Seascape 27

Project sheet
1.1.2011

“Everything
should be made
as simple as possible,
but not simpler”
(Einstein)

Introduction

Watching the incredible development of offshore racing yachts in the past 20 years, we realized that the gap between custom-made racing and mass production yachts was getting bigger and bigger. Even though some companies finally started following the trend set by the former, by applying chines to the hull and twin rudders on the transom, we believe the gap is far from being closed, as it lies deeper in mentality of the boatbuilders.

Until recently both racing and cruising yachts were too heavy to plane which meant that your boat-speed was defined by the length of the yacht measured on the water line. With other words, longer was by default faster, and better hull shape and lower displacement of the yacht could only help her get to her maximum speed a bit sooner.

The main problem was sailing downwind where yachts quickly ended up with excessive energy generated by their sails which couldn't be transfer to speed due to yacht's inability to plane. This energy was therefore burned as excessive rolling that often ended up in so called "death rolls" which broached or even worse, uncontrollably jibed the yacht. Consequently, spinnakers were used only by experienced crews, and downwind sailing in strong wind was neither fast, nor safe nor comfortable.

More importantly, such racing yachts were not much different to fast cruisers. Since none of them could plane, heavy wood-en furniture didn't make a major difference in performance.

First 435 - production racer/cruiser by Benetau.
First introduced 1984
Downwind sail area to displacement ratio: 17

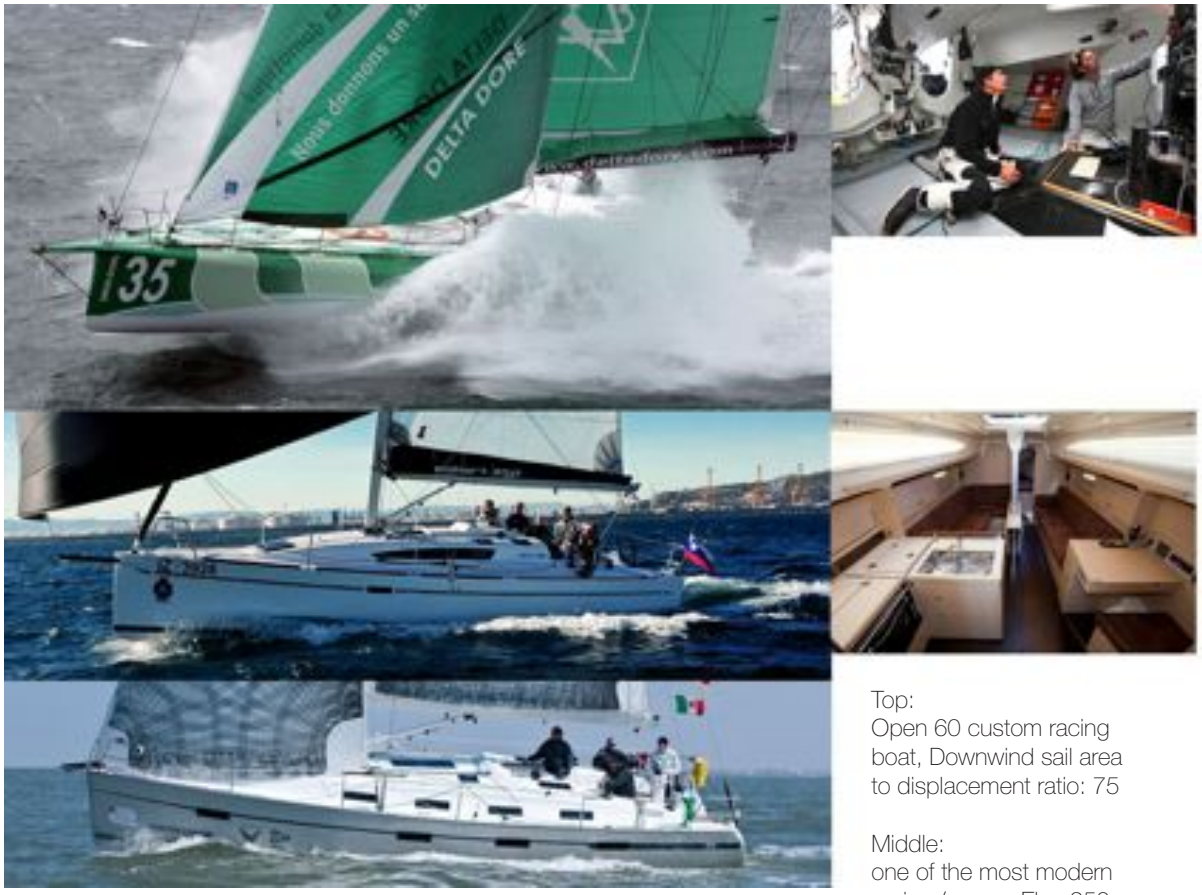
L'Esprit d'Equipe, winner of 1986 Whitbread race
Custom built by Dufour in 1981
Downwind sail area to displacement ratio: 18

And then the racing boats started to plane. Industry launched a new term – the racer-cruiser. At their conception, racer-cruisers looked more like racers, while today, with notable exception of J-boats, Pogo Structures, and a few other non-mainstream manufacturers, look more like cruisers with bigger steering wheels and better ergonomics in the cockpit.

Problem of the modern racer-cruisers is that they are weight sensitive. Add 10% displacement and, instead at 15, yacht will start to plane at 20 knots of wind. However, this is true only if a gennaker is used. Not being able to handle big gennakers at high wind speeds, some crews will therefore be stuck at the uncomfortable and slow displacement speeds, even though the hull would allow them to plane.

The modern racer-cruisers should therefore provide their crews all the necessary comfort without bulky visual luxury in interior and exterior.

The main luxury that this kind of a yacht has to offer is her safety, ergonomics and performance close to those of the modern racing yachts, but achievable with a shorthanded crew.



Top:
Open 60 custom racing boat, Downwind sail area to displacement ratio: 75

Middle:
one of the most modern cruiser/racers: Elan 350. Downwind sail area to displacement ratio: 26

Bottom:
Common cruiser/racer: Bavaria 40s, Downwind sail area to displacement ratio: 20

Evolution of the racing hull

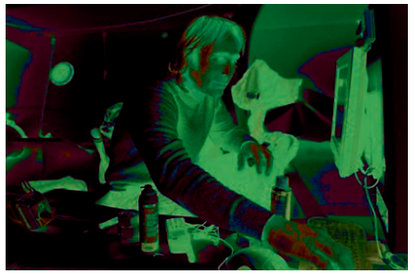
Hull shapes of racing boats went trough several evolution phases. Generally, yachts are getting more and more powerful and easier to sail, however, details are much more complex.

	Classic displacement hull shape with narrow stern and symmetric waterline	Planning hull with more volume in the stern, adding stability and power	Increased volume to the bow to get more symmetric waterline and prevent bow-down tendency while heeling	
Whitbread Volvo				Extreme increase of the bow volume to get maximum stability and symmetric waterline. Won 2011 Mini Transat. Still unknown how it applies to bigger boats
	1989 Steinlager 2	2005 Abn Amro / Kouyoumdjian design	2011 All of them - on photo Abu Dhabi / Farr design	
Open60				
	1989 Baggage Superior	1993 Geodis / Finot design	2007 Safran / Verdier,VPLP design	
Mini				
	1981 Berret design	1989 Finot design	2010 Manuard design	2011 Magnum / Raison design

The team

Seascape

Seascape is young and dynamic company that grew out of succsesfull proffesional offshore racing project 4ocean. In the span of the project Kristian Hajnšek and Andraž Mihelin gathered more than 40000 racing miles on the Minitransat 650 class sailing boats - among them competing on 2 consecutive Mini Transat races. Years of sailing singlehanded on one of the most extreme boats on the planet gave birth to an idea to bring that experience to the recreational sailor. FIrst in the line of Seascapes - Seascape 18 was a perfect proof of concept since she needed just 3 years to be crowned Europen Yacht of the year and sold in over 150 examples all around the world.

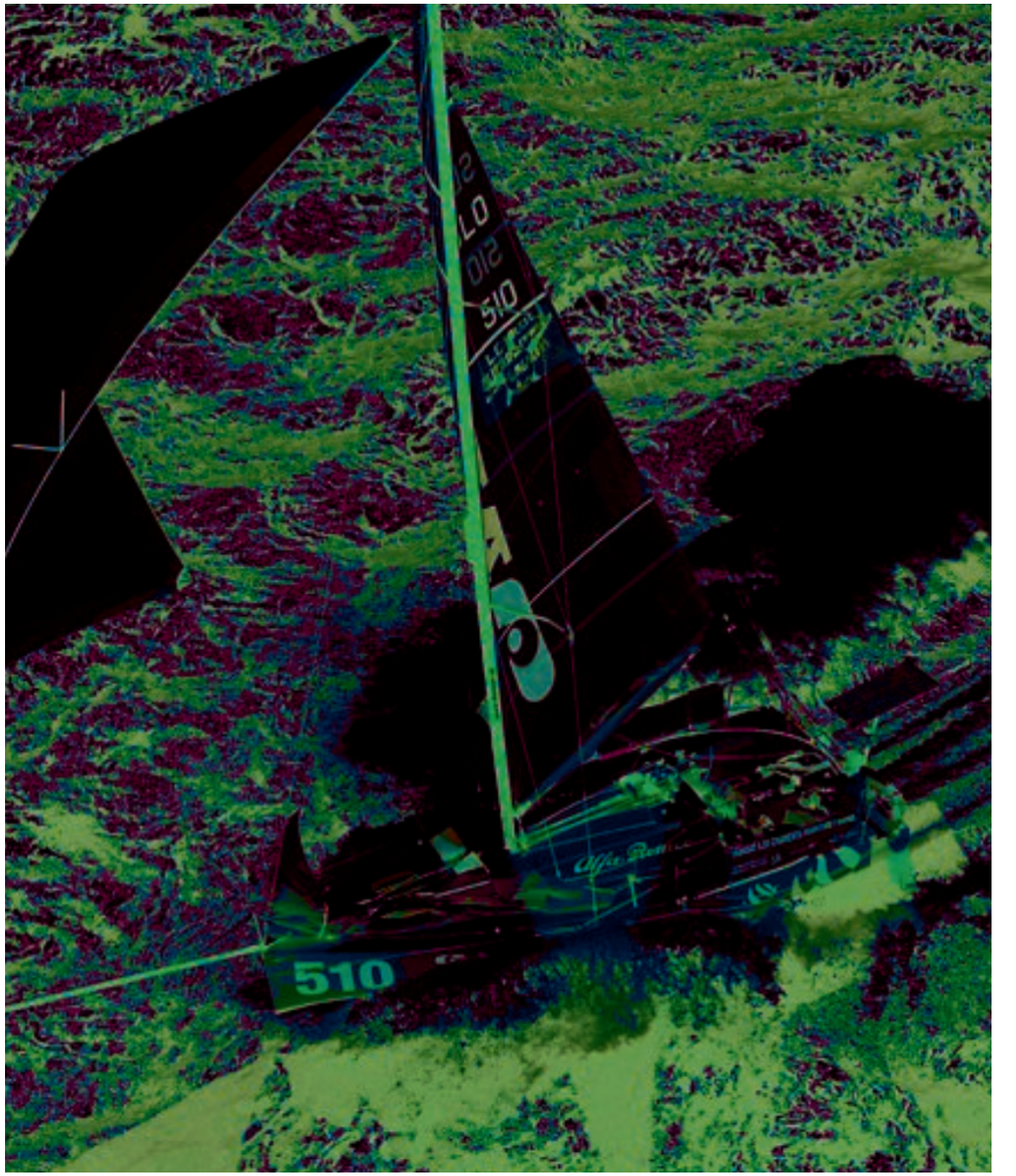


Manuard YD

Rare combinaton of world class sailor and gifted designer. Curently his designs lead the way in the Minitransat Class and Class 40 but his last success comes from wininning doblehanded Transat Jacques Vabre on board of Open 50 class Trimaran. Working together with Seascape team from the build of 4ocean's Minitransat 650 prototypes in 2003.

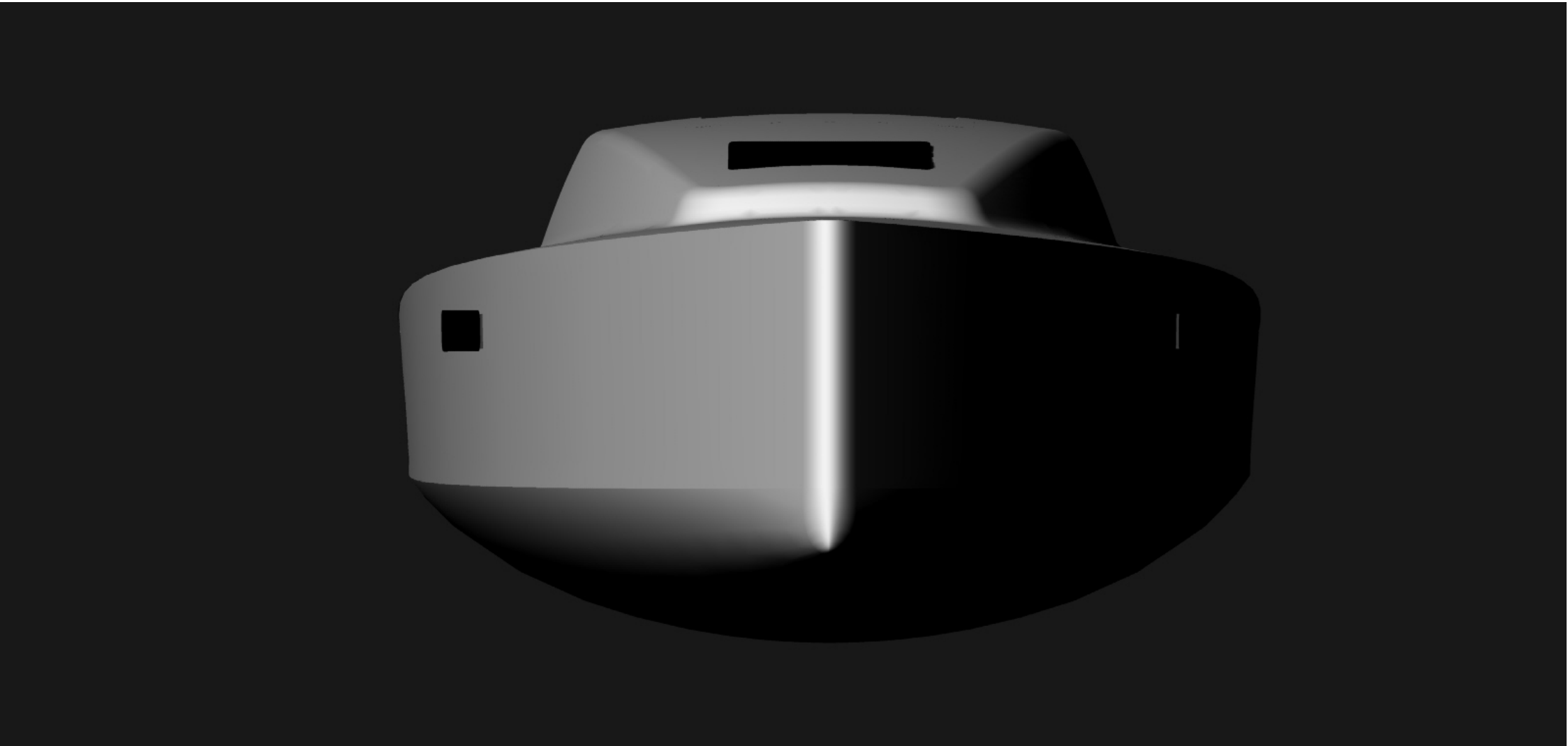
Gigodesign

Gigodesign is succsesfull Slovenian Industrial design company that worked on projects that range from Elan skis to Adria Mobile caravans. Martin Šoštaric together with his team took care of every detail of exterior and is now working on interior of the new Seascape 27.



The platform

Being familiar with the newest advantages of the racing class boats we decided to go for the most advanced but proven concept and designed a new boat, Seascape 27. She features extremely powerful hull lines with a beam limited to 2.54 metres in order to conform to the road standards. Beside better performance in most conditions, compared to the more traditional lines, her hull shape provides also a stiffer, more forgiving boat with a bigger internal volume.



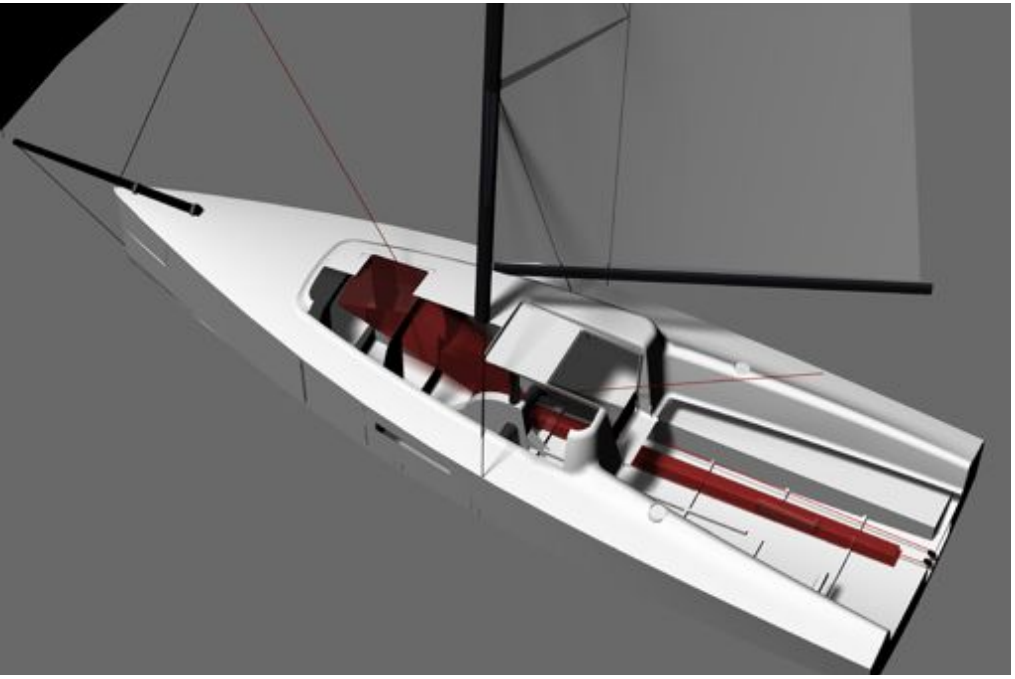
The Engine

Carbon fibre and modern engineering allowed us to go for a mast with no backstay and continuous rigging.
11 m tall mast also features cutter rig with genoa on classic forestay and jib on inner stay.

Lower diagonal shroud (D1) is moved inboard to allow easier passage from cockpit to the bow

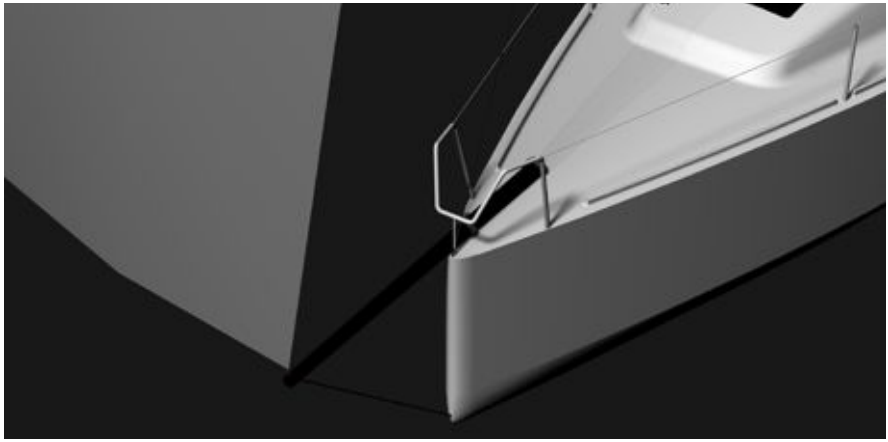
The Control

Despite the fact that Seascape 27 controls are simplified to the essentials, they allow enough trimming options to get the maximum out of the boat performance. Implementation of retracting/removing bowsprit, gennaker snuffer and other controls allow the boat to adapt to multiple purposes she was built for.

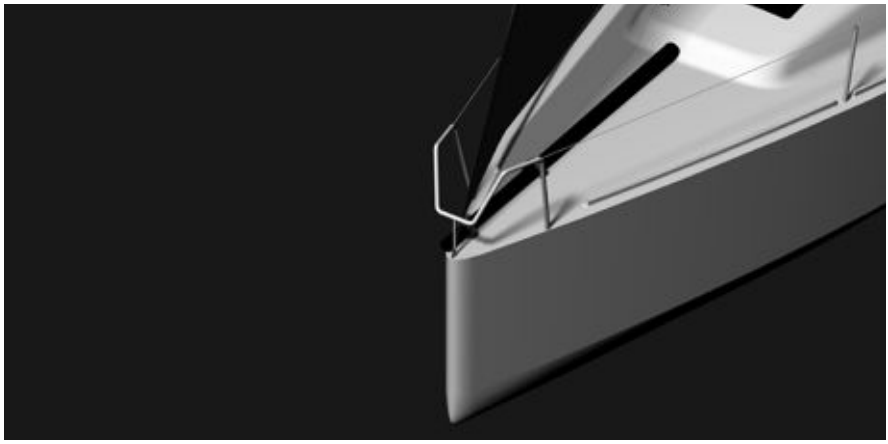


Removable Snuffer system for a gennaker, a feature until recently used only on modern inshore racing boats (GP42, RC44, Farr400)

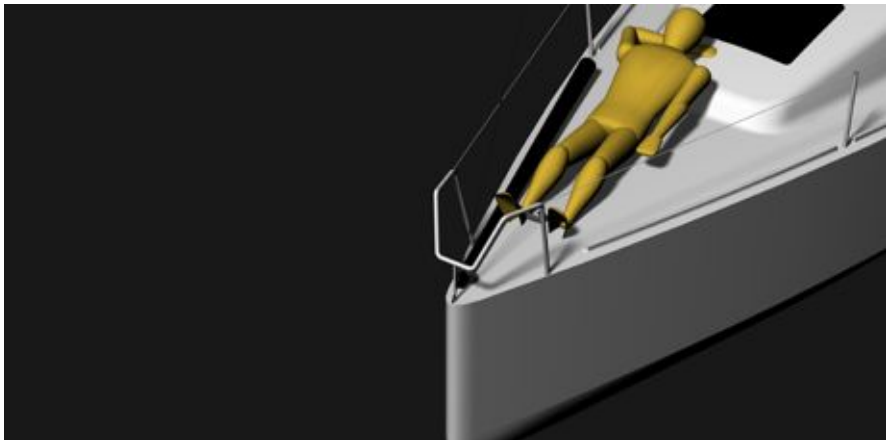
Bowsprit out (operated from the cockpit)

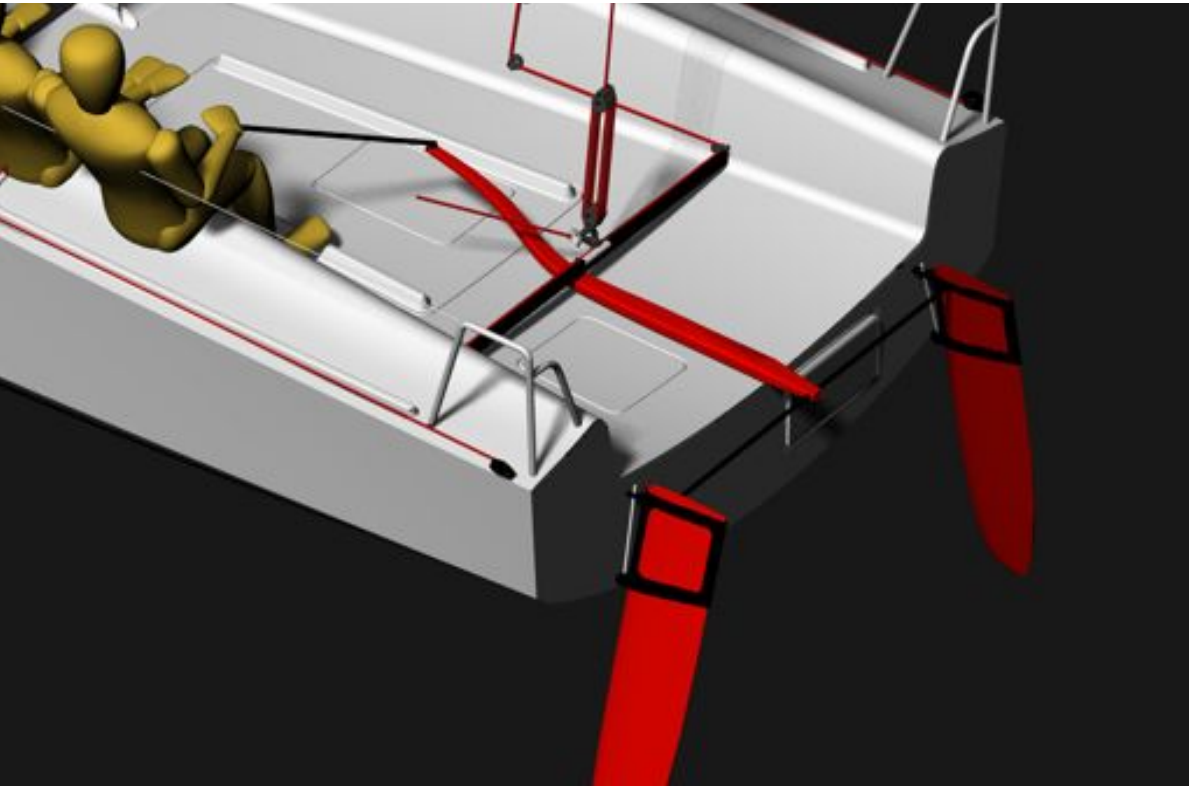


Bowsprit in (operated from the cockpit)



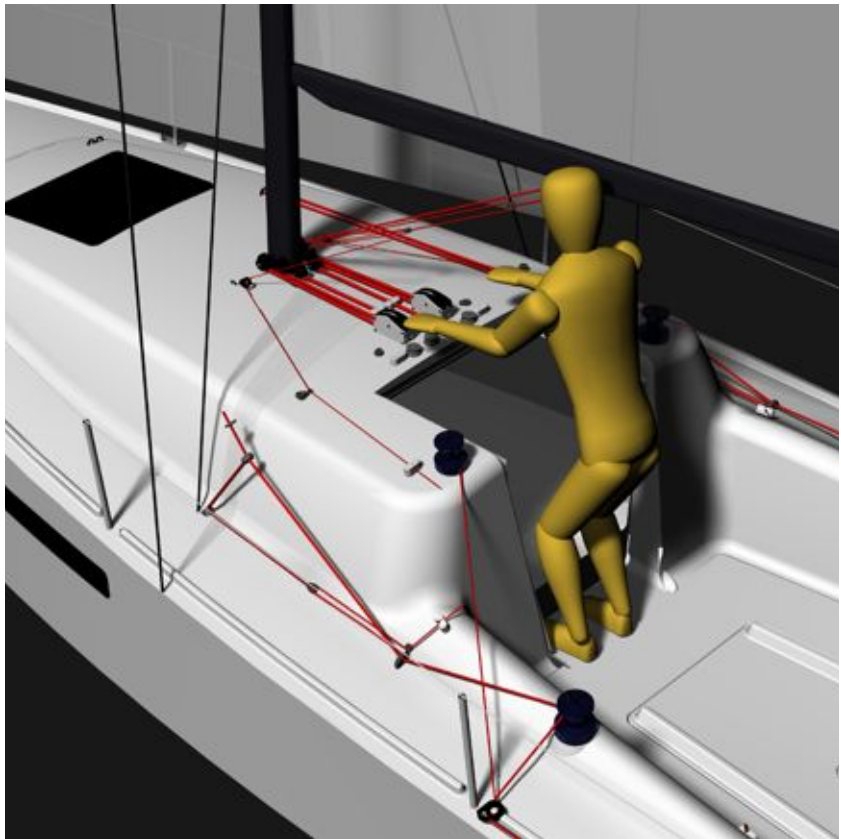
Bowsprit removed (operated from the foredeck)





The rudder and tiller system are designed to be as simple and reliable as possible. They allow the autopilot ram mounting inside or outside the boat. The “naked” look is applied to simplify inspection and maintenance

The central position of the pit controls allows the use of running rigging on both winches from a central position of the crew



The Range

To achieve her almost unlimited range, Seascape 27 uses both elements available – the water and the land.

The water

Strictly following the rules of CE category B (Offshore) and ISAF OSR category 3, the Seascape 27 design makes her extremely seaworthy for her size. Some of her details, e.g. liferaft storage in the transom and the insubmersibility volume, are based on our experience from the offshore racing. They contribute to the Seascape 27 ability to follow the ancient agreement between the boat and the man: the boat should protect the man against the sea, while the man should protect the boat against the land. She is designed to do so up to the force 8 winds.

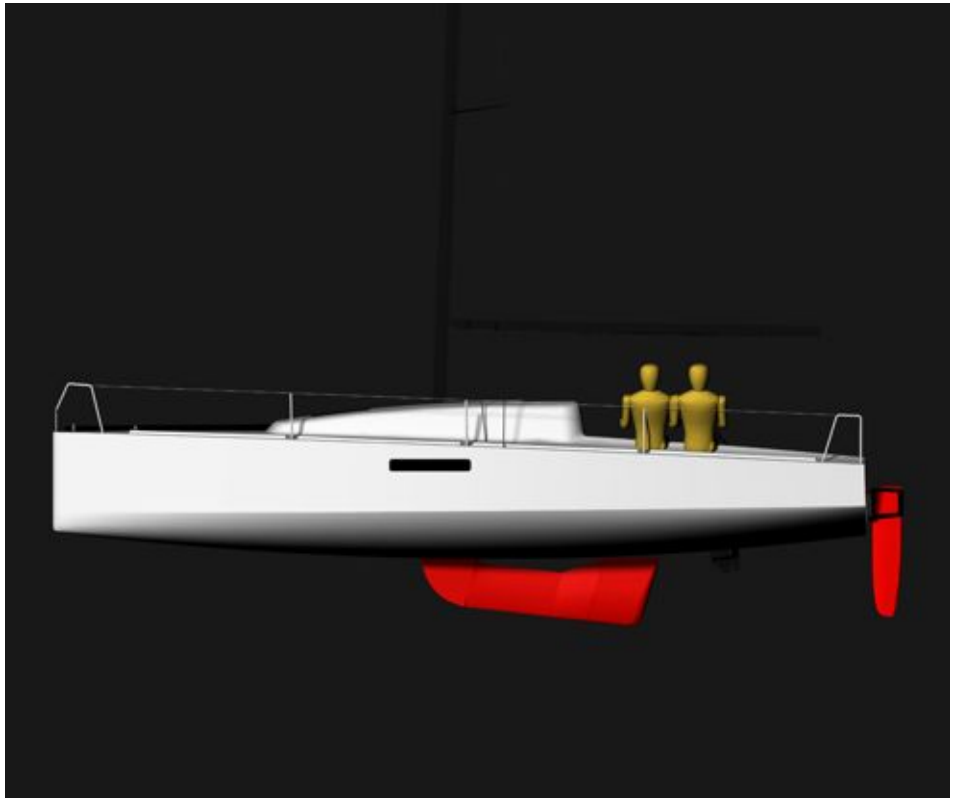
The land

Her almost unique feature among the boats of her kind is that she is well adapted for the land transport. Being 2.54 m wide and with the weight just over 1 tonne, she can be trailed upright and even slip-launched. Swing keel, removable rudder blades and a system to hoist the mast without the crane allow the owners to decide whether they want to reach the start of the race or their favourite cruising destination by the sea or by the road.

The true uniqueness of Seascape 27 is that she is the only offshore capable boat that fits into a 40'HC container (only 233 cm wide) while sitting on the trailer. That means you simply roll her in, ship her to your favourite destination for less than a price of the marina berth, and roll her out when she arrives. Reaching the world best sailing locations is thus only a matter of decision.

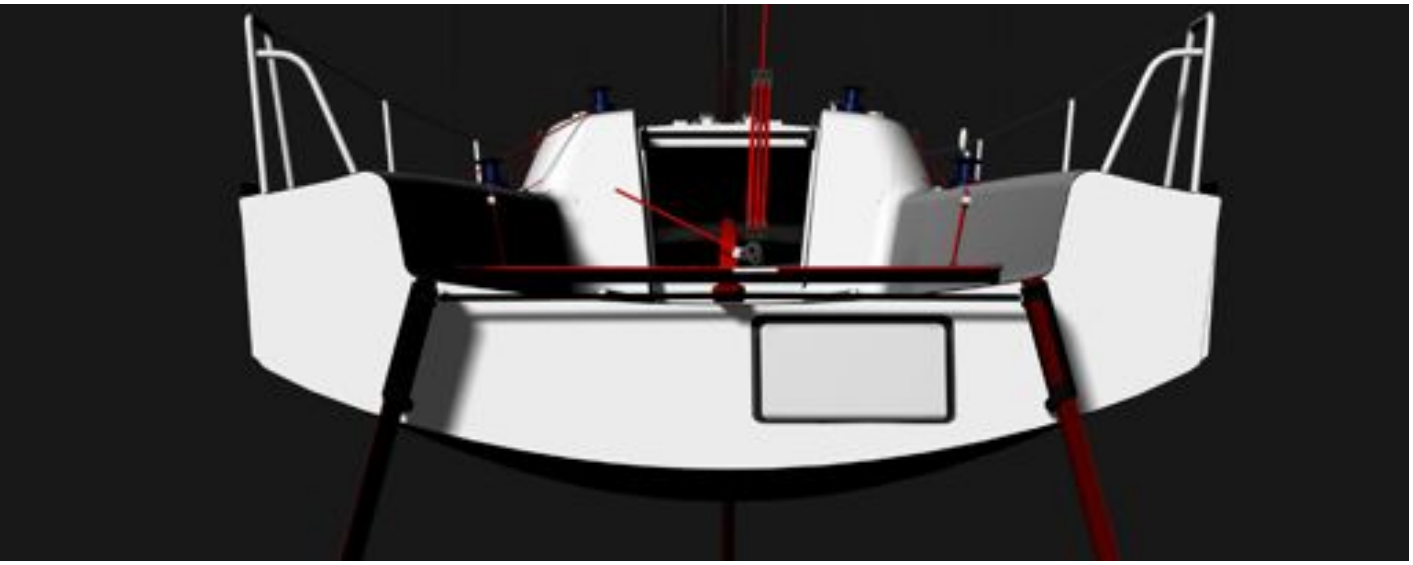
The shallows

Swing keel and retractable rudders also allow Seascape 27 to reach parts of the sea that are usually reserved for much smaller boats. It is not only a practical feature, it also adds to safety, since your chances for finding a safe anchoring spot increase dramatically. And – in addition - she also has a proper anchor locker.



The Safety

Since Seascape 27 is designed to be a family racer cruiser we decided to equip her with all of the important features that add to safety of the crew. Even though she is only 27 ft long, the crew safety is on the highest level. To name just a few features:



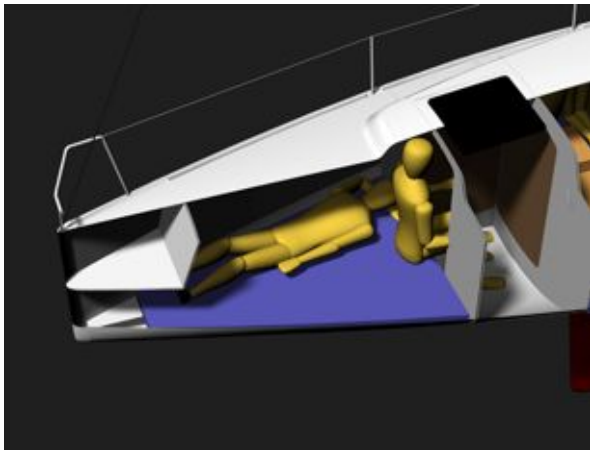
Life raft compartment on the stern in an Open 60 fashion allows life raft to be accessible when needed in any situation

The 550 kg heavy composite keel provides stability which complies with strict CE category B (Offshore) regulations

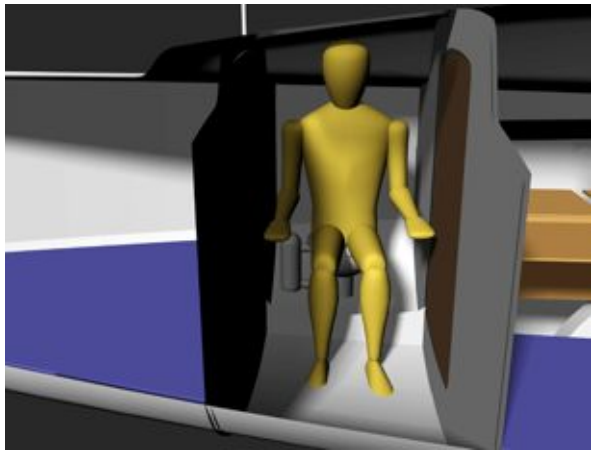
Insubmersibility chambers provide enough buoyancy to keep the boat afloat in case of the hull breach or any other accident. They are positioned to the bottom and to the extremities of the boat so they keep the boat as stable as possible in case of flooding

The living space

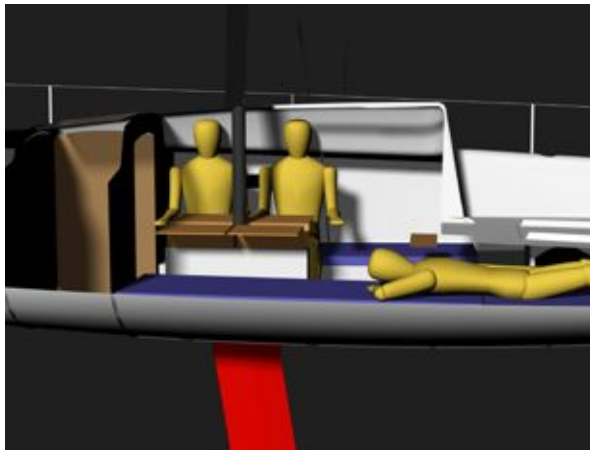
Details of the interior are still in the hands of the Gigodesign team but the basic concept is quite simple – to provide 4 people with all comfort without heavy luxury. The general layout is shown on the following renders, with some details, e.g. kitchen, still under development:



While cruising, the front cabin extends into the “wet room” by a door system in order to get place to change clothes and access to light via huge portlight. Length of the bed is 210 cm



Sail storage room / Toilette / appendix to the front bedroom features 50 x 50 cm portlight, toilette and storage volume. Smart door system allows modification of space to different purposes



The living space is based around the keel box. Benches are extended under the cockpit so as to allow the crew choose their sleeping position. The table is completely removable allowing unhindered passage to the front

Navigation is located on a waterproof case attached to the keel-box carrying laptop and all other navigation equipment. A motorcycle like saddle can be extracted from the keelbox to accommodate the navigator. When not in use, the case is closed and stored in its provided place

And most importantly...

...all the solutions were first tested and troubleshooted on a 1:1 mock-up built by Gigodesign.

The crew

The two biggest problems that we noticed during our extensive involvement in yacht racing are: assembling a crew larger than 3–4 people is a real pain in the a**, not to mention that it is very difficult to recruit it from the members of our own families.
Therefore both our boats, 18 and 27, are designed to be shorthanded and family friendly. In practice that means that full crew for Seascape 27 in inshore races is 3 or 4, but she can easily sail double handed or solo for navigations or long distance races. Since she is light, the loads on the ropes are relatively low, and her deck gear is generously sized so that everybody can participate.

Race crew of Seascape 18
with sail number SLO 128

The One design

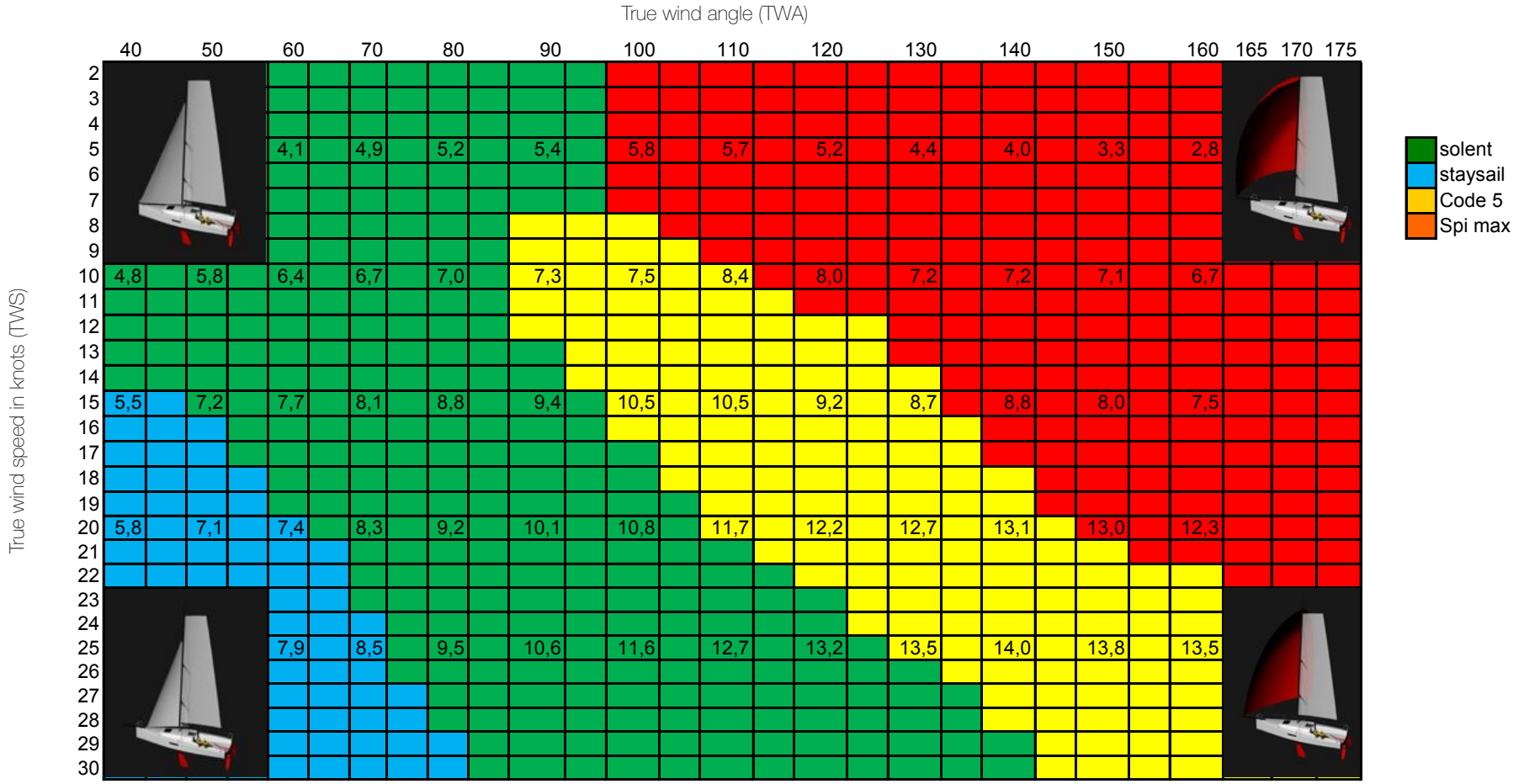
At Seascape we are devoted believers of the One-design philosophy. We believe it is the only way that crews can learn, since they have no “excuse to lose”, as the boats perform almost equally. Therefore Seascape 27 is built on the one-design concept and she can take part in the Offshore shorthanded (Isaf Category 3) races as well as in the inshore fully crewed ones. The team will do our best to create for her as diverse and as interesting racing calendar as we have done for Seascape 18.

Start of Seascape 18 One design race in Adriatic

Due to the fact that Seascape 27 is the only fully trailable offshore one-design available, one of our priorities is to include short offshore races into the class calendar. The knowledge gained in this type of races is directly the one needed for cruising, and therefore very useful for a relaxed and memorable holidays

The Fun

... in this case hidden in numbers and colours. They are based on the preliminary Velocity prediction program calculations (VPP) and on the designer's experience. On a closer look it can be seen that she can reach and exceed speeds that are achievable by the modern racing boats. And the cherry on the cream is she can reach them with a shorthanded or family crew.



The Numbers

Some preliminary numbers describing Seascape 27 in units:

Overall length: 799 cm
Beam: 254 cm
Displacement: 1150 kg
Keel weight: 550 kg
Draft (keel down): 195 cm
Draft (keel up): 85 cm
Main sail: 26 m2
Jib: 21 m2
Staysail: 14 m2
Gennaker: 72 m2