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An "in-depth" innovation

Diego Amadei - Riccardo Mambretti

A perfect synthesis of these concepts is to be found in the latest idea from Leopoldo Rodriquez, a leading figure in Italian yachting, who has designed with determination and an abundance of stylistic and functional details a truly unique yacht

Moonride Yacht 43' Runabout

It's the "Runabout" 43', the first from the new Italian brand Moonride Yacht. This strange and interesting creature has unmistakable lines with a vaguely retro look that offer every comfort for life at sea. It could be compared to a *paraggina* or a whaler, perhaps a fisherman or even a lobster boat with all the characteristics that this kind of boat offers. Functions on board are first-class, seagoing qualities such

as seaworthiness, range and safety are guaranteed even in rough waters, and living comfort is ensured by the cabins and services designed also for long cruises. But the real surprises are hidden below the waterline, both inside and out, and this is the secret that makes this boat unique and formidable. The engines, two 370 hp s-drivers with their 600 L of diesel can push the yacht to a top speed of 60 kn and take her

400 miles with a cruising speed of more than 40 kn. Her performance similar to an offshore, of which she maintains and exploits the reliability and safety, are the result of Riccardo Mambretti's decades of experience as a designer and pilot. He decided to

adopt his patented PDP SYSTEM hull for the design below the waterline. Its unique efficiency as a V hull permits fuel saving for every mile of up to 40%, and thus a range increased by more than 50%. Scientific experiments in a test tank and with CFD (computerised fluid dynamics) lie behind the Runabout 43' and guarantee its performance and safety under way, with total comfort in any conditions. This innovative project combines the classic qualities of boatyards worldwide with technology that is absolutely innovative and looking to the future, revolutionary yet discreet in its invisibility.

Mission

The aim of this exceptional hull is to transfer the know-how built up in racing to pleasure boating, so as to give even design driven boats these remarkable advantages:

- Reduce the current costs for boat acquisition, management and maintenance.





- Renew a hull configuration now abused and unchanged for half a century
- Reduce the consumption of non-renewable sources
- Encourage the use of boats to ease the problem of transportation stock
- Reduce environmental pollution by adopting lower power
- Help developing the sales of marine engines and increase production
- Allow the Navy to reduce management costs for the patrol service
- Make faster connections to the oil platforms
- Fight the crisis developing the recreational boating industry with innovative ideas
- Reduce the number of cruise fuel supplies
- Give fresh and lively impetus to offshore racing as it was originally born
- Make these races return to be the true test facility

P.D.P. System

A love for the sea and persistent technological research led to the conception of the PDP (Powered Dynamic Pressure) system which consists of a planing hull that conveys air, with a V shaped design and a series of parallel longitudinal canals where forced and progressive compression of water and air develops. This phenomenon generates an increase in lift and a reduction of drag surface. Thanks to patented know-how, progressively generate complementary lift as the speed increases. They help stabilise the hull, combating rolling and yawing in rough waters, and also soften the hull's re-entry into the water.

This characteristic means that the power of the engines installed can

be significantly lowered, and so consequently exhaust pollution too is reduced. This opens the way to innovative clean engines, with a consequent reduction of the running costs of the boat. Thus the magic of this system comes into play bit by bit as relative speed increases, proportionately to the boat's power/weight ratio. For this reason, correct design of the geometries and careful placing of the centres of gravity is essential. Not only is the performance of the yacht improved, but also its safety and strength, making its behaviour even more predictable in all sea conditions.

Advantages and construction criteria

To obtain a perfectly built boat, construction of the first model was entrusted to the Cantieri Navali D'Este yard, known for building racing sailing yachts in advanced composites. Close collaboration between the yard and 3D Service Italia, a young Roman company specialising in three-dimensional CNC processes and the Croatian architectural studio ADG gradually producing a boat that is beautifully built both in technical and stylistic terms.

Well-designed interior layout and the use of high-tech materials thus allow the advantages of the PDP system to be exploited to the full. This is the key to obtaining a boat that is a high performance but at the same time fascinating and respectful of the waters where it navigates, with such improvements as:

- Increased speed
- Increased cruise speed
- Fuel savings up to 40%
- Increased range for up to 70% and more
- Reduction of the planing time
- Structural strengthening (functional to the performance increase)

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- Reliability and safety given by the long and rich feedback from trials
- Exceptional flexibility: virtually adoptable by any planing "V" hull
- Low sensibility to increased loads on board
- Roll and side-leaning reduction - thanks to the stabilizing effect
- Torque effect cancellation - in case of single-engine boats
- Better route holding and drift reduction in turns

Conclusions

In this period of slow economic upturn in the yachting sector, the new model from Moonride Yacht appears like a bolt out of the blue. A perfect example of how experience, technique and Italian style can be perfectly blended to produce a new concept in day cruisers.

In the face of such design breakthroughs, the hope is that in the near future what are currently pilot projects will be developed not just by farsighted individuals, but also by big companies, and that Italian and world boatyards will increasingly adopt a structure typical of car companies, where the research and development departments are the beating heart of a brand.

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Building the model and the mould at 3D Service Italia

