



PHOTOS: ALL TOM GRUITT

RS100

The latest addition to the RS family has been hotly awaited – **Mark Rushall** puts the new RS100 asymmetric singlehander to the test...

With 200 firm orders to date, RS have certainly shown that there is demand for a fast, modern, accessible sitting out singlehander, and we've been looking forward to testing the new RS100 for some time.

Our initial impression of the RS100 was of a great looking, well thought out boat that is lightweight yet robust. On the water, the 100 did not disappoint, and at the end of the day we were most reluctant to drop the kite and head for home!

Design and development

Part of the development process for the RS100 involved a two-day evaluation of the prototype by 40 potential purchasers. The questionnaire at the end of the weekend gave RS director Nick Peters plenty of food for thought, and many suggestions

were included in the final designs, including some major decisions such as the choice of a pivoting centreboard rather than a daggerboard. But the RS100 is no camel, and the hull, layout and rig make for a neat, coherent package.

With its sleek lines – hard chine, flared topsides, and curved wings stretching the beam out to over 1.8m – Paul Handley's hull design looks narrower than it is. In fact its 1m waterline width is similar to a Laser's, some 150mm more than a RS300 or Phantom. The hull is an epoxy foam sandwich: 10mm foam in the floor and 8mm elsewhere gives the hull a bulletproof feel, despite the low bare hull weight of around 55kg.

Detailing has benefitted from the input of Daniel Vitali, a sailor as well as an industrial designer. The stylish carbon foredeck looks great as well as adding stiffness, forming the top of the spinnaker ▶



LEFT RS listened to sailor feedback before finalising the design of the 100, but it still has a coherent rig, hull and sail package.

Specifications

Design:	Paul Handley & Vitali Design, Italy
Length:	4.3m
Beam:	1.83m
Hull weight (ex-fittings):	55kg
Sailing weight:	80kg
Sail area:	Mainsail 8.4/10.2sq m Asymmetric 12.5sq m
Construction:	Epoxy GRP foam sandwich
Foils:	Pivoting centreboard and rudder
Mast:	Carbon composite (two-part), rotating
Predicted PN:	10.2 rig 1005 / 8.4 rig 1014
Price:	£7,400



ABOVE Upwind in flat water, a fully powered up 8.4sq m boat was pretty much matching the 10.2 sail, although in lighter patchier conditions the 10.2 had a clear advantage.

chute, and providing something to stand on! The wide open, uncluttered cockpit self drains through two large holes in the half transom that again adds stiffness. At the slot gasket the front end of the Mylar slot strip is shaped to fit snugly around the trailing edge of the centreboard: together with a foam rubber

packer at the front this ensures clean flow around the board through the likely racing board angles. The moulded epoxy centreboard and rudder both pivot, with a simple 2:1 control line for centreboard. Production RS100s are being built by RS's established builders in Thailand, alongside the RS200.

Rig and sails

There are two rig options to suit varying sailor weights or sailing conditions. Sail sizes are 8.4 and 10.2sq m, with the 10.2 requiring the addition of a 350mm stub to the two-piece mast, and shroud and spinnaker halyard attachments moved to the lower position. Nick Peters reckons that the 8.4sq m rig will suit 65-80kg sailors, though less experienced heavyweights may opt for the small rig while inland sailors may also find the big

rig optimum. With the price of the second sail under £500, one in five customers have hedged their bets and ordered both options: it is expected that the two versions will race as separate fleets with different PY numbers in the same way as the Laser and Laser Radia.

The mast, boom, and pole are composite Selden sections: the two-piece mast is supported by shrouds offwind that also provide some sideways stiffness upwind, and the whole mast rotates inside a custom spreader bracket. Spreader angle is fixed, but length adjustable and its expected that bigger sailors will run with more deflection. The rotating rig lends itself to the RS300-style gnaw: the compression roller runs up and down the mast which means that the velocity ratio increases as the vang comes on: a nice feature.

Sails are from Hyde, mainly laminated cloth with a Dacron luff panel to accommodate a wide range of mast bends and two full-length battens. A square top profile was tested at the prototype stage but the more conventional profile always proved faster and easier to handle: function prevailed over form!

Fit out is by Selden, with a couple of really nice custom-moulded fittings adding to the clean look of the whole product. The bow plate locates the pole and includes a track to secure the front end of the chute, and the mast deck plate incorporates control line organiser, and calibrated mast rake adjuster. This enables true singlehanded rigging: wind the rake back to attach the shrouds, then forward to the mid setting to apply rig tension. In fact, the boat is easily rigged and ready to launch in under 15 minutes.

On the water

Lifting foils, a semi-soft sail, and stable hull form make for an easy launch - we were soon trucking upwind enjoying the unique sound and feel of a light and stiff epoxy hull. The wings are perfectly contoured for sitting out comfort: the best we have ever experienced. The hull responds to sailing upright and there is sufficient freeboard for keen hikers to ease the straps (whilst beating the toe strap adjuster cleats so you can sit out hard and sail the boat flat in the waves). Vang and cunningham cleats are perfectly aligned for easy adjustment - both controls are continuous and elasticated: drop the control and it automatically cleats so there is never any scrabbling about to leeward.

The rig is very responsive to vang and cunningham. Ease both to power up, and you feel the boat leap forward. Depower



ABOVE The RS100 has been eagerly awaited and didn't disappoint, with our test team reluctant to drop the kite and go home at the end of the day!

RIGHT Although the boom looks low, there is plenty of room through the tacks, with both tiller extension and mainsheet passing through in front for smooth, controlled roll tacks.



progressively increasing both, and you appreciate the increasing power of the vang as it comes down the mast. We felt that the cunningham on the test boat could benefit from an extra purchase: RS are considering this.

The bottom mast section is 100 per cent carbon, and the top section 75 per cent: this gives the option of depowering with mast bend for forward speed, or powering up the leech with the mainsheet for high pointing, although in our 8-12 knots of breeze the boat felt more comfortable upwind when keeping the flow over the foils in a fast forward mode rather than 'stab and flap'. As well as cunningham, vang, and mainsheet, there is an adjustable bridle, and the rake adjustment to consider: this is a tweaky boat and it's going to be fun for those developing the fast settings.

We approached the first tack gingerly: that boom looks pretty low from the side decks. In fact there is more than enough boom: the mainsheet turret is well forward, there is no need to move aft or ease vang, and the tiller extension and mainsheet pass through in front allowing



Time for the kite at last – the Spinlock cleat is protected by the mainsheet turret and automatically cleats when you pull the kite up, and uncleats for the drop. The favoured hoist and drop methods seemed to be to use a leeward mark mainsheet-

these marginal conditions between soaking deep and sailing high and planning. Even though the optimum VMG angle will soon become obvious, this wide groove will give plenty of tactical options. But real asymmetric sailing is all about planing in apparent wind, and the RS100 excels at this. The mast is stepped well aft, so there is no problem with lee helm even at low speeds, so no need to heel the boat to leeward to compensate. The rudder is so light and the boat so responsive that it's easy to over-react to a gust: bear away too soon in the gust and the rig unloads and the boat slows abruptly. The fast technique was to keep course as the gust built, allowing speed to do its job and the building apparent wind to take the boat downhill with no speed loss. Again, in these medium conditions there was no big difference in speed between the two rigs.

Kite sheet loads were minimal: it's easy to hold the mainsheet in one hand and kite sheet in the other, though we weren't sure which way round was best and got the two muddled several times! We'll have different colour sheets on our boat...

With no forestay, the gybe is an absolute dream. In the lighter winds, cleat the main, keep hold of the old sheet until the kite starts to back, and roll the boat upright out of the gybe as you pick up the new sheet: there is no sheet pulling to do. The spinnaker sets as the top battens pop, and the boat accelerates beautifully out of the manoeuvre. In more wind, ease the mainsheet as you bear off, and sail the boat flat through the gybe. The top battens remain inverted until you are ready to sheet the mainsheet on, making for a super-safe manoeuvre.

ABOVE Capsize was uneventful - the mast is partially foam filled, so is very slow to turtle and there is an elasticated righting line.

“Real asymmetric sailing is all about planing in apparent wind, and the RS100 excels at this”

smooth, controlled roll tack. Now sailing at maximum power conditions in the 4sq m rigged boat, we were matching the 10.2sq m pretty much boat for boat: the 8.4 felt well balanced and responsive through the wind range.

style movement on the halyard, pulling hand over hand while rotating the extension around the tiller.

With its long (1.2m) pole and long-footed (in skiff terms) asymmetric spinnaker, there was a wide groove in



LEFT There are two different mainsail options, at either 8.4 or 10.2sq m for differing sailing weights and conditions. They are expected to race with different PY numbers.



The drop is as straightforward as the hoist, using the same arm over arm technique. The twin patch kite slips into the chute freely. As the pole retracts,

foredeck shock chords take in the slack spinnaker sheet preventing any possibility of snagging over the pole.

With the wind slightly patchier, we switched to the 10.2sq m rigged boat. The balanced feel was the same, but the extra power is welcome when driving the boat through the light patches in the chop. In these conditions the 10.2 is definitely faster upwind. At 75kgs, I think I'd choose the big rig for inland sailing, and the small rig for sea sailing in predominantly sea breeze conditions.

As the sea breeze built, we found a couple of Olympic development squad Lasers to line up against. Upwind, the speed advantage of the RS100 is discernable, but not stunning. Downwind it's a completely different picture: by the time we'd stopped to drop the kite the Lasers were dots on the horizon... this boat is quick!

In 12-13 knots downwind, the boat really comes into its own. Playing the kite sheet is still a one-handed job; the boat is continuously planing, while sailing surprisingly deep angles. Once in the groove, the boat sails itself; hold the height, let the apparent wind build and off you go. We couldn't find any evidence of potential nose diving issues: in fact we barely needed the aft toe straps, and gybing remained straightforward so long as the turn was started with speed. We can't wait to repeat the test in 25 knots!

Vice free?

Nick finally persuaded us to return to harbour. Spinnaker down, we tried but failed to get stuck in irons; the traditional singlehander's scourge. In fact we are told that even in extreme conditions, all that is needed is a quick pull on the centreboard, and the bow blows off the wind: no problem.

Finally, the capsizes. The mast is partially foam filled, so is very slow to



ABOVE The whole mast rotates inside a custom spreader bracket: spreader angle is fixed, but length adjustable.



ABOVE The 10.2sq m mainsail requires an additional 350mm stub to the two-piece carbon rig.



ABOVE The carbon foredeck adds stiffness and forms the top of the spinnaker chute.

turtle: we capsized the boat and then climbed onto the rig and over the top onto the plate and still couldn't turtle it. Once on the plate, maintaining balance with the elasticated righting line, the boat popped straight up: we suspect there is no need to get fully onto the plate in most cases. The wings provide enough buoyancy to allow you to slide over the windward side to get back into the boat we opted for the rear entry, which was equally uneventful. As you'd expect, the boat came upright completely free of water and ready to race.

Our overall impressions? We think this is the best RS boat to be launched since the 200: and poised to be just as successful. Bring on the racing! ■

Answer Back

From Nick Peters

The RS100 Class is developing quickly. It has been adopted by both the UK RS Class Association and the International RS Class Association, who has already organised an international programme of events. Boat deliveries are in full flow (at a steady rate of 30 or so every month), the first class training event will take place in July, and the inaugural DaKine-sponsored National Championships are scheduled for September 4-5 at Parkstone, Poole. Over 40 per cent of orders for RS100s are from outside the UK, which is a healthy start. A European Tour kicks off in late May with events scheduled in seven European countries, culminating in the European Grand Prix at Saint Raphael on the Cote d'Azur in late September. RS100s are also scheduled to head across the Atlantic and 'down under'.

After one of the most intense RS development processes the general reaction to the RS100 is incredibly exciting for us. I have never struggled to drag a boat tester ashore in quite the same way that I did with Mark Rushall! I was sure he would love it - it is a delight to sail - and this reaction seems to be mirrored by most people who try the boat. Many thanks for such a comprehensive test!

Contact: www.rssailing.com



Laser

Length: 4.23m
Beam: 1.37m
Hull weight: 56.7kgs
Construction: GRP
PN: 1078

You don't get much sophistication for your £4,500, but 170,000 boats to race against around the world still provides the ultimate competition.



Solo

Length: 3.78m
Beam: 1.55m
Hull weight: 70kg
Construction: Various
PN: 1155

Jack Holt's 1960's double-chiner boasts large club fleets, a fully tuneable rig with choice of manufacturer, but by modern standards it's not fast!