

Solar catamaran RA 46

London – Hyde Park



Kopf Solarschiff GmbH
Stützenstrasse 6
D-72172 Sulz-Bergfelden
Germany

Telefon +49-7454-75-288
Fax +49-7454-75-302
Internet www.kopf-solarschiff.de
E-Mail info@kopf-solarschiff.de



KOPF Solarschiff GmbH

KOPF Solarschiff GmbH develops ecological products by intelligently combining high-tech and design. These products are the result of the responsible use of materials, energy and knowledge of ecological conditions. Driven by solar power, the **KOPF** solar ships create a symbiosis between nature and technology and thus an important perspective for those of us who are working towards a more ecologically conscious future that we wish to share in. Meanwhile, **KOPF** has manufactured more than 45 ships and boats. They are used for different purposes in many countries like for example Germany, England, Scotland, Austria, Spain or Switzerland.



The use of solar energy is one of the most challenging and thrilling technologies of today. In this way the **KOPF** solar catamarans combine the latest solar and motor technology. Passengers are fascinated and strongly attracted by the power of solar energy and the outstanding design. The operators praise the positive characteristics like low maintenance and low operating costs. Further advantages for anybody are the noiseless motors, no exhaust, no fuel or oil and – no waste of fossil energy. All these reasons are the basis for this technology in harmony with human beings and nature.



The **KOPF** solar ships do not create any pollution of water or air. They are the perfect means of ecological transport, even on the most sensitive environments. The solar shuttle RA 46 is a perfect ship for roundtrips of any kind. Every aspect of the **KOPF** solar ships is considered in terms of energy as well as aesthetics and design. The lightness of the structure allows uninterrupted views while gliding noiseless over the water.

Solarship RA 46

The RA 46 is a solar catamaran for passenger transportation up to max. 40 persons

- Impressive design and latest technology
- A large choice of outfit and equipment is available
- Classification according to the German RheinSchUO, the British MCA or the German Lloyd
- Other classifications are possible on demand
- Motor power and battery capacity can be adjusted according to the requirements

Details - Solarship – RA 46



Technical datas – Solarship RA 46

Length over all:	Approx. 14,30 m
Width over all:	Approx. 3,50 m
Height over all:	Approx. 3,90 m
Draft unloaded:	Approx. 0,70 m
Draft loaded:	Approx. 0,85 m
Passengers incl. crew:	Approx. 40
Cruising speed:	8 km/h
Maximum speed:	Approx. 16 km/h
Range:	Approx. 80 km
Unloaded weight:	Approx. 14 to
Photovoltaic-generator:	Approx. 1,9 kWp
Batteries:	2 x 400 Ah, 96 Volt
Motors:	2 x 18 kW AC-motors
Rudder:	Hydraulic twin rudder

Subject to technical alterations until all technical details have been clarified.

General description RA 46

The solar passenger ferry RA 46 is a welded catamaran structure. The entire hull is made of coated steel, stainless steel or aluminium. The strut construction comprises cross frames and bulkheads and longitudinal frames. All frames are of edged steel with the corresponding static's for weight reasons. Thanks to the light-weight construction, the weight of the ship is kept to a minimum. However, this is not at the expense of the ship's static's and the stability of the ship as a well-proven steel construction is used. The highly transparent passenger deck is also a steel construction without struts. The main deck has with an easy-to-care coloured rubber coating (teak wood is optional). Seating is in the form of benches located at the guard rail. The hulls provides storage space for technical equipment and the motors. They have openings for drive shafts as well as bushes for the rudder. This space is accessible from the main deck via hatchways. The motor room is also accessible for maintenance purposes. The helm is located in the motor room and a bilge pump is in the individual bulkheads. Access to the ship is via both sides which have lockable doors. The ship is completely opened. A maximum of 40 passengers can be transported.



The unique solar generator with the photovoltaic cells is made of multi-layered curved glass. The modules are glued on the roof frame. They are waterproof and supply the batteries with electrical direct current during the day. The ship is equipped with batteries in accordance with the performance requirements of the ship. Lead batteries (low maintenance, long life with high number of cycles) are used. The drive batteries are used for the energy supply of the drive machines, a second battery group (24V) for other consumption on board (e.g. navigation lamps/instruments etc.). Electronic controllers are switched between the solar modules and the batteries. They route the current generated in the solar generator to the battery and switch off automatically the current supply from the solar generators when the batteries are fully charged to prevent overcharging. Expected service life is approx. 7-10 years by proper conditions of use. For recharging the batteries via the public power supply system, the ship is equipped with mains battery chargers. The status of the charging and the discharging process is indicated in a driver information display.

Please ask us for further details. We will be glad, if we can make you an offer for this impressive ship.