BHW
Bushey Hall Winchmaster
www.bhwgroup.com

OPERATING & MAINTENANCE MANUAL

CWG SERIES WINCH 1000-6000kg

CWG30375, CWG30565, CWG30750,
CWG31500, CWG34000

CONFORMING TO
BS EN14492 Cranes – Power Driven Winches and Hoists – Part 1&2

Part No. 15458 / 03.10.24

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CONTENTS

INTRODUCTION

PLEASE READ THIS MANUAL CAREFULLY BEFORE INSTALLATION OR OPERATION OF THE WINCH

Those responsible for the installation and the operation of this winch must read and understand this manual. The first section deals with the installation requirements and the second section is for the user and provides information to ensure safe use of the winch.

These winches are of the highest quality and have been designed to give a robust and efficient service for many years if care and attention are given at all times to correct installation, operation and maintenance.

PLEASE KEEP THIS MANUAL WITH THE WINCH
NOTE: Hire companies should make the hirer fully aware of the safety issues and correct operation of this winch as detailed in this manual and ensure that the proposed operator is suitably trained.

WINCH STANDARDS & BHW GROUP LTD

The British Standard: BS EN14492 part 1&2 for power driven winch provides the means for conformity to essential Health and Safety requirements of the EN Machinery Directive and the essential Health & Safety at Work Act 1974.

Selecting the correct winch for the application is very important not only from the health and safety aspect, but also to maximise product life and ensure the best value for money.

BHW Group Ltd products are fully compliant and carry a UKCA and CE mark. A Declaration of Conformity is also supplied with each product. BHW Group Ltd aim to ensure the correct machine is supplied to suit the application and we welcome the opportunity of discussing the proposed application and offer advice. It will help us considerably if information regarding the maximum and average loads to be lifted or pulled - and approximate frequency of use can be provided.

PRE OPERATION CHECK

- Check for any transit damage.
- Check that all fixings and joints are tight and secure.
- Check the capacity of the winch versus intended loads and ensure it is adequate for the task
- Check that all external wiring is in good order.
- Check the wire rope to ensure that there is no damage – (see notes on Wire Ropes & Hooks, page 11).
- Check that the suspension point is fully capable of taking the proposed load bearing of operation.
- Check that the hooks (top and bottom) are in good order, the top hook is fully secured on the suspension point and that potential travel on the load hook is unimpeded.

SETTING UP WINCH PRIOR TO USE

1. Check that all components of the winch are sound and in good working order.
2. Install and check the winch in accordance with instructions, ensuring that the winch is suited to the task.
3. The winch is supplied with the wire rope already fitted to the drum
4. Hooks must have a safety latch and a minimum rated capacity of 300kg.
   Use only high tensile grade 80 or 100 to comply with BS EN14492 part 1 & 2 standards.
   (Hooks supplied as standard from BHW Group Ltd are rated and stamped for lifting and have a safety factor of 4:1.) Hook capacity for these machines is selected to ensure they are large enough to take webbing straps).
5. Fully test and check all wanderlead operations including Emergency Stop.
6. Ensure that winch has suitable circuit breaker or fuse as part of the power supply and suitable earthing.
7. When installing on site, test the winch, check the integrity of the selected mounting
8. Check that the wire rope is evenly wound on to the drum and generally fit for use, replace if damaged or worn (See section on wire ropes).
9. You are also advised that adherence to the directive ISO4309:2004/2010 regarding care, installation and disposal of wire ropes also applies to this range of winch. (See section on Wire Ropes & Hooks, page 11).

WINCH INFORMATION

WINCH SPECIFICATIONS

Models:	**CWG WINCH Rated typically on the third layer of rope.** **CWG30375, 415V x 3ph = 1000kg** **CWG30565, 415V x 3ph = 1500kg** **CWG30750, 415V x 3ph = 2500kg** **CWG31500, 415V x 3ph = 3500kg** **CWG31500, 415V x 3ph = 4200kg** **CWG34000, 415V x 3ph = 5000kg** **CWG34000, 415V x 3ph = 6000kg** **BS EN 14492 part 1 & 2 Compliant**
Typical Uses:	**Vertical winching and lowering of loads.**
Construction:	**Steel gears running in grease, in cast housing.**
Motor:	**415V x 3ph. AC Induction Type Rated IP54**
Total Kit Includes	**Winch, wire rope, weighted hook, pendant control and power lead with plug**
Wanderlead	Tough, 3 button hand held control with 3m lead.IP65 (see below). Includes emergency stop. Other lead lengths are available on request.
Hooks (as supplied with CWG winch)	**R**ated with safety latch. High tensile grade 80 or 100 in compliance with BS EN14492-1 & 2 standards.
IP (Ingress Protection) Ratings	**Motor = IP54** - Protection from entry by solid objects with a diameter or thickness greater than 1mm. Protection against water splashed from any direction – limited ingress permitted. **Wanderlead Control = IP65** – Totally protected against dust. Protection against strong jets of water – limited ingress permitted.
Machine Insulation Class	**F** - Maximum operation temperature of 155° C (311° F). Allowable temperature rise at full load 1.0 service factor motor = 105° and at full load 1.15 service factor motor = 115°.
Lubrication & Recommended grease	Gear Box: lithium grease EP000 or equivalent
Noise Level	80db
Ambient Temp. Operating Range	-10°C to 40°C (humidity must be below 90%)

WINCH INFORMATION

LINE PULL AND LINE SPEED PERFORMANCES - WINCH VARIANTS

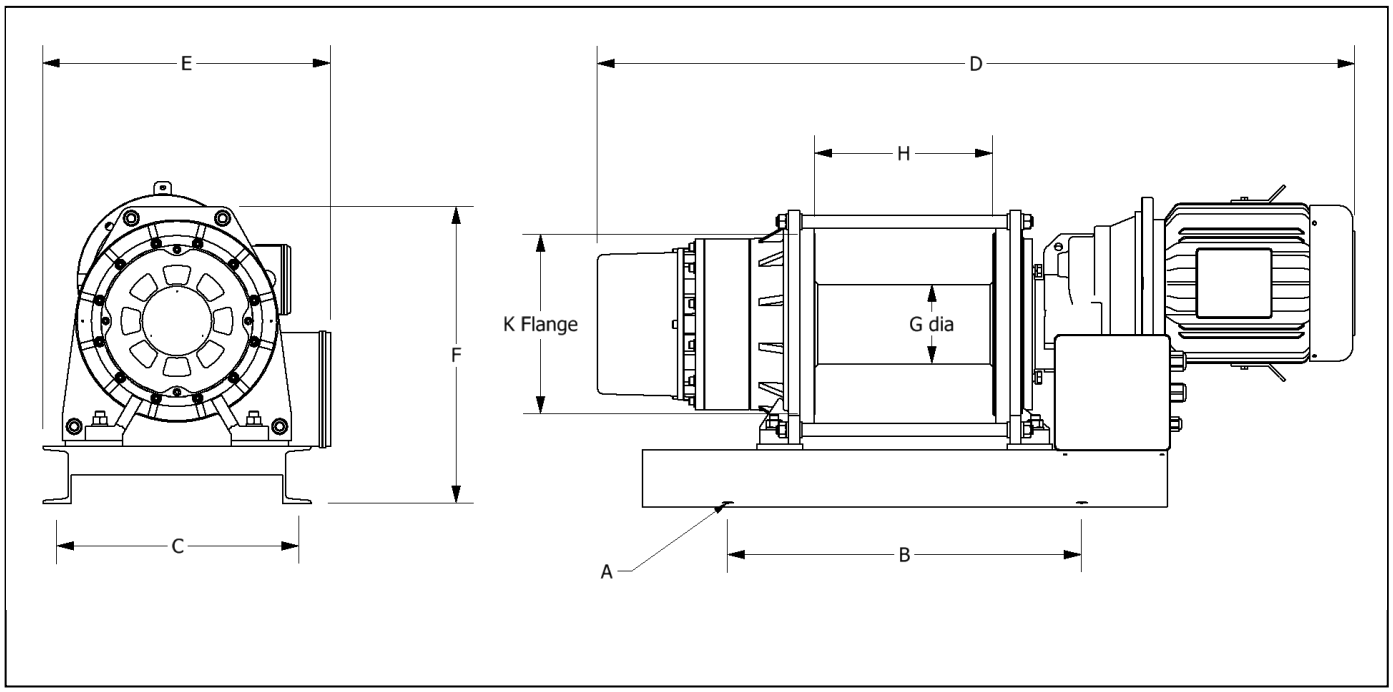
CWG SERIES WINCH VARIANTS - SPECIFICATION

Part No.	Model	Rated Load per Layer [kgf/kN]				Line Speed [m/min]				Rope Length [m/layer]				Wire Rope			Drum Ø [mm]	Motor [Amps]	Motor [kW]
		1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	Ø [mm]	Length [m]	SWL [kg]			
CWG30375 – 1000kg Rated on the 3rd layer																			
16479	A	1386/13.6	1220/12	**1091/10.7**	985/9.6	12	14	**15.3**	17	10	21	**33**	45	9	33	1062	127	8.3	4
16480	B	1386/13.6	1220/12	**1091/10.7**	985/9.6	8	9.8	**11**	12.2	10	21	**33**	45	9	33	1062	127	5	2.2
16481	C	1386/13.6	1220/12	**1091/10.7**	985/9.6	3.7	4.1	**4.6**	5	10	21	**33**	45	9	33	1062	127	3.5	1.5
16482	D	1386/13.6	1220/12	**1091/10.7**	985/9.6	1	1.2	**1.6**	2	10	21	**33**	45	9	33	1062	127	1.7	0.55
CWG30565 – 1500kg Rated on the 3rd layer																			
16483	A	1800/17.7	1650/16.2	**1500/14.7**	N/A	20	22.5	**24.6**	N/A	20	40	60	N/A	11	40	1586	219	15.5	7.5
16484	B	1800/17.7	1650/16.2	**1500/14.7**	N/A	14	15.5	**17**	N/A	20	40	60	N/A	11	40	1586	219	10	5.5
16485	C	1800/17.7	1650/16.2	**1500/14.7**	N/A	4.2	4.6	**5.1**	N/A	20	40	60	N/A	11	40	1586	219	5.3	2.2
16486	D	1800/17.7	1650/16.2	**1500/14.7**	N/A	1	1.2	**1.8**	N/A	20	40	60	N/A	11	40	1586	219	1.7	0.55
CWG30750 – 2500kg Rated on the 4th layer																			
16487	A	3410/33.4	3072/30.1	2795/27.4	**2567/25.2**	7.7	8.6	9.4	**10.3**	16	34	54	75	14	54	2568	219	11	5.5
16488	B	3410/33.4	3072/30.1	2795/27.4	**2567/25.2**	5	5.5	6.3	**6.8**	16	34	54	75	14	54	2568	219	9.5	4
16489	C	3410/33.4	3072/30.1	2795/27.4	**2567/25.2**	2.5	2.8	3.1	**3.4**	16	34	54	75	14	54	2568	219	5.6	2.2
16490	D	3410/33.4	3072/30.1	2795/27.4	**2567/25.2**	1.1	1.3	1.5	**1.8**	16	34	54	75	14	54	2568	219	3	1.1
CWG31500 –3500kg Rated on the 4th layer																			
16491	A	5000/49	4600/45.1	4259/41.8	**3965/38.9**	5.5	6	6.4	**6.8**	29	61	95	131	16	95	3651	356	13.5	5.5
16492	B	5000/49	4600/45.1	4259/41.8	**3965/38.9**	4	4.4	4.7	**5**	29	61	95	131	16	95	3651	356	9.5	4
16493	C	5000/49	4600/45.1	4259/41.8	**3965/38.9**	2.9	3.2	3.5	**3.7**	29	61	95	131	16	95	3651	356	6.8	3
16494	D	5000/49	4600/45.1	4259/41.8	**3965/38.9**	1.2	1.4	1.6	**1.8**	29	61	95	131	16	95	3651	356	3.7	1.5
CWG31500 – 4200kg Rated on the 3rd layer																			
16495	A	5000/49	4600/45.1	**4259/41.8**	N/A	5.8	6.4	**7**	N/A	25	51	78	N/A	18	78	4243	356	13	5.5
16496	B	5000/49	4600/45.1	**4259/41.8**	N/A	4.3	4.8	**5.2**	N/A	25	51	78	N/A	18	78	4243	356	9.5	4
16497	C	5000/49	4600/45.1	**4259/41.8**	N/A	3.1	3.4	**3.7**	N/A	25	51	78	N/A	18	78	4243	356	6.8	3
16498	D	5000/49	4600/45.1	**4259/41.8**	N/A	1.2	1.4	**1.6**	N/A	25	51	78	N/A	18	78	4243	356	3.7	1.5
CWG34000 – 5000kg Rated on the 4th layer																			
17227	A	7320/71.8	6655/65.3	6050/59.3	**5500/53.9**	7.2	8.1	8.9	**9.8**	35	72	111	153	20	111	5242	324	24	11
17228	B	7320/71.8	6655/65.3	6050/59.3	**5500/53.9**	5.2	5.5	6.1	**6.7**	35	72	111	153	20	111	5242	324	16	7.5
17229	C	7320/71.8	6655/65.3	6050/59.3	**5500/53.9**	2.7	3	3.4	**3.7**	35	72	111	153	20	111	5242	324	8.5	4
17230	D	7320/71.8	6655/65.3	6050/59.3	**5500/53.9**	1	1.1	1.3	**1.5**	35	72	111	153	20	111	5242	324	4.8	2.2
CWG34000 – 6000kg Rated on the 3rd layer																			
17231	A	7320/71.8	6655/65.3	**6050/59.3**	N/A	7.2	8.4	**9.3**	N/A	32	66	103	N/A	22	103	6344	324	22	11
17232	B	7320/71.8	6655/65.3	**6050/59.3**	N/A	5.2	5.9	**6.6**	N/A	32	66	103	N/A	22	103	6344	324	17.6	7.5
17233	C	7320/71.8	6655/65.3	**6050/59.3**	N/A	2.7	3.3	**3.7**	N/A	32	66	103	N/A	22	103	6344	324	9	4
17234	D	7320/71.8	6655/65.3	**6050/59.3**	N/A	1	1.2	**1.4**	N/A	32	66	103	N/A	22	103	6344	324	4.5	2.2

Data shown is approximate based on winch and motor variants and intended as a guide only.

WINCH INFORMATION

WINCH DIMENSION

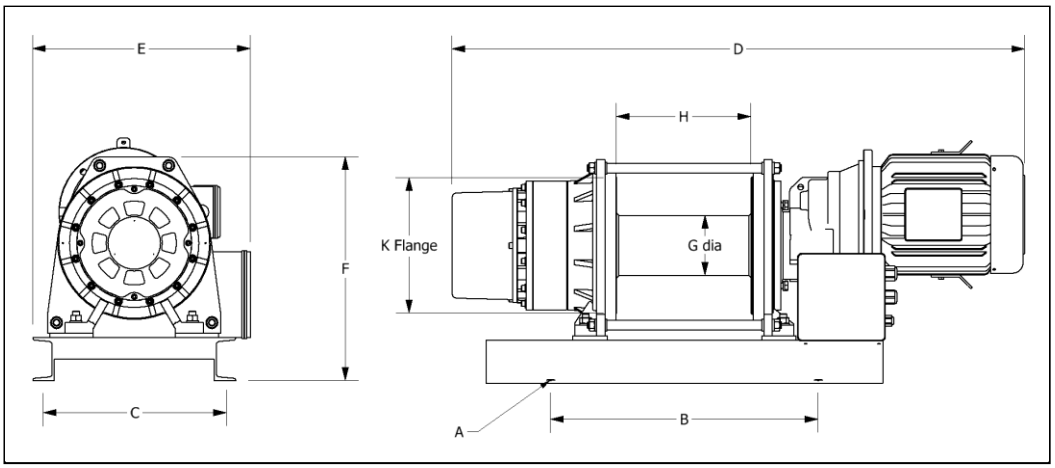


WINCH DIMENSIONS mm											
No	MODEL	VERSION	A	B	C	D	E	F	G	H	K
16479	CWG30375	A	4 off Ø 19	500	370	960	400	445	124	239	275
16480	CWG30375	B	4 off Ø 19	500	370	960	400	445	124	239	275
16483	CWG30565	A	4 off Ø 19	620	495	1100	470	520	140	312	320
16484	CWG30565	B	4 off Ø 19	620	495	1100	470	520	140	312	320
16487	CWG30750	A	4 off Ø 22	600	199	1160	565	658	219	312	410
16488	CWG30750	B	4 off Ø 22	600	199	1160	565	658	219	312	410
16491	CWG31500	A	4 off Ø 30	847	689	1431	740	860	356	405	570
16492	CWG31500	B	4 off Ø 30	847	689	1431	740	860	356	405	570
16495	CWG31500	A	4 off Ø 30	847	689	1431	740	860	356	405	570
16496	CWG31500	B	4 off Ø 30	847	689	1431	740	860	356	405	570
17227	CWG34000	A	4 off Ø 32	920	680	1860	740	905	324	680	570
17228	CWG34000	B	4 off Ø 32	920	680	1860	740	905	324	680	570
17231	CWG34000	A	4 off Ø 32	920	680	1860	740	905	324	680	570
17232	CWG34000	B	4 off Ø 32	920	680	1860	740	905	324	680	570

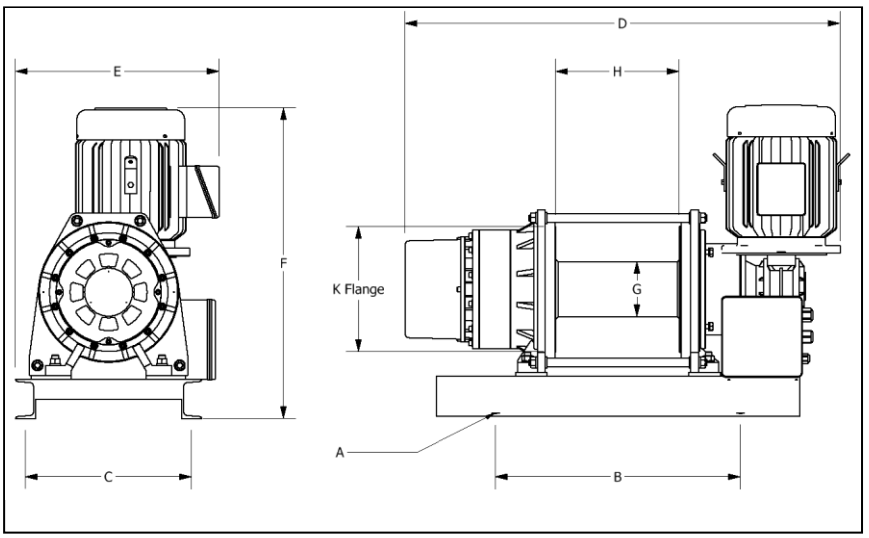
Data shown is approximate based on winch and motor variants and intended as a guide only.

WINCH INFORMATION

WINCH DIMENSIONS



WINCH DIMENSIONS mm											
No	MODEL	VERSION	A	B	C	D	E	F	G	H	K
16481	CWG30375	C	4 off Ø 19	500	370	960	400	445	124	239	275
16485	CWG30565	C	4 off Ø 19	620	495	1100	470	520	140	312	320
16489	CWG30750	C	4 off Ø 22	600	199	1160	565	658	219	312	410
16493	CWG31500	C	4 off Ø 30	847	689	1431	740	860	356	405	570
16497	CWG31500	C	4 off Ø 30	847	689	1431	740	860	356	405	570
17229	CWG34000	C	4 off Ø 32	920	680	1860	740	905	324	680	570
17233	CWG34000	C	4 off Ø 32	920	680	1860	740	905	324	680	570



WINCH DIMENSIONS mm											
No	MODEL	VERSION	A	B	C	D	E	F	G	H	K
16482	CWG30375	D	4 off Ø 19	500	370	942	400	445	124	239	275
16486	CWG30565	D	4 off Ø 19	620	495	1100	470	520	140	312	320
16490	CWG30750	D	4 off Ø 22	600	199	1142	565	658	219	312	410
16494	CWG31500	D	4 off Ø 30	847	689	1413	740	860	356	405	570
16498	CWG31500	D	4 off Ø 30	847	689	1413	740	860	356	405	570
17230	CWG34000	D	4 off Ø 32	920	680	1842	740	905	324	680	570
17234	CWG34000	D	4 off Ø 32	920	680	1842	740	905	324	680	570

Data shown is approximate based on winch and motor variants and intended as a guide only.

CWG WINCH - FEATURES

OVERVIEW

The electric motor on the winch drives the drum via the integral planetary gearbox.

The winch has an automatic brake which will apply when the operator release the control button and ceases either winching in or out. The automatic brake will also operate in the event of a power supply failure.

The winch is fully capable of winching in or out using the wanderlead control as the task dictates. The wanderlead also has an emergency stop button which will shut down the winch instantly. The emergency stop can be released by turning the stop button clockwise, in order to resume operation.

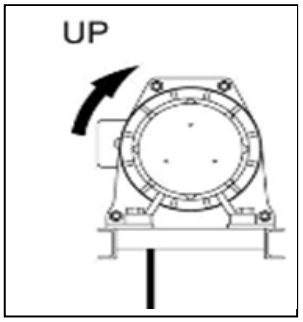
MOUNTING & SAFETY

It is generally envisaged that a secure, load tested surface will be the main support for the winch. All surfaces and bolts used must be capable of holding a load of 25% above the rated load of the winch used.

OPERATING THE CWG WINCH

To operate the CWG winch

- Twist and release the Emergency stop button
- Press the 'UP' button to raise the load, drum will rotate clockwise viewing the winch from the motor end
- Press the 'DOWN' button to lower the load; drum will rotate anti-clockwise viewing the winch from the motor end.
- Press the 'EMERGENCY STOP' button to isolate the control
- The wire rope can come of the top or bottom of the drum provided correct rotation for lifting is maintained.



Up button

Viewing the winch from the motor end the drum rotation is Clockwise

CWG WINCH - FEATURES (continued)

CWG WINCH LABELS

Winch rating label

Winch voltage WARNING label

Drum direction label “Rope in”

SWIVEL LOAD HOOK & SPIN RESISTANT WIRE ROPE
The appropriate wire rope and load hook are both supplied with new CWG winch, with the wire rope already installed. Ropes and hooks for CWG winch are specifically calibrated for the safe working load of each model.
Hooks are weighted swivel type, with a safety catch.
Ropes should be spin resistant, galvanised 18 x 7 wire core.
Replacement ropes and hooks should be of the same relevant calibration and are available from BHW Group Ltd sales. Please refer to the section on Parts (pages 14-17).

WIRE ROPES ARE NOT COVERED UNDER WARRANTY.

LOW VOLTAGE WANDERLEAD CONTROL: - provided on 415V x 3ph winches include low voltage controls as standard. These are supplied pre-wired to the control box on a 3 metre lead to a 3 button (including Emergency Stop) wander lead control. Press ‘UP’ and ‘DOWN’ buttons to activate the winch. The winch will stop once either of these buttons is released.

EMERGENCY STOP If the emergency stop button is used, winch operation will immediately cease. Once the operator is sure that any potential problem with operations has been solved, the hoist can be put back into use. To do this, the emergency stop needs to be reset by a small turn clockwise to release the button. ‘UP’ and ‘DOWN’ control can then be resumed.

NOTE: Cables should be kept away from the area of operation. Both cables should be attached to the hanging clip on the side of the motor housing. It is a good idea to also attach the cables to a hook above the winch, or place the wires over the suspension bar where possible to ensure that cables do not obstruct the operation of the hoist.

OPERATIONAL SAFETY

ENVIRONMENTAL CONSIDERATIONS
Protect the hoist from unsuitable environmental conditions. The motor is IP54 rated, the wanderlead control is IP65 rated.

Avoid temperatures under -10° C or above 40° C. Conditions with humidity above 90% may also affect hoist performance.

Avoid heavy acidic or salt environments. Protect the winch and controls from excessive exposure to rain or snow or other moisture ingress.

As with all electrical equipment, general exposure to excessive dust pollution, gas emissions or flammable / corrosive liquids, or any potentially explosive environment should also be avoided.

THE WINCH OPERATOR
The winch should be operated by designated and fully trained operators only. Operators should wear suitable work wear for onsite operations including safety gloves, helmets, steel reinforced footwear and protective clothing.

The operator should not engage in any activity which will divert attention from operating the winch.

Operators are advised to check that the top hook is safely attached to the suspension point, that the safety catch on the hook is fully closed and the suspension point is fully capable of supporting lifting operations. The winch should be further secured or bracketed to the suspension arm to prevent it coming off of the suspension point. Open ended suspension bars should have an additional bracket or suitable fixture at the end point.

Prior to use, the operator should check each operation mode (lift / descend / emergency stop) to ensure that all winch activities are fully operational. Operators should also make sure that loads are safe to move and that the working area is clear of personnel and obstructions.

Operators should not attempt to use the hoist if any aspect of the lifting operation or its surrounding environment is deemed unsafe.

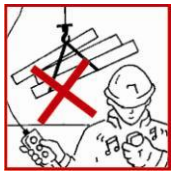
WORKING ON SITE

Winch should **NEVER** be used for the transport or lifting of personnel.
Loads should **NEVER** pass over the heads of personnel or in any way compromise on site safety.

Using the wanderlead, stand away from the load and use the lift or descend buttons according to need. Use suitable chains or strops to engage the load on to the lifting hook. Make sure that the load and its route is not obstructed in any way.

The wire rope must form a straight line from the load hook to the suspension point.
All loads should be securely hitched, PROPERLY BALANCED and central to the lift, with the load hook safety latch closed, before any lift is made.

If the load is not balanced and centred correctly the wire rope will bunch to one side of the drum, impede operation and damage the wire rope and drum flange. An unbalanced or off centre load is also dangerous.



WATCH WHAT YOU ARE DOING. Do not get distracted from the task. Always keep an eye on the winch and the load to ensure safe operation.

NEVER WRAP THE WIRE ROPE AROUND A LOAD TO ENGAGE THE HOOK.
NEVER STAND UNDERNEATH, OR CLOSE TO THE LOAD.
WEAR PROTECTIVE CLOTHING – ESPECIALLY GLOVES.

Make sure that the hoist is fully capable of lifting the intended load.
DO NOT attempt to lift loads that are beyond the winches capacity (See specifications, page 4).
NEVER use the winch beyond the rated duty cycles shown in specifications.
The efficiency and life of a CP winch is dependent on weights of loads and working frequency.
All CP winch are rated at a 25% duty cycle, with a maximum of 60 starts per hour – this includes lifting and lowering. Exceeding the duty cycle or overloading the hoist will cause unnecessary stress to component parts, and shorten the life of the machine, or may cause it to fail.

OPERATIONAL SAFETY

CHECK ALL EQUIPMENT: The winch, power lead, wanderlead, wire rope - and any chains, ropes and slings used for lifting should be continually inspected for damage or obvious wear that could make them unsafe to work with. Damaged accessory items should be replaced, not repaired (See notes on Routine Maintenance, page 12).

MAKE SURE THE WINCH IS SAFE WHEN UNATTENDED: Before leaving a winch unattended, the operator should lower any load onto the floor or on to an appropriate support and disconnect the winch. The unloaded hook should be raised clear of all passing personnel and traffic. The winch should be fully switched OFF when not in use. Wanderleads, power leads, strops and slings etc., should be neatly stowed away to avoid any trip hazard.

OPERATION

Gearbox – The winch has been supplied from new with the gearbox pre-greased with Lithium gear type.

Gear lubrication is very important to ensure the long life of the winch.

When replacing grease, please take note of the following advice:

For ambient temperature of approx. –10° to +40°C, a gear grease with mild high-pressure additives should be used.

Under higher or lower than ambient temperatures, the type of grease used for the gearbox should be adapted to the specific conditions.

DO NOT USE GREASE OR OIL ON THE WIRE ROPE. USE A PROPRIETARY WIRE ROPE LUBRICANT.

CONNECTION TO THE ELECTRICAL SUPPLY – 415V x 3ph
An AC supply is required at the appropriate voltage for the winch. The supply voltage and frequency at which the winch operates is marked on the motor rating plate as **415V x 3ph.**

IT IS IMPERATIVE TO CHECK THAT YOU ARE USING THE CORRECT VOLTAGE.

Cables supplying the winch with power should be kept clear of the operating area and not impede the winch.
A suitable circuit breaker or fuse should be installed in the power supply to the winch, and checked regularly.

COMMISSIONING THE WINCH
On completion of pre-operation, but before the winch is put into regular service, the following procedures should be carried out.

- Isolate the power supply.
- Check that all mechanical and electrical joints and connections are tight and secure.
- Connect the power cable to supply
- Switch on power supply.
- Activate emergency stop button on hand control.
- Run the full extent of winch without a load and check that the operation is smooth at all times. A slight tension on the wire rope is advised to ensure smooth running to and from the drum.
- Check operation of hoist emergency stop, under both light load and full load conditions

NOTE: If the winch is not being used on a regular basis it should be powered in and out from time to time to minimise corrosion of the internal motor components that may occur due to condensation. Energising the motor will generate heat, which will help dissipate any moisture.

OPERATIONAL SAFETY

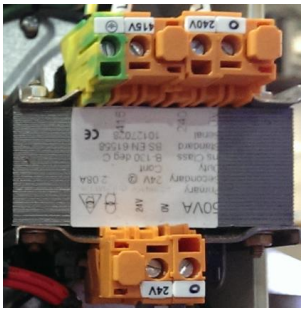
LOW VOLTAGE CONTROLS:

Typical layout

PART IDENTIFICATION

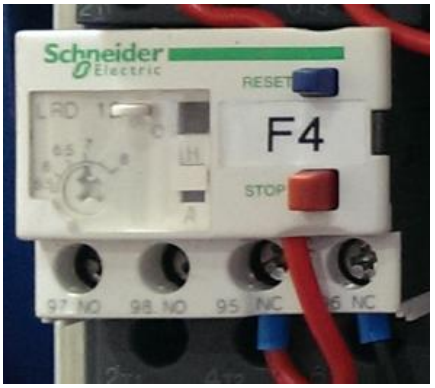
Isolator contact

Reversing contactors with mechanical interlock



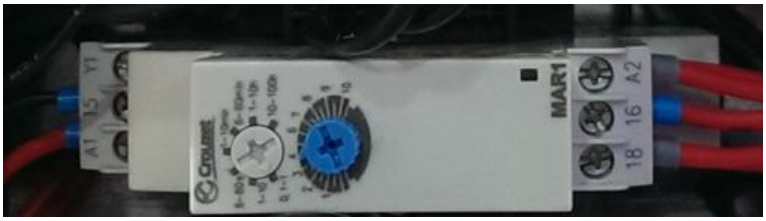
Transformer input 415V 3ph Output 24vac

PART IDENTIFICATION



Overload contact.

Pre-set to motor amp rate.
No adjustment required



Current sensor timer.

Pre-set. **No adjustment required**

Current Sensor.

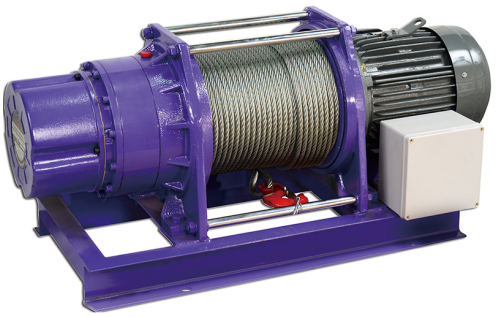
Onsite adjustment required.

Increase dial clockwise from 0 up to 20 until winch design rating is achieved.

Load cell required

WARNING: Turning the dial to maximum without testing will cause damage or failure

CWG-30375
#16479, #16480, #16481, #16482



CWG-30565
#16483, #16484, #16485, #16486

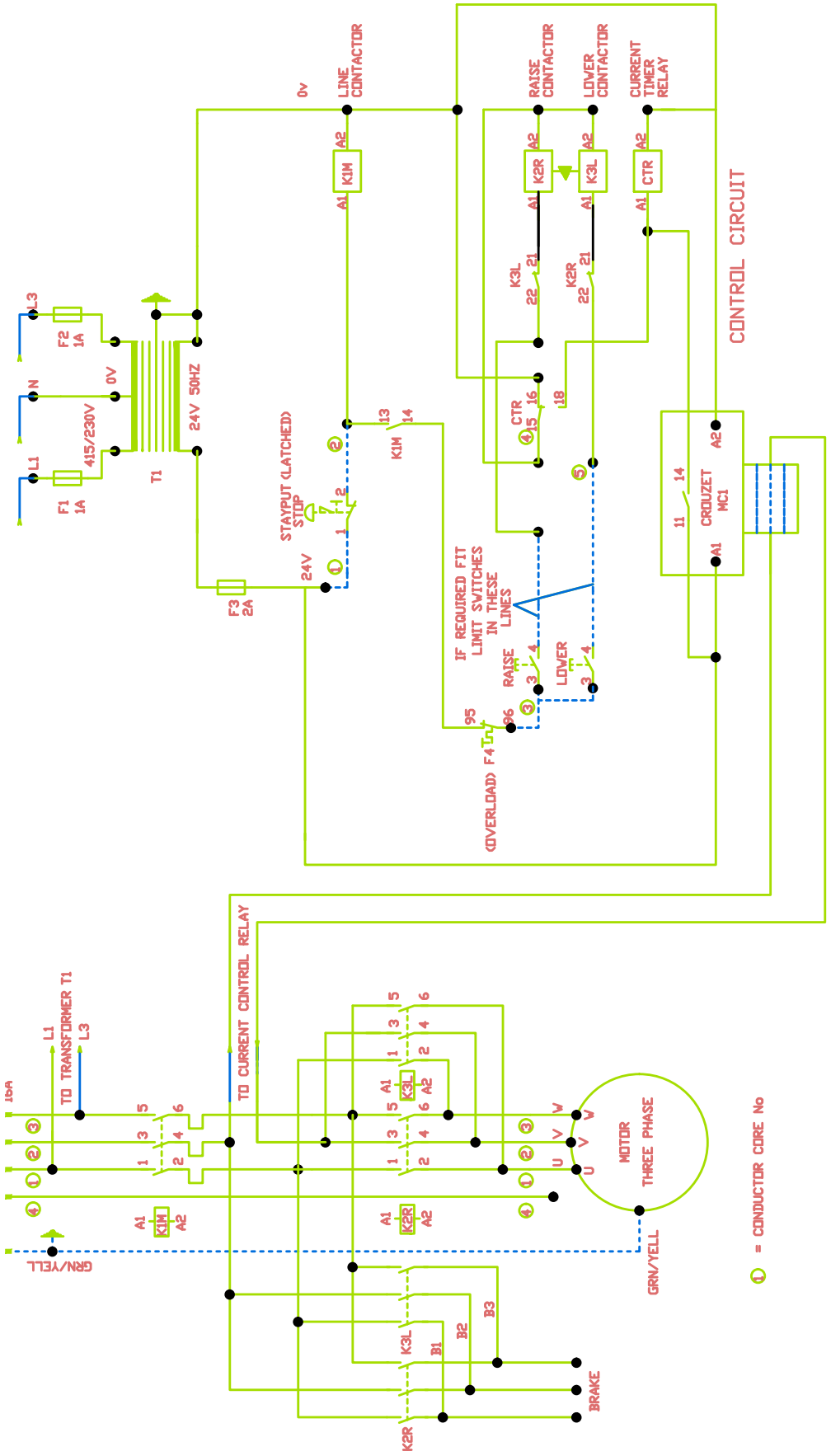
CWG-30750
#16487, #16488, #16489, #16490

CWG-31500
#16491, #16492, #16493, #16494

OPERATION

CIRCUITRY CWG

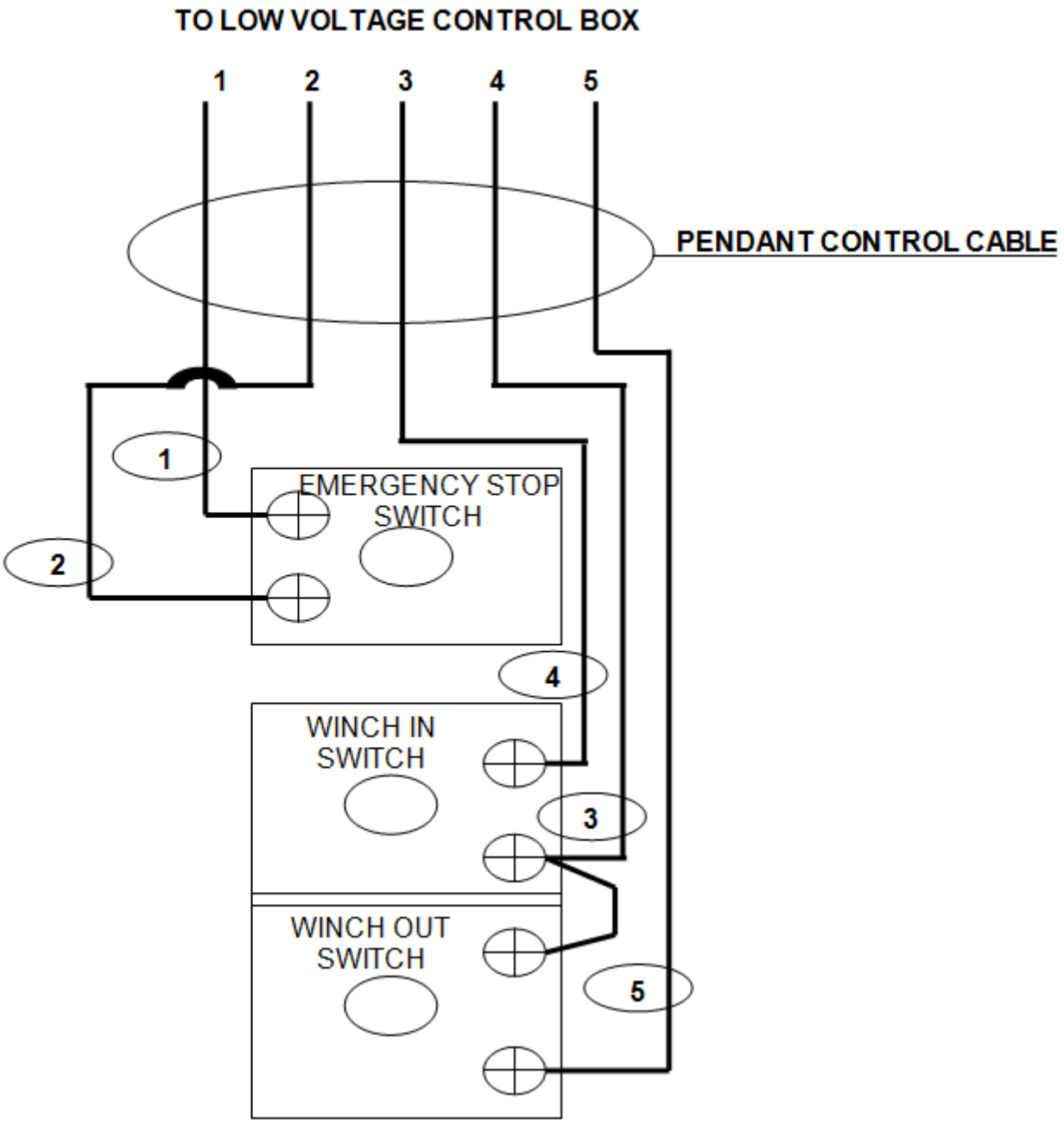
Low voltage control circuit



OPERATION

CIRCUITRY CWG

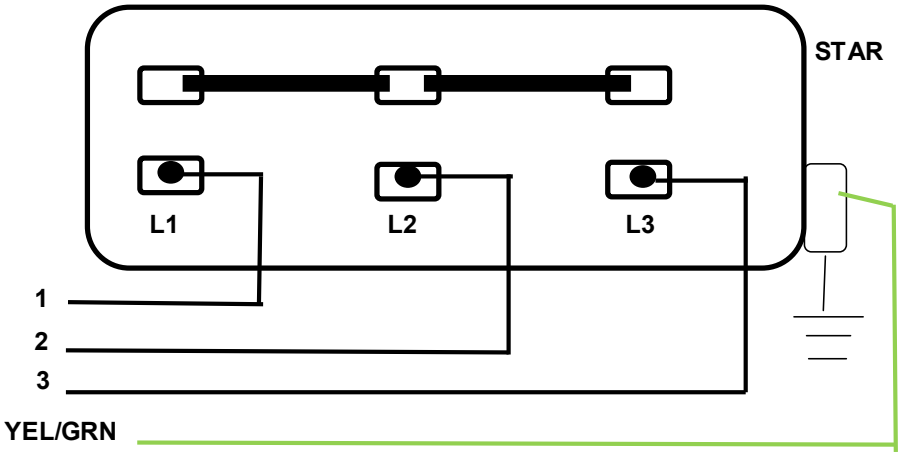
Pendent control only is shown below:

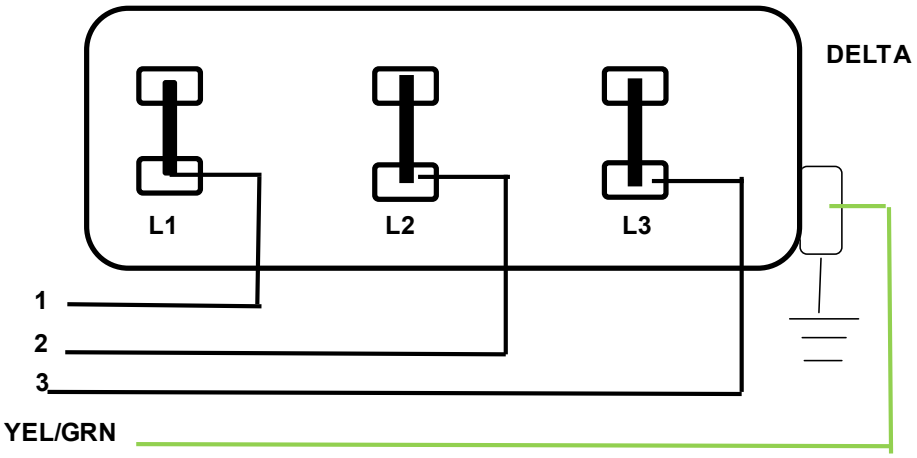


OPERATION

CIRCUITRY CWG

Motor connections

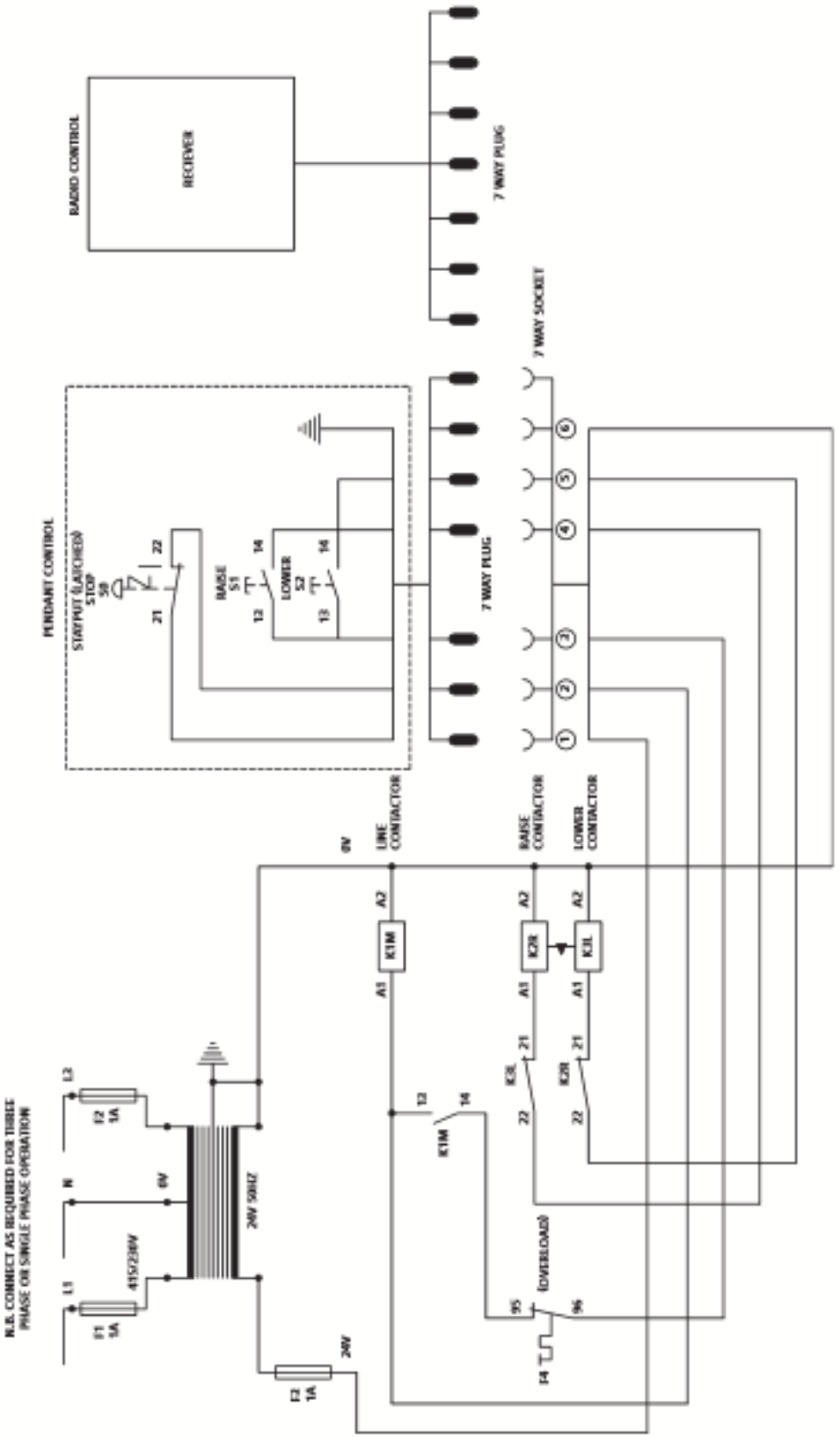




OPERATION

CIRCUITRY CWG

Radio remote circuit



WIRE ROPE INFORMATION

NOTE: ISO 4309:2004/2010 – WIRE ROPES DIRECTIVE
ISO 4309:2004 / 2010 details guidelines for the care, installation, maintenance and examination of wire rope in service on winches, hoists and cranes, and enumerates the discard criteria to be applied to promote the safe use of the machinery.
It is important that these guidelines - for safe care, installation and ultimately disposal of wire ropes is strictly adhered to according to this directive.

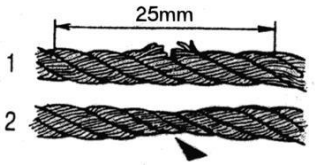
For hoisting applications the minimum breaking force (MBF) of the wire rope must be 5 x the lifting capacity of the hoist. The ratio of wire rope diameter to mean drum diameter* is usually at least 15:1. This will vary according to the application, the average operating time per day and the average and maximum weights being lifted.

CARE OF THE WIRE ROPE

It is most important that the wire rope is inspected on a regular basis, for kinks, flat spots, broken strands and other damage caused by wear and tear or possible misuse.

Check both the rope and the hook and replace under any of the following circumstances:

- 10 strands of rope or more broken with a space of 25mm (See fig.1).
- Rope shows visible signs of wasting (See fig.2).
- Deformed or excessively corroded rope.
- Twisted rope.
- Bent rope.
- Broken or faulty safety catch on hook
- Damage or distortion to steel plate above hook



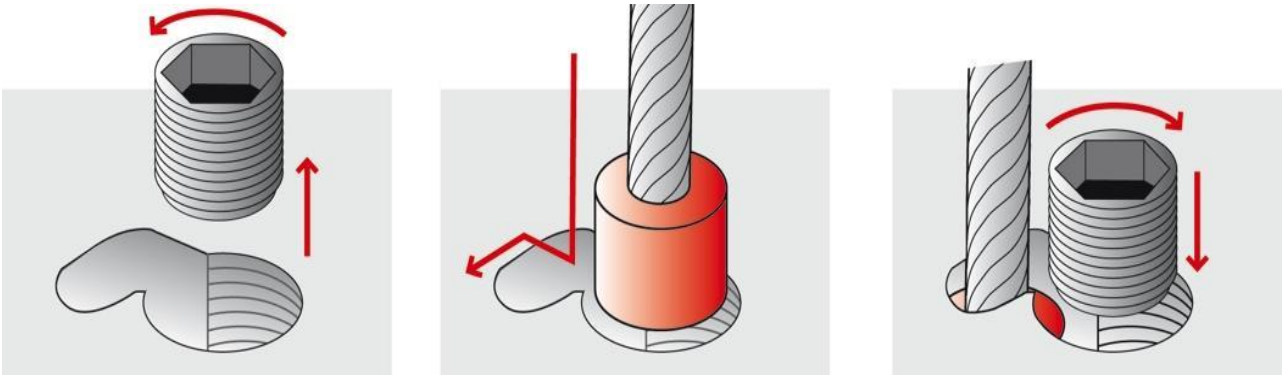
The wire rope or load hook should be replaced if damaged or worn.

After using the winch always check to ensure that the wire rope is layered evenly on the drum. If this is not the case, power out the wire rope and rewind it to ensure even layers. This will significantly extend wire rope life. Normally the tension can be applied by hand – wear gloves.

Under no circumstances wrap the wire rope around the load being recovered and then attach the hook back on to the rope. This will result in serious rope damage or breakage. Always employ a chain or webbing strap from the hook to the load.

WIRE ROPE REPLACEMENT

Unwind the new wire rope by rolling it out along the ground to prevent kinking. Position the cable drum so the large 15mm diameter hole in the drum flange is approximately on top. Remove grub screw from drum and insert cable end with plug into aperture, sliding plug sideways and down (see diagram below). Replace flange screw to secure rope end into drum. Keeping tension on end of rope, run the winch in the 'in' direction and spool all the rope onto the rope drum, taking care to form neatly wrapped layers.



WIRE ROPES ARE NOT COVERED BY WARRANTY.

TAKING CARE OF THE WINCH

CWG winches are a valuable item of equipment for working on site, but care should be taken to ensure the winch is packed away and stored in a responsible manner to minimise potential damage to external parts. It is recommended that either a suitable storage suspension point is fitted to vehicles or storage areas, or at least that the winch is protected by a suitable storage bag, protective covering or kept in a storage box. CWG winches should be routinely cleaned before taking off site or into storage.

ROUTINE INSPECTION & MAINTENANCE

To maintain optimum performance and condition of your CWG winch, it is important to carry out periodical checks.

BRAKING: Check continuously each time the winch is used and following a full service.
The brake unit is an electromagnetic coil with spring applied brake disc and plates. This is a failsafe system that will applied when either the 'in' or 'out' buttons are released, the Emergency stop button is pressed or if there is a power failure. The brake is full load holding at design rating and will not release until the 'in' or 'out' button, emergency stop button is operated or the power supply is restored.
Therefore to test correctly, a load would have to be put onto the winch to check that the load stops correctly over a Short distance. All this should be observed during a normal working schedule when it was last used or during a full service.

MOTOR: Check commutator depending on use and loading conditions.
The motor can only be checked during a major strip down when the commutator can be seen. If it is badly scored or blued, the motor should be checked by a qualified electrician.

POWER LEAD AND WANDERLEAD CONTROL: Visual inspection daily.
The power lead and wanderlead should both be inspected before use to make sure that the outer insulation isn't damaged, that all the plugs are undamaged and the cable connections into the plugs are tight. The wanderlead emergency stop button and control buttons must also be checked for free movement and correct operation.

WINCH SUPPORT HOOK AND SAFETY LOCK: Visual inspection daily.
Before use, check that the hook and support fittings are secure and are moving freely. Lubricate if necessary with light oil.

WIRE ROPE: Visual inspection daily.
Check the wire rope for damage before use. This should be done before lifting any goods by powering the rope completely out and then back on by keeping tension on the rope while doing so.
NOTE: During this operation protective gloves must be worn. Check for kinks, broken strands and flattening of the rope during this operation.

MARKING LABELS: Visual inspection at major service.
Check for wear and damage. Replace if necessary.

SERVICING

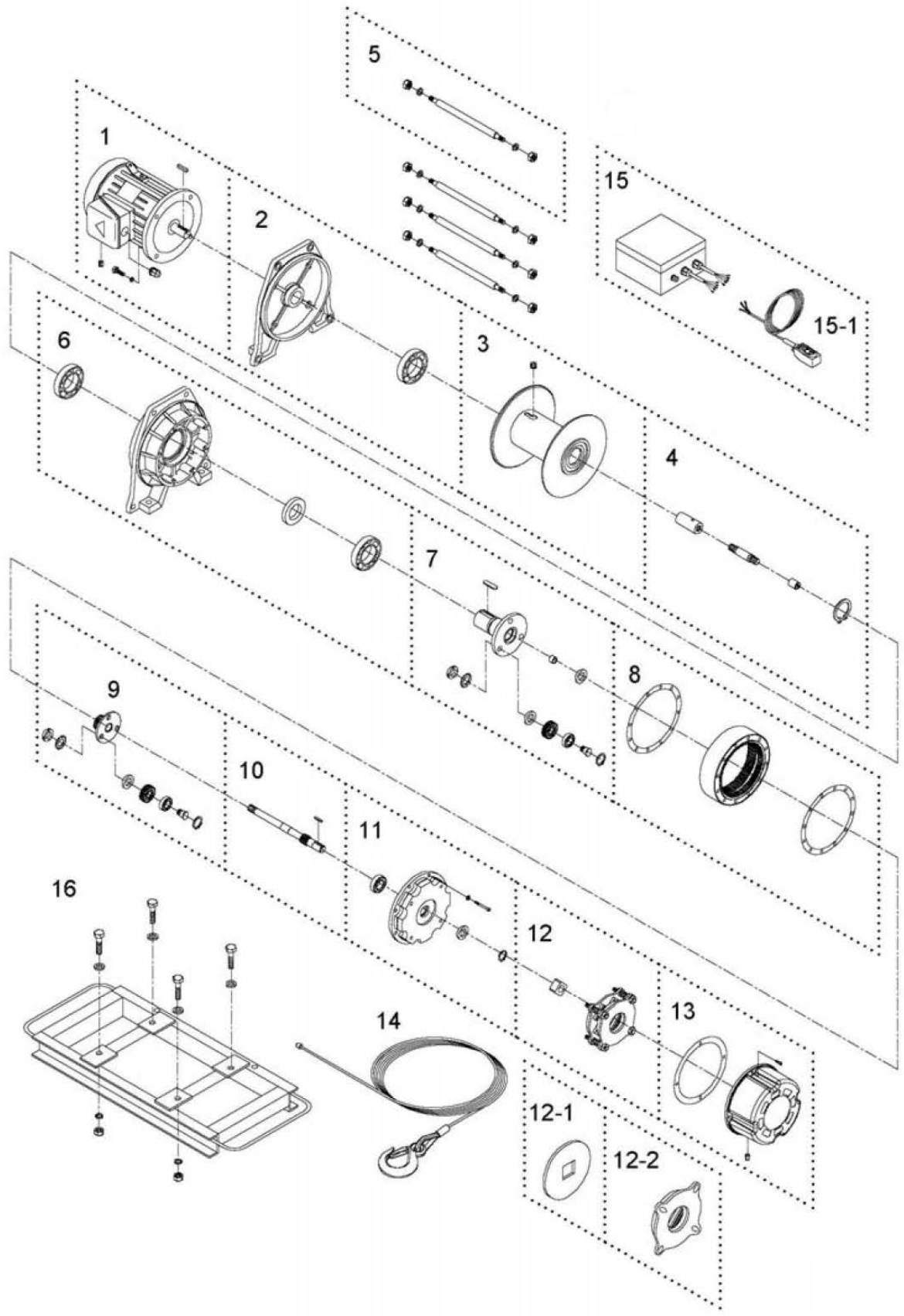
It is recommended that CWG winch are returned to the supplier for a full service and load tested at a period of time dependant on duty cycle.

TROUBLE SHOOTING

Below are some tips on trouble shooting with a CWG winch, further advice is readily available from the BHW Group Ltd.

SYMPTOM	POSSIBLE CAUSES	CORRECTIONS
No power	Faulty wiring on power lead or poor electrical source Burnt out rectifier(s) on power source Burnt out motor	Check power lead and power source Replace rectifier(s) - note +/- poles Replace motor
Can lift, but fails to lower	Burnt out rectifier(s) on motor side Malfunction of 'DOWN' button on wanderlead	Replace rectifier(s) - note +/- poles) Replace 'DOWN' switch in wanderlead
Can lower, but fails to lift	Burnt out rectifier(s) on motor side Malfunction of 'UP' button on wanderlead	Replace rectifier(s) - note +/- poles Replace 'UP' switch in wanderlead
Short circuit	Melted 'B' contact of wanderlead Short circuit on rectifier on motor side Burnt out motor	Replace wanderlead Replace rectifier (note +/- poles) Replace motor
Failure to lift the rated load	Overloaded	Reduce load
Failure to hold rated load after stopping	Worn brake	Replace or ajust brake
Brake distance is too long at 'no load'	Worn brake	Check brake or replace
Smell of burning or smoke	Malfunction of brake Malfunction of contact of pendant switch Winch has debris inside, impairing operation	Replace brake Replace pendant switch Remove debris and clean outer housing (do not use jet sprays)

Parts diagram CWG30375 and CWG30565



Parts list CWG30375 and CWG30565

CWG30375

Parts description - CWG30375

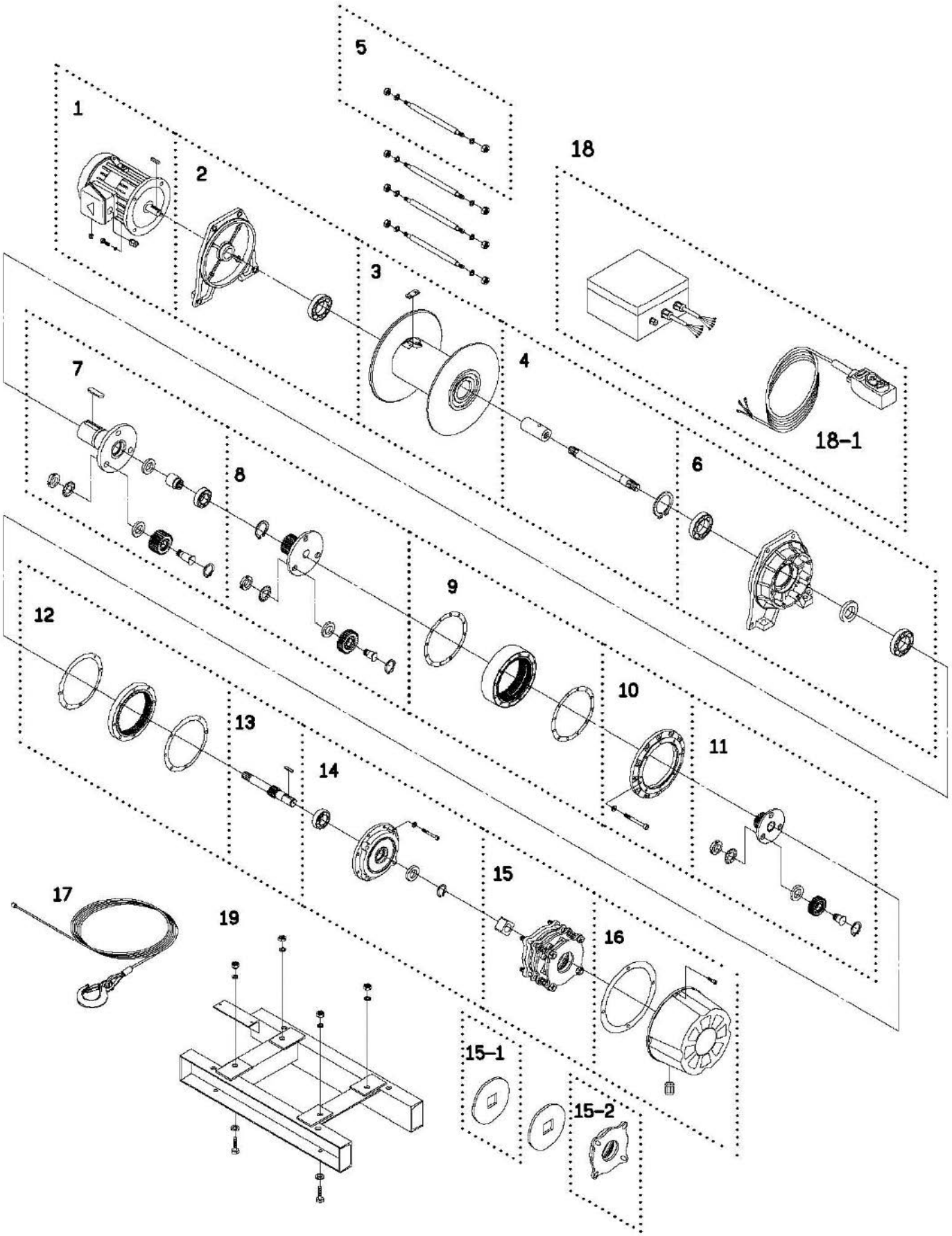
No.	BHW no.	Description	Qty
1	16574	Induction motor - winch model A	1
	16575	Induction motor - winch model B	1
	8060	Induction motor - winch model C	1
	16569	Induction motor - winch model D	1
1.1	16550	Gearbox auxiliary - winch model C	1
	16554	Gearbox auxiliary - winch model D	1
2	13452	Motor support rack - 880739	1
3	13454	Drum kit - 880740	1
4	13455	Connect shaft kit - 880741	1
5	13456	Tie bar kit - 880742	4
6	13457	Gearbox support rack - 880743	1
7	13458	2nd Stage carrier kit - 881579	1
8	13459	Ring gear kit - 880746	1
9	13460	1st Stage carrier kit - 881580	1
10	13461	1st Shaft kit - 880749	1
11	13462	Brake base kit - 880750	1
12	13463	Brake kit - 415V 5.5kw - 881342	1
12.1	13464	Brake disc - 880751	1
12.2	10118	Brake coil 400V 5.5kw - 880770	1
13	13465	Brake rear cover - 880752	1
14	10073	Wire rope 9mm x 34mtr	1
15	12935	Low voltage controls - winch model A	1
	12935	Low voltage controls - winch model B	1
	17166	Low voltage controls - winch model C	1
	13923	Low voltage controls - winch model D	1
16	3867	Control handset BTH + E-stop	1
17	13466	Base plate kit - 880755	1

CWG30565

Parts description - CWG30565

No.	BHW no.	Description	Qty
1	17564	Induction motor - winch model A	1
	16579	Induction motor - winch model B	1
	16578	Induction motor - winch model C	1
	16570	Induction motor - winch model D	1
1.1	16551	Gearbox auxiliary - winch model C	1
	16555	Gearbox auxiliary - winch model D	1
2	17721	Motor support rack - 880723	1
3	17722	Drum kit - 880724	1
4	17723	Connect shaft kit - 880725	1
5	17724	Tie bar kit - 880726	4
6	17725	Gearbox support rack - 880727	1
7	17726	2nd Stage carrier kit - 881576	1
8	17727	Ring gear kit - 880730	1
9	17728	1st Stage carrier kit - 881577	1
10	17729	1st Shaft kit - 880733	1
11	17730	Brake base kit - 880625	1
12	17731	Brake kit - 415V 5.5kw - 881346	1
12.1	17732	Brake disc - 880626	1
12.2	13088	Brake coil 400V 5.5kw - 880649	1
13	17733	Brake rear cover - 880627	1
14	17603	Wire rope 11mm x 60mtr	1
15	12935	Low voltage controls - winch model A	1
	12935	Low voltage controls - winch model B	1
	13923	Low voltage controls - winch model C	1
	13923	Low voltage controls - winch model D	1
16	3867	Control handset BTH + E-stop	1
17	17734	Base plate kit - 880738	1

Parts diagram CWG30750



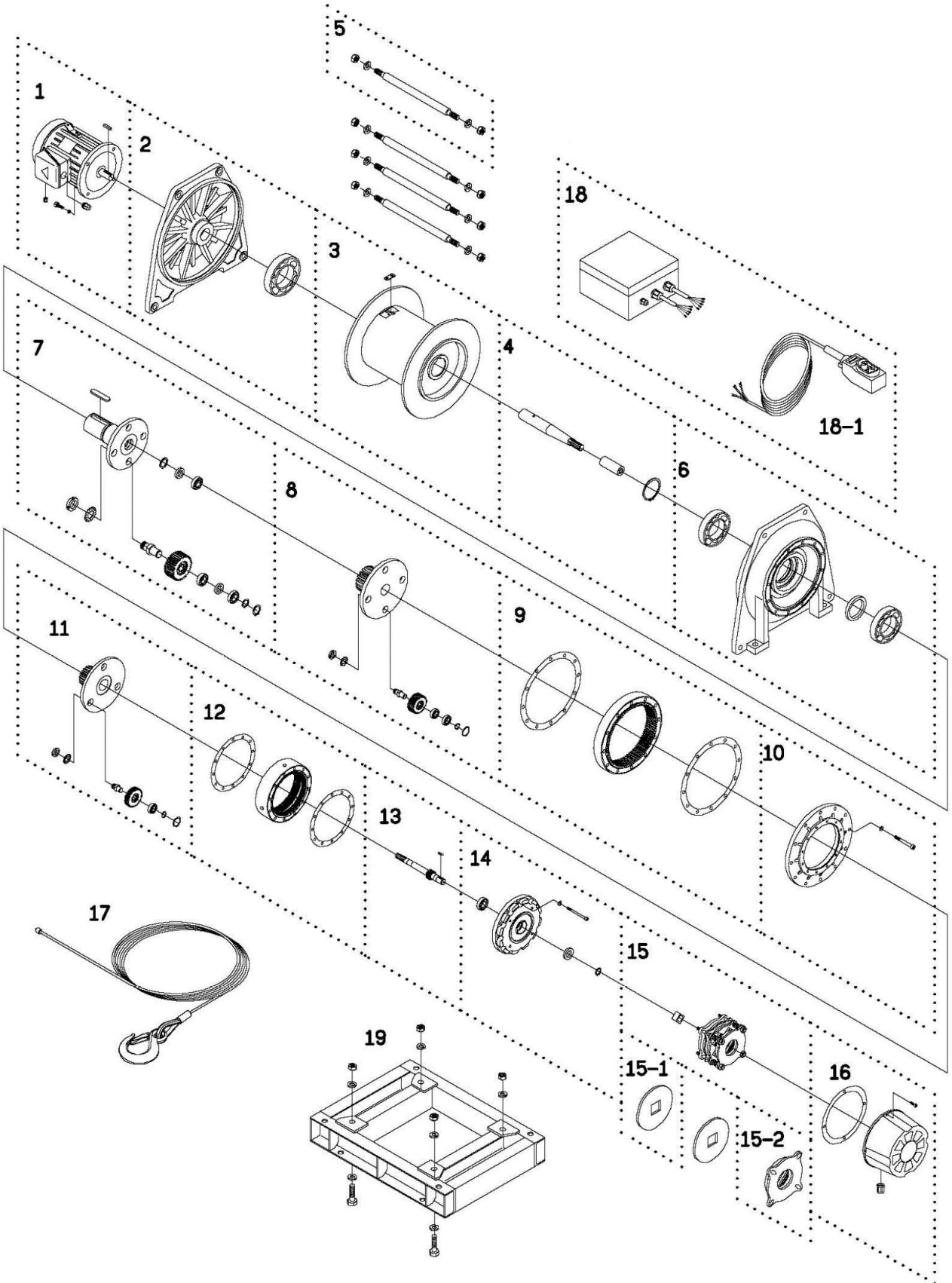
Parts list CWG30750

CWG30750

Parts description - CWG30750

No.	BHW no.	Description	Qty
1	10076	Induction motor - winch model A	1
	16576	Induction motor - winch model B	1
	16577	Induction motor - winch model C	1
	16571	Induction motor - winch model D	1
1.1	16551	Gearbox auxiliary - winch model C	1
	16556	Gearbox auxiliary - winch model D	1
2	17735	Motor support rack - 880610	1
3	17736	Drum kit - 880611	1
4	17737	Connect shaft kit - 880612	1
5	17738	Tie bar kit - 880613	4
6	17739	Gearbox support rack - 880614	1
7	17740	3rd stage carrier kit - 880615	1
8	17741	2nd Stage carrier kit - 880618	1
9	17742	2nd & 3rd Ring gear kit - 880619	1
10	17743	Fix plate kit - 880620	1
11	17744	1st Stage carrier kit - 880622	1
12	17745	1st ring gear kit - 880623	1
13	17746	1st Shaft kit - 880624	1
14	17747	Brake base kit - 881638	1
15	17748	Brake kit - 415V 7.5kw - 881642	1
15.1	17732	Brake disc - 880626	1
15.2	13088	Brake coil 400V 7.5kw - 880649	1
16	17733	Brake rear cover - 880627	1
17	17750	Wire rope 14mm x 55mtr	1
18	12900	Low voltage controls - winch model A	1
	13923	Low voltage controls - winch model B	1
	13923	Low voltage controls - winch model C	1
	13923	Low voltage controls - winch model D	1
19	3867	Control handset BTH + E-stop	1
20	17749	Base plate kit - 881637	1

Parts diagram CWG31500 & CWG34000



Parts list CWG31500 & CWG34000

CWG31500

Parts description - CWG31500

No.	BHW no.	Description	Qty
1	16579	Induction motor - winch model A	1
	16580	Induction motor - winch model B	1
	10071	Induction motor - winch model C	1
	16572	Induction motor - winch model D	1
1.1	16552	Gearbox auxiliary - winch model C	1
	16556	Gearbox auxiliary - winch model D	1
2	17757	Motor support rack - 880651	1
3	17758	Drum kit - 880652	1
4	17759	Connect shaft kit - 880653	1
5	17760	Tie bar kit - 880654	4
6	17761	Gearbox support rack - 880655	1
7	17762	3rd stage carrier kit - 881631	1
8	17763	2nd Stage carrier kit - 881632	1
9	17764	3rd Ring gear kit - 880660	1
10	17765	Fix plate kit - 880661	1
11	17766	1st Stage carrier kit - 881625	1
12	17767	1st & 2nd Ring gear kit - 880664	1
13	17768	1st Shaft kit - 880665	1
14	17769	Brake base kit - 881443	1
15	17770	Brake kit - 415V 7.5kw - 881361	1
15.1	17732	Brake disc - 880626	1
15.2	17771	Brake coil 400V 7.5kw - 880649	1
16	17733	Brake rear cover - 880627	1
17	17773	Wire rope 16mm x 95mtr	1
	17774	Wire rope 18mm x 78mtr	1
18	13929	Low voltage controls - winch model A	1
	13923	Low voltage controls - winch model B	1
	13923	Low voltage controls - winch model C	1
	13923	Low voltage controls - winch model D	1
19	3867	Control handset BTH + E-stop	1
20	17772	Base plate kit - 880671	1

CWG34000

Parts description - CWG34000

No.	BHW no.	Description	Qty
1	16581	Induction motor - winch model A	1
	13930	Induction motor - winch model B	1
	16574	Induction motor - winch model C	1
	16573	Induction motor - winch model D	1
1.1	16553	Gearbox auxiliary - winch model C	1
	16557	Gearbox auxiliary - winch model D	1
2	17775	Motor support rack - 880688	1
3	17776	Drum kit - 880689	1
4	17777	Connect shaft kit - 880690	1
5	17778	Tie bar kit - 880691	4
6	17779	Gearbox support rack - 880692	1
7	17780	3rd stage carrier kit - 881623	1
8	17781	2nd Stage carrier kit - 881624	1
9	17782	3rd Ring gear kit - 880697	1
10	17783	Fix plate kit - 880661	1
11	17766	1st Stage carrier kit - 881625	1
12	17767	1st & 2nd Ring gear kit - 880664	1
13	17784	1st Shaft kit - 880700	1
14	17785	Brake base kit - 881701	1
15	17786	Brake kit - 415V 11kw - 880717	1
15.1	17787	Brake disc - 880702	1
15.2	17788	Brake coil 415V 11kw - 880721	1
16	17789	Brake rear cover - 880703	1
17		Wire rope 20mm x 111mtr	1
		Wire rope 22mm x 103mtr	1
18	13929	Low voltage controls - winch model A	1
	13929	Low voltage controls - winch model B	1
	12935	Low voltage controls - winch model C	1
	12935	Low voltage controls - winch model D	1
19	3867	Control handset BTH + E-stop	1
20	17790	Base plate kit - 880706	1

BHW Group Ltd warrants each new CWG winch and ancillary equipment supplied against factory defects in material and workmanship for one year from date of purchase.

The responsibility for uninstalling the winch or ancillary equipment is the owner's, together with its return, transportation prepaid to BHW Group Ltd.

BHW Group Ltd will, under this warranty, without charge repair or replace at its option, parts, which on inspection are deemed to be defective.

The loss of use of the produce, loss of time, inconvenience, commercial loss or consequential damages is not covered.

Warranty does not apply where the product has been tampered with or altered in any way, or where the serial number or date stamp has been defaced, altered or removed, or if in the view of BHW Group Ltd the damage or failure occurred from misuse, negligence or accident.

NOTE: This is a mechanical product and as such requires regular, routine maintenance (see page 12). Subject to duty cycle, some consumable parts are not likely to be covered by warranty. This would typically apply to items like wire ropes and motor brushes. BHW Group Ltd will always examine any product whilst under warranty and advise accordingly.

BHW Group Ltd reserve the right to change the design of any product without assuming any obligation to modify any product previously supplied.

Winches or equipment returned under warranty should be despatched to BHW Group Ltd service department at the address shown below, with full name and address of sender, a statement detailing the defect and proof of purchase.

BHW
Bushey Hall Winchmaster
www.bhwgroup.com

Service Department
BHW Group Ltd
Unit 6, South Orbital Trading Park
Hedon Road, Hull, HU9 1NJ

Telephone: +44 (0)1482 223 663
Email: sales@bhwgroup.com
Website: www.bhwgroup.com

CWG WINCH MODEL & VOLTAGE……..

SERIAL NUMBER……..……

DATE OF PURCHASE……..……....

CWG Winch is manufactured in Taiwan