

KEVO'S BOATING TIPS & MORE

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Anchor Windlass Systems

"Never again." That's what I said the last time someone asked me to manually yank a big anchor with a chain rode out of the mud. I remember the day vividly: We were anchored on the lee of Angel Island on my friend's 34-ft. sailboat drinking fine wine and eating expensive cheese. (OK, OK, I was drinking beer and eating chips.) It was a perfect day on the Bay. Next thing I know I'm on all fours on the foredeck wincing in serious (back) pain.

Now my wife Susan (the Admiral) would say I was a dumb ass for even attempting this stunt after having had three serious back surgeries and a titanium brace screwed into my neck. But hey, I'm a guy, what do you expect! (The Admiral was right, of course.)

Even if the anchor wasn't stuck in the mud, the weight of the chain rode and anchor was unbelievable. Unfortunately, the small motor on the sailboat could not help us free the anchor. Also, the tide had gone out and the depth of the keel prevented us from breaking the anchor by driving forward over the anchor toward land. (Shame on us.)

Electric Windlasses

An anchor windlass is a winch system, which helps to raise and lower the anchor. They come in four basic varieties: manual/vertical axis, manual/horizontal axis, electric/horizontal axis and electric/vertical axis. In my opinion, a manual windlass is about as useful as the cars they had on "The Flintstones." So, let's cut to the chase and talk about electric windlasses.

First off, they are not cheap. You can expect to pay between \$1,500 and \$3,000 for the purchase and (professional) installation of a quality windlass system. Having said this, I can assure you that installing a windlass on your vessel (if appropriate) will be one of the best investments you will ever make in your boat. You will have more confidence, peace of mind, expand your boating experience, be less likely to injure your back, hands and feet, and be safer on the water.

Windlass systems use 1/2- to 2-hp electric motors to help weigh anchor. They can raise and lower an anchor at between 35 and 100 feet per minute and can exert a pull of several thousand pounds on your anchor rode. Let me stop right here and give you the best tip in this column: The fact that a windlass can exert several thousand pounds of force on the rode means that if you don't turn it off when pulling up the anchor to the bow roller/cage, you risk the possibility that it will rip the anchor right through the bow pulpit or anything else in its way. When the anchor shank is visible from the helm or bow entering the roller, gently tap control a few times to get the anchor snug in its holder. No more, no less.



Horizontal axis windlass.

Windlasses can be controlled from the helm with an up or down switch, from the bow with waterproof foot switches mounted in the deck, or from both. Some models use gravity to drop anchor, so the only electric control is the up switch at the bow. I prefer having the controls at both the helm and bow. This is especially advantageous in the Delta where you could pull up a bunch of weeds with the anchor. Having the switches on the bow can help clear the weeds by dipping the anchor back in the water repeatedly and monitoring the disbursement of the weeds while doing so. (This is especially true when single-handing.)

Points to Keep in Mind When Choosing a Windlass:

1. How long is the vessel and what is its displacement? Windlasses are designed for specific vessel size and weight ranges. Be sure the windlass you choose is compatible with the size and weight of the vessel.
2. How long is the anchor rode you plan to use and will it all fit into the locker? The first measurement you need to take is the "fall" distance. This is the distance between the top of the locker and the top of the anchor rode when it is completely stored in the locker. Both vertical and horizontal axis windlasses require a fall distance of at least 12 inches. If the fall distance is too small, the rode will bunch up in the locker and most likely jam the windlass. Another factor in choosing the length of your rode is weight. I have a client at Pacific Powerboating with a brand new Nordic Tug complete with a windlass and 250 feet of chain rode. The darn chain was so heavy the bow sat too low in the water and you could see that the stern was sitting too high. They had to chop off 100 feet of chain to make it work.
3. Horizontal windlass: The horizontal windlass is a no-nonsense design widely used by serious mariners who require optimum performance from their anchoring system. (Our vessel *Her Way* has a horizontal windlass with a 250-ft. all-chain rode.) The horizontal windlass offers the best



Verticle axis windlass.

performance with small or unusual locker designs. As the anchor rode enters the “gypsy” it makes a 90-degree turn and feeds into the anchor locker. Simplicity is the essence of the advantage with this design. The rode simply makes a 90-degree turn to feed into the locker.

4. Vertical Windlass: The vertical windlass provides aesthetic value and offers the added security of the anchor rode making a 180-degree turn around the gypsy. The motors for these units are mounted below decks, offering a very low profile on the foredeck, which is preferable for vessels such as express cruisers and sailboats. These units are more suitable for chain/line rode and for smaller vessels. Most big boat cruisers prefer the horizontal windlass with an all-chain rode.
5. Pulling Power or Load: The pulling power or load capacity required of a windlass is a hotly debated topic these days. Windlasses are not designed to pull a boat against high winds, current, tide or chop with the engines in neutral. They are also not designed to pull an anchor embedded in 3 feet of hard sand or mud. They are designed to weigh anchors and rode under little or no stress and to break out a firmly set anchor. The best way to weigh anchor with a windlass is to maneuver the vessel upwind or current in the direction of the scope while weighing anchor. This slackens the rode and makes it easier for the windlass to work. When the vessel’s bow is directly over the anchor and the rode is taut, use the weight of the vessel to free the anchor by driving forward without the use of the windlass. This will free the anchor and allow the windlass to further weigh anchor with the least amount of stress on the electric motor.

Be safe and happy boating. As always, feedback is appreciated. I can be reached at 925/890-8428 or kevo@YachtsmanMagazine.com ➤