DK Series

VERTICAL WINDLASSES

REV 005A

May, 2023

MODELS AVAILABLE IN LH/RH VERSION, WITH AND WITHOUT DRUM

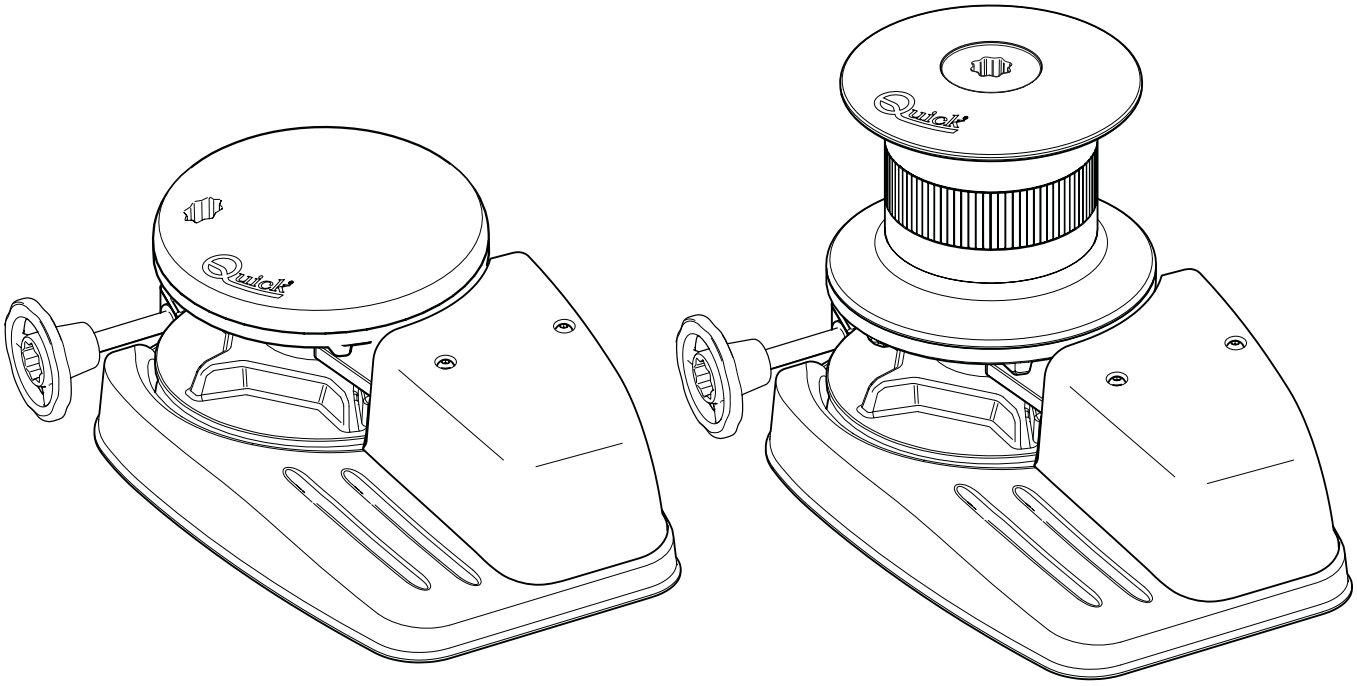
DK 3024 DC

DK 3524 DC

DK 4000 AC

DK 5500 AC

DK HYDRO



***EN -** INSTALLATION AND USER'S MANUAL

*Other languages available by scanning the QR code on the back of this manual or on the label on the product.

Quick®
Nautical Equipment

IT *Altre lingue disponibili scansionando il codice QR presente sul retro del seguente manuale o sull'etichetta alloggiata sul prodotto.

ES *Otros idiomas disponibles escaneando el código QR en la parte posterior de este manual o en la etiqueta del producto.

FR *Autres langues disponibles en scannant le code QR au dos de ce manuel ou sur l'étiquette du produit.

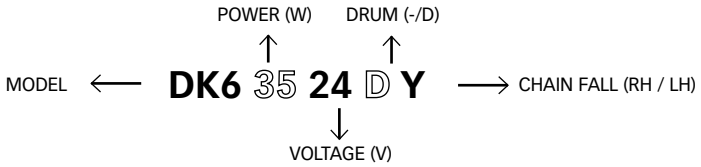
DE *Andere Sprachen sind durch Scannen des QR-Codes auf der Rückseite dieser Betriebsanleitung oder auf dem Aufkleber am Produkt verfügbar.

PT *Outros idiomas disponíveis, digitalizando o código QR no verso deste manual ou no rótulo do produto.

READ THIS INSTRUCTION MANUAL CAREFULLY BEFORE USING THE PRODUCT. IF IN DOUBT, CONTACT YOUR QUICK® DEALER.

QUICK® RESERVES THE RIGHT TO MODIFY THE TECHNICAL CHARACTERISTICS OF THE EQUIPMENT AND THE CONTENTS OF THIS MANUAL WITHOUT PRIOR NOTICE. IN CASE OF DISCORDANCE OR ERRORS IN TRANSLATION BETWEEN THE TRANSLATED VERSION AND THE ORIGINAL TEXT IN THE ITALIAN LANGUAGE, REFERENCE WILL BE MADE TO THE ITALIAN TEXT.

1.0 - Model code



1.1 - DK Technical Data

MODELS	3000 DC	3500 DC	4000 AC	5500 AC
MOTOR POWER	**3000 W**	**3500 W**	**4000 W**	**5500 W**
Motor voltage	24 V		230/400 V	
Maximum instantaneous pull	3000 kg (6613.9 lb)	4000 kg (8818.5 lb)		4500 kg (9920.8 lb)
Maximum work load	1200 kg (2645.5 lb)	1500 kg (3307.0 lb)		1700 kg (3747.8 lb)
Work load	600 kg (1322.8 lb)	700 kg (1532.2 lb)		800 kg (1763.7 lb)
Current consumption at work load (1)	242 A	250 A	12.0 A	12.5 A
Max recovery speed (2)	31 m/min (101.7 ft/min)	27.6 m/min (90.6 ft/min)	20 m/min (65.6 ft/min)	
Recovery speed at work load (2)	15.1 m/min (49.5 ft/min)	14.7 m/min (48.2 ft/min)	19 m/min (51.5 ft/min)	
Minimum motor cable cross section (3)	70 mm	70 mm	2.5 mm	2.5 mm
Circuit breaker (4)	100A (Quick)	150A (Quick)	EC-BOX / INVERTER	
Max Noise (5)	Up to 80 DB			
Deck thickness (6)	30 ÷ 80 mm / 1”3/16 ÷ 3” 5/32 inch			
Weight - model without drum	81.2 kg - 179 lb	82.2 kg - 181.2 lb	76 kg - 167.5 lb	77 kg - 169.75 lb
Weight-model with drum	86 kg - 189.6 lb	87 kg - 191.8 lb	81 kg - 178.6 lb	82 kg - 180.7 lb

MODELS	HYDRAULIC	
MOTOR TYPE	**REVERSIBLE GEAR TYPE**	
Displacement	17.9 cc	1.09 in3
Lifting capacity	• 100 bar = 1400 kg • 200 bar = 2700 kg	• 1450.4 psi = 3087 lb • 2900 psi = 5953 lb
Recovery speed at work load (2)	50 l/min = 15 m/min	11.4 USG/min = 49 ft/min
Max Noise (5)	Up to 80 DB	
Deck thickness (6)	30 ÷ 80 mm	1” 3/16 ÷ 3” 5/32 inch
Model weight	73 kg without drum 78 kg with drum	160.9 lb without drum 171.9 lb with drum
ADJUSTMENT VALUES		
Flow rate	50 l/min	11.4 USG/min
Maximum pressure	210 bar	3045.8 psi

(1) After an initial period of use.
(2) Measurements taken with gypsy for 12/13 mm chain.
(3) Minimum recommended value for total length L= <20 m.
Determine the cable cross section according to the length of the wiring.
(4) With specific circuit breaker for direct current (DC) and delayed circuit breaker (thermal-magnetic or hydraulic-magnetic).
(5) Noise measured at one metre distance.
(6) Shafts and studs for greater deck thickness can be supplied upon request.

GYPSY*	12/13 mm			14 mm / 1/2"			16 mm		12.5 mm
CHAIN SIZE	12 mm	13 mm	7/16"	14 mm	14 mm	1/2"	16 mm	16 mm	12.5 mm
	ISO	DIN 766	G4	DIN 766	ISO (**)	G4	DIN 766	ISO (**)	STUD-LINK

(*) For gypsy codes, see the exploded drawing on page
(**) ISO EN 4565

XR7 XR8 XR9 TIGHTENING TORQUE	Nm
M6	6.5
M8	16
M10	31
M12	55
M14	87
M16	135

Indicative values for stainless steel screws, consider tightening by assessing the material of the surface to which it will be fixed.

2.0 - Standard supply and material included in the package

- Windlass (top+gearmotor)
- Reversing contactor box (DK 3000W) / reversing contactor box (DK 3500W) (DC electric motor only)
- Lever
- Screws for assembly
- Installation and user's manual, Warranty
- Drilling template

2.1 - Tools required for installation

DK Series
- Drill with bit: Ø 15 mm (19/32")
- Hollow mill Ø 40 mm (1" 9/16)
- Hex wrench: 13 mm

2.2 - Recommended Quick® accessories not included

- Control from control board
- Diverter from panel
- Waterproof push-button panel
- Foot-operated switch
- Hydraulic-magnetic circuit breaker
- Anchor chain counter
- Control system via RRC radio

3 - Introduction

BEFORE USING THE PRODUCT, PLEASE READ THIS USER'S MANUAL CAREFULLY. IF IN DOUBT, PLEASE CONSULT YOUR QUICK® DEALER.

3.0 - Important notes

This manual features Warning and/or Caution symbols that are important for safety.
Please follow the instructions provided.

Warning symbol for dangerous situations.

Caution symbol to prevent direct or indirect damage to the product.

This manual provides boat manufacturers and nautical equipment installers with instructions on how to assemble the specified Quick® product and operate it correctly.

Keep the manual for future reference. Scan the QR code to download the digital version

3.1 - Precautions

Quick® windlasses are designed and manufactured to weigh the anchor.
- Do not use these products for any other type of operation.
- Quick® shall not be held liable for direct or indirect damage caused by improper use of the product.
- The windlass is not designed to support loads generated in particular weather conditions (storm).
- **Weighing the anchor: switch on the boat's engine.**
- Operate the product from a position where it is possible to supervise the work area.
- Always deactivate the windlass when not being used.
- Make sure that there are no bathers nearby before dropping the anchor.
- The splice between the rope and the chain must be tightly woven for the rope to slide easily into the gypsy shape.

For any problem or request, feel free to contact Quick® Technical Service.
- For improved safety, we recommend installing at least two controls to operate the windlass in case one is damaged.
- We recommend the use of Quick® switch as motor safety device.
- Secure the chain with a retainer before sailing off.
- The reversing contactor box must be installed in a position protected from any water entry.
- After completing the anchorage, secure the chain to fixed points such as chain stopper or bollard.
- To prevent accidental releases, the anchor must be secured. The windlass must not be used as sole securing device.
- Isolate the windlass from the electrical system during navigation and secure the rope to a fixed point of the boat.
- This equipment is not intended for use by people (including children) with reduced physical, sensory or mental capabilities.

3.2- Precautions for the installer

CARRY OUT THE INSTALLATION IN GOOD LIGHTING CONDITIONS.

It is advisable to wear suitable clothing and personal protective equipment (PPE).

The product is not suitable for installation in potentially explosive environments and/or atmospheres.
Installation and subsequent inspection or repair work must only be carried out by qualified personnel.

CARRY OUT INSTALLATION/MAINTENANCE WORK MAKING SURE THAT THE PRODUCT IS DISCONNECTED FROM THE ELECTRICAL SYSTEM.

Quick® accepts no responsibility for inadequate connection of users to the electrical/hydraulic system and its inadequate safety.

4.0 - Installation requirements

A. ROLLER ALIGNMENT
the windlass must be positioned by aligning the gypsy with the bow roller. Precise alignment of the windlass is essential for the correct operation of the product (**fig.1**). A positive tilt of up to 10° is allowed (**fig.2**).

FIG.1

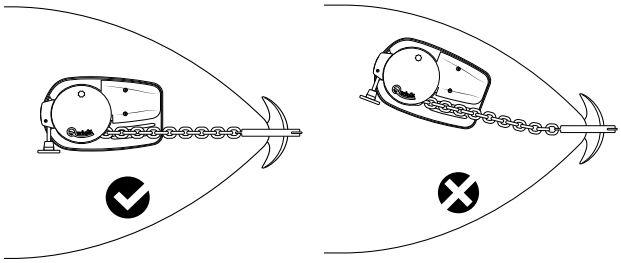
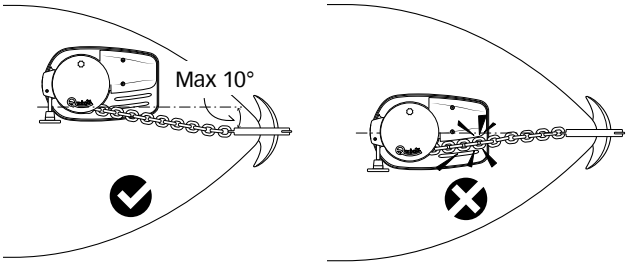
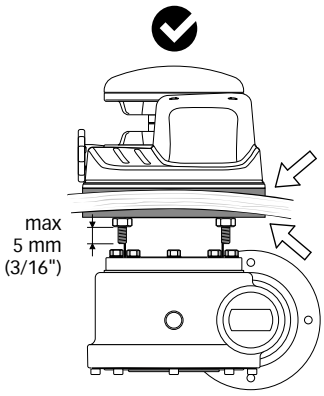


FIG.2

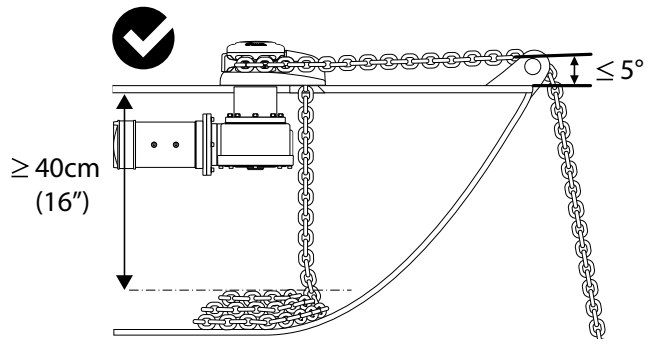


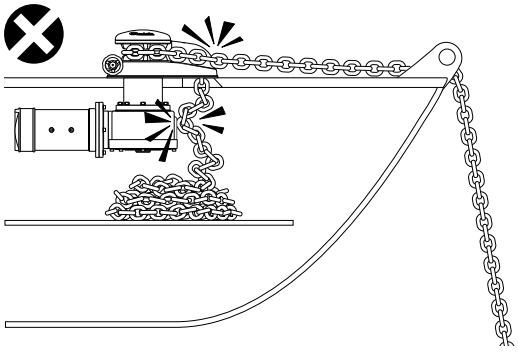
C. DECK LEVEL
Ensure that the upper and lower surfaces of the deck are as parallel as possible. If this is not the case, compensate the difference appropriately.

Tighten nuts to the tightening torque specified in the table (ch.1.1, page 5)



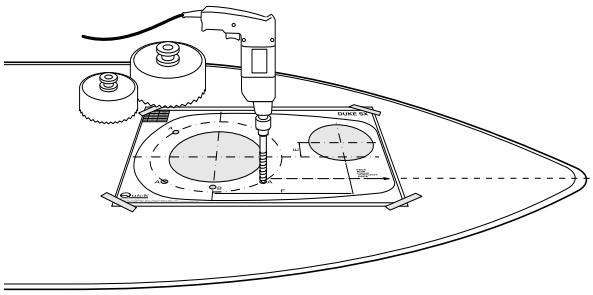
D. PEAK DEPTH & ROLLER HEIGHT
There must be no obstacles to the passage of cables, rope and chain under deck. Insufficient depth of the peak could cause jamming. The roller height; a positive chain tilt with respect to the deck level up to 5° is permitted, the negative tilt must not interfere with the windlass base

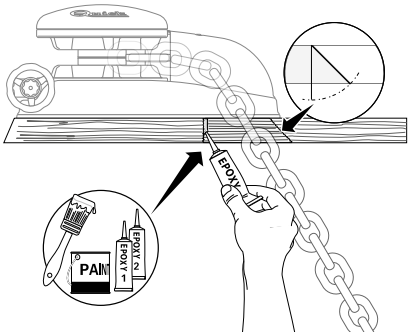




4.1 - Installation procedure

Identify the ideal position and drill the holes using the drilling template supplied.
Remove the excess material from the chain/rope passage hole, finish it and smooth it with a specific product (marine paint, epoxy resin or gel) ensuring the free passage of the chain/rope.





Position the upper part, inserting the gasket between the deck and the base (fig.3), fit the motor gearbox flange (fig.4) and connect the gearbox to it, inserting the shaft into the gearbox (fig.5).

Fix the windlass by screwing the nuts onto the fixing studs. (See tightening torque, ch.1.1 page 5).

FIG.3

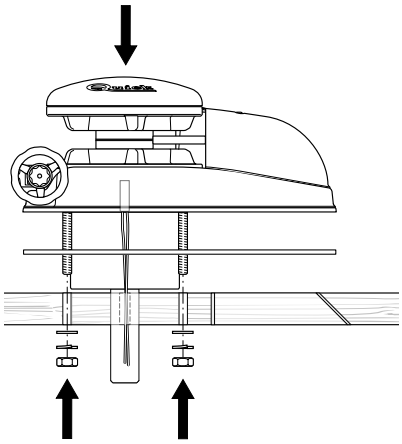


FIG.4

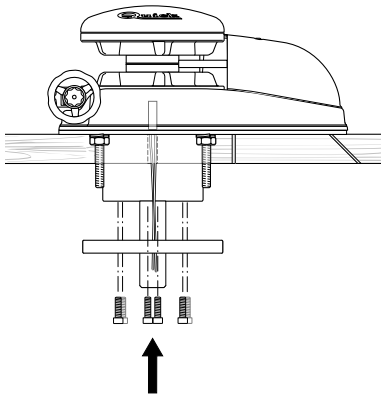
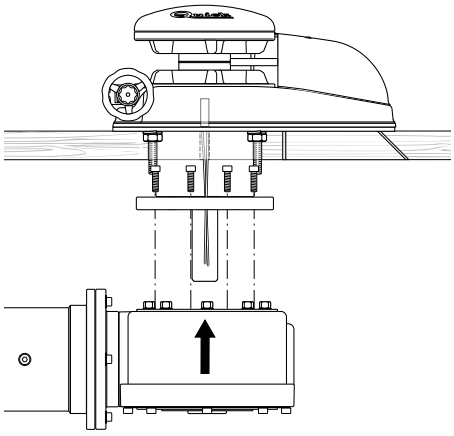


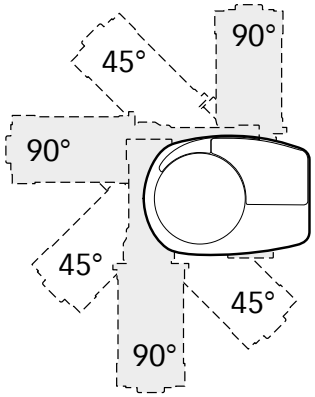
FIG.5



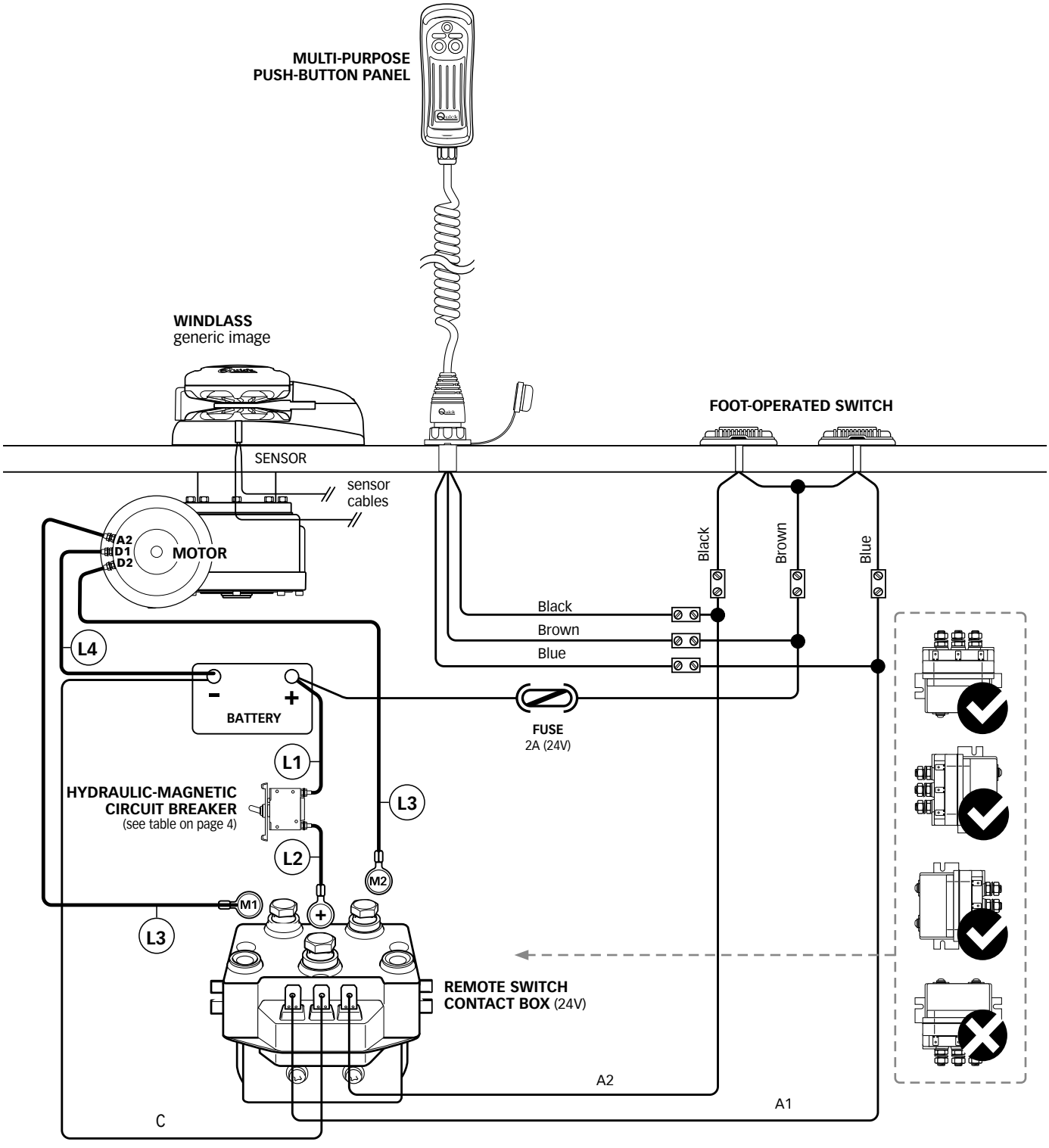
ELECTRIC MOTOR: Connect the supply cables from the windlass to the remote switch/reversing contactor unit. (see wiring diagram on page 9 to 11)
HYDRAULIC MOTOR: Connect the pipes coming from the distribution valve to the two hydraulic motor flanges. (see connection diagram on page 12)

4.2 - Motor gearbox position

Depending on the type of motor gearbox, a rotation every 45° or 90° is possible.

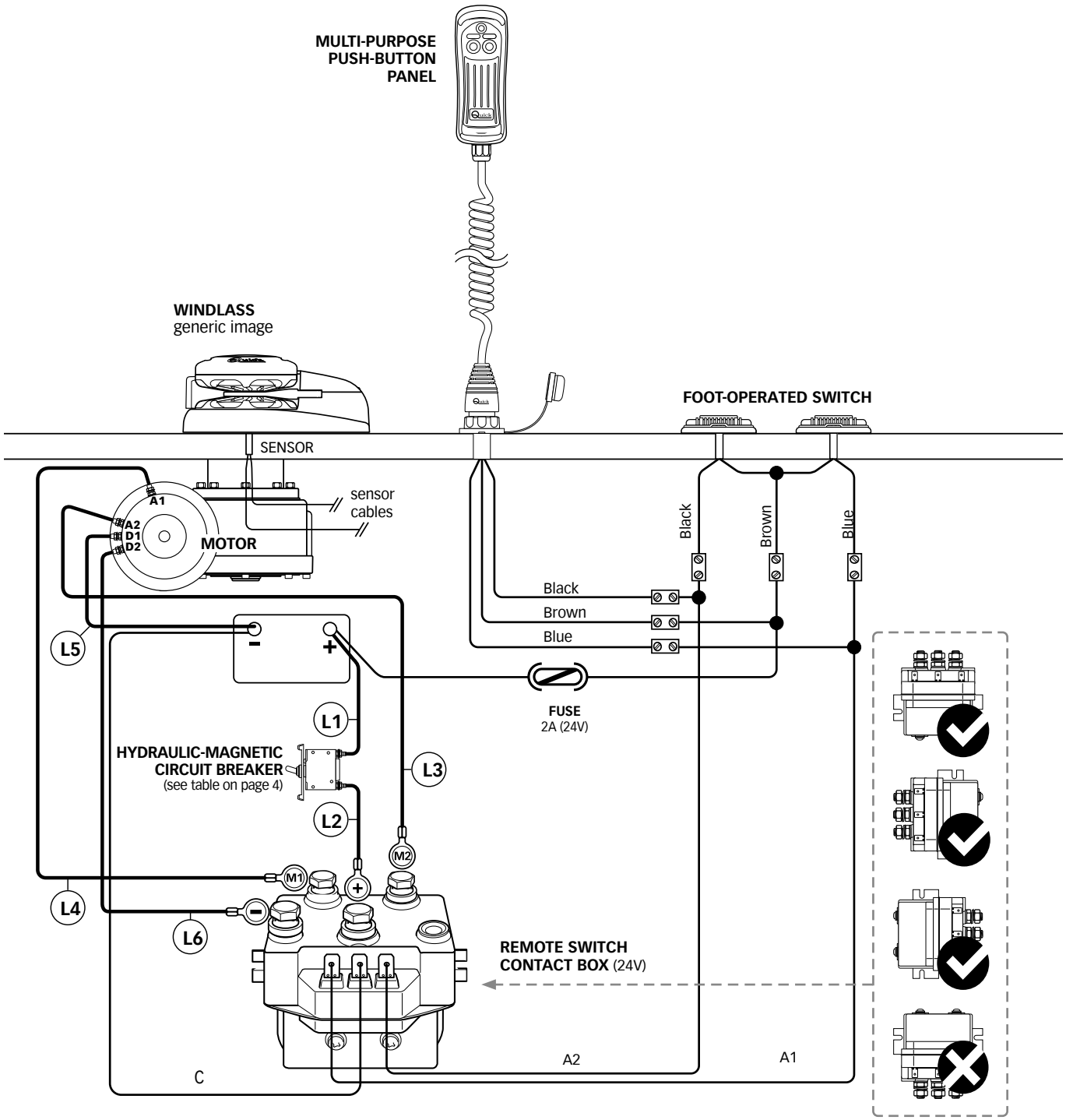


5.0 - Example of connection of DK 3000W



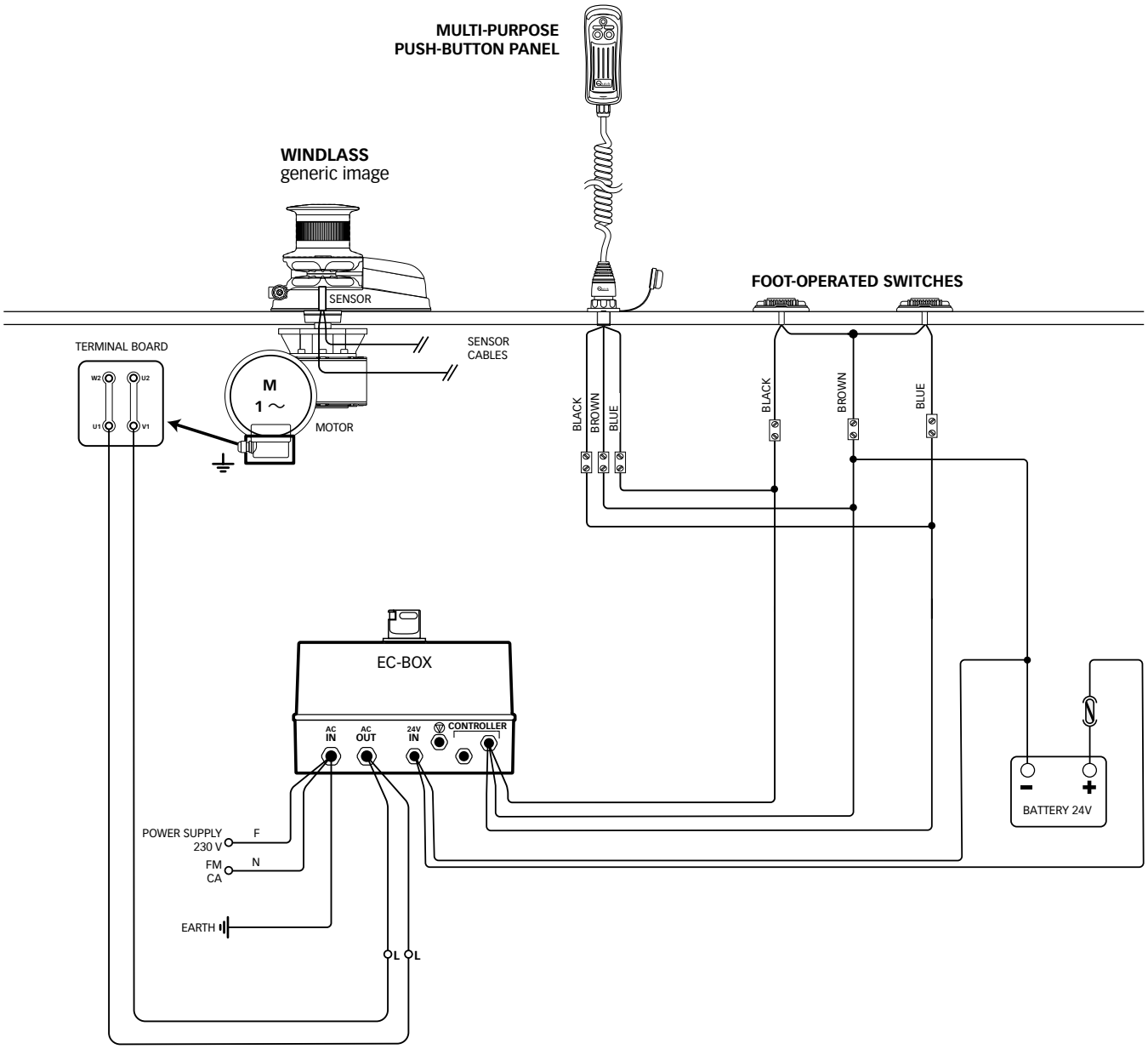
L = (L1) + (L2) + (L3) + (L4)

5.1 - Example of connection of DK 3500W

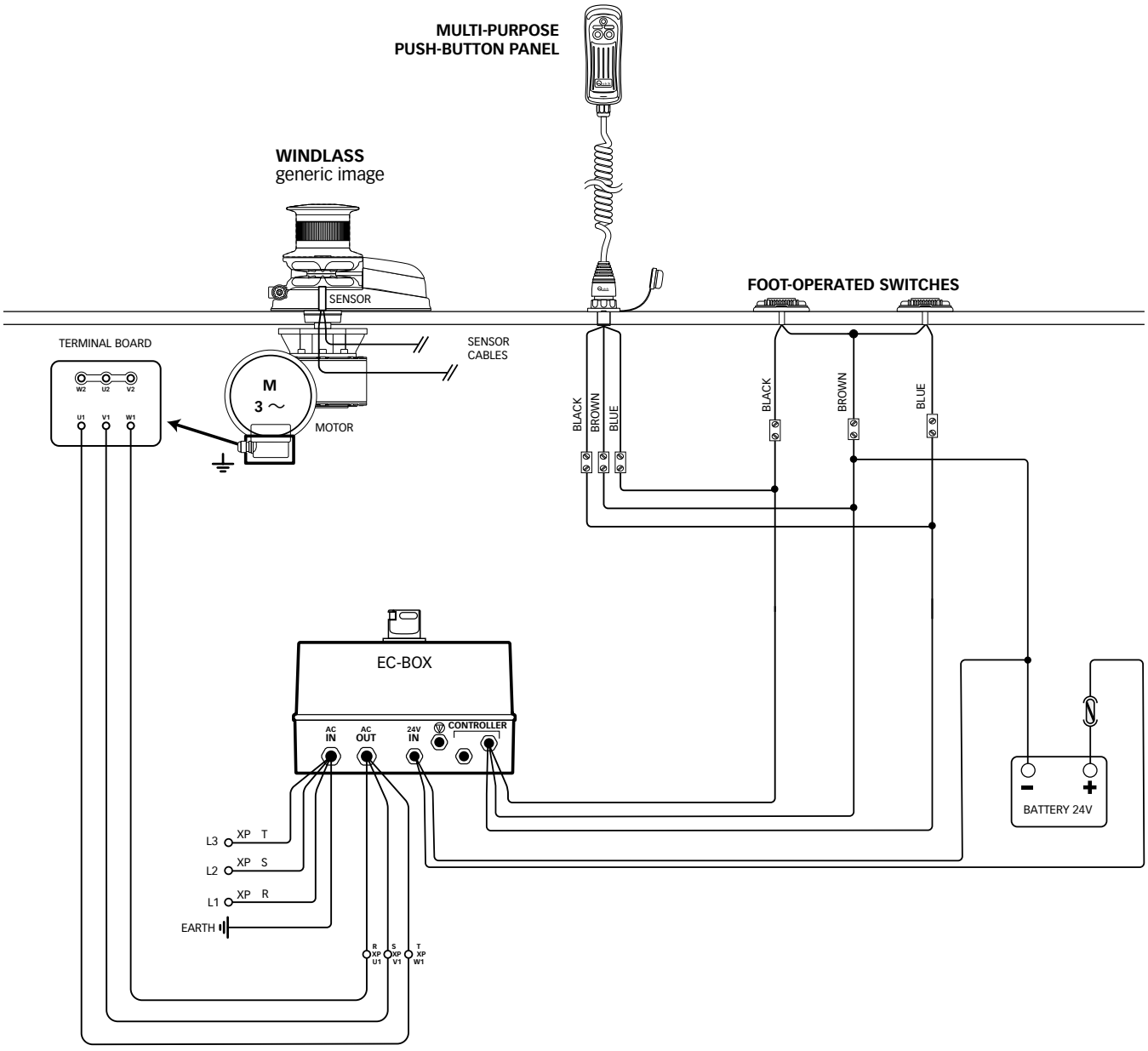


L = L1 + L2 + L3 + L4 + L5 + L6

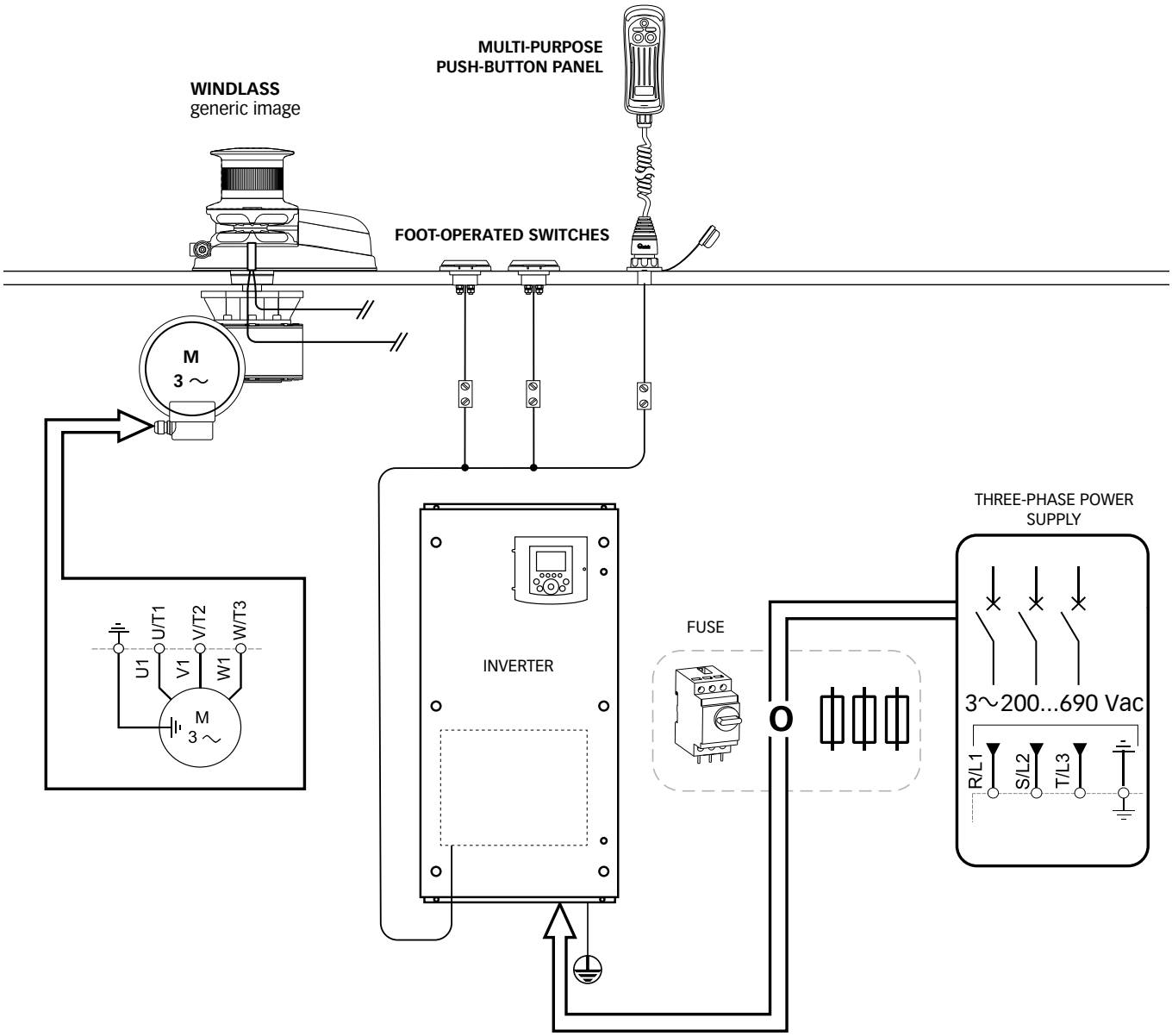
5.2 - Example of connection of 220V single-phase DK 3000W



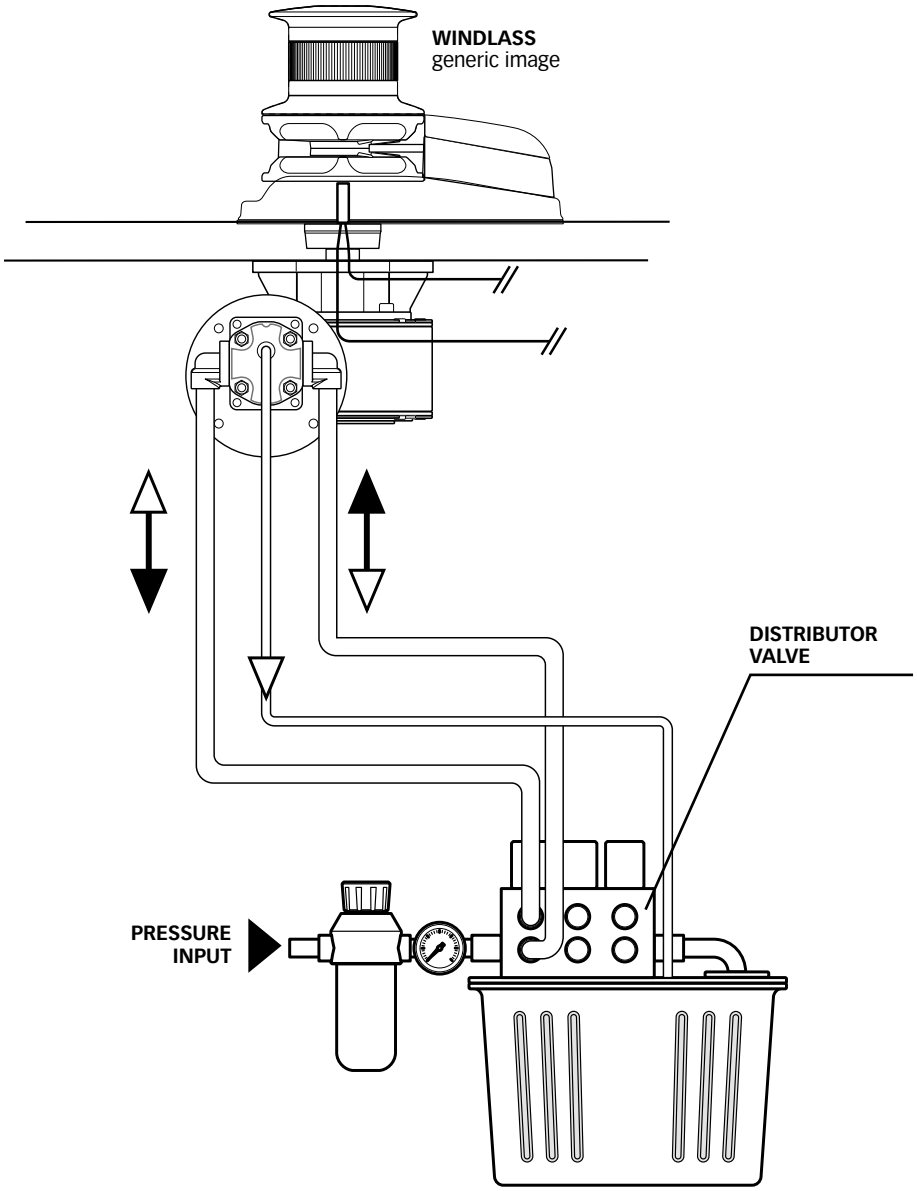
5.3 - Example of connection of 400V DK 4000W - 5500W with EC-BOX



5.4 - Example of connection of 400V DK 4000W - 5500W with INVERTER



5.4 - Example of hydraulic system connection

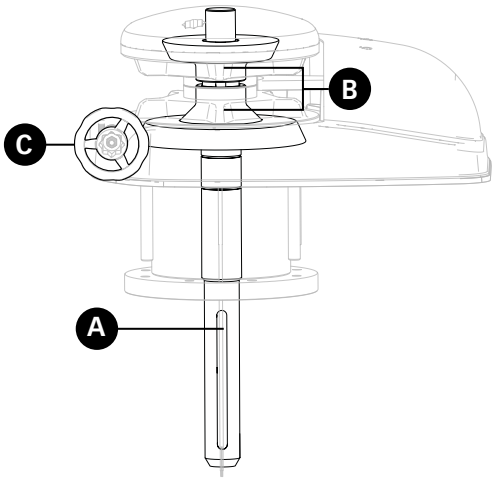


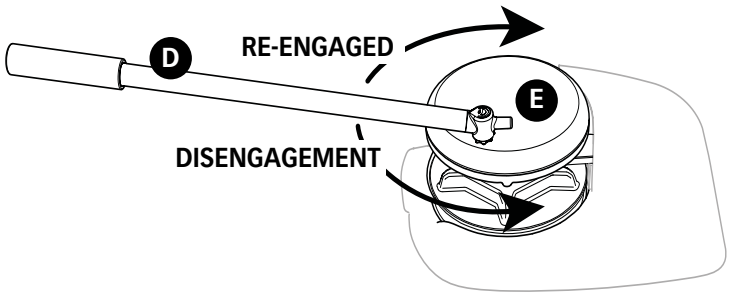
6.0 - Important cautions

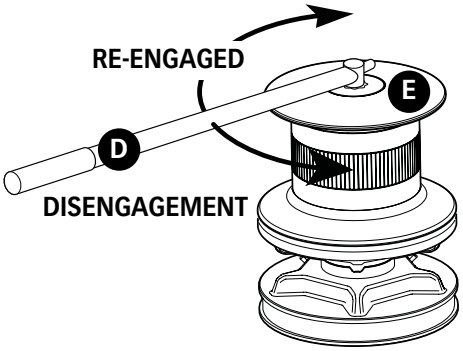
- Stay clear of chains, ropes and gypsy.
- Operate the windlass from a position where it is possible to supervise the work area
- Make sure the electric motor is not powered when the windlass is used manually (even when using the handle to disengage the clutch), because people with windlass remote controls (remote push-button panel or radio control) might accidentally operate it.
- Secure the chain with a retainer before sailing off.
- DO NOT operate the windlass by using the electrical power when the handle is inserted in the drum or into the gypsy cover.
- Quick® recommends using a suitable power fuse/thermal-magnetic/hydraulic-magnetic protection for the motor used, to protect the motor from overheating or short circuits.
- The circuit breaker can be used to isolate the windlass control circuit, thus avoiding accidental activation.

6.1 - Clutch use

The clutch (**B**) provides a link between the gypsy and the main shaft (**A**). The clutch can be released (disengagement) by using handle (**D**) which is inserted into the gypsy cover (**E**) or drum bush. It must rotate counter-clockwise. The clutch will be re-engaged by turning it clockwise.







WEIGHING THE ANCHOR

1 Turn on the boat engine.
2 Make sure the clutch is engaged and remove the handle.
3 Press the UP button on the control provided. (*)

Check the upward movement of the chain for the last few meters in order to avoid damage to the bow.

CASTING THE ANCHOR

The anchor can be cast by using the electrical controls or manually.

Manually
The clutch must be disengaged allowing the gypsy to revolve and letting the chain or rope fall into the water.
To slow down the chain, the brake (**C**) must be turned clockwise.

Electrically
To cast the anchor by using the electrical power, press the DOWN button on the control provided.
In this manner, anchor casting is under control and the chain unwinds evenly.

In order to avoid any stress on the windlass once the boat is anchored, fasten the chain or secure it to a safe point by means of a rope.

6.2 - Drum use

WARNING: before any warping operation, ensure that the anchor and its rope or chain are securely fastened to a bollard or other strong point on the boat.

WARNING: during recovery, keep a suitable safety distance between your hands and the windlass drum.

1. For independent use of the drum, operate the brake to lock the gypsy. Use the lever to open the clutch (at least two bush revolutions counter-clockwise) (**fig.1**).
2. Remove the lever from the bush, wind the rope over the drum counter-clockwise (at least 3 turns) (**fig.2**).
3. Activate the windlass DOWN control by keeping the rope under tension during the recovery. By varying this tension during recovery, it is possible to change the winding speed of the rope (**fig.3**).

FIG.1

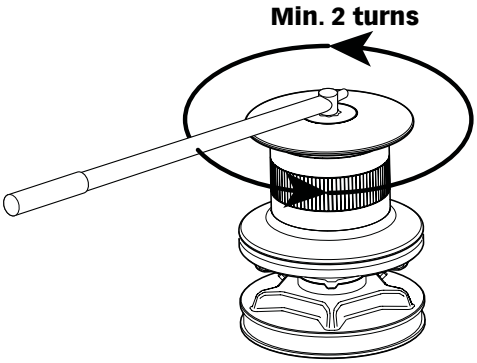


FIG.2

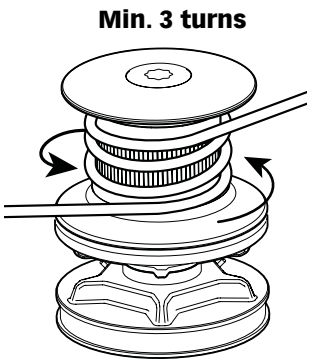
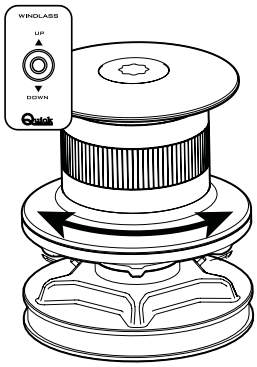


FIG.3



At the end of the recovery procedure, engage the clutch by tightening the gypsy bush clockwise and secure the rope to a bollard or other strong point on the boat.

6.3 - Troubleshooting

If the windlass stops and the hydraulic magnetic (or thermal magnetic) switch has not tripped, wait a few seconds and try again (avoid keeping the button pressed). *ref. page 10

If the hydraulic magnetic switch, has tripped, reset it and wait a few minutes before weighing anchor once again.

If, after a number of attempts, the windlass is still blocked, we suggest to move the boat to release the anchor.

7 - Maintenance

WARNING: make sure the electrical power to the motor is switched off when working manually on the windlass. Carefully remove the chain from the gypsy or the rope from the drum.

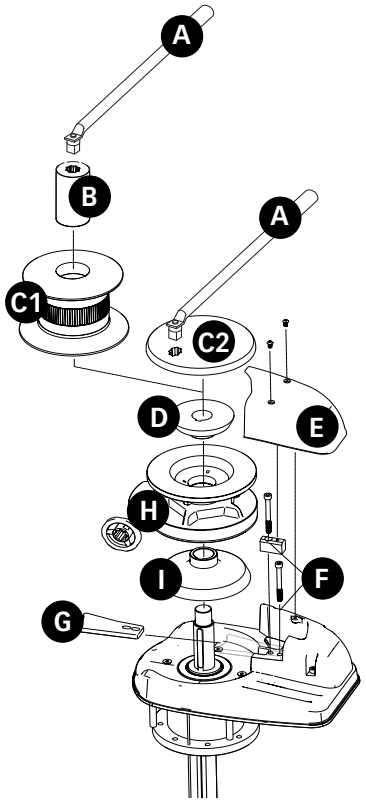
Quick® windlasses are made of materials resistant to the marine environment: it is essential, in any case, to periodically remove salt deposits that form on the external surfaces to avoid corrosion and consequently damage to the device. Thoroughly wash the surfaces and parts where salt can deposit with fresh water.

Once a year, disassemble the gypsy and the drum according to the following sequence:

WARNING: make sure that the anchor and its rope or chain are securely fastened to a bollard or other strong point on the boat.

Drum version
- Use the handle (A) to loosen the bush (B) and pull off the drum (C1)
- Remove the top clutch cone (D)
- Undo the screws and remove the chain guide cover (E)
- Undo the retaining screws (F) to remove the chain stripper (G)
- Remove the gypsy (H)
- Remove the bottom clutch cone (I)

No-drum version
- Use the handle (A) to remove the gypsy cover (C2)
- Remove the top clutch cone (D)
- Undo the screws and remove the chain guide cover (E)
- Undo the retaining screws (F) to remove the chain stripper (G)
- Remove the gypsy (H)
- Remove the bottom clutch cone (I)



Clean all the parts removed to avoid corrosion, and grease (with marine grease) the shaft thread and the gypsy where the clutch cones rest. Remove any oxide deposits from the terminals of the electric motor and the reversing contactor unit; grease them.

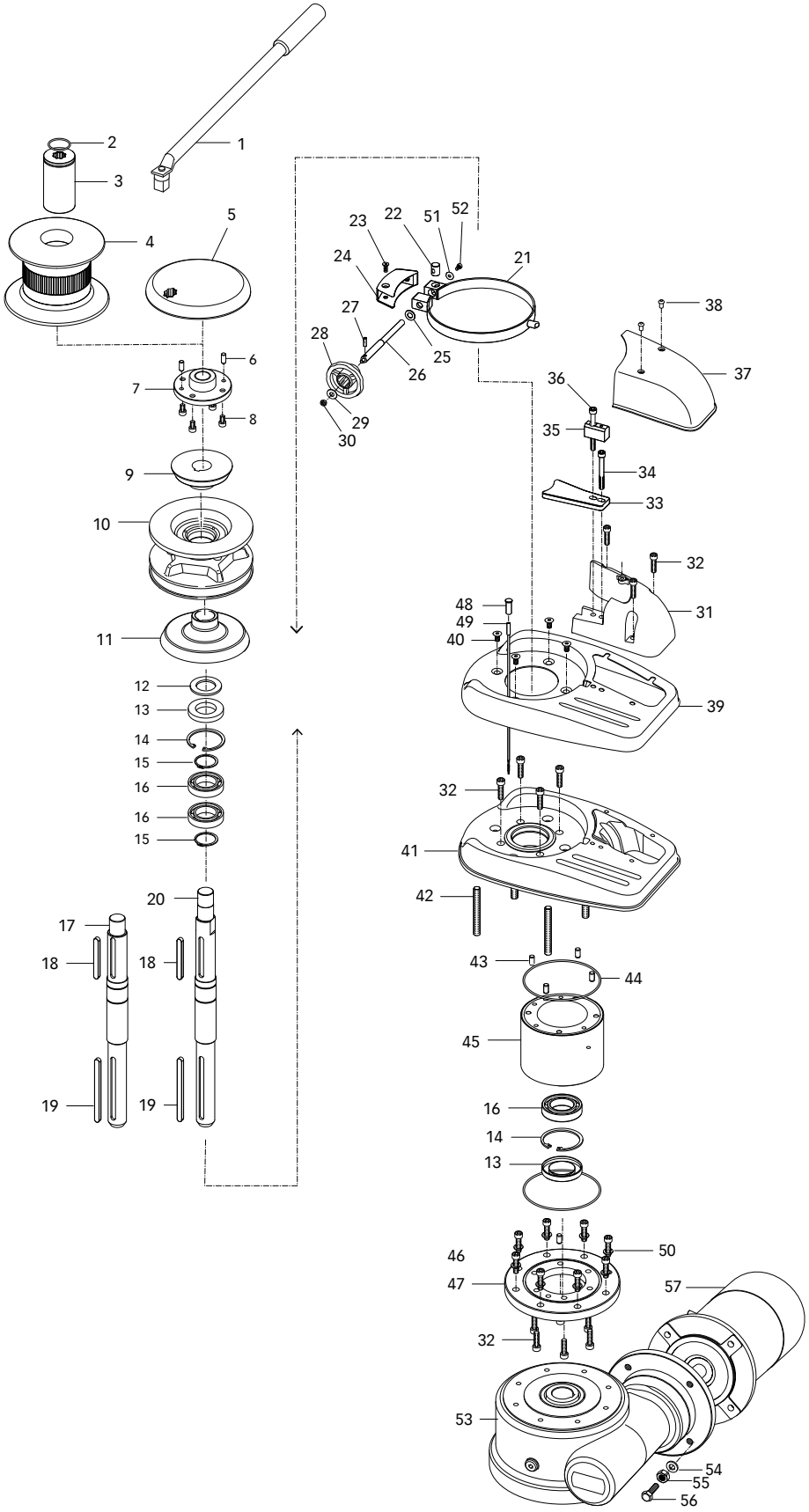
If required, windlass must be disassembled by qualified personnel.
Make sure that the motor gearbox is cold before disassembling it.
To clean the nautical accessory, use products that are not corrosive and not hazardous to human health. Use the personal protective equipment specified in the safety data sheets of the products used.
The disposal must be carried out according to the regulations of the place where the work is carried out.

8 - Product disposal

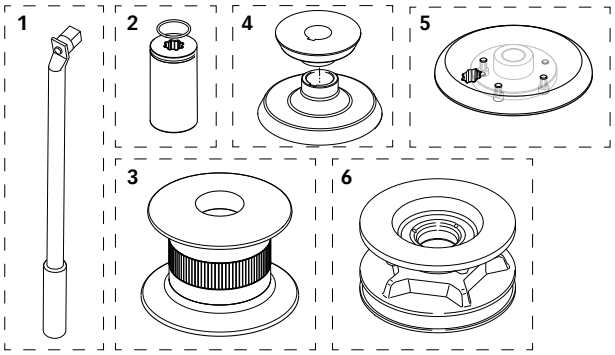
As with installation, at the end of this product life, dismantling must be carried out by qualified personnel.
This product is made up of various materials, some can be recycled and others must be suitably disposed of; enquire about the recycling or disposal systems provided for by local regulations for this product category.
Some parts of the product may contain pollutants or hazardous substances that, if dispersed, may be harmful to the environment and human health.

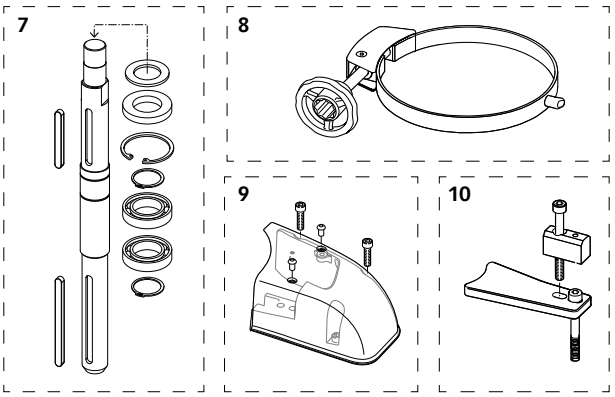
As indicated by the symbol on the side, it is forbidden to dispose of this product as domestic waste.
Separate the products for disposal in accordance with the regulations in force in your area or return the product to the seller when purchasing a new equivalent product. Local regulations may impose severe penalties for the improper disposal of this product.

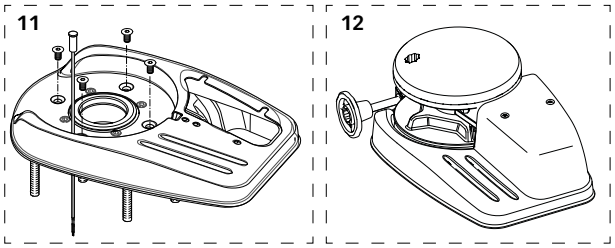
No.	NAME
1	WINDLASS LEVER
2	BUSH O-RING
3	"DK" SERIES CLUTCH BUSH
4	"DK" WINDLASS DRUM 4000W
5	"DK" GYPSY COVER 4000W
6	PIN
7	"DK" GYPSY COVER INSERT
8	SCREW
9	TOP CLUTCH CONE 4000W
10 A	GYPSY 4000W 12.5 MM
10B	GYPSY 4000W 12-13 MM
10C	GYPSY 4000W 14MM
10D	GYPSY 4000W 16 MM
11	BOTTOM CLUTCH CONE 4000W
12	REINFORCING WASHER
13	OIL SEAL
14	INTERNAL SNAP RING
15	EXTERNAL SNAP RING
16	BEARING 6008
17	SHAFT SERIES "DK/RY" 4000W
18	KEY
19	KEY
20	SHAFT SERIES "DK/RY" 4000W D
21	BRAKE BAND
22	BRAKE BAND PIN
23	SCREW
24	BRAKE BAND GUARD "DK"
25	WASHER
26	BRAKE BAND SHAFT "DK"
27	WASHER
28	BRAKE BAND KNOB "DK"
29	WASHER
30	NUT
31	CHAIN GUIDE SUPPORT "DK"
32	SCREW
33	CHAIN STRIPPER "DK"
34	SCREW
35	CHAIN STRIPPER INSERT "DK"
36	SCREW
37	CHAIN GUIDE COVER "DK"
38	SCREW
39	BASE COVER SERIES "DK"
40	SCREW
41	WINDLASS BASE SERIES "DK"
42	STUD
43	PIN
44	BASE INSERT O-RING
45	"DK" BASE INSERT
46	SCREW
47	BASE INSERT FLANGE
48	SENSOR COVER
49	SENSOR
50	GROWER
51	WASHER
52	SCREW
53	TG110 GEARBOX
54	WASHER
55	NUT
56	SCREW
57	MOTOR

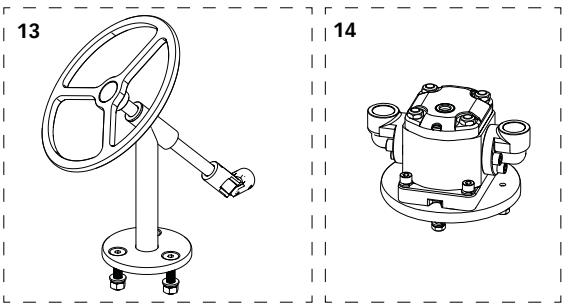


The images are purely indicative and may not fully reflect the product characteristics

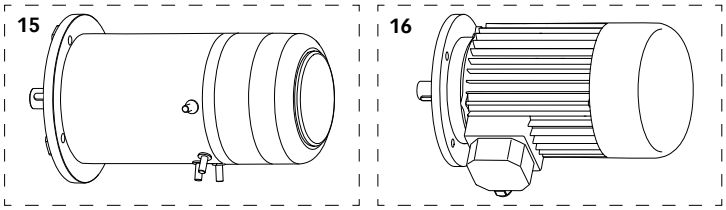


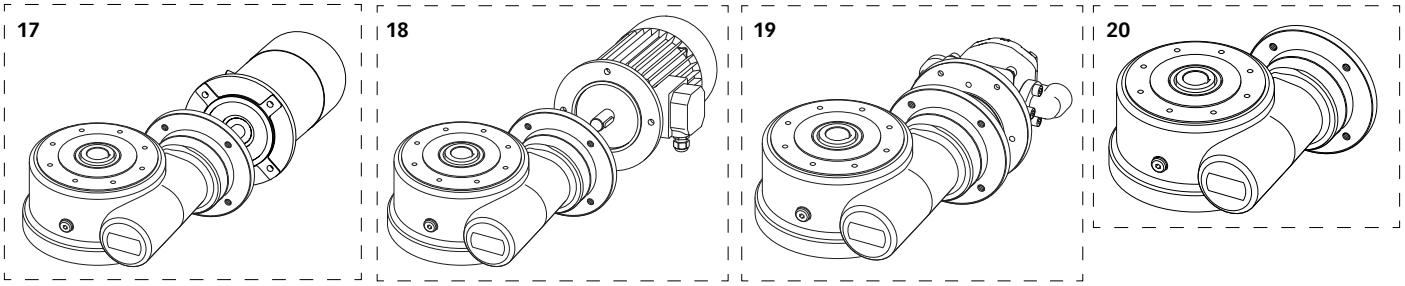




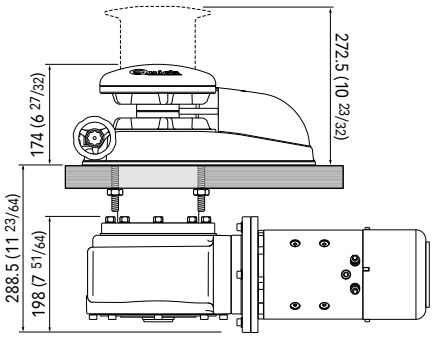


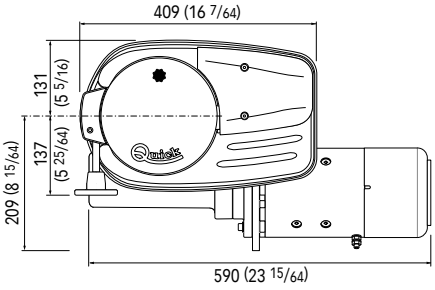
No.	DESCRIPTION	CODE
1	OSP STAINLESS STEEL WINDLASS LEVER	FVSSLVSH4000A00
2	OSP DRUM BUSH DK6/RY6	FVSSGMSDCPDK600
3	OSP WINDLASS DRUM DK6/RY6/TB6	FVSSMSE06000A00
4	OSP CLUTCH CONE KIT DK6	FVSSCF30DK00A00
5	OSP GYPSY COVER DK6/RY6	FVSSCPBBDK60A00
6 A	OSP GYPSY 12MM-13MM DK6/RY6	FVSSB4012130A00
6B	OSP GYPSY 12.5MM STUD DK6/RY6	FVSSB40125S0A00
6C	OSP GYPSY 14MM DK6/RY6	FVSSB4014000A00
6D	OSP GYPSY 16MM DK6/RY6	FVSSB4016000A00
7 A	OSP SHAFT KIT DK6/RY6	FVSSADKRY000A00
7B	OSP SHAFT KIT DK6/RY6 D	FVSSADKRYD00A00
8	OSP BAND BRAKE KIT DK6 ST. STEEL	FVSSVLTDK60XA00
9 A	OSP CHAIN PIPE KIT DK6 X	FVSSPSCDKX00A00
9B	OSP CHAIN PIPE KIT DK6 Y	FVSSPSCDKY00A00
10	OSP CHAIN STRIPPER KIT DK6	FVSSSCDK0000A00
11 A	OSP WINDLASS BASE DK6 X SERIES	FVSSBDK4X000A00
11B	OSP WINDLASS BASE DK6 Y SERIES	FVSSBDK4Y000A00
12 A	OSP TOP DK6 X 12.5MM ST	FVSSTDKX012SA00
12B	OSP TOP DK6 X 12MM-13MM	FVSSTDKX4012A00
12C	OSP TOP DK6 X 14MM	FVSSTDKX4014A00
12D	OSP TOP DK6 X 16MM	FVSSTDKX4016A00
12E	OSP TOP DK6 DX 12.5MM ST	FVSSTDKXD12SA00
12F	OSP TOP DK6 DX 12MM 13MM	FVSSTDKX4D12A00
12G	OSP TOP DK6 DX 14MM	FVSSTDKX4D14A00
12H	OSP TOP DK6 DX 16MM	FVSSTDKX4D16A00
12I	OSP TOP DK6 Y 12.5MM ST	FVSSTDKY012SA00
12L	OSP TOP DK6 Y 12MM-13MM	FVSSTDKY4012A00
12M	OSP TOP DK6 Y 14MM	FVSSTDKY4014A00
12N	OSP TOP DK6 Y 16MM	FVSSTDKY4016A00
12O	OSP TOP DK6 DY 12.5MM ST	FVSSTDKYD12SA00
12P	OSP TOP DK6 DY 12MM 13MM	FVSSTDKY4D12A00
12Q	OSP TOP DK6 DY 14MM	FVSSTDKY4D14A00
12R	OSP TOP DK6 DY 16MM	FVSSTDKY4D16A00
13	STAINLESS STEEL REMOTE BRAKE HANDWHEEL DK6/RY6	FSRBDK000000A00
14	OSP GEAR MOTOR 17.9CC GR2 B5/100	FVEMFEL179B5100
15 A	OSP WINDLASS MOTOR 3000W 24V RY6/DK6	FVSSM3024DK0A00
15B	OSP WINDLASS MOTOR 3500W 24V RY6/DK6	FVSSM3524DK0A00
16 A	OSP WINDLASS MOTOR 4000W 230/400V B5 TG110	FVSSM4000AC0A00
16B	OSP WINDLASS MOTOR 5500W 230/400V B5 TG110	FVSSM5500AC0A00
17 A	OSP MOTOR GEARBOX 3000W 24V RY6/DK6	FVSSR3024DK0A00
17B	OSP MOTOR GEARBOX 3500W 24V RY6/DK6	FVSSR3524DK0A00
18 A	OSP MOTOR GEARBOX 4000W 230/400V DK6	FVSSR40TR000A00
18B	OSP MOTOR GEARBOX 5500W 230/400V DK6	FVSSR55TR000A00
19	OSP HYDRO MOTOR GEARBOX 4000W DK6	FVSSRHYTR000A00
20	OSP GEARBOX 4000W WINDLASS DK6/RY6/TB6	FVSSMR400000A00



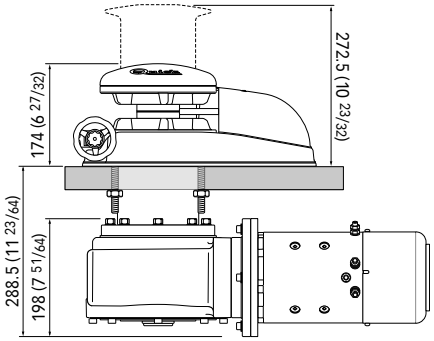


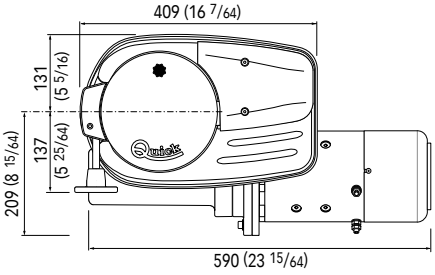
DUKE SERIES 3000



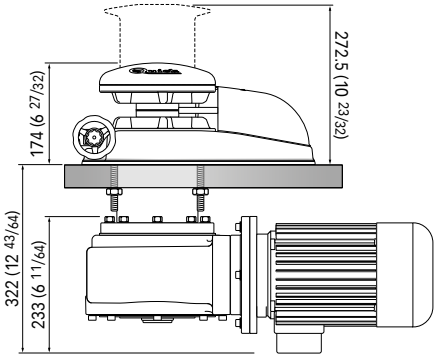


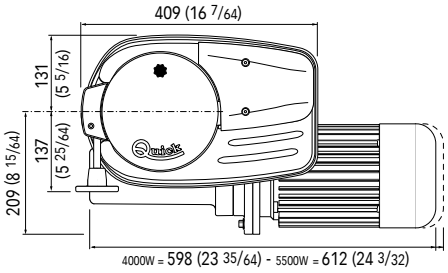
DUKE SERIES 3500



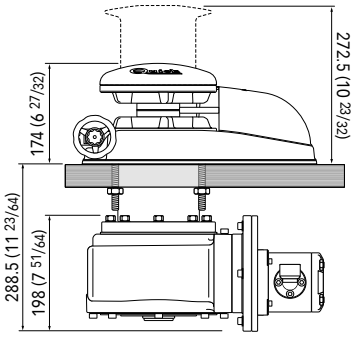


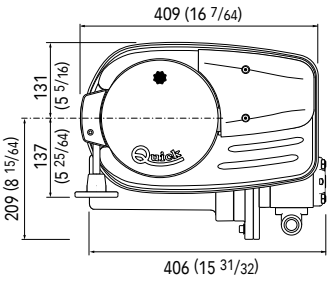
DUKE SERIES 4000/5500





DUKE SERIES HYDRO





DK Series

REV 005A

Product serial number

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