



316 Stainless Steel Flange

**More Power
More Speed**

Stamped 316 Stainless Bearing Hub

316 Stainless Steel Gearbox

Sealed 316 Stainless Steel Terminals

**Fully Submersible Motor
Water/Corrosion Resistant**

316 Stainless Steel Drum

**316 Stainless Steel Motor
NO COVERS/SLEEVES!**

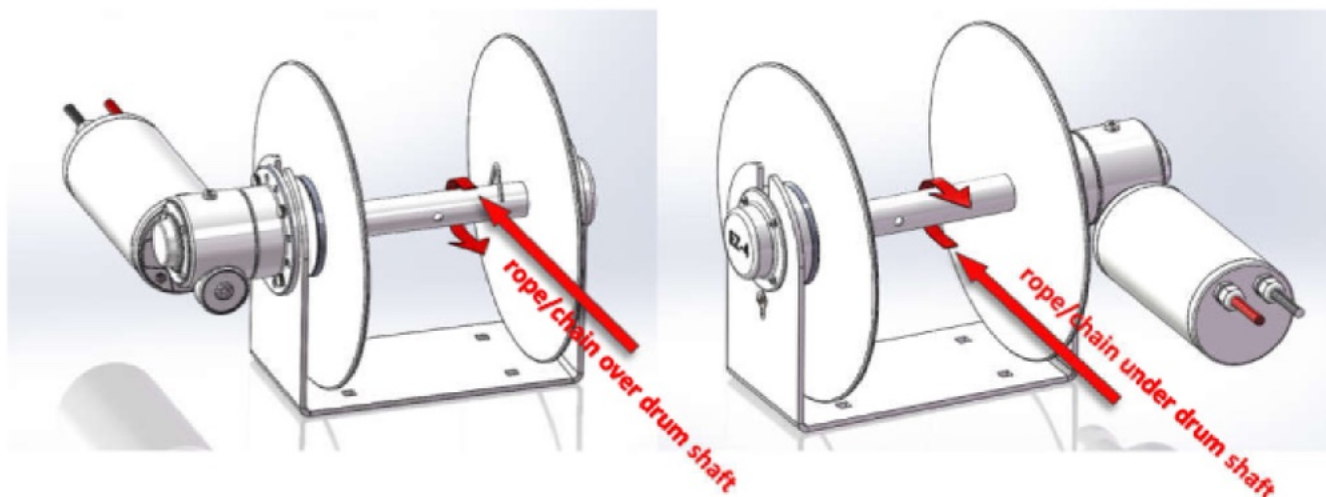
Tips for Installation

1. Both exposed wires from the Motor must be connected via Joiners/solder and then heat shrink, including internal silicon to wires (thicker wire, see bottom of page for wiring size) to eliminate any corrosion or water entering wires when attaching power cables to other attachments.
2. The drum must be in line and centred to the Guide roller or hawse pipe and Bowe sprit in order to ensure an even spread of the rope and chain to the drum.
3. Gearbox output flange to drum bracket can rotate in eight different mounting positions for your motor and gearbox components. This will allow you to position motor/gearbox at the most convenient configuration required.
4. Bushing and bushing hub; if bushing needs to be replaced just un- bolt four screws to hub and replace bushing, you can purchase bushings

INSTALLATION INSTRUCTIONS

Locate the drum anchor winch in a suitable position so there is no interference from other ropes or objects. Ensure that the rope has a clear lead to the winch – use a roller if required to direct the rope to the drum. Ensure that there is sufficient room to run the electrical cables to the winch underneath the deck.

Depending on the motor/gearbox position the drum anchor winch can be overfeed or underfeed. The red arrows in pictures below indicate the direction of feed rotation of the rope.



If the deck or bulkhead selected for mounting is angled or curved, a suitably shaped mounting block will be required to spread the load evenly over the deck surface and mount the winch on a level and even footing. Place the shaped mounting block (if required) onto the deck or bulkhead. Use the drum anchor winch as the layout template to mark the centers. Remove the winch and drill the holes.

Apply an appropriate marine grade silicone sealant to the base plate and mounting block (if required), taking care to align mounting holes when assembling. For Aluminum or Steel hull vessels, it is important to insulate the drum anchor winch with a non-conductive gasket to avoid corrosion. This also applies below deck with the mounting bolts, nuts and washers. Where the deck construction is light or of foam sandwich construction, a plywood stiffener of at least 16mm (5/8") should be fitted to the underside of the deck to spread the load. Install and tighten mounting bolts.

HANDY HINTS

- Ensure sufficient room to run electric cables to the drum anchor winch. Follow the instructions above including underdeck stiffening, alignment, mounting blocks and sealing procedures.
- Position the drum anchor winch carefully checking desired rope path before mounting to your deck or bulkhead.
- To help the rope to lead onto the drum a minimum of 12"-24" / 30 -60 cm is recommended between the last roller and the drum anchor winch. If the drum anchor winch is being used inside a chain locker it is recommended to have a roller as wide as the spool / drum
- When operating in shallow water, avoid over loading spool / drum with rope and chain.
- When operating Free Fall drum anchor winches in salt waters may cause the salt to build up around the clutch and brake plates. To avoid the Plates becoming stuck, rinse with fresh water after use.

IMPORTANT

IT IS NECESSARY TO INSTALL A CIRCUIT BREAKER WITH AN ISOLATION / RESET SWITCH TO ISOLATE THE DRUM ANCHOR WINCH WHEN NOT IN USE. This is to prevent the rope and chain from paying out if the winch is accidentally reversed. **THE CIRCUIT BREAKER ASSISTS IN THE PROTECTION AGAINST OVERLOADING THE MOTOR. CIRCUIT BREAKERS ARE NOT TOTAL PROTECTION AGAINST OVERLOAD AND OF COURSE OVERLOADING THE MOTOR IS NOT COVERED BY WARRANTY.**

Circuit breaker (must be fitted to ensure warranty) If the drum anchor winch is overloaded or stalled the circuit breaker automatically cuts off power to the winch and protects the wiring and motor. Deck Switches (if fitted) are best located to either port or starboard or directly behind the drum anchor winch in a position where it can be easily reached with your foot or knee, preferably where you can view the anchor and chain coming aboard.

In the boating world it is suggested:

- 3% max voltage drop for conductors providing power to panels and switchboards, navigation lighting, bilge blowers, main DC feeders, and any other circuit where voltage drop should be kept to a minimum
- 10% max voltage drop on conductors used for general lighting and other non-critical circuits

Drum anchor winches are operable in the acceptable voltage loss range of 3% to 10%. Batteries are best located as close to the drum anchor winch as possible. Smaller diameter cables drop voltage considerably. Larger cables will reduce the voltage drop to the motor and the heat generated when operating the winch. Use the following guide located here <http://www.calculator.net/voltage-drop-calculator.html> to determine your required wire size:

IMPORTANT NOTE: The following cable sizes must be used as a minimum.

12 Volt DC system with copper wire & conductors Using a 40 amp circuit breaker producing 480W:
up to 15' from battery use 6 awg cable and experience 4% voltage drop
up to 30' from battery use 4 awg cable and experience 5% voltage drop
up to 40' from battery use 2 awg cable and experience 4% voltage drop

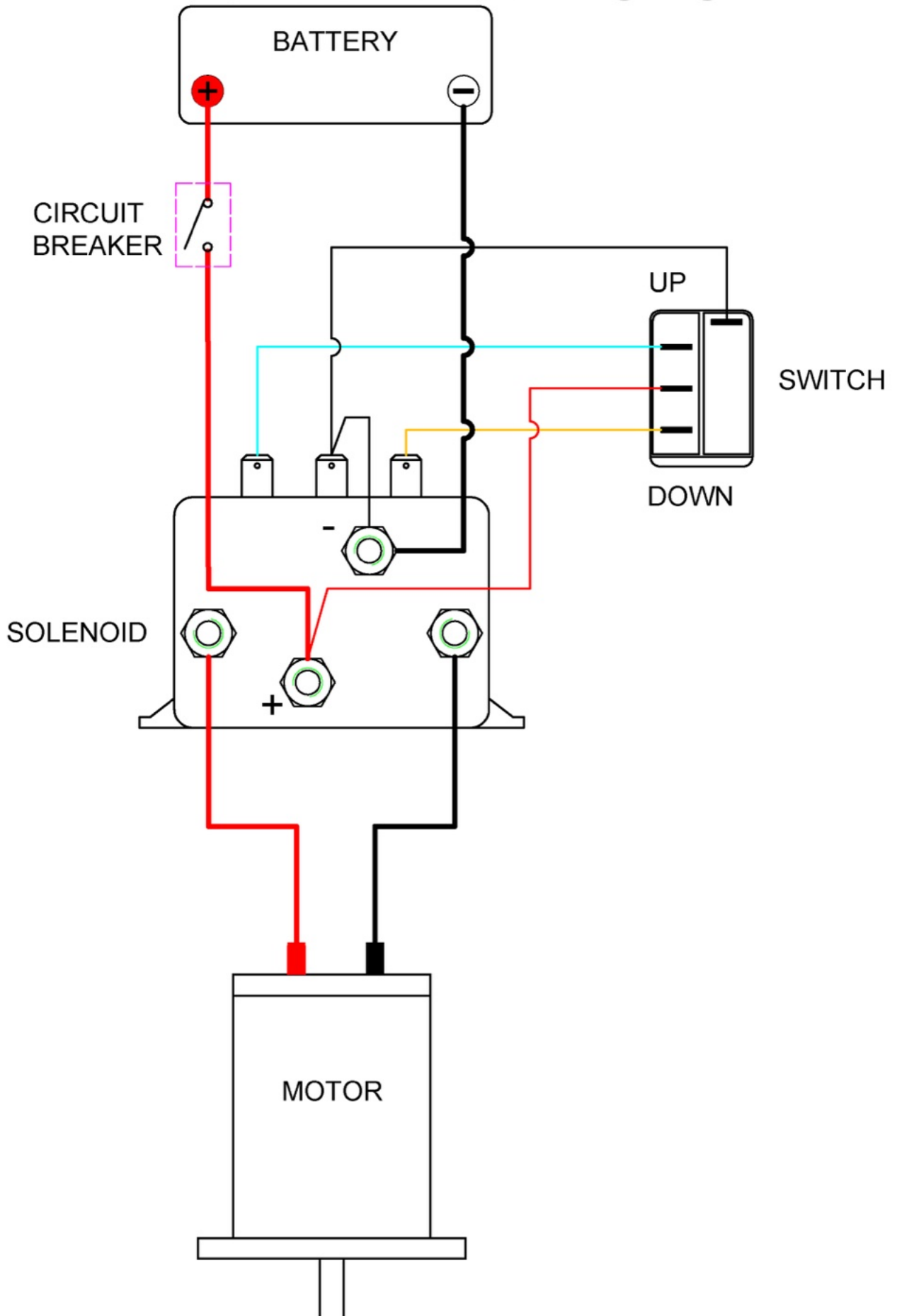
12 Volt DC system with copper wire & conductors Using a 60 amp circuit breaker producing 720W:
up to 15' from battery use 6 awg cable and experience 6% voltage drop
up to 30' from battery use 4 awg cable and experience 8% voltage drop
up to 40' from battery use 2 awg cable and experience 6% voltage drop

12 Volt DC system with copper wire & conductors Using a 80 amp circuit breaker producing 960W:
up to 15' from battery use 6 awg cable and experience 8% voltage drop
up to 30' from battery use 4 awg cable and experience 9% voltage drop
up to 40' from battery use 2 awg cable and experience 8% voltage drop

12 Volt DC system with copper wire & conductors Using a 100 amp circuit breaker producing 1200W:
up to 15' from battery use 4 awg cable and experience 6% voltage drop
up to 30' from battery use 2 awg cable and experience 8% voltage drop
up to 45' from battery use 1 awg cable and experience 9% voltage drop

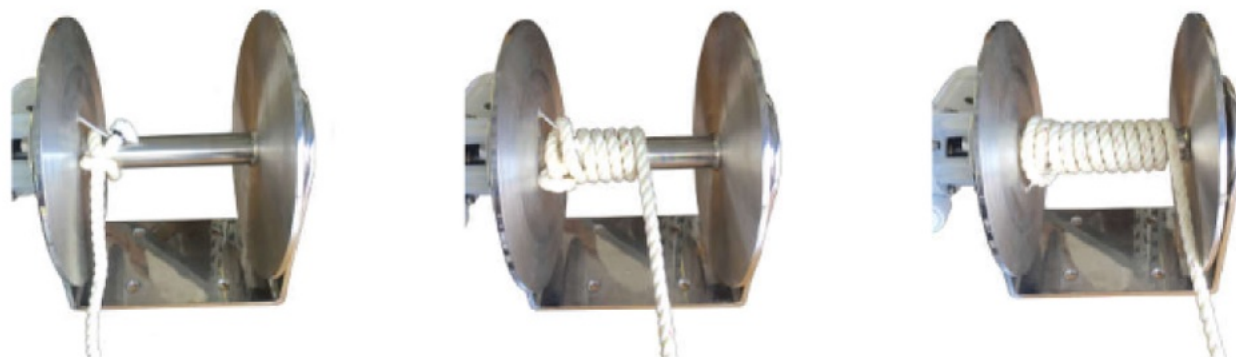
12 Volt DC system with copper wire & conductors Using a 120 amp circuit breaker producing 1440W:
up to 15' from battery use 4 awg cable and experience 7% voltage drop
up to 30' from battery use 2 awg cable and experience 9% voltage drop
up to 45' from battery use 1/0 awg cable and experience 9% voltage drop
up to 55' from battery use 2/0 awg cable and experience 9% voltage drop

Standard UP/DOWN Solenoid Wiring Diagram & Switch



ANCHOR LINE & CHAIN INSTALLATION

Invariably in winding chain / rope onto the drum, the rope is wound over or under the shaft of the drum refer back to installation instructions to decide how your rope should wind based on how the winch is orientated on your boat. To install the line on the drum, insert the rope through the hole



The chain / rope should be wound "thread lay", with close even winding throughout the length of the chain / rope. If wound unevenly, the turns of chain / rope bunch-up, cross wind and are liable to form doglegs, particularly on the more flexible chain / ropes.

Never fill the drum full to the rim or edge of the flanges. If possible, leave a clearance equivalent to at least two layers of chain / rope. A tension should be induced into the line as a tight winding is imperative. One person should operate the drum anchor winch in the RAISE direction while a second person guides the rope, making sure each turn is winding tightly against the adjacent turn.

NEVER UN-WIND THE LAST LAY OF LINE ON THE SPOOL!

Note: The amount of chain can be lengthened or shortened to meet individual needs. In these situations, the amount of rope must be tailored to ensure there is a maintained clearance between the chain and the base plate.

To avoid damage to the drum anchor winch or vessel when bringing the anchor up, it is a preferred practice to mark the chain/rope at approximately 6.5' and 16.5' (2m-5m) intervals from the anchor, to alert the operator to the anchor position.

WARNING! -Do not overload. -Do not attempt pro-longed pulls at heavy loads. -Do not maintain power to the winch if the motor stalls. - The anchor rope may break before the winch stalls.

Under no circumstances should the drum anchor winch be operated if it is stalled or overloaded, check for the cause and rectify prior to resuming operation. If anchor retrieval is impaired by high wind, heavy seas or the anchor is snagged, ease the load by either motoring or maneuvering slowly forward into the wind, until the anchor can be lifted vertically. The drum anchor winches are powerful machines. Treat them with respect, use with caution and always follow the safety guidelines.

Overloads can damage the winch and/or the rope and create unsafe operating conditions. The generator/ main engine should be running during winch operation to minimize battery drain and maximize winch power and speed. If considerable winching is performed with engine off, the battery may become too weak to restart the engine.

RULES FOR OPERATION AND SAFETY

1. Keep winching area clear. Ensure that hands, feet, hair and clothing are kept clear of the drum anchor winch and other loose gear when in operation.
2. Inspect the Anchor rope, chain and equipment frequently. A frayed rope or damaged splice to the chain should be replaced immediately.
3. Periodically check the drum anchor winch installation to ensure that all bolts are tight.
4. Never use your drum anchor winch for lifting or moving people. Ensure no one is swimming nearby as anchor is lowered or retrieved.
5. This drum anchor winch not designed or intended for overhead hoisting operations.
6. Avoid continuous pulls from extreme angles as this will cause the rope to pile up on one end of the drum. This can jam the rope in the winch causing damage to the rope or the winch.
7. Always operate the drum anchor winch with an unobstructed view of the winching operation if possible.
8. Use only factory approved switches, remote controls and accessories. Use of non-factory approved components may cause injury or property damage and will void your warranty.
9. Do not machine or weld any part of the drum anchor winch. Such alterations may weaken the structural integrity and will void your warranty.

Once wired and installed just hold the button (raise) until the spool turns in the direction in which the spool becomes clamped between the clutch and friction plates. This will be the UP direction. Once Spool is tightly clamped, push the button in opposite direction (lower) until the clutch and friction plates un-clamp the spool and it will free spin. An internal spring inside the spool shaft will act as a brake to prevent the spool from over-spooling.

After Free Fall has started wait until the anchor hits the bottom and the rope/chain stops or slows before pushing the up button to lock in the drum to hold you at anchor. Do Not push the up button while anchor is being deployed, the sudden stop will damage the gearbox and free fall components.

MAINTENANCE AND REPAIR

Periodically check tightness of mounting bolts and electrical connections. Remove bolts and electrical connections. Remove any dirt or corrosion that may have accumulated on the electrical connections.

LUBRICATION

The gearbox and drum bearings are permanently lubricated with a high performance gear lube. If re-lubricating is necessary (after repair or disassembly) only use Shell Alvenia EP2 or equivalent. All black nylon components are self lubricating and should not be lubricated as grease can reduce their efficiency and performance life.

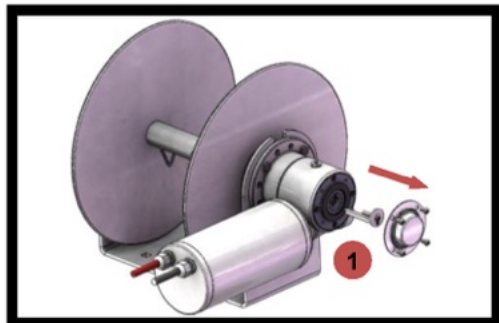
Emergency Free Spool, Crank Handle, & Permanent Direct Drive Use Guide

If your boat should lose all power and you need to deploy the anchor there is an emergency free spooling feature to allow you to get the rope off the drum

If you need to retrieve the anchor while there is no power to the winch you can pull the anchor line in by hand then use the included crank handle to wind the rope back on to the drum.

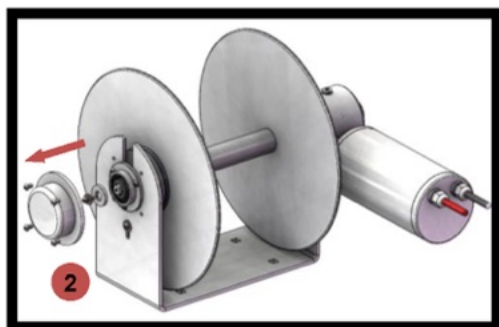
If you should decide to permanently disengage the auto drop free fall feature you can insert a 3/8" x 3" bolt thru the drive shaft and lock the winch into direct drive.

Using the emergency free spooling feature to deploy the anchor if your boat loses power:

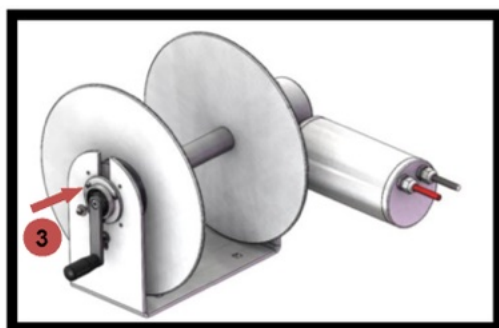


Take off the end cap and remove shaft key on the side of the gearbox by removing the screws.

To retrieve the anchor while there is no power to the winch you can pull the anchor line in by hand then use the included crank handle to wind the rope back on to the drum:

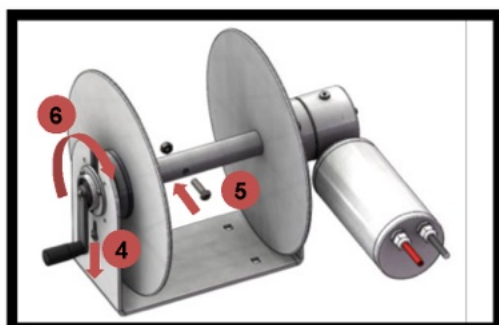


Take off the end cap and washer/bolt on the side opposite the gearbox by removing the screws.



Attach and tighten the handle crank to the shaft on the opposite side of the gear box. Turn the handle crank to lift and lower the anchor.

To permanently disengage the auto- drop free fall feature and lock the winch into direct drive:



Lower the clutch block by loosening the screw of the clutch block.

Place any 3/8" x 3" bolt through the holes of the hollow & solid shafts.