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VULKAN MARINE MAKES ITS MARKET DEBUT WITH THE K-RIB 9.5: AN INFLATABLE BOAT THAT TAKES ADVANTAGE OF KYMS, THE DIGITAL PLATFORM DEVELOPED BY KINETON FOR SIMPLE AND INTUITIVE MANAGEMENT OF THE BOAT. THE KYMS SYSTEM, STILL UNDER DEVELOPMENT, WILL BE AVAILABLE TO ALL BOATING OPERATORS IN THE FUTURE

Paola Bertelli



ARTIFICIAL INTELLIGENCE GETS ON BOARD INFLATABLE BOATS

The new Vulkan Marine brand owned by Kineton, a high-tech engineering company specializing in the development and validation of software solutions for the automotive, media, it, telco, and aerospace sectors, was officially unveiled at the Cannes Boat Show. Kineton decided to start Vulkan Marine to bring its solutions to the nautical world.

The shipyard, which was present at the show with the first unit called K-Rib 9.5, is developing a range of inflatable boats between 9 and 12 m: specifically smart boats that are always connected through the KYMS boat management software. KYMS – Kineton Yacht

Management System is a digital platform designed to control basic inflatable boat functions and ensure greater safety while sailing; it also offers infotainment and owner support applications.

ACQUIRING AND MANAGING INFORMATION REMOTELY, IN REAL TIME

Consisting of an on-board embedded system, a cloud platform, and a web and/or mobile application, KYMS – through the NMEA2000 network – can acquire information on the status of the vessel including engine data, GPS, radar, echo-sounder, and anemometer.

It can also support the shipowner in navigation and during berthing, control all onboard utilities, and enable advanced infotainment applications such as live and VOD content streaming and music streaming services. KYMS, now being finalized on the K-Rib 9.5, will then be available in the market

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KYMS – Kineton Yacht Management System is a digital platform designed to control basic inflatable boat functions and ensure greater safety while sailing



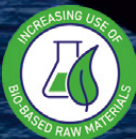
The dashboard with flush display on a plexiglass top

With two Mercury V6s, the boat reaches a top speed of 40 knots

to all boat operators. "Thanks to KYMS's advanced algorithms, it will be possible to visually monitor sensitive areas of the shipboard, while fully respecting the privacy of the users," explains Giovanni Fiengo, CEO of Kineton, "and to observe the operating status of the vessel and remotely manage certain subsystems. Navigational data collection and diagnostics will also enable boat manufacturers and operators to be able to be informed in real time of possible breakdowns and thus be significantly more efficient in customer service management."

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Paolo D'Orazio,
Vulkan Marine
administrator

A “CONTAINER” OF TECHNOLOGY

IN CANNES WE MET WITH PAOLO D’ORAZIO, ADMINISTRATOR OF VULKAN MARINE, WHO ARRIVED AT THE SHOW FROM NAPLES BY SEA JUST ABOARD THE NEW K-RIB 9.5.

How did the Vulkan Marine brand come about?

Vulkan is a brand owned by Kineton, a young (and growing) engineering company that works in the automotive and aerospace infotainment multimedia world and produces hardware and software for these industries. Among other development possibilities, it has also focused on a technological boat management system: by ‘technological’ we mean having a connected boat and a simple user experience that enables the user to enjoy the asset effectively and efficiently. Kineton is a benefits company, it has broader goals than just profit, a code of ethics, etc., values that are increasingly prominent even in a luxury industry like boating.

How did the first boat, a 9.5 m inflatable, come about?

We wanted to focus on a wheelable inflatable boat (when deflated it is 2.5 m wide and when inflated 3 m wide) that could potentially be a watercraft as well. It is a boat that started as a demo: we made, tested, and validated it in eight months. We have installed a higher level of equipment than usual, with the bow



THE K-RIB 9.5 BOAT

At 9.5 m long and 3.20 m wide, the K-Rib 9.5 is a center console boat with a sleek and sporty design.

The tubular is made of Orca 1880 neoprene hypalon and has a variable section that tapers toward the bow; there is no anchor bow gear, which comes out of the fairlead to facilitate bow approach maneuvers

thruster, radar, anemometer, proximity sensors, and cameras; all these devices interact with each other in our system that works embedded and on the cloud, so it can process data and self-learn through artificial intelligence.

We currently have a constant 5G connection on board that meets our needs, but if we want, we can also work with satellites.

How did you choose motorization?

We settled on Mercury because it gives 5-year warranties and, most importantly, has extremely low emissions. We chose to downsize power and installed a pair of V6s, knowing that we had adequate efficiency. This inflatable boat in a speed range of 20 to 30 knots (which is the correct one for us) has an average consumption consistently under 2.5 liters per mile. I came to Cannes by sea from Naples, and after a summer of testing, I know that these data are reliable.

Is the KYMS control and infotainment system closed or open to the market?

It is open to the market and other shipyards, not just dedicated to our boats. From the

manufacturers’ point of view, such a system – always connected to the cloud – simplifies aftersales service considerably: for example, it allows them to collect data in real time, making service and maintenance easier and timelier.

Where is Vulkan Marine based and how will the range evolve?

We produce in Naples. We plan to make – 3 years from now – also 12 m and 6 m models. Our boats are very customizable, we use modular molds.

Our goal is not to make big numbers, but to build tailor-made products, with an eye toward a greener world; in small steps, we are trying to have more and more efficiency in terms of consumption and recyclable materials. The carbon console of the K-RIB 9.5, for example, has the first layers of recycled carbon.

We are also studying hybrid and/or electric solutions. Of course, storage issues are still important and make the 100% electric solution complex for now: for the K-RIB 9.5 we worked hard to save 500 kg, it would be contradictory to fill it with batteries.



DATA SHEET: K-RIB 9.5

Hull construction material: fiberglass
Deck construction material: fiberglass/carbon
Tubular construction material: hypalon neoprene
Overall length: 10.00 m
Hull length: 9.50 m
Maximum width: 3.20m
Maximum immersion: 0.40 m
Assumed full load displacement: 1800 kg
Main engines: no. 2 x 225/no. 2 x 350hp
Bow thruster: "Lewmar" 1.3kw
Fuel tank capacity: 1x405 L approx.
Freshwater tank capacity: 80 L approx.
CE classification: category B

lighten as much as possible at the top. The tank in the hull is also barycentric to the boat." Efficient hull and weight control enable good performance even with relatively small engines. It is powered by a pair of 225 HP Mercury outboard engines that enable K-Rib 9.5 to reach a top speed of more than 40 knots and consumption at cruising speeds ranging from 20 to 30 knots below 2.5 liters/mile. For higher performance, motors with a power output of up to 700 HP can be mounted.

FACILITIES AND SERVICES

In the middle of the boat is the dashboard with touch displays, mounted flush on a sloping plexiglass top that then bends upward to become the windshield. In the console block are two 30-litre refrigerators and a retractable sink. Toward the stern, a sofa with a backrest folds down if necessary to expand the sundeck below which are storage lockers for equipment, batteries, water tanks, and the boiler. In the bow is a second settee and a large sunbathing area. There is no lack of a dressing room with services and an electrical panel. The plumbing system includes an 80-liter tank and a 10-liter water heater; the electrical system in addition to normal on-board use also has underwater lights.

to other boats. The hull, with a very pronounced variable V, is derived from that of Soffio, an award-winning boat in Endurance racing, and is hand-rolled. "The choice of a monolithic," explains Paolo d'Orazio, "was made to have particular solidity and efficiency, to ensure good inertia of the medium even on waves".

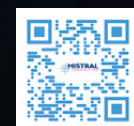
LESS WEIGHT, EXCELLENT PERFORMANCE

The deck, for which Valerio Rivellini did the design, is made by infusion, as are the console and hard-top, which, along with the uprights, are made of carbon fiber. "We tried to concentrate the major weights at the bottom, in favor of greater stability, and



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HEART OF THE INFLATABLE BOAT: THE KYMS DIGITAL SYSTEM



The system suggests optimal routes based on the user's profile, weather, and forecast. In the future, it will also suggest the bay where to anchor based on crowding, sea depth, etc

The carbon hard top designed by Valerio Rivellini

KYMS - KINETON YACHT MANAGEMENT SYSTEM WAS CREATED TO BRING THE CONCEPT OF A FULL AND CONSTANT CONNECTION TO BOATS IN THIS SEGMENT

On the control console of K-Rib 9.5, in addition to the classic chart plotter, there is a 15.4" monitor dedicated to KYMS. Through both local and remote management, this system provides assistance and decision-support capabilities for the shipowner with the help of artificial intelligence.

BOAT MANAGEMENT

The boat is organized into functional groups that include the management of batteries, loads (boiler, autoclave refrigerator, fan), lights, three pumps, winch (on the display in addition to the buttons for raising and lowering the chain are also the indications of water depth and chain meters given), bow thruster. Most of these operations can be done from mobile remotely. A screen updates the user on water and diesel levels, shows essential navigation data, the status of the various facilities, and reports any failures. In the console, in addition to the KYMS system, the navigation utilities also have an independent parallel system protected by fuses.

AIDS TO NAVIGATION AND MOORING

Radar, cameras, proximity sensors, and bow thrusters are the basis of navigation aid systems.

"With this kind of sensor infrastructure," they explain from the shipyard, "we want to do a sensor fusion of information domains and then get to have, for example, an autonomous mooring system in the future.

Object recognition is borrowed from automotive. The level of intervention of the system is scaled: for now, we give alerts, tomorrow we might think of sensors that inhibit certain maneuvers (for example, in the case of a possible collision they might intervene by stopping the motor). But this is all related to a regulatory as well as technological discourse."

An important part of the system is network training. "It is a neural network that, in order to recognize moving objects, must be trained by acquiring meaningful video streams of the real world. We currently have the infrastructure ready and have started training, which we expect to finish by the end of the year."