

FIGHTER

Fighter Yachts Limited

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PERFORMANCE CHARACTERISTICS;

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Compared to a conventional fin keel the Collins Tandem Keel offers a radical reduction in draft, a high righting moment, and improved handling characteristics.

RIGHTING MOMENT

With more than 50% of total keel weight in the endplate, the Tandem Keel has a greater righting moment than a conventional fin keel of 40% greater draft.

STALL RESISTANCE

Whereas a single fin keel stalls at approx 10° of leeway, the Tandem Keel does not stall at angles of up to 30° of leeway. The principle is comparable to that of a canard/main wing configuration on a modern fighter aircraft. Several further advantages flow from this:-

ACCELERATION OUT OF THE TACK

When yachts tack through the wind, lose speed, and increase leeway angle, most keels stall or partially stall. By bearing off a little, one picks up speed and reintegrates flow over the keel. The much greater stall resistance of the Tandem Keel allows one to accelerate well without bearing away.

BROACH RECOVERY

Because the Tandem Keel does not stall in the final stages of a broach, the drag remains moderate, the yacht maintains reasonable speed, and one can 'pull out' at a relatively late stage, when a comparable yacht with a conventional fin would be already 'pinned'.

GUST/WAVE RESPONSE

In extreme conditions, when normal keels would temporarily stall, with subsequent temporary reductions in speed and control, the more stall-resistant Tandem Keel has a gentler, more controllable response.

IMPROVED DIRECTIONAL STABILITY

This arises mostly from the Tandem Keel's distribution of vertical surfaces along the longitudinal axis of the yacht. The yacht has the directional stability of a longer-keeled boat, so that the demands made on the helmsman are thus reduced.

PITCH-DAMPING

The large, delta-wing shaped endplate is itself more stall-resistant than Australia II type wings, and acts to reduce pitch without significantly increasing drag. Some of the best racing results on Tandem Keel yachts have been achieved in heavy weather, during which pitching has been noticeably less than close rivals.

ROLL RESISTANCE

The angle between the main foil and endplate acts like a 'scoop' against strong sideways motion, and has a powerful effect on reducing roll.

WEED SHEDDING

Weed and other underwater debris is easily shed by the swept back forward foil and strongly swept delta-shaped endplate.

Sole Agents for 'FIGHTER' Yacht Designs & Collins Tandem Keels