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Matching the demands and the solutions for winched control of loaded lines onboard any sailboat present a challenge to find the perfect fit. For any boat over 25ft in length you need the speed, power and geared mechanical advantage that only a winch can provide, but this comes at a cost: weight, reliability, maintenance, physical footprint, installation hassle and price of the unit itself can be mitigating factors in selecting the right winch for the job...



And even when all other requirements are right in the selection, there will be circumstances when you need both speed and power from the same device. Achieving both efficiently is another significant challenge, because the more gears needed to meet the speed and power requirements, the more the size, weight, complication and operating difficulty of the winch.

Without resorting to electric or hydraulic power sources, Pontos has devised a new twist on this age-old conundrum by introducing a product line of new four-speed winches that offer a geared solution to balancing line speed with power in a manually operated device.

Called the Grinder and the Trimmer, these devices offer a clutched method to allow the operator to automatically change the gearing based purely on the loads on the line, similar in manner to how the gearing in an automobile transmission will change when the load changes on the car. This represents an ideal solution for when there are limited crew, cockpit space and resources to invest in multiple winches or a pedestal-driven system. With three sizes available, Pontos offers a perfect solution for boats 30-45ft in length, the most popular size range in recreational sailing.

The secret to the success of the Pontos design is in the inner clutch mechanism that activates a second range of gears when the line is loaded, thus offering four speeds rather than just two. For high-speed applications on raceboats, the Grinder offers stunningly fast line recovery speeds: putting an effort of only 16kg into the winch handle in the first of the two high-speed gears sheets in 70cm of line with each turn of the winch handle. Once the slack is in and the line starts to load, the Grinder moves automatically up into the standard third and fourth gears to complete the operation.

The choreography of the typical tacking manoeuvre, for example, is now made much easier and more efficient with the Grinder, especially for the shorthanded crew, because it is no longer necessary to sheet in by hand, load the tail into the self-tailer and then activate the geared power of the winch. Now you can anticipate the tack by pre-loading the self-tailer and win back those critical seconds when the sheet is starting to load but the sail is not yet trimmed in place.

Achieving this efficiency in tacking with a conventional winch requires countless hours of practising with a skilled team of two or more on the task... with the Grinder this can be achieved by one person after a few turns.

The Grinder can also be a great solution for use in halyards where initial speed is important in raising the sail, followed by high loads when making fine adjustments in the trim.

For scenarios where speed in line recovery is not as important as having less load on the handle in top gear, the Trimmer is again an excellent solution. Whereas ordinary twospeed winches necessitate an effort of 16kg on the handle, the Trimmer was developed by Pontos to function with an effort of only 8kg. Tests have shown that while an average man can develop a force of 16kg momentarily, he usually cannot, unless he is highly trained, maintain that effort for the full 30 seconds or so required to complete a manoeuvre.

In these scenarios some resort to electric drives, with their added weight, complication and expense, but with the Trimmer there is no longer any need to resort to this to get more comfort. Halving the winch handle load now allows a greater variety of crew to join in the manoeuvre, making the activity more accessible to family, friends and others who are not highly trained in sailing.

Sailors are the best salesmen for innovation, and here is what Loïck Peyron has said about the Pontos winches on his own 39ft Walter Greenedesign trimaran Happy:

'Pontos has reinvented winch technology, working on new ideas in areas that we thought were definitive, but never quite are. Pontos has come up with a real innovation. We have the same philosophy when working for the America's Cup. The main principles in winch design have been established over the years, thanks to the America's Cup, and I believe Pontos has gone one step further, bringing simplicity and ease of use, corresponding exactly to the size and specificity of my multihull.

'My idea of a simple and easy deck layout true to Happy's early design matches perfectly the Pontos philosophy. I like to try new things. And a four-speed winch without extra buttons sounded exciting. In the America's Cup we spend an enormous amount of time searching for maximum efficiency. Pontos, with its Grinder or Trimmer model, brings us some very well thought out simplicity. It does take a little time to adapt to it, but the principle works beautifully. I could have chosen any type of winch, but on Happy Pontos is providing me with a simpler, easier, more streamlined boat. All the people who've sailed with me so far just love Pontos.

'I think it's fantastic that Darryl Spurling and Michel Chenon have had the courage to bring change to this niche. They've made a revolution in the village. Their approach is intelligent and very well thought out. I like their way of thinking...'

And Peyron is not the only fan: nearly 20 per cent of the Class40s and Rhum Class of the 2014 Route du Rhum chose to upgrade to Pontos winches. The 'revolution in the village' is spreading fast...



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