

1000 & 1500 Windlass Manual

VETUS-MAXWELL APAC Ltd

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Illustrations and specifications are not binding as to detail.

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Additional Resources

The following resources are included at the back of this manual:

Deck Cutout Details

Warranty Form

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

www.maxwellmarine.com

Preliminary Information

Introduction

Congratulations on your purchase of a Maxwell windlass. Please read these instructions carefully to enable you to correctly install and maintain the windlass for years of trouble-free operation.

Note

Failure to follow the correct installation, operation or maintenance instructions will jeopardise your safety and could invalidate the warranty.

Components

In addition to this instruction manual, the following components may be included with the windlass:

- Windlass
- Remote up/down control panel
- Circuit breaker/isolator panel
- 12V or 24V reversing solenoid
- Clutch Lever
- Deckplate gasket
- Motor Bolt Kit
- Template (At rear of manual)
- Small parts:
 - Nuts
 - Flat washer
 - Spring washer

Important Safety Information

- Make sure your windlass has been correctly specified before installation - Personal safety may depend on it. The windlass must have a maximum pull capacity of at least three times the combined weight of the anchor and chain.
- For automatic operation to be possible, the anchor must be self launching.
- Never use the windlass under power with the lever inserted in the clutch nut.
- Keep hands, feet, loose clothing and hair well clear of the windlass and rope/chain during operation.
- While raising the anchor, run the boat's engine above idle. This will minimise the power drain on the batteries.
- Never operate the windlass from a remote station without having a clear view of the windlass.
- When operating the chainwheel pawl, keep fingers away from incoming chain.
- 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.
- Tie the end of the anchor chain rode to a secure fixture in the chain locker.
- Do NOT use the windlass to haul a person up a mast.

VW and VWLP Windlass parts

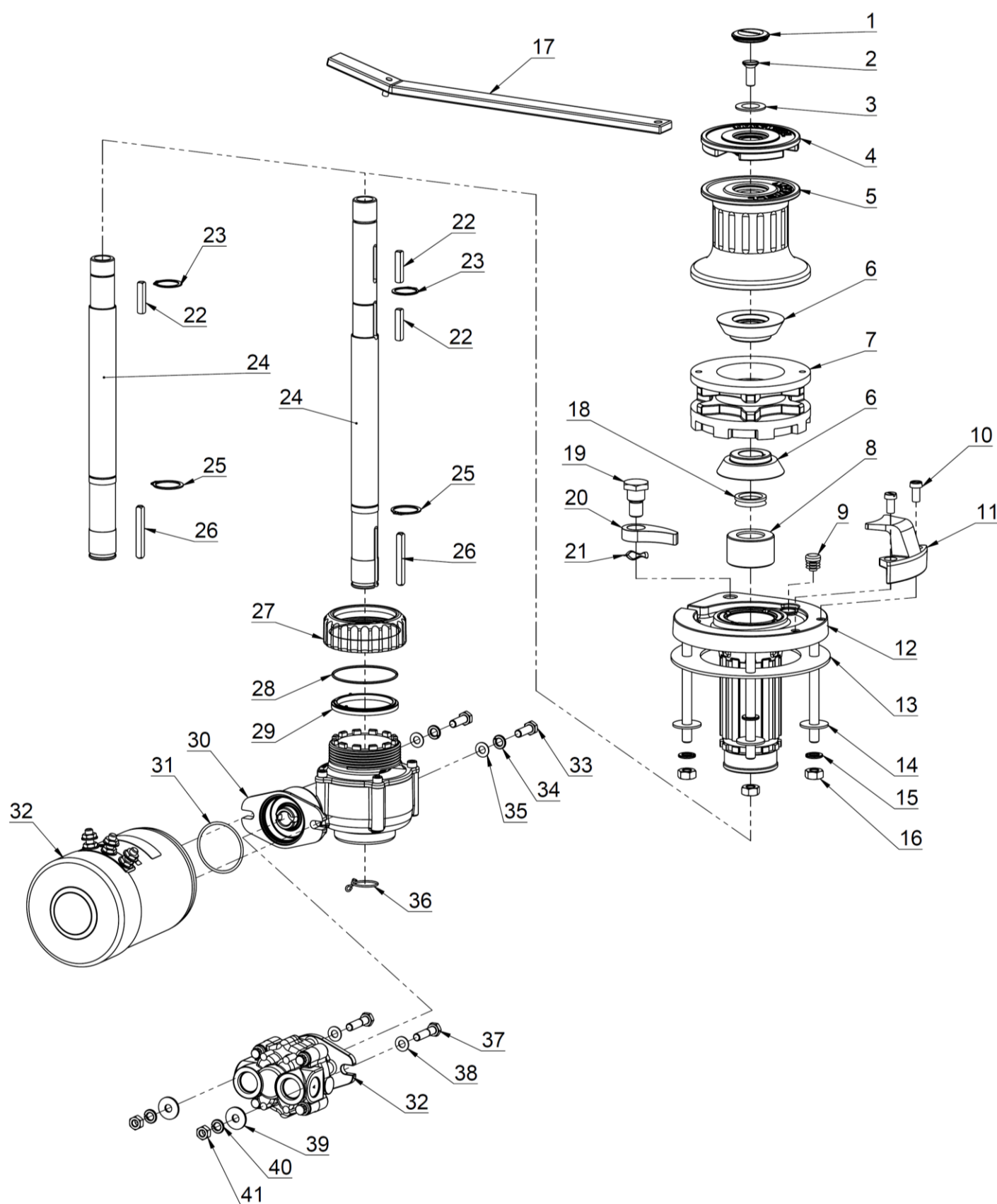


Fig 1 . VW and VWLP Windlass parts

VW and VWLP Windlass Parts List

Item No	Component Description	QTY.	Part Number	Kit	Include items
1	Cap - Ø36	1	3465	P101615	1,2,3,18,21,22(x2),23
2	Screw CSK 3/8" x 1"	1	SP0040	P101615	1,2,3,18,21,22(x2),23
3	Retaining Washer - M8	1	3467	P101615	1,2,3,18,21,22(x2),23
4	Clutch nut 1000 1500 series	1	6195		
5	Capstan Ø80 x 95 StSt	1	7502		
6	Clutch Cone 1000 1500 Series	2	3497	P101623	6(x2)
7	Chainwheel 1000 -1500 VW/VWC	1	3173		
8	Deckplate bearing Ø29 x Ø50 x30	1	6147		
9	Plug - head 15.8 dia finned	1	SP0875		
10	Screw Cheese Hd Slotted - M8	2	SP0037	P101626	10(x2),11
11	Stripper 1000 1500 VW	1	6158	P101626	10(x2),11
12	Deckplate 1000 1500 VW VWLP - 50TDC	1	P101627	Pre-assembled kit	Pre-assembled kit
	Deckplate 1000 1500 VW VWLP - 100TDC	1	P101628	Pre-assembled kit	Pre-assembled kit
	Deckplate 1000 1500 VW VWLP - 150TDC	1	P101629	Pre-assembled kit	Pre-assembled kit
13	Gasket - VW 1000 1500	1	3474		
14	Washer Flat Large - 28x10x2	4	3843		
15	Washer Spring 3/8"	4	SP0457		
16	Nut Hex - 3/8"	4	SP0322		
17	Lever 800 series emergency crank assy	1	P20044		
18	V-Ring V28 A	1	SP0708	P101615	1,2,3,18,21,22(x2),23
19	Pawl Pin - 1000 1500	1	6148	P101620	19,20,21
20	Pawl - 1000 - 1500 series - 2500 VW	1	3372	P101620	19,20,21
21	Spring Wave - SSR-0100-S17	1	SP0463	P101620	19,20,21
22	Key 6.35x34L	2	3462	P101615	1,2,3,18,21,22(x2),23
23	Circlip - Ext - 1" x 1mm, SS304	1	SP0848	P101615	1,2,3,18,21,22(x2),23
24	Shaft 1000 1500 VW VWC - 50TDC	1	6152		
	Shaft 1000 1500 VW VWC - 100TDC	1	6151		
	Shaft 1000 1500 VW VWC - 150TDC	1	6150		
	Shaft 1000 1500 VWLP VWCLP - 50TDC	1	6203		
	Shaft 1000 1500 VWLP VWCLP - 100TDC	1	6204		
	Shaft 1000 1500 VWLP VWCLP - 150TDC	1	6205		
25	Circlip External 1 1/8"	1	SP0878	P101619	25,26,36
26	Key 1/4" x 1/4" 57mm Long	1	6340	P101619	25,26,36
27	Locknut	1	4257	P100088	27,28,29
28	O-Ring 66x2	1	SP2751	P100088	27,28,29
29	Collar	1	4258	P100088	27,28,29
30	Gearbox - 1000 - 44-1	1	P100900		
	Gearbox - 1500 - 56-1	1	P102730		
31	O-ring 50 x 2	1	SP2787	P12487	31,33(x2),34(x2),35(x2)
32	Motor 12V 1000W-with 1000 VWC/VWLP	1	P12072		
	Motor 24V 1000W-with 1000 VWC/VWLP	1	P12074		
	Motor 48V 1000W-with 1000 VWC/VWLP	1	SP5140		
	Motor 12V 1200W-with 1500 VWC/VWLP	1	P12073		
	Motor 24V 1200W-with 1500 VWC/VWLP	1	P12074		
	Motor 48V 1000W-with 1500 VWC/VWLP	1	SP5140		
	Motor Hydraulic	1	P14366		
33	Screw Hex Hd - M8x25, SS316	2	SP0288	P12487	31,33(x2),34(x2),35(x2)
34	Washer Spring - M8, SS316	2	SP0467	P12487	31,33(x2),34(x2),35(x2)
35	Washer Flat - 5/16" x 5/8" x 20G, SS316	2	SP0413	P12487	31,33(x2),34(x2),35(x2)
36	Quick Release Clip	1	4547	P101619	25,26,36
37	BoltHex Hd - M8	2	SP3216	P12488	37(x2),38(x2),39(x2),40(x2),41(x2)
38	Flat washer	2	SP0413	P12488	37(x2),38(x2),39(x2),40(x2),41(x2)
39	Flat washer	2	SP5402	P12488	37(x2),38(x2),39(x2),40(x2),41(x2)
40	Washer spring	2	SP0467	P12488	37(x2),38(x2),39(x2),40(x2),41(x2)
41	Nut M8	2	SP0366	P12488	37(x2),38(x2),39(x2),40(x2),41(x2)

VWC and VWCLP Windlass parts

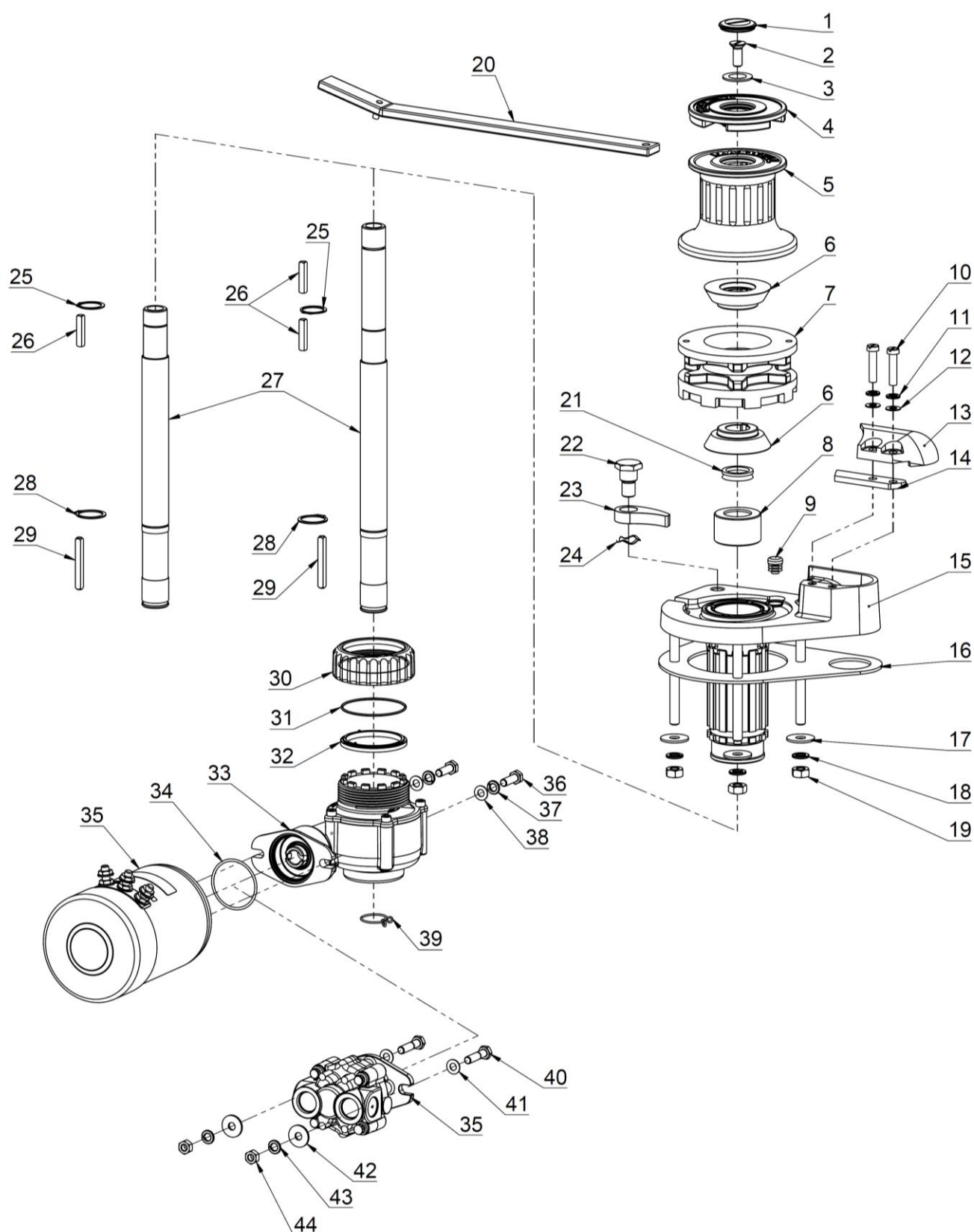


Fig 2. VWC and VWCLP Windlass parts

VWC and VWCLP Windlass Parts List

Item No	Component Description	QTY.	Part Number	Kit	Include items
1	Cap	1	3465	P101615	1,2,3,21,24,25,26(x2)
2	Screw CSK 3/8" x 1"	1	SP0040	P101615	1,2,3,21,24,25,26(x2)
3	Retaining Washer	1	3467	P101615	1,2,3,21,24,25,26(x2)
4	Clutch nut 1000 1500 series	1	6195		
5	Capstan	1	7502		
6	Clutch Cone 1000 1500 Series	2	3497	P101623	6(x2)
7	Chainwheel 1000 -1500 VW/VWC	1	3173		
8	Deckplate bearing Ø29 x Ø50 x30	1	6147		
9	Plug - head 15.8 dia finned	1	SP0875		
10	Screw Chs Hd M8	2	SP0070	P101600	10(x2),11(x2),12(x2),13,14
11	Washer Spring - M8	2	SP0467	P101600	10(x2),11(x2),12(x2),13,14
12	Flat washer	2	SP0413	P101600	10(x2),11(x2),12(x2),13,14
13	Chain Cover	1	4528	P101600	10(x2),11(x2),12(x2),13,14
14	Stripper 1000 1500 VWC	1	4445	P101600	10(x2),11(x2),12(x2),13,14
15	Deckplate 1000 1500 VWC VWCLP - 50TDC	1	P101616	Pre-assembled kit	Pre-assembled kit
	Deckplate 1000 1500 VWC VWCLP - 100TDC	1	P101617	Pre-assembled kit	Pre-assembled kit
	Deckplate 1000 1500 VWC VWCLP - 150TDC	1	P101618	Pre-assembled kit	Pre-assembled kit
16	Gasket - VWC VWCLP 1000 1500	1	3473		
17	Washer Flat Large - M10	4	SP5401		
18	Washer Spring - M10	4	SP0466		
19	Nut M10	4	SP0371		
20	Lever 800 series emergency crank assy	1	P20044		
21	V-Ring V28	1	SP0708	P101615	1,2,3,21,24,25,26(x2)
22	Pawl Pin - 1000 1500	1	6148	P101620	22,23,24
23	Pawl - 1000 - 1500 series	1	3372	P101620	22,23,24
24	Spring Wave	1	SP0463	P101620	22,23,24
25	Circlip - Ext - 1" x 1mm	1	SP0848	P101615	1,2,3,21,24,25,26(x2)
26	Key 6.35x34L	2	3462	P101615	1,2,3,21,24,25,26(x2)
27	Shaft 1000 1500 VW VWC - 50TDC	1	6152		
	Shaft 1000 1500 VW VWC - 100TDC	1	6151		
	Shaft 1000 1500 VW VWC - 150TDC	1	6150		
	Shaft 1000 1500 VWLP VWCLP - 50TDC	1	6203		
	Shaft 1000 1500 VWLP VWCLP - 100TDC	1	6204		
	Shaft 1000 1500 VWLP VWCLP - 150TDC	1	6205		
28	Circlip External 1 1/8"	1	SP0878	P101619	28,29,39
29	Key 1/4' x 1/4' 57mm Long	1	6340	P101619	28,29,39
30	Locknut	1	4257	P100088	30,31,32
31	O-Ring 66x2	1	SP2751	P100088	30,31,32
32	Collar	1	4258	P100088	30,31,32
33	Gearbox - 1000 - 44-1	1	P100900		
	Gearbox - 1500 - 56-1	1	P102730		
34	O-ring 50 x 2	1	SP2787	P12487	34,36(x2),37(x2),38(x2)
35	Motor 12V 1000W - with 1000 VWC/VWLP	1	P12072		
	Motor 24V 1200W - with 1000 VWC/VWLP	1	P12074		
	Motor 48V 1200W - with 1000 VWC/VWLP	1	SP5140		
	Motor 12V 1200W - with 1500 VWC/VWLP	1	P12073		
	Motor 24V 1200W - with 1500 VWC/VWLP	1	P12074		
	Motor 48V 1200W - with 1500 VWC/VWLP	1	SP5140		
	Motor Hydraulic	1	P14366		
36	Screw Hex Hd - M8	2	SP0288	P12487	34,36(x2),37(x2),38(x2)
37	Washer Spring - M8	2	SP0467	P12487	34,36(x2),37(x2),38(x2)
38	Washer Flat - 5/16" x 5/8" x 20G	2	SP0413	P12487	34,36(x2),37(x2),38(x2)
39	Quick Release Clip	1	4547	P101619	28,29,39
40	BoltHex Hd - M8	2	SP3216	P12488	40(x2),41(x2),42(x2),43(x2),44(x2)
41	Flat washer	2	SP0413	P12488	40(x2),41(x2),42(x2),43(x2),44(x2)
42	Flat washer	2	SP5402	P12488	40(x2),41(x2),42(x2),43(x2),44(x2)
43	Washer spring	2	SP0467	P12488	40(x2),41(x2),42(x2),43(x2),44(x2)
44	Nut M8	2	SP0366	P12488	40(x2),41(x2),42(x2),43(x2),44(x2)

Ordering Spare Parts

When ordering spare parts, please refer to the parts list above and quote the following details.

Windlass Model

VWC ☐ VWCLP ☐ VW ☐ VWLP ☐

50TDC ☐ 100TDC ☐ 150TDC ☐

Serial number (located on gearbox housing)

Power supply

12V ☐ 24V ☐ 48V ☐ Hyd ☐

Part details

Part number	Description	Quantity

Refer back cover for contact details.

Chain Selection

THE MAXWELL WINDLASSES ARE DESIGNED FOR ALL CHAIN SYSTEMS USING: 6-10mm (1/4" – 3/8") short link

Your Windlass should have a rating of approximately 3 times total combined weight of the anchor and chain.

The ground tackle should have been selected taking into account:

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

CORRECT FIT OF CHAIN TO CHAINWHEEL IS ESSENTIAL FOR THE WINDLASS TO OPERATE PROPERLY.

A range of chainwheels is available to suit your windlass.

The correct fit can only be guaranteed where a standard chain known to us is used. Alternatively a 450mm (18") or 12 links (whichever is longer) sample must be forwarded to us to match fit. Where patterns to suit are not held by us we are able to manufacture to instructions and reserve the right to charge cost thereof.

THE WINDLASS SHOULD BE USED IN CONJUNCTION WITH A MAXWELL CHAIN STOPPER, OR SNUBBER, OF THE APPROPRIATE SIZE.

Installation

General Requirements

Foredeck layout

Make sure that the area of deck between the windlass and the bow roller is clear of obstructions.

The bow roller should have a central groove suitable for the chain size.

Use a chain guide if necessary to prevent the chain from running against the deckplate and potentially causing damage to the windlass.

Anchor and chain considerations

When purchasing an anchor, make sure it fits into the bow roller and is self-launching.

Use a swivel between the anchor and the chain to prevent the line from twisting as the anchor is raised or lowered.

To prevent build up of chain on deck causing possible damage, the bow roller must allow the anchor to free fall immediately when the anchor is deployed.

Make sure that at least three links of chain are exposed when the anchor is docked.

The chain *must* gravity feed into the locker. If the chain outlet cannot be positioned directly over the locker, heavy wall flexible plastic pipe can be used to direct the chain to the required area. It is important that the chain slips through easily, completely unaided. It may be necessary to provide the pipe with a bell mouth or to bell mouth the entrance to the chain outlet from the locker to assist the free flow of the chain from the locker.

NOTE: Make sure you securely fasten the end of the chain to the boat.

Required clearances

Ideally the outlet for the chain should be directly over the chain locker. The chain should have at least 300mm (1ft) clear fall to allow the chain to straighten before passing through the windlass.

Position the windlass clear of pulpit, lifelines and bulwark so that there is room to swing the Clutch Lever. Refer to Figures on page 26 and 27 for overall dimensions

The chain locker must be of such a size that the chain will heap up and feed out naturally without fouling the windlass motor.

Allow access for conveniently connecting the supply lines under deck after the windlass is bolted in position.

It should be noted that the gearbox can be indexed at different positions in relation to the deck plate. Be sure to select the most convenient position and allow for the best run for the chain to clear the motor.

Aligning the windlass

“UP” is the clockwise rotation when looking down on the windlass.

The windlass must be positioned to allow the chain to have a clear run from the bow roller to the chainwheel.

The deck plate should be mounted pointing in the direction of the incoming chain and with the left hand side parallel to the line of the incoming chain. This arrangement allows the chain to have maximum engagement with the chainwheel.

The bow roller should have a vertical groove to suit the profile of the chain. This will align the chain so that it enters the chainwheel without twisting.

Installation Instructions

Before you start

Before installing the windlass, identify any bulkheads, wiring or piping under the deck. This may determine where the windlass can be positioned. Ensure the deck is flat, if not; a plinth will be required to ensure the windlass sits on a flat surface.

If the windlass is installed horizontally, on a bulwark (mainly VW type), make sure that the gearbox is installed with worm on the lower side to ensure good lubrication of the gears. The stripper should also be positioned at the lowest end of the deckplate

Deck thickness

It is imperative that the deck and under-deck pad (not supplied) are of sufficient thickness and structural strength to support the loads imposed on or by the windlass.

An under-deck pad should spread the load as widely as possible.

Preventing electrolysis

For aluminium boats, it is essential that the deckplate be insulated from the deck with a non-conductive gasket (not supplied), that the mounting studs pass through insulators (not supplied), and that the under-deck fastenings are insulated from the deck with fibre washers (not supplied).

It is also important that the anchor and chain are insulated from the hull, including rubber lining the chain locker and insulating the fixing for the end of the rode to the hull.

Without these precautions, severe electrolysis can occur.

Because the motor is of the isolated earth type, it is not necessary to separately earth the windlass.

Locating the chain stopper

The chain stopper should be positioned and aligned in a convenient position between the windlass and the bow roller, so that it clears the anchor stock. The chain should pass through the stopper without being deflected.

Installation procedure

**** ATTENTION ****

Please note, when installing winch and in particular the chain wheel. The shaft and bronze clutch cones **MUST** be coated in grease during assembly. See "Typical Greasing Instructions" on Pg 30.

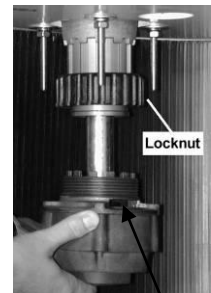
1. Use the Deck Cutout Details drawing as a guide for marking and cutting the holes.
Tip: On GRP boats, running the drill in reverse first will reduce chipping of the gel coat.
Using hole saws, cut the holes for the spacer tube and chain pipe.
2. On GRP or wooden decks, seal the edges of the holes with epoxy to avoid ingress of moisture.
3. Remove the gearbox from the spacer tube by undoing the Locknut. With gearbox held horizontally, check that oil is showing half way up the sight glass. If necessary, top up with SAE 90 (Shell Omala 320, Castrol Alpha SP320 or equivalent), by removing the sight glass and adding the required amount. DO NOT OVER FILL!
4. Use the gasket supplied to seal the windlass to the deck. For aluminium boats fit a non-conductive gasket to insulate the deckplate from the deck to prevent electrolysis.

5. 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.



6. Smear a coating of grease on the shaft and spacer tube. Fit the gearbox/motor assembly to the bottom of the spacer tube. Orientate the motor away from the incoming chain and then tighten the plastic locknut by hand.

NOTE: If the unit is going to be mounted in such a way, that it may be tilted, ensure the drainage slot on the gearbox is at the lowest point to prevent excess water etc. sitting around the seals.



Drainage Slot

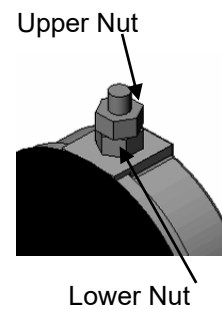
7. Rotate the shaft by hand (or by using the manual crank handle) to align the keyway in the shaft with the keyway in the gearbox. Insert the key into the keyway.



8. Fit the quick-release clip into the groove in the bottom of the shaft to secure the key. Make sure the eyelets are facing down and away from the keyway.



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



Assembling the chainwheel.

Refer Fig 1, page 4 for VW and VWLP Windlass and Fig 2, page 6 for VWC and VWCLP Windlass

1. With a pen knife or similar, carefully remove the Cap.
2. Remove the screw and retaining washer.
3. Remove the Clutch Nut, drum (except for low profile) and upper clutch cone.
4. Remove the stripper arm by undoing the two screws.
5. Grease the two clutch faces of the chainwheel and insert with the side that has two holes facing upwards.
6. Assemble the components in the reverse order they were removed.

Assembling the motor.

1. Bring the motor up to the gearbox and align the roll pin with the slot in the worm.
2. Use parts from the "motor bolt kit" to assemble as per diagram on page 4.

Installing on a sloping or curved deck

Ensure that the windlass has the correct vertical alignment with the bow roller. If necessary, use a mounting pad.

Important note to Boat Builders

Experience has shown that on long ocean deliveries as deck cargo, sulphur (from the ships exhaust and condensation) settles and severely damages the chrome plating and stainless steel of the windlass by breaking down the protective chrome oxide film.

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

Wiring Instructions

Electrical component layout

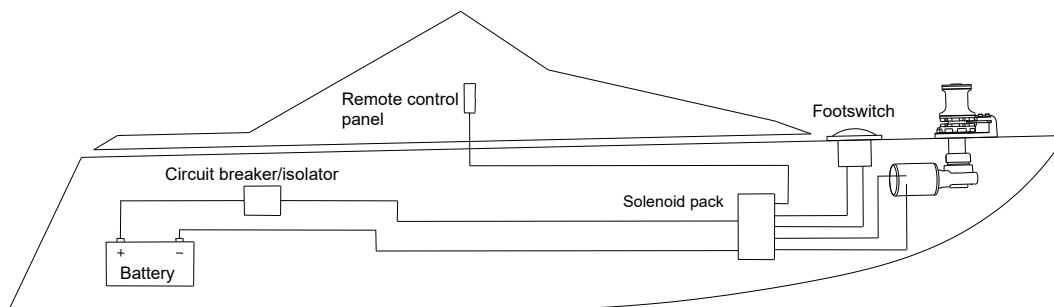


Figure 3 - Electrical component layout

Solenoid pack

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

Circuit breaker/isolator panel

This unit provides limited protection for the motor and full protection for the power supply cables. It also provides the means to isolate the system from the battery.

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

This equipment or equivalent is mandatory to meet USCG requirements.

Remote control panel

The remote control panel should be mounted in a convenient location (such as the bridge, helm or cockpit) so that the operator can see the windlass. Mount and seal the panel so that the terminals project into a dry area.

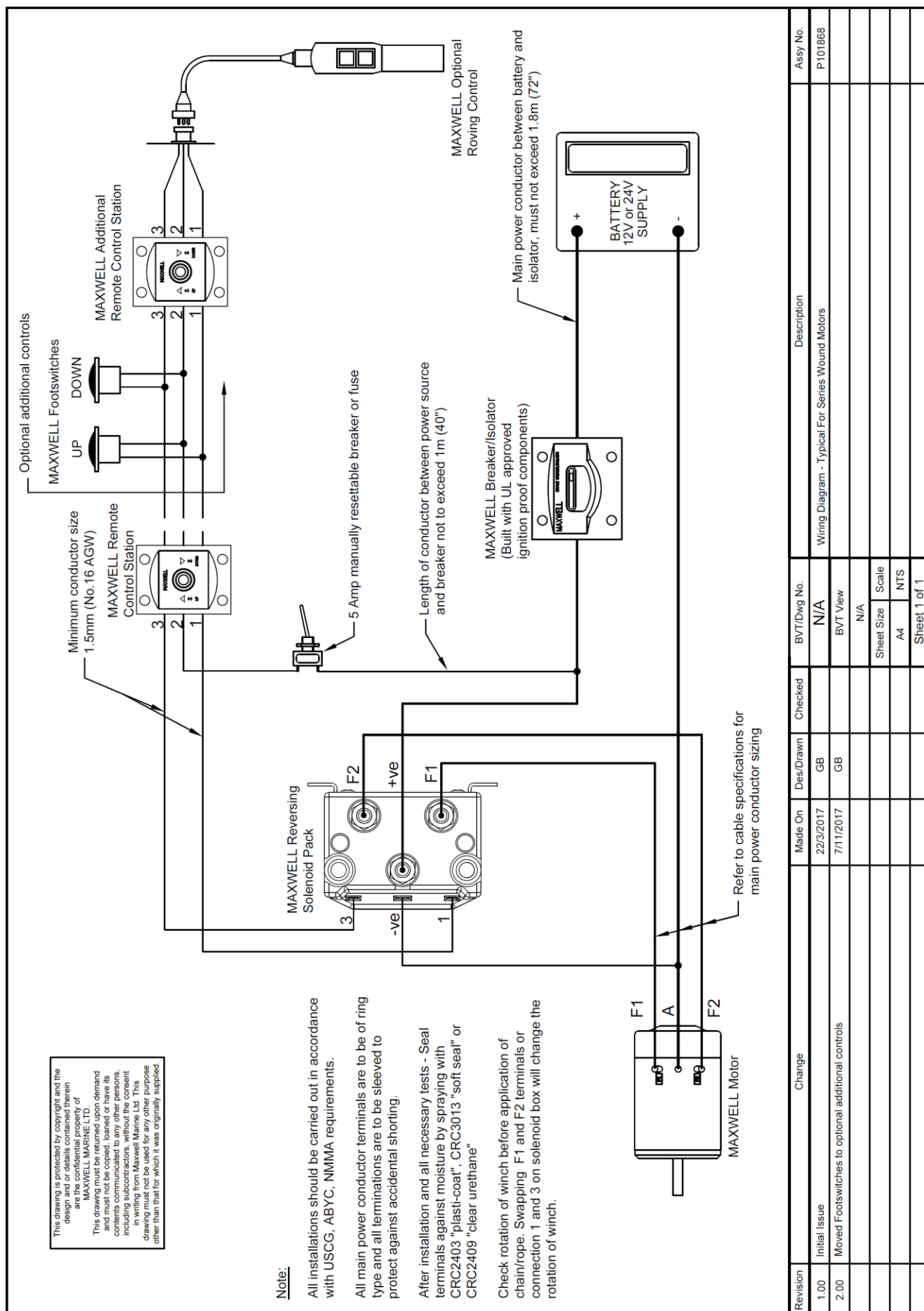
Optional footswitches

For safe operation, the footswitches must be at least 500 mm (20") from the windlass.

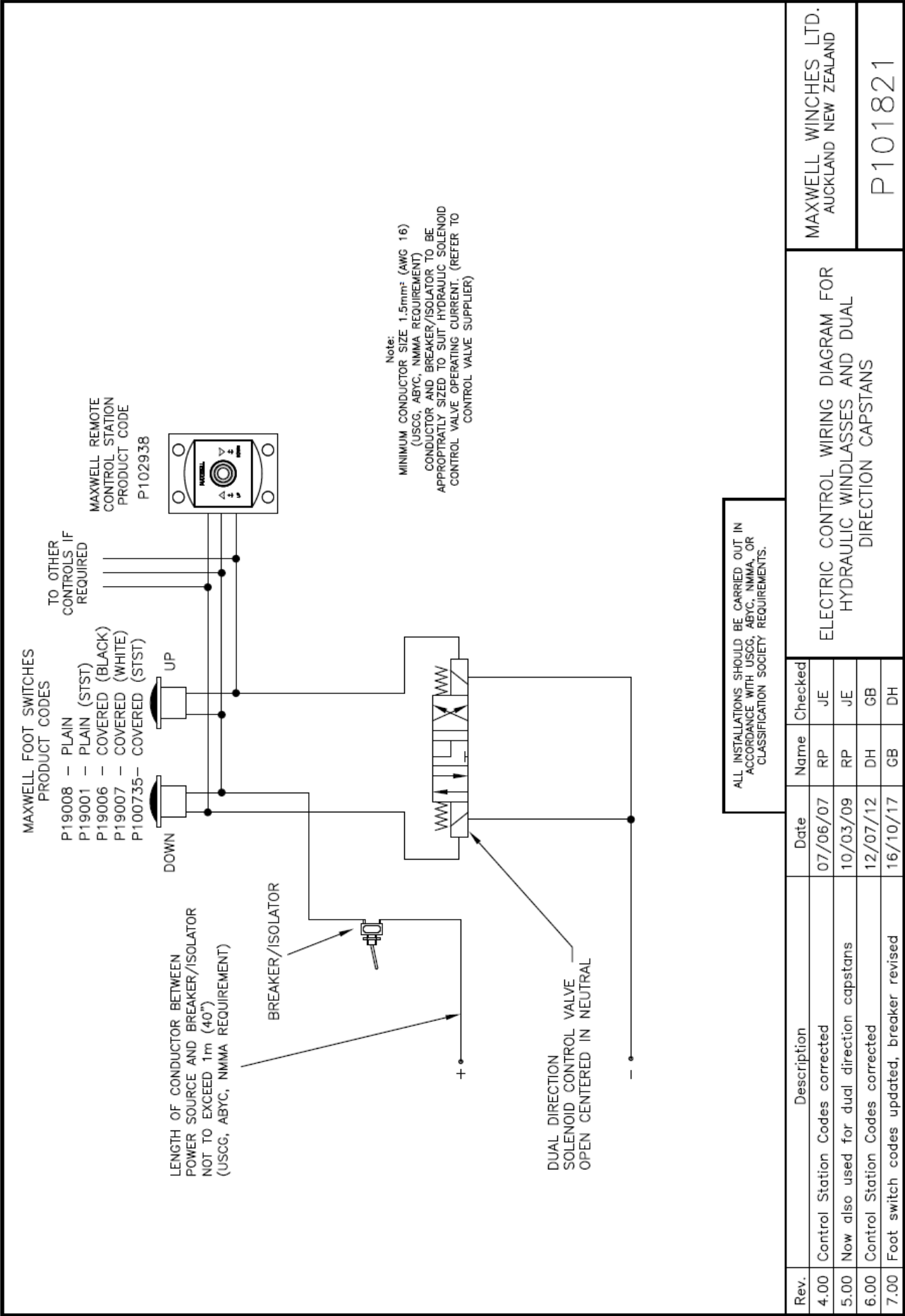
The below-deck part of the footswitch must be in a dry environment, and the breather holes must be kept clear.

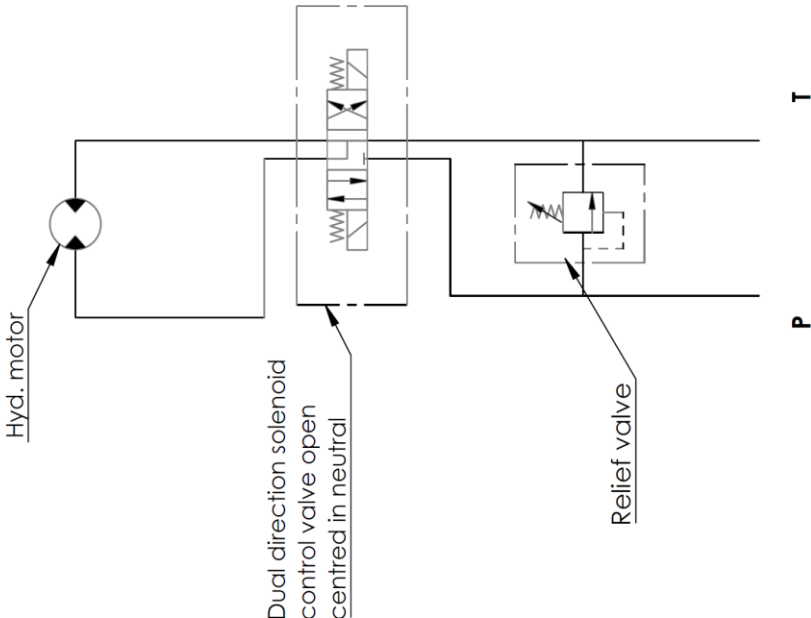
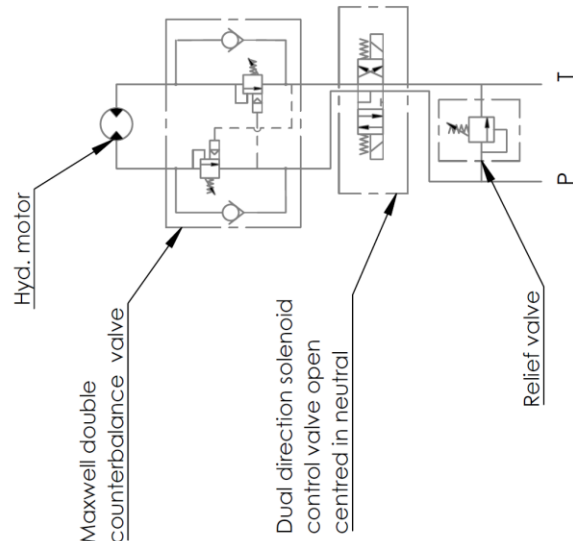
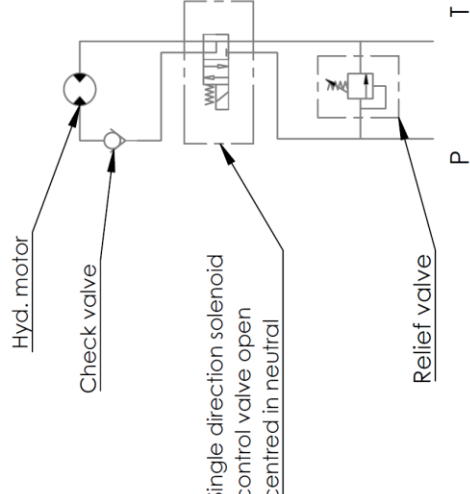
The arrows on the footswitches should be arranged to indicate the direction of operation.

Wiring schematic (series wound motor)



Wiring schematic (Hydraulics)



For improved backwind prevention :		Copyright Maxwell Marine International	
Standard schematic			
	Note: Ensure that selected hydraulic components are adequate for recommended flow rate. For maximum pressure & recommended flow see specification page in Product manual.		
Dual direction			
Single direction			
Hydraulic Schematic for wormbox (windlass /capstan) with no case drain		P101870	
Description		Pbv/Dwg No.	
File location: W:\Product Data\assemblies\P101000-P101999\P101870_1.00_pt_Hydraulic schematic for worm gearbox (windlass, capstan) with no case drain			
Rev.	Change	Made on	Des/Dwn Checked
1.00	Initial issue	15/02/18	DH CP

Cable specifications

Cable lengths given are from the battery terminal to the terminal on the windlass motor via the solenoid box and back to the battery.

Where a portion of cable runs through the engine room, a size increase should be made as indicated.

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".

All installations must be carried out in accordance with USCG, ABYC, NMMA or other local electrical requirements.

Recommended conductor sizes are based on cables with a heat rating of 90° and allow for a maximum 10% voltage drop over the total length. Due to circuit breaker size (135amp / 80amp /40amp) a minimum of 25mm² cable for 12V systems and 10mm² cable for 24V systems is to be fitted.

Note there is some cross over between metric cable sizes and AWG cable sizes.

<u>12V systems (135Amp breaker)</u>				
Total Cable Length From Battery to Winch Then Back to Battery	Cable Size		Engine room Size Correction*	
	mm²	AWG	mm²	AWG
Up to 10m (33')	25	4	35	2
10m - 15m (33'-50')	35	2	-	-
15m – 20m (50' – 65')	50	1	-	-
20m – 25m (65' – 82')	50	0	-	-
25m – 35m (82' – 115')	70	2/0	-	-
35m – 45m (115' – 150')	95	3/0	-	-

<u>24V systems (80Amp breaker)</u>				
Total Cable Length From Battery to Winch Then Back to Battery	Cable Size		Engine room Size Correction*	
	mm²	AWG	mm²	AWG
Up to 10m (33')	10	6	6	5
10m - 15m (33'-50')	16	4	42	1
15m – 20m (50' – 65')	25	4	-	-
20m – 25m (65' – 82')	35	3	-	-

<u>48V systems (40Amp breaker)</u>				
Total Cable Length From Battery to Winch Then Back to Battery	Cable Size		Engine room Size Correction*	
	mm²	AWG	mm²	AWG
Up to 10m (33')	4	12	6	10
10m - 15m (33'-50')	6	10	-	-
15m – 25m (50' – 82')	10	8	-	-
25m-30mm (80'- 100')	16	6	-	-

* Engine room size correction factor is based on the ambient temperature of the engine room to be 60° C.

Hydraulic specification

Pressure/flow quoted in the specifications section, assumes operation at rated capacity with standard motor fitted.

Levels below that specified can be accommodated by a motor change.

Contact Maxwell Marine Ltd, for a representative who can help with this selection.

Operation

Warnings

- When using the windlass, 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.
- When the isolator switch is on, the windlass can be started from either the remote control panel or the optional footswitch. Always make sure the isolator switch is turned off when the system is not being used.
- The system provides protection for the motor from excessive current or short circuit. It does not provide protection against heat build up due to prolonged operation or excessive loads. Make sure you give the motor time to cool off; otherwise the warranty may be invalidated.

Anchoring Tips

- Use a chart to ensure that there is sufficient depth of water and shelter in the location where you want to anchor.
- Slowly cruise around the anchorage and check the boats already at anchor.
- Allow adequate room. Remember that power vessels swing differently from yachts. Boats on rope lines swing around more than those on chains.
- Always anchor the boat from the bow.
- Slow down and keep the bow into the wind or current, whichever is stronger. When the boat comes to a complete stop, start to lower the anchor.
- After lowering the anchor, either drift back or slowly reverse while paying out the anchor line.
- The length of line you pay out should be at least three times the depth of water.
- Do not switch off the engine until you are sure the anchor is holding.
- Once anchored, secure the anchor line with a chain stopper etc. Do not anchor off the windlass.
- Use reference points, such as prominent landmarks, to check that the anchor is holding.
- Check the boat's position regularly in case the anchor drags.

Lowering the Anchor

1. Run the boat's motor(s) at sufficient rpm to activate the charging system.
2. Insert the Clutch Lever into the clutch nut and tighten the clutches by turning the nut clockwise. Only tighten sufficiently so that you could easily pull up the anchor. **REMOVE THE LEVER.** NOTE: Over tightening the clutches can cause damage to the motor when docking the anchor.
3. With the circuit breaker/isolator switch "On," press the toggle switch down on the remote up/down control panel to pay out the chain (or press the "Down" footswitch if fitted).
4. Pay out sufficient chain to set the anchor.
5. Watch as the chain is being fed out. Any jam might cause damage to the windlass.

Raising the Anchor

1. Run the boat's motor(s) at sufficient rpm to activate the charging system.
2. Insert the Clutch Lever item into the clutch nut and tighten the clutches by turning the nut clockwise. Only tighten sufficiently so that you could easily pull up the anchor. **REMOVE THE LEVER.** NOTE: Over tightening the clutches can cause damage to the motor when docking the anchor.
3. With the circuit breaker/isolator switch "On," operate the windlass by pressing the toggle switch up on the remote up/down control panel (or press the "Up" footswitch if fitted).
4. Motor up to the anchor while retrieving it. Do not use the windlass to pull the boat to the anchor.
5. To avoid damaging the bow fitting, retrieve the last metre (3') of rode very slowly and take care when docking the anchor.

Tip: Mark the chain at suitable intervals with coloured line, or purchase and install a Maxwell AutoAnchor rope/chain counter.

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

1. Check that the chain has unrestricted travel over the bow roller.
2. Ensure the clutch is tight enough to hold the anchor.
3. Disengage the pawl from the chainwheel and/or chain from the chain stopper.
4. Standing well clear of the chain, insert the clutch lever into the clutch nut and loosen by slowly turning the handle anticlockwise.
5. Tightening the clutch nut clockwise will control the rate of descent.

CAUTION

Do Not allow the chainwheel to free wheel as this will allow dangerously high chain speeds to build up.

4. When the required amount of chain is out, reset the clutch and remove the lever and stow.

Raising the Anchor Manually

1. Tie off the chain so that it does not pay out when the clutch is released.
2. Insert the crank handle into the clutch nut and turn anticlockwise to loosen the clutch.
3. Engage the pawl on the chainwheel and/or chain stopper onto the chain.
4. Disassemble winch until the top of the chain wheel is showing.
5. Insert the Clutch Lever spigot into the chain wheel hole and by levering on the shaft, turn the chainwheel.
6. Before releasing pressure, always make sure the pawl is engaged into the chainwheel or the chain stopper is engaged. This is to prevent the anchor from releasing while manually winching.

Using the Warping Drum

The vertical 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 warping drum:

1. Make sure the anchor is secured with the pawl and/or chain stopper engaged.
2. Insert the Clutch Lever 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.
3. Take three turns of rope around the drum in a clockwise direction.
4. While holding the tail of the rope, press the "Up" footswitch. The capstan will rotate clockwise.

Notes

- To increase rate at which the rope is hauled in, increase the load on the tail.
- To decrease rate at which the rope is hauled in, decrease the load on the tail.
- Extra turns around the drum will increase the grip and require less load on the tail.

CAUTIONS

- Make sure that you do not operate the footswitch accidentally while putting extra turns on the capstan.
- Keep your fingers clear of the capstan.
- Do not put so many turns on the drum that easing the load on the tail will not allow the rope to slip on the drum.

Maintenance

Carrying out the following simple maintenance procedures will provide years of trouble-free service from the windlass and will ensure that the warranty remains valid.

Recommended lubricants

Gearbox oil

Capacity: 70-80ml (2.4 – 2.7 fl oz)

Type: API GL-4 or lower (low sulphur) gear oil with a weight of between 90 & 110,

Main shaft, bearing,
and clutch surfaces

Marine grease, Lithium or Lithium complex based grease with a consistency between NLGI No.1 and NLGI No.3

Service Intervals

	Every trip	3 monthly	12 monthly	3 yearly
Ensure clutch is adjusted correctly				
Strip and grease clutch				
Remove windlass components, grease with suitable lubricant				
Split gearbox from spacer tube, clean and re-grease mating faces				
Spray fresh water into drainage slot on gearbox, to breakdown and flush away any build up of salt/debris, that may have accumulated				
Service motor				
Remove gearbox, replace oil and seals				

Topworks

The above-deck parts of the windlass should be washed down with fresh water regularly.

Every three months, remove the chainwheel. Refer to “Assembling the chainwheel” on page 13, for disassembly instructions

Use the grease (specified above) and with the aid of a clean brush or non-fluffy rag, lightly grease the thread on the top end of the shaft and the bores and clutch faces of the parts removed.

Re-assemble in reverse order. IMPORTANT – care must be taken to ensure the key/keys are properly seated in the shaft.

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

Regular use of CRC3097 “Long Life” will assist maintaining the bright chrome finish.

Natural lustre of bronze units can be restored by polishing with mild abrasive liquid polish. DO NOT use on chrome units.

Below Deck

Every three months.

The under deck components should be sprayed, preferably with CRC 3097 "Long Life" or alternatively, CRC6-66 or WD40.

Particular attention should be paid to electric motors, including the motor terminals, footswitch terminals, terminals on the Reversing Solenoid plus the battery and isolator terminals.

Gearbox

Every 3 months, check level of oil in gearbox using the sight glass. If necessary top up as per step 4 of the installation procedure".

The gearbox is a self-contained sealed unit. We recommend that the gearbox be removed and serviced by an authorised Maxwell service technician every three years. Visit our website (www.maxwellmarine.com) for a list of service centres and agents.

Motor

DC and Hydraulic Motors

For maximum protection, we recommend that the motor and electrical connections be sprayed periodically with CRC Soft Seal.

The motor can be removed from the gearbox by undoing two bolts and washers.

A replaceable roll pin SP0530 (also included in the brush kits) is a press fit in the output end of the drive shaft.

12V, 24V and 48V Motors

Providing the windlass is properly installed and the windlass is not abused, trouble free operation can be expected.

Remove the brush cover from the motor. Clean out accumulated carbon dust using a compressed air hose.

Check and replace brushes if worn.

Remove any rust build up from the casing and paint with a suitable coating

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

Replacement brush sets are available – order:

Part No. P100807 – 12 Volt.

Part No. P100808 – 24 Volt.

Part No. P100810 – 48 Volt.

Trouble Shooting Guide

Windlass does not operate when activated

- Check that the breaker/isolator panel is "On."
- Check the connections to the following:
 - Remote up/down control panel and footswitches (if fitted)
 - Circuit breaker/isolator panel
 - Reversing solenoid
 - Windlass motor
- Check the battery condition by operating other electrical equipment.
- Check that the solenoid is working. You should hear the solenoid click when activated.

Motor is working but the chainwheel does not rotate

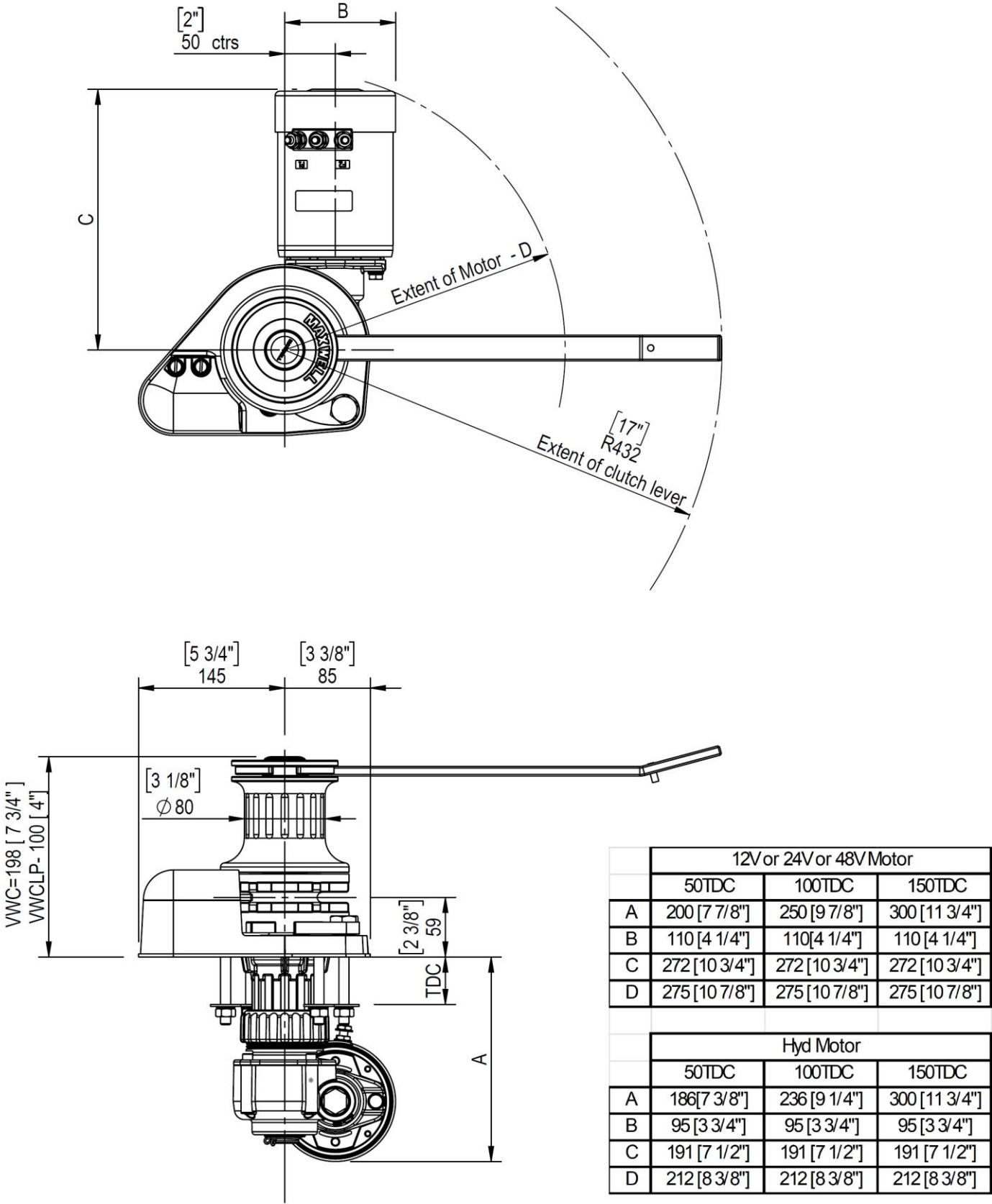
- Check that the clutch nut is not too loose, causing slippage.
- Check that the chainwheel is not jammed with the chain. If necessary, reverse the windlass to free the jam.
- Check that the key between the shaft and the gearbox is installed.
- If the windlass does not rotate smoothly or there is excessive noise, the gearbox may be damaged.
- Check the motor drive pin by unbolting the motor from the gearbox.

Reference Information

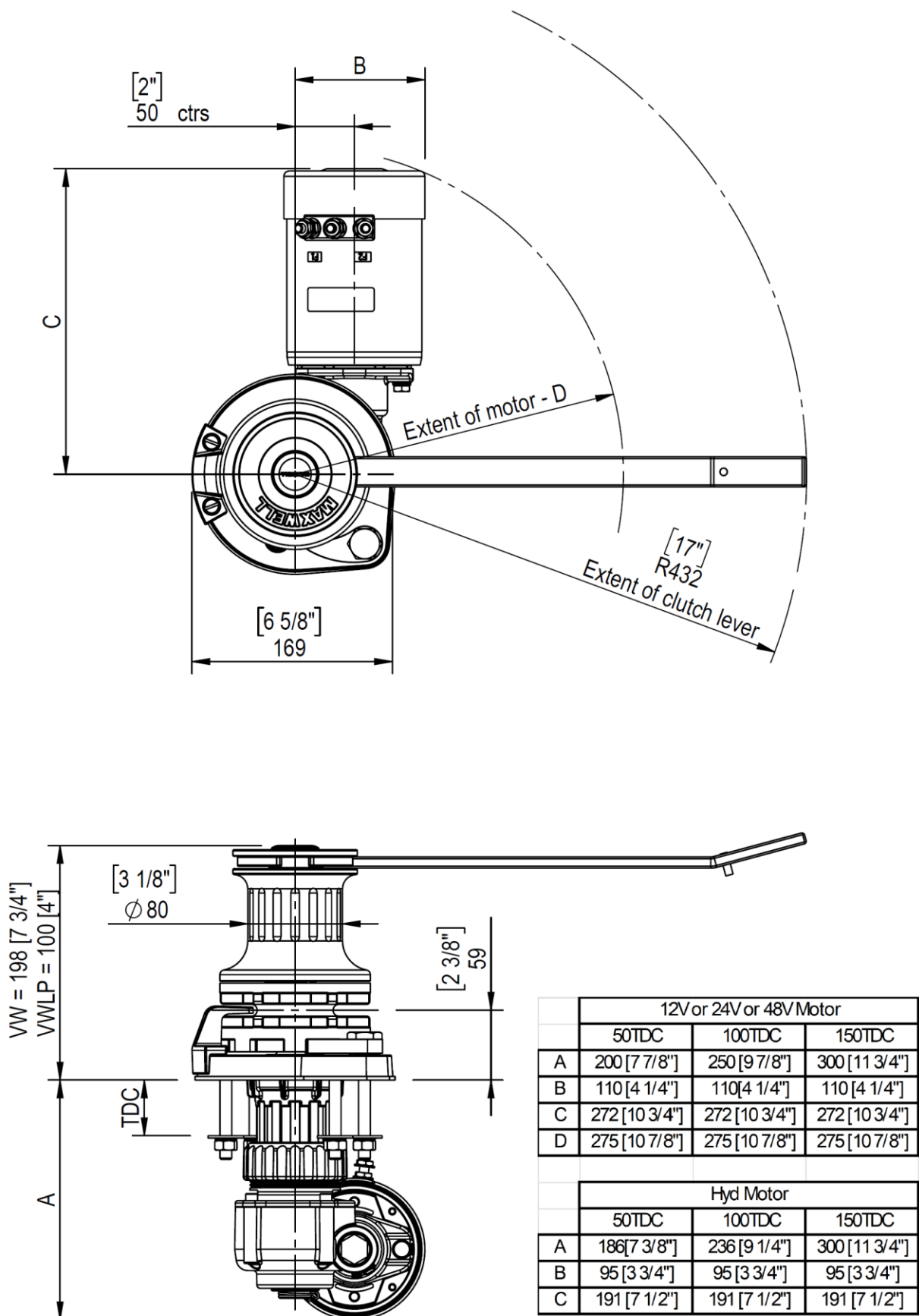
Specifications

	VWC & VWCLP 1000	VWC & VWCLP 1500
Max. Pull Rating	456kg (1000 lbs)	680kg (1500 lbs)
Chain Speed (Normal Working Load)	20 m/min (65 ft/min)	17 m/min (56ft/min)
Chain Size	6-10mm (1/4" - 3/8") short link	
Gearbox Ratio	44:1	56:1
Motor Rating (Electric)	1000w	1200w
Current at normal working loads – 12V	120-160A	160-200A
Current at normal working loads - 24V	60-80A	80-100A
Current at normal working loads - 48V	30-40A	40-50A
Hyd. Motor Recommended Flow	20 l/min (5.3 US Gal/min)	
Hyd. Motor Maximum Flow	30 l/min (8 US Gal/min)	
Hyd. Motor Max. Recommended Pressure	100 Bar (1450 psi)	138 Bar (2000 psi)
Hyd. Motor Ports	SAE 8 (3/4" 16 UNF)	
Hyd. Oil	Viscosity ISO 32 - ISO 68 @ 20-50°C *	

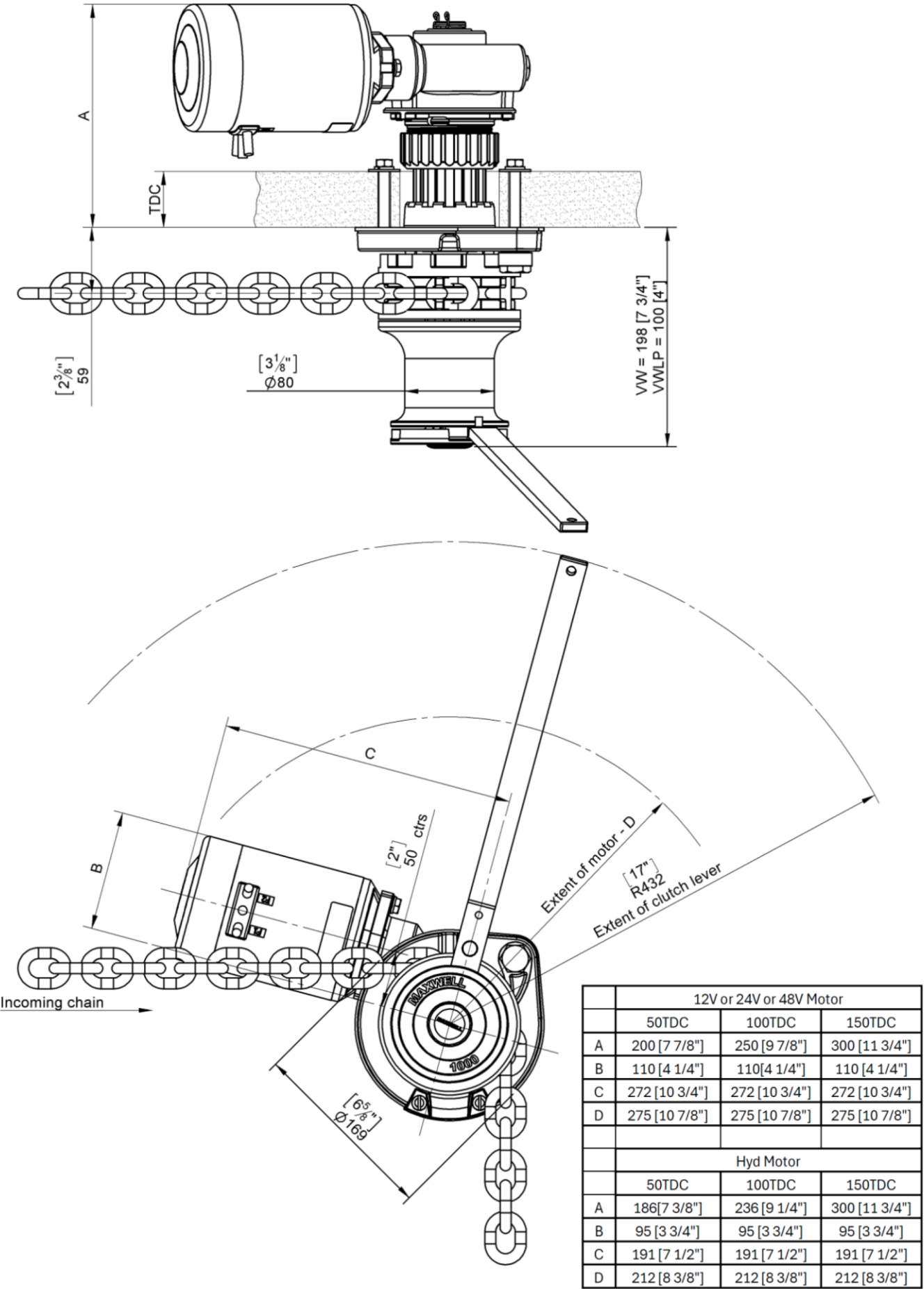
Dimensions – VWC



Dimensions – VW

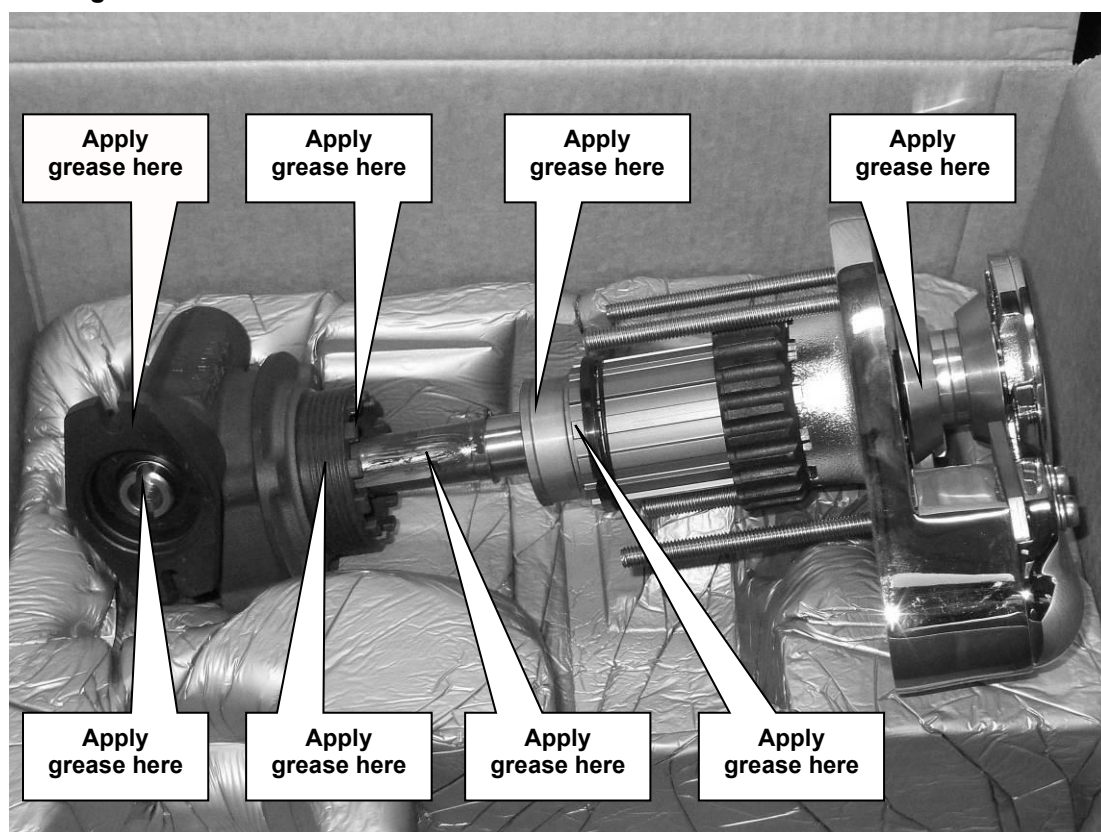


Dimensions – VW horizontal arrangement



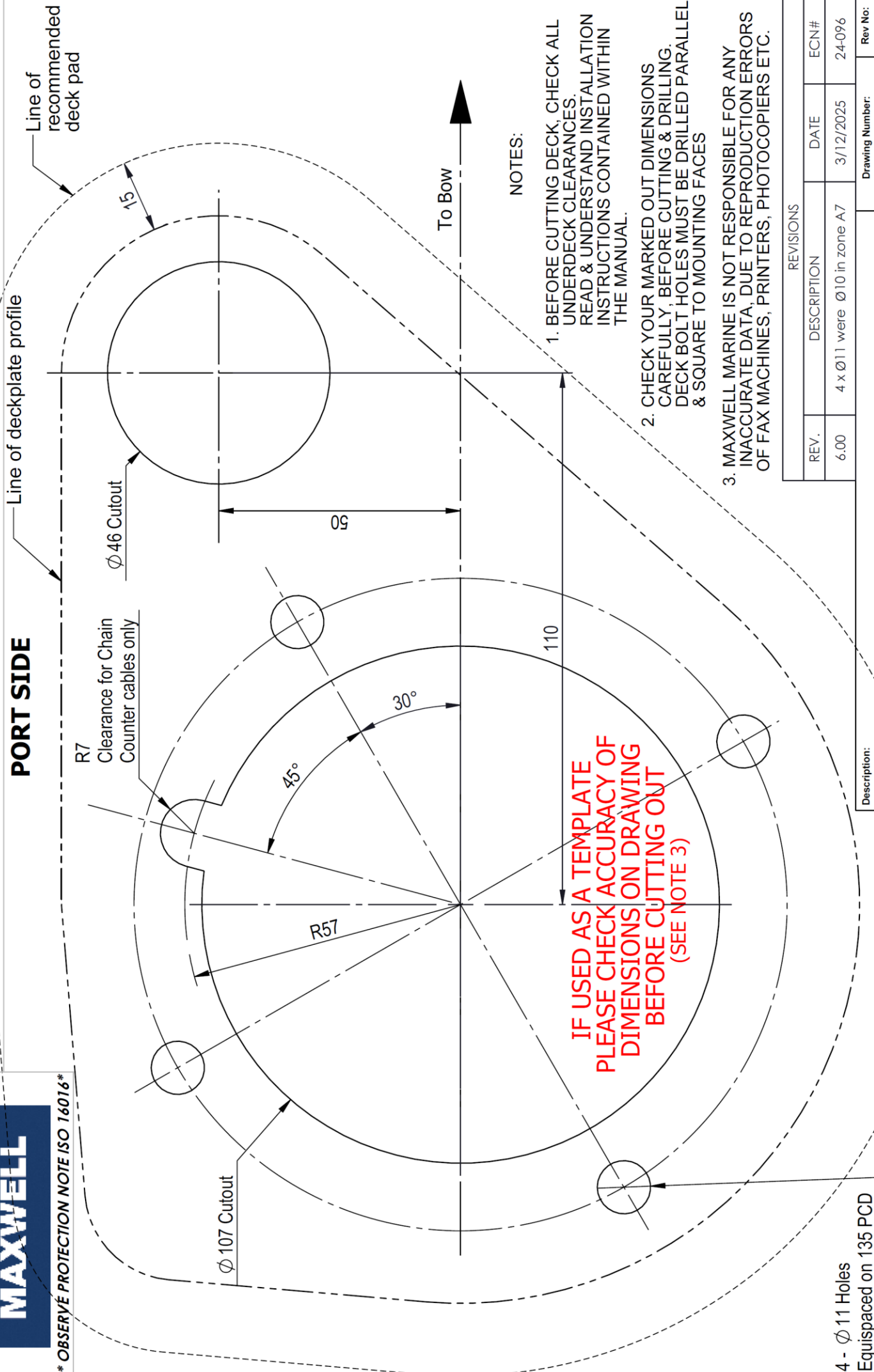
Typical Greasing Instructions

Note: Picture shows typical winches, greasing instructions apply to all types using this motor gearbox and spacertube arrangement



Grease must be applied to motor face, gearbox locating lugs, spacer tube, gearbox thread, shaft and clutch cone faces where shown. Use CRC 3097 (or equivalent) spray to coat all under deck components to help guard against corrosion. **Failure to do so will void warranty.**

PORT SIDE



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.

REVISIONS

REV.	DESCRIPTION	DATE	ECN#
6.00	4 x Ø11 were Ø10 in zone A7	3/12/2025	24-096

Description:		Drawing Number:	Rev No:
Deck Cutout Template - 1000 1200 1500 VWC VWCLP		3487-345	6.00
Drawn by: DHaluza	Checked by: GBarton	Approved by: GBarton	Sheet Status: Released
Approval Date: 03/12/2025			Sheet 1 of 1

4 - Ø 11 Holes
Equispaced on 135 PCD

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General Note: ALL DIMENSIONS IN MILLIMETRES / REMOVE ALL BURRS AND SHARP EDGES / ALL FINISHES SPECIFIED BY DRAWING NOTE / **>>IF IN DOUBT ASK<<***



* OBSERVE PROTECTION NOTE ISO 16016*

REVISIONS			
REV.	DESCRIPTION	DATE	ECN#
7.00	4 x Ø11 were Ø10 in zone E3	3/12/2025	24-096

PORT SIDE

R7
Clearance for Chain
Counter cables only

4 - Ø 11 Holes
Equispaced on 135 PCD

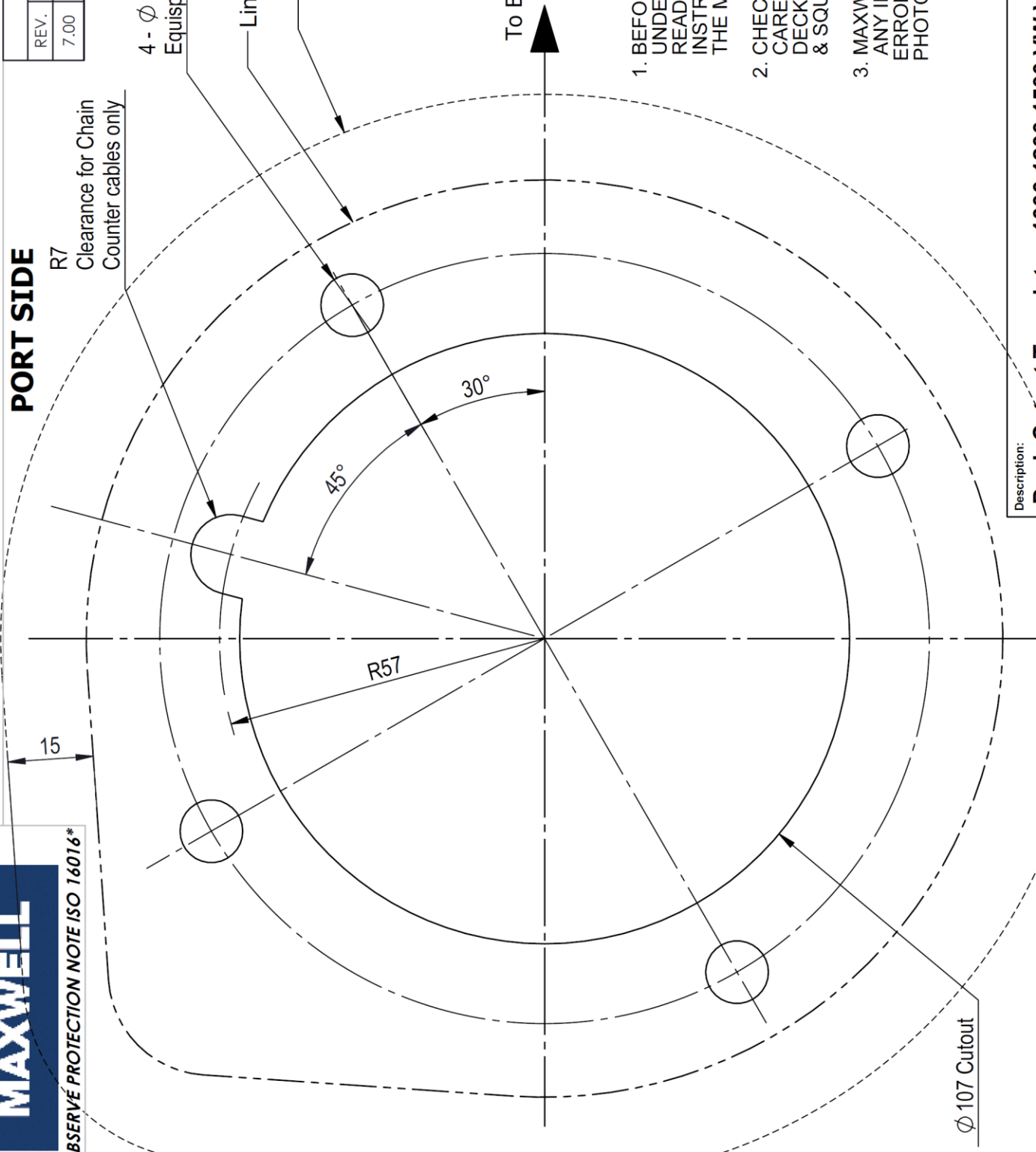
Line of deckplate profile

Line of
recommended
deck pad

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.



Description:		Drawing Number:		Rev No:
Deck Cutout Template - 1000 1200 1500 VW VWLP		3485-345		7.00
Drawn by: DHaluza	Checked by: GBarton	Approved by: GBarton	Approval Date: 03/12/2025	Sheet Status: Released
				1 of 1

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LIMITED WARRANTY

Warranty: VETUS-Maxwell 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 VETUS-Maxwell office for a complete list of service centres and distributors.

This warranty is subject to the following conditions and limitations:

- This Warranty will be null and void if
 - there is any neglect or failure to properly maintain and service the products.
 - the products are serviced, repaired or maintained improperly or by unauthorised persons.
 - loss or damage is attributed to any act, matter or omission beyond the reasonable control of Vetus-Maxwell or the purchaser.
- VETUS-Maxwell's liability shall be limited to repair or replacement (as determined by Maxwell) of the goods or parts defective in materials or workmanship.
- 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 VETUS-Maxwell shall have no responsibility in connection with such suitability.
- VETUS-Maxwell shall not be liable for any loss, damages, harm or claim attributed to:
 - use of the products in applications for which the products are not intended.
 - corrosion, wear and tear or improper installation.
 - improper use of the product.
- This Warranty applies to the original purchaser of the products only. The benefits of the Warranty are not transferable to subsequent purchasers.
- VETUS-Maxwell shall not be responsible for shipping charges or installation labour associated with any warranty claims.
- 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.
- VETUS-Maxwell shall not be liable for consequential damages to any vessel, equipment, or other property or persons due to use or installation of VETUS-Maxwell equipment.
- This Warranty sets out your specific legal rights allowed by VETUS-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.
- To make a claim under this Warranty, contact your nearest VETUS-Maxwell office or distributor. Proof of purchase and authorisation from VETUS-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
www.maxwellmarine.com

Purchaser

Name:

Address:

Telephone:

Facsimile

Supplier / Dealer

Name:

Address:

Telephone:

Facsimile

Windlass Model

Serial Number

Date of Purchase

Boat Type

Windlasses Supplied

☐

With boat

☐

Fitted by boat yard/dealer

☐

Purchased from dealer/chandler

Name

L.O.A.

Built by



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