

HOLDING POWER

A RANGE OF NEW ANCHOR DESIGNS HAVE APPEARED OVER TIME. JONATHAN NEEVES REVIEWS THE BEST



There is no perfect anchor, suitable for all seabeds, that fits all bow rollers and meets all budgets. Acknowledging this limitation of any anchor design is an essential part of seamanship.

When embarking on a longer-term cruise to areas with unknown anchorages and taxing weather, it is wise to take a portfolio of anchors. Each one, by itself, should be of a size to be the main bower anchor, but each should be of a different design, allowing you to plug the weakness of one style with the strength of another.

'Most acknowledge newer designs are more reliable'

In this article I list most of the anchors available in the UK. Almost all of these anchors work well or reasonably well in softer sands and firmer muds. Most people acknowledge that the newer designs are more reliable, set more quickly and hold more tenaciously than the older models, but don't forget these older styles are still in use (with happy owners).

My recommended portfolio would

include the Spade as my main anchor (a Rocna or Supreme would also work), a Fortress and either a Delta or Kobra, and a complete spare rode: a chain/nylon combination.

BUYING CHECKLIST

- ▶ Does it fit your bow roller, especially with long-shanked or roll-bar anchors?
- ▶ What types of seabed are you likely to encounter in your cruising plans?
- ▶ Does the anchor's engineering match the quality of the design?

REVIEWS

ROLL BAR, CONCAVE ANCHORS Peter Bruce of the Bruce anchor invented the roll bar in 1970, but never actually used it in any of his commercial designs. The roll bar allows the anchor to self-right without the need for weight in the toe, thus allowing a better fluke area-to-weight ratio (and fluke area is related to holding capacity). Once the anchor has started to dive into the seabed the roll bar becomes an impediment – slightly offsetting the higher fluke area-to-weight ratio.



Manson Supreme (20kg)

A concave, roll-bar, unballasted anchor with a sharp toe, available in stainless and galvanised steel. The fluke is made from layers of welded rolled steel and the shank is almost bulletproof, being made from 800 MPa (millions of pascals) high tensile steel. The shank has a slot for quick retrieval and a separate shackle hole. The anchor has built a very good reputation since its introduction around 2005. It does well in most anchor tests held in sand. It is self-launching and sets easily and quickly in its own shank length. Can be defeated by even medium weed, as the fluke/roll bar can clog. The very sharp toe ensures the anchor will set in hard seabeds. In a slow change of wind direction the anchor will rotate. In heavy clay and weed, it might drag until the fluke is washed free of any clogging. It is endorsed by Lloyd's as a super- high-holding-power anchor.

HOLDING

Thick mud, sand and clay	★★★★★
Thin mud	★★★★★
Weed	★★★★★
Ease of use	★★★★★

► Price: £471

► www.mansonmarine.co.nz

Knox Anchor (18kg) ➔

A new anchor from Professor Knox of Edinburgh. It looks like a welded,

concave, fluke anchor with a roll bar. There has been very little user feedback and ST has not yet tested one, but what feedback there is has been positive. If the manufacturer's claims are correct, it is an excellent product. Very well engineered and constructed and, unlike other roll-bar anchors, it apparently has no need for a thicker plate in the toe, which gives it a high surface-area-to-weight ratio. The shank is built from 900 MPa steel. There may be issues in fitting this anchor to some bow rollers.

HOLDING

Thick mud, sand and clay	★★★★★
Thin mud	No data
Weed	No data
Ease of use	★★★★★

► Price: £448

► www.knoxanchors.com

Rocna (20kg)

Similar in performance to a Supreme, this is a concave roll-bar anchor with a weighted, strengthened, sharp toe. Historic problems with steel quality have been totally overcome by new owner CMP. There is a suggestion that roll-bar anchors that depend on a hard substrate to support the roll bar may not self-right in softer seabeds. There are worrying user comments surfacing that on the few occasions these anchors need to somersault – for



example in a change of tide, or a rapid change of wind direction – the fluke might clog and not re-set properly.

HOLDING

Thick mud, sand and clay	★★★★★
Thin mud	★★★★★
Weed	★★★★★
Ease of use	★★★★★

► Price: £490

► www.rocna.com



Mantus (29.5kg)

An excellent and simple design with performance spoilt only by some poor engineering. A demountable, galvanised steel, concave, roll-bar anchor. The shank is quite thin.

HOLDING

Thick mud, sand and clay	★★★★★
Thin mud	★★★★★
Weed	★★★★★
Ease of use	★★★★★

► Price: c£420

► www.mantusanchors.com

CONCAVE, WEIGHTED TOE The Spade was a revolutionary anchor design in the early 1990s that combined a shallow concave fluke with a weighted toe. Often expensive, with complex designs, such as a hollow shank and multitude of components, these anchors are good in sand but also perform well in light-to-medium weed, where the weighted toe aids seabed penetration, as well as in seabeds with loose rocks and stones.

TOP FOR PERFORMANCE



Spade S100 (20kg)

Arguably the first of the new higher-performance anchors, introduced in the early 1990s. Although expensive, the anchor has an enviable reputation, consistently performing at or near the top in most anchor tests conducted. It performs in a very broad cross section of seabeds from thicker muds and sand and into medium-density weed. It is not so good in thin muds. Produced in galvanised steel, stainless steel or alloy with a demountable, hollow shank. The anchor has a ballasted fluke and the upper surface of the fluke is slightly concave (but does not collect mud). The anchor will fit on most bow rollers, is self-launching and will set in its own shank length. Once properly set the anchor will rotate with slow wind shifts and quickly reset.

HOLDING

Thick mud, sand and clay	★★★★★
Thin mud	★★★★★
Weed	★★★★★
Ease of use	★★★★★

► Price: £569

► www.spade-anchor.com

► www.bluewatersupplies.com

Ultra (21kg)

Very similar in design to the Spade and Vulcan but only available in stainless steel. Has a characteristic hollow shank that is said to engender self-righting. Our tests and users' comments are very positive and one of the best

(excepting articulated fluke anchors) in thin mud. Works very well in most seabeds. It will fit virtually any bow roller, but is a more expensive option.

HOLDING

Thick mud, sand and clay	★★★★★
Thin mud	★★★★★
Weed	★★★★★
Ease of use	★★★★★

► Price: £1,473

► www.ultramarine.com



Vulcan (20kg)

A new model from the Rocna camp and looking very like a Spade or Ultra. The model is simply too new to pass comment but it looks very interesting – watch this space.

► Price: £450

► www.rocna.com

Manson Boss (20kg)

A very new anchor from Manson. Looking like an updated version of the original Bruce, this anchor is a concave anchor with a thin, high-tensile shank. The shank is slotted to allow quick retrieval (though the slot can be locked off). The anchor is self-righting without a roll bar. Its very large surface area might look ungainly on some bow rollers. Few independent tests have been conducted and user reports are ambivalent and anecdotal.

HOLDING

Thick mud, sand and clay	★★★★★
Thin mud	★★★★★
Weed	N/A
Ease of use	N/A

► Price: £523

► www.mansonmarine.co.nz



HOW AN ANCHOR SETS

Once an anchor is deployed and slight tension is applied – enough to pull the anchor into the direction of set – most anchors will be lying on their side with one fluke edge, the anchor toe and shackle end of the shank on the seabed.

As the load is applied, the toe will engage with the seabed and start to dive, pulling the shackle end of the shank down with it. As the anchor dives it straightens up, the flukes usually become parallel with the seabed.

A well-set anchor is one you cannot see – it has completely disappeared, dragging some of the chain with it. An adequately-set anchor might still show some of the shank and roll bar, if it has one, clear of the seabed.

Once an anchor starts to dive then the swivel, the chain itself and even the roll bar are all hindrances to the anchor setting. This is less of an issue in clean sand – but in heavy clays, firm sand and weedy anchorages, an anchor designed with thin shanks and no swivel will dive better.

FLUKE ANCHORS Made by reputable suppliers, these anchors have very high fluke area-to-weight ratios, which is reflected in their holding capacities. They stand head and shoulders above other anchors in mud and sand but can be defeated in anchorages with loose stones (or loose coral) and medium weed. They can be very difficult to stow on a conventional bow roller.



Danforth HT (9kg)

An enduring design, introduced in 1939, and still a very acceptable product. The anchor has a strong reputation in America and develops exceptional hold in sand, clay and mud. It is defeated by medium-to-thick weed, unless in very large sizes (beyond those of a leisure yacht). These articulated fluke anchors can be difficult to stow and the stock can be a menace to sail-handling – which accounts for their lack of popularity on sailing yachts. However they store flat, or flattish, in a locker. West Marine in America suggested a 9kg size for a 45ft yacht, which seems a bit small to us.

HOLDING

Thick mud, sand and clay ★★★★★

Thin mud	★★★★★
Weed	★★★★★
Ease of use	★★★★★
► Price: c£184 (US\$280)	
► www.danforthanchors.com	

Fortress FX-23 (6.8kg)

An alloy articulated fluke anchor with sharpened flukes and streamlined shank. Unbeatable in sand and mud on a weight-to-holding-power basis. This is the only anchor to offer any reliability in thin mud. Its nemesis is medium to heavy weed and rocky or pebbly seabeds. Fortress anchors are difficult to fit on a bow roller and the stock seems designed to catch any loose sheets. But the anchor is completely demountable and packs easily, though I prefer to store them ready to use in a locker or attached to the transom. They are light and easy to carry up the side deck or deploy from a dinghy – I would not leave home without one.

HOLDING

Thick mud, sand and clay ★★★★★

Thin mud N/A

Weed, pebbles and rocks ★★★★★

Ease of use ★★★★★

► Price: £474

► www.fortressanchors.com



Manson Racer (10.5kg)

A welded, alloy, articulated fluke type anchor developed to meet the needs of racing yachts. There are no test reports nor user comments. The anchor might make a useful kedge.

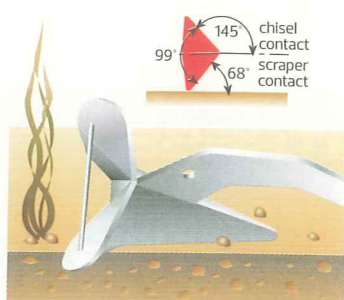
► www.mansonmarine.co.nz

Bügel (25kg)

Much like a welded fluke anchor with a roll bar but its thick fluke does not enhance setting. A very simple design but now very much dated and overtaken by better, newer models. Expensive for what it is. Very popular in



ENGAGING WITH THE SEABED



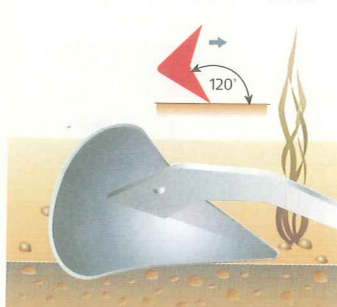
DELTA

Convex flukes have a relatively steep angle of attack to the seabed



DANFORTH

The articulated stock gives the flat flukes a very shallow angle of attack



SPADE

Concave-type anchors rely on the same effect as a chisel blade to dig into the seabed



BÜGEL

With sharp-toed anchors, the 'chisel' comparison is even clearer

WHAT CHAIN?

Chain is now designated by the strength of the wire (in MPa) from which the chain is manufactured: G30 (or G3), G40 (or G4) and G70 (or G7). Chain failure is very uncommon and G30 chain is more than adequate for yachts.

Much chain is marked by the manufacturer with its own simple but unique marking, but most Chinese chain is unmarked – so ask for a test certificate for the batch you want to buy. It should be proof-tested to twice its working load limit and each batch (which might be as long as 1,000m) should be break-tested.

The standard of galvanising also determines the life of your chain and galvanising thickness is the easiest measure. Based on our tests the best and most consistent galvanising comes from America.

There are two metric standards for chain size – ISO and DIN. Both are effectively identical, except for 10mm chain where there is a difference in link size of 2mm, so an ISO 10mm will not fit a DIN 10mm gypsy.

You should only use a rated shackle to connect chain to anchor. If the shackle is not rated it could be much weaker than the chain. In any event the shackle should have a working load limit greater than that of your chain.

the eastern Mediterranean, possibly because they are made cheaply locally.

HOLDING

Thick mud, sand and clay ★★★★★

Thin mud N/A

Weed, pebbles ★★★★★

Ease of use ★★★★★

► Price: £505

► www.swi-tec.com

Brittany (20kg)

A popular articulated fluke anchor from Plastimo, particularly popular in France and Italy (less so in



Britain). Brittany anchors are however difficult to stow on the bow roller of most yachts and the model offers no advantage (other than being very cheap) over a Fortress or Danforth. Good in sand and thick mud.

HOLDING

Thick mud, sand and clay ★★★★★

Thin mud N/A

Weed ★★★★★

Ease of use ★★★★★

► Price: £134

► www.plastimo.com



FISHERMAN-STYLE ANCHORS

These anchors are well known for adorning pubs and yacht club forecourts. Centuries old in design – but they are the only anchor to penetrate thick weed and kelp and to perform in rocky anchorages.

These anchors tend to be heavy and expensive. For a 45ft yacht, as big as you can handle is the recommendation (as you are very unlikely to stow on a bow roller).

You are likely to carry this design of anchor only if you are to spend considerable time in areas of kelp and rock, such as Patagonia, Greenland or some parts of Scotland.

HOLDING

Thick mud, sand and clay ★★★★★

Thin mud ★★★★★

Weed and rock ★★★★★

Ease of use ★★★★★

► Price: c£110

► www.gaelforcemarine.co.uk

GO FURTHER

SAIL BETTER

BE INSPIRED

LEFT
WANTING
MORE?

