

## HANUMAN'S GIANT SPARS



The 52 m mast and 19.5 m Park Avenue boom for the new J-Class yacht *Hanuman* (see page 43) were made by Rondal of High Modulus carbon fibre. The exceptionally strong mast is the largest single composite structure ever produced by Rondal and the result of close consultations with a wide range of experts in order to maximise the yacht's performance.

In creating the spars and rigging for *Hanuman*, the goal was to find the ultimate combination of technology, design and materials. The entire rig was engineered with sailmaker North Sails to synchronise the mast and sail design and ensure it acts as a single aerodynamic shape. Rondal also brought in the Carew Design Group for the design of the mast and fittings, and to make calculations related to the use of such a large carbon structure. Sophisticated software programs tested various



configurations and analysed the effects of localised loads.

The mast was created using a carbon rather than aluminium mould to avoid making the mast in sections, which would entail moulded connections. The High Modulus carbon is 150 percent stronger than standard composites. Rondal also supplied the yacht's running rigging, hatches, sliding hatch and most of the deck equipment.

"*Hanuman* illustrates Rondal's ability to work at the cutting edge of mast design and she will reach speeds of which our J Class ancestors could only have dreamed," says Sales Director Hein Eek. "While Rondal has traditionally had a name for premium quality, a project like this illustrates that our company is anything but traditional in the scope of its technologies, methods and materials."