

THE BASICS OF ANCHORING

What you need to know about installing an anchoring system.

With so much investment literally riding on your boat's anchoring system, it's essential to understand the basics of anchoring and the components you will need to complete a fully-integrated, high performance system. A well thought-out anchoring system will help make boating easier, safer, and more enjoyable for years to come.

Which system is best for you? Your choice depends on the size and type of your boat, as well as the anchoring conditions you typically encounter. Imtra has the extensive product selection you need for a customized solution. Individually, these are the top brands sought by boatbuilders and yachtsmen around the world. Together, these products function seamlessly as a comprehensive anchoring system.

Windlasses

A **windlass** is the backbone of any anchoring system. Imtra offers the complete range of windlasses from Lofrans [p.8](#) and Muir [p.24](#), the world's leaders in anchor windlasses. Choose from horizontal, vertical, electric (DC or AC), hydraulic or manual – every variation to meet your specific needs.

Footswitches

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Most windlasses are operated by these simple **deck-mounted switches**. High-amperage models can operate a windlass without a control box. Low-amperage models make a good choice for customers using a control box who want a small deck cutout or multiple control stations.

Control Boxes

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These watertight **control boxes** contain solenoids that interpret signals from the windlass operator (via footswitches, toggles, remote panels or handhelds). Pre-wired and fully sealed, they feature easy-access terminals for DC electric and control cables.

Circuit Breakers

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Circuit breakers are needed to protect the motor and wiring from electrical overload. Wiring should be sized to carry the full motor current and the circuit breakers should be sized based on the current carrying capacity of the wire. They also act as a safety shut-off for the system. We offer different amp rated breakers to match the wattage of the motor. Typically, the breaker's amperage rating is equal to 10% of the motor wattage for 12vdc systems (5% for 24vdc).

SYSTEM OVERVIEW

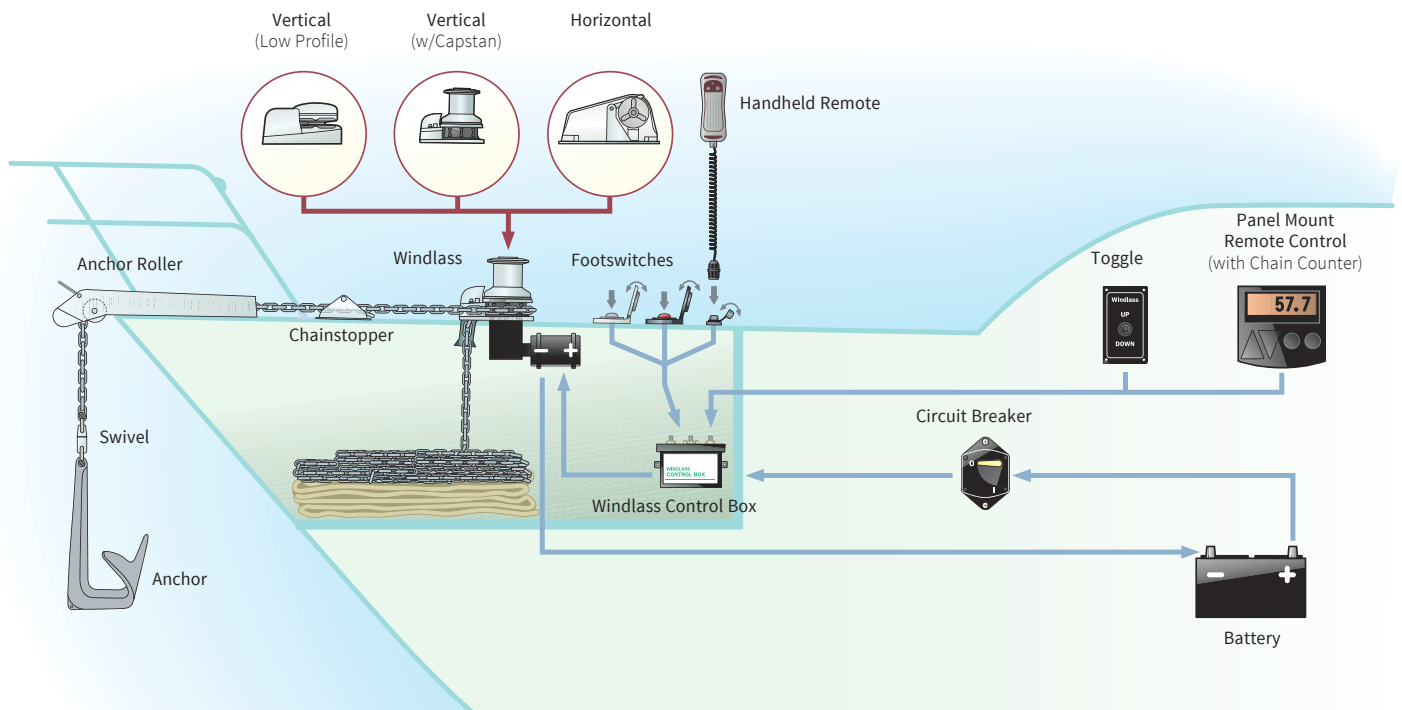




Photo: Cabo Yachts

Toggles and Panel Controls

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Many boats offer **control panels** to operate a windlass from the helm station. Whether you choose a simple up/down toggle or a full-function, chain-counting panel-mount control system, Imtra has a control for you.

Handheld Remotes

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Add-ons like **handheld remotes** can make operating your windlass so much easier. Fully watertight, these convenient controls allow you to move about the boat while controlling the windlass. They are even available wired or wireless and some with built-in chain counters and LED flashlights!

Anchor Rodes

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Often overlooked in the design of anchoring systems, the **anchor rode** plays a more critical role than some may realize. Selecting the proper fit, material and length/size combination will ensure your windlass will payout and retrieve your anchor quickly, reliably and safely. Created to fit your own specifications, the options are endless. Available in stainless steel, HT, or BBB chain spliced expertly to high quality anchor line.

Chainstoppers

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A must-have for boaters running all chain rodes, a **chainstopper** takes the load off the windlass and puts it safely on the boat when anchored. Our basic stainless steel version suits most applications, though more elegant models are available for those desiring a more finished appearance. Larger yachts can even consider models with devil's claws to tightly secure the anchor into its roller while underway.

Anchor Rollers

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Our wide range of **anchor rollers** will protect your yacht and stow your anchor securely. All Imtra rollers offer Delrin® wheels for added durability.



Photo: Shutterstock

HOW TO SELECT A WINDLASS

The right anchor windlass makes all the difference.

The anchor windlass on your boat allows you to handle even the most difficult anchoring situations safely and with complete peace of mind. Choosing the right size and type of windlass for



Photo: Pearson Yachts

your vessel is the key to trouble-free boating.

Several factors play an important role when selecting a windlass: vessel type and size, displacement, anchor and chain size, and the anchoring environment.

The range of available models includes horizontal and vertical, manual, electric or hydraulic and chain or combination rope/chain management.

Imtra has the technical expertise and extensive product selection to make your decision process easier. To help you get started, we offer the following handy guide.

Which windlass is the best for



Manual, Electric or Hydraulic

With a **Manual** windlass, you provide the energy. Manuals are less expensive, easier to install and require neither the wiring nor the plumbing of electric and hydraulic windlasses.

Electric windlasses are by far the most popular. They supply generous lifting power to make the retrieval of your anchor and rode a simple task of pressing a footswitch or pushing a button. They are compact in size and usually can be operated off the boat's existing electrical system.

Hydraulic windlasses are extremely strong and efficient. They require a central hydraulic system within the yacht to power them. For this reason, they are usually fitted only on larger yachts with an existing hydraulic system that would control many systems on the boat.

Rope/Chain or All Chain

Today, most people fit combination rope/chain anchor rodes. These rodes combine a mid-length piece of chain (10-50') spliced to a high-quality 3-strand anchor line of a length selected by the owner. Most vertical windlasses are now designed to retrieve these combination rodes around a single gypsy or chainwheel. Some horizontals, typically for smaller boats, can also accept combination rope/chain rodes.

The primary advantage of **rope/chain** rodes is a savings in weight in the bow of the boat. The nylon anchor line also gives an element of elasticity to the rode that can be more comfortable at anchor in heavy weather.

Chain only rodes are much easier to retrieve reliably for all windlasses. Chain does not kink as anchor line can, therefore you avoid "hockles" that can sometimes slow the retrieval process. Chain is also stronger and usually allows the anchor rode to be set with less "scope" than a rope/chain rode.



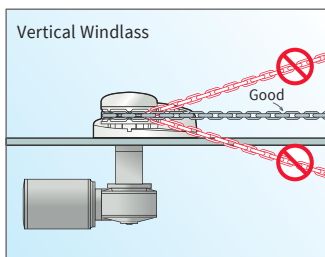


Photo: Krogen Express

my boat? Here are the most important things to consider before you buy.

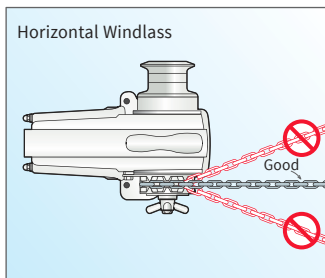
Vertical or Horizontal

Vertical windlasses place the chainwheel on a vertical drive shaft above the gearbox and motor, which are mounted below deck. The “topworks” can thus be lower in profile. Vertical windlasses often retrieve combination rope/chain rodes. The anchor rode should lead to the windlass parallel with the plane of the chainwheel for best results. The lead should be within 5 degrees of level to the chainwheel for the best results.



The anchor chain should have a straight entry to the winch, not entering from a vertical angle.

Horizontal models mount the chainwheel and capstan on either side of the on-deck housing which usually contains both the motor and gearbox. Horizontals make very good choices for boats with little space below deck to mount the motor and gearbox. Most horizontals retrieve rope and chain separately. For this reason, most owners of horizontals choose all chain rodes. The lead of the anchor rode on the horizontal should also be in line with the plane of the chainwheel.



The anchor chain should have a straight entry to the winch, not entering from Port or Starboard.

Sizing Considerations

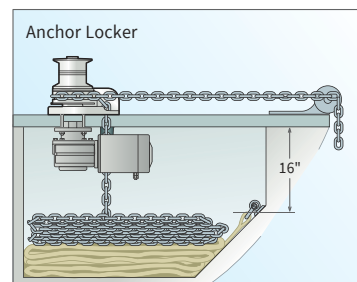
The windlass is intended to lift the anchor and ground tackle, not to pull or drag the boat. A typical rule of thumb is to take the total weight of your anchor and complete anchor rode and multiply that by a factor of three. This number should be less than the power rating of the windlass. On the introductory pages for each windlass brand, we include charts of the typical boat sizes for each model.

Use these charts to get an idea of what size is right for you. We also strongly recommend that you consult marine professionals to determine what size windlass is right for your boat. You can also contact Imtra at 508-995-7000 to discuss your individual requirements.

Mounting Locations

With both horizontal and vertical models, a windlass should normally be mounted on the yacht’s centerline with the chain in close alignment to a line drawn from the chainwheel through the bow roller (or chock) to straight ahead in the water. It is important, especially for combination rodes, to locate your windlass so that, as rope is stripped from chain-wheel or drum, it can “fall” directly into the rope locker.

The location and depth of an anchor locker are important elements in a windlass installation. When the rode is in the anchor locker, the top of the anchor rode should be a minimum of 16" below the underside of the deck. The anchor locker should also be positioned so the chain and rope feed through the windlass deck plate or hawsepipe directly into the deepest section of the anchor locker.



Installation

For your convenience, Imtra provides easy access to technical information on windlass installation at our website. Go to www.imtra.com and simply download the files you need, including owners manuals, parts diagrams, dimensional drawings and more. If you need technical advice or other information, our knowledgeable staff is ready to help at 508-995-7000.



Photo: Hunter Yachts

HOW TO SELECT A WINDLASS