

Dyna-Rig and composite mast support programme

Large modern sailing yachts are increasing in size and complexity. The best superyachts, with tall carbon fibre composite freestanding masts and sophisticated Dyna-Rigs, only need a minimal crew and can deploy all of their sails in minutes, at the push of a button. However, regular monitoring and maintenance is essential to get the best out of these complex sailing systems and hardware, and Magma has now launched a new Rig Support programme.

The unique and complex superyacht

The team at Magma designed and built freestanding carbon composite masts and Dyna-Rigs for the world's top three largest private yachts. These vessels sail rapidly and efficiently using complex computer controlled hardware, monitoring and control systems, with automated roller furling sails weighing up to 2 tonnes. They are also a green energy solution, spending most of their time under sail.



The Dyna-Rig is a balanced rotating modern rig specifically designed for large modern superyachts. Easy to use, and with no highly loaded lines on deck, it is one of the safest sailing systems available. Clean sail shapes and aerodynamic lines combine to create a highly efficient sailing rig on all points of sailing.

The ease and simplicity of use of Dyna-Rig automated sailing systems enables a reduction in the number of operational crew on these large type of superyacht.

However, Dyna-Rig systems are highly complex. This creates the challenge of having the necessary skills on board, as well as the crew maintenance hours available, to carry out the periodic planned maintenance and servicing that is required. Crew turnover on these large yachts can also often further exacerbate this shortfall in valuable vessel knowledge.

Regular maintenance and professional support

Rig Support is a tailored mast and rig monitoring, service and long term maintenance program designed to get the best from these sophisticated rigs, to minimise downtime, maximise long term protection and maintain vessel value.



“Rig Support solves the challenge of consistent and regular management and maintenance of sailing systems, and also ensures safe, reliable operation through the vessel's life.”

Andy Shaw, Magma Structures Managing Director

Magma Structures

A global leader in carbon composite structure technology, with innovative solutions and flexible manufacturing to meet complex design challenges

Magma Structures delivers world-leading carbon composite structural engineering expertise and flexible manufacturing capabilities. We specify, design and deliver unique and complex high-performance composite assemblies to meet the most demanding structural needs

The potential of composite materials is harnessed to engineer solutions with specific performance characteristics in terms of structure strength, durability, scale and weight

A systematic and engineering led approach matches the best technology and build processes to each individual project. World-class, in-house testing facilities, robotic engineering skills and extensive experience in through-life fibre optic strain monitoring systems

Working at the leading edge of carbon composite technology, with expertise in its applications in bespoke structures and components, all backed by a proven project delivery process

Rig Support for superyachts

Rig Support is a comprehensive rig monitoring and management service delivered by Magma Structures, the free-standing rig designers and manufacturers, and backed by in-house marine engineering expertise. The aim of the Rig Support package is to provide a single location where all the related maintenance and operational knowledge is stored, so that no information is lost when the vessel has a crew change and / or software or hardware upgrade.

RIG Support

A structured support and maintenance programme to ensure safety and performance at sea



Lifetime record of superyacht sailing history

It is essential that these huge, complex sailing yachts operate their rigs and equipment within the specific design limits established at the time of build. Magma Rig Support can monitor, record and report on all the data provided by the built-in rig sensors, to provide a lifetime sailing history. Most importantly, this programme helps underpin vessel warranties, keeping owner / operator insurance premiums down and maintaining long term vessel value over time.

Magma Structures Rig Support package includes:

- Single point of contact for vessel crew for any issues regarding the sailing system
- Daily collection and maintenance of all of the data from the vessel in a structured form
- Rig data analysis from all vessel sensors for safety monitoring, daily or regular reporting
- Coordination with original hardware and software suppliers and sensor software updates
- Direct advice available from Magma via appropriate professionals and third party suppliers
- Annual rig inspection with a report on the rig condition and recommendations for any work
- Arrangement of vessel maintenance team briefings or vessel crew training requirements
- Guidance on any updates required from relevant classification societies and class states
- Spare parts administration, management and stocking as required for the vessel



Magma Rig Support benefits

- Lifetime sailing system history record
- Inspections, training and guidance
- Supports owners, operators & crew
- Maintains vessel safety and value

To discuss more about the Magma Structures Rig Support service please email andy.shaw@magmastructures.com

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