

## Specification for KER53 Production IRC Cruiser-Racer Design

Commercial Confidential

### Hull/Deck and Internal Structure:

The KER53 is designed employing current America's Cup technology and knowledge. Crafted from vacuum-bagged **Carbon/Epoxy** with a lightweight closed-cell core foam sandwich construction it is very strong, light, stiff and designed to ABS Rules for Offshore Yachts and optimised for the IRC Rule.

### Principal Dimensions:

- length overall, hull ..... 16.00 m
- beam moulded ..... 4.20 m
- draft ..... 3.40 m
- displacement, appr. .... 10.20 tonnes
- bulb weight, appr. .... 5.00 tonnes



# KER53 CRUISER RACER

## Rig

The mast is a 7/8ths, 2 spreaders carbon mast, with 20° of sweep on the spreaders and a permanent hydraulic backstay has been developed to allow maximum control of the sail plan while being easy and secure. Discontinuous rod rigging is used as standard, with an Aramid backstay.

The carbon boom is a deep section for stiffness and lightness. The German style mainsheet system is lead internally in both the boom and under deck to keep the loose sheet out of action during gybes.

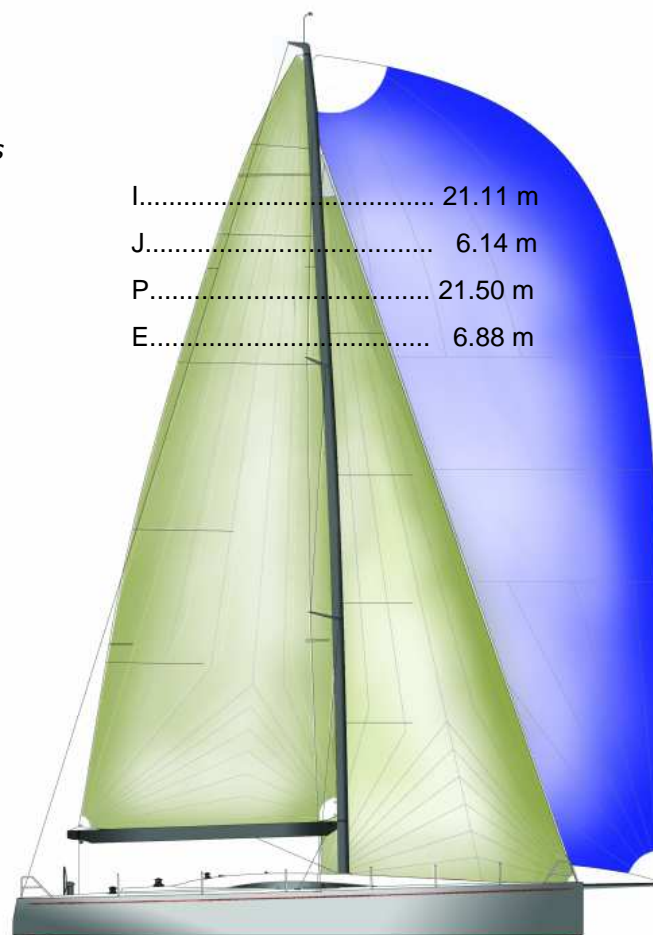
Mast, boom and poles are painted in a clear lacquer (or a plain colour), giving a gloss carbon finish a/o best available UV-Protection.

The KER53 is fitted with a retractable bowsprit to fly asymmetric spinnakers, delivering a very powerful downwind configuration, whilst easing sail handling.

### Principal sail areas:

upwind .....	approx. 170m <sup>2</sup>
spinnaker (asym.)	approx. 280m <sup>2</sup>

### rig dimensions

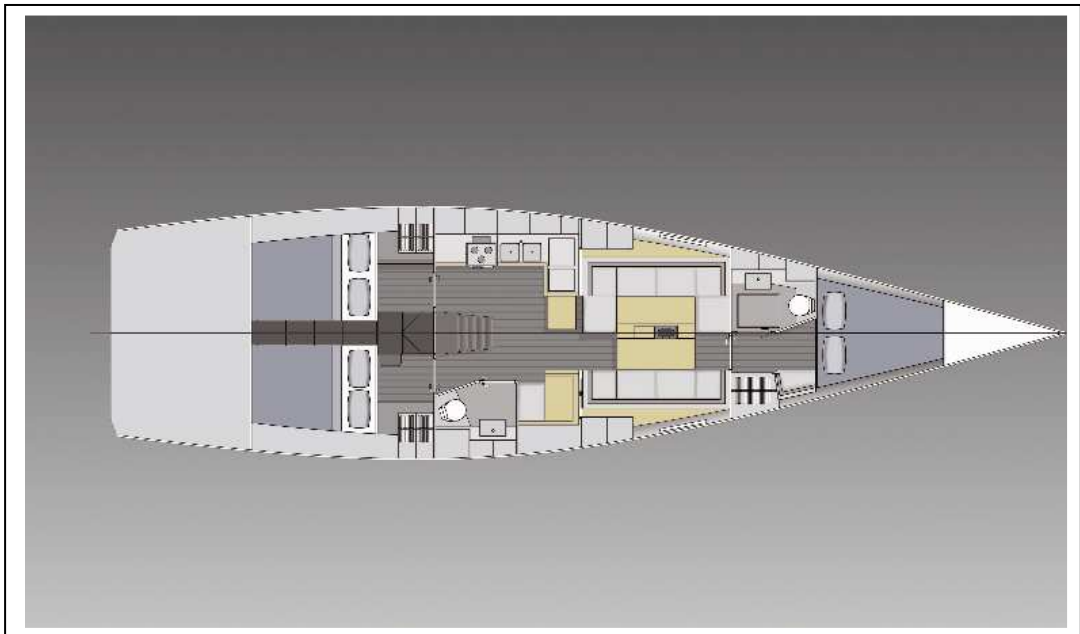


# KER53 CRUISER RACER

## Interior Layout

By DESIGN UNLIMITED, the interior is constructed in lightweight carbon/foam sandwich panels, with particular attention to the finish and fit of all the furniture in keeping with the standards of a high quality cruiser/racer.

Large coachroof windows and opening hatches allow for light and fresh air to circulate through the entire interior. Hull windows in the saloon deliver additional light and panoramic views of the oceanscape from the comfort of the saloon.



# FAST. AND EASY.

# KER53 CRUISER RACER

## STANDARD SPECIFICATION

### 1. hull and deck

- Female moulded hull and deck in carbon/epoxy on a closed-cell foam core
- Structures in accordance with ABS regulations
- Painted exterior hull and deck finish
- Carbon V1/D1 chainplates; carbon/SS-steel forestay fitting
- Carbon/Aluminium keel floors grid to take keel/rig loads out to longitudinal structure
- Large capacity self draining foredeck chain locker, with space for optional electric anchor windlass and below deck headsailfurler
- Large, comfortable cockpit with seating with low coamings to provide back support
- 2 cockpit seat lockers for general storage (1 to contain self draining/vented gas bottle storage)
- 2 aft cockpit lockers (in cockpit floor aft of wheels)
- Painted non-skid deck, teak fitted to the cockpit sole and seats

### 2. keel and rudder

- Carbon fibre rudder stock and quadrant with emergency tiller attachment point; emergency tiller
- Twin Carbon-composite wheels and -pedestals
- Lightweight chain & sprocket steering heads
- experienced AC improved T-shaped keel with iron fin and CFD optimised lead bulb

### 3. Propulsion

- 75hp VOLVO diesel engine with "sail drive" leg and 3 blade folding racing propeller
- Throttle control mounted on stbd side of cockpit
- Below deck engine instrument panel
- 150 liter rigid plastic fuel tank
- Optimal additional 120 liter fuel tank

### 4. Electrical

- Red/white cabin lighting in saloon, galley and nav areas
- 12 volt & 24 volt DC switch panel and battery indicator mounted by the Chart/Navarea
- Battery isolator/selection switch mounted on engine box
- 24V circuit 2 x 175 Ah service-batteries & 12V circuit 1 x 75 Ah battery for engine start
- 12 V electrical panel for engine with fuel gauge, rev counter and start/stop switches
- Ceiling light in heads and all cabins – berth lights where applicable
- LED navigation lights on pushpit and pulpit, steaming light and WINDEX light on rig
- Gas alarm
- Shorepower connection & battery charger

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## 5. plumbing

- Pressurized hot and cold water system for galley and heads
- Additional manual tap at galley sink
- Plumbed in seawater toilets
- Manual bilge pump in cockpit
- Shower drain pumps with filters
- Flexible water tank (250 liters) under main cabin settees
- Option: additional approx. 250 liter water tank
- 1 Blackwater tank

## 6. interior

- Built using lightweight carbon and e-glass foam sandwich panels
- Reinforcing of laminate in high use areas
- Light and stylish interior by DESIGN UNLIMITED. Clean, fresh and light with a blend of fabric, wood veneer and lacquer finished surfaces
- High quality fittings used through out

## 7. accommodation

designed to meet ORC, IMS, IRC and CE regulations

different interior styles available like "Classic" or "Modern"

## 8.1 Forward Cabin

- Access door to main saloon
- Ensuite heads with shower
- Large vee or double berth with storage below
- Hanging locker and cushioned seating
- Centreline, flush low profile hatch and aft port flush low profile hatch for ventilation
- Recessed ceiling lights
- individual berth reading lights

## 8.2 Forward Heads

- Access door to main forward cabin (fully enclosed)
- Lower part integrally moulded with integral shower tray, washbasin with access below to seacocks, toilet roll holder
- Carbon-washbasin on top of solid surface worktop
- Shower head with pressurised hot and cold water
- Marine salt water toilet
- Electric shower drain pump
- Vanity unit along the hull side with mirror
- Under washbasin storage
- Removable shower sole
- Flush low profile hatch in deckhead for ventilation
- Recessed ceiling lights
- High standard design tap and fitting

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## 8.3 aft cabins (port and stb)

- Access door to main cabin
- Large hanging locker with cushioned seat beneath
- Vanity unit with storage space along the centerline
- Large double berth in each cabin
- Access panels to engine space, machinery and steering area
- Portlight into cockpit for ventilation
- Recessed ceiling lights
- individual berth reading lights

## 8.4 aft head

- Access door to main saloon (fully enclosed)
- Lower part integrally moulded, with integral shower tray, washbasin with access below to seacocks, toilet roll holder
- Carbon-washbasin on top of solid surface worktop
- Shower head with pressurised hot and cold water
- Marine salt water toilet
- Electric shower drain pump
- Under washbasin storage
- Removable shower sole
- Flush low profile hatch in deckhead for ventilation
- Recessed ceiling lights

## 8.5 Chart Table / Navarea

- Large chart table facing forward
- Storage under the chart table accessed via a lift up, hinged section
- Locker under chart table
- Bookshelf
- Large hinged instrument panel with electric display, 12 V-, 24 V-, amp-meter
- Space for VHF, instruments, stereo and flat screen
- Cushioned navigator's seat with storage below
- Fiddle around edge of Nav-table with integrated handrail
- Recessed ceiling light

## 8.6 Main Saloon

- Cushioned settee to port ("U") and starbord (straight)
- Removable raising/lowering table with fiddles
- Fresh water tank/blackwater tank fitted under settees
- Handrail integrated into internal rope garage in deckhead
- Red/white lighting recessed into headlining
- Ample storage behind settee backs, in the galley, and in the NavStation
- Central opening saloon hatch with Perspex windows
- separate reading lights

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## 8.7 galley

- Gimballed gas stove with oven and 3/4 burners with s/s protection bar
- Double s/s sink unit recessed in solid surface worktop
- Pressurised hot and cold water through a swiveling mixer tap unit
- Additional tap (cold sea-/water only)
- Large 150 litre moulded icebox, with top access (optional refrigeration)
- An assortment of utensil drawers and shelved cupboard space
- Eye level locker units are mounted
- Splashback behind cooker and worktop
- Fiddle around the edge of the worktop with integrated handrail
- Recessed ceiling lights and worktop lights
- integrated rubbish bin

## 9. companionway

- Large top step to provide working platform for pitman
- engine box with best available noise insulation
- Design carbon ladder, non slip surface on all steps

## 10. rig

- Carbon fibre, twin carbon spreader, runnerless rig
- Carbon fibre boom with internal outhaul purchase system, 3 x mainsail reefing sheaves and jammers, internally led German mainsheet system and carbon fibre vang lug
- Composite rigging backstay

- Nitronic rod, discontinuous standing rigging
- Carbon retractable bowsprit with provision for two tacklines
- Mast deck collar with custom moulded wedge, adjustable mast step
- Hydraulic backstay adjuster with push button control panel
- Solid spring vang with integral purchase
- 1 Vectran mainsail halyard – 2:1
- 1 Vectran genoa halyard with snapshackle
- 1 Spectra fractional spinnaker halyard with snapshackle
- 2 Spectra masthead spinnaker halyards with snapshackles
- 2 Spectra spinnaker sheets with snapshackles
- 2 tacklines
- 2 Spectra jib sheets with snapshackles
- 1 Spectra mainsheet
- Mainsail traveller lines
- Genoa car adjustment lines
- Spinnaker tweaker lines
- Outhaul lines
- Cunningham lines
- 2 Spectra reef lines

## 11. deck equipment and hardware

- use of world best brands  
(LEWMAR, RONSTAN-FREDERIKSEN, SPINLOCK, HARKEN etc.)
- Remote Hydraulic backstay adjustment

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- Bow anchor locker
- 2 Cockpit lockers with stbd side incorporating gas locker
- Transom liferaft lockers
- 2 size 65 three speed racing winches with base crossover rings and top cleats
- 2 size 50 two speed self-tailing halyard racing winches
- 2 size 65 two speed self-tailing mainsheet racing winches
- 3 lock-in winch handles
- 2:1 mainsheet system, led forward through boom and aft under deck to cockpit winches
- Adjustable mainsheet traveler with a below deck purchase
- jib tracks, with ball-bearing car system and adjustable internal purchase, adjusted from the cockpit
- Inhauler system, adjusted from the cockpit
- 2 solid machined fairleads for Genoa sheets
- spinnaker sheet blocks mounted on fwd leg of pushpit
- Custom thru deck halyard leads
- custom deck organizer to lead halyards to either coachroof halyard winches
- SPINLOCK halyard clutches in jammer recess
- Gas strut vang with ball bearing blocks purchase system lead aft to either side of the companionway
- 2:1 Spinnaker sheet tweaker, led through custom fairleads under deck into cockpit coamings
- Twin fairleads at end of retractable bowsprit for tacklines
- 1 main foredeck opening hatch (into fwd cabin)
- 1 opening hatch for heads

- 1 opening hatch for forward cabin
- 1 opening hatch for aft head
- 2 opening ports for aft cabins
- Coachroof windows to be curved PERSPEX (dark tinted)
- Non-opening hull windows in saloon
- Double stainless steel rail pulpit and pushpit
- tapered ss stanchions and twin ss guard rails
- Recessed grab rail running along coachroof sides
- A lightweight companionway wash board with lock
- 2 magnetic compasses
- Layout ready for racing and cruising

## **miscellaneous**

- The entire yacht is build using high-advanced mouldtechnologie. Even for the interior moulds are used to alliance strength/weight ratio. Moulds made with highest accuracy using 5 axes milling machine
- To demonstrate this alliance some carbon elements are used for design like carbonladder, carbon washbasins, clear coated mast below deck etc.
- Vanity units on the centerline allow perfect integration of options like: generator, watermaker, heating, aircon etc.
- Plenty of hatches and portlights allow best ventilation in all cabins and provide much of natural light
- Selected option available to tailor the yacht, even for extended cruising
- Shallow draft Version 2,95 m available