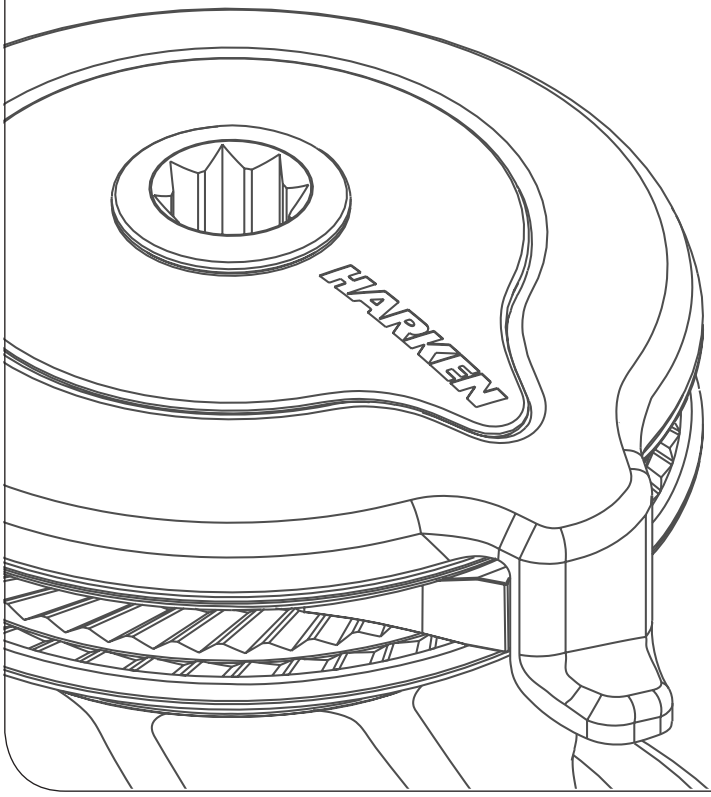
Installation and Maintenance Manual

MRW-05

Powered Radial Winch
80.2 ST E/HY



HARKEN®

Introduction

This manual gives technical information on winch installation and maintenance, including disassembling and reassembling.
This information is DESTINED EXCLUSIVELY for specialised personnel or expert users.
Installation, disassembling and reassembling of the winch by personnel who are not experts may cause serious damage to users and those in the vicinity of the winch.
Harken® accepts no responsibility for defective installation or reassembly of its winches.
In case of doubt the Harken® Tech Service is at your disposal at techservice@harken.it
This Manual is available only in English. If you do not fully understand the English language, do not carry out the operations described in this Manual.

Technical characteristics

	Power ratio	Gear ratio
1st speed	28,85 : 1	9,94 : 1
2nd speed	93,24 : 1	32,12 : 1

The theoretical power ratio does not take friction into account.

Performance data

Winch 80.2 ST E (electric)

	horizontal motor				vertical motor			
	12 V (1500 W)		24 V (2000 W)		12 V (1500 W)		24 V (2000 W)	
	1st speed	2nd speed	1st speed	2nd speed	1st speed	2nd speed	1st speed	2nd speed
line speed (m/min)**	12,4	3,9	15,0	4,6	14,2	4,4	17,1	5,3
max load (Kg)	1500	4500	1500	4500	1500	4500	1500	4500

***Line speed is measured with no load*

		motor nominal power (W)		current absorption at winch MWL (A)	
		12 V	24 V	12 V	24 V
winch 80.2 ST E	**horizontal**	1500	2000	320	170
	vertical	1500	2000	300	160

Winch 80.2 ST HY (hydraulic)

	1st speed	2nd speed
line speed (m/min)*	16,6	5,1
max load (Kg)***	1500	4500

** at 30 L/min oil flow (7,93 Gal/min)*

**** at 110 bar at 30 l/min*

NOTE
The ratio of the line load - pressure is evaluated at nominal flow rate.
The performance is evaluated measuring the pressure and flow on the motor ports.
The performance data are based on oil with a viscosity of 35mm²/s [165 SUS] and temperature of 50°C [120°F].

Weight

	ST A EH	ST C EH	ST A EV	ST C EV	ST A H	ST C H
weight (Kg)	32,0	39,5	32,7	40,2	30,1	37,6

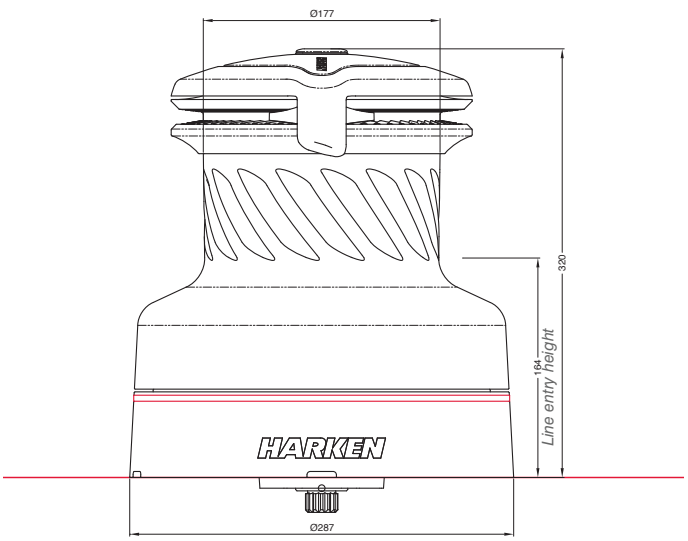
Versions:
A = drum in anodised aluminium
C = drum in chrome bronze
EH = horizontal electric winch
EV = vertical electric winch
H = vertical hydraulic winch

Maximum working load

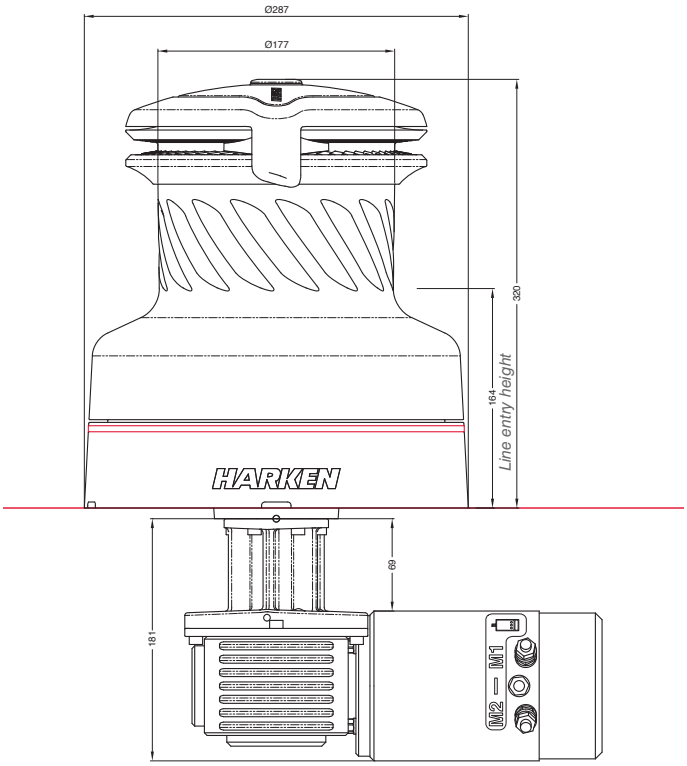
WARNING!
The maximum working load (MWL) for the 80.2 ST Radial Winch is 4500 Kg (9920 lb)
Subjecting the winch to loads above the maximum working load can cause the winch to fail or pull off the deck suddenly and unexpectedly during high loads causing severe injury or death.

Outline

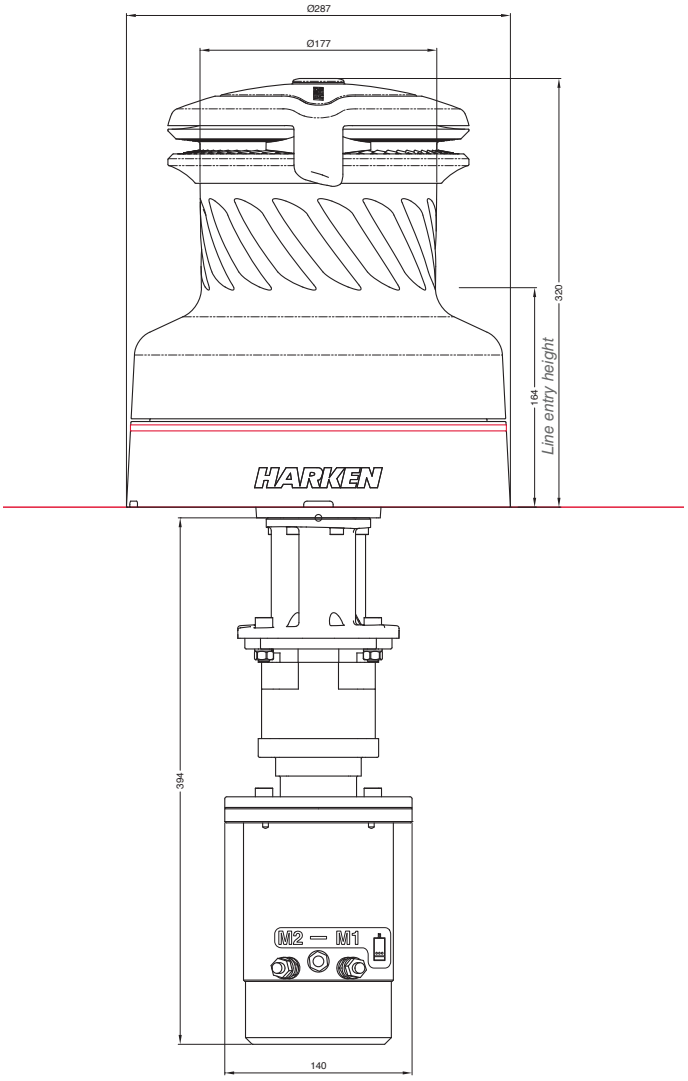
Winch 80.2 ST E/HY



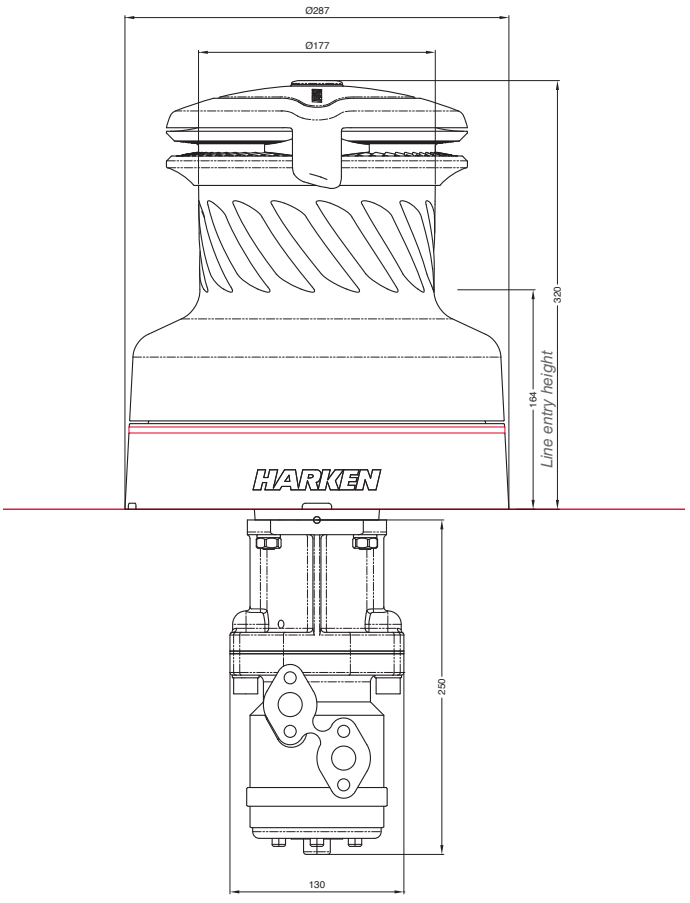
Horizontal electric motor (12 V / 24 V)



Vertical electric motor (12 V / 24 V)



Hydraulic motor



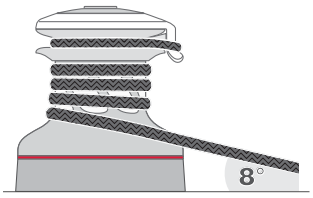
Installation

The winch must be installed on a flat area of the deck, reinforced if necessary to bear a load equal to at least twice the maximum working load of the winch.
It is the installer's responsibility to carry out all structural tests needed to ensure that the deck can bear the load.
Harken® does not supply the screws needed to install the winch since these may vary depending on the deck on which it is to be installed.
It is the installer's responsibility to choose the correct screws taking account of the loads they will have to bear.
Harken® assumes no responsibility for incorrect installation of its winches or for an incorrect choice of mounting screws.

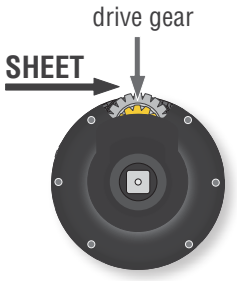
DANGER!
Incorrect installation of the winch may cause severe injury or death. Consult the yard that built the boat in the case of doubt over the correct positioning of the winch.

WARNING!
Failure to use the correct number and type of mounting fasteners or failure to ensure the correct deck strength can result in the winch pulling off the deck suddenly and unexpectedly during high loads causing severe injury or death.

WARNING!
Verify the entry angle of the sheet. This must be 8° with tolerance of ±2°, to avoid sheet overrides and damaging the winch or making the winch inoperable leading to loss of control of the boat which can lead to severe injury or death.



WARNING!
Mount the winch on the deck so that the drive gear is positioned where the sheet enters the winch drum.
Incorrect position of drive gear can weaken winch leading to failure which can cause an accident leading to severe injury or death.



After correctly positioning the final drive gear with respect to the load, check that the motor, gearing, electrical wiring and/or hydraulic pipes can be housed below decks. To help find the optimal compromise, remember that, to make the installation of the motor easier, it can be coupled to the winch in different positions.

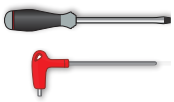
Once you have decided the correct mounting position for the winch on the deck and checked the space available below deck, proceed with the installation.

Installation Procedure

To install the winch you must follow and complete the Disassembly procedure.

Disassembly Procedure

Tools needed:



One medium flat-bladed screwdriver
A number six hex key
Rags

To identify the various parts, refer to the exploded view at the end of this Manual.

🔧 Torque to apply when assembling

1. Pull out the disconnect rod n°40

2. Unscrew the central screw (🔧2Nm/18 in-lb)

3. Slide off the assy socket n°39

4. Slide off the assy cover n°38

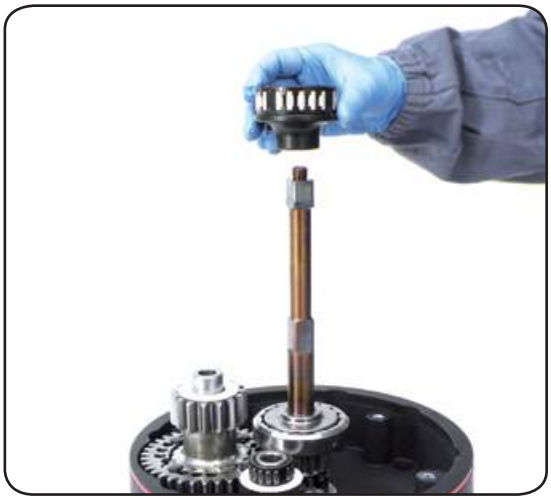
5. Unscrew the three screws n°37 (🔧4Nm/35 in-lb) and remove the stripper arm n°36 by rotating and lifting it.

6. Lift off the drum n°15

7. Completely unscrew the six screws n°25 (🔧20Nm/177 in-lb)

8. Lift off the assy housing n°18

9. Slide out the washer n°24



10. Slide out the inner spacer n°34 and the roller bearing n°23

11. Slide out the assy pinion n°32 and the spacer n°31

12. Disassemble the Assy pinion n°33 and the hub n°32

13. Slide out the shaft n°28

14. Remove washers n°30 and n°29.

Important: The plastic washer must be positioned in contact with the winch base.

15. Slide out the roller bearing n°6 and the washer n°5

16. Slide out the washer n°5

17. Slide out the final drive pinion n°9

18. Slide out the gear n°10

19. Slide out roller bearings n°6 and washer n°8

20. Remove the shaft n°7

21. Remove the pinion n°13

22. Remove the gear n°14

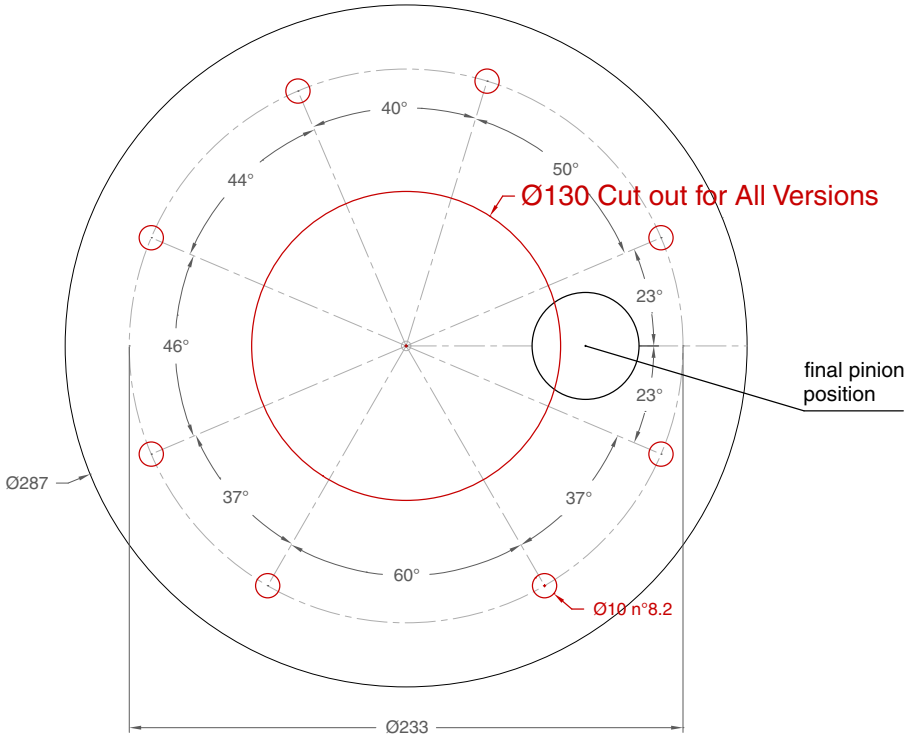
23. Remove the roller bearing n°6 and the washer n°11

Carry out Disassembly procedure then install the winch on the deck in the chosen position.

NOTICE
Before drilling the deck, check the space available below deck for the flange and the motor

A. Position the base of the winch on the deck and mark the position of the holes or use the drilling cut-out template at the point where you have decided to place the winch.

Below is a reduced scale diagram.



The drilling cut out template is available on the Harken® website, www.harken.com

B. Remove the winch and drill the eight 10.2 mm and a 130 mm diameter holes.
C. Bolt the base of the winch to the deck using eight M10 Socket Head (SH) bolts (not supplied by Harken®), correctly chosen for the thickness and type of the boat deck. Consult the yard that built the boat in case of doubt.

WARNING!
To install the winch on the deck, use only bolts in A4 stainless steel (DIN 267 part11).
Bolts made of other materials may not have sufficient strength or may corrode which can result in winch pulling off deck suddenly and unexpectedly during high loads causing severe injury or death.

NOTICE
To mount winches on the deck, do not use countersunk bolts.

D. Fill the mounting holes with a suitable marine sealant.
E. Remove the excess adhesive/sealant from the holes and base drainage channels
F. Reassemble the winch following the steps in **Disassemble procedure** (page 7) in the reverse order, and apply the products indicated in the section on maintenance.

NOTICE
Before closing the winch, make sure the holes and drainage channels in the base of the winch are not obstructed.

Positioning the self-tailing arm

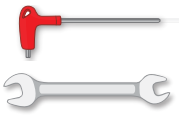
Position the self-tailing arm so that the line leaving the winch is led into the cockpit.

Motor installation procedure

WARNING!
Make sure that the power is switched off before installing or carrying out maintenance on the winch.

Once you have installed the winch on the deck, proceed with motor installation. The motor can be coupled to the winch in different positions. Check the space available below deck and choose the suitable position.

Tools needed



A number six hex key (only for vertical electric motor)
A number ten hex key (only for hydraulic motor)
Two number thirteen wrenches

1. Position the reduction gear and motor

2. Tighten four M6 precote coated screws (8 Nm/ 71 in-lb)

NOTICE
Before positioning the flange, check to make sure that seals (the first one is above the flange and the second one is under the flange) are seated correctly.

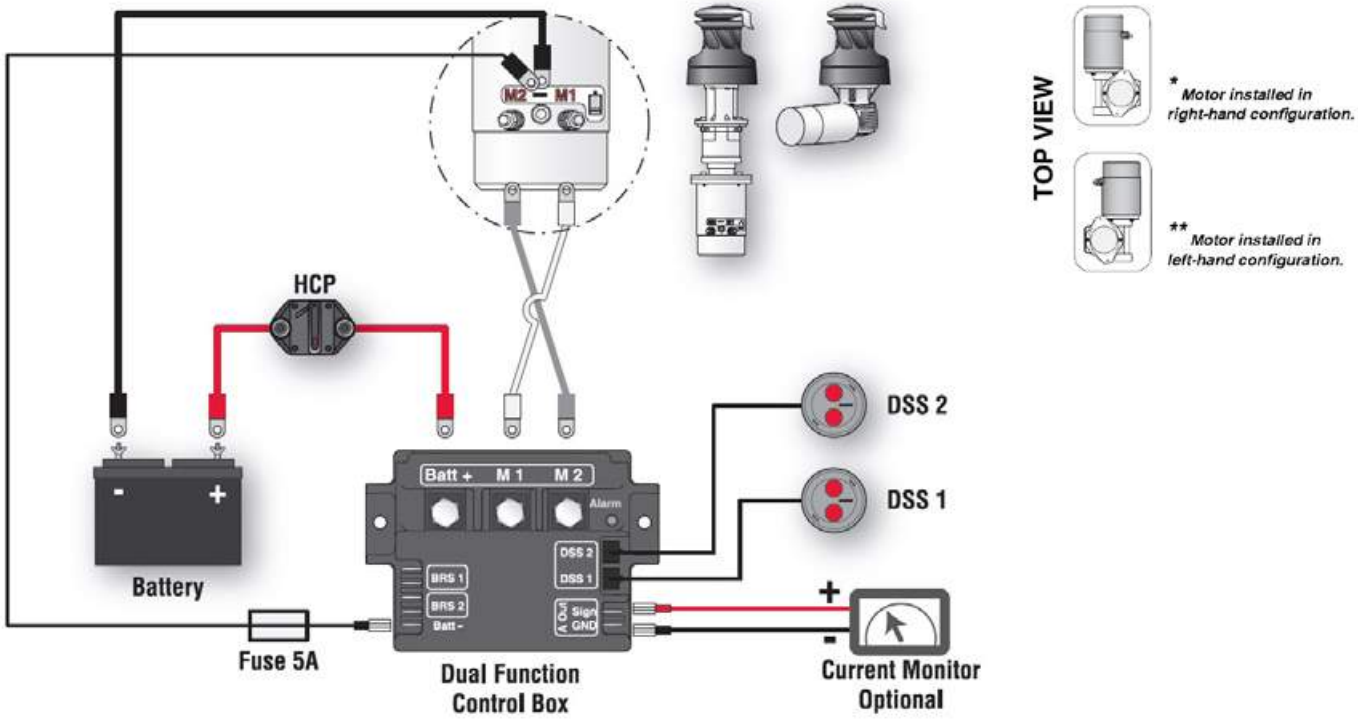
After winch is assembled and before sailing, test the powered winch functioning: insert the lock-in winch handle in the handle socket and check that the disconnect rod must disconnect gearbox.

Electric wiring diagrams

To guarantee greater efficiency in terms of safety and long life, for every winch model is mandatory to install the Dual Function Control Box.

For more information, refer to the Dual Function Control Box manual.

Refer to the following diagrams for the electric wiring:



WARNING!
Read the Dual Function Control Box manual carefully before installing and using the device.

NOTICE
For other installations, refer to the Dual Function Control Box manual.

Fasten the Dual Function Control Box containing solenoids to bulkhead or wall: refer to the Dual Function Control Box manual. Install remote circuit breaker between power supply and Dual Function Control Box. Locate push-buttons on deck in a convenient spot for easy winch operation: refer to the Digital System Switch manual.

Refer to the following chart for wire size:

Total distance between winch and battery

Winch size	Current voltage	Under 16.4 ft AWG	Under 5 m mm²	16.4 - 32.8 ft AWG	5 m - 10 m mm²	32.8 - 49.2 ft AWG	10 m - 15 m mm²	49.2 - 65.6 ft AGW	15m - 20 m mm²
80.2	12 V	2	32	0	50	00	70	000	95
80.2	24 V	5	16	3	25	2	35	0	50

NOTICE
To connect motor, attach cable terminals to clamps between nut and lock nut. Hold nut in contact with motor using a spanner and tighten other nut with second spanner. Take special care not to turn the central spindles. Be careful not to turn central spindles. These instructions apply when assembling and disassembling. We recommend using a torque wrench so as to obtain a torque equal to and no greater than 10 Nm (88 in-lb).

NOTICE
Note that correct electrical contact sequence is: Nut – Cable Terminal – Self-Locking Washer – Lock Nut

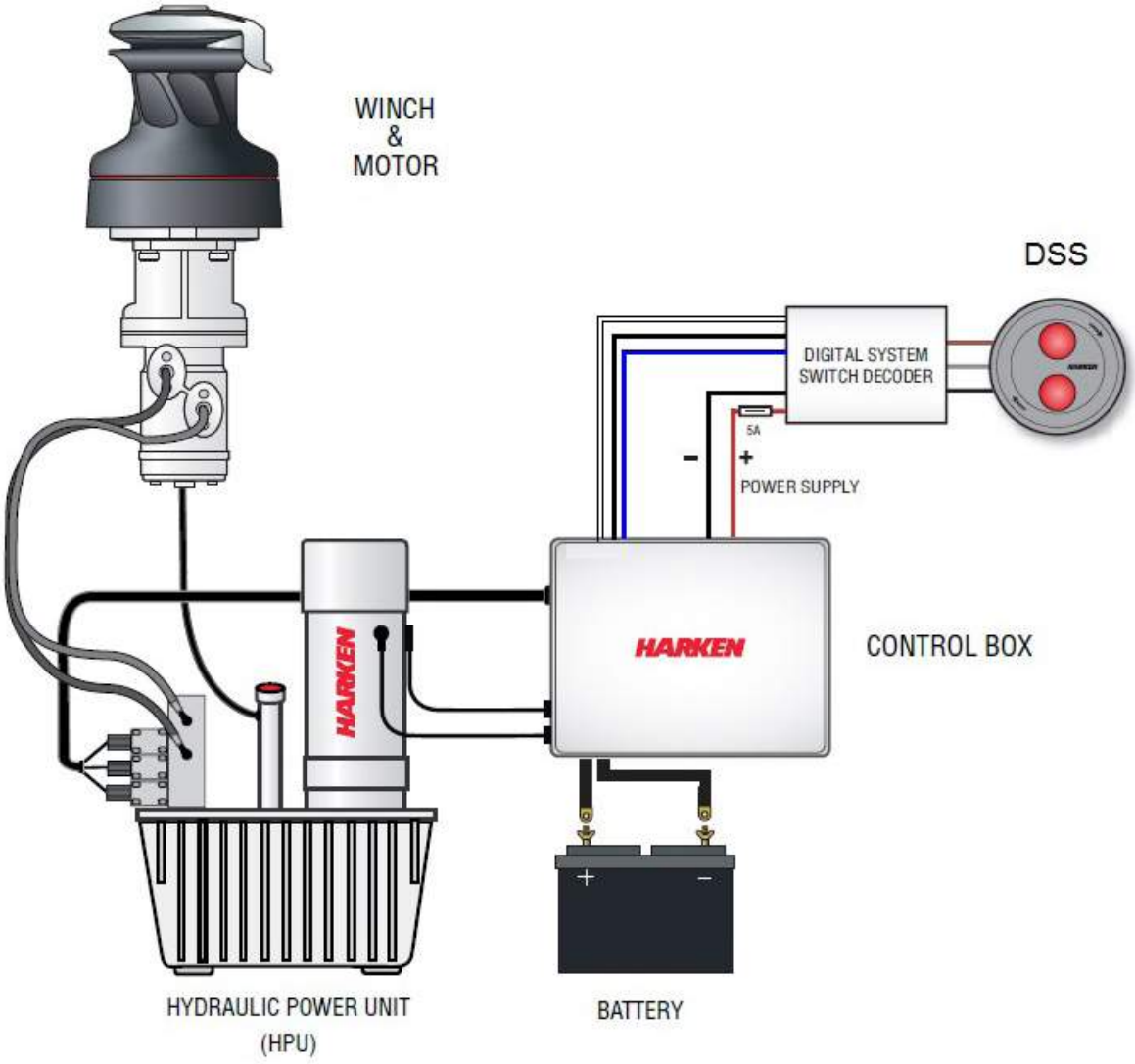
Hydraulic connections diagram

The hydraulic motor must be connected to a hydraulic system using two high-pressure tubes which serve for input or output according to the direction in which the motor will be run. The motor also needs a third connection with a low pressure tube for drainage, so that excess oil can return to the main tank to avoid shortening the life of the motor. This motor uses an open centre valve.

Refer to the following chart for the hydraulic system:

For the hydraulic motor:

Input/output pipe thread: G 1/2 – depth 15 mm
Drainage pipe thread: G 1/4 – depth 12 mm



WARNING!
Refer to the Hydraulic Power Unit and Control Box manual.

WARNING!
Refer to the Digital System Switch manual.

Maintenance

Washing

Winches must be washed frequently with fresh water, and in any case after each use.
Do not allow teak cleaning products or other cleaners containing caustic solutions to come into contact with winches and especially anodised, chrome plated or plastic parts.
Do not use solvents, polishes or abrasive pastes on the logos or stickers on the winches. Do not use polishes or abrasive pastes on anodised, chromed plated or plastics surfaces.
Make sure that the holes and drainage channels in the base of the winch are not obstructed so that water does not collect.

Maintenance table

Winches must be visually inspected at the beginning and end of every season of sailing or racing. In addition they must be completely overhauled, cleaned and lubricated at least every 12 months. After an inspection, replace worn or damaged components. Do not replace or modify any part of the winch with a part that is not original.

WARNING!
Periodic maintenance must be carried out regularly. Lack of adequate maintenance shortens the life of the winch, can cause serious injury and also invalidate the winch warranty. Installation and maintenance of winches must be carried out exclusively by specialized personnel.

WARNING!
Make sure that the power is switched off before installing or carrying out maintenance on the winch.

In the case of doubt contact Harken® Tech Service at techservice@harken.it

If it is necessary to replace any jaws of the winch, proceed as follows:

I. Unscrew the 3 screws n°17
(🔧4Nm/35 in-lb)

II. Remove the jaws n°16

Inspect balls inside the drum and carefully check the correct position; if it is necessary to put back any balls, push balls in the race (as shown below):

Once the winch is completely disassembled, clean the parts: use a basin of diesel oil to soak metal components and rinse plastic parts in fresh water. Once you have done this, dry the parts with cloths that do not leave residue.

Inspect gears, bearings, pins and pawls for any signs of wear or corrosion.

Carefully check the teeth of gears and ring gears to make sure there are no traces of wear.

Check the roller bearings and check there are no breaks in the bearing cages.

Replace worn or damaged components.

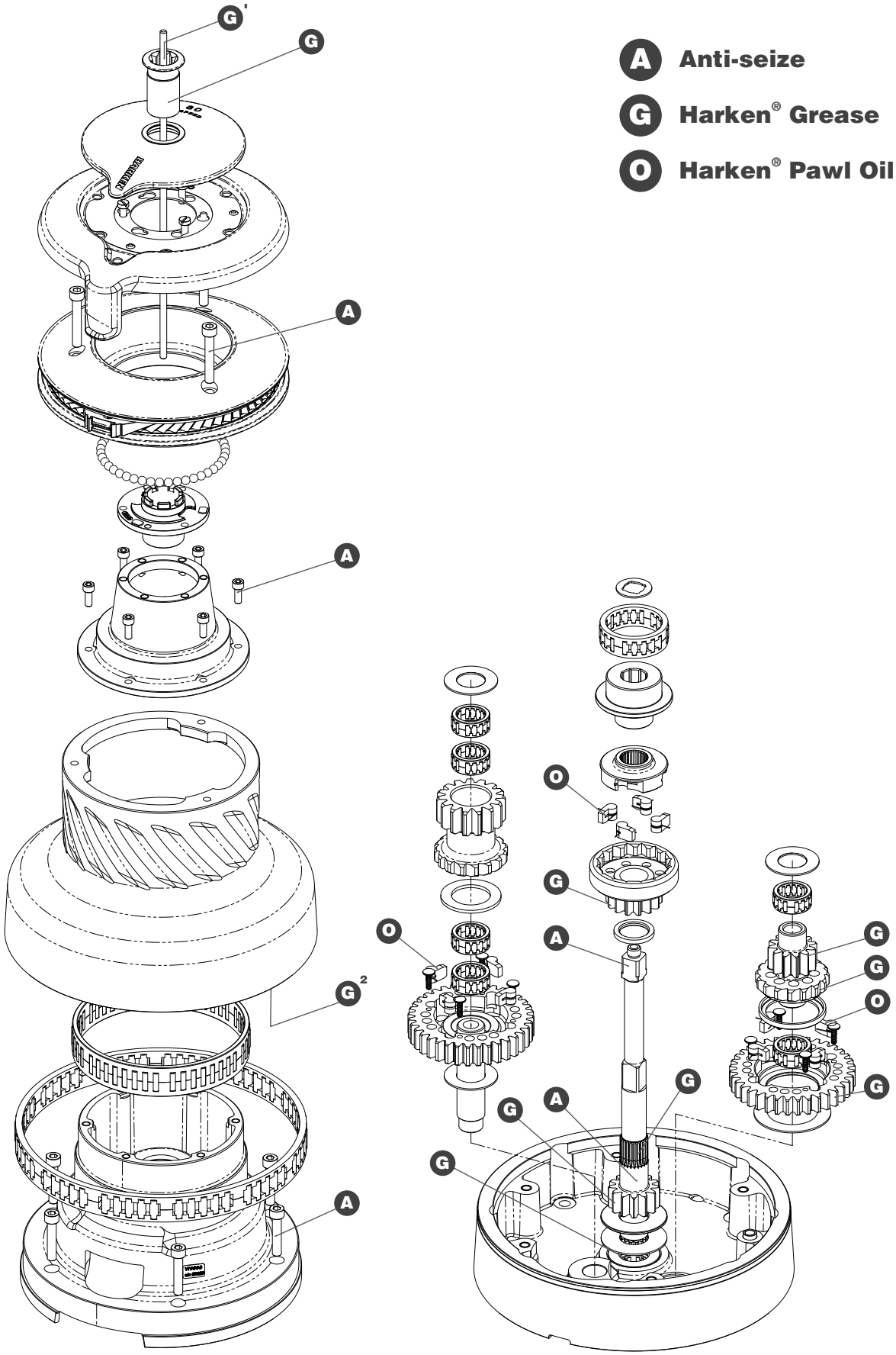
Carry out maintenance on components using the products listed below.

For more information on which products to use where, refer to the exploded diagram below.

Use a brush to lightly lubricate all gears, gear pins, teeth and all moving parts with grease.

Lightly lubricate the pawls and springs with oil. Do not use grease on the pawls!

Exploded view with maintenance products



1. Apply Harken® grease on assy socket screw

2. Apply Harken® grease on drum gear

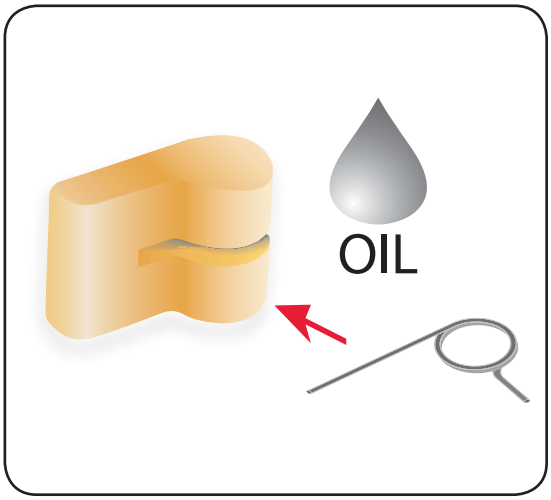
Assembly

Make sure that the holes and drainage channels in the base of the winch are not obstructed. Assemble the winch in the reverse order of the sequence in the section on disassembly.

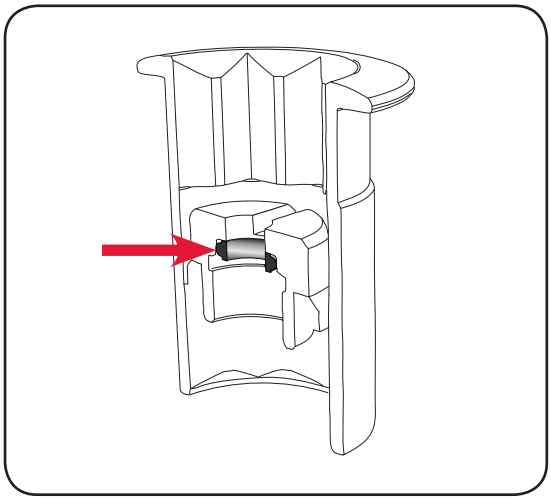
To tighten bolts, use the torque indicated in the disassembly procedure.

The icon ▲ on the Stripper Arm Housing indicates the Stripper Arm final position.
Change the Stripper Arm Housing angle to modify the Stripper Arm final position.

When positioning the stripper arm, align the peeler with it.
If the jaws have been disassembled, insert peeler between the two jaws, taking care that the letters TOP on the peeler are facing upwards.



To assemble the pawls
Correctly position the spring in its housing as shown at left. Hold the spring closed and slide the pawl into its housing. Once in position, check that the pawls can be easily opened and closed with a finger.



NOTICE
Before screw the central screw, check the correct position of the o-ring in the assy socket and apply Harken® grease.

In case of doubt concerning the assembly procedure contact Harken® Tech Service: techservice@harken.it

Harken® limited worldwide warranty

Refer to the Harken® Limited Worldwide Warranty in the Harken® Catalogue and on the website www.harken.com

Ordering spare parts

Spare parts can be requested from Harken® as described in the Harken® Limited Worldwide Warranty, indicating the part number in the Parts List and including the serial number of the winch for which the parts are required.

The serial number of the winch is printed on a plate on the drum support of the winch.

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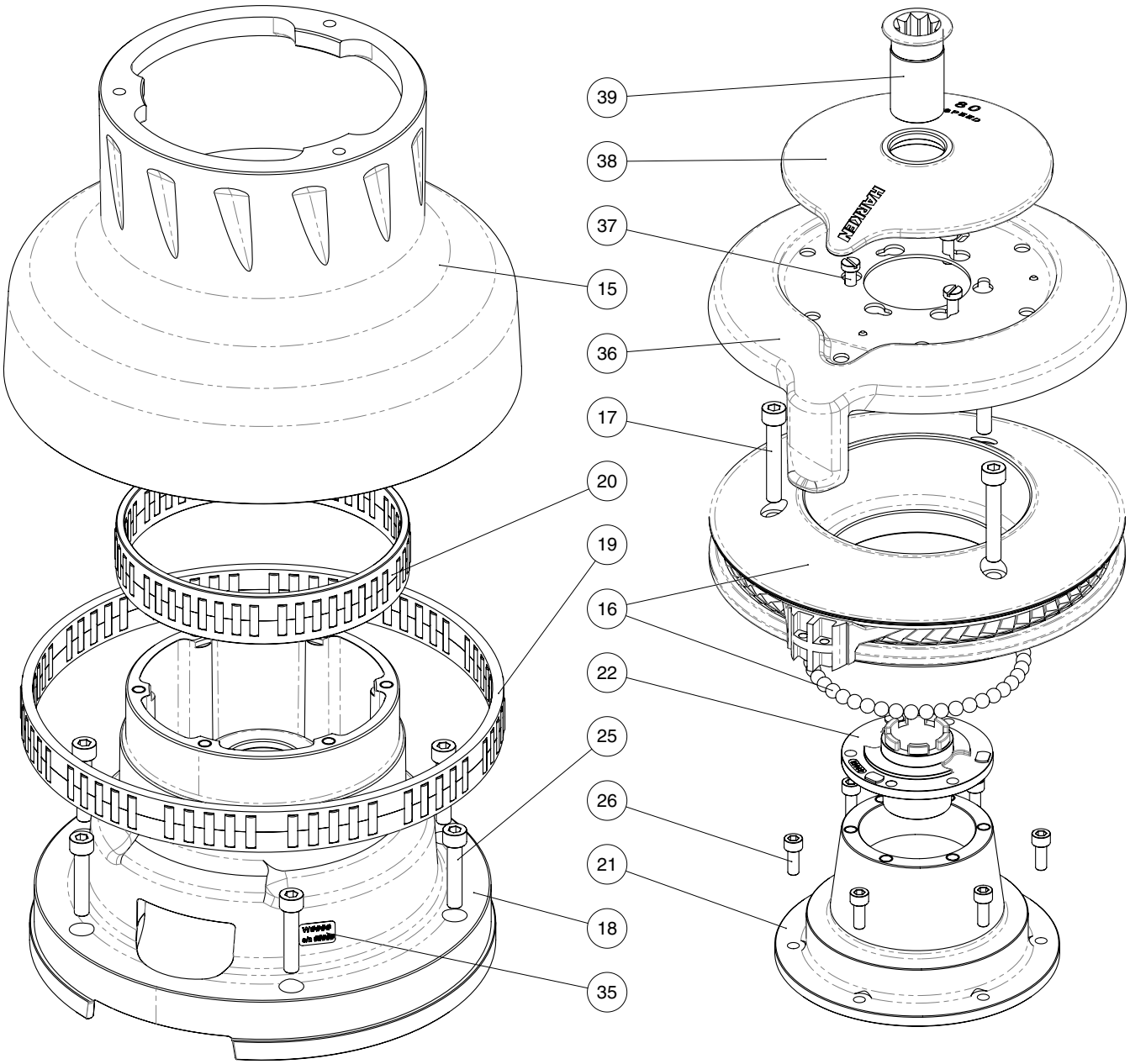
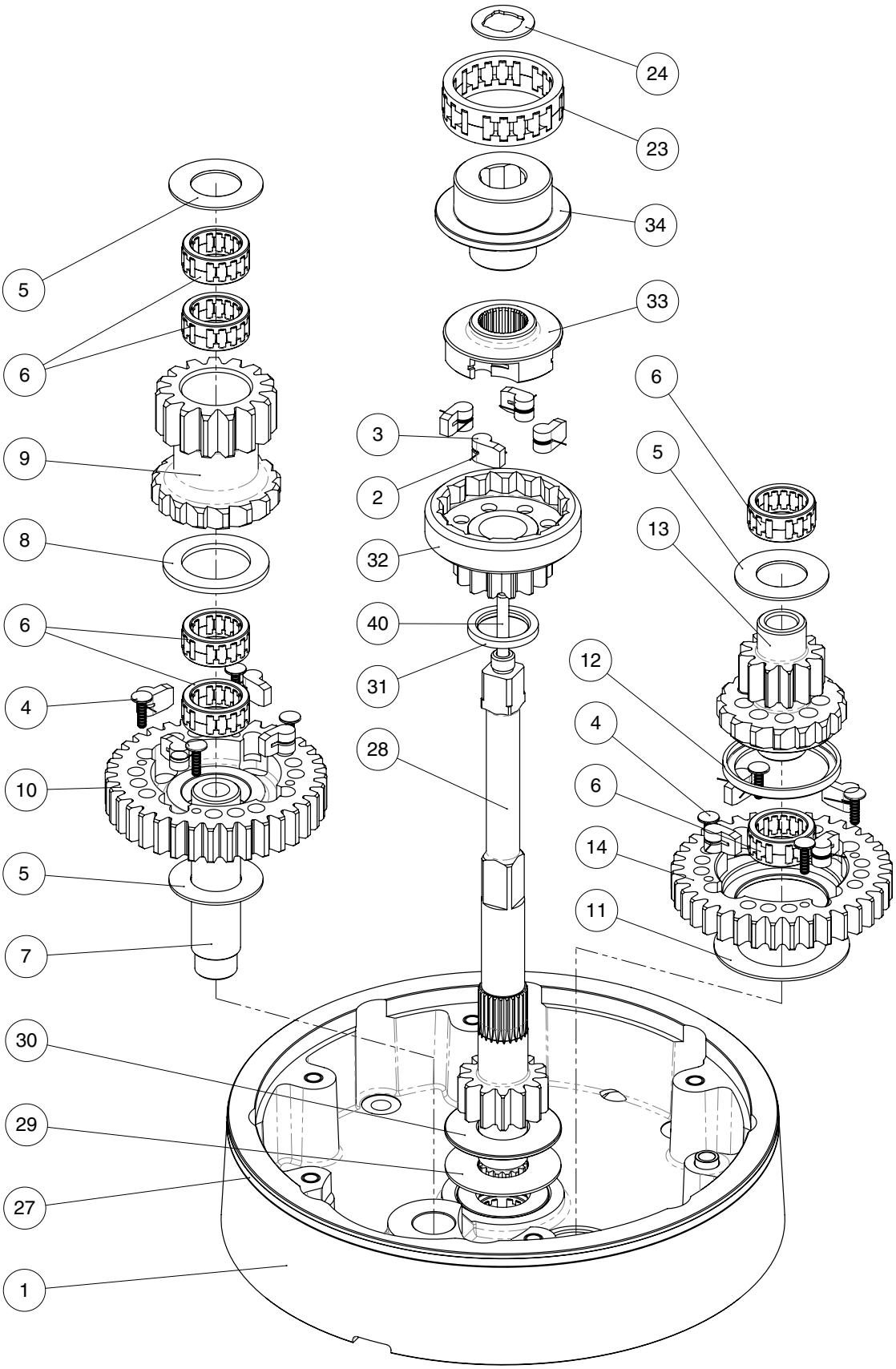
Exploded view

Radial Winch 80.2 STA, STC



Radial Winch 80.2 STA, STC



Parts List

Radial Winch 80.2 STA

A = drum in anodised aluminium

Pos.	Q.ty	Code	Description
1	1	A94158200	Base assembly
			Base winch 80
			Plug for instrumented base Ø13x4
			Heli-coil M8x10
			Heli-coil M10x10
			Bush gear shaft Ø32xØ39x22
			Bushing Ø39xØ32x22
	1	A74506900	*Bearing Ø25xØ35x15*
	1	S476030004	*Centering bushing Ø12*
	1	M0620697	*Seal Ø25xØ47x7*
			*Winch Product Sticker***
2	12	S285040001	Pawl Spring*
3	12	S392440004	Pawl Ø10*
4	8	HFS753	plug-pawl retainer
5	3	S434110081	Washer Ø48xØ26x1,5
6	6	A74506900	Bearing Ø25xØ35x15
7	1	S405830004	Shaft -FD pinion
8	1	S438860081	Washer Ø54xØ35,2x3
9	1	S405540004	Final Drive Pinion Winch 990
10	1	S405550004	Gear Z36 - Winch 990
11	1	S434170081	Washer Ø69xØ45x1,5
12	1	S402260041	Bushing 4th. gear pinion
13	1	S405580004	Pinion 3rd
14	1	S423870004	Gear Z=36 - Winch 990 PR 80
15	1	A74159000	Drum assembly W80
16	1	A94159200	Assy Jaws Winch 80
			Upper Jaw ST W80
			Lower Jaw ST W80
	6	S385970001	*SPRING*
	1	S6876800C0	*Peeler winch 80*
	44	M0610280	*Ball 5/16"*
17	3	M0624703	Screw M8x50 UNI5931
18	1	A94158700	Assy Housing W80
			Housing W80-1000
			Bushing Ø39xØ32x22
			Heli-coil M6x9
19	1	A74059500	Roller Bearing lower 990

Pos.	Q.ty	Code	Description
20	1	A74158900	Roller bearing Ø148x160x30
21	1	A94159600	Assy flange
			Stripper arm support
			Heli-coil M6x9
22	1	S4144300A0	Stripper Arm Housing W60/70
23	1	A73129200	ROLLER BEARING 50-62-20 ERTA P
24	1	S413880002	Washer Ø17.2xØ32x1.5
25	6	M0624603	Screw M8x40 UNI5931
26	6	M0635103	Socket head screw M6x16 UNI 5931
27	1	S386550097	Red line
28	1	S418020004	Shaft Z13 W80 Pred EL/HY
29	1	S434160081	Washer Ø59xØ26x1,5
30	1	S402050004	Washer Ø25,2xØ61x2,4
31	1	S405860080	Spacer
32	1	A94055700	Assy Pinion Z14
			Pinion Z14
	1	S455420081	*Bushing Ø24,5xØ28,5x27*
33	1	S405620004	Hub 2nd Ratchet
34	1	S415860080	Inner spacer
35			Winch Serial Number Sticker
36	1	A94159901	Kit stripper arm
			Stripper-arm W80
			Pin
37	3	M0601903	Screw M6x16 UNI1207
38	1	S4160000B7	Cover W80.2 ST
39	1	A94149300	Assy Socket W35-80 EL/HY
			Socket Handle W20/80
	1	S414940085	*Washer Ø25xØ15x4*
	1	S414930003	*Nut Screw for Disconnect Rod*
	1	M0679797	*O ring RC 2025 series*
40	1	S495390002	Disconnect rod W80.2

**Available with service kit; see website www.harken.com*

***Winch product sticker*

Radial Winch 80.2 STC

C = drum in chrome bronze

Pos.	Q.ty	Code	Description
1	1	A94158200	Base assembly
			Base winch 80
			Plug for instrumented base Ø13x4
			Heli-coil M8x10
			Heli-coil M10x10
			Bush gear shaft Ø32xØ39x22
			Bushing Ø39xØ32x22
	1	A74506900	*Bearing Ø25xØ35x15*
	1	S476030004	*Centering bushing Ø12*
	1	M0620697	*Seal Ø25xØ47x7*
			*Winch Product Sticker***
2	12	S285040001	Pawl Spring*
3	12	S392440004	Pawl Ø10*
4	8	HFS753	plug-pawl retainer
5	3	S434110081	Washer Ø48xØ26x1,5
6	6	A74506900	Bearing Ø25xØ35x15
7	1	S405830004	Shaft -FD pinion
8	1	S438860081	Washer Ø54xØ35,2x3
9	1	S405540004	Final Drive Pinion Winch 990
10	1	S405550004	Gear Z36 - Winch 990
11	1	S434170081	Washer Ø69xØ45x1,5
12	1	S402260041	Bushing 4th. gear pinion
13	1	S405580004	Pinion 3rd
14	1	S423870004	Gear Z=36 - Winch 990 PR 80
15	1	A74159100	Drum assembly W80 C
16	1	A94159200	Assy Jaws Winch 80
			Upper Jaw ST W80
			Lower Jaw ST W80
	6	S385970001	*SPRING*
	1	S6876800C0	*Peeler winch 80*
	44	M0610280	*Ball 5/16"*
17	3	M0624703	Screw M8x50 UNI5931
18	1	A94158700	Assy Housing W80
			Housing W80-1000
			Bushing Ø39xØ32x22
			Heli-coil M6x9
19	1	A74059500	Roller Bearing lower 990

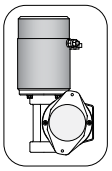
Pos.	Q.ty	Code	Description
20	1	A74158900	Roller bearing Ø148x160x30
21	1	A94159600	Assy flange
			Stripper arm support
			Heli-coil M6x9
22	1	S4144300A0	Stripper Arm Housing W60/70
23	1	A73129200	ROLLER BEARING 50-62-20 ERTA P
24	1	S413880002	Washer Ø17.2xØ32x1.5
25	6	M0624603	Screw M8x40 UNI5931
26	6	M0635103	Socket head screw M6x16 UNI 5931
27	1	S386550097	Red line
28	1	S418020004	Shaft Z13 W80 Pred EL/HY
29	1	S434160081	Washer Ø59xØ26x1,5
30	1	S402050004	Washer Ø25,2xØ61x2,4
31	1	S405860080	Spacer
32	1	A94055700	Assy Pinion Z14
			Pinion Z14
	1	S455420081	*Bushing Ø24,5xØ28,5x27*
33	1	S405620004	Hub 2nd Ratchet
34	1	S415860080	Inner spacer
35			Winch Serial Number Sticker
36	1	A94159901	Kit stripper arm
			Stripper-arm W80
			Pin
37	3	M0601903	Screw M6x16 UNI1207
38	1	S4160000B7	Cover W80.2 ST
39	1	A94149300	Assy Socket W35-80 EL/HY
			Socket Handle W20/80
	1	S414940085	*Washer Ø25xØ15x4*
	1	S414930003	*Nut Screw for Disconnect Rod*
	1	M0679797	*O ring RC 2025 series*
40	1	S495390002	Disconnect rod W80.2

**Available with service kit; see website www.harken.com*

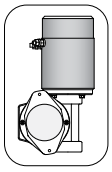
***Winch product sticker*

Horizontal electric motor 12V / 24V

TOP VIEW

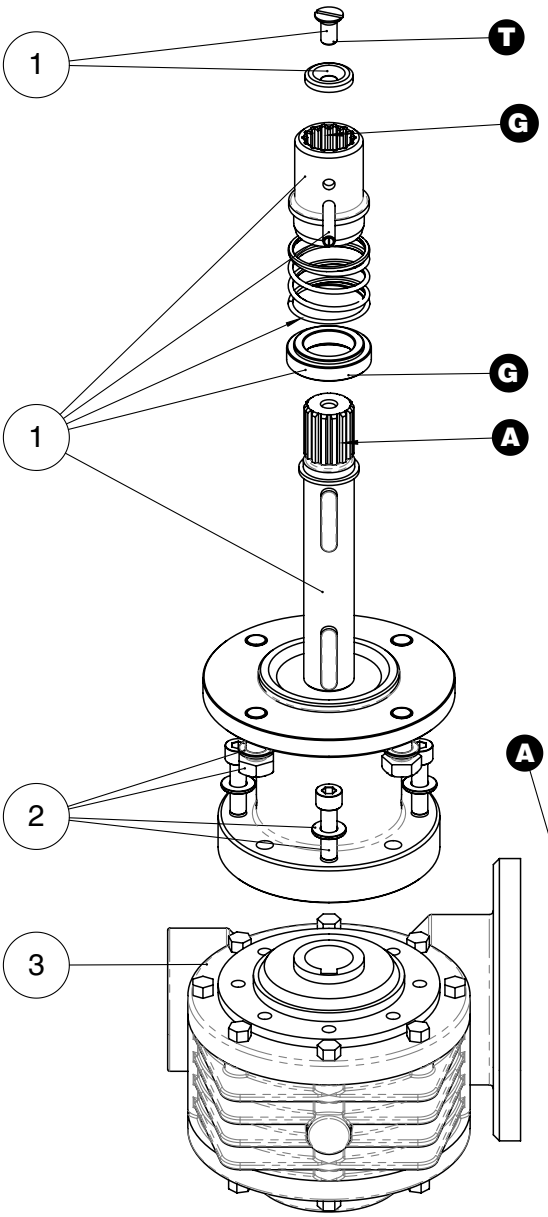


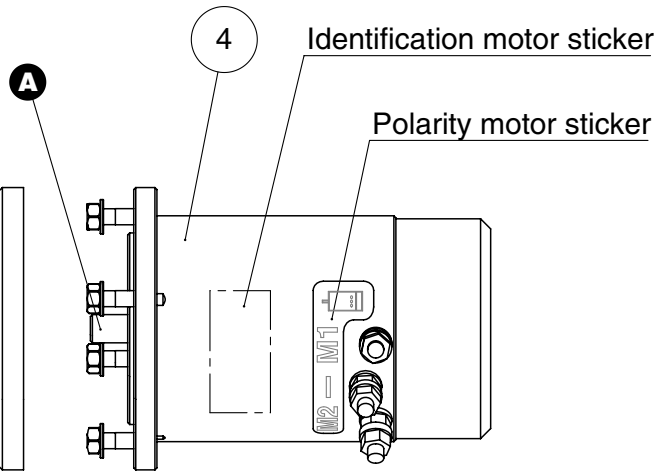
* ***Motor installed in right-hand configuration.***



** ***Motor installed in left-hand configuration.***

Pos.	Q.ty	Code	Description
1	1	A93569400	Assy drive shaft W80
			Shaft for Gear Reductor W80
			Coupler
	1	M0617803	*Pin Ø6x36*
	2	M0628106	*Key 8x7x35*
	1	S330430085	*Washer*
	1	M0635303	*Screw M8x16 UNI6109*
	1	S432980080	*Spacer for Seal*
	1	S432920001	*Spring for motor clutch*
2	1	A94329700	Assy flange W80
			Flange for Gear Box Reduction W80
	1	M0673997	*Seal 42x55x8*
	4	M0623503	*Screw UNI EN ISO 4017:2002 - M10x25 - A4*
	4	M0611703	*Washer 10.5 U1751 DIN127*
	4	M0624503	*Screw M8x30 UNI5931*
	4	M0648702	*Washer D.8 ISO 7089*
3	1	A94185200	KIT Gear Reduction W80
	1	A96508300	KIT Gear Reduction LM W80
4	1	A84807000	Motor 12V 1,5kW
	1	A84807100	Motor 24V 2kW
			Electric Motor
			Screw stud M8X34
			Washer D.8 ISO 7089
			NUT M8 - UNI 5588 - A4
			Polarity motor sticker
	1	M6014206	*Key DIN 6885 5x5x15*





A **Anti-seize**

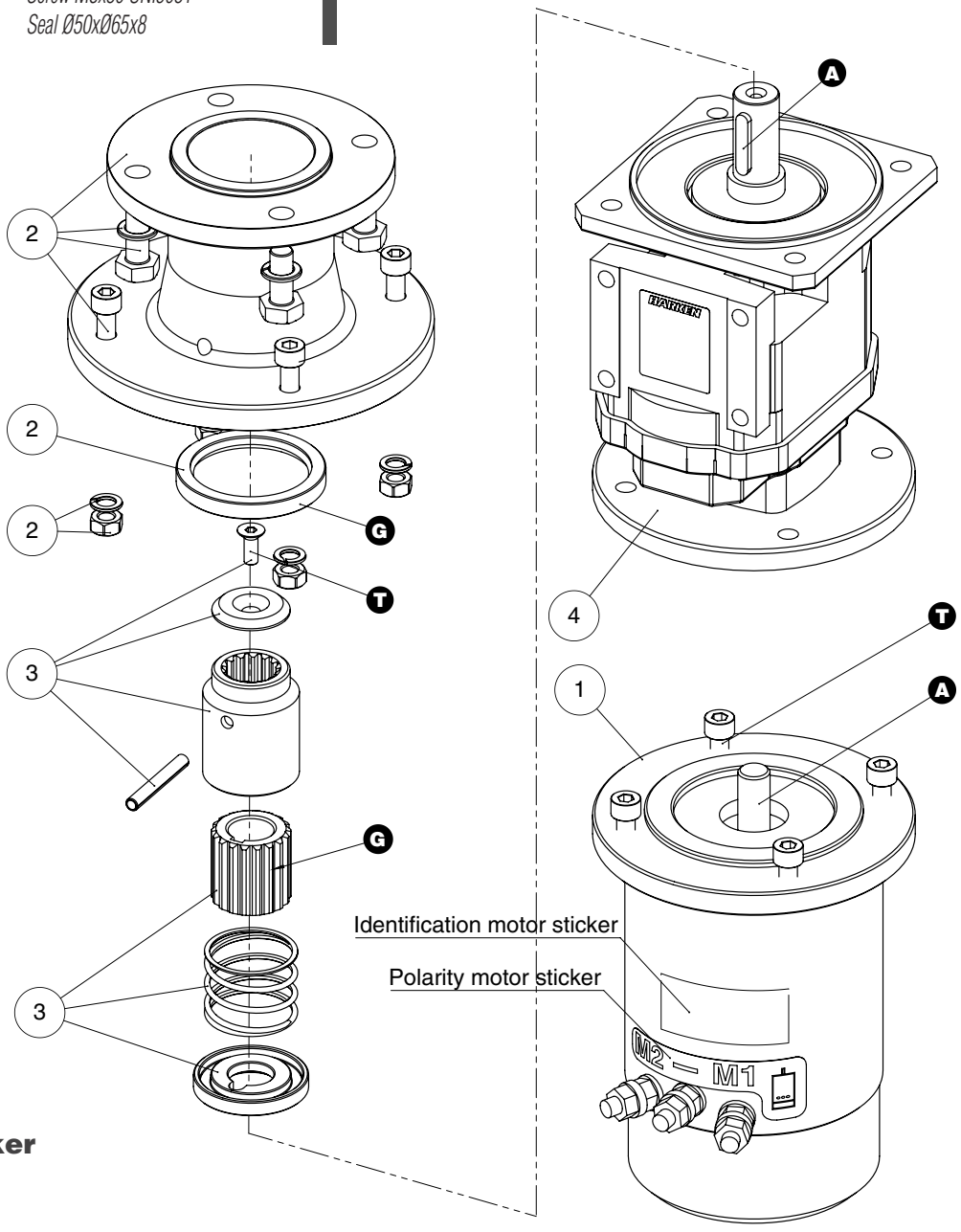
G **Harken® Grease**

T **Axial Threadlocker**

Vertical electric motor 12V / 24V

Pos.	Q.ty	Code	Description
1	1	A96010500	KIT EL Motor 12V 1,5kW VT
	1	A96010400	KIT EL Motor 24V 2kW VT
			Electric Motor
			Polarity motor sticker
			Screw M8x20 UNI5931
	1	M6014206	*Key DIN 6885 5x5x15*
2	1	A94954200	Assy flange Vertical Gbox W80
			Flange for gear box for electric
	4	M0611703	*Washer Ø10.5 U1751 DIN127*
	4	M0603103	*WASHER Ø8.4 U1751 DIN127 A4*
	4	M0602903	*NUT M8 - UNI 5588 - A4*
	4	M0623503	*Screw UNI EN ISO 4017:2002 - M10x25 - A4*
	4	M0624503	*Screw M8x30 UNI5931*
	1	M0674097	*Seal Ø50xØ65x8*

Pos.	Q.ty	Code	Description
3	1	A96508200	KIT EL VT Motor Clutch W80
			Connecting coupling
			Toothed coupler
	1	M0666002	*Spring pin 6x45 DIN 1481*
	1	S432920001	*Spring for motor clutch*
	1	S495410080	*spacer for Seal*
	1	S329360082	*Washer*
	1	M0666603	*Screw M6x16 UNI 5933*
4	1	A96563000	Vertical reduction gear box 1/20.2



A **Anti-seize**

G **Harken® Grease**

T **Axial Threadlocker**

Hydraulic motor

Pos.	Q.ty	Code	Description
1	1	G30849000Y	Hydraulic motor W80
2	1	A94226600	KIT HY Motor Flange W80
			Flange for Motor fixing
			HELI COIL M12x18
	4	M0611703	*Washer 10.5 U1751 DIN127*
	2	M0667103	*Screw M12x35 UNI5931*
	2	M0621503	*Washer D.13 U1751 DIN127*
	1	M0674097	*Seal Ø50xØ65x8*
	4	M0623503	*Screw UNI EN ISO 4017:2002 - M10x25 - A4*

Pos.	Q.ty	Code	Description
3	1	S295050082	Spacer
4	1	A93264800	KIT Clutch HY Motor W80
			Connecting coupling
			Toothed coupling
	1	M0666002	*Spring pin 6x45 DIN 1481*
	1	S432920001	*Spring for motor clutch*
	1	S432930080	*Spring seat*
	1	S329360082	*Washer*
	1	M0635303	*Screw M8x16 UNI6109*

A **Anti-seize**

G **Harken® Grease**

T **Axial Threadlocker**