Electric chain hoist

EHOIST5

Original of the
OPERATING INSTRUCTIONS

Save for later use

Manufacturer address

Trading EU GmbH
Gruckinger street 4
D - 85461 Bockhorn

Tel.: +49 (0) 8123 - 989 0 900
Fax: +49 (0) 8123 - 989 0 904
E-mail: info@tradingeu.de
Web: www.tradingeu.de

Dear customer

Users must read and understand the operating instructions before operating the hoist.

Operating instructions

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Model:	150.500kg
Year of manufacture:	2023

Customer entries

Inventory no:	
Location:	

Storage

The operating instructions must be kept in the responsible specialist department. They must always be at hand.

Table of contents

1 Safety instructions

1.1 Basic safety instructions

Keep the work area clean. Untidy areas and benches invite injury.

1.2 Consider the environment of the work area

Do not expose power tools to rain. Do not use power tools in damp or wet locations. Keep the work area well lit. Do not use power tools near flammable liquids or gases.

1.3 Protection against electric shock

Avoid body contact with grounded surfaces, make sure the hoist is properly grounded before operating it.

1.4 Keep children away

Do not allow visitors to come into contact with power tools or extension cords. All visitors should be kept away from the work area.

1.5 Save unused tools

When not in use, power tools should be stored in a dry, high or locked place.

out of the reach of children.

1.6 Appropriate clothing

Do not wear loose clothing or jewelry as they can get caught in moving parts; rubber gloves and non-slip footwear are recommended when working outdoors. Wear hair protection to protect long hair.

1.7 Do not abuse cord

Never carry the power tool by the cord or pull on it to disconnect it from the power outlet. Keep the cable away from heat, oil and sharp edges.

1.8 Use the right tools

Do not force small power tools or attachments to do the work of a heavy-duty tool; it will do a better job and work safer than it is intended. Do not use power tools for anything other than their intended purpose.

1.9 Safe work

Maintain a firm footing or are otherwise secured when operating the hoist, use tools to hold the workstation, this is safer and frees both handles to operate the power tool.

1.10 Do not go too far

Always make sure you have a secure footing and balance.

1.11 Care for the tools with care

Keep power tools sharp and clean for better and safer performance; follow instructions for lubricating and changing accessories. Check power tool cords regularly and have them repaired by an authorized service center if damaged; check extension cords regularly and replace them if damaged. Keep handles dry, clean and free of oil and grease.

1.12 Avoid unintentional startup

Do not carry the plugged-in power tool with your finger on the switch, make sure the power tool is turned off before plugging it in.

1.13 Extension cords for outdoor use

When using power tools outdoors, use only extension cords that are designed for outdoor use and marked accordingly.

1.14 Stay alert

Pay attention to what you are doing and use common sense. Do not operate a power tool when you are tired, distracted, or under the influence of drugs, alcohol, or medications that impair control.

1.15 Check damaged parts

Before continuing to use the power tool, carefully inspect a damaged guard or other part to determine if it is functioning properly and performing its intended function. Do not operate a damaged, malfunctioning, or abnormally operating hoist.

1.16 Warning

Read and understand the operating instructions completely and clearly before using the hoist.

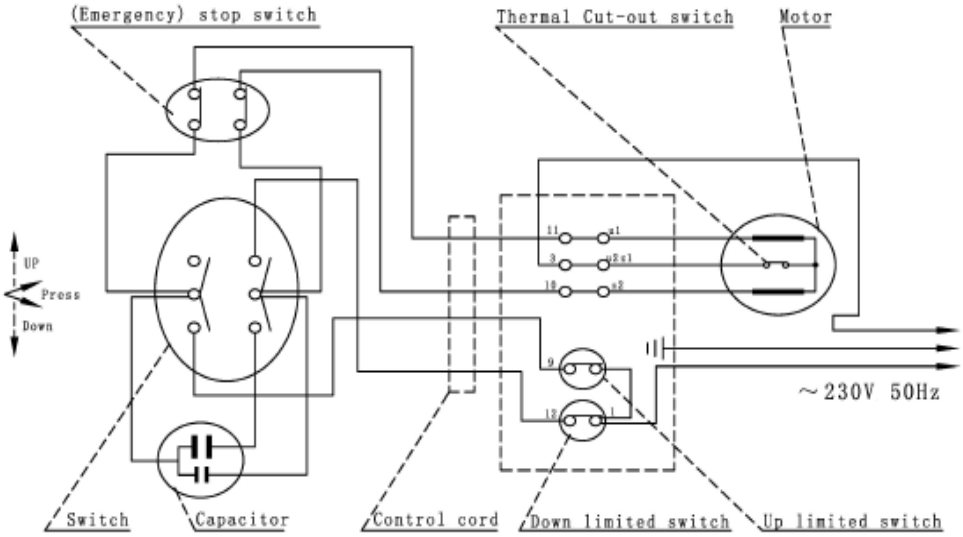
Make sure that the operator knows how the machine works and how to operate it. The operator must always work in accordance with the operating instructions. The use of other accessories or attachments not recommended in the operating instructions poses a risk of injury. Have your device repaired by a professional. The repair of this electrical device may only be carried out by specialists, as otherwise considerable dangers may arise for the user.

1.17 Additional safety regulations

1. Do not operate the hoist until you have thoroughly read and understood these instructions.
2. Do not lift more than the rated load of the hoist
3. Do not use the hoist with twisted, kinked, damaged or worn load chain
4. Do not use the hoist for lifting, carrying or transporting
5. Only start operation when the load is centered under the hoist,
6. Do not attempt to extend the load chain or repair damaged load chains.
7. Protect the hoist and load chain from weld spatter or other harmful contaminants.
8. do not operate the hoist if it is not able to form a straight line from hook to hook in the load direction
9. Do not use the load chain as a sling or wrap the chain around the load.
10. do not apply the load to the hook tip or the hook tongue
11. Do not apply a load if the load chain is not properly seated on the chain sprocket.
12. Do not work beyond the limits of the load chain path
13. Do not leave the load carried by the hoist unattended, unless special precautions have been taken
14. Operate a hoist only when load slings or other approved individual attachments are properly sized and seated in the hook saddle.
15. Pick up the load carefully - make sure the load is balanced and the load is held securely before proceeding.
16. Shut down a hoist that malfunctions or exhibits unusual behavior and report the malfunction
17. Ensure that the hoist limit switches are working properly
18. Warn personnel of approaching cargo
19. Check the function of the brake by tensioning the hoist before each lifting operation.
20. avoid the swaying of the load or the hook

21. Make sure that the hook moves in the same direction as indicated on the controls.
22. Inspect the hoist regularly, replace damaged or worn parts, and keep appropriate maintenance records.
23. Do not use limit switches as routine operating stops. They are intended for emergency use only
24. Do not be distracted from the operation of the hoist
25. not allow your attention to come into sharp contact with other lifting equipment, structures or objects due to improper use
26. Not approved for use in potentially explosive atmospheres
27. the value of the equivalent sound emission pressure level at the operator's workplace is less than 78db
28. Required power: voltage 230V±10%, frequency 50Hz±1 %.
29. The hoist is used at a relative humidity below 85% and an altitude above sea level below 1000 meters.
30. The transport and storage temperature of the hoist can be above -250 and below 550. The highest temperature must not exceed 70 C.
31. Comes with a 10 amp fuse or 10 amp overcurrent circuit breaker to protect your electrical system
32. Do not attempt to lift a fixed or plugged-in load
33. Do not lift the load diagonally
34. Avoid excessive shaking (which causes a short motor shock)

SCHEDULE


(Emergency) stop switch
Thermal Cut-out switch
Motor
UP
Press
Down
~230V 50Hz
Switch
Capacitor
Control cord
Down limited switch
Up limited switch

2 Instruction manual

2.1 Intended use

The electric chain hoist promises improved working condition and high efficiency, with the limit switch devices, the features of compact structure, light weight, easy operation and beautiful appearance.

Description(FIG 1)

1. subjection hook.
2. hoist
3. chain.
4. Chain stop
5. Hook

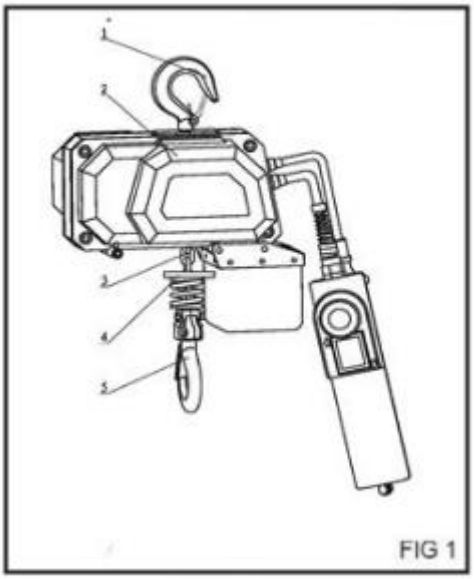


FIG 1

2.2 Technical data

Technical characteristics

model	BDH300	model	BDH300
voltage	230V,50Hz	Input power	410W
Current	1.7A	Rating lifting	300kg
Lifting speed	3m/min	Lifting height	3m
Speed ratio	119:1	Insulating grade	B
Protecting grade	IP54	Chain diameter	5.0mm
Group of mechanisms	M3	Work rate	S3 25%-10min
Cable tensile strength	≥900N/mm²	Net weight	14.3kg

2.2.1 Unpacking

After opening the carton, carefully inspect the hoist frame, ropes, hooks, CHAIN and control station for any damage that may have occurred during shipping.

Assembly of the hoist

Suspend the hoist from the provided support. The structure from which the hoist is suspended must have sufficient strength to support several times the imposed load. If the hoist is suspended from an inadequate suspension, the hoist may fall and cause injury and/or damage.

2.2.2 Check for sufficient tension on the hoist

The hoist must be supplied with sufficient electrical power to ensure proper operation and to avoid problems that may arise due to insufficient power (low voltage). :

1. Noise pollution during operation of the hoist due to brake and/or contactor rattle
2. Heating of the hoist motor and other internal components, as well as heating of wires and connectors in the circuit that supplies the hoist
3. Failure of the hoist to lift the load due to a stalled motor
4. Slowing down motors connected to the same circuit

2.2.3 Control for others

After the hoist has been suspended from its support and you have ensured that the power supply meets the requirements, the hoist is ready for operation

2.2.4 Operating instructions

1. Check whether the (emergency) stop switch is pressed. Turn the red stop switch clockwise to stop the
2. An overload is indicated when the hoist's speed slows, it lifts the load jerkily, or it does not lift the load at all. Also, coupling noises may be heard when the hoist is loaded beyond its rated capacity. If this occurs, immediately release the "up" button to stop hoist operation. When the excessive load is removed, normal operation of the hoist will be automatically restored.
3. The hoist is not recommended for applications where there is a possibility of increasing an already suspended load to the point of overload. Also, if the hoist is used in unusually extreme ambient temperatures, above40 C or below -CC, changes in lubricating properties may result in damage or injury, and under these conditions the work performance will be less than under normal operating conditions
4. The operation of the hoist is controlled by pressing the pushbuttons of the control panel. Pressing the "Up" pushbutton moves the load hook towards the hoist; pressing the "Down" pushbutton moves the load hook away from the hoist

5. The "Up" and "Down" keys are momentary keys and the hoist will operate in the selected direction as long as the key is held down.
6. Before lifting a load, make sure that the hook attachments are firmly seated in the hook saddle. Avoid any kind of off-center loading, especially loading of the hook tip.
7. When lifting, raise the load only to the point where it protrudes above the floor or support, and make sure that the attachment on the hook and the load are firmly seated. Do not continue lifting until you are sure that the load is clear of all obstructions.
8. Do not use the hoist outside its working range.
9. Keep your distance from all loads and avoid moving a load over the heads of others. Warn personnel of your intention to move a load in their area.
10. Do not leave the load hanging in the air unattended
11. The device may only be operated by qualified personnel.
12. Do not wrap the load chain around the load or hook it as a choke chain.
13. There must be no load on the hook pawl. The pawl is used to hold the hook in position while the chain is slack, before the slack chain is picked up.
14. Carefully pick up a slack load chain and start the load lightly to avoid vibration and jerking of the lifting chain. If there are signs of overloading, lower the load immediately and remove the excess load.
15. When the push button is pressed, the machine stops.

2.2.5 Regular control

To maintain continuous and satisfactory operation, a regular inspection procedure must be initiated so that worn or damaged parts can be replaced before they become unsafe. Inspection intervals must be determined by the individual application and are based on the type of operation to which the hoist is subjected. Regular inspections should be performed semi-annually and should include the following:

1. external signs of loose screws.

2. external signs of worn, corroded, cracked or deformed hook blocks, gears, bearings, chain stop balls and hook holders.

3. external signs of damage or excessive wear of the hoist wheel. Widening and deepening of the pockets may cause the chain to lift in the pockets and jam between the hoist wheel and chain guide or between the lower sheave and hook block. Check the chain guide for wear or burrs where the chain enters the hoist; badly worn or damaged parts should be replaced.

4. External signs of excessive wear on the brake parts. Check the control station push buttons to make sure they function freely and spring back when released.

Check the power cable, the control cable and the control rod for damaged insulation.

Check the chain pin or the dead center pin and the chain stop for wear and cracks. Any defects found must be repaired before the hoist is put back into operation.

2.2.6 Hook inspection

Hooks that are damaged due to chemicals, deformation, or cracks, or are twisted more than 10^0 from the plane of the unbent hook, or have excessive throat opening, indicate misuse or overloading of the device. Verify that the latch is not damaged or bent and that it is functioning properly with sufficient spring pressure so that the latch is tight against the lip of the hook and springs back into the tip when released. If the latch does not function properly, it should be replaced.

2.2.7 Chain control

Notches, grooves, twisted links, weld spatter, corrosion holes, grooves, cracks in weld areas, wear and stretching. A chain with any of these defects must be replaced. Lubricate the chain after 200 cycles with a 3#calcium based grease. The life of the chain is 50000 cycles. Loosen the part of the chain that normally goes over the lifting wheel.

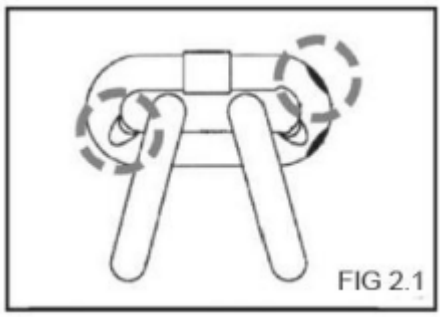


FIG 2.1

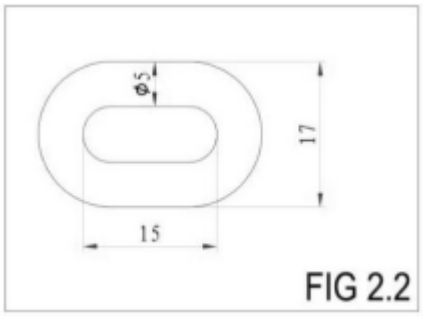


FIG 2.2

Examine the area between the links for the point of highest wear. Measure and record the original diameter at this point on the link. Then measure the original diameter in the same area on a link that does not pass over the stroke wheel (use the link next to the loose end link for this purpose). Compare these two measurements. If the original diameter of the worn link is 0.254 mm (or more). smaller than the diameter of the unworn link, the chain must be replaced. The chain is 3 meters long and has 200 knots. FIG 2.2 are the specific dimensions of the chain.

2.2.8 Lubrication

The gears are filled with grease during assembly and do not need to be replaced unless the gears have been removed from the housing and degreased.

2.2.9 Bearing

The rotor bearings are prelubricated and do not need to be relubricated. Needle bearings are filled with grease during assembly and should not be relubricated. However, if the housings, stroke wheel or rope sheave have been degreased, these bearings should be lubricated with lithium grease.

2.2.10 Removal/installation of the load chain (FIG3& FIG4& FIG5)

1. Remove the chain bag (FIG 3)
2. remove the hook safety device (FIG 4). Press the "Open" key and let the chain run out of the hoist.

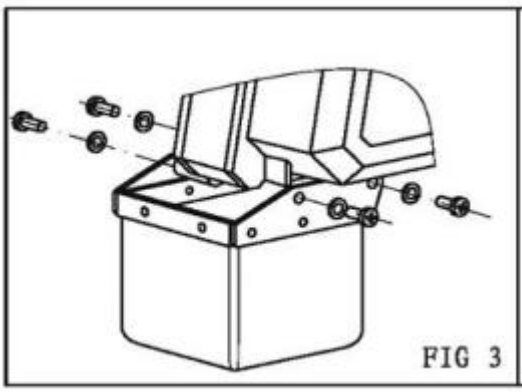


FIG 3

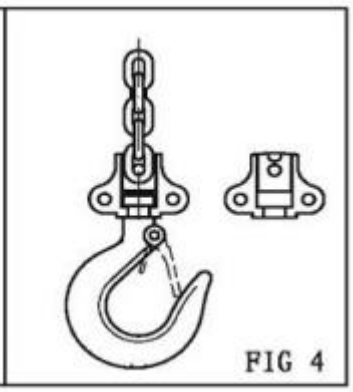


FIG 4

3. Pull the new chain while pressing the down push button until the old chain comes off the hoist.
4. Attach the hook block to the new chain.
5. Remove the chain stop ball from the old chain (FIG. 5) and attach it to the new chain, using the chain pin again.

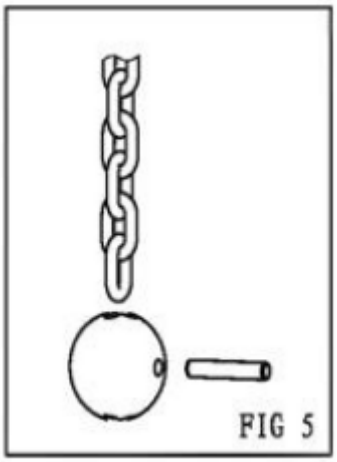
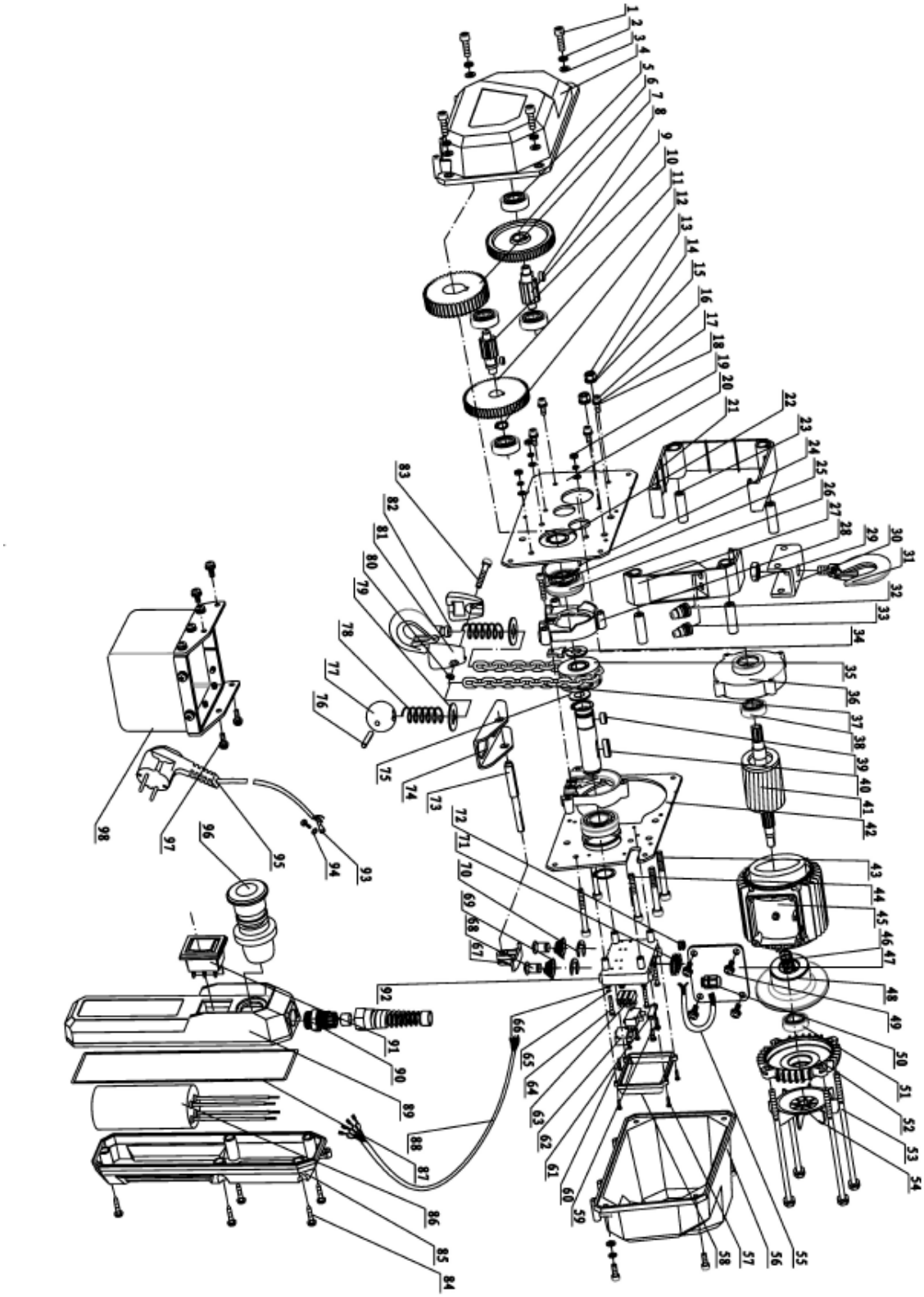


FIG 5

2.2.11 Technical drawing



2.2.12 Parts list of the chain hoist

Part list of chain hoist BDH300

No.	Part name	Qty.	No.	Part name	Qty.
1	Hexagon socket head cap screws	8	50	Cord clip	1
2	Spring washers	11	51	Bearing	1
3	Plain washers	11	52	Motor cover	1
4	Gear box	1	53	Assembly of Hex head bolts	4
5	Bearing	4	54	Fan blade	1
6	Second stage gear	1	55	3 cord	1
7	Third stage gear	1	56	Motor housing	1
8	Flat pin	2	57	Cross recessed pan head tapping screws	4
9	Second middle shaft	1	58	Connection box	1
10	First middle shaft	1	59	Cross recessed pan head tapping screws	4
11	First stage gear	1	60	Cross recessed pan head tapping screws	5
12	Circlips for shaft	1	61	Clamp plate	1
13	Hexagon thin nuts	2	62	Limit switch	2
14	Spring washers	2	63	Terminal block	1
15	Plain washers	2	64	Cross recessed pan head screws	4
16	Hexagon socket head cap screws	4	65	Spring washers	4
17	Spring washers	4	66	Plain washers	4
18	Plain washers	4	67	Limit head	1
19	Hexagon thin nuts	3	68	Limit shaft	2
20	Plate	1	69	Limit switch spring	2
21	Right cover	1	70	"E" rings	2
22	Circlips for shaft	3	71	Limit shaft seal	1
23	Shoring	4	72	Ground wire sheath	1
24	Circlips for shaft	2	73	Llimit lever shaft	1
25	Hexagon socket head cap screws	1	74	Limit lever	1
26	Bearing	2	75	Plain washers	2
27	Left cover	1	76	Spring-type straight pins	1
28	Chain shelf	2	77	Chain fixed block	1
29	Hexagon thin nuts	1	78	spring buffer	2
30	Hook base	1	79	Gasket buffer	2
31	Hook	1	80	Prevailing torque type hexagon nut	1
32	Big sheath	1	81	Hook block	2
33	Small sheath	1	82	Hook	1
34	Chain baffle	1	83	Hexagon socket head cap screws	1
35	Chain wheel	1	84	Cross recessed pan head tapping screws	7
36	Front cover	1	85	Controlling handle（base）	1
37	Chain	1	86	Capacitor	1
38	Bearing	1	87	Handle sealed loop	1
39	Flat pin	1	88	Control cord	1
40	Flat pin	1	89	Controlling handle（cover）	1
41	Rotor	1	90	sheath	1
42	Motor plate	1	91	positive and negative switch	1
43	Hexagon socket head cap screws	2	92	Base of connection box	1
44	Hexagon socket head cap screws	4	93	grouding sheet	1
45	Stator	1	94	lock washer sex ternal teeth	1
46	Brake spring	1	95	plug	1
47	Motor wire cover	1	96	Emergency stop switch	1
48	Brake assembly	1	97	Cross recessed pan head screws	4
49	Cross recessed pan head screws	5	98	Chain bag assembly	1