

MAX PROP TWO-BLADE

£1,120 TO £2,750 16x12in tested: £1,275



A two-blade version of the Max Prop, also named after its designer, Massimiliano Bianchi. As expected, it gave some vibration on our test boat, but this would not occur on a yacht with a

P-bracket or saildrive. On test, it gave mid-range performance for speed, astern thrust and stopping distance, but generated more prop-walk than any other propeller on test.

Sizes 12in-30in
Max power 250hp
Website www.darglow.co.uk
Tel 01929 556512

SLIPSTREAM THREE-BLADE

£1,360 TO £1,845 15.5x11in tested: £1,530



From the same Australian company as the Autostream comes the Slipstream folding propeller. Again, the boss and blades are stainless steel, which gives greater strength, allows thinner section blades, and removes the need for an anode. The bearings are bronze bushes, while

the blade gears are bevelled, with two rows each, claimed to better chew up any barnacles that might choose to grow on them. Polyethylene side thrust washers further improve the opening action. On test, it performed in the middle of the group of folding propellers, though with

comfortable low cruising revs of 2,250rpm at 6 knots, which makes for a quieter passage while sailing or motor-sailing.
Sizes 14in-20in **Max power** 80hp
Website www.steeldevelopments.co.uk
Tel 020 8874 7059

SLIPSTREAM TWO-BLADE

£895 TO £1,195 16x11½in tested: £990



Slipstream's two-blade propeller is similar in design to the three-blade version. On test, it achieved almost the same thrust in ahead,

though with slightly worse astern figures. But it proved faster than the three-blade Slipstream and made 6 knots at a low cruising rpm of 2,350.

Sizes 14in-20in **Max power** 80hp
Website www.steeldevelopments.co.uk
Tel 020 8874 7059

VARIFOLD TWO-BLADE

£585 TO £760 15x11in tested: £630



Made in the UK, this folding unit is mid-way between a racing and cruising prop, with the blades closing tightly for low drag, but still having enough shape to give good motoring performance. As a result of its close fit, you have

to give the engine a burst of throttle to get the blades to open initially. It has a bronze boss and blades, and stainless steel pins. The Varifold achieved equal highest top speed, but was near the bottom of the field for astern performance.

Sizes 12in-17in
Max power 50hp
Website www.bruntons-propellers.com
Tel 01255 420005

VARIPROFILE THREE-BLADE

£1,604 TO £2,740 16x11in tested: £1,770



This is a three-blade feathering prop, made in Germany. The blades swivel 180° to give the same leading edge in astern, and the pitch can be set differently for ahead and astern. Usually,

this is set in advance for the customer, but can be altered on site. Blades and boss are bronze, with stainless pins, and an anode aft of the nut. Ahead thrust was low, but stopping distance was good.

Sizes 13in-22in
Max power 120hp
Website www.bruntons-propellers.com
Tel 01255 420005

MORE PROPELLERS

PROPELLERS FROM THESE THREE COMPANIES ARRIVED TOO LATE FOR OUR TEST



Volvo

Volvo has a range of all-bronze two, three and four-bladed folding props, for shaft drives and saildrives. The blades have an unusual hooked design, claimed to give better performance under power.

Sizes 14in-22in **Max power** 120hp **Prices** £615-£2,470; 16x11in two-blade £650, three-blade £1,215
Website www.volvo-penta.co.uk **Tel** 01923 228544



Radice

Radice of Italy makes a huge range of fixed and folding props, for every type of boat. Its two-blade folding props are all-bronze, and simple to fit.

Sizes 13-20in **Prices** £505-£680; 16x12in £540
Website www.sillette.com **Tel** 020 8330 9014



J-Prop

The J-Prop is a feathering unit made in Italy. All-bronze, in two, three and four-blade models, they feature helical gears for smooth vibration-free operation.

Sizes 13-38in **Max power** 240hp
Prices £1,624-£12,860, 16x11in three-blade £1,900
Website www.calibramarine.com **Tel** 02380 403944

CONCLUSION

If you want to add up to a knot to your boatspeed, then fitting a folding or feathering propeller is a must, not just for racing boats. And as our test demonstrates, you can usually still retain the handling and performance under power that you had with a standard fixed-blade prop. In fact, often you'll get better performance.

Five of the tested props gave more speed than the standard prop, with four of them being folding models, and both Flexofolds coming out top. And even though it was only 0.15 knots better, when you look at the hull resistance curve this is a considerable improvement. On the other hand, with astern performance, in general it was the feathering props that came out best, with better bollard pull than the standard, and better stopping times, and the Autostream coming out top. The folding props were generally not as good as the standard, though in the main only by no more than 10%.

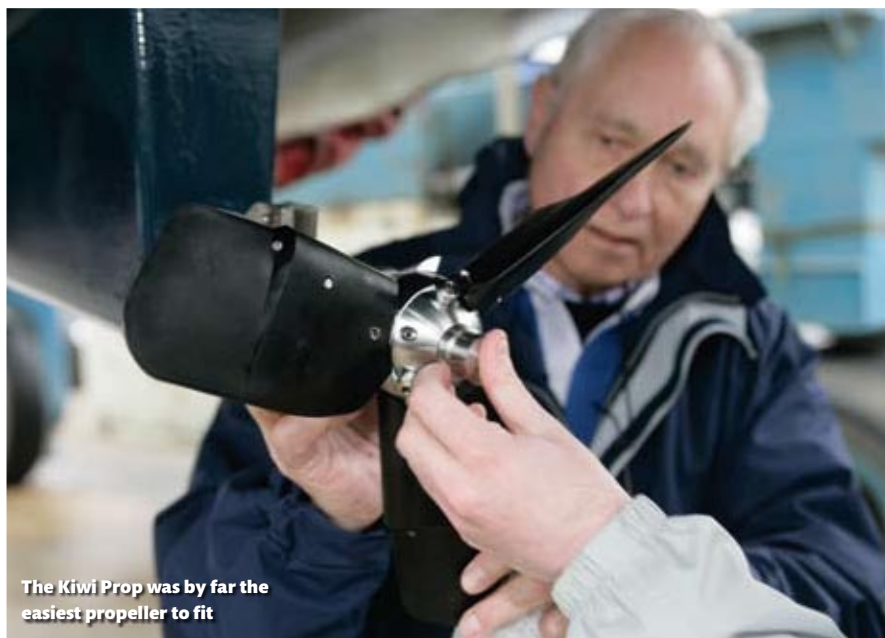
The prop walk figures were most revealing. Ten of our test units gave less prop walk, with generally the folders coming out best, but the top units being the Axiom and Autostream, with 30% less side-thrust than the standard fixed three-blade, a considerable advantage when you have to stop suddenly or back-up in a marina.

Our test shows that letting your fixed-blade prop spin, if the gearbox manufacturer will allow it, halves the drag. But fitting a folding prop will give at least 95% less drag than a locked, fixed propeller, while a feathering unit will give at least 92% less drag – still an enormous saving.

But these benefits do have a price, literally on your wallet. A 16in fixed three-blade propeller will cost around £300. The cheapest two-blade folding prop will cost at least double, with most of them between £600 and £900. For a three-bladed folding unit, expect to pay between £1,200 and £1,600. With the exception of the £985 Kiwi Prop, feathering props are even more expensive, starting at around £1,200 for a two-blade model, rising to £2,100 for the most expensive three-blade version.

Because of the wide variation in cost, performance and specifications of the units tested, we have not felt it appropriate to recommend a best buy. The tables and curves give you the information you need at a glance, allowing you to make your own decisions as to which is best for you and your boat.

Our test was only able to measure one set of circumstances, and one model of boat. If you have your own experience of props, good or bad, let us know. ▲



The Kiwi Prop was by far the easiest propeller to fit

CRUISING OR RACING?

Some folding prop manufacturers now sell cruising and racing versions of their products. To minimise drag, racing units fold up tightly and create less drag, perhaps gaining an extra tenth of a knot of boatspeed. However, they don't perform as well when the yacht is motoring and can be more reluctant to open when the engine is engaged.



GORI

Gori recommended the 15x12in three-blade propeller for our test. Subsequently, they have suggested a 16.5x11in would have given a better performance, as the engine was over-revving with the smaller prop. All manufacturers were given the same information regarding dimensions, specifications and test conditions. Gori says a prop test carried out by French *Voile* magazine, using the 16.5x11in propeller and a similar size engine, produced very different results.

THANKS



Testing 15 props in two days placed big demands on Lymington Yacht Haven's hoist team. Their professionalism, good humour and willingness to help meant the test went without a single hitch. Our thanks go to all at Lymington Yacht Haven for their considerable part in this test's success.

Lymington Yacht Haven
Kings Saltern Road
Lymington, Hampshire SO41 3QD
Tel: 01590 677071



Our thanks go to Sailtime, the sailing membership scheme, for agreeing to let us use its pristine Océanis 323, *Aragorn*, for this test. Not for the first time, Richard and Sue went out of their way to help us get what we needed and once again we're very grateful to them for their help.

Sailtime Lymington
19 Waterford Lane,
Lymington, Hampshire SO41 3PT
Tel: 01590 688 008 or 07809 444480



The load cell used to measure the bollard pulls and prop walk was supplied by Diverse Yacht Services. Diverse has been a major marine player since its foundation in 1982. Then as now, the company supplies and tunes electronics and load cells for the world's leading racing fleets.

Diverse Yacht Services
Uni 12, Port Hamble, Satchell Lane,
Southampton, Hampshire SO31 4QD
Tel: 023 8045 3399



To understand better what happens to feathering and folding props changing from ahead to astern, we needed to watch them do just that. We used a Scubar Pro unit – a waterproof video camera mounted on a pole that displays recordable video on a screen. See *New gear*, p88.

Scubar
Sailmakers Loft, Kings Copse Farm,
Tanhouse Lane, Botley, Hampshire SO30 2SZ
Tel: 023 8045 4484