

Credentials and history

Nominated 'Innovative Boat of the Year' IPC Media Marine Awards 2005
Finalist, AYRS Yacht design competition 2004
3rd in Cruiser Class, North Devon Open Week 2004
500 Miles of Southwest coast sailed in conditions up to F6 with 8ft waves, including crossing the Bristol Channel and rounding Land's End.
The Explorer will circumnavigate Britain in 2007 to promote low carbon lifestyles, supported by HRH The Prince of Wales and other leading environmental figures.

"A boat where everything has a function, nothing is missed, and nothing is duplicated." Dinghy Cruising Association

"Mitchell Microyachts are the vessels of the future." James Lovelock, planetary scientist

"Though the Swing Bulb Keel in Mukti Mitchell's Explorer is an inspired piece of engineering, it is nevertheless beautifully simple in operation. There is little doubt that it will appear in other microcruiser designs in the future, and in bigger boats too." Dinghy Cruising Association

Price list (inclusive of vat)

Sail-away Explorer	£17,773
Roller reefing, main, genoa and sliding sheet leads standard	
Ground Legs	£ 345
Split 8ft oars & rowlocks	£ 317
Two cushions and two mattresses	£ 425
Aluminium road trailer (marine grade)	£ 1,246

Construction time for a completed Explorer is around 4 months. A purchase can be made by a deposit of £250 followed by three equal payments during construction. Call Mitchell Yachts today for a test sail.

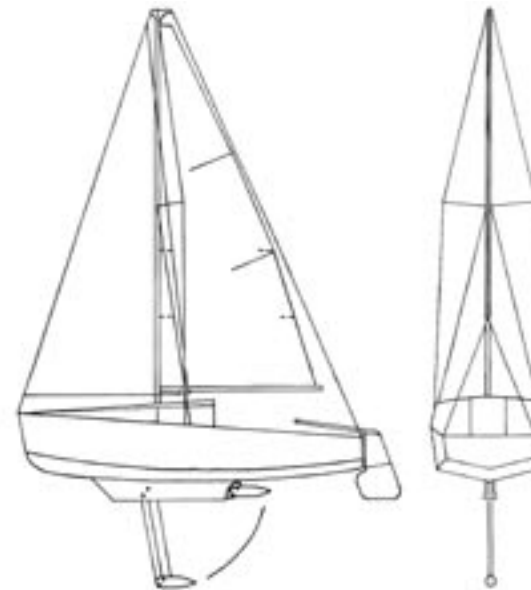


Rat's Castle, Clovelly, Bideford, Devon EX39 5TF 0845 3455075
enquiries@mitchellyachts.co.uk www.mitchellyachts.co.uk

Mitchell Yachts Ltd. is registered in the U.K. Company number: 5256127
Registered office: 12 Chingswell Street, Bideford, Devon EX39 2NF

MITCHELL YACHTS EXPLORER: Technical Brochure

Sailing Characteristics: Explorer combines the pleasures of dinghy and yacht sailing. Like a dinghy, she is responsive and exciting to sail, will turn in a boat length, and can be stopped with a foot against a wall. Yet like a yacht, she is self-righting and looks after you. You can heave-to in a force 6 and stand in the cockpit to tend reefing lines. She takes steep 4ft waves on the beam with barely a roll. The helm is responsive but light, a pleasure to guide single-handed all day.

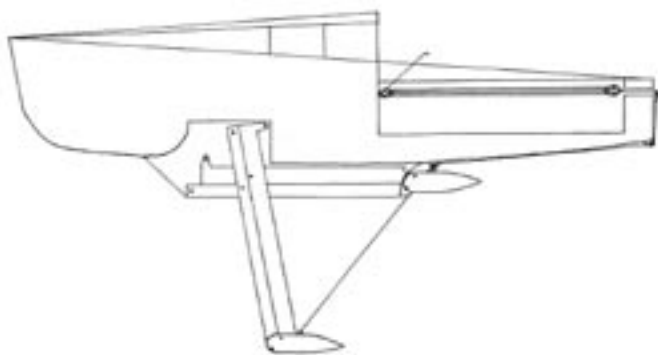


The masthead Bermudan rig provides maximum windward performance and can be tuned to sail optimally at all times. The main and Genoa are roughly equal in size, so well balanced when goose-winged. The Genoa is fitted with roller reefing so all sail handling can be done from the cockpit. Long tracks for the Genoa and main sheets enable fine-tuning of sail shape. The mainsail has a luff track and slab reefing, with central sheeting accessible to helm and crew.

The Swing Bulb Keel has a 45kg (100lb) bulb and 75kg (160lb) fin, that generates 1,000lbsft of righting force at 45 degrees of heel. The keel shifts the COG of the vessel from forward & low to aft & at the waterline. *This is exactly what is required by the dynamics of sailing to windward and downwind respectively, and gives rise to the following advantages:* Extending the keel creates high righting force for driving to windward and keeps the bow down. Retracting the keel prevents diving, reduces rolling, reduces drag and improves sail balance when running.

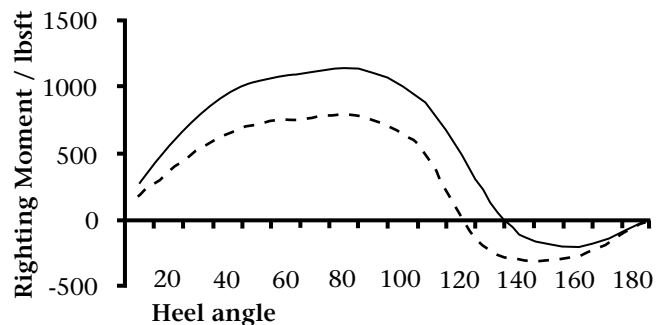
The Swing Bulb Keel

A hollow long-keel houses the swing bulb keel below the hull. This creates excellent directional stability, prevents hull-wear on the ground, and provides lateral resistance in shallow waters. The keel is retracted manually from the cockpit by a sheet and 6-part blocks. All components are visible and easy to maintain. A nylon shear-pin keeps the keel extended, and shears on hitting an obstruction. This is only necessary in strong conditions, as it is extremely difficult to capsize the Explorer.



Self-righting from 90 degrees is instant with keel extended or retracted. From 180 degrees, having the keel extended requires a gentle pull on the chine, and having the keel retracted requires some weight on the chine to begin self-righting. The cabin hatch and cockpit footwell are above the waterline at 90 degrees. After five consecutive 180-degree inversions water ingress to the cabin had no noticeable effect on Explorer's waterline or sailing characteristics. A fully flooded cockpit lowers the aft waterline by a few inches. With a fully flooded cabin, the built-in buoyancy keeps Explorer afloat with the gunwales several inches above the water.

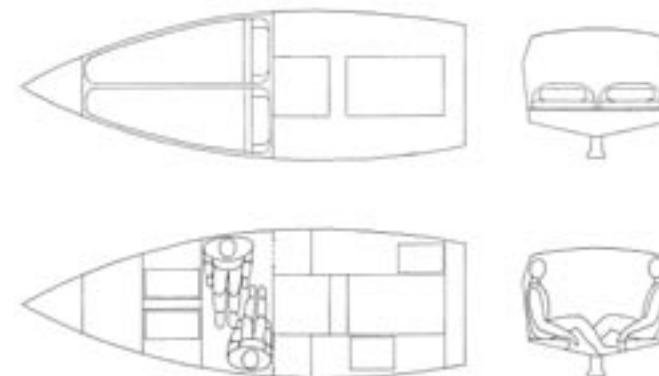
Explorer Stability Curve



Construction

Explorer is built is from Douglas fir and marine plywood. Wood is a natural carbon fibre, and has a higher strength to weight ratio than all other materials bar Carbon and Kevlar. A light displacement plywood hull remains stiffer longer than fibreglass.

Of sustainably grown timber, her production is energy efficient and environmentally friendly. She has the warmth, feel and sound that only wood can provide.



Explorer is engineered for a long life in strong conditions. The keel is fabricated from 40mm diameter 4mm stainless steel sections epoxy, faired to create a hydrofoil:

The keel case is 25mm thick, bonded and bolted to a 25mm arched frame conveying high lateral loads from keel to hull. The six-stay masthead rig is for high strength over years of cruising. The keel strength was assessed by a Rolls Royce aeroplane engineer, and the vessel structure by High Modulus, composite engineers for the World's largest sloop, launched 2004. Explorer's shipwright has 27 years experience from the great North Devon tradition that built the replica Nonsuch and Golden Hind.



Hull: BS1088 Marine-plywood throughout (bottom 9mm, sides 6mm sheathed)

Frames & spars: Sustainably grown high-grade Douglas Fir, hollow spars
Bonding: Resorcinol and epoxy resins.

Fixings: Bronze and 316 marine-grade stainless steel throughout
Rudder fittings and keel are heavily engineered in 316-L marine-grade stainless steel.

Explorer is available in a full range of colours from International.