

The boat tacked well in light winds and came out of the tack with pace.

THE RS100

DOES IT LIVE UP TO ALL THE HYPE, THE ACID TEST?

After a remarkable public development process that involved many potential new owners in a public on-line consultation process the RS100 was launched at the Tullett Prebon London International Boat Show. Nearly 200 boats are now on order with a very impressive 40% for export. CMI in Thailand have gone into full production of the RS100 with two moulds and the first containers with production boats have arrived with boats now being delivered to customers. DSM was very keen to test sail the RS100 and report to our readers our reaction so on a rather grey March day five of us met Nick Peters and Charlie 'Demo' Merchant from RS Sailing at Burghfield SC.

Although the choice of Burghfield was questioned by some assuming that we would want to do a boat test on the open sea in waves I wanted to test the boat in conditions more in keeping to the type of sailing the majority of our readers and likely owners race in. Particularly as RS Sailing's stated aim was to design a boat for the reasonable club racer and bored Laser sailor looking for more thrills. A boat that had to be able to perform in light/shifty conditions yet also is a challenge to sail in real breeze with you wanting to go back out again without being a huge struggle and scaring you. Burghfield is a good size gravel pit with islands and shallows which can produce some patchy wind, exactly to my mind the type of club the boat has to be able to perform at to succeed.

Designer Paul Handley and RS Sailing had carefully considered options to increase the weight range that would be competitive in the boat. Weight equalisation system was ruled out in part on cost grounds, the need for lighter sailors to carry a lot of lead and as Nick explained on the day of the test, weight equalisation works well in trapezing boats where you can work out leverage but not in hiking boats. Instead the RS100 has been developed with two different-sized mains, 8.4m² and 10.2m² to increase the weight range that can sail the boat. So to test how these rigs worked for different weight helms we had two RS100s at the test day and I invited three different weight sailors to test the boats.

THE TEST SAILORS

PETER BARTON

One of our top racers having won Cherub, Laser 4000 and RS800 National titles. Just about to start an International Moth campaign. Pete weighed in at 77kg out of his nice coloured drysuit!

DAVID HENSHALL

Vastly experienced dinghy sailor across a huge range of boats. Has been campaigning a Contender for several years. Weighed in at 92kg when dry.

WILL GULLIVER

A very competitive and well respected sailor with many years' experience in a range of two man and single-handed boats. Right at the front of the strong Phantom fleet and current Albacore National Champion. Weighed in at 106kg of sailing magnificence!



Without a forestay the kite crosses very easily allowing for very quick gybes.

FIRST IMPRESSIONS

The first impression is an over ridding this is a stylish boat that really looks the part, particularly with the carbon foredeck (an extra £189). Paul Handley had done an excellent job on the lines of the boat. Made using an epoxy GRP composite construction the hull without fittings is a light 55kg yet is very stiff. This also gives it the added advantage of being very easy to move around on the shore.

During the development period real attention had been paid to detail. I have never seen a styling consultant credited on the specification sheet on a manufacturer's website before; in this case Vitali Design of Italy. Vang and cummingham controls are led either side of the wing with alongside adjustment for your toe straps in a very simple but effective way. The mainsheet jammer is well forward which will be a great help when tacking/gybing, avoiding the need to move weight too far back. There is a pivoting centreboard which will be a relief to many used to daggerboards which has to make launching/landing much easier. The centreboard is controlled by a straight forward but effective uphaul/downhaul system. The rudder/stock/tiller is standard from other RS classes which we all know works very well.

The carbon fibre rotating mast is in two parts to make life easy for roof racking, fitting inside a 20ft container or for stowing inside the boat when trailing. There are shrouds but no forestay; this allows the mast to work automatically up wind and supports the mast, stopping it going forward downwind. As Nick Peters explained this helps stop the boat nose diving, avoiding need for a stiffer and heavier mast that would not have been so responsive. There is a compression strut vang exactly the same as the RS300's with

a roller on top end against the mast which is very easy to adjust with lots of power.

Conditions afloat during the test.

We started sailing in a very light 3-4 knots that almost faded to nothing but then slowly built over the next 3 hours to become at one stage a puffy 12/13 knots.

SO WHAT DID THE BOYS THINK OF THE BOAT AFLOAT?

DAVID HENSHALL

My first thought was that testing in very light airs I was sure would show up a potential weakness in the new boat, in that the cockpit area looked somewhat cramped and restrictive. With what wind there was being off-shore, no sooner than the plate and rudder were down, a very easy operation, than the kite was up. Incredibly though, despite being sat in the cockpit, just to one side of the centreline, the space for the helm seemed roomy, with all the controls easily coming to hand. In the light conditions it helped to roll the boat into the gybe, with the main left cleated the sail came over with an impressive crack but the key impression was the ease – and speed with which the boat could be gybed. Spinnaker drops were also a simple activity, with the up/down toggle cleat showing no signs of trying to 'recreat' the halyard; this gave me the confidence to delay dropping to the last minute, secure in the knowledge that I'd not get into a jam.

The big surprise came when I started to beat back upwind, as a new breeze was just starting to fill in. Despite being in the 'small' rig, at 92kg I was soon fully powered up and starting to think about using the sail controls to dump power. After beating easily up the length of

the lake it was time for another hoist, this time in a more stable breeze, but one that could not have been more than 10 knots. Again the hoist was straight forward, but now the weight was very much up onto the side deck as the RS100 quickly accelerated away. What became clear here is that the boat planes with a clear bow up angle, so unless it is very windy, or the wave patterns are really big, there is no need to keep moving the weight aft – indeed, the normal 'back of the boat' mode may actually be slow, with the better position for the helm being pretty much in the middle of the flared wing. Gybes were still easy, with the boat showing no signs of any 'bad' behaviour! Even when I tried to do silly things the boat seemed very forgiving, though I could well imagine it would be less so in a hard wind and rough sea combination.

We'd talked about trying a capsize, but with the lake only clear of ice for just a week or so this seemed a 'test too far'. However, to change from the small rigged boat to the large meant rafting up along side the other boat and clambering across. Sods Law dictated that the wind would blow at that moment and I was in the water. Given the ambient temperature, all I could hope for was an easy righting and to my amazement the boat came straight back up and held position across the wind whilst I came in over the open stern. There was little in the way of water in the cockpit, allowing me to make an immediate return to fun (though a little chilly) sailing.

Will Gulliver, another tester, who in response to the usual quip of "a bit more breeze would be nice" came straight back with "yes, but a lot more would be scary"! He may well be right, with sailing the RS100 in wind and wave being a new challenge that has yet to

All testers found the hoist and drops a very straight forward, quick and friction-free process.





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be really explored. But on the evidence of today, I can see no reason why the good club sailor should not be able to master this boat in all conditions. Middle-aged and unfit club sailors can manage it, Laser sailors wanting thrills without the spills can manage it, in fact, with the investment of sometime practicing and getting to grips with the boat, most should be able to manage it. If this is the case, then the RS100 is not just a commercial success but a really good boat.

WILL GULLIVER

An outstanding piece of design work. It did feel a little like the RS300, brilliantly sculpted side decks made tacking and gybing immensely comfortable. The foils worked well, the rudder being similar to most of the RS range. The rig (using the 10.2 m² sail) was powerful and I can believe that many sub 90kg owners will opt for the small 8.4m² version. The leech opened progressively as the wind increased and the powerful gnav controlled the sail well.

The kite hoist was easy and relatively friction free, the spinlock cleat worked well. The fittings, especially the mainsheet mount, are well positioned and fit for purpose.

Upwind – Even with 106kg at the helm the boat accelerated well out of tacks in the light winds, the steering was light and responsive. The boat speed with a helm 30kg lighter (smaller rig) remained comparatively even. As the wind reached 10mph the greater mass gave the helm options to foot and pinch but the VMG remained remarkably similar to the lighter helm.

Downwind – following the simple gennaker hoist the boat accelerated promptly, remaining well in control, gybing provided a brilliant tactical opportunity with the kite banging through rapidly without a forestay. The

relatively narrow waterline will make this operation interesting with winds above 25mph.

Boat speed against the lightweight helm was very similar with winds below 10 knots. However above the lightweight helm was able to plain sooner and lower than the heavyweight sailor. I'm sure above 15 knots the deficit would be eliminated. One interesting point that around the cans during club racing the 12.5m² kite will provide a handful making close reaching a single sail exercise.

PETE BARTON

At 77kg the temptation was to be macho and 'man up' to the big rig, trying to depower upwind and then blast downwind. However the test sail in predominantly light winds quickly changed this philosophy with a small sail being faster for a lightweight upwind and a lightweight might still retain an advantage downwind with the smaller mainsail as the spinnaker is still the same size.

RS's design goal was to make the rigs suitable for a 15kg difference of sailor with the 2 rigs covering the 70-100kg range. However early test sails have proven this weight range could be higher with heavier helms still being competitive and this was verified during our test sail with Will Gulliver fully competitive and enjoying the boat at 106kg. Will and I had a 29kg differential.

'Drifter' 2-4 knots

The difference was negligible. Technique and sailing skill was vastly more important than any minute speed difference.

'Trundle' 5-6 knots

Upwind; The 10.2 had the advantage upwind with just enough extra power to unstick it from the water earlier than the 8.4.

Downwind; Similar. Whilst the mainsails are 1.8m² different the spinnakers are the same size.

'Under powered up' 7-9' knots

Upwind; I was fully hiking the 8.4 earlier than Will in the 10.2 at 106kg. Whilst I was not overpowered (just starting to use kicker and cummingham to depower) I could now match him upwind as I was using my weight efficiently whilst not being overpowered. His weight was still not being fully utilized.

Downwind; 8.4 had the advantage. Would plane earlier and then manage to keep on the plain at a similar speed but at a lower angle.

'Fully powered' 10-12 knots (maybe we saw this in the top gusts)

Upwind; Similar. I was now pulling the kicker and cummingham hard to depower, in stuffing mode in the flat water and hiking my little legs off.

Downwind; 8.4 advantage. Would plane earlier and then manage to keep on the plane at a similar speed but at a lower angle.

Wind increasing over 12 knots;

Upwind; I would have been overpowered earlier than Will and he would then have an advantage.

Downwind; As both rigs plane more easily the lightweight in the 8.4 may still have an advantage sailing a lower angle. As it gets increasingly windy the leverage of the heavier 10.4 sailor might produce more speed and the differential in angles sailed will be smaller as both boats sail increasingly lower angles.

This is in the context of 77kg vs 106kg, almost twice the intended design differential.





PETE SUMMED UP THE PROS AND CONS

PROS

- » I really liked the ergonomic nature of the layout and roll top side decks. Nothing much to get a bruise or a pressure sore from.
- » Its looks are good which I believe to be a major part of its success so far.
- » Spinnaker halyard is laid out so it can be hoist and dropped from sitting a long way back when windy.
- » 2 rig concept adds usability. Personally I would expect keen sailors to buy both. I would not want to sail a drifter with a small sail or a howler with the big one, but using both is likely to be subject to series rules.
- » Easy to manoeuvre; tacks and gybes were no issue, close quarters boat on boat racing is achievable more so than in trapeze asymmetric single handers.
- » Spinnaker sheets easy to gybe without forestay. Big pull on new sheet was barely necessary.
- » Easily adjustable toe straps.
- » Cockpit was very clear with the mainsheet ratchet situated well forward.
- » I liked the way the kicker and cummingham control cleats were very close together which meant I could release them both in one hand movement.

CONS

- » Struggle to have enough hiking leverage to go high once powered up downwind. Can't make a significant higher angle change if necessary.
- » I kicked the spinnaker halyard out of the cleat a couple of times on the gybes. This could easily be avoided with more practice.
- » If you pull the old spinnaker sheet tight in a gybe to backwind it through the clew hangs near the gooseneck and it is possible for the sheets to snag on the gooseneck bolt. It would be an easy bumble to cover it if necessary.

CLASS RACING WITH THE TWO RIGS

As Nick explained development has now totally stopped with the RS100; the design is frozen. The plan is very much to run the two rigs as per the Laser Radial and Laser Standard. At the moment the two rigs will start together at events with separate prizes but the feeling is this will quickly become two separate starts. This is not fixed but will evolve as lessons are learnt by the membership of the RS Association.

OVERALL IMPRESSION

This boat looks the part on and off the water. A huge amount of thought had gone into the detail of the boat with so many nice features that really work and enhance the fun of sailing the boat. The fact that we could come up with such few relatively minor cons high lights how much time has gone into testing and developing. Yes it could be argued that the boat could do with a little more power but I think this misses the point of the market it is aimed at. Good club racers across a wide range of weights and ages are going to be able to race this boat, be challenged by it yet feel able to control the boat; at the same time it will not be for the faint hearted or less experienced sailors. What was also very clear from the test was that this is a very responsive boat in light airs, very quick to tack and gybe that will be fully capable of doing well in those classic Wednesday night conditions.

My over riding impression though was this will be a fantastic boat for fleet racing. The way Pete and Will spent two hours banging in gybe after gybe at a moment's notice to gain tactical advantage when 'testing' (read – racing hard to outdo the other) clearly showed the amazing racing a fleet of RS100s will have. The RS International Dealership is really backing the RS100 with many demo boats and a year of events throughout Europe. The first European Grand Prix at Saint Rafael YC, Cote d'Azur, France Sept 25/27 will show us just how good the racing is.

The fact that me as the editor could not prise Pete or Will out of the boats so I could have a sail because they were having a ball said it all really.

Pete Vincent

FACT SHEET

Length	4300mm
Beam	1830mm
Hull shell weight (ex fittings)	55kg
Sailing weight	80kg
Mainsail areas	8.4m ²
	10.2m ² Radial Mylar cut with Dacron luff panel
Asymmetric spinnaker area	12.5m ²
	Twin patch downhaul system
Hull construction	Epoxy GRP foam sandwich
Foils	Pivoting centreboard and rudder Epoxy foam sandwich
Mast	Carbon composite – 2 part + removable bottom stump Rotating
Boom	Carbon composite Twin tube compression strut vang
Bowsprit	Carbon reinforced GRP composite
Designer	Paul Handley
Styling consultant	Vitali Design – Italy

Boat complete £7,400, carbon foredeck is £189 extra.

Boat complete with trailer, trolley, top and under covers is £8,500.

For more details about the RS100 and for contact details of RSsailing see www.rssailing.com

COMMENT FROM RS SAILING

One of the great features of hiking dinghies is how responsive, rewarding and 'fluid' they can be to sail. Not trying to be the fastest, that is the preserve of the trapeze boats, but always beautifully mannered, and a joy to sail. The RS100 is the latest and possibly the most refined of the breed and is everything it should be; attainable by all and so quickly rewarding the keen sailor, it soon feels like an extension to your body – and a super comfortable one at that!

It was evident that our test sailors loved the boat, and the tightness of the 'competition' between Pete in the 8.4 and Will in the 10.2 bore testament to the broad weight range that the 2 size sail feature ensures. It is envisaged that the Class rules will not restrict who uses which sail, but simply that results will be separated and eventually 2 classes will emerge.

As part of the ever strong RS Class Association, the RS100 class has its first Nationals in September, followed by the Eurocup in St Raphael; this is also the final round of the European Tour, which will have been to six other European countries through the summer months.

Throughout the development process of the RS100 it was always the goal to create the best possible sailing experience for a wide range of sailing abilities. Without doubt it delivers 100%. It was great to have so much input from the prospective owners through the more consultative development process, and a thanks to all those who gave their time. ■

Nick Peters

