

# Grand Designs

Previously in Grand Designs... Andrew Wolstenholme introduced the Bristol 22 and Bristol 27 break-deck launches. Now there are not one but two additions to the Star Yachts range.

Just as the interest in the 23' (7m) Bristol 22 – see W82 – led to an order for the 27'3" (8.3m) Bristol 27 – see W86 – it seems interest in the larger craft has brought an order for Win Cnoops at his Star Yachts yard in Bristol for an even larger 29-footer – and a 16' (4.9m) little sister.

The new client was drawn to the 27 but wanted something capable of 18-20 knots, possibly twin screw, with a wheel shelter and with a little more flare to the topsides forward and as straight a stem as possible. As the preliminary design evolved we decided to increase the length to 29' (8.8m) to give a larger cockpit, which would also help the overall proportions as the wheel shelter had the effect of making the aft end of the boat look a little short. The design fell into place fairly quickly although numerous variations were tried before we were happy with the styling of the wheel shelter.

The 18-20 knot target speed is modest by modern powerboat standards and will need around 120-140hp to achieve it on this slender launch. With ever-rising fuel costs, there has been a move in recent years towards high powered single engine installations in semi-displacement cruisers which owners are happy to cruise most of the time at up to 12 knots but would like the capability of running at up to 20 knots. The limiting factor with these boats is being able to swing a large enough prop to absorb the power and they generally top out at about 450 hp. Doubling that power with a twin installation will take the speed up to close on 30 knots.

The Bristol 29 should have no problem delivering its 130hp through a single prop but there are other benefits from a twin installation. If he had decided to go for a single engine, the client would have also wanted an emergency outboard engine but this would take up space to stow and introduce the safety issue of petrol storage and the complications that this involves. And the single engine in the middle of the cockpit takes up valuable people space. Twin screw will be more expensive with two engines, two sets of sterngear and twice the labour for installation but on the plus side, we can use the cockpit space more effectively, we don't need the reserve outboard motor and we get improved manoeuvrability.

Once speeds rises above the low teens spray and topside wetness start to become issues; a round bilge smooth-skinned hull can become very wet, particularly in a breeze. So where the 27 has a conventional round bilge hull, on the 29 I have added a chine flat which runs the length of the boat. This serves as a spray deflector forward, defines the lifting surface aft and stops water creeping up the side of the hull increasing

drag. It also helps generate dynamic stability to reduce rolling. Aesthetically the chine gives a slightly more modern look – more retro than traditional – and I feel is a positive addition.

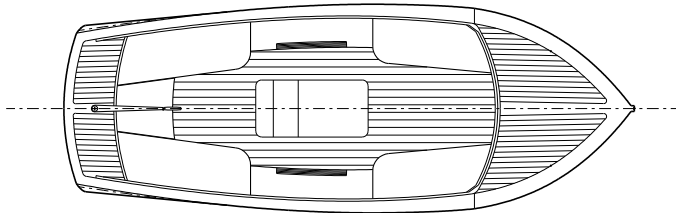
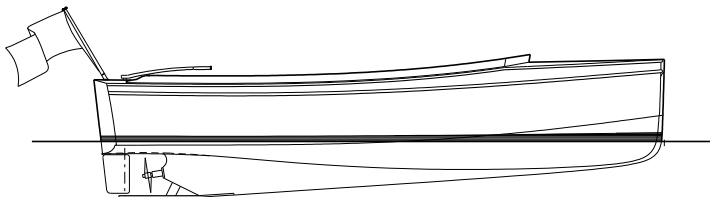
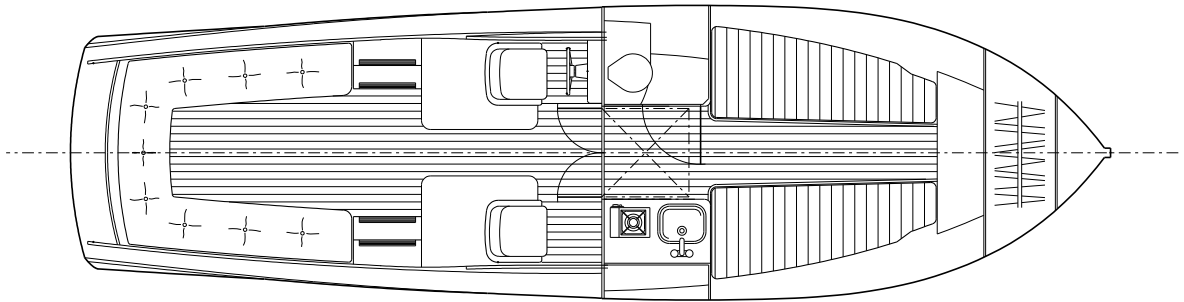
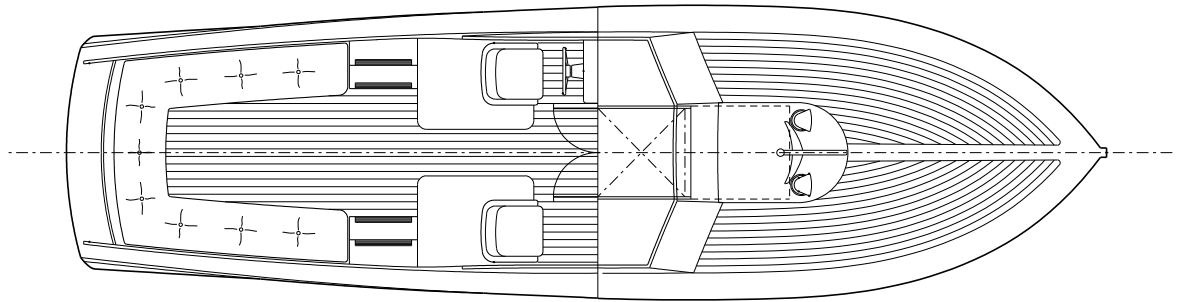
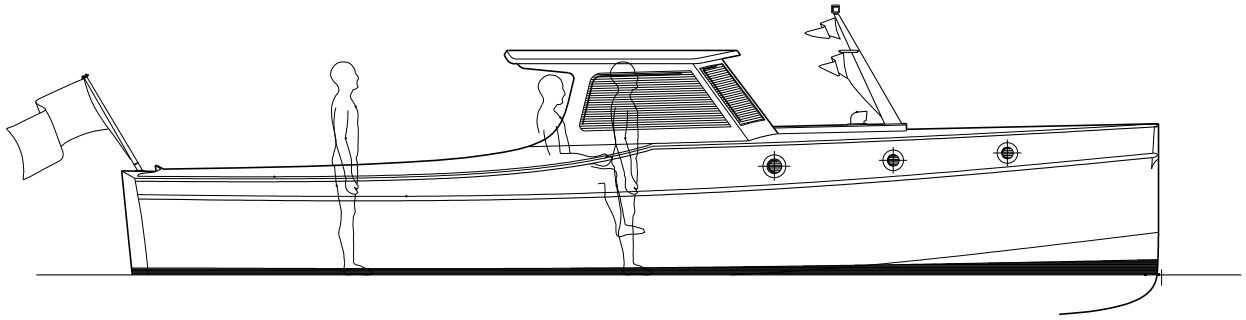
The cabin length is the same as the 27 but the layout has been changed to bring the toilet compartment aft and put a hanging locker forward. In the interest of aesthetics, headroom is limited but is perfectly acceptable and gives a cosy feel to the cabin; standing headroom can be achieved at the galley with the sliding hatch open. On other designs of this type, like my Duchy 27, wheel shelters are often long enough to enclose the helmsman – and could be here – but the client requested a roof over the helm with the sides open to keep him in the fresh air. The resulting short side windows made the styling more challenging and there is the potential for the aft pillar to be a blind spot but overall I think it will work well.

It isn't often that the opportunity comes along to design a matching pair of launches and certainly it's a first for me. The 29 was the more critical boat to design and it was logical to resolve that one first, then design the 16' (4.9m) launch to match. The result is a hull with a much more subtle stepped sheer and the distinctive spray chine. There was no requirement for higher speed for the small launch but with the smallest diesel engines delivering significantly more power than would be needed for displacement speed, adopting the chine flat of the 29 would still be beneficial, preventing the 16 from squatting and allowing her to run at around 7-8 knots with a 10hp Nanni twin cylinder engine.

To avoid increasing draft, single screw motor boats often use a shallow tunnel in the hull bottom to provide room for the prop. This is easily done on a GRP hull but is a complication when building in timber, so on this boat I have incorporated a gentle indent in the bottom which is simpler to build and results in a draft to DWL of 1'7" (0.48m). The cockpit layout is simple and practical, with the twin seats forward allowing access to the forepeak through a hatch in the bulkhead. Steering is by tiller to a bottom mounted rudder leaving the gently curved transom clear.

Both boats will be strip planked and glass-epoxy sheathed, their painted hulls set off with varnished trim. The 16 will be launched this summer and building the 29 will begin in the autumn for launch in 2015.

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**BRISTOL 29 PROJECTED SPECIFICATION**  
 LOA = 29'4" (8.94m)  
 LWL = 28'11" (8.81m)  
 Beam = 8'4" (2.53m)  
 Draft to DWL = 2'1" (0.64m)

**BRISTOL 16 SPECIFICATION**  
 LOA = 16'1" (4.905m)  
 LWL = 15'10" (4.816m)  
 Beam = 5'11" (1.793m)  
 Draft to DWL = 1'7" (0.480m)