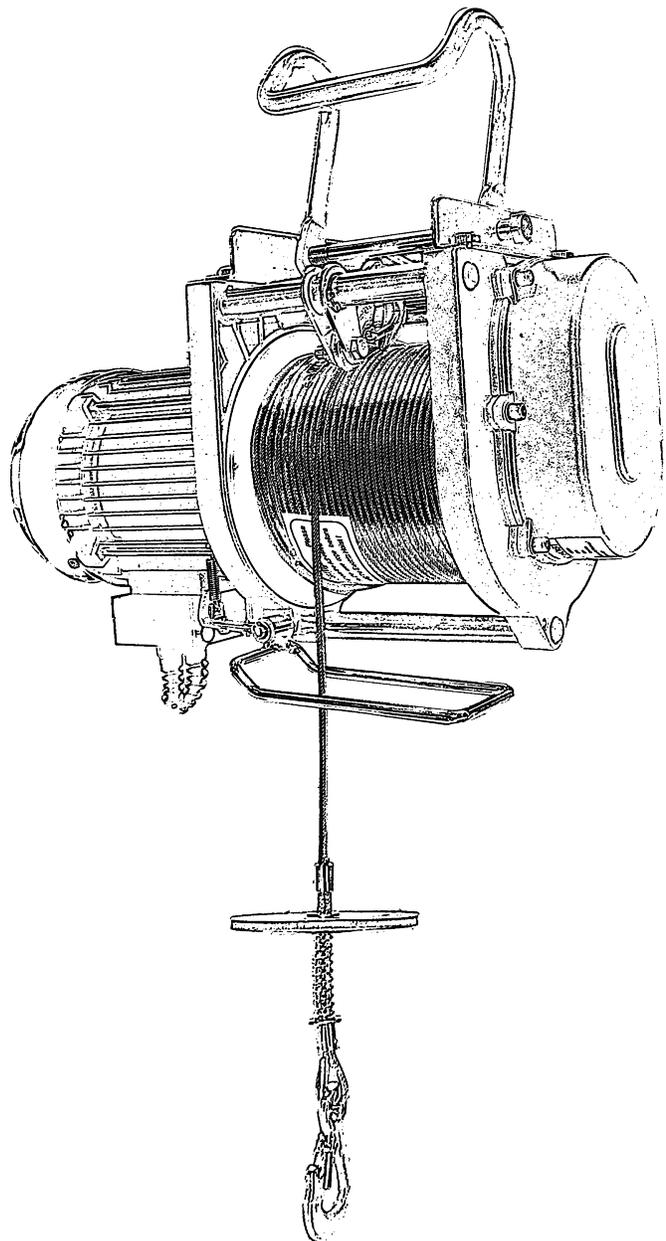




## PWBH250A Electric Hoist

User's Manual / Manual de usuario



## TECHNICAL DATA

Model	BH250A
Voltage	230V , 50Hz
Current (A)	5.7
Input Power (W)	1300
Rated Load (Kg)	250
Lifting height (m)	60
*Rated Speed (m/min)	15
Cable Diameter (mm)	4.5
Cable Tensile Strength ( N/mm <sup>2</sup> )	>1870
Insulating Grade	B
Protecting Grade	IP54
*Work Rate	S3 40% - 10 min
Group of round beam diameter (mm)	M1
Recommend of round beam diameter (mm)	40 - 50
Net Weight (Kg)	31

\* Rating speed is lowest speed of the hoist.

\* Work rate e.g S3 - 40% - 10min: S3= intermittent periodic duty. Means during a period of 10 minutes the machine may run max. 40% (4min).

## GENERAL

- 1.- The electric rope hoist intended for indoor use.
- 2.- The electric rope hoist is an ideal appliance in your garage, shed or similar location hoisting all kinds of loads.
- 3.- This rope hoist is not used for transporting hot molten masses. It is not used for operal in agressive environment and low temperatures.
- 4.- Group of mechanisms is M1.
- 5.- The useful life of the hoist is above 8000 cycles (except wearing parts). If the hoist has 8000 cycles, it must have all mechanisms inspected and maintained.
- 6.- Read and understood the instruction manual completely and clearly, before using the hoist.
- 7.- Ensure that operator know how the machine works, and how it should be operated.
- 8.- The user shall always work in compliance with the operating instructions.

- 9.- The hoist is not designed for continuous use. The work rate is intermittent
- 10.- The rated capacity of the machine does not vary with the position of the load

## **SAFETY INSTRUCTIONS**

- 1.- Always check that the voltage corresponds to the voltage on the rating plate. In case the mains voltage is not suitable may cause working abnormally or personal or injury
- 2.- Your socket plug must be grounded and your electric system must be supplied with an earth leakage circuit breaker.
- 3.- It is forbidden to lift loads above the rated load of the hoist.
- 4.- Use the device only for its intended purpose. Never carry persons with the hoist.
- 5.- Do not pull cord to disconnect the plug. Keep cord from heat, oil and sharp edges.
- 6.- Do not try to lift fixed or obstructed loads.
- 7.- Pull out the mains plug when not in use.
- 8.- Keep children and other unauthorized persons away from the machine.
- 9.- Do not side-pull loads. Avoid swinging the load or hook.
- 10.- Make sure hook travel is in the same direction as shown on the controls.
- 11.- Inspect the hoist regularly; check the switches are in good operating conditions
- 12.- Have your tool repaired by an expert; otherwise it may cause danger for the user.
- 13.- Avoid switch-on / switch-off quickly sequences.
- 14.- Not allow your attention to be diverted from operating the hoist.
- 15.- Do not stand or work under a lifted load.
- 16.- When drinking, drugs illness, and danger of external conditions, do not operating electric hoist.

## **INSTALLATION & USE**

### **Unpacking**

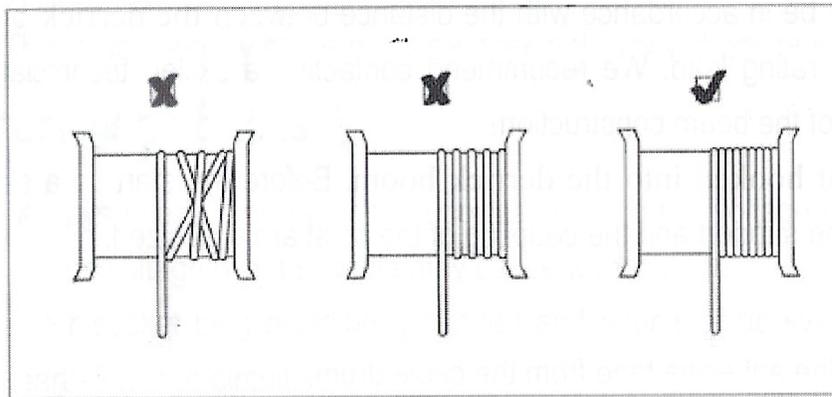
After opening the carton, carefully inspect the hoist frame, cords, hooks and control station for damage that may have occurred during shipment.

### **Mounting**

- 1.- The electric hoist provided with a derrick boom system, Recommend the system fixed in the round solid beam.
- 2.- The beam dimensions must be in accordance with the distance between the derrick boom and its strength can hold the rating load. We recommend contacting a skilled technician for help and checking the solidity of the beam construction.
- 3.- The hook should be right hooked into the derrick boom. Before the start-up a skilled technician should check that the support and the coupling of the hoist are well sized.

## Operating Instructions

- 1.- Before first using, remove the adhesive tape from cable drum.
- 2.- The value of the A-weighted emission sound pressure level at the operator's position is lower than 70dB.
- 3.- Supplying power need: voltage  $230V \pm 10\%$ , frequency  $50Hz \pm 1\%$ .
- 4.- The hoist is used at ambient temperatures, among  $0\text{ }^{\circ}\text{C}$  and  $40\text{ }^{\circ}\text{C}$ , relative humidity below 85%, height above sea below 1000 meters.
- 5.- The hoist's transportation and storage temperature may be above  $-25\text{ }^{\circ}\text{C}$ , below  $55\text{ }^{\circ}\text{C}$ . Its highest temperature can not exceed  $70\text{ }^{\circ}\text{C}$ .
- 6.- The user shall lift the loads from the ground with the minimum speed available at the hoist. Shall be tightened and shall not be in the slack-condition when the load is being lifted from the ground.
- 7.- The electric motor of the hoist is equipped with a thermostat switch for protection. During operation the hoist may stop, it will only become operational again after a break for cooling.
- 8.- The hoist electric rope hoist is not supplied with any rated capacity limiter. Therefore, if you are unable to hoist a load do not insist and let the motor cool down. It means the load exceeds the hoist max capacity.
- 9.- Not leave load supported by the hoist unattended unless specific precautions have been taken.
- 10.- Be supplied with a 10 A fuse or 10 A over-current circuit-breaker to protect your electric system.
- 11.- Not use limit switches as routine operating stops. They are emergency devices only.
- 12.- Before starting the work, make sure that the steel cable is correctly wound around the drum and the pitch is equal to the cable diameter. (see next figure)

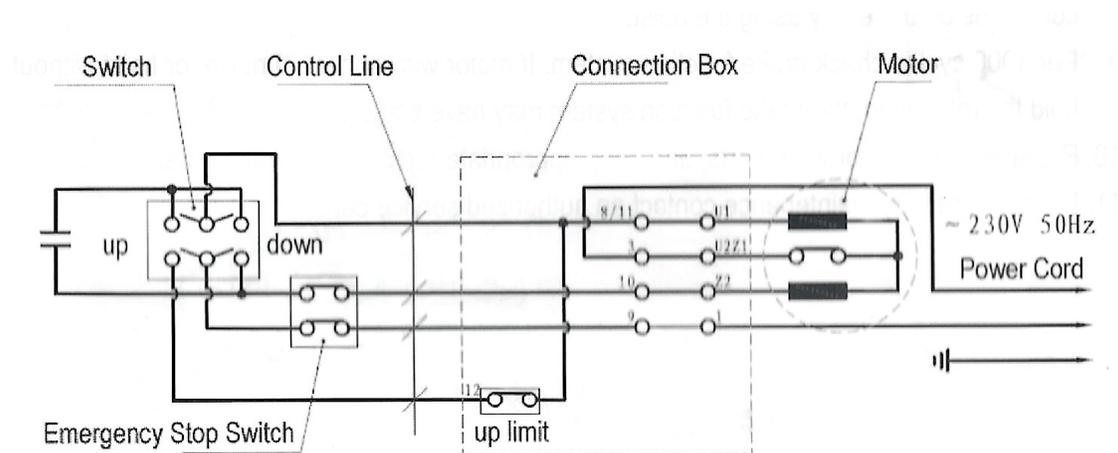


- 13.- Make sure that the load is properly secured to the lifting hook or return pulley and always stay at a distance from the load and steel cable.

## Operation

- 1.- Check if the (emergency) stop switch is pressed. Turn the red stop switch clockwise to engage.
- 2.- Press the push button ▲ to lift the load-
- 3.- Press the push button ▼ to lower the load.
- 4.- For up limited system, when the hoisted load is almost in top position, the limit block will move the lever upward. A switch on the motor is now engaged and the motor up direction moving will stop running.
- 5.- For down limited system, when the load is almost in low position (about two turns of cable around the drum), the down limit pole will move. A switch on the motor is now engaged and the motor down direction moving will stop running. In case the cable moving direction is not as shown on the controls, which caused by the cable hold down by the side cable, the down limited system may work also.
- 6.- When the push is pressed, the machine will stop. In case of an emergency, immediately press the red stop switch to stop the machine. Operating the machine is not possible when this red switch is pressed.

## Circuit Diagram



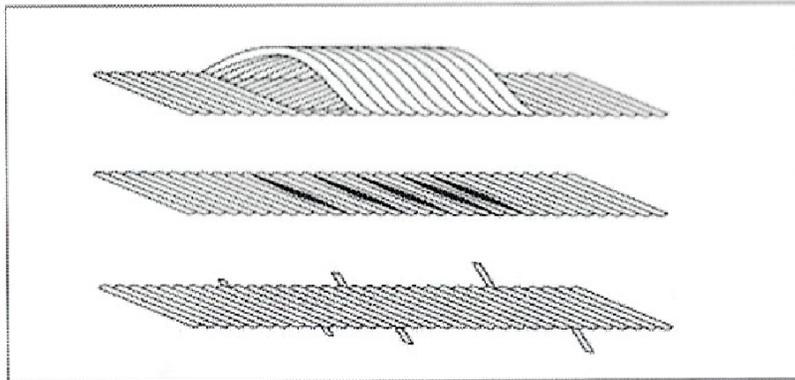
## PERIODIC INSPECTION & MAINTENANCE



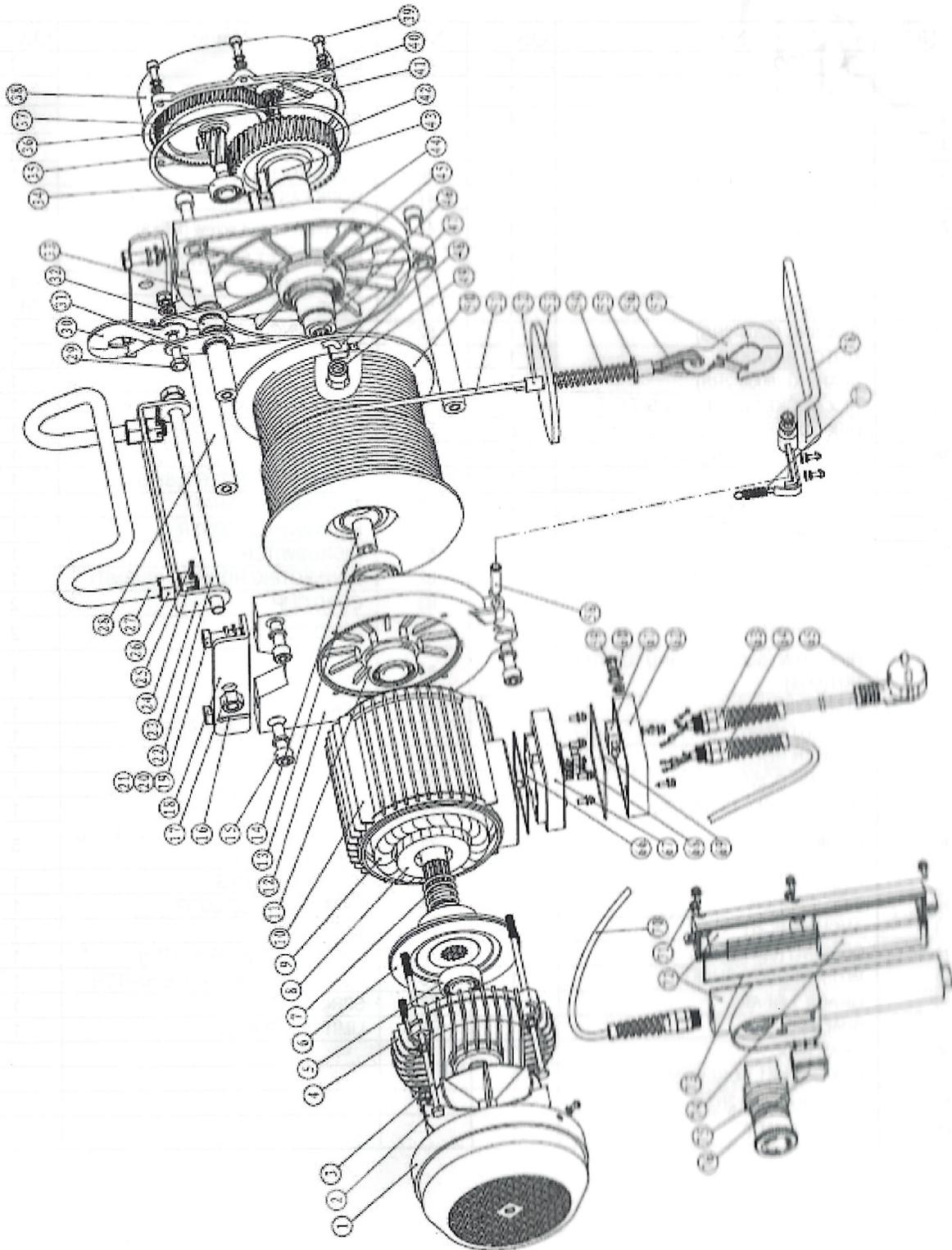
### WARNING

Always make sure that the machine is not connected to the mains electricity when you carry out any maintenance of the mechanism

- 1.- Hereinafter, per cycle means that the operator operates the load up and down one time. Periodically checking usually means it has checked after the hoist work per 100 cycles.
- 2.- Periodically make sure the hoist limit switches function properly. Testing see below. When the hoist is hoist, moves the lever upward lifting direction. the motor must be stopping running. (with no load)
- 3.- Periodically check power cord and control cord.
- 4.- Per 200 cycles may lubricate the steel cable and pulley.
- 5.- Per 30 cycles check that the entire steel cable is in good condition. If the cable is damaged, replace the cable immediately according the technical data form. (see next figure)



- 6.- Per 1000 cycles checks that the screws securing the brackets and pulley are well tightened
- 7.- Per 1000 cycles check that the hook and the pulley are in good condition.
- 8.- Check that the (emergency) stop switch and push button panel are in good operating conditions before every using the hoist.
- 9.- Per 1000 cycles check brake function system. If motor with abnormal noise, or hoist without hold the rated load, the brake function system may have some overhaul.
- 10.- Replace damaged or worn part, and keep appropriate records of maintenance.
- 11.- For extraordinary maintenance contact an authorized service center.



## PART LIST

Nº	NAME	Qty.	Nº	NAME	Qty.
1	FAN HOOD	1	42	GRADE 2 GEAR	1
2	FAN BLADE	1	43	SHAFT OF ROPE	1
3	HEX HEAD BOLTS (M6X176)	4	44	GEAR BOX BRACKET	1
4	GEAR COVER	1	45	BEARING (6007-2RS)	1
5	BEARING (6203-2RS)	1	46	QUILL ROLLER BEARING	1
6	BRAKE HOOP	1	47	ROPE FASTENING	1
7	SPRING	1	48	HEX PLAIN-ENDED SCREW (M6X8)	1
8	ROTOR	1	49	HEX SOCKET SCREW (M12X25)	1
9	STATOR	1	50	ROPE TUBE	1
10	CHASSIS	1	51	ROPE	61.5M
11	BEARING (6204-2RS)	1	52	FASTENING SLEEVE OF ROPE	2
12	MOTOT BRACKET	1	53	PRESS PLATE	1
13	BEARING (6006-2RS)	1	54	SPRING	1
14	HEX SOCKET COUPLING SLEEVE	1	55	PLAIN WASHER (Ø12)	1
15	HEX SOCKET SCREW (M10X30)	6	56	SHRINK-RING OF ROPE	1
16	SPLIT COTTER PIN (2.5X20)	1	57	HOOK	1
17	HEX NUT (M12)	1	58	CLAMP CONNECTER (Ø8X45)	1
18	MOUNTING PLATE	2	59	MICROSWITCH SHAFT	1
19	HEX HEAD BOLTS (M10X30)	4	60	MICROSWITCH COVER	1
20	PLAIN WASHER (Ø10)	4	61	MICROSIWTCH	1
21	SPRING WASHER (Ø10)	4	62	CONNECTING HOUSING (SUBMIT)	1
22	HEX HEAD BOLTS (M12X240)	1	63	CORD CLIP	2
23	SWING PLATE	1	64	CORD CLIP	2
24	HEX THIN SLOTTED AND CASTLE NUT (M14)	2	65	PLUG	1
25	SPRING PIN (Ø3X20)	2	66	SEAL	1
26	HEX NUT (M14)	2	67	BASE OF CONNECTION BOX	1
27	HANGER ROD	1	68	TERMINAL BLOCK	1
28	ANCHOR POST	2	69	SEAL	1
29	HEX HEAD BOLTS (M8X30)	1	70	FOUR CORE CABLE	1
30	HOOK	1	71	CROSS RECESSED PAN HEAD TAPPING SCREW	5
31	PULLEY CLAMP	2	72	SWITCH HOUSING	1
32	PIPE WASHER	1	73	HANDLE SEALED LOOP	1
33	ANCHOR POST	1	74	CAPACITOR	1
34	BEARING (6201-2RS)	2	75	EMERGENCY STOP SWITCH	1
35	INTERMEDIATE SHAFT	1	76	POSITIVE AND NEGATIVE SWITCH	1
36	GRADE 1 GEAR	1	77	SPRING	1
37	SPACER	1	78	LIMIT LEVER ASSY	1
38	GEAR BOX	1			
39	HEX SOCKET SCREW (M6X20)	6			
40	BEARING (6000-2RS)	1			
41	GEAR 1 SHAFT	1			

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