

# BOAT REPORT ROYAL 380

Certainly the most radical models yet from high-quality Swedish boatbuilders Storebro, the 380 and its larger 420 compatriot have left their traditional semi-displacement hull for a planing form.

FEW, if any, would dispute that Storebro of Sweden build a very high-quality range of motorboats which have always found a market amongst discerning owners worldwide. Their Royal Cruisers command a premium price, but there is a steady supply of customers willing to pay the extra money.

Benefits include safety and reliability, both essential ingredients for trouble-free boating. But just as significant today is the boats' strong resale value. And the other attraction, of course, is the sheer pleasure an owner derives from having a superbly finished and engineered craft. The flawless mahogany joinery and simple elegance of the design are matched by a quality of construction that is second to none.

One of the reasons the boats keep their value so well is that the models do not change frequently; and when they do, the alterations are gradual, retaining a continuity of style and ensuring that even older boats do not look dated. So it was of considerable interest to us when the company announced two new models at the end of last year.

The 420 made its debut at Earls Court, while the 380 met the international market for the first time at Düsseldorf. The first example of the latter model available was from the factory at Västervik on the east coast of Sweden, so we travelled there to bring you this exclusive first test, and found time to take a quick look at its big sister while we were visiting.







## Design and construction

The two new boats confirm the philosophy that Royal Cruisers do not change radically in their styling from one generation to the next. The models they have replaced are the 36 and the 400, and above the water they have the same classic Storebro lines.

However, the complete change comes underwater. Gone is the semi-displacement hull the company has favoured for the past 30 years, to be replaced by deep-vee forms, better able to handle the high speeds demanded today.

Both hulls have been drawn by Johan Bjorklund, who cut his design teeth on fast patrol boats for the Swedish navy. He has produced forms which have a constant deadrise of 22° from amidships to the transom. Broad chine-flats run full length, with a slight outward down-angle. Surprisingly, the 380 has no sprayrails, while the 420 has only one short rail forward.

In both cases the propellers run in tunnels, which reduces draught and engineroom height. It also allows the greatest possible clearance from the hull, which helps to reduce vibration and noise from the props.

Tunnels can produce handling and steering problems at high speeds, and require careful positioning and sizing of the rudders. Getting this right was not a problem for Storebro because

their normal practice is to build a full-size wooden prototype and test this extensively to find the best match of engines, shaft angles and weight distribution. Testing complete, the hull becomes the plug for the production mould.

One result of this development process is a pronounced flat on the keel, from amidships aft. This helps to improve the water flow into the rudders when the boat is heeling and turning hard, and avoids any problems of stalling.

Also noticeable at the aft end of the hull are the underwater exhausts. Storebro have always run their engine exhaust outlets down the transom under the waterline, but on the new models the hulls extend aft from the transom, carrying the integral bathing platform. This allows the underwater exhausts to be set into the hull extension, further improving performance. The streamlined shape of the outlets ensures there is no build-up of back pressure, and gives both reduced noise and a noticeable absence of fumes and spray pulled into the cockpit at speed.

For the design above the waterline and inside the boats, Storebro have stayed with their long-standing partner Winnfried Wilke.

When Wilke first visited the yard 27 years ago, the design he showed the company so impressed the then-owner Ivar Gustavsson that they shook hands on the deal there and then. That handshake has been the only contract



**The 380 maintains the Royal tradition, blending a high-quality traditional mahogany interior fit-out within hull and superstructure lines of a timeless nature. But innovation is not forgotten either, and there are plenty of practical touches to please even the most experienced of owners.**







between the two parties ever since, over a period that has spanned more than a dozen designs and many thousands of boats, and the same working relationship remains between Wilke and Ivar's sons, who are the present managing directors.

Wilke has retained the classic elegance of the Storebro style for the exterior lines, while inside many features on both boats are the same as on the models they replace. After all, if you have produced the best shape for a galley, toilet compartment or saloon, why change it? The new models also share common furniture components and modules wherever possible.

Quality control is rigorous. Computer-controlled cutting machines ensure all timber for the joinery is made to millimetre-perfect accuracy, but one man is still responsible solely for checking the precision and quality of the finished items. Similarly, huge sanding machines prepare the flat panels for the first of seven coats of satin varnish, applied in environmentally-controlled spray-booths, but a human hand with a piece of the finest-grade sandpaper checks for nibs and nicks before the final coats are applied.

The same care goes into the moulding of the hulls, with banks of extractors ensuring as close to a styrene-free atmosphere as possible, for the benefit of operators and the environment alike. All hulls are moulded to Lloyd's approved standards and, again, precision in their manufacture ensures accuracy of fit, and savings in production time when the interiors are installed.

Over the years, Storebro have become synonymous with mahogany. Initially this extended to the building of wooden hulls, latterly it has been limited to interior joinery. But again the company is aware of changes in fashion, and the growing concern today over the possible misuse of hardwoods. While trying to ensure that their timber comes from managed plantations, they are looking to possible alternatives.

To this end, at the recent Stockholm Boat Show the company exhibited two versions of the 380 alongside each other. One was finished traditionally in mahogany, while the other used ash. Visitors were asked to express their preference, with their views being processed for

consideration in future designs.

We were left undecided — the new finish certainly looked superb, and would be ideal for hotter, sunnier climates, but whether it will ever replace the traditional style, only time and consumer-preferences will tell.

## Interior

The 380 has a conventional layout of flybridge, aft cockpit, wheelhouse/saloon and forward accommodation. The latter can take the form of a double cabin plus a convertible lower dinette, or two double cabins. Additionally, the settee in the saloon can convert into a double berth.

Entering the saloon from the cockpit, you immediately encounter a good idea. The sliding patio door is held in a choice of three open positions by an integral catch which locates in the top runner but is released by the normal door handle. Thus opening the door is a one-handed operation, with the catch positive and strong, unlike the weak and fiddly systems often seen.

The saloon itself has a sideboard to port, with lockers for bottles, glasses and other gear. The shelf is a sensible width, with good deep fiddle rails which have cut-outs to give you something to hold on to. The door catches are not so good, being half-holes which you have to put your finger into to open. More modern press-to-open catches would be better here.

The helm seat forward to port is mounted on a substantial plinth which has room in its base for a television locker and cocktail locker, facing aft.

To starboard is a C-shaped settee, with room for six people to sit around a drop-leaf table that lowers to form the infill for a double berth. Cushions here and throughout the boat have rubber-sprung bases, while the mattresses for the berths are interior-sprung to give all the luxury of home life. The forward section of the settee lifts and hinges forward, to make a clever forward-facing double seat for when the boat is underway, ideal for the comfort of your passengers on a long trip.

The helm seat to port is a generous single, with sliding adjustment and side supports. It faces a large chart area whose lid lifts for stowage. A

## Royal 420

The 420 (above) features an aft cabin, an extra double suite complete with its own bathroom facilities. The cabin runs the full width of the boat, and is spacious and well equipped.

The saloon is also slightly longer, as are the galley and the forward cabin, but many of the modules and furniture units are common to both boats. The two craft also share the neat sliding doors to the cabins, with concealed press-to-hold latches, which help create extra space in the accommodation.

Access to the engineroom for maintenance is by lifting the steps down to the galley.

Outside, the aft deck is a spacious entertaining area, while the flybridge includes a small wet-bar. A feature that caught our eye was the foredeck hatch, which houses the anchor and windlass in a recessed well.

Standard engines are 430hp Volvo TAMD71s, and these give the boat an easy 30 knots. Handling is if anything more precise than the 380 and turning is even tighter. Noise levels throughout are generally as good, but increase to 91dB(A) in the aft cabin.

**Loa** 42ft 3in (12.88m).

**Beam** 13ft 9in (4.20m).

**Draught** 3ft 11in (1.20m).

**Displacement** 12 tonnes.

**Fuel capacity** 2 x 175gal

(1600lt).

**Water capacity** 130gal

(600lt).

**Price** £295,000 ex VAT with

two TAMD72s.

## Storebro Royal 380

**Engines:** twin Volvo KAD 42s, 230hp at 3800rpm, 6 cyl, 3590cc.

**Conditions:** wind SW Force 2-3, sea calm. **Load:** fuel 75%, water 0%, crew 2.

rpm	knots	gph	lph	mpg	range	trim	sound levels dB(A)			
							saloon	fwd cab	cockpit	flbdg
1000	5.5	0.7	3	7.86	1728	0.5	65	64	68	66
1500	6.9	1.5	7	4.60	1012	1.0	68	67	73	71
2000	8.8	4.0	18	2.19	484	3.5	74	70	79	78
2500	11.0	7.4	33	1.49	327	6.0	75	75	79	76
2750	15.0	9.2	42	1.62	357	5.5	76	76	80	77
3000	18.0	11.7	53	1.54	340	5.0	76	77	81	77
3500	24.6	17.2	78	1.42	313	4.5	79	79	83	80
3700	26.0	23.3	106	1.12	245	4.5	81	81	85	81

**Acceleration:** 0-20 knots, 11.8sec.

<b>Loa</b>	37ft 6in (11.43m)	<b>Displacement</b>	8.5 tonnes
<b>Beam</b>	12ft 4in (3.77m)	<b>Fuel</b>	2x110gal (1000lt)
<b>Draught</b>	3ft 4in (1.02m)	<b>Water</b>	90gal (400lt)

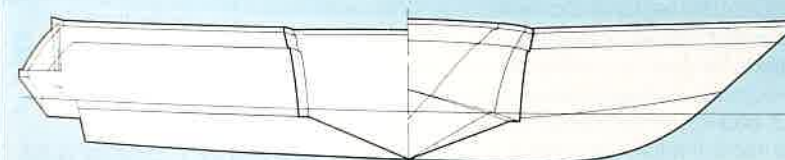
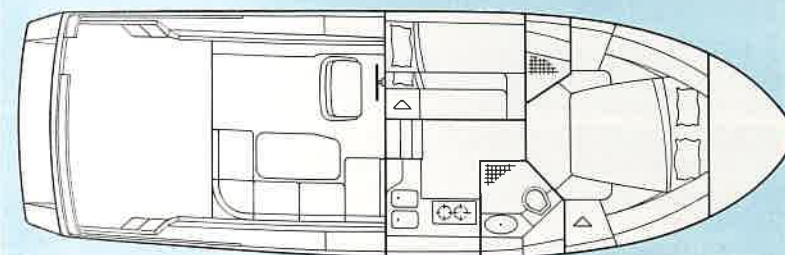
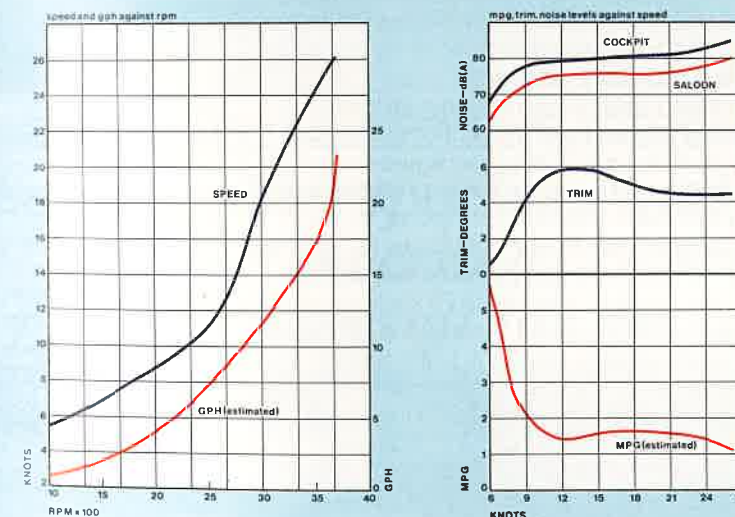
**Price:** £149,000 ex VAT with twin Volvo Penta KAD 42 diesels.

**Builders:** AB Storebro Bruk, S-590 83 Storebro, Sweden.

Tel: (46) 492 30160. Fax: (46) 492 30300.

**UK enquiries:** Paul Hadley Boat Sales, Northney Marina, Hayling Island, Hampshire.

Tel: 0705 461672. Fax: 0705 463492.



feature to note here is the manufacturers' plate inside the chart locker, which has all the technical data about the boat you are likely to need in a hurry: engine numbers, propeller sizes, shaft details, displacement and so on. The corner of the chart lid opens separately to allow you to fit a radar here.

Ahead is a simple but clear engine instrument panel, with the compass set on top. Navigation instruments are set in overhead panels port and starboard, with room for VHF, autopilot and GPS as well as the standard echo-sounder and log. Single-lever engine controls are set conveniently by your left hand, as is the ship's electrical panel in the top of the shelf running under the window, with ready-use switches at its forward end and main breakers behind.

A sliding window here and another to starboard provide ventilation, and allow you to talk to the crew on deck. Large pantograph wipers with integral washers keep the screens clear ahead, aided by two-speed demisters.

Two glass holders are strategically set in the chart area, with two more to starboard, while two ashtrays provide a further practical touch.

Four steps lead down to the galley to starboard. This is finished in the same immaculate mahogany as the rest of the boat, and is both practical and attractive.

Removable lids over cooker and sink maximise the worktop area, with the sink lid reversing to make a chopping board. A further lifting lid reveals a top-loading Isotherm freezer, now becoming an essential item on modern boats in addition to the standard fridge. The hob is a three-burner gas unit, with a microwave underneath. Ample lockers all round provide stowage for crockery and food, with further storage space found under the sole.

Opposite, you can either specify an open-plan dinette which converts into a double berth, with a curtain for privacy, or a twin-bunked cabin as on our test boat.

Forward to starboard is the toilet compartment, with doors from both the saloon and the forward master cabin. This compartment has plenty of space, and 6ft 3in (1.90m) headroom. The sink is sensibly deep and wide, while three lockers will swallow the toiletries of everyone on board. Ample light comes from a window and an overhead hatch, the latter opening for extra ventilation, in addition to a fixed vent.

The master cabin forward has a central double bed and, surprisingly, a second shower compartment to port. This gives extra flexibility given that there is just one toilet compartment, and also doubles as a drying-room, with an outlet in here for the central heating system. Stowage is provided by a half-height hanging locker plus further lockers under the berth.

Lifting the mattress reveals the toolkit, a Royal Cruiser speciality, with tools and emergency spares in a neat moulded tray. And under the forward section you find the ship's batteries (a somewhat unusual location, but necessary to help the boat's trim). A sealed venting system is sensibly fitted to these.

Throughout the boat, the soles are in teak with holly stripes, with loose fitted carpet on top, giving you the option of either finish. All the sole boards lift to give excellent access to the inside of the hull, which is painted out everywhere; you also discover that they all have rubber



soundproofing bonded on their underside to help noise reduction — a further example of Storebro attention to detail.

## Engines

Power for the 380 comes from a pair of Volvo diesels, either the 230hp KAD42s, giving 26 knots, or 306hp TAMD61s, with around 30 knots.

Access to these is via lifting hatches in the saloon. These have neat removable aluminium bearers, to give extra clearance or allow for major repairs. It is easiest to lift the aft port hatch first, and this gives you good access to all routine service points, including fuel filters, inlet strainers and sternglands. Access to the sides and tops of the engines is similarly good, though we thought the gearbox control and propshaft on the port engine were vulnerable to being trodden on as you step down.

Soundproofing is installed on all surfaces, including tanks, bulkheads and hatches.

## Exterior

To complement its mahogany interior, the 380 is fully finished in teak outside, including cockpit, side decks and bathing platform, with mahogany trim for the rail capping, boathooks and lower saloon door panels.

The bathing platform is reached via a through-transom door, with the port 'wing' providing the location for the stern anchor used when mooring bow-on in Sweden. A hot-and-cold shower is located in a recessed locker.

The cockpit has four hatches in it. The aft pair give access to recessed storage boxes which will take mooring lines. The forward pair allow you into a spacious lazarette which contains plastic freshwater tanks port and starboard but still has plenty of room for a deflated dinghy and its engine, plus all the other gear that always accumulates on board. On the forward bulkhead are a row of six pumps — three bilge, two shower and one freshwater — all easily accessible for clearance or repair. At the after end you find the steering gear, again easily reached but protected from damage.

Steps from the cockpit lead up to the side decks. The decks themselves are reasonably wide, but at the aft end the capping on the rails restricts the width. From here forward is fine, with well-placed inboard rails for security and good moulded non-slip on the coachroof top.

A deep foredeck hatch would take anchor and chain, though this is not fitted as standard for the Scandinavian market. Mooring is taken care of by substantial 12in (300mm) bollards forward, midships and aft, while 4in (100mm) rubber D-fendering all around the gunwale adds a welcome feeling of protection.

The flybridge is reached via a ladder from the cockpit. An exciting feature here that we have not seen before is the electrically-operated sliding hatch, which can be operated from above or below. This immediately removes the often dangerous possibility of the hatch crashing shut, and is both practical and safe.

Seating up here comprises two bucket seats at the helm and an L-shaped settee to port. The bucket seats are on a base that swivels through 90° for socialising when moored.

The helm position itself is a good one, with

well-placed controls and instruments, and three trays with perspex lids to provide stowage for items such as the VHF and that essential for all travellers in Scandinavia, the portable telephone. Another essential of outdoor life is also catered for, in the shape of a neat bottle stowage in a hinged recessed locker to starboard.

The single mast aft hinges down for low bridges, with the option of electrical operation.

## Handling and performance

In the marina, the 380 was a dream to manoeuvre. The engine controls are Volvo's own single-lever units which we have criticised before as being heavy and imprecise but, whether it was the MS5 gearboxes or just the way the controls were set up, all shifts were crisp and clean on this particular installation.

Out on the water at low speeds we tracked a straight course. Opening the throttles, the supercharged KAD42s pushed the 380 smartly onto the plane, as evidenced by the 0-20 knots acceleration time of 11.8sec, although the boat did climb to a comparatively high trim angle of 6° as it came over the hump, before settling down to a satisfactory 4½° running angle.

The trim tabs fitted are powerful, allowing the bow angle to be adjusted for different sea conditions or any lateral trim to be levelled up. The only time the hull was caught out was on the wake of the photo boat — always a difficult one, especially if the following boat is shorter than the lead one. Turning was easy, with no stalling and as tight a circle as you wanted.

Storebro's claimed top speed is 26 knots with these engines, and we hit it right on the button first time, with the indicated rpm figure some 100 down on the maximum, and with a 75% fuel load. Using estimated consumption figures, for the same engines on a similar boat, gives 23.3gph at full speed, making 1.12mpg and a range of 245 miles. Reducing your speed to 20 knots should improve these figures to 1.50mpg and 330 miles.

Noise levels were excellent. In the saloon they only reached 81dB(A) at maximum speed, 80dB(A) cruising, while even out in the cockpit they were never above 85dB(A). Underway, there was a complete absence of the infuriating exhaust fumes and spray which are so often sucked back into the cockpit and saloon.

## Conclusions

Every Royal Cruiser we have tested has impressed us with its build quality and attention to detail, and the two latest craft are no exception.

We walked around the factory and were struck, as we have been previously (see MBM Dec 90 p38), by its cleanliness and tidiness and by the positive attitude of everyone in the firm. There is no bickering between trades, just an ordered progression through the production process with everyone contributing to the final product. The fact that Storebro have now sold 170 craft to Japan, that most demanding of markets for quality goods, indicates the correctness and success of this policy.

Of course, under the water the new boats are a step into the future, and we would like the opportunity of a more testing trial to see how they make out. But on the evidence of our short run we would feel confident in their performance.

## Storebro

*There has been industry at the town of Storebro since 1728, when iron ore was found on the beds of the local lakes. First this was simply smelted, but later cast-iron artefacts including ploughs and household utensils were manufactured.*

*In the early years of this century, the Storebro company developed internal-combustion engines, both stationary (for driving sawmills and farm machinery) and for marine use. By World War Two, production had diversified into machine-tools and lathes.*

*After the War, refugees arrived from Estonia, escaping the Soviet occupation of their native lands. They took up work in the foundry and machine-shops, but in their spare time they carried on their original trade of fishing, and making fishing boats.*

*By this time the company had split into two, with a young former employee, Ivar Gustavsson, setting up in competition with the original firm. He recognised the skills of the Estonians, and also foresaw the increasing demand for pleasure boats as the economy started to recover. He therefore set up a division of his company to make wooden production motorboats.*

*The first of these were 16ft open boats powered by outboard motors, but gradually they increased in size, gaining cabins and inboard engines, and quickly acquiring a reputation for quality. Gradually the range expanded, firstly with the boats being built wholly in wood, latterly with GRP hulls but interiors still bearing the hallmarks of their forebears.*

*In a quirk of fate, close by the Storebro stand at the recent Stockholm Boat Show was a small display of wooden craft now in production in Estonia. Following the freeing of the Baltic states from the Soviet grip, this is a joint venture between a Swedish company and an Estonian one. And for the inspiration for one model in their range, where better to turn than the museum at Storebro (see Waterfront), which still houses the first boats built 45 years ago?*

*And so the wheel has turned full-circle.*