Electric chain hoist
Instructions for use

ECB0100PC / ECB0500PC

Technical Specifications

Name of the article	ECB0100PC	ECB0500PC
Spanning	230 V, 50 Hz	220 V, 50 Hz / 380 V, 50Hz
Nominal power	450 W	1100 W
Nominal power consumption	3.5 A	7.5A / 3A
Nominal load	100 kg	500 kg
Lifting speed	0–18.0 m/min	0–10.0 m/min
Lifting height	5 M	
Insulation class	B	
Chain diameter	4.0 mm	6.3 mm
Working class mechanism	M5	
Breaking strength chain	≥900 N/mm2	
Protection class	IP54	
Work system	S3 50% - 10min	
Operating temperature range	0-40 ☒	
Net weight	15.4 kg	32 kg

Warnings

1. Carefully check that the profile, cable, hook, chain and controlswitch have not been damaged during transport.
Check the chain for dirt, tangles, and any irregularities. Then, connect the upper hook sections to the machine correctly, following the instructions. If you try to operate the machine too quickly, the chain may hit the directional stop or jam the machine.
2. Ensure that the power cord is properly positioned in relation to any rotating or moving parts of the electric chain hoist.
3. The electric chain hoist must be switched off and isolated when unattended or temporarily not in use by the operator. Do not hang heavy objects on the hoist for extended periods to prevent permanent deformation or damage to components.
4. Do not expose the electric chain hoist to rain or use it in damp locations. Ensure the work area is well lit and keep the electric chain hoist away from flammable liquids or gases.
5. When the electric chain hoist is moving up or down, ensure that no personnel are within the lifting range to avoid accidents under the load.
6. Electric chain hoists must not be used for handling hot melts and must not be used in hazardous or low temperature environments.

Safety regulations

Before using the electric chain hoist, pay attention to safety and observe the following safety precautions:

1. The installation location of the electric chain hoist should be chosen to meet safety requirements and facilitate operation. Regularly check that the electric chain hoist is securely installed and that the chains are intact.
2. The electric chain hoist has a limited lifting capacity. Do not use the hoist when overloaded or in situations where the weight of the object being lifted is uncertain (including when lifting the implant). Overloading not only damages the electric chain hoist's components and shortens its service life, but also increases safety during use.
3. When lifting heavy objects, do not use twisted, knotted, damaged or worn chains.
4. It is recommended to use the electric chain hoist at temperatures between 0 and 40°C. If the electric chain hoist is used in extreme ambient temperatures (above 40°C or below -10°C), the lubricant's performance will deteriorate, increasing the operating load.
5. If the electric chain hoist's lifting speed becomes too slow, this indicates an overload. This can result in lifting a heavy object under abnormal conditions or even making it impossible to lift the object. A noise may also occur if the lifting load exceeds the rated value, with the number "1" appearing on the Nixie display tube on the handle. In this case, immediately stop the electric chain hoist and reduce the load to the rated value. Once the overload is removed, the machine will resume normal operation.
6. The electric chain hoist is designed for a duty cycle of S3 50% – 10 minutes (i.e., 5 minutes of use and 5 minutes of rest). Therefore, do not use the hoist continuously for long periods. Continuous use can compromise safety and, in severe cases, damage engine components.
7. It is not permitted to pull or subject the electric chain hoist to an uneven load (such as pulling or lowering it at an angle) during use, as this increases the load and can easily lead to overload.
8. If the chain needs to be replaced, the model and specifications must match those of the original chain.
9. Keep the electric chain hoist's work area clean and tidy. No unattended personnel should be near the work area, no one should touch the tensioned chain, and no one should stand under the electric chain hoist while it is in operation.
10. When operating the chain, wear thicker gloves and do not let the chain slide over other parts of your body to avoid cutting yourself on the chain.

11. After using the electric chain hoist, you must disconnect the power plug from the socket in time to ensure that the electric hoist is de-energized.
12. Do not hook the hook to the chain itself and do not tie the suspended object to the electric hoist's chain, otherwise the chain will be damaged. Use other suitable ropes to secure the suspended object.
13. The upper and lower limits are configured as a safety feature to automatically deactivate the ascending or descending circuit when the hook ascends or descends to the limit position. Do not use a stopper as a limit switch.
14. Do not use the electric hoist to lift persons or in a manned elevator.
15. The electric hoist's installation position must be selected so that the warning and indicative markings are clearly visible and must be used correctly in accordance with the relevant markings. 16. Ensure that the electric hoist operates without obstruction.
17. Do not use the electric hoist under the influence of alcohol, medication, illness or external conditions.
18. When the electric chain hoist is in operation, do not work under or around the hoist to avoid accidents.
19. Use the fixed mountings provided with this product, otherwise you may find yourself in an unsafe situation.
20. Do not modify or weld any parts of the electric chain hoist at your own discretion, otherwise this will reduce the safety of the electric chain hoist and put you in an unsafe situation.

Installation

1. Before using the electric chain hoist, correctly attach the hook to the machine as shown in the figure below (Figure 1). Maintain a clearance of 1 mm between the self-locking nut and the reduction gear. Overtightening causes unnecessary tension and can damage the gear. 2. The installation location of the electric chain hoist depends on the work to be performed. It is recommended that the hoist be secured to a load-bearing structure designed to withstand the maximum permissible load, ensuring that no hazards arise from loosening, tipping, or failure of the attachment, in accordance with the essential health and safety requirements of Machinery Directive 2006/42/EC. Insufficient strength can result in injury and damage to both the hoist and the load, resulting in improper operation of the system. Accessories such as a top hook and mounting bolts (included with the product) are required for mounting electric chain hoists. Ensure that all components are installed correctly. 3. The standard power supply for electric chain hoists operation is single-phase AC 220 (V)/50 (Hz), and a power socket with a ground wire must be used.

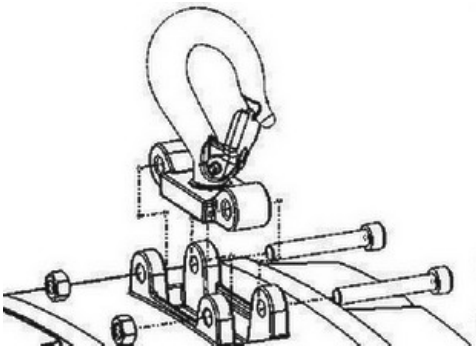


Image 1.1 ECB0100PC

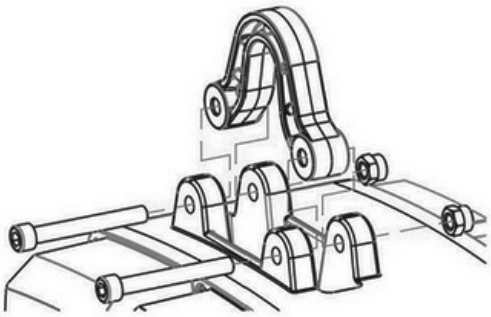
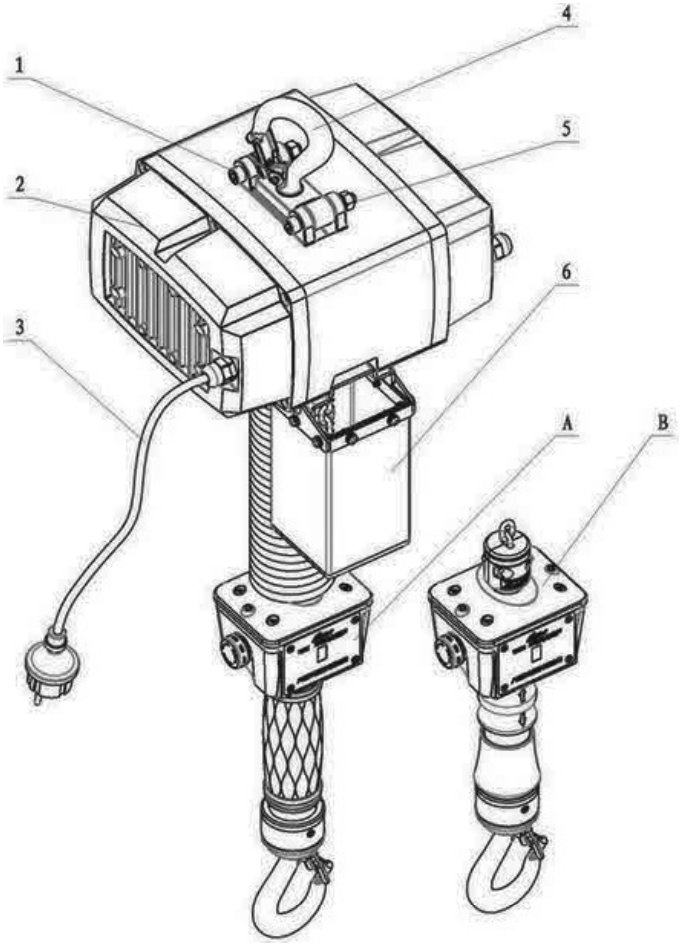


Image 1.2 ECB0500PC

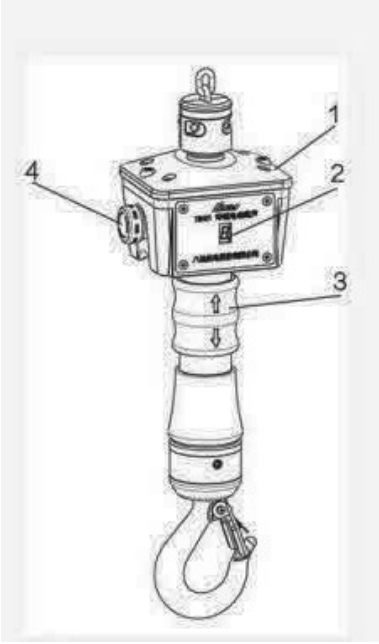
Main parts

1.M8 * 55 mounting bolt
2.Frame
3. Power cord
4.Top hook
5.M8 self-locking nut
6.Chain bag A.Handle incl. switch B.Handle incl. switch ECB series



Ministry

The design of the electric chain hoist's handle and bottom hook forms an integrated structure with a magnetic contactless induction switch. The handle allows the weight to be raised or lowered by sliding the center control lever up or down. The emergency stop switch is normally in the ON position. Pressing the emergency stop switch switches it to the OFF position (functional fault). Then, turning the knob slightly clockwise returns the switch to the ON position (functionally restored).
When the emergency stop switch is in the ON position and the control handle is moved up, the up switch is in the ON position, energizing the electric hoist's up loop. In this up position, the lifting speed changes depending on the distance the control handle is moved up.
When the control lever is moved down, the descent switch is in the ON position, energizing the descent loop. In this down position, the descent speed also changes depending on the distance the lever is moved.
When the electric hoist is in the lifting or lowering position and the emergency stop switch is pressed, both the ascending and descending loops are immediately disconnected. The hoist can then no longer be operated until the emergency stop switch is reset.
In front of the connection box there is a digital display that shows the various statuses of the machine.



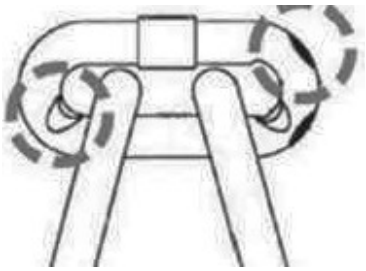
1. Connection box
2. Digital display
3. Control lever
4. Emergency stop switch

Maintenance measures

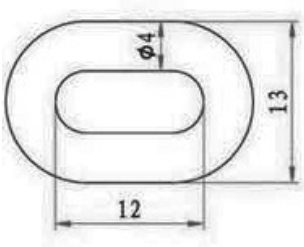
Regularly inspect the electric hoist's bolts and power cables and immediately remove any dust, water, or corrosive liquids that may have accumulated on the cables.

Newly purchased electric chain hoists are filled with a maintenance-free lubricant for their entire service life. A small amount of lubricant may leak out during use, especially during initial use. This is normal, and no lubricant needs to be added to the electric chain hoist.

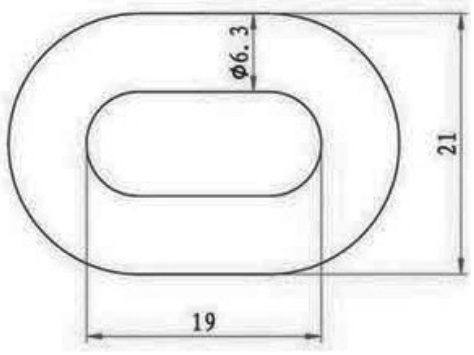
The chain components of the electric chain hoist should be inspected regularly, and the chain should be replaced if any of the above defects are present, such as nicks, grooves, twisted chains, weld slag, corrosion pits, cracks, weld fractures, wear, and elongation. As shown in the figure:



The specifications of the chain are as follows:



ECB0100PC : 4mm

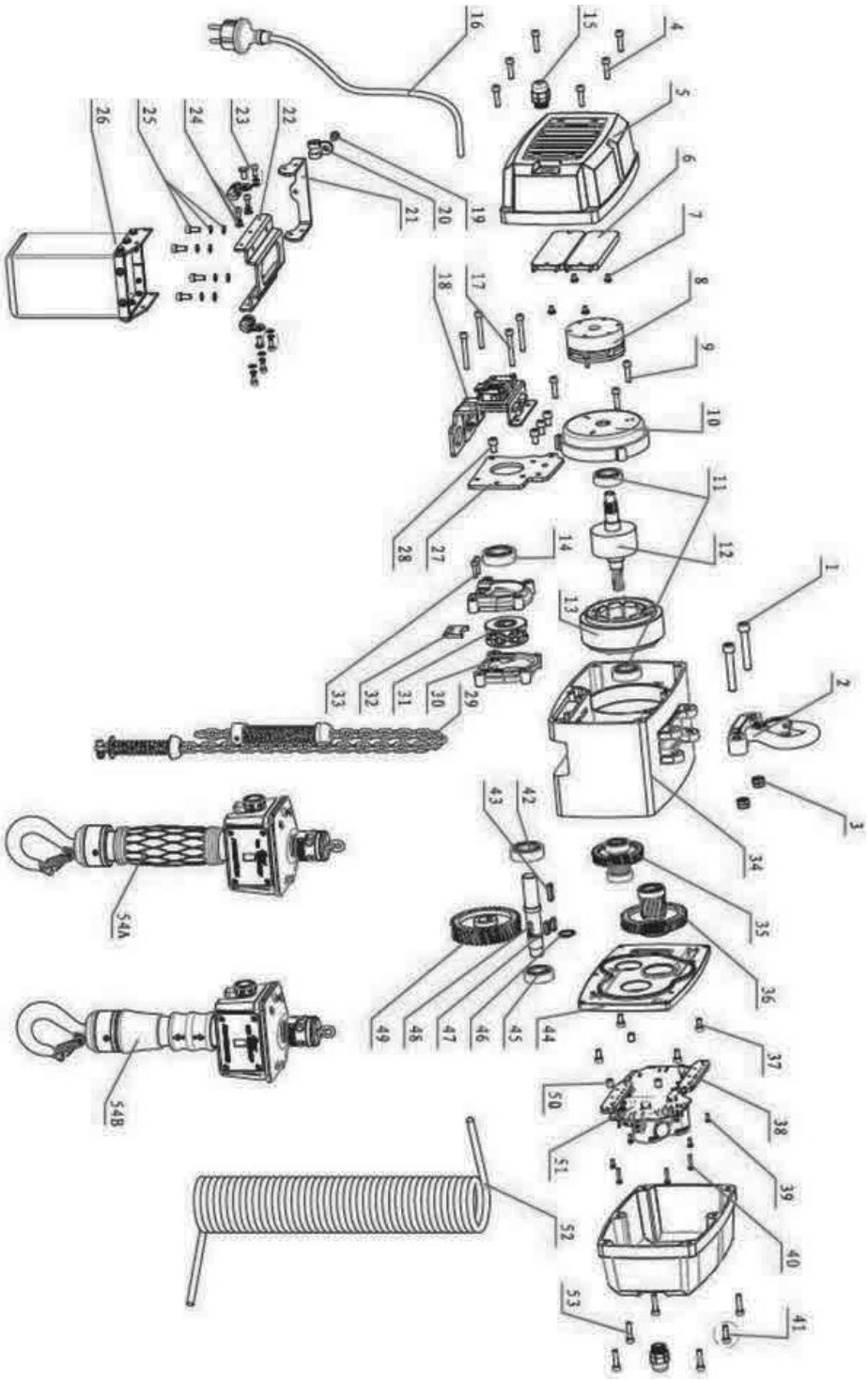


ECB0500PC : 6.3mm

Recommended chain size: use original chain

Check the top and bottom hook:
The main damage to the hook includes corrosion, deformation, breakage, or deformation of more than 10° compared to a normal hook, an enlarged hook opening, etc., indicating improper use or overloading of the hook. Check the hook's safety catch to ensure it is not damaged or bent. Criteria for a properly functioning hook are that the hook can be pressed firmly against the hook, and that it can be repositioned and pushed along the hook edge when released, and that the hook can function normally. If the hook's safety catch is not functioning properly, it must be replaced.

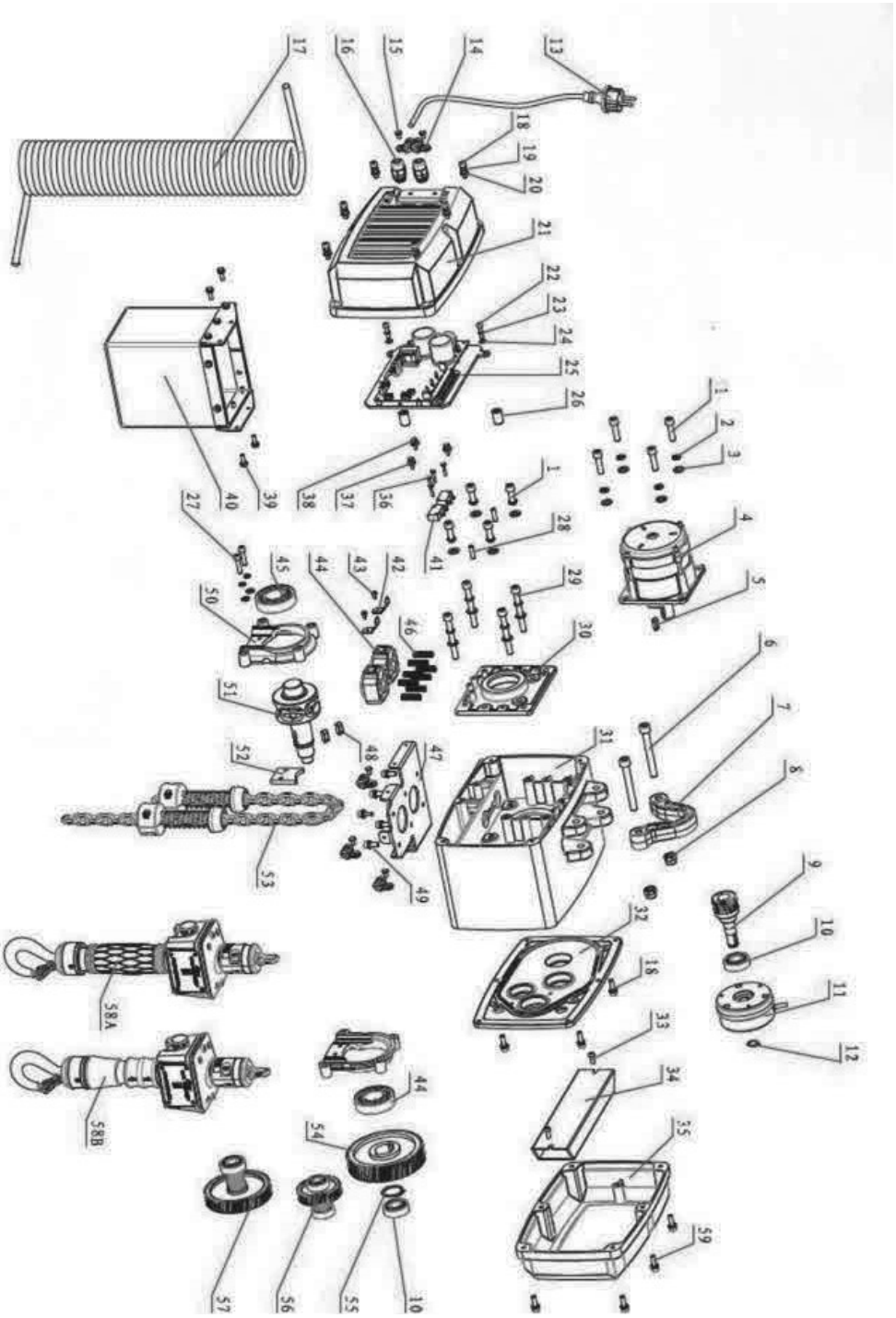
Parts list ECB0100PC



NO.	Art.code	Description	Number
1	PEB0100PCN1	Zeskantbouten M8*55	2
2	PEB0100PCN2	Hook construction Castle mother M8	1
3	PEB0100PCN3		2
4	PEB0100PCN4	Zeskantenbouten M5*20	6
5	PEB0100PCN5	Device cover	2
6	PEB0100PCN6	Resistance	2
7	PEB0100PCN7	Phillips screw M4*6	4
8	PEB0100PCN8	4N/M-rem	1
9	PEB0100PCN9	Zeskantenbouten M5*30	3
10	PEB0100PCN10	Rear engine cover Roller bearing 6202-2RS	1
11	PEB0100PCN11		2
12	PEB0100PCN12		1
13	PEB0100PCN13	Rotor	1
14	PEB0100PCN14	Stator	2
15	PEB0100PCN15	Rollerbearing 6203-2ZN + stop ring 40mm	2
16	PEB0100PCN16	Cable mounting head M16	1
17	PEB0100PCN17	Plug	4
18	PEB0100PCN18	Zeskantbouten M5*45	1
19	PEB0100PCN19	Boundary construction Phillips head screw M5*10	3
20	PEB0100PCN20		3
21	PEB0100PCN21	cable ties	1
22	PEB0100PCN22	Spiral fixation plate	1
23	PEB0100PCN23	Chain holder for bags	2
24	PEB0100PCN24	Hexagon bolts three-in-one combination M4*10 Hexagon nuts with socket head, three-in-one combination M4*8	4
25	PEB0100PCN25	Hexagon bolts with socket head, three-in-one combination 5*12	4
26	PEB0100PCN26	Chain bag assembly	1
27	PEB0100PCN27	Mounting plate	1
28	PEB0100PCN28	Zeskantbouten M6*14	4
29	PEB0100PCN29	Chain assembly	1
30	PEB0100PCN30	Kettingwielracket	2
31	PEB0100PCN31	Chainwheel	1
32	PEB0100PCN32	Chain damper	1

NO.	Art.code	Description	Number
33	PEB0100PCN33	Hexagonal bolts M4*16	2
34	PEB0100PCN34	Housing	1
35	PEB0100PCN35	Primary gear assembly	1
36	PEB0100PCN36	Secondary gear assembly	1
37	PEB0100PCN37	Zeskantbouten M5*10	4
38	PEB0100PCN38	Heat sink	2
39	PEB0100PCN39	Phillips screw M3*8	4
40	PEB0100PCN40	Phillips screw M3*16	4
41	PEB0100PCN41	Hexagon bolts M5*16	1
42	PEB0100PCN42	Roller bearing 6203-2RS	1
43	PEB0100PCN43	Flat 5*22	1
44	PEB0100PCN44	Reduced housing	1
45	PEB0100PCN45	Roller bearing 6202-2RS	1
46	PEB0100PCN46	Elastic retaining ring for 17mm axle	1
47	PEB0100PCN47	Flat key 5*16	2
48	PEB0100PCN48	Sprocket shaft	1
49	PEB0100PCN49	Tertiary gear	1
50	PEB0100PCN50	Plastic path	4
51	PEB0100PCN51	Main control board	1
52	PEB0100PCN52	Spiral line	1
53	PEB0100PCN53	Zeskantbouten M5*20	5
54A	PEB0100PCN54A	Coaxial sliding handle construction	1
55B	PEB0100PCN54B	Fine adjustment of the slide lever assembly	1

Electric chain hoist Exploded view



NO.	Art.code	Description	Number
1	PEB0500PCN1	Zeskantbouten M8*25	8
2	PEB0500PCN2	Flat washer 8mm	12
3	PEB0500PCN3	Veerring 8mm	12
4	PEB0500PCN4	Motorassemblage	1
5	PEB0500PCN5	Device cover	1
6	PEB0500PCN6	Zeskantbouten M10*80	2
7	PEB0500PCN7	Hook holder	1
8	PEB0500PCN8	Castle nut M10	2
9	PEB0500PCN9	Primary gear	1
10	PEB0500PCN10	Roller bearing 6203-2RS	2
11	PEB0500PCN11	6N/M rem	1
12	PEB0500PCN12	Elastic collar for axle 15mm	1
13	PEB0500PCN13	Plug	1
14	PEB0500PCN14	Cable clamp Ø6*15mm	2
15	PEB0500PCN15	Phillips head screw M5*8	2
16	PEB0500PCN16	Cable mounting head M16*1.5	2
17	PEB0500PCN17	Spring wire	1
18	PEB0500PCN18		10
19	PEB0500PCN19	Inbusbouten M16*1.5	24
20	PEB0500PCN20	Platte sluitring 6mm	
21	PEB0500PCN21	Veerring 6mm	24
22	PEB0500PCN22	Engine cover	1
23	PEB0500PCN23	Zeskantbouten M5*35	2
24	PEB0500PCN24	Flat washer 5mm	2
25	PEB0500PCN25	Veerring 5 mm	2
26	PEB0500PCN26	Main printed circuit board	1
27	PEB0500PCN27	Support bus	2
28	PEB0500PCN28	Zeskantbouten M6*25	2
29	PEB0500PCN29	Chain wheel support frame	2
30	PEB0500PCN30	Inbusbouten M8*70	4
31	PEB0500PCN31	Cylindrical pin 6*20	2
32	PEB0500PCN32	Contracting box	1
		Forward	1
		discharge cover	

NO.	Art.code	Description	Number
33	PEB0500PCN33	Hexagon bolts with button head M6*14	2
34	PEB0500PCN34	Resistance	1
35	PEB0500PCN35	Resistance shield	1
36	PEB0500PCN36	Phillips screw M3*18	4
37	PEB0500PCN37	Beaconlite path	3
38	PEB0500PCN38	Phillips screw M4*16	3
39	PEB0500PCN39	Phillips head screw M5*10	4
40	PEB0500PCN40	Chain bag assembly	1
41	PEB0500PCN41	Microswitch	2
42	PEB0500PCN42	Limiting plate	2
43	PEB0500PCN43	Crosshead self-tapping screw st 4.2*10	2
44	PEB0500PCN44	Limiting block	2
45	PEB0500PCN45	Roller bearing 6202-2RS	2
46	PEB0500PCN46	Limiting spring	8
47	PEB0500PCN47	Chain axle bottom	1
48	PEB0500PCN48	Flat key 8*20	2
49	PEB0500PCN49	Zeskantenbouten M16*16	6
50	PEB0500PCN50	Kettingwielracket	2
51	PEB0500PCN51	Chainwheel	1
52	PEB0500PCN52	Chain damper	1
53	PEB0500PCN53	Chain construction	1
54	PEB0500PCN54	Tertiary gear	1
55	PEB0500PCN55	Elastic retaining ring for axle 30mm	1
56	PEB0500PCN56	Secondary gear assembly	1
57	PEB0500PCN57	Tertiary gear assembly	1
58A	PEB0500PCN58A	Coaxial sliding handle construction	
58B	PEB0500PCN58B	Fine adjustment slide lever	1
59	PEB0500PCN59	Zeskantbouten M6*30	1
			6

Problem solving

Electric chain hoists can exhibit variousmalfunctionsduetoprolonged use or incorrect operation.
Common faults, causes and maintenance measures are listed in the table below:

Common malfunctions	Cause	Service measures
The push button switch motor drive is not running	(1) Power supply not connected (2) Damaged or loose wiring (3) Switch defective (4) Emergency stop switch not reset	(1) Turn on the power (2) Check and repair the wiring. (3) Repair or replace switch (4) Reset emergency stop switch
Engine makes a lot of noise and does not start properly	Supply voltage too low or too high	Check the supply voltage and frequency
Excessive noise	(1) Poor lubrication (2) Damaged gear or bearings (3) Impurities in gear or rotor spline (4) Poor installation or dents after disassembl	(1) Add an appropriate amount of fat (2) Check replacement gears or bearings (3) Remove impurities (y4) Check the m ounting and repair the bump
Casing loaded	(1) Ground fault or no grounding (2) Internal conductor grounded to enclosure	(1) Inspect and repair grounding (2) Check and repair internal pipes
Treat Nixie display tube digitally	A: Indicates an emergency stop.	Turn clockwise to release the emergency stop
	---: Indicates that the machine is operating normally;	
	1: Maximum power limit;	Weight loss
	2 : Abnormal drive power supply;	Check the power supply
	3 : IGBT-storing;	Replace the printed circuit board
	4 : Blocked rotor;	Check for overload or mechanical blocking
	5 : Overflow;	Check the overload
	6 : Overpressure;	Check the voltage or brake resistance
	7 : High temperature;	Equipment overheats and needs to be replaced cooled before use
	8 : Sampling deviation;	Please contact the manufacturer for technical support
	9 : Deviation in the hall;	Please contact the manufacturer for technical support
Emergency stop switch	Pressing the emergency stop switch can temporarily fix problems 1, 2, 4, 5, and 6 with the Nixie display tube.	
Other matters	Contact your Torso sales point. .	

EG-verklaring van overeenstemming - Declaration of conformity – Konformitätsverklärung - Declaration de conformite - Dichiarazione di conformita- Declaracion de conformidad

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Type *Model* *Art* *Tipe*	*Beschrijving* *Description* *Beschreibung* *Description*	*Merk* *Brand* *Marke* *Marque*
ECB0100PC	**Elektrische kettingtakel**	**Torso**
ECB0100PC	**Electric hoist**	**Torso**

Waarop deze verklaring betrekking heeft, in overeenstemming zijn met de volgende normen:To which this declaration relates, are in conformity with the following standards:Auf die sich diese Erklärung bezieht, den folgenden Normen entsprechen:Auxquels la présente déclaration se rapporte, sont conformes aux normes suivantes

De machinerichtlijn: Following the provisions of Directive: Gemäβ den Bestimmungen der Richtlinie: Conformément aux dispositions de la Directive:
2006/42/EG

Serienummer: Serial number:

Directeur Valkenpower

Nederland, Maasbracht, 08-09-2020

B.A.H Valkenburg

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