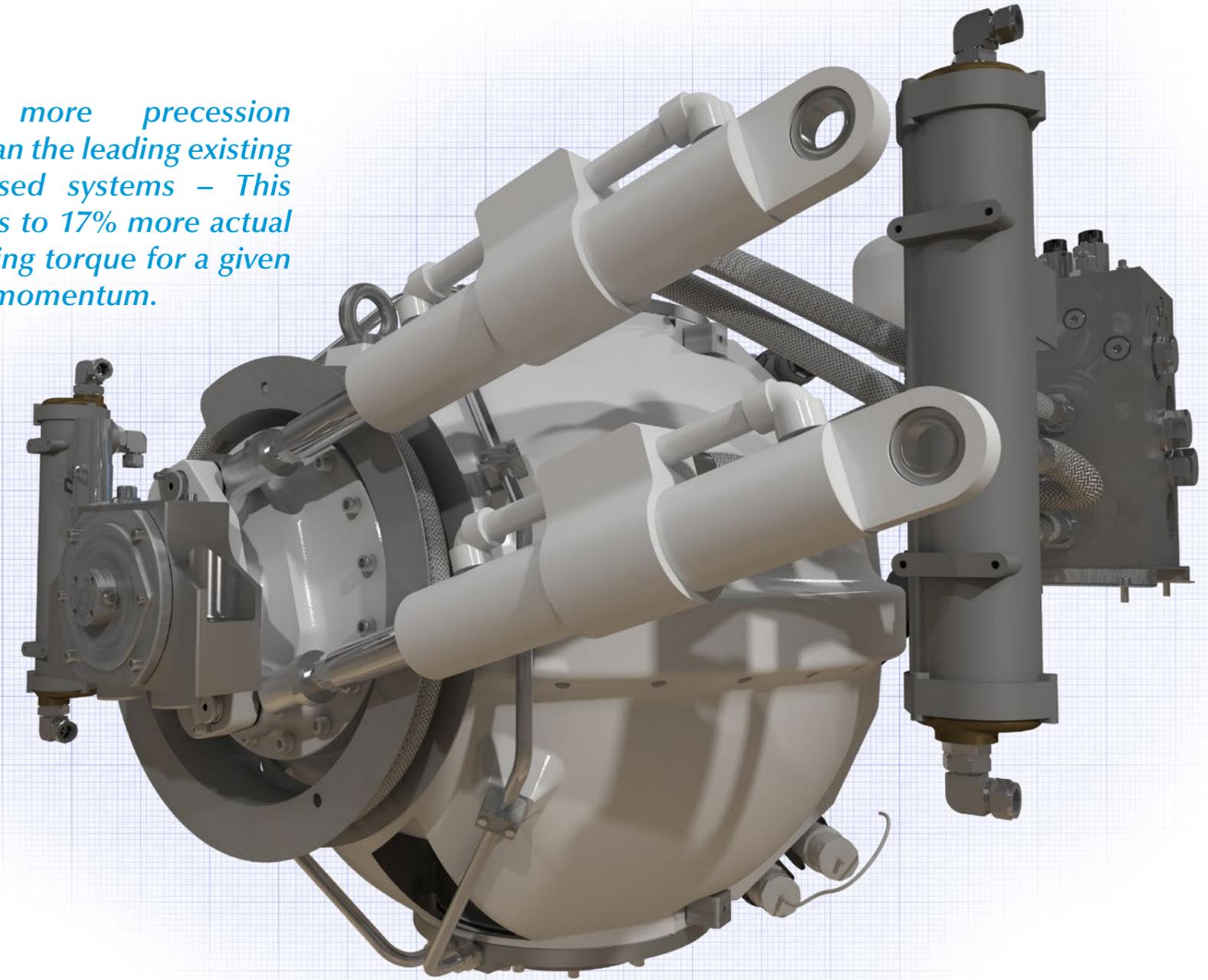
The VEEM active control system maximises roll reduction as sea and vessel running conditions vary. With active control, a smaller unit can provide the same performance as a larger passive gyro system. The active control system also ensures that the VEEM Gyro is safe to operate in all conditions.

- Up to 95 per cent roll attenuation
- +/- 70 degrees precession range
- Higher top speed
- Increased fuel efficiency
- No dry docking for maintenance

- Flexible mounting options
- Infinite flywheel fatigue life
- Short run-down time
- Color touch-screen control
- Glass bridge interface available



17% more precession range than the leading existing gyro based systems – This translates to 17% more actual attenuating torque for a given angular momentum.

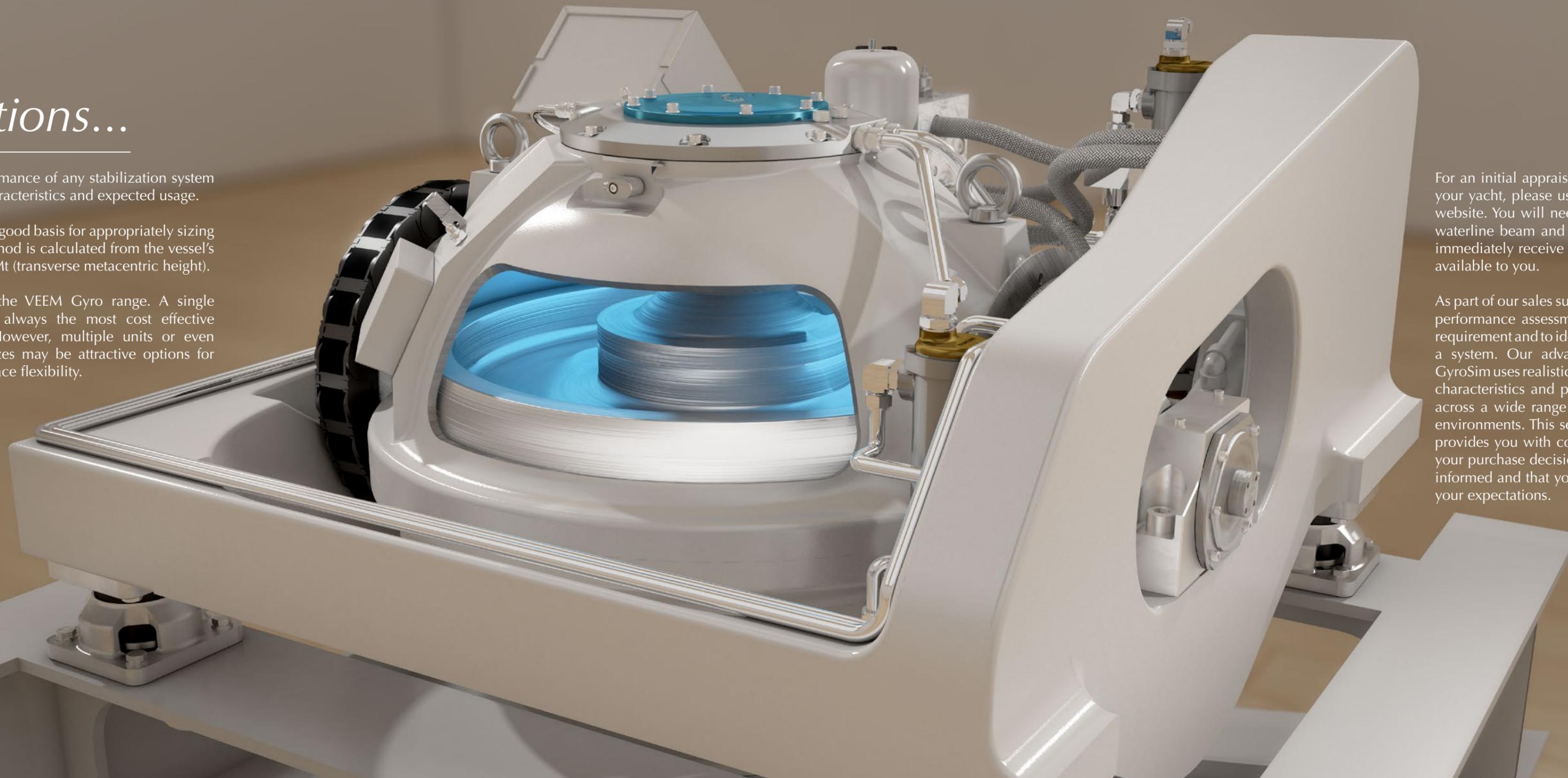


More options...

The required size and performance of any stabilization system depends upon the vessel characteristics and expected usage.

Vessel length is not usually a good basis for appropriately sizing a gyro. A more accurate method is calculated from the vessel's displacement, beam and GMt (transverse metacentric height).

There are four models in the VEEM Gyro range. A single gyro installation is almost always the most cost effective and technically efficient. However, multiple units or even a combination of model sizes may be attractive options for reasons of redundancy or space flexibility.



For an initial appraisal of the VEEM Gyro installation options for your yacht, please use the free GyroSize calculation tool on our website. You will need to provide the yacht's displacement, max waterline beam and GMt (found in the stability book). You will immediately receive an emailed PDF report outlining the options available to you.

As part of our sales support, VEEM provides a detailed stabilization performance assessment to understand your yacht's stabilization requirement and to identify the right solution before recommending a system. Our advanced dynamic simulation package called GyroSim uses realistic irregular waves, considers actual gyro system characteristics and provides predicted stabilization performance across a wide range of possible operating conditions and wave environments. This service far exceeds the industry standard and provides you with comprehensive information on which to base your purchase decision. It is important to VEEM that you are well informed and that your VEEM Gyro installation meets or exceeds your expectations.



More support...

From your first contact with the VEEM Gyro team you will notice a commitment to thoughtful, straightforward pre-sales advice and support from experienced experts in the field. Our aim is to ensure that your yacht is characterised by exceptional roll stability, at speed and at rest.

All VEEM Gyros come with a comprehensive after sales support package. Following the warranty period, technical support is available within the scope of a tailored maintenance contract or on an ad hoc basis.

VEEM Gyrostabilizers have been developed to require very limited maintenance. All maintenance tasks can be completed wholly whilst the vessel is in the water, without the need for dry-docking, or the removal of major components.

In another first for this market, VEEM's maintenance contracts include remote web access to the gyro system – allowing remote diagnostic support and firmware upgrades whenever required and regardless of your location, further minimising disruption to the boat's schedule. VEEM's diagnostic tools also enable expert through-life evaluation of replaceable components to maximise their working life and cut service costs, ensuring only elements which need replacing are replaced.



The Halcyon bird...

The myth of the Halcyon birds is a story of beauty, passionate and enduring love, the wrath of Gods, and ultimately calming the seas.

It is said that Alcyone, who was the exceptionally beautiful daughter of the God Aelous, and her equally handsome husband Ceyx, the King of Thessaly, were in the habit of playfully calling each other by the pet names of Hera and Zeus in reference to their shared exceptional beauty. This angered Zeus. Returning by sea from an audience with Apollo about the dangers of angering the Gods, Ceyx encountered a violent storm sent by Zeus and was shipwrecked and drowned as he approached his home shores.

Deeply mourning the absence of her beloved husband, Alcyone was warned in her dreams of his return and waited by the shore. Upon seeing his drowned body afloat in the waves, she threw herself into the ocean in an attempt to save Ceyx. Her attempts looked likely to result in her drowning as well. Aeolus held council with Zeus and compassion prevailed. It was decided that the two tragic lovers would be rescued by turning them into Kingfisher birds which became the Halcyon birds.

Thereafter the Halcyon birds enjoyed the protection of Aeolus who calmed the wind and the seas where the Halcyon birds nested in the middle of winter.

VEEM Gyro brings calm to your part of the ocean, just like its mythical namesake.

Want to discover more?

To find out if a VEEM Gyro is suitable for your yacht and the options available to you, use the sizing tool available on our website. You will receive a free VEEM Gyro sizing appraisal via email.

If you would prefer, please talk to one of our authorised global agents, who will be able to walk you through your stabilization system selection. A full list of our global contacts is available on our website.

www.veemgyro.com



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