



Aspect45 - An exclusive family racer

A boat with beautiful lines and easily driven hull, designed to sail fast in all wind conditions with wonderful sailing characteristics for both the solo sailor and a full crew. The light but strong, rigid structure is built to cope with the tough conditions that the ocean can offer.

CONSTRUCTION

To create a light, strong, rigid and durable boat, the Aspect45 is built with single skin laminate made in pre-preg carbon fibre, hardened under vacuum in an oven.

The hull laminate is reinforced by a beam system which together with the interior forms an internal structural skeleton. This provides a durable boat, built to withstand the slamming loads from the sea.

The deck is built in pre-preg carbon fibre with a honeycomb core material.

KEEL AND RUDDER

To reduce the draught and enable anchoring in shallow bays, the Aspect 45 is equipped with a swing keel. The 2.5 ton, 3.5m deep keel is equipped with a trim tab. The blade is made of carbon fibre with laminated titanium reinforcements. The keel is designed to be adjusted to achieve optimum hull trim and balance. It is controlled with a double-acting titanium hydraulic cylinder reinforced with carbon fibre. No hydraulic pressure is required to keep the keel in fully raised position.

The hydraulic cylinder is designed to allow the keel to rotate backwards at ground impacts at speeds of up to 20 knots and then stay in folded position.

The rudder with its integrated stock is made in pre-preg carbon with an Autopilot mounted under the deck. The boat is available with either a tiller or a steering wheel.

HYBRID ENGINE

Aspect 45 is equipped with a parallel hybrid and sail-drive.

The hybrid engine consists of a 27hp 3-cylinder Lombardini diesel engine and a 15hp electric motor, a total of 42hp.

The hybrid assembly has 2 modes – generator and hybrid operation.

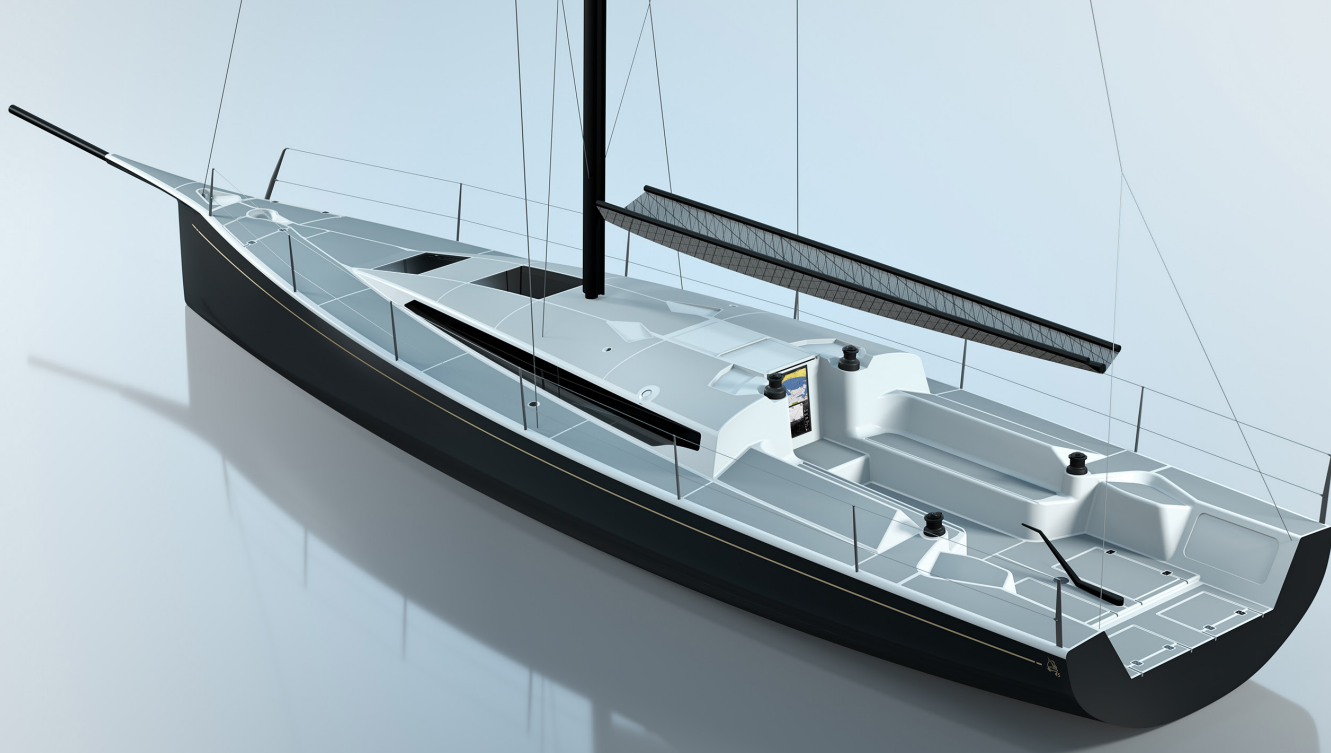
In generator mode, the batteries can be charged with around 7kW without the propeller connected.

In hybrid mode, the boat can run on pure electricity up to 6 knots, at higher speeds the diesel engine will automatically switch in. In this mode, the battery charges as long as there is excess power generated by the diesel engine and the battery is not fully charged. Everything is managed automatically just like a modern hybrid car.

BATTERIES

The Aspect 45 is equipped with LiFePo4 battery pack, 48V / 10.5 kWh + 24V / 3.5 kWh. The batteries can be either charged by the hybrid motor or by shore power. A 4.2 kW / 230 V inverter is connected to the 48V battery.

The diesel engine has its own start battery in accordance to OSR.



HYDRAULICS

Seven unique hydraulic functions to simplify sailing

- Hydraulically regulated swing keel
- Hydraulic solution for a self-tacking, overlapping jib.
- Hydraulic systems for the mainsheet, jib lead height, backstay and boom vang.

The hydraulics are controlled either by the panels beside the helmsman or with a remote control. Features can be programmed for quicker rig changes and simplified trimming of sails. The remote control can even be operated by a crew member hiking on the rail.

INSULATION, HEAT AND VENTILATION

The boat is insulated with Aerogel against cold, heat and noise. Aerogel is water repellent and around 3 times more effective than ordinary insulating materials.

Inside, the boat is lined with a beautiful water-resistant fabric in light grey. The upholstery in the main salon is black with a silver inlay. The cabins have lighter tones with gold inserts.

Electric ventilation in the cabins, kitchen, and WC.

Electric heating elements, 9 units controlled by central thermostat.

LIGHTING

Navigation and deck lights by Lopolight. Sail illumination light and bow disembarkation light. Interior lighting consists of LED strips, spot lighting and bedside lamps from Casolux.

DECK AND COCKPIT

Advanced Sailmon instrumentation and 27-inch bright screen integrated into the main companionway washboard.

Recessed EVA foam deck grip panels in the deck and on the cabin top - 3 mm. On seat surfaces and in the cockpit - 5 mm.

Electric heated seat for helmsman.

All halyards and control lines are recessed and led to the cockpit.

Grab rails, stanchions and pulpit in titanium.

Deck hardware by Harken. Rope clutches by Spinlock.

2 x 50.3 (three-speed) electric and 2 x 600.3 (three-speed) Harken carbon fibre racing winches.

Opening skylight by Lewmar.

Large anchor box forward for sail stowage with drop system for retrieving the gennaker.

4 hatches in the cockpit floor, one dedicated for the stowage of a 10 person liferaft.

2 additional hatches aft for sail stowage in cockpit.

Lightweight cockpit table in elegant carbon fibre and Nomex. Easily moved from the stern to the cockpit. The table's storage across the transom makes the boat safe during sailing as the table can be used as a boundary of the cockpit aft.

BUNK BEDS

3 double cabins with wardrobes

Main saloon bunks can be converted into 4 single sea berths



LOUNGE

Dining table with 10 seats and storage of glasses and cutlery

Dining table and flooring in teak laminate.

Standing height inside

KITCHEN

U-shaped kitchen counter in rose-polished titanium

2 refrigerators 110 litres

230 V electrical stove with oven, and storage cabinet

Sink with hot water flow, 230 V

DRYING LOCKER AND WC

Wet wardrobe with access from saloon and WC.

Electric wall-hung toilet built in carbon fibre

Water flow, 230V for shower and sink

MAST AND RIG

The mast support rises 80 cm above the deck and is part of the boat's structure. The mast continues down over the mast support and rests on a ball at gooseneck height, this allows the mast to function like a keel-stepped mast (trimmable) despite being placed on deck.

At the top of the mast is a carbon fibre crane that extends 75 cm backwards and 25 cm forward, this allows gives a larger sail area on the mainsail and a 1: 3 interchange between the backstay and the forestay. If the backstay is tightened by 1.5 tonnes, a forestay tension 4.5 tonnes is achieved. The rig is constructed using high modulus carbon fibre.

A trim-tab on the keel reduces leeway and provides better performance, especially up-wind.

LOA 13,70 m

LWL 12,50 m

Beam 3,68 m

Draft 3,50 m

Draft with keel aft 2,08 m

Displacement 5600 kg

Keel weight 2500 kg

**Motor/generator Lombardini 27 hk,
3-cylinder diesel**

Hybrid electrical motor 15 hk

Mast height 22,0 m

P= 17,9 m

E= 5,65 m

T= 5,85 m

Mainsail 66 m2

Jib2 59 m2

Jib4 rolled on a cable 38 m2

Code 52% rolled on a cable 113 m2

Code 75% rolled on a cable 168 m2

A2 running gennaker 200 m2