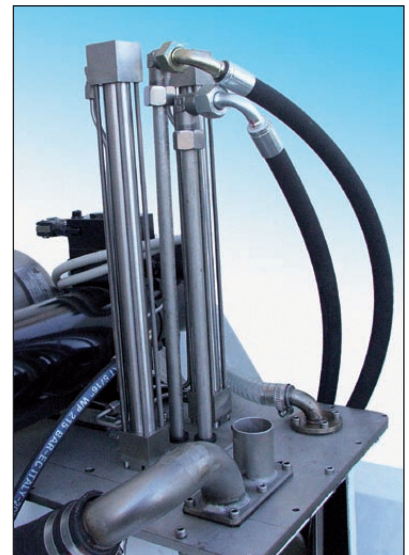


ProPod 2016

RETRACTABLE FORWARDING PROPELLER SYSTEM



THE IDEA

Comes from professional sailing requirements for which boats' hull must be as flat as possible, with no fixed appendix, in order to guarantee high level sailing and speed performances.

The solution to this problem consists in a vertical retractable device in which an engine is settled. This allows the propeller system to be descended in the water when the engine is turned on and be retracted inside the hull, leaving it perfectly in shape when the mechanical thrust is not needed.

The suggestion was given by the three time winner of America's Cup Russell Coutts, who applied for the first time ProPod 2016 on his one-design RC44 boats, after testing and approving its efficiency.

The system has been worldwide patented in 2006 and Quaiat is its official supplier.

DIESEL GROUP

A diesel engine powered 20 hp (in the specific case Volvo Penta). A hydraulic pump is coaxed at a variable output on the engine's fly wheel side, with a reversible oil flood system

HYDRAULIC GROUP

An hydraulic engine powered 16 hp is adjusted on a sliding plate on three inox guides which are fixed on a stationary plate, directly assembled with bolts on the slot in the hull. The ascending-descending movement of the hydraulic engine is obtained by

the movement of two hydraulic cylinders, driven by an electro-hydraulic pump, which is controlled by a (Volvo Penta) selector.

The engine and the pump are connected by three telescopic tubes (two are needed for the flood pressure and one for the drainage), fixed right on the engine. The tubes are connected to other three rubber tubes, suitable for high pressures, which are attached to the pump.

POWERS

Volvo Penta Engine Power	Hydraulic power kW/hp
D1-13	11
D1-20	16
D1-30	24
D2-40	32
D2-55	45
D2-75	60
D3-110	90

The table values are calculated on the Volvo Penta engines, which are actually applied on the system.

ProPod is adaptable to any kind of diesel engine brand, so powers may vary according to the type of engine applied.

PECULIARITIES

The three blade (240 x 240) propeller is a forwarding shrouded type which guarantees much more efficiency than a regular propeller. Its integrity is safeguarded by the cylinder in which it is set.

A very important peculiarity of ProPod is that gas exhaust outlet and water inlet for the diesel engine's refreshment are allowed through the stationary plate directly in the water, so that dirt on the side of the hull and the noise produced by the outlet are avoided, thus improving cruise comfort.

A carbon covering, attached to the vtr tunnel in which the propeller is shrouded, closes hermetically the propeller's slot when retracted, leaving the hull completely in shape, guaranteeing high sailing performances.

BENEFITS

- No resistance from the propulsion system, higher speed while sailing
- Fast and easy to install
- Easy to operate
- Low and practical maintenance - possibility to disassemble ProPod, in order to work on it, with no need to pull the boat out of the water
- Compact design; only a small slot is required
- Adaptability:
 - The engine can be stationed wherever in the hull, thus optimizing room and weight subdivision
 - Possibility to assemble a wide range of propeller type engines with different powers and of different brands
 - Possibility to install the system on every type of sailingboat.