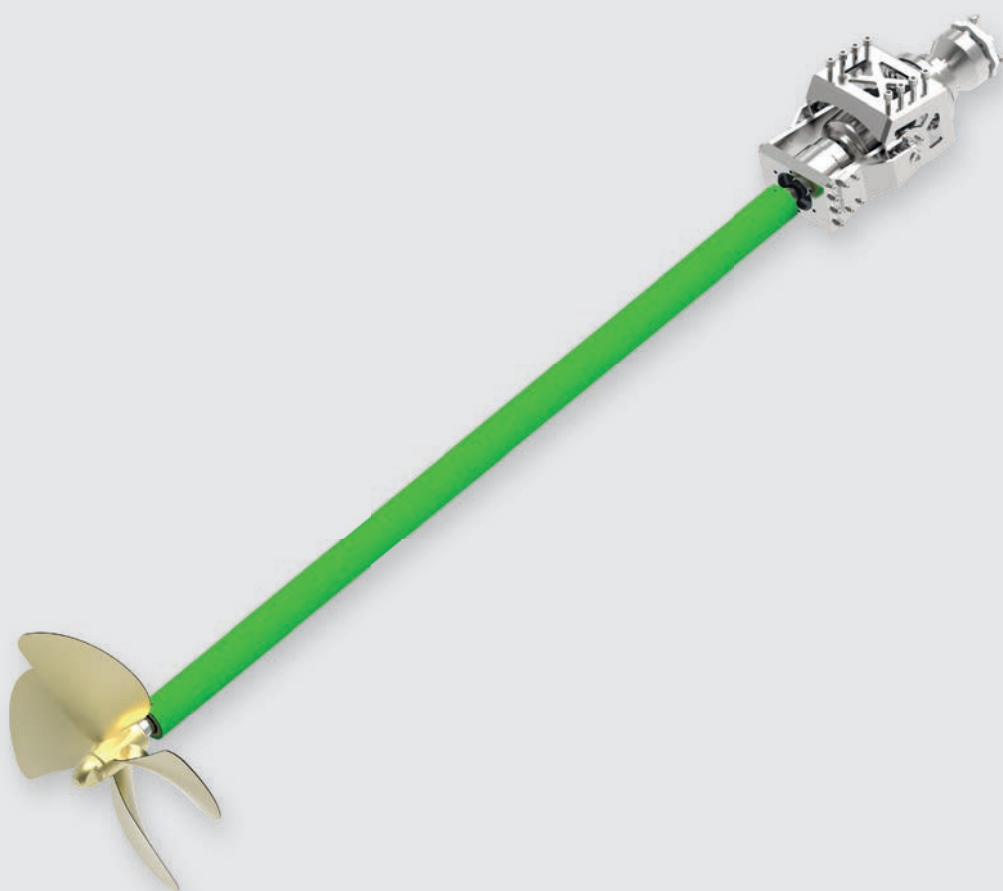




## ***Retractable Propulsion System***



**amartech**

Propulsion and Rudder Systems

*The Retractable Propulsion System (RPS) offers the lowest possible drag from the propulsion line. It is designed for fast sailing boats attending the world most famous ocean races and is available in stainless steel or in the ultra light version (titanium + carbon fiber).*

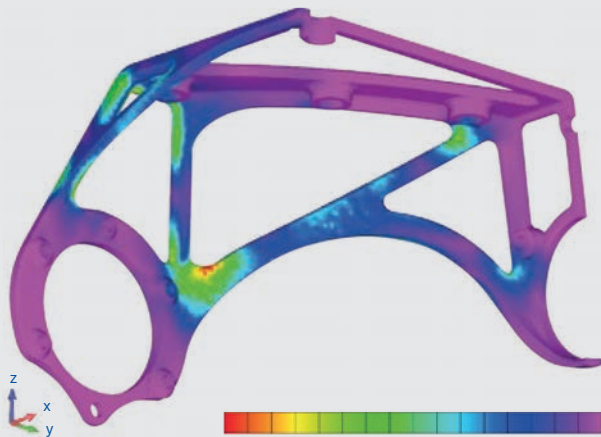


Retractable Propulsion System in TITANIUM

The development of the Retractable Propulsion unit has been started in 2004. For the ABN-Amro boats, which competed in the Volvo Ocean Race. At that time all the parts where in stainless steel. After a successful race, the main issue for the new model was weight savings. Therefore the latest version of Amartech's RPS is made in titanium and the propeller in Carbon. Engine power up to 100 hp.

Finite elements calculations

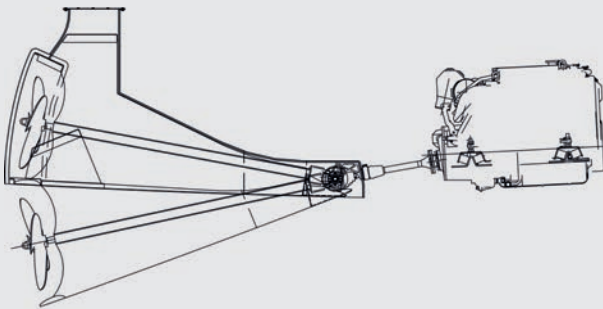
The load deviation, vibration characteristics on the parts have been calculated with finite element calculations.



Output Set	NX NASTRAN Case 1
Contour	Solid Von Mises Stress

Mounted in the hull

The RPS has to be mounted in a carbon cassette in the hull. This cassette will not be delivered by Blokland Non Ferro.



Carbon propeller

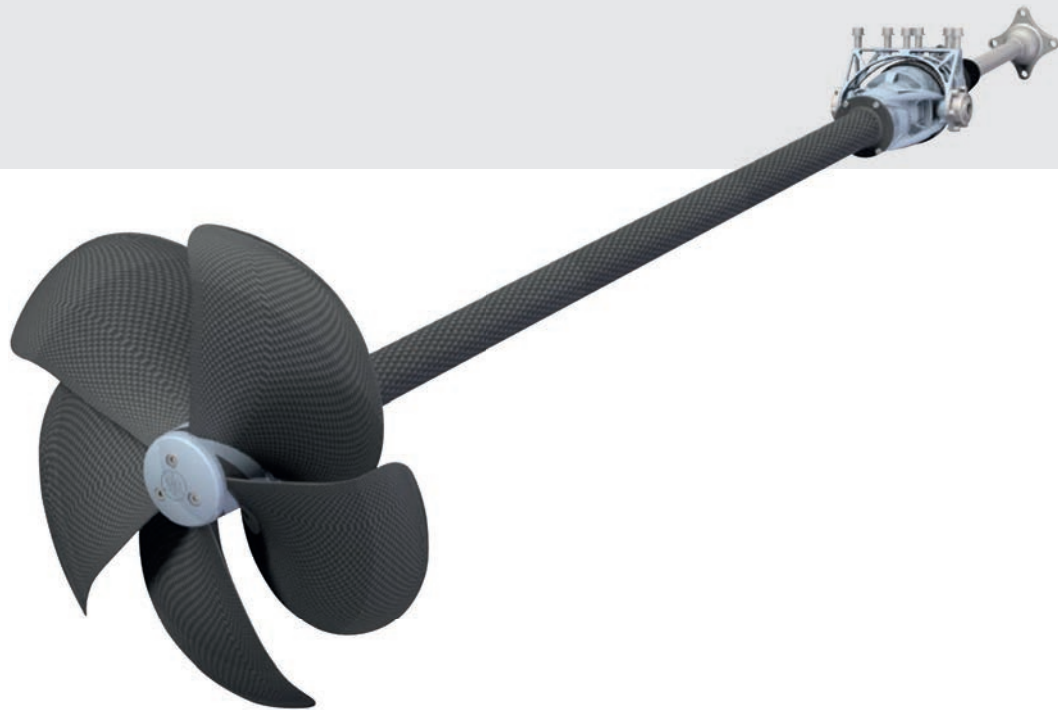
The carbon propeller will be custom designed for each boat. Because of the carbon construction the pitch of the propeller will vary under the different load conditions which results in high efficiency.

Ultra light

The total weight of the complete RPS (excluding cassette) is only 13 kg. (52 kg. for stainless steel version).

Advantages

- > No drag of the propulsion unit
- > Ultra light design
- > Optimum propeller design







### **Blokland Non Ferro bv**

*Blokland Non Ferro is a Dutch family business, founded in 1962 and active on the global marine market. The company specializes in designing, producing and supplying complete propulsion- and rudder systems for yachts and small commercial vessels as well as box coolers and heat exchangers for inland- and commercial vessels and industrial applications.*

*With extended possibilities for design and production of our products we offer you an attractive combination of superior know-how, experience and production possibilities.*

### **We offer two kind of propulsion systems:**

- › Fixed pitch propeller system
- › Retractable propeller system

*With numerous national and international references Blokland Non Ferro has built a reputation of a highly*

*dependable quality player. We provide shipyard and naval architects around the world with our solutions. For (small) yachts as well as megayachts (both motor- and sailing yachts). Blokland Non Ferro also produces technical propulsion components and holds a comprehensive stock so that customers can be serviced promptly.*

### **Blokland Non Ferro offers you the following services:**

- › Standard and custom designed propulsion- and rudder systems
- › Design and supply of box coolers and heat exchangers
- › Sales and distribution of technical marine equipment

*Blokland Non Ferro is committed to offer quality solutions and products only. Comfort and noise reduction are basic elements in our process of engineering.*

*Blokland Non Ferro operates worldwide from its premises in Sliedrecht, The Netherlands.*



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