ORC

# Fast – Fun – Affordable

*ORC's smallest GP box rule class, the GP26, continues to attract interest in disparate parts of the world. After a quiet start the GP26 class is now experiencing steady, if gentle, growth with the world fleet now approaching two dozen boats. Examples of this fun little development package are to be found in South America, where the fleet saw its strongest initial growth, as well as in Europe, Russia, USA, Australia and Hong Kong. Several new boats designed by Hawaii-based Jim Donovan are also joining the fleet this year. Jim explains his approach to designing to this fast, enjoyable and relatively affordable box rule.*

Before I started work on my first GP26 design I performed my typical rigorous review of the class rule, looking to find any possible advantage. As is normal for any new rule, there were ambiguities and also some rather more obvious loopholes that deserved attention... However, rather than exploiting these for the short-term benefit of my designs, I opted to work with the ORC and other GP26 designers to refine the rules further in an effort to modernise the GP26 platform without adversely affecting existing yachts.

The following changes were made to the original GP26 rule, which attempt to strike a balance between using the latest innovations in materials and construction, but being mindful of cost:

- Carbon fibre has now been adopted for use in both the keel framing and the keel fin itself
- Bulb weight has been restricted within a 70kg range (previous rule versions did not require a bulb keel)
- Synthetic sidestays are allowed (a 5kg saving in rig weight)
- Aluminium masts may now be double-spreader... (this request originated in Russia)

There are currently two builders producing JP Donovan Design GP26s. My first GP26 design for Kevin Farrar started construction in May 2009 in his sail loft in New London, Connecticut. Kevin is carefully building his boat to a higher standard than seen from most yards, and now has the hull and deck structures 90 per cent complete. His project is going at the pace expected for anyone tackling a yacht-building project on a part-time basis!

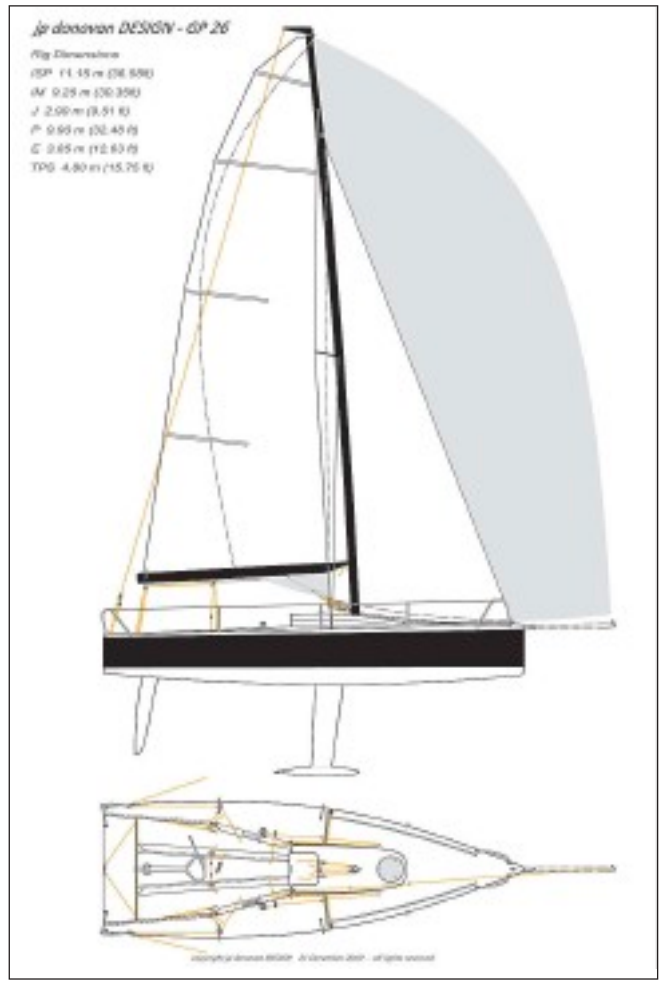
Windseeker Yachts, near Istanbul, Turkey have just launched their first Donovan GP26, with a second boat already in the mould. They have created a beautiful set of tooling and are capable of providing very high-quality yachts, as can be seen in the photograph of boat no1 (*right*).

My design's high-stability hull form is obvious in the wide transom and topsides panels above the chine that approach the vertical. The objective is to extract maximum speed from the large sailplan with a hull form that will plane easily. Careful balance of the hull's volume ensures the boat retains good manners and neutral helm as it heels, boosting acceleration out of tacks and gybes.

The deck features a no-compromise race layout, carefully organised to allow the active crew work and weight transfers needed to get the boat around the racecourse efficiently. Where some sport yachts at this size have dispensed with winches, I have kept a small pair to deal primarily with the highly loaded spinnaker sheets and halyards. The mainsheet traveller spans the cockpit aft of the rudder, reducing the load on the traveller car and getting the mainsheet purchase clear of the crew during gybes. Transverse jib tracks provide complete control for jib sheeting.

Sophisticated structural design is required to achieve class minimum displacement. Class rules restrict the use of exotic materials, so we selected E-glass/epoxy/foam core construction as the best choice for strength to weight. Vacuum laminates with toughened epoxy resin systems and adhesives are used throughout the structure. Precise construction methods minimise any weight gains from excessive fairing or gelcoat. As explained, recent rule edits now allow carbon in the primary structure used to resolve the forces generated by the large rig and deep keel with its heavy bulb.

The high-aspect carbon rudder is positioned well forward to avoid ventilation at high heel angles and generate more lift upwind. GP26 keel rules allow for a deep keel fin and heavy bulb – pretty essential attributes for such a powered-up design!




**The first of Jim Donovan's new Turkish GP26 designs waits for her rig. Almost at random the GP26 is becoming established in small pockets around the world where sailors still have the desire and means to design and build something a little different, while embracing the best qualities of lightweight modern design**

We've also worked with mast builders to develop a specific carbon spar section to the GP26 rule measurements, to achieve maximum stiffness at minimum weight. Although the spar weight is somewhat conservative at 45kg fully rigged, the GP26's extremely powerful masthead sails generate forces that will launch these small boats at speeds approaching 25kt – the need for sensible spar weights becomes obvious at these times...

Overall, we feel the GP26 fills an important niche for those interested in a strong, light, high-performance boat with big-boat attributes, which is no doubt why we're seeing steadily increasing widespread interest in this class.

*Jim Donovan* ❑