



Code words

What exactly are those mysteriously named Code sails and how can they benefit cruising yachts? Andy Schell investigates

The ideal sailing vessel needs clouds of sails in light airs,' wrote Hal Roth, the American cruising pioneer. In various yachts called *Whisper*, Roth and his wife Margaret sailed hundreds of thousands of miles, from Cape Horn to Alaska, Japan into the Mediterranean.

"If you don't put up lots of sails, you'll never get anywhere," he added. "When you sail in feather-strength winds you need big, tall, light sails." Whether you call those sails genoas, ghosters, spinnakers, drifters, asymmetric or gennakers is not important. Nowadays the options include so-called Code sails. But what exactly are they and how would they fit into Roth's dictum?

The Code sail trend officially began in the 1997-98 Whitbread Round the World Race, when the team of EF Language unveiled their now-infamous 'Code 0' and went on to win. Unofficially, the Code 0 debuted several years earlier during the 1993-94 Whitbread.

Magnus Olsson sailed onboard *Intrum Justitia*, then one of the new fleet of Volvo 60s. "I was part of inventing the Code 0," Olsson says. "The Volvo 60s didn't have enough sail area in light air. We realised that



▲ **Top: cruising with a Code 0 – the bar-tight halyard is critical for proper furling. Above: author Andy Schell**

if you used a spinnaker and made it really really flat, you could perhaps have a headsail that was measured as a spinnaker."

The Whitbread penalised oversized genoas. So, to get around the rule, Olsson and his team designed a sail that would act like a big genoa but measure as a spinnaker. The sail worked, but sailcloth technology needed to evolve before the sail could be a weapon under the Whitbread/Volvo rule.

That took four years. By the '97-'98 Whitbread, sailmakers could produce the lightweight non-stretch cloth needed to make a sail that would be stable enough upwind to be effective. Olsson says: "We tried to keep it secret, but in the end of that race, everybody had a Code 0."

Who are these sails for?

Code sails were previously known as asymmetric spinnakers. Olsson says that before the Code 0, the crew on *EF* developed a system that numbered sails A1, A2, A3, up to A6. Even numbers denoted running sails, odd numbers reaching sails, and the increase in number corresponded to an increase in true windspeed. So, a higher number described a smaller heavier sail. The code system was just a shorthand.

"Then we started to develop this so-called spinnaker that you could go upwind with," Olsson says. "We couldn't change all the numbers on the sails, so we had to call it 'Code 0!'"

But the Code 0 is an asymmetric by rule only; to be a spinnaker the sail must have a

mid-girth measurement at least 75 per cent of the foot length. It's really a very big, very flat upwind sail – very different to the A sails.

The two most useful Code sails for cruising boats are the Code 0 and the A2 – the former for going upwind in light air, the latter for going down. Evans Starzinger, a vastly experienced cruiser who built his own 47ft aluminum Van de Stadt sloop, *Hawk*, says it's not the cruising ground that determines the usefulness of Code sails. "I would suggest that the boat and its rig are the determinant rather than the type of sailing," he says. "A boat that has a fractional rig with a small jib [105 per cent] but also masthead spinnaker halyards is ideal."

The increase in sail area from the small jib to a Code sail is significant.

Both Olsson and Starzinger agree that if they could only have one Code sail aboard, it would be a Code 0: "It can be used in any of the applications, good enough for cruising purposes," Starzinger explains.

Dedicated cruisers can have a cruising Code 0 custom-cut for their boat. The mid-girth of the sail would be reduced to around 60 per cent of the foot-length, so the sail would look more like a vast genoa than a small spinnaker. It would set better, be more stable and make the boat sail faster.

"We have a cruising Code 0 on *Hawk* plus an A2 running chute," Starzinger says. He believes the latter is the only other Code sail a cruiser needs "but the zero is the most versatile of these sails," he adds. The rest in the series cover too narrow a wind-band.

It's possible to set a Code 0 from a pole downwind or use it free-flying with a poled-out genoa for running goosewinged. Similarly, although an A2 is designed to be tacked down on a bowsprit or forward of the headstay, can also be flown on a pole.

Who are Code sails not for?

Any cruiser who fires up the engine as soon as the wind drops below 10-12 knots is less likely to benefit from Code sails, upwind or down. Starzinger adds: "If you have a big jib, say 140 per cent or bigger, the incremental gain to the Code sail is going to be smaller."

And those sailors with big genoas may not need bother as some boats can reach at a decent pace with their white sails in just a little apparent wind; my wife and I skipped a Saga 43 in this year's ARC Europe rally and sailed with a large genoa and non-overlapping jib on an inner forestay when a lot of the fleet was motoring.

The boat is to sail westabout in this year's ARC and the owner has added a symmetric spinnaker for the downwind run in the Trades. The Saga would receive little benefit with a Code 0. She might ship both if budget was not a factor, but the owner is satisfied to reach a little slower with his genoa and keep some money in the bank.

Solutions for sail-handling

Though they can both be set and doused on a furler or with a sock, there's a big difference between handling a Code 0 and an A2. "To be able to have the Code 0 flat, you have to make it in a material that doesn't stretch, so it gets very bulky," Magnus Olsson explains. "You have to be able to furl it or you cannot handle it."

A bar-tight luff is imperative for a Code 0 to set properly. But for any Code sail to furl properly, halyard tension is paramount.

Marc Elbet, owner of Ovni 445 *Hanami II* uses a Karver KF2 continuous line furler to handle his 'gennaker' – a mash-up of genoa and spinnaker that is a modified cruising Code 0. "Furling it when the wind starts to increase can be challenging due to the size of the sail and the pull it generates," he says. Starzinger also recommends fitting big gear to get the sail furled in a squall and says that the furler for his 47-footer is sized for a Vendée Globe 60-footer.

"The continuous line on *Hanami II* is operated with a rock-climbing blocking handle," Elbet continues, an ingenious trick that helps him furl the sail in control when the wind gets up. "The handle, which can slide one way on the rope, but not the other, helps pulling in or slowing down the line."

Pitfalls – and how to avoid them

"Halyard chafe is a big problem with many set-ups, either where the halyard enters the mast or across the headstay on one tack," Starzinger says. Fractional rigs have less



▲ **Above: the Colligo continuous-line furling gear for a Code 0 on Schell's Arcturus; note its position forward of the headstay. Left: the masthead spin halyard is clipped to the upper swivel on the Colligo Code 0 furling gear, though do not let the spin halyard and block touch the headstay as here**

trouble with chafe because the headstay is far below the masthead spinnaker halyard. However, the topmast must be fully supported athwartships and with a properly sized backstay to take the halyard loads. "The topmast cannot move around in the waves – that's scary," Olsson says.

Both Elbet and Starzinger recommend lowering the sail when it's not in use. Elbet says: "If the genaker is not used for a long period of sailing we put it down as there is no UV protection and the sail could unfurl with strong winds."

Starzinger stores his Code sail in a bag on deck when he expects a lot of light airs, otherwise it remains in the sail locker.

Cost versus benefit

For Olsson the Code 0 is a no-brainer. "Let's say it's only blowing six to eight knots and you think, 'Forget this, I'll turn the engine on,'" he says. "Then you put out this Code 0 that might be twice as big as your genoa and suddenly you don't need to turn on the engine after all because now you're moving very nicely."

It's a comment that captures who will benefit most from a Code sail. They are for the sailor who wants to sail as much as possible and to ghost along in a zephyr. Code sails offer the reward of making miles quietly, without engine.

Captain, rigger and sailing journalist Andy Schell has sailed three times across the Atlantic, twice in his classic yawl Arcturus. He lives in Sweden and the US. andyandmia.net



▲ **Above: Magnus Olsson helped pioneer the Code 0 during the 1997-98 Whitbread race**

TOP TIPS FOR CODE SAILS

- ▶ Have a sailmaker make a cruising Code 0 by reducing its mid-girth.
- ▶ On fractional boats, ensure that the topmast can support the luff tension required for a Code 0. On masthead boats, make sure the spinnaker cranes are far enough forward to make room for the swivel on the furling gear.
- ▶ Racing Code 0 sailcloths are expensive; some cruising cloths are too heavy.
- ▶ Keep constant tension on the furling line – run the aft end through a snatch block with a lashing on it to take up tension.
- ▶ Experiment with using a 2:1 purchase on the halyard to get proper tension.

SAILING DEAD DOWNWIND

Here's a word of caution about longer passages downwind. For most cruising boats, the quickest way to travel from point A to point B remains a straight line – don't get swept up in sailing gybing angles just because that's what the pros do.

"On a boat like [Baltic 60] *Triumph* that is so heavy, it doesn't pay to come up 20° or 30° from dead downwind," Magnus Olsson explains. "If you sail a Volvo 70 the right way around the world, based on the VPPs [Velocity Prediction Programmes], you go so fast you're apparent wind angle will always be 90°. That's so different to cruising, where it does not pay [to sail gybing angles] because you don't go faster. On a cruising boat in 20 knots of wind, if you want to go fast, you VMG downwind and go very close to dead downwind."

But Code sails can be useful even then. Remember that an A2 sail, though designed for broad reaching, can be set on a pole and sailed dead downwind. Likewise a Code 0.

“Don't get swept up in sailing gybing angles downwind because the pros do it”