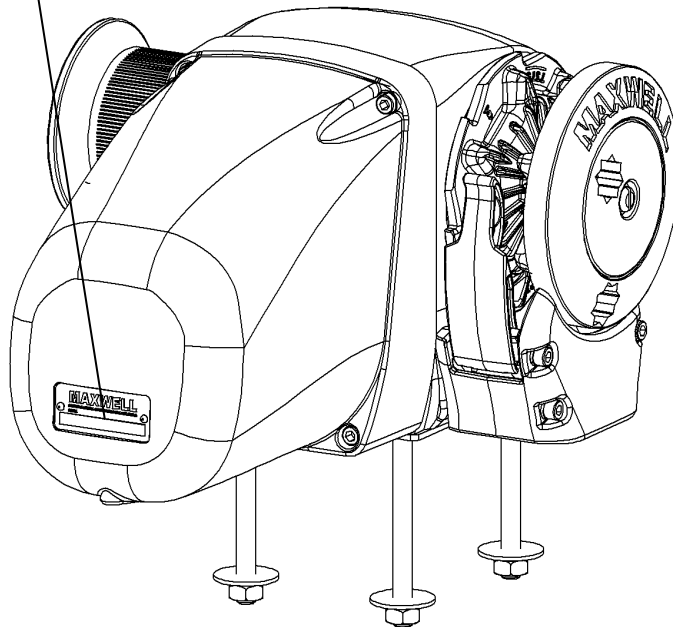


HRC10
Rope/Chain Windlass

Owner Note:

Record your serial Number here.



INTRODUCTION

- Read this manual thoroughly before installation and using the windlass. Failure to adhere to the correct procedures, recommendations and guidelines described in this Owner's Manual may invalidate the warranty.
 - Correct selection of windlass together with correct installation, care in use and maintenance, are essential for long life and reliable performance.
 - In addition to this instruction manual, the following components should be included with the windlass:
 - Clutch Handle
 - Deckplate Gasket
 - Deck Cutout Details (at rear of manual)
 - Deck stud Kit
 - Studs
 - Nuts
 - Flat washers
 - Spring washers
- The following accessories may be required to complete your installation:
- Remote up/down control panel
 - Circuit breaker/isolator panel
 - 12V or 24V reversing solenoid

IMPORTANT INFORMATION

- The windlass must have a minimum pull capacity of three times the combined weight of the anchor and rope/chain.
- Keep hands, feet, loose clothing and hair well clear of the windlass and rope/chain during operation.
- Never operate the windlass from a remote station without having a clear view of the windlass.
- Do NOT use the windlass as a mooring point. When anchoring or mooring, secure the line directly to a bollard or deck cleat.
- Do NOT use the windlass to pull the boat forward when raising the anchor. Use the boat's engine to drive the boat up to the anchor.
- Do NOT attempt to break free a fouled anchor with the windlass. Secure the line to a bollard or cleat and use the boat's engine to break the anchor out.
- Always firmly tie down the anchor when under way or in heavy seas. Do not rely on the windlass as a securing device.
- Always turn the circuit breaker/isolator switch off when the windlass is not in use and before you leave the boat.
- Do NOT use the windlass to haul a person up a mast.

ROPE AND CHAIN SELECTION

Correct fit of rope and chain to chainwheel is essential for the windlass to operate properly.

The ground tackle should be selected taking into account:

- a) Boat size, displacement and windage.
- b) Conditions of operation such as maximum depth of water, type of bottom and likely weather conditions.
- c) Holding power and size of anchor, taking special note of the manufacturers' recommendations.

Selection of chainwheel:

Part Number P103315 for :
HRC10-8: 14mm (9/16")-16mm (5/8") rope / 8mm (5/16") chain

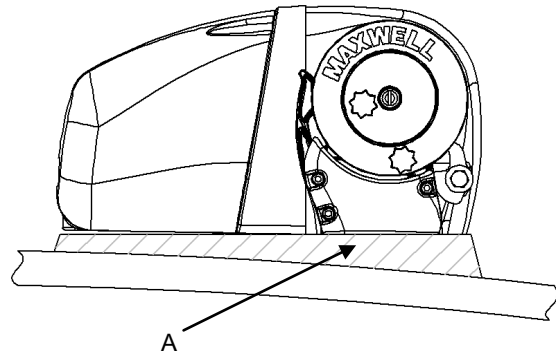
Part Number P103316 for :
HRC10-10: 14mm (9/16")-16mm (5/8") rope / 10mm (3/8") chain

INSTALLATION

- For automatic operation to be possible, the anchor must be self launching.
- Tie the end of the anchor rope/chain to a secure fixture in the rope/chain locker.

Foredeck layout

Ensure the deck is flat, if not; a plinth (A) will be required to ensure the windlass sits on a flat surface.



Required clearances

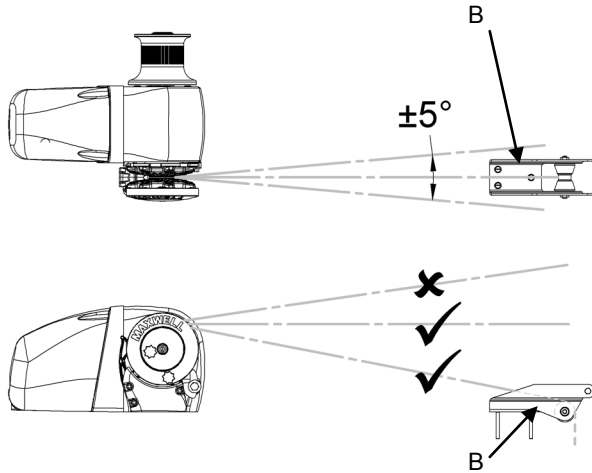
Identify any bulkheads, wiring or piping under the deck that should be avoided.

Position the windlass so the rope/chain falls directly into the rope/chain locker with at least 200mm (8") unobstructed fall.

Aligning the windlass

The windlass must be positioned to allow the rope/chain to have a clear run from the bow roller (B) to the chainwheel without deflection.

The windlass must be mounted pointing in the direction of the incoming rope/chain. This arrangement allows the rope/chain to have maximum engagement with the chainwheel.



Installation Procedure

Use the Deck Cutout Details drawing, as a guide for marking and cutting the holes.

Tip: On GRP boats, running the drill in reverse first will reduce chipping of the gel coat.

Using hole saws, cut the holes for the rope/chain pipe and electrical cables.

On GRP or wooden decks, seal the edges of the holes with epoxy to avoid ingress of moisture.

Install deck studs to windlass and tighten by use of two nuts. Place the gasket onto the windlass and fit to deck.

Fasten the windlass to the deck using the nuts and washers supplied. Tighten the nuts progressively and evenly. Do NOT use power tools. Make sure the installation is firm, but do not over tighten the nuts.

Important note to Boat Builders

Experience has shown that, on long ocean deliveries as deck cargo, sulphur from the ships exhaust and condensation can damage the chrome plating and stainless steel of the windlass.

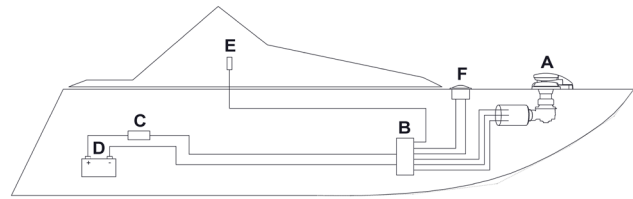
We recommend, after completing installation, you spray the top works of the windlass with CRC 3097 "long life" (or alternative) and wrap the windlass with plastic film and tape.

WIRING INSTRUCTIONS

Installation must be carried out in accordance with USCG, ABYC, NMMA, CE or other relevant local electrical requirements.

We recommend that connection of the power lines and control circuitry to the windlass be done by qualified technicians, to ensure reliable and safe operation of the windlass.

After all connections have been made and system tested, seal terminals against moisture by spraying with: CRC2043 "Plasti-Coat", CRC3013 "Soft Seal" or CRC2049 "Clear Urethane" (or alternative).



Solenoid pack (Required)

The solenoid pack (B) should be located in a dry area close to the windlass, not in the rope/chain locker.

Circuit breaker/isolator (Required)

! FOR SAFETY - The winch circuit requires protection provided by an isolator switch and either a fuse or circuit breaker, rated as follows:

HRC10-12V : 135amp

HRC10-24V : 80amp

Position the circuit breaker/isolator (C) no further than 1.8 m (6 ft) away from the battery (D) in an accessible and dry location.

Remote control panel (Recommended)

The remote control panel (E) should be mounted in a convenient location (such as the bridge, helm or cockpit) so that the operator can see the windlass.

Footswitch (Optional).

For safe operation, the footswitch (F) should be approximately 500 mm (20") from the windlass (A).

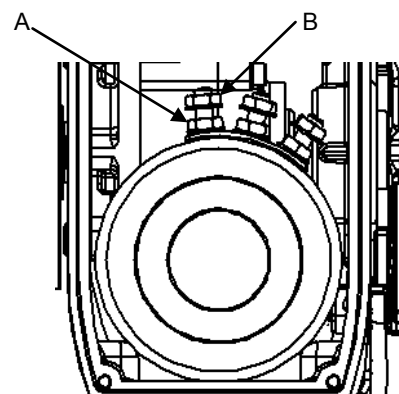
The below-deck part of the footswitch must be in a dry environment and the breather holes must be kept clear.

The arrows on the footswitch should be arranged to indicate the direction of operation.

Fit the switch according to the instructions supplied. Connect wiring as shown.

Motor

When tightening the cables to the motor, ensure the lower nut (A) is secure against turning when tightening the upper nut (B). This will prevent damage occurring within the motor.



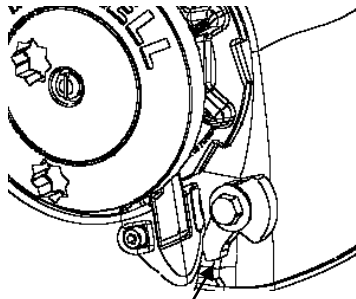
OPERATION

CAUTION:

Make sure that you do not operate the footswitch accidentally while putting extra turns on the capstan. Keep your fingers clear of the chainwheel and/or capstan.

When operating the windlass:

-Ensure the pawl is in the disengaged position when paying out the anchor.



Pawl In Disengaged position

-Do not switch immediately from one direction to the other. Wait for the windlass to stop in one direction before applying power in the other direction.

-Run the boat's motor(s) at sufficient rpm to activate the charging system.

Always make sure the isolator switch is turned off when the system is not being used.

Lowering the Anchor

Insert the clutch handle into the clutch nut and tighten the clutches by turning the nut clockwise. Only tighten sufficiently so that you can easily pull up the anchor.

REMOVE THE CLUTCH HANDLE.

Operate the windlass by pressing the toggle switch down on the remote up/down control panel to pay out the rope/chain (or press the "Down" footswitch if fitted).

Pay out sufficient rope/chain to set the anchor.

Watch as the rope/chain is being fed out. Any jam might cause damage to the windlass.

Raising the Anchor

Insert the clutch handle into the clutch nut and tighten the clutches by turning the nut clockwise. Only tighten sufficiently so that you can easily pull up the anchor.

REMOVE THE CLUTCH HANDLE. NOTE: Over tightening the clutches can cause damage to the motor when docking the anchor.

Operate the windlass by pressing the toggle switch up on the remote up/down control panel (or press the "Up" footswitch if fitted).

Motor up to the anchor while retrieving it. Do not use the windlass to pull the boat to the anchor.

To avoid damaging the bow fitting, retrieve the last meter (3') of rope/chain slowly and take care when docking the anchor.

Note: To avoid applying the full force of the windlass to the bow fitting when docking the anchor, adjust the clutch nut so that there is some slippage when docking the anchor.

Free falling the Anchor

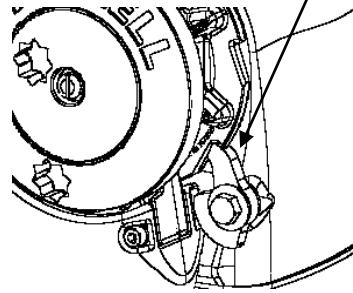
Insert the clutch handle into the clutch nut and loosen by slowly turning the handle anticlockwise.

Tightening the clutch nut clockwise will control the rate of descent.

CAUTION: Do not allow the chainwheel to free wheel uncontrolled as this will allow dangerously high speeds to build up.

Raising the Anchor Manually:

Move the pawl into the engaged position.



Insert the clutch handle into the clutch nut and turn anticlockwise to loosen the clutch. Note the chain wheel may pay out the anchor until the pawl locks into the chainwheel.

Insert the clutch handle into the outer bi-square of the chainwheel and rotate anticlockwise to pull in the line. A bi-square to 1/2" socket adaptor has been provided with your windlass. This can be used with any 1/2" ratchet to recover the rode.

Using the Capstan Drum for Rope Warping:

The capstan can be used independently from the chainwheel. This is ideal for handling mooring or docking lines, or retrieving a second anchor. For safety reasons, a footswitch is highly recommended.

To haul in using the capstan:

Make sure the anchor is secured.

Insert the clutch handle into the clutch nut and turn anticlockwise until rotation stops. This will release the mechanism so that the chainwheel remains stationary while you operate the capstan.

Take three turns of rope around the drum in a clockwise direction.

While holding the tail of the rope, press the "Up" footswitch. The capstan will rotate clockwise.

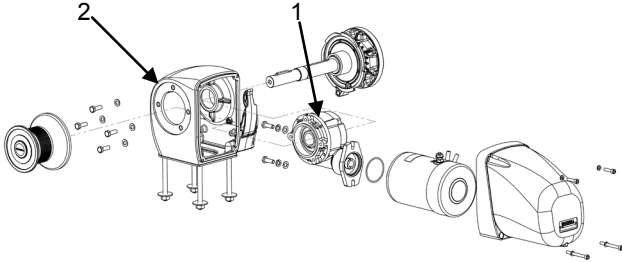
MAINTENANCE

Every Trip

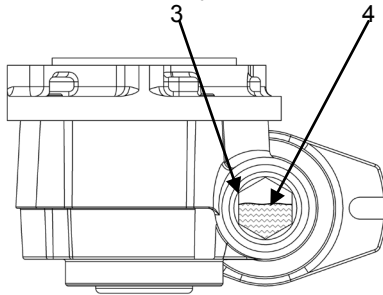
- Ensure clutch is adjusted correctly
- Wash down topworks with fresh water
- Spray motor and electrical connections with CRC Soft Seal.
- Check rope for wear and wash down with fresh water

Every 3 Months

- Remove chainwheel. Strip and grease clutch
- Split gearbox (1) from main case (2), clean and re-grease mating faces.



- Check level of oil in gearbox using the sight glass (3). Oil level (4) should be above 1/2 and no more than 3/4 full. If necessary top up.



- Clean the Windlass with a cloth damp with Kerosene (paraffin). Spray preferably with CRC3097 "Long Life" or alternatively, CRC6-66 or WD40 (or alternative). Polish off with a clean non-fluffy cloth.

Every Year

- The motor should be serviced by a qualified technician.
- Remove any rust build up from the casing and paint with a suitable coating

Every 3 Years

- The gearbox should be serviced by an authorised service agent.

Specifications

Electric Motor : Direct Current motor
Voltage : 12 V DC or 24 V DC
Rated Output : HRC10-8: 1000W
: HRC10-10: 1200W

Hydraulic Motor:
Recommended Flow :20l/min 5.3gal/min
Relief Valve setting :2000 psi 138bar

Gear box ratio : 56:1

Max Pulling : HRC10-8: 700kg (1540 lbs)
Weight : HRC10-10: 850kg (1870 lbs)

Haulage speed : 20-24 m/min (65.6-78.7 ft/min)
(Dependant on the load)

Rope size : HRC10-8: 14-16mm (9/16"-5/8")
: HRC10-10: 16mm (5/8")

Chain size : HRC10-8: 8mm (5/16") short link
: HRC10-10:10mm (3/8") short link

Net weight : HRC10-8: 19kgs (42lbs)
: HRC10-10: 20kgs (44lbs)

Recommended lubricants:

Gearbox :

Capacity: 75 ml (2.4 fl oz)

Type: SAE viscosity grade 90-110 (e.g., Shell Omala 320, Castrol Alpha SP320 or other approved equivalents).

Main shaft, bearing, and clutch surfaces:

Marine grease, Lithium or Lithium complex based (e.g. Duckhams Keenol or Castrol LMX). Do not use soap based greases.

WARNING:

When re-assembling care must be taken to ensure the key/keys are properly seated in the shaft.

DO NOT wrap the motor with grease cloth as this prevents the cooling of the motor.

Cable Lengths

12V Systems		
Cable Length	Cable Size	
	mm ²	AWG
Up to 12m (40')	26	3
12m - 16m (40' - 52')	34	2
16m - 20m (52' - 65')	42	1
20m - 26m (65' - 85')	54	0
66m - 33m (85' - 108')	68	00

24V Systems		
Cable Length	Cable Size	
	mm ²	AWG
Up to 27m (88')	14	6
27m - 43m (88' - 141')	22	4

! **NOTE: Cable length is the total length from battery to winch then back to battery.**

Ordering Spare Parts

When ordering spare parts, please quote the following details.

Windlass Model _____

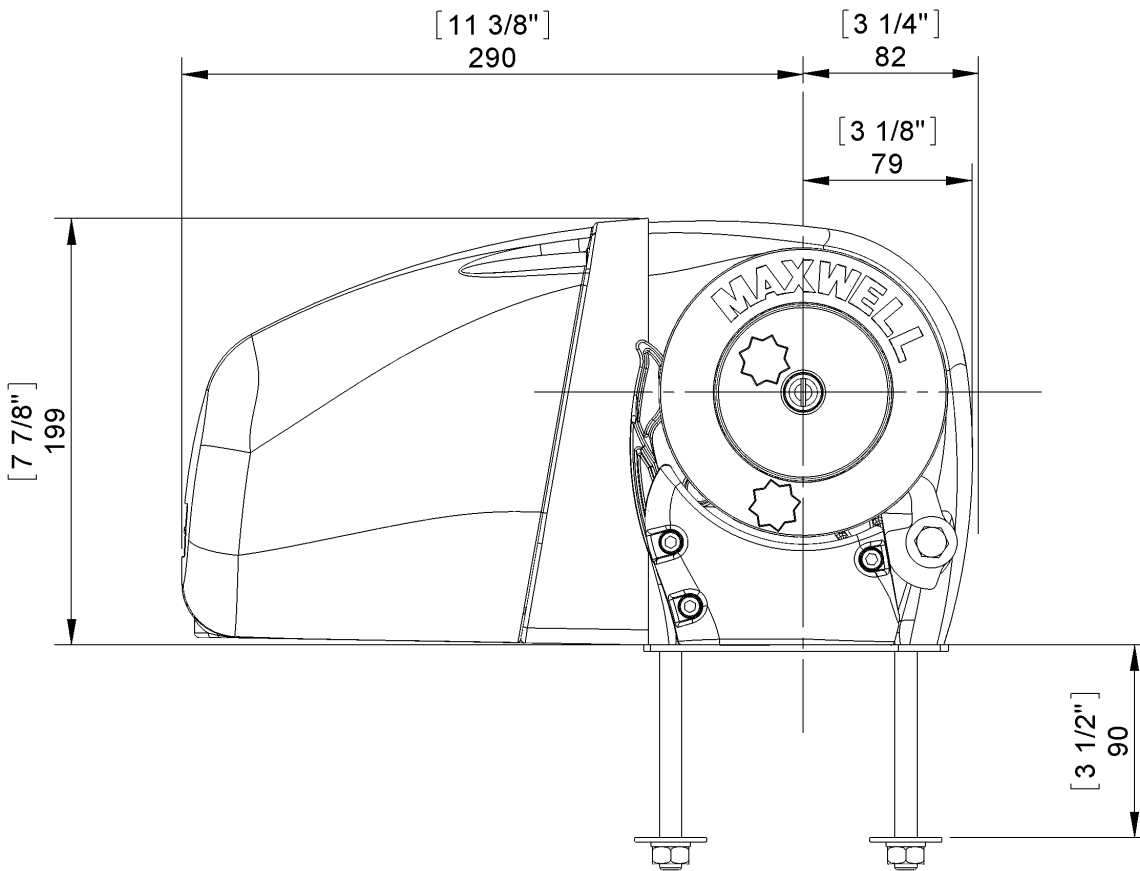
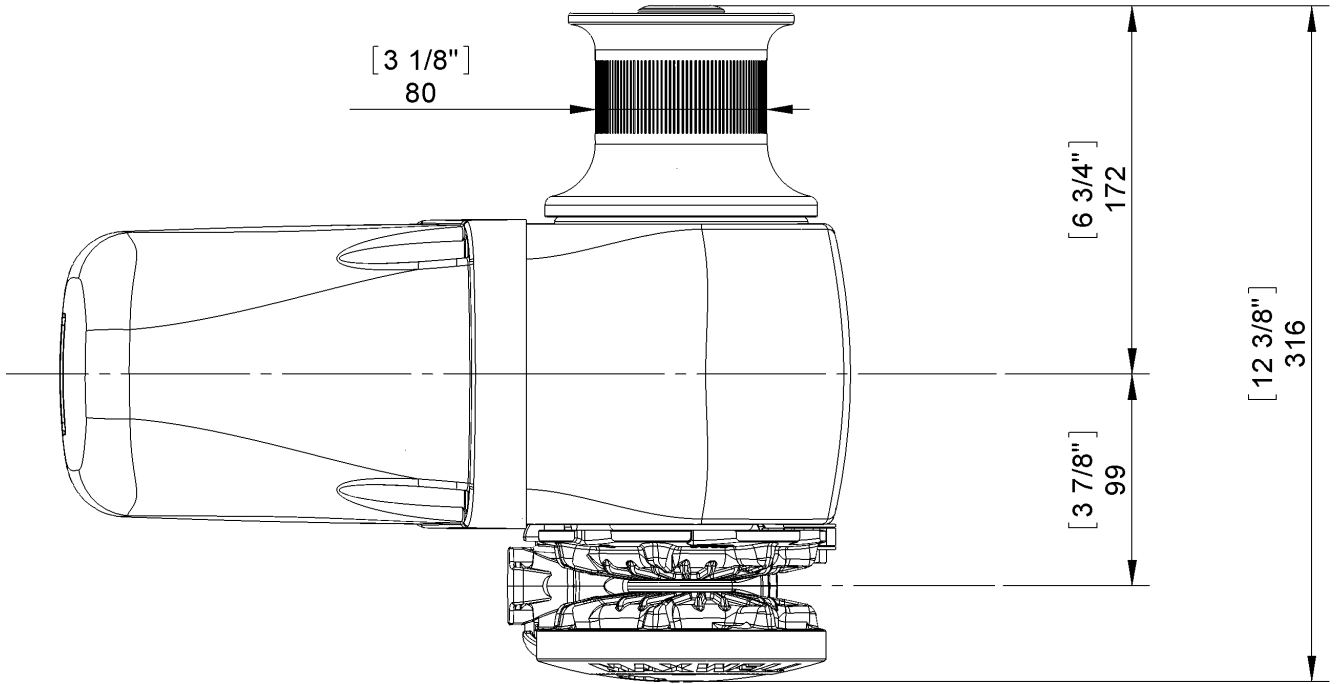
Serial number _____

Power supply _____

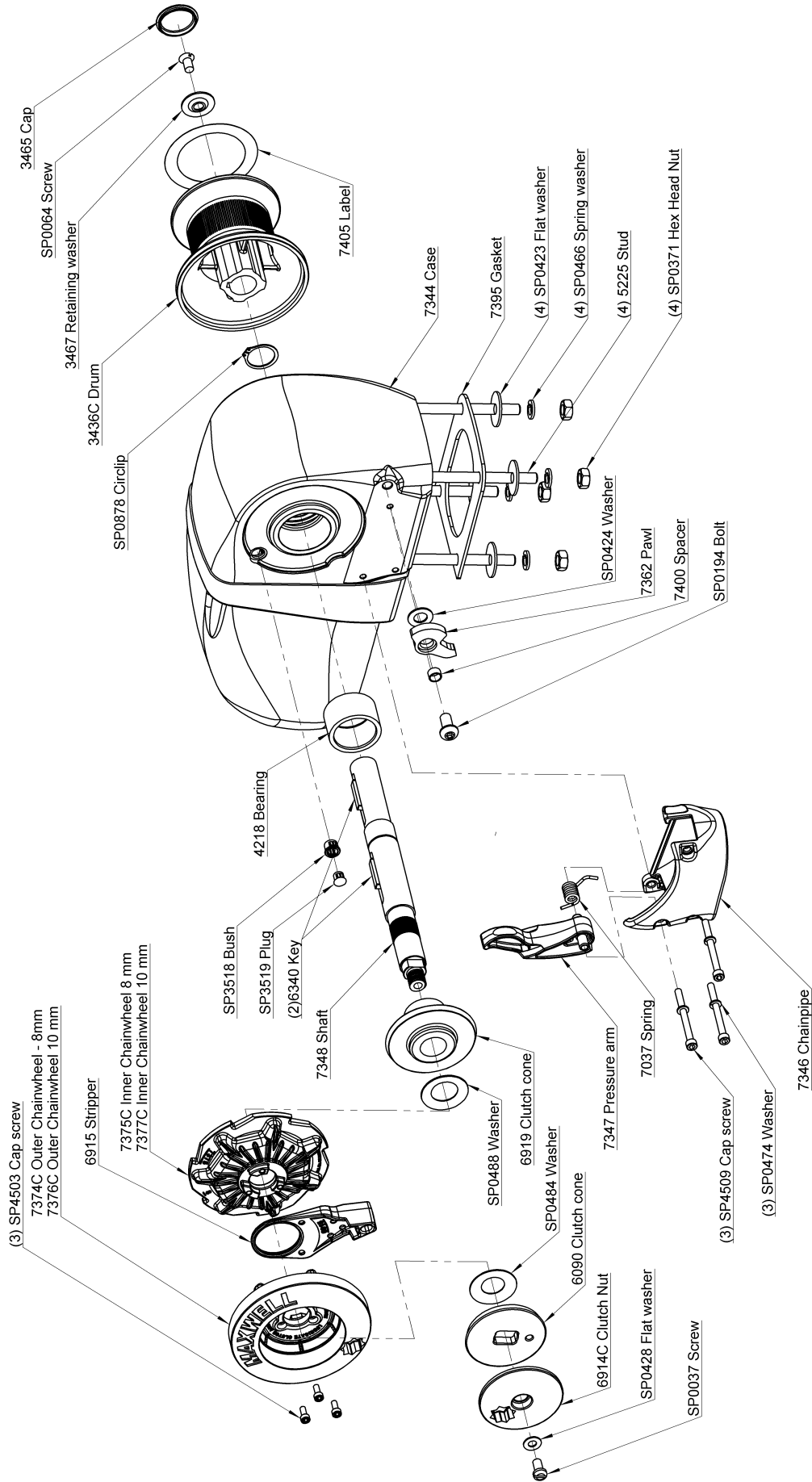
Note: For your nearest retailer, service agent or representative please refer to our website

www.maxwellmarine.com

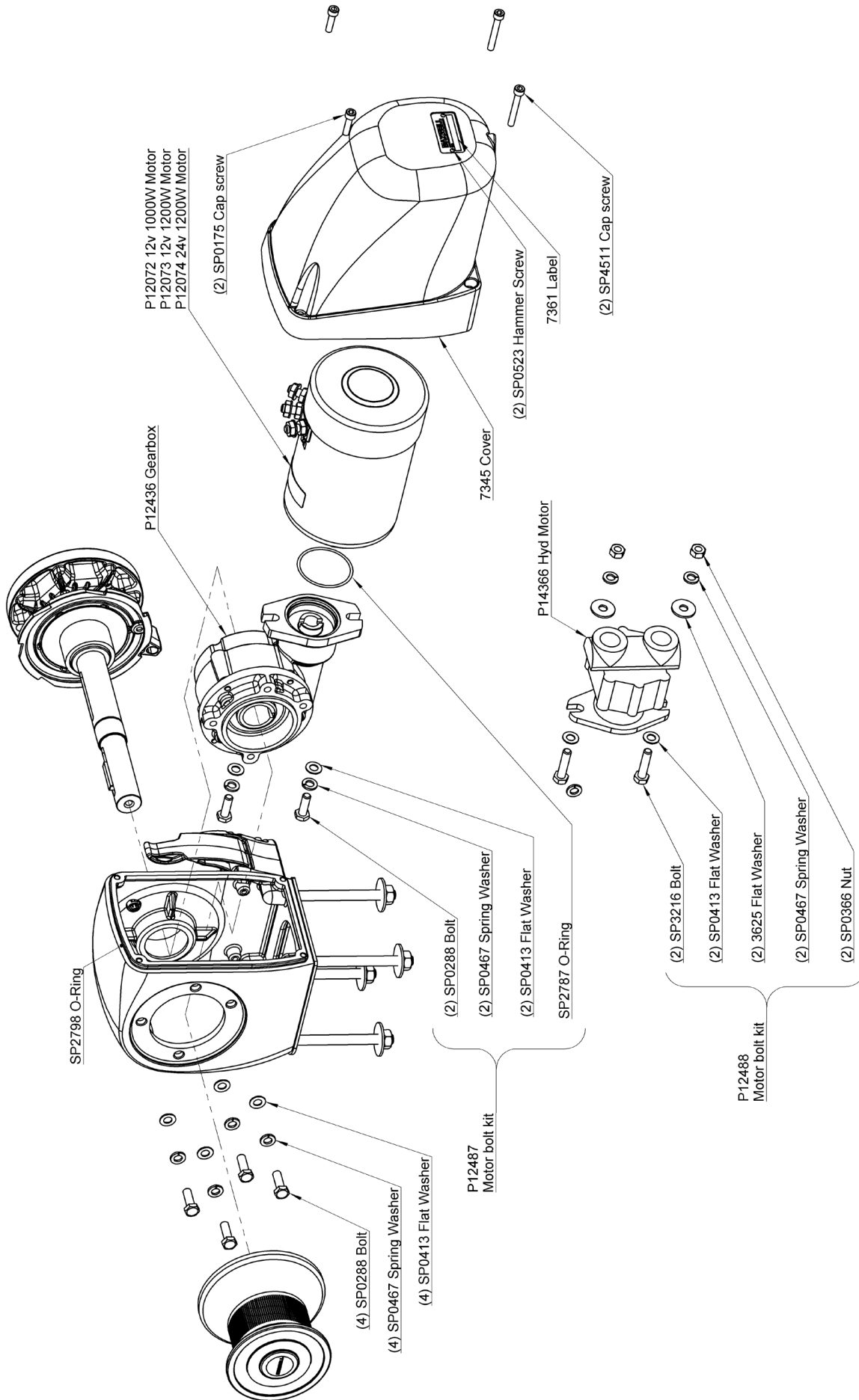
Overall Dimensions



Parts List



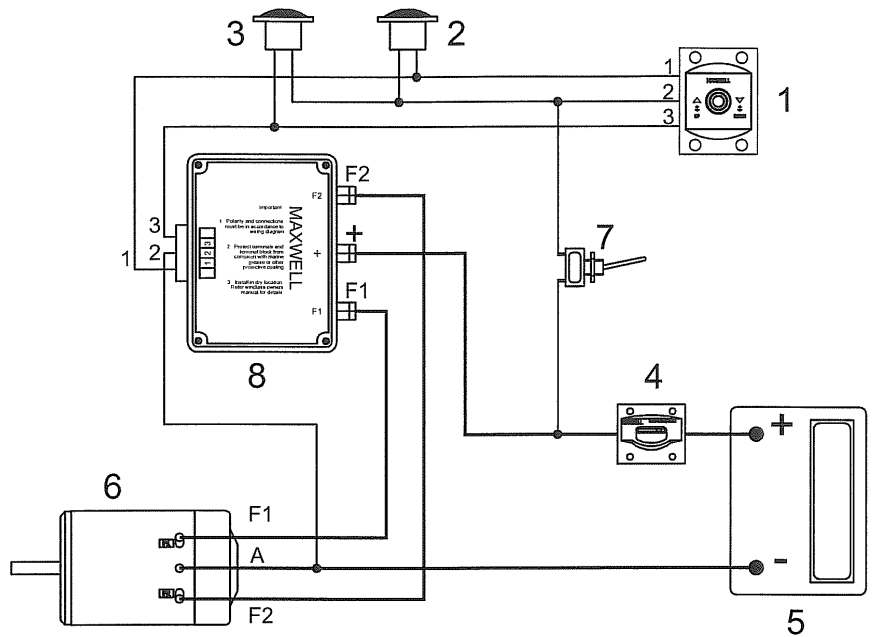
Parts List



Electrical and Hydraulic Schematic

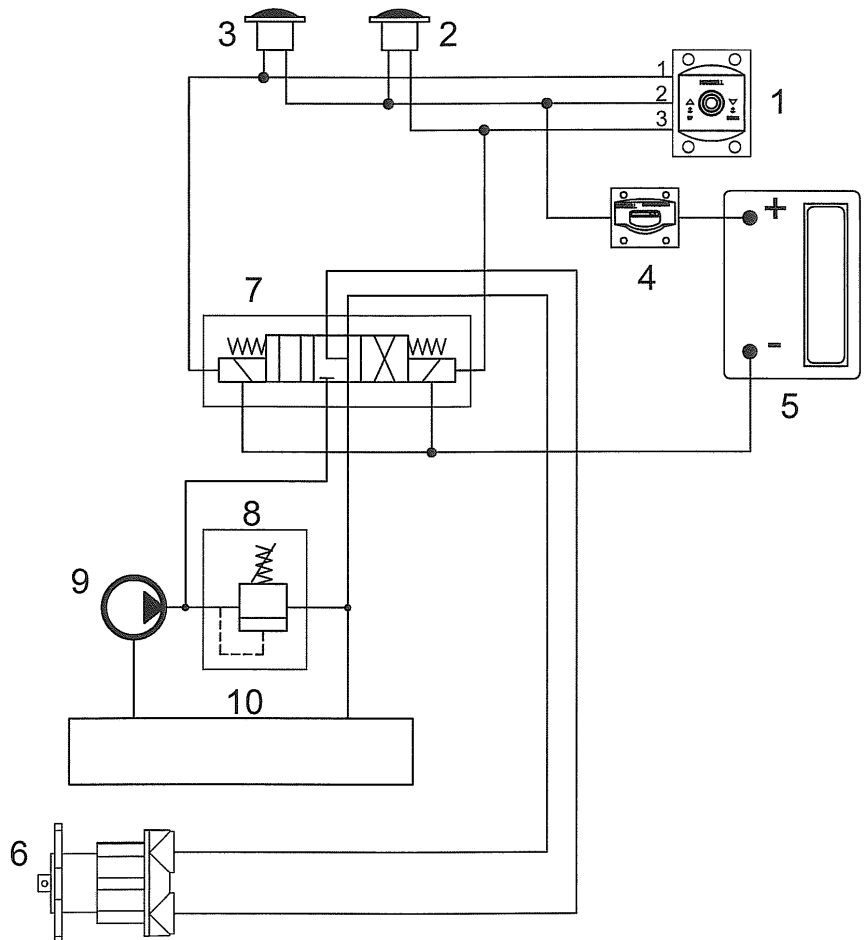
Series Wound Motor

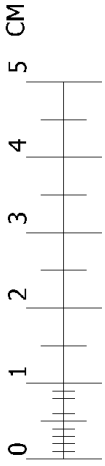
- 1 Remote control panel
- 2 Down Foot Switch
- 3 Up Foot Switch
- 4 Breaker/Isolator
- 5 Battery
- 6 Motor
- 7 Manually resettable breaker
- 8 Solenoid Pack



Hydraulic Motor

- 1 Remote control panel
- 2 Down Foot Switch
- 3 Up Foot Switch
- 4 Breaker/Isolator
- 5 Battery
- 6 Motor
- 7 Dual direction solenoid
- 8 Relief Valve
- 9 Pump
- 10 Tank





R30 [1 1/8"] Typ.

[1 3/4"]
46

[1 1/2"]
37

[1 3/4"]
46

[1 1/2"]
37

[3 7/8"]
99

Centerline of Rode to Bow Roller

[1/2"]
(4) ϕ 12 Holes

Centerline of shaft

[1 7/8"]
48

[1 3/4"]
43

[2 1/8"]
54

[2 1/2"]
62

[3"]
 ϕ 75

Approximate outline of
chainpipe footprint

Min. ϕ 30mm [1 1/8"] cutout for wiring
can be placed anywhere within this area

Approximate outline of
windlass footprint

**IF USED AS A TEMPLATE
PLEASE CHECK ACCURACY OF
DIMENSIONS ON DRAWING
BEFORE CUTTING OUT
(SEE NOTE 3)**

NOTES:

1. BEFORE CUTTING DECK, CHECK ALL UNDERDECK CLEARANCES. READ & UNDERSTAND INSTALLATION INSTRUCTIONS CONTAINED WITHIN THE MANUAL.
2. CHECK YOUR MARKED OUT DIMENSIONS CAREFULLY, BEFORE CUTTING & DRILLING. DECK BOLT HOLES MUST BE DRILLED PARALLEL & SQUARE TO MOUNTING FACES.
3. MAXWELL MARINE IS NOT RESPONSIBLE FOR ANY INACCURATE DATA, DUE TO REPRODUCTION ERRORS OF FAX MACHINES, PRINTERS, PHOTOCOPIERS ETC.

This drawing is protected by copyright and the design and or details contained therein are the confidential property of MAXWELL MARINE INTERNATIONAL LTD. This drawing must be returned upon demand and must not be copied, loaned or have its contents communicated to any other persons, including subcontractors, without the consent in writing from Maxwell Marine International Ltd. This drawing must not be used for any other purpose other than that for which it was originally supplied.

LIMITED WARRANTY

Warranty: Maxwell Marine International Ltd provides a three year limited warranty on all windlasses for pleasure boat usage, and a one year limited warranty for those systems used on commercial or charter vessels. Warranty, service and parts are available around the world. Contact your nearest Maxwell office for a complete list of service centres and distributors.

This warranty is subject to the following conditions and limitations:

1. This Warranty will be null and void if
 - (a) there is any neglect or failure to properly maintain and service the products.
 - (b) the products are serviced, repaired or maintained improperly or by unauthorised persons.
 - (c) loss or damage is attributed to any act, matter or omission beyond the reasonable control of Maxwell or the purchaser.
2. Maxwell's liability shall be limited to repair or replacement (as determined by Maxwell) of the goods or parts defective in materials or workmanship.
3. Determination of the suitability of the product and the materials for the use contemplated by the buyer is the sole responsibility of the buyer, and Maxwell shall have no responsibility in connection with such suitability.
4. Maxwell shall not be liable for any loss, damages, harm or claim attributed to:
 - (a) use of the products in applications for which the products are not intended.
 - (b) corrosion, wear and tear or improper installation.
 - (c) improper use of the product.
5. This Warranty applies to the original purchaser of the products only. The benefits of the Warranty are not transferable to subsequent purchasers.
6. Maxwell shall not be responsible for shipping charges or installation labour associated with any warranty claims.
7. There are no warranties of merchantability, fitness for purpose, or any other kind, express or implied, and none shall be implied by law. If any such warranties are nonetheless implied by law for the benefit of the customer they shall be limited to a period of three years from the original purchase by the user.
8. Maxwell shall not be liable for consequential damages to any vessel, equipment, or other property or persons due to use or installation of Maxwell equipment.
9. This Warranty sets out your specific legal rights allowed by Maxwell; these may be varied by the laws of different countries. In addition, the purchaser may also have other legal rights which vary from country to country.
10. To make a claim under this Warranty, contact your nearest Maxwell Marine office or distributor. Proof of purchase and authorisation from Maxwell will be required prior to any repairs being attempted.



To be eligible for warranty protection, please either complete the form below at the time of purchase and return it to the appropriate retailer or supplier of the goods, or fill out the electronic warranty form on our website, www.maxwellmarine.com

Purchaser

Name:	
Telephone:	Facsimile

Address:

Supplier / Dealer

Name:	
Telephone:	Facsimile

Address:

Windlass Model

Serial Number

Date of Purchase	Boat Type
Name L.O.A.	
Built by	

Windlasses Supplied	
<input type="checkbox"/>	With boat
<input type="checkbox"/>	Fitted by boat yard/dealer
<input type="checkbox"/>	Purchased from dealer/chandler

