



Boat Report

# BIRCHWOOD 320 CHALLENGER

*A river version of the baby model in the range takes Birchwood back to their roots. We took a test on the River Trent at Nottingham.*

When Birchwood launched their Challenger range last year, their intention was to provide boats for first-time buyers, with the minimum of frills but all the equipment necessary to get afloat. They have no flybridges, removing the cost and complication of a second helm position, but their interiors are finished to the same standard as those of the rest of the fleet.

The latest model, the 320, is offered in two distinct versions: one for river and estuary cruising, the other for offshore work. The seagoing 320 is fitted with a pair of diesel outdrives, giving 30-knot performance, but the slower model has a single

diesel driving a conventional shaft and propeller, giving economical displacement speeds of up to 10-11 knots.

At the Nottingham Boat Show, we took the riverboat out for a trial to see how it meets its brief.

## Design

A tunnel is moulded into the hull, allowing the engine to be fitted well aft yet still maintain a shallow shaft angle and minimum draught, and giving protection to the sterngear. In addition, a galvanised steel keel is bolted onto the bottom of the boat, further

**The Challenger series has taken Birchwood into the age of curvaceous design, and nowhere is this more evident on the 320 than in the cockpit. The deck saloon layout is highly suitable for larger rivers, keeping air draught down, but inside there is still plenty of space.**







**Above: the galley is three steps down from the saloon and to starboard, with natural light from a translucent panel overhead, a good selection of appliances but limited storage space. Left: the toilet/shower compartment is of sensible proportions and serves both sleeping cabins. The toilet discharges to a holding tank as standard, but a sea outlet is an option.**



protecting the rudder and propeller, and giving greater directional stability for a boat travelling at river speeds.

The interior layout provides two well-separated double cabins, a shared bathroom with a door from each, and a wheelhouse/saloon. The settee here is not designed as another berth, but it would not be too difficult to achieve an occasional bed here. Outside, the deep cockpit is good for al-fresco dining or entertaining.

### Exterior

At the stern is a narrow bathing platform, partially integral with the hull. A good feature here is the all-round rubber fendering, just above water level, providing good protection against the inevitable knocks that will occur in restricted waters.

A walk-through transom door, set slightly to port, leads into the cockpit. Here there is curved seating to starboard with room for four or five people, and three storage lockers underneath, one of which takes a pair of 4.5kg gas bottles. To port is a matching curved cave locker, with a simple cut-out slot to allow you to drop ropes in.

A hatch in the cockpit sole allows you to reach the combined lazaret/engine room. A conventional sliding patio door to starboard gives access to the saloon, while two moulded steps port and starboard lead up to the side decks.

Climbing up here would be helped by a handrail, as the curved corner of the cabin offers no finger grip and the vertical rail by the sliding door is too far away. The boat also lacks an inboard rail on the wheelhouse side to grab when you are climbing



**Above: an attractive option for families will be the over-and-under berths as seen on our test boat, but a double is available as an alternative. Below: the Volvo Penta TMD31, with good space for servicing.**

aboard from the pontoon or riverbank, as again the smooth GRP moulding gives no purchase. There is a raised lip around the top of the wheelhouse, but this is not apparent until you are already on deck, and even then only if you are tall enough. Riverboats really should be designed for frequent boarding and stepping off, in potentially wet conditions.

Solid outboard guardrails provide security when moving forward, aided by a raised gunwale lip and by the inboard slope to the side of the wheelhouse. The side decks themselves are a good width aft, but taper from 12in (30cm) to 6in (15cm) forward, which could trip up the unwary. The good moulded non-slip continues over the coachroof, an important feature if you have to change sides quickly.

On the foredeck, a manual anchor windlass is partially recessed into the deck, handling a Bruce anchor on a stainless steel stem-fitting. The chain is stowed in a locker, but its tiny lid means you could not put anything else in here and might have difficulty reaching in to clear a jam.

A substantial split pulpit allows you to step safely onto the bank when approaching bow-on, important in shallow water because it allows you to keep the vulnerable sterngear safe. The 6in (150mm) aluminium bollards forward, midships and aft will just about take care of light mooring lines on the river, but would quickly become full if you used heavier ropes in more exposed conditions.

### Interior

The saloon is a bright, open space. The windows are large, and the side ones slide open, with further light and ventilation achieved by the two sliding GRP

sunroofs over the forward end of the saloon. These are a simple but excellent idea, giving you the pleasure of an open-air helm position in fine weather but quickly converting the wheelhouse to a snug compartment if rain sets in or the temperature falls.

To port is a four-to-five-seater settee which has locker space under the aft end only and whose forward end has an angular look. This is explained when you enter the mid-cabin below, and discover that this layout allows full headroom over a larger area than is normal with such an arrangement.

Opposite the settee is a sideboard, with three





storage lockers, and a cocktail locker.

Forward, up two steps, is a large, comfortable single helm seat facing a simple GRP console. The engine instruments are set in a walnut-veneered panel ahead of the wheel, while the single-lever engine control is located conveniently to the right. Six ready-use switches control wipers, washers, horn and navigation lights, and to the left is a combined log/echo-sounder. Ahead of the wheel, a shallow tray with a perspex lid will take maps and folded charts.

An optional but important extra is the TX bow-thruster, whose control is sited forward of the wheel to the right. Purists may argue that a good-sized rudder should give you all the manoeuvrability you require on the river, but there is no doubt that a bow-thruster gives that extra touch, particularly useful for shorthanded crews or less agile crews.

A compartment under the saloon sole to starboard provides a convenient location for the hot-water calorifier, batteries and freshwater pump.

Three steps lead down forward to the cabins and the galley.

The latter, located to starboard, is a good size but completely open to the lobby area at the foot of the stairs. Equipment consists of a four-burner gas hob, a large square sink, a built-in oven above the counter-top and a fridge underneath it. Three small lockers below and two above, together with a small cutlery drawer, comprise the limited storage space. A translucent panel overhead plus a small portlight outboard provide natural light, but there is no good view out for the chef — a pity on the river, where everyone wants to be able to watch the changing scene outside.

A door to port leads to the mid-cabin. The double berth here runs athwartships, under the saloon, but with up to 60% standing headroom, including over a reasonable area of the berth itself, courtesy of the angled settee above. A small dressing table and a hanging locker provide storage space, and light comes from another translucent panel in the overhead, plus a small portlight.

The forward cabin has two large over/under vee berths as standard, but can be supplied with a double as an option. The former arrangement provides extra storage space under the higher berth, to port, but it does mean a climb up to get into bed. Two further lockers under the starboard berth are unlined, going straight down to the hull. There is a full-height hanging locker to starboard and a small dressing table opposite, while headroom is 6ft 0in (1.83m) at the aft end of the compartment, tapering forward.

The shared WC is a good size, with a GRP moulding incorporating a nice moulded sink, a sensibly large shelf above and a small locker below. The extractor fan is a valuable item in a shared compartment. The toilet is a manual Brydon discharging into a holding tank for dockside pump-out; as an extra it can be arranged with a sea discharge too, for boats which will be venturing into estuaries.

## Engine

Power comes as standard from a choice of single inboard diesels, from a naturally-aspirated 59hp Volvo MD22, through a turbocharged 78hp TMD22 or 100hp TMD31B, to a 130hp Iveco SRM 8141. A sterndrive version of the 31B is also listed, for those who want to reduce their draught on occasions or

reach the propeller more easily, though in the latter case a weedhatch would seem a more obvious solution.

The engine is mounted under the aft end of the saloon, and reached via a large hatch in the cockpit sole. The after end of the space would provide useful stowage as a lazaret.

You get good access to most of the services, including the rudder stock, the inlet strainer, the stern gland and the automatic bilge pump. The latter is mounted in an expanded aluminium strainer box, a good feature found on all Birchwoods, reducing the risk of the pump or float-switch becoming fouled or jammed. We were also pleased to see the wire-reinforced outlet hoses both on this pump and on the manual back-up also located here. The fuel filter is mounted on the forward-bulkhead, which is a long crawl away.

Also in the engine compartment are the fuel tank, the stainless steel holding tank and an in-line rubber engine silencer. Plenty of PVC-faced foam insulation is applied to the overheads, forward bulkhead and tanks, and an automatic fire-extinguisher is mounted overhead.

## Handling and performance

Out on the river, the 320 behaves itself well. Its straight-line performance is excellent, thanks to the keel, while the large rudder means it turns tightly.

Manoeuvrability is also helped by the light, precise push-pull steering; hydraulic steering can be unresponsive, especially when you are always trimming your course at slow speeds to match changing river conditions, but with no second helm position it was not necessary here. Similarly, the single-station Morse engine control lets you slip easily in and out of gear, and control the revs precisely, without the drag of a changeover system.

The 100hp TMD31 fitted to our test boat gave more than enough power for river cruising, with speed in reserve for estuary or coastal use. An easy cruise was with the engine very lightly loaded at 1750rpm, which gave an indicated 4.7 knots (5.4mph) on our calibrated trailing log and noise levels of a pleasant 62dB(A) in the saloon and 71dB(A) in the cockpit.

Pushing up though the revs, 2000rpm gave 5.4 knots (6.2mph), 2500rpm gave 6.8 knots (7.8mph), and 3000rpm 7.6 knots (8.7mph). We estimate the maximum 3800rpm would give around 10 knots (11.5mph), although the noise and vibration would probably make you reluctant to maintain this for any prolonged period of time.

Coming alongside, the precise controls and steering alone make life easy enough, but the powerful bow-thruster provide added security and peace of mind, and comes into its own in windy conditions.

## Conclusions

Birchwood's latest Challenger achieves all it sets out to do, providing a simple but effective accommodation layout and a good standard of finish — no frills, but good value.

In some areas the compromise between modern rounded styling (with a design that is also meant to appeal to the offshore fraternity) and the need for quick and easy boarding has not quite hit the mark, but these could be adjusted on later boats. The power package certainly works at river speeds. □

## Birchwood 320 Challenger

**Loa** 32ft 10in (10.02m).

**Beam** 12ft 3in (3.74m).

**Draught** 3ft 5in (1.04m).

**Displacement** 6 tonnes.

**Air draught** 11ft 0in (3.35m).

**Fuel capacity** 144gal (655lt).

**Water capacity** 61gal (275lt).

**Price** from £65,748 ex VAT

with 59hp Volvo MD22A;

£69,872 ex VAT with 100hp

Volvo TMD31B.

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