

Choosing A Windlass

From www.lewmar.com

In order to select the proper windlass for your boat, three questions should be answered:

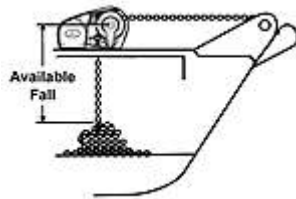
1. What size windlass would best suit my boat?

If you have a 10m (33 ft) boat, typically a 270kg (600 lb) pull windlass would be selected. The rule to crosscheck your windlass selection is to add the total weight of the chain and the weight of the anchor together. Rope is very light and does not affect the actual lifting performance of the windlass, but can be factored in. For safe cruising in all types of conditions and sea areas, Lewmar recommends that you multiply the total weight of your anchor and chain by 4. This number should be less than the maximum pull of the windlass you have selected. Should your findings be at or more than the maximum pull, select the next largest windlass. The windlass does not stow the anchor rode in the locker. Gravity stows the rode in the locker. There must be a free and clear area under the hawse pipe for the incoming rode to lie; if not the rode will jam. Your windlass is a retrieval device; the windlass retrieves the anchor and rode. A windlass is not a high load bearing device. When at anchor your rode should be secured to a cleat or other mooring point on the bow.

2. How long is the anchor rode you wish to use and will it fit into your locker?

Begin by examining the depth of the anchor locker to determine the amount of 'fall' available. The fall is the vertical distance between the top of the anchor locker and the top of the anchor rode when it is completely stored inside the locker. This measurement is important in determining whether your boat will be best suited for a **vertical** or **horizontal** windlass.

Horizontal Windlass



The Horizontal windlass is a no-nonsense design widely used by boaters requiring optimum performance from their anchoring system. Boaters who frequently anchor, especially in deep water, require a no hassle self-tailing system. The horizontal windlass offers the best performance with small or unusual locker designs. As the anchor rode enters the gypsy it makes a 90° turn and feeds directly into the anchor locker. a minimum fall of 12"/ 30cm is recommended.

Vertical Windlass



Vertical windlasses provide aesthetic value and offer the added security of the anchor rode making a 180° wrap around the gypsy. The inherent design of the vertical windlass requires at least 16"/ 40cm of fall.

This is to allow gravity to properly self-tail the anchor rode through a 90° vertical turn into the anchor locker. Additionally, nylon line is lightweight and a short fall in a vertical windlass system might prevent the rode from feeding properly into the locker.

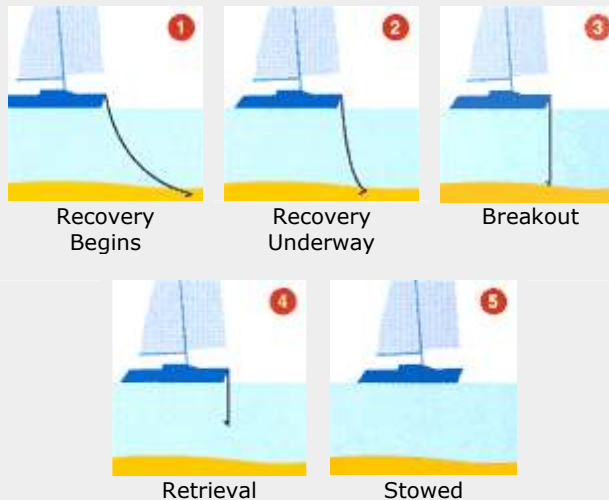
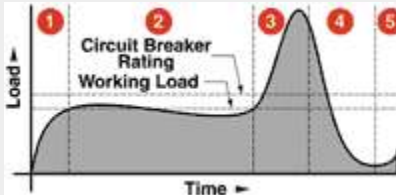
3. How much pulling power should my windlass have?

Having selected a vertical or horizontal windlass and determined the size required for your boat length and displacement, the correct windlass pulling power for your needs must be determined using the following formula:

$$\text{Total weight of ground tackle (anchor and rode) X 4} = \text{Pulling power required by the windlass}$$

Working Load

In a typical anchor recovery situation, the windlass will pass through a number of phases of operation as the boat approaches the anchor and finally breaks it out of the seabed. The load and speed will vary at each phase. For any anchor recovery, the windlass will operate longest in the 'working load' phase and it will experience a significant peak in load during anchor breakout.



Electrical Circuit Protection

Any installation of electric powered windlasses must be protected with a circuit breaker. This ensures complete protection of the electric motor and installation cables if the windlass is overloaded.

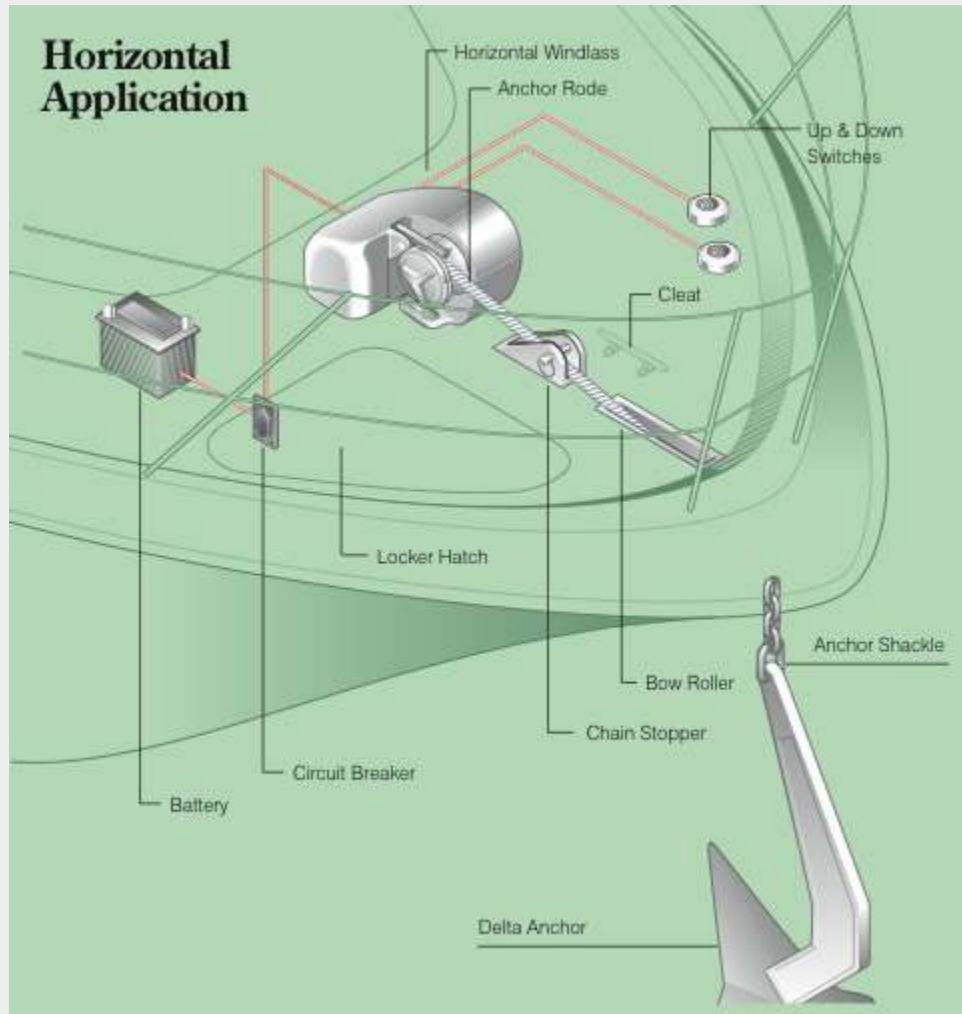
Circuit breakers are normally rated on a 'continuous' basis. This is the load in Amps, under which they will retain electrical contact for an indefinite period. For example, a 70Amp circuit breaker will not trip unless the continuous current exceeds this figure. However, the maximum tolerated current draw may be as much as 250 Amps, but only for a short period of time. All our windlasses carry a recommendation on circuit breaker rating based on continuous operation.

Remember that motoring up to the anchor whilst using the windlass to retrieve the anchor rode and using the boat to "break out the anchor" is the proper anchor recovery procedure. Using the windlass to haul the boat to the anchor is not recommended and will result in damage to the windlass and motor.

Safety At Anchor

Windlasses are not designed to hold high loads while a boat is at anchor. When the windlass is not in use and the boat is at anchor, the anchor rode should be secured using a chain stopper or attached to a load bearing point such as a cleat.

Horizontal Application



Vertical Application

Vertical Application

