

# CRANE

“Lift with Confidence”

## SAFETY, OPERATIONS & PARTS MANUAL

**NEW GENERATION**

# ELECTRIC CHAIN HOIST

500kg, 1 tonne, 2 tonne model capacities

Complies to AS 1418.2 **CE**

**WARNING:**

Crane Electric Chain Hoists should not be installed or operated or maintained by any person who has not read all the contents of these general instructions. Failure to read and comply with these instructions or any one of the limitations noted herein can result in bodily injury and/or property damage.



**GRANGE**  
LIFT

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## Warning

1. Shall be sure the hoist is with the correct earth connection before applied to operation.
2. Before lifting a load, examine the load chain to ensure that there is no twist, kink, and no turn-over of bottom hook for multi-falls.
3. The hoist is only used for load within its capacity, any application for over rated capacity is forbidden.
4. Ensure lift a load vertically, diagonally lift or tow a load is not allowed beyond 10 degrees.
5. While operating, any person is prohibited to stand or work underneath the load.
6. Do not lift any load with the load chain as slinging tackle.
7. Never apply any load to the tip of hook for lifting.
8. While lifting, do not operate the hoist for rapid up and down repetitively.
9. Don't run the hoist out of the limit position.
10. Never lift a load using 2 or more than 2 sets hoists simultaneously.
11. Don't dismantle and adjust the limit load device by users themselves.
12. Measuring the load by limit load device is forbidden.
13. The load chain should be properly lubricated with suitable oil or grease before applied to lifting purpose, and periodically lubrication is necessary in normal operation.
14. When lifting, the slings should be properly put into the hook throat with the safety latch properly closed.

## Application

CRANE electric chain hoist is our newly developed product based on Japanese and Germany technology with the features of compact design, light weight, easy operation and built to last. The hoist is widely used for the lifting purpose which occur in factories, mines, ports, warehouses etc., it can be used together with cranes as an integrate part of an overhead crane system, our hoist will improve your work conditions with high efficiency.

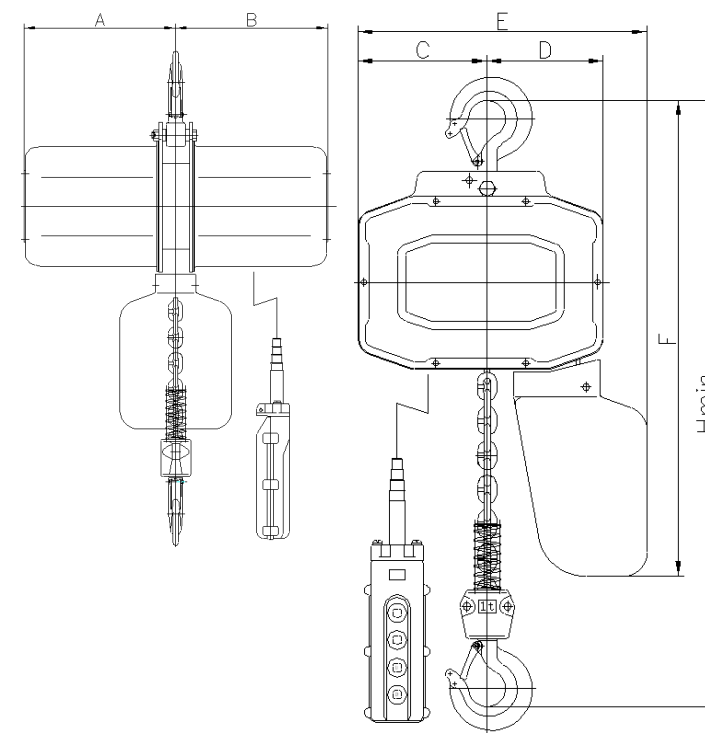
## Features

### Safe and Reliable

1. Brake: adopting D.C. normal close brake, without asbestos. Once the motor stops, the brake will hold the load safely.
2. This hoist is equipped with a electronic limit load device, which prevents the chain from being over tightened.
3. Friction clutch: which can make the motor idle running to avoid damage under overload and over tight revolving.
4. he motor is equipped with a heat protection device, which prevents the motor to be damaged in overheating.
5. Top and bottom hooks are made of high tensile alloy steel with special heat treatment. This prevents the hook from breaking and being deformed gradually under a sudden extra-load situation.
6. Load chain is carbonized to ensure long life.
7. Chain container serves as a storage bag, keeping the load chain clear of dirt and dust, and without chuck will safely lower down freely.

## Dimension & Specification

### Electric Chain Hoist



Capacity	tonnes	0.5	1	2	
Standard Lift	meter	3	3	3	
Power Supply	1P/110~220V/50Hz or 60Hz				
Lifting Lift	50Hz	7	6	3	
	60Hz	8.4	7.2	3.6	
Motor Power	kw	1.2			
INS Class	F				
Working Level / %ED	M4 / 30%				
Dimension of Load Chain	φ5 x 15	φ7.1 x 21			
Strands of Load Chain		1	1	2	
Test Load	tonne	0.625	1.25	2.5	
Cable Length	meter	2.5			
Net Weight	kg	55	55	62	
Extra Weight Per Meter of Extra Lift	kg	1.1	1.1	2.2	
minimum headroom Hmin	mm	500	520	630	
Main Dimensions	A	mm	245	245	245
	B	mm	245	245	245
	C	mm	158	158	124
	D	mm	142	142	176
	E	mm	350	350	350
	F	mm	600	600	650

## Technical Specification

1. Relative humidity: <85%
2. Ambient temperature: -25°C - 40°C
3. Working class: M4
4. Level of Protection: IP54
5. Power: 1P/110~220V/50HZ or 60HZ
6. Chain size:  $\phi 5 \times 15 / \phi 7.1 \times 21$
7. The hoist **Can Not** be used under any environmental conditions of flammable, explosive or corrosive air.

## Working Class and Using Life

CRANE hoist shall be operated as per fixed working class to ensure safety and long using life.

Load Cond.	Explanation	Load Spectrum Factor	Daily Operating Time (h)	Total Operating Time (h)
Light Load	Seldom lifting rated load, generally for light lifting	0.125	2-4	6400
Medium	Sometimes lift rated load, generally lift. Medium Load.	0.25	1-2	3200
Heavy	Often lift rated load, generally for heavy load lifting.	0.5	0.5-1	1600
Extra Heavy	Frequently lifting rated load.	1.0	0.25-0.5	800

## Installation Instructions

### 1. Installation and Test Operating

- a) When CRANE electric chain hoist is applied to use, install the hoist to a support structure, switch.
- b) on it as the nameplate indicates, then push the button to watch the running direction of load hook, if its moving follow the button direction, it means the wires are rightly connected to power supply, otherwise, the connection failure, please correct it by exchanging any two wires' connection.
- c) Before operating a new hoist for its first lifting, it should be operated without load for 15 minutes to ensure the running is ok, same procedure should be given to a hoist which has been out of usage for a long time.

### 2. Maintenance

Maintenance should be done by personnel specially designated every year, and great attention paid to the below parts and components.

- a) Load chain: with daily duty service, the chain should be always oiled or lubricated by grease, in the meantime, a periodically inspection for abrasion is needed. Refer to the illustration figure for the inspection, if any one of the phenomenon in the figure occurs, the chain must be replaced.
- b) Brake device: maintenance should be carried out every

three months, it should be cleaned to ensure it clear of dust and oil, also, the inspection should be given to the working space of brake device, if abrasion of brake disc more than the maximum working space (1mm), then the working space should be adjusted over again, and if abrasion of friction disc near to the aluminum core, the brake disc should be replace in time, otherwise, the brake device can be damaged.

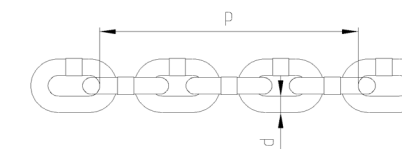
- c) Gearing: cleaned and grease lubricated once a year.
- d) Bearing: cleaned and grease lubricated once a year.
- e) Hooks: to be checked periodically for the deformation and abrasion measurement, if the wear or deformation measures up 10% of the standard sizes (ref to illustrated figure), please change the hooks.
- f) Hooks: to be checked periodically for the deformation and abrasion measurement, if the wear or deformation measures up 10% of the standard sizes (ref to illustrated figure), please change the hooks.

### 3. Repairing Warning

Once the is hoist damaged or **Can Not** be operated normally, you need to contact and consult with your local supplier or the designated maintenance provider, end users are not allowed to open or repair the hoist by themselves.

## 4. Illustration Figure for Chain Inspection

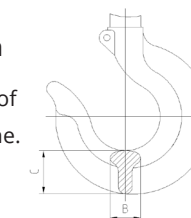
If chain is abraded over the limit value, it must be replaced with a new one.



Dia. of Chain (d)	Wearing Limit Value (d)	Measure links	Standard Value (p)	Wearing Limit Value (p)
5mm	4.5mm	5	75.5mm	78mm
7.1mm	6.4mm	5	106mm	109.2mm

## 5. Illustration Figure for Hook Inspection

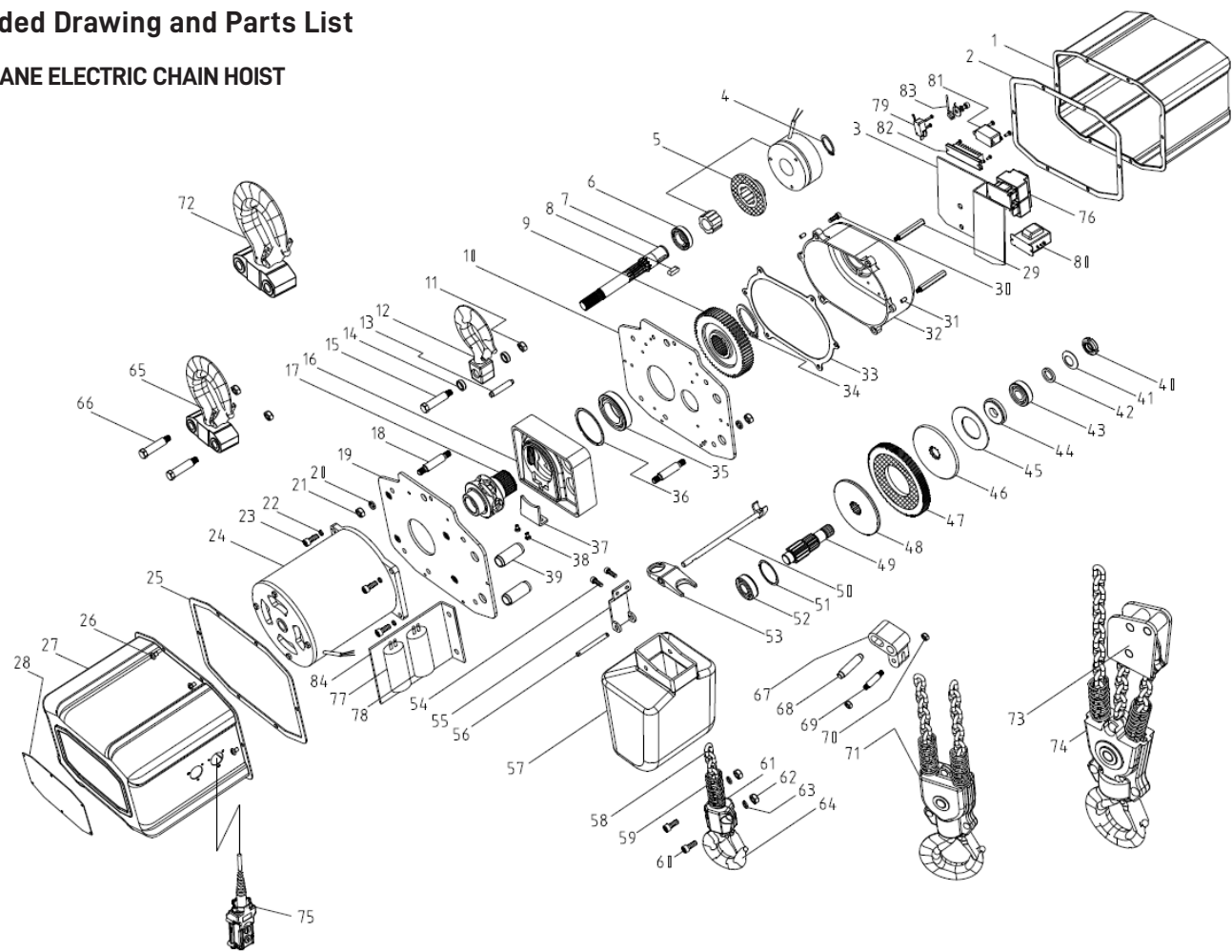
If the size "b" and "c" is smaller than the 90% of the standard size, please replace with new one.



Capacity (t)	B (mm)		C(mm)	
	Normal Size	Abnormal Size	Normal Size	Abnormal Size
0.5	19	17	26	23.4
1	19.5	17.5	27	24.3
2	22	19.8	32	28.8

## Exploded Drawing and Parts List

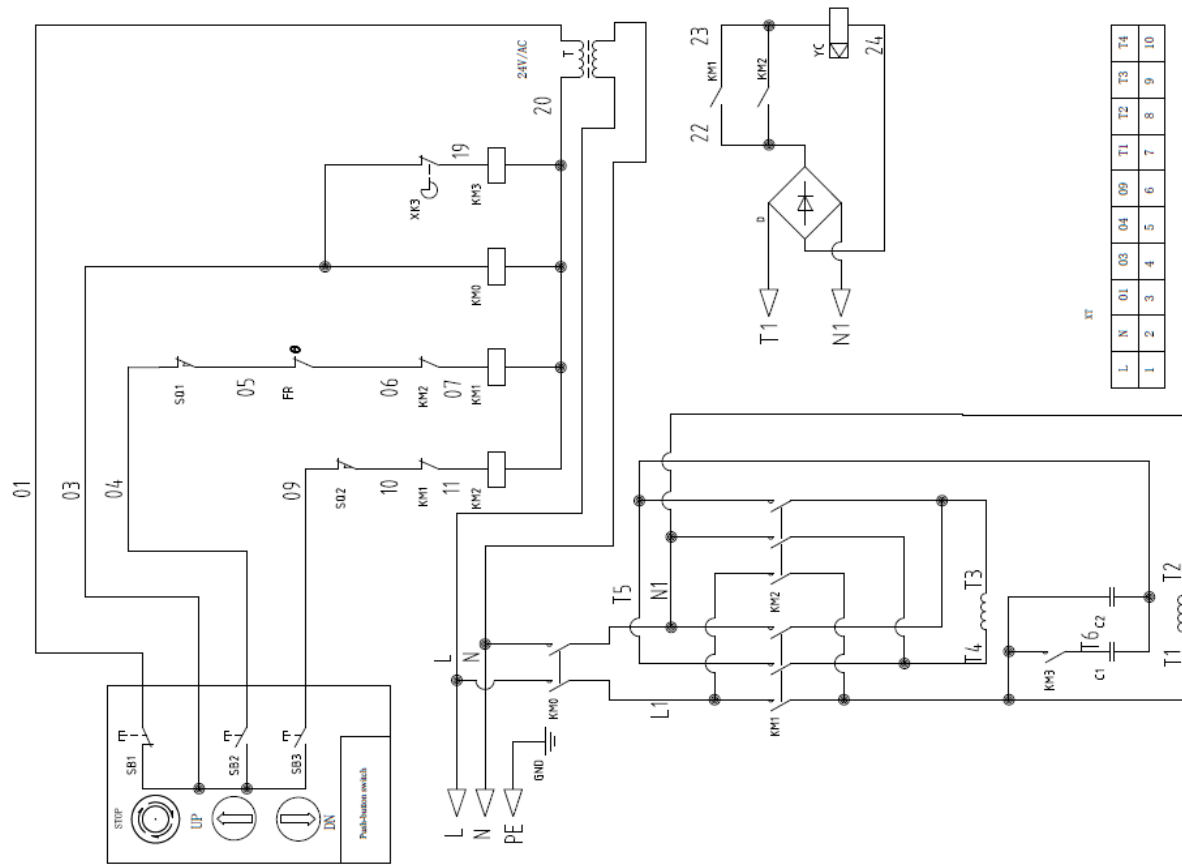
### 1. CRANE ELECTRIC CHAIN HOIST



No.	Description	Quantity	No.	Description	Quantity
1	Cover A	1	43	Rolling bearing 6004Z	1
2	Motor cover packing	1	44	Spring set	1
3	Electric board A	1	45	Spring	1
4	Axle race 25	1	46	Friction disk pressing panel	1
5	Brake assembly	1	47	Big Gear A	1
6	Rolling bearing 6005Z	1	48	Limit device base	1
7	Pinion gear A	1	49	Pinion gear B	1
8	Flat key 8×7×20	1	50	Limiter rotating axle	1
9	Big gear B	1	51	Stop ring 47	1
10	Right side plate	1	52	Rolling bearing 6204ZN	1
11	Hex nut M10	10	53	Limiter baffle	1
12	Top hook	1	54	Screw M6×16	2
13	Hook holder stop lever	1	55	Chain container hanging plate	1
14	Hook axle washer	2	56	Connecting pole	1
15	Hook axle	1	57	Chain container	1
16	Chain container	1	58	Load chainφ7.1×21	1
17	Chain sprocket	1	59	Limit spring	2
18	Staying pole	4	60	Hex bolt M8×30	2
19	Left side plate	1	61	Bottom hook assembly	2
20	Spring washer 10	8	62	Hex nut M8	2
21	Hex nut M10	8	63	Spring washer 8	2
22	Spring washer 8	4	64	Bottom hook	1
23	Hex screw M8×20	4	65	Top hook assembly(2t)	1
24	Motor assembly	1	66	Hook axle (2t)	2
25	Motor cover packing	1	67	Chain suspension holder (2t)	1
26	Screw M6×8	12	68	Connecting pin(2t)	1
27	Cover B	1	69	Pin (2t)	1
28	Name plate	2	70	Hex nut M8(2t)	2
29	Rivet screw	2	71	Bottom hook assembly (2t)	1
30	Hex screw M6×20	4	72	Top hook assembly (3t)	1
31	Spring locating pin 6×16	2	73	Top pulley assembly (3t)	1
32	Gear case	1	74	Bottom hook assembly (3t)	1
33	Gear case space	1	75	Push button	1
34	Axle race 42	1	76	contactor	3
35	Rolling bearing 6009ZN	1	77	Run capacitor (30/75μF)	1
36	Stop ring 75	1	78	Start capacitor (170/500μF)	1
37	Load chain baffle	1	79	Limit switch	2
38	Screw M6×10	2	80	Transformer	1
39	Conduit	2	81	Rectifier	1
40	Nut M20×1.5	1	82	Amphenol connector	1
41	Stop washer 20	1	83	Torsional spring	1
42	Nut washer	1	84	Electric board B	1

## Electrical Drawing

### ELECTRIC CHAIN HOIST (STOP + UP + DOWN)



## Malfunctions and Settlements

No.	Malfunctions	Causes	Settlements
1	The hoist refuse to operate under switch on.	Wires unconnected or loose result power off.	Check and fasten all the wire connection points.
		Electrical parts damaged.	Replace the damaged part.
2	Hoist refuse to operate, and the braking parts has wuwu bee noise.	Voltage is too low.	Operate under rated voltage.
3	After switch off, the load drop while braked.	Dust or oil on brake disc.	Clean the disc.
		Severe abrasion of disc.	Replace the disc.
4	Hoist still operate while the control button released.	The conductor damaged.	Replace conductor.
5	Chain run with strange noise.	The chain no lubricated properly.	Lubricate chain by oil or grease.
		The chain or sprocket wheel worn.	Change with new ones.
6	Leakage of electricity	The earth connection is not ok.	Ensure good earth connection.
		High humidity in the air.	Improve the environment.
		Dust on the electrical parts.	Keep the parts clear to dust.



# NOTES

# CRANE

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**Note:**

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**Your Specialist Distributor:**

Note: All images are just for illustration purpose only. All Specifications are Correct with our Current Stock Holdings. Specifications and dimensions are subject change without notice.

## ELECTRIC CHAIN BLOCKS

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