
FOS
technologies

FOS KYRA ELECTRIC CHAIN HOIST

USER'S MANUAL

TO OUR ESTEEMED USERS

Sincerely thanks for purchasing Huaige brand electric hoists.

Please be sure to read this operation manual and maintainence instruction.

Please keep this manual where you can reach conveniently to read it any time.

Appendix 5 Maintenance Log

Equipment :	Manufacturer :	Equipment Supplier name & address:
Building:	Model:	
Location:	Serial No:	
Equipment No:	Year of Mfg:	
Asset No:	Year of Installation:	
Equipment priority class:	Warranty expiration:	Contact Person:
	Capacity:	Contact No:

Installation Vendor name & address	Maintenance vendor name & address	Recommended spare Parts List
Contact Person:	Contact Person:	
Contact No:	Contact No:	

Type of maintenance

Date	Details	Total Down Time			Spares Used	Remarks
		Fr.	to	Hrs		

TABLE OF CONTENTS

1. Spare Parts And Order

Please keep the following parameters in case of use, through the following parameters the right parts can be supplied promptly.

Model of the ring-chain electric hoist:

Product Code；

Manufacturing Date；

Rated Load:

2.General Guidelines

2.1 Safety Guidelines

2.1.1Warnings

The following symbols are used as hazard alert:

Warning!

Failure to comply with operating guidelines and warning symbols may result in personal injury or death. Warnings must be strictly observed。

Caution!

Failure to comply with operating guidelines and warning symbols may result in serious machine damage or property damage. Caution information must be strictly followed

Hints!

Following operating guidelines and warning symbols could enhance work efficiency; Hints information could help with convenient and safe operation and prolong the service life of equipment

3.Safety Code

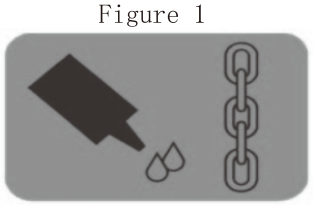
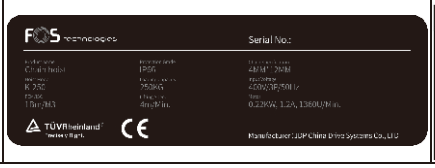
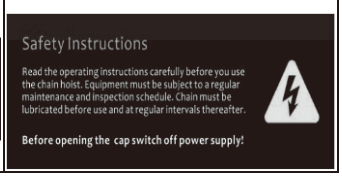
3.1 The operating manual must always be kept at the place where the electric chain hoist is used. Comply with the operating instructions. In addition, pay attention to the general legal provisions on accident prevention and environmental protection。

3.1.1 People in charge of operation and maintenance must read and understand instructions before starting work. Protective gear is required. The users and monitors of electric chain hoist better have a good sense of potential risk.

3.1.2 The Manufacturer reserves the right to make technical changes to the product or to this instruction manual at any time and assumes no responsibility for the completeness and updates of the instruction manual

3.2 Warning Mark/Chart/Warning Board

- Grease the chain • • • • • • • • • • • • • • Figure 1
- CE certificate • • • • • • • • • • • • • • • • • Figure 2
- Nameplate • Figure 3
- 电压警示 Voltage Alert • • • • • • • • • • • • • • • • Figure 4

Figure 1	Figure 2	Figure 3e.g	Figure 4
			

4.Special Safety Guide

Transportation/Installation:

• Carefully install electric chain hoists, parts and larger components to the point of their lifting capacity。

Power On/Debug/Connect:

•Should only be carried out by well-trained personnel 。

Start/Operation:

• Conduct testing work before regular adjustment。

• Protective gear is required in operation

• Immediately stop operation and report to the supervisor when abnormal

• The power supply should be protected in downtime in case of accidents and unauthorized use

• Do not apply any dangerous working methods。

Cleaning/Maintenance/Repair/Modification:

• Using specified climbing tools or platforms when working at heights.

• Machine parts shall not be used as climbing aids

• Check whether the cable is worn or damaged。

• Meet safety and environmental requirements and properly deal with the waste

• Safety devices removed during installation, maintenance and repair must be reinstalled and inspected immediately after work is done.

• Strictly follow the specified maintenance timetable

• Note the parts replacement information in the operating instructions

• Notify the operator before special operations and maintenance operations。

• Reserve a large enough working space during maintenance, and make safety isolation and warning sign。

• During maintenance and repair operations, the main power supply should be cut off to prevent the electric chain hoist from being accidentally switched on, and a warning sign should be placed。

• After maintenance and repair work, tighten up all the loose ends。

• Replace one time parts (like self-locking nuts, gaskets, cotter pins, O-rings) and sealing components.

Out of Service And Disposal:

• Clean the electric chain hoist and treat it with corrosion protection before disuse and long-term storage (All the chains are oiled and the body is coated with anti-corrosion grease) 。

4.1 Hazard Prevention Tips

Hot zone must be clearly marked with warning signs. Be sure to pay attention to the warning information in the danger zone。

Cause Of Danger:

• Not used as prescribed

• Not paying enough attention to safety messages

• Maintenance operations are not adequate

• Private remodel

4.2 Mechanical Injury

Personal Injury :

Potential accidents and personal injury by machinery:

- Squeezed, cut, chopped, tangled
- Pulled in, bumped into, pricked, rubbed
- Slip, tripped, fall down

e Causes:

- within Squeezing, cutting or weaving area
- Parts are broken or ruptured

ion:

- Keep ground, equipment and machinery clean
- Containment of leakage
- Note the required safety distance

ctrical Injury

can only be operated by qualified electricians in accordance with technical regulations.

Physical Injury:

Potential accidents and personal injury by electric shock:

- Touch conducting parts or stay nearby
- Use non-conducting tools
- The conductive components are exposed
- Inadequate safety checks after maintenance
- Wrong protection device was installed (Such as the limitation of leakage protection is too high)

Precaution:

- When conducting inspection, maintenance and repair work, the main power supply should be cut off
- When conducting inspection, maintenance and repair work , it is necessary to check whether the hoist is live。
- Check electrical equipment regularly。
- Replace aged or damaged cables immediately。
- Use specified leakage protection device
- Avoid contact with conductive parts。
- Use non-conducting tools and wear non-conducting outfit.

5 Noise level

The noise level of the electric chain hoist is measured at 1, 2, 4, 8 and 16 m from the testing center, Measurement is according to DIN-45-635.

The noise level is gauged in the following cases:

5.1. Using electric chain hoist in enclosed space.

5.2. Using electric chain hoist outdoor

Noise level Chart

Measuring Distance		1m	2m	4m	8m	16m
Series	Type of Measurement	dB				
D8 320Kg	5.1	68	62	55	48	43
	5.2	68	58	48	40	38
D8PLUS 250Kg	5.1	68	62	55	48	43
	5.2	68	58	48	40	38
D8 500Kg	5.1	68	62	55	48	43
	5.2	68	58	48	40	38
D8PLUS 500Kg	5.1	68	60	50	43	40
	5.2	65	55	45	40	35
C1 500Kg	5.1	68	60	50	43	40
	5.2	65	55	45	40	35
D8 1000Kg	5.1	79	77	70	63	60
	5.2	79	70	65	60	55
D8PLUS 1000Kg	5.1	79	77	70	63	60
	5.2	79	70	65	60	55
D8 2000Kg	5.1	79	77	70	63	60
	5.2	79	70	65	60	55

5.3voltage indication

Standard input voltage: 3-phase, 380V-400V/50HZ.
(Optional: 3-phase, 380V-400V/60HZ).

6 Technical Conditions

This operating manual was created in 2023 in accordance with Europe EG Directive (including amendments) and Grade 100 chain is applied in Kyra Series to make the hoists comply with DIN56950 standard and the safety factor up to 8:1.

6.1 Regular Inspection

Each equipment/machine operator shall record all inspection and maintenance work in the log for future reference, and have them confirmed by the supervisor/manager, If the record is inaccurate or incorrect, the warranty will be void.

Chains and hooks must be fully inspected.

All regular inspection shall be arranged by the user (except for those who have purchased our inspection and maintenance service).

6.2 Warranty

If the installation, operation, inspection and maintenance are not carried out in accordance with this operation manual, the warranty will be invalid. Repairs and troubleshooting during the warranty period shall only be carried out by qualified personnel authorized by the manufacturer. The warranty is void if the product is remodeled or different spare parts are used.

7 Use As Required

Series electric chain hoist is a lifting device suitable for different rated loads. It can either be fixed or movable in use. The electric chain hoist is manufactured according to the latest technology and accepted safety technical guidelines. It is tested for safety by the manufacturer. Electric chain hoist has been approved by domestic and foreign certification institutions. The mentioned series of electric chain hoists can only be used by trained personnel in a technically sound state.

EN 60204-32 General parts of the requirement

Generally, this system is installed in the following conditions:

- Supply voltage: 0.9 -1.1 nominal supply voltage
- Source frequency: 0.99- 1.01 nominal frequency; 0,98 to 1,02 short time.
- Ambient temperature: +0 ° C and +40 ° C.
- Altitude: shall be at altitudes up to 1000m above mean sea level
- Relative humidity: not exceed 50% at 40 ℃
- Atmosphere: free from excessive dust, acid fume, corrosive gases and salt.
- Avoid exposing to direct sunlight or heat rays which can change the environmental temp.
- Avoid exposing to abnormal vibration.
- Electrical equipment shall withstand the effects of transpotation and storage temperature within a range of -25 ° C to +55 ° C and for short periods not exceeding 24 hours at up to +70 ° C.

EN 14492-2 General parts of the requirement

The operating instructions shall always include the following instructions:

1) the necessary training for the operating personnel shall be described;

2) the user shall ensure that the operating personnel are given the necessary training;

3) the operator shall always work in compliance with the operating instructions;

4) the operator shall lift the load from the ground with the minimum speed available at the hoist. The rope (chain, belt) shall be tightened and shall not be in the slack-condition when the load is being lifted from the ground;

5) the hoist is not designed to lift loads above the rated capacity of the hoist;

6) do not try to lift fixed or obstructed loads;

7) do not side-pull loads;
8) excessive inching (e.g. giving short pulses to the motor) shall be avoided;
9) the hoist is not designed for lifting of persons.

General Conditions Of Use:

- Operating Temperature .....-15° C to +50 ° C
- Humidity .....Maximum 70%
- IP Rate.....IP66
- Electromagnetic Compatibility .....Anti-interference degree of industrial environment

In order to prevent outdoors weather effects, we provide consultancy on installation condition.and we will design solution scheme to ensure safety and service life. The use of electric chain hoists in accordance with the regulations is highly required.

Make sure the trolleys have same speed and makes. Different speeds and loads can not be used in one operation

All chain hoist series are suitable for preparation and use in activities; use scenarios include concerts, performances, activities, conferences, exhibitions, exhibitions, etc. Use event venues include theatre, multifunctional halls, studios, cinemas, television and radio production facilities, concert hall, conference center, schools, trade shows, museums and open-air events.

IGVW association classifies the electric chain hoists into three categories:

D8 Electric Chain Hoist

According to DIN EN 14492-2 directive by IGVW, loads can not be moved at height if there's no extra protection when using D8 Electric Chain Hoist.

D8 PLUS Electric Chain Hoist

According to DIN EN 14492-2 directive, mounting loads at height is allowed when using D8 PLUS Electric Chain Hoist.

C1 Electric Chain Hoist

According to DIN 56950-1 directive, theoretically mounting or moving loads is allowed when using C1 Electric Chain Hoist

Electric chain hoists are available in different structures and options as well as different safety devices. Therefore, the choice of chain hoist is very important. It is necessary to consider the hazards arising from use under specific conditions. The choice of electric chain hoist depends on the conditions of use.

Conditions Of Use (see in chart7-1)

When there is a person under the load:				
Use	D8	With secondary safety equipment	D8 PLUS	C1
Assembly, Disassembly and Setup	Not Suggested	Not Suggested	Not Suggested	Allowed
Mounting	Not Suggested	Allowed	Allowed	Allowed
Moving loads	Not Allowed	Not Allowed	Not Allowed	Allowed

7.1 Improper Usages :

Do not use hoists in the following circumstances otherwise it will be dangerous

- Overloaded
- Pulling or dragging the load
- Used for human transportation
- Pulling the load sideways
- Pulling the control cable
- When the chain is tangled
- Without monitoring the loading point
- The load is unstable
- There is a loose end at loading point

For other warnings, see Section 4.

8 Instruction

8.1 Operating Condition

Classified according to conditions :

Electric chain hoists are divided into different mechanism groups according to the following guidelines:

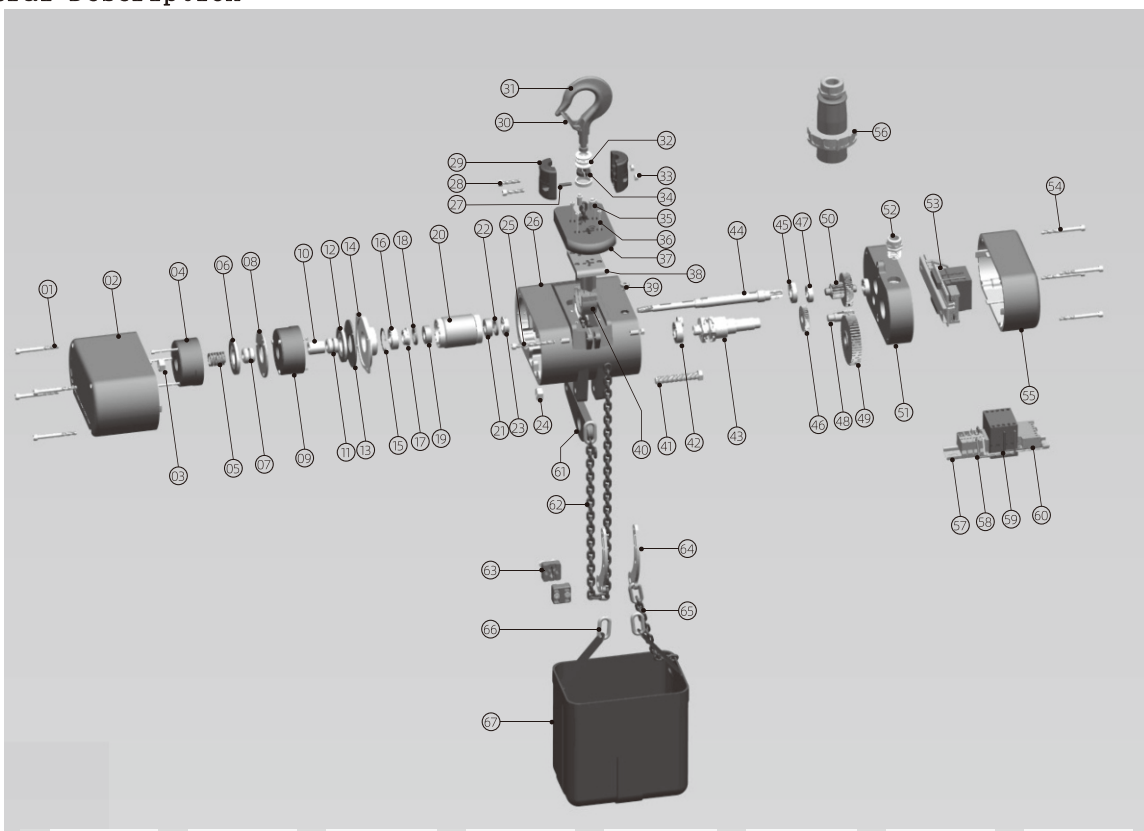
- DIN EN 14492-2 (A5 = 125 000 cycles)
- ISO 4301-1 (M5 = 1 600 h)
- DIN 15401 / DIN EN 13001 (lifting hook)
- Overhaul info see Section 11.

Different standard must be followed in operation and in accordance with DIN EN 14492-2 (ISO 4301-1) directive

The mobile mechanism must have the same lifting capacity as the electric chain hoist.

Only when the electric chain hoist is used in accordance with unit standard values can the manufacturer ensure safe and sustainable operation. Before the first operation, the user must decide which of the four load forms is suitable for entire service life according to the parameters in Table 1-1. Table 1-2 indicates the standard values for units based on load patterns and working hours.

8.2 General Description



01	Electrical equipment cover screws	02	Electrical brake cover	03	Clutch adjustment nut	04	DC brake	05	Adjustment spring	06	Brake friction disk-1	07	Brake gear	08	Brake base plate
09	DC brake-2	10	Brake adjustment sleeve	11	Brake gear	12	Brake friction disk-2	13	Brake base plate-2	14	Brake base	15	Circlip	16	Bearing
17	Clutch pressing disk-1	18	Clutch friction disk-1	19	Clutch press sleeve-1	20	Rotor	21	Clutch press sleeve-2	22	Clutch friction disk-2	23	Clutch pressing disk-2	24	Up hook nut
25	Chain Bag Holder Bolts	26	Gear box	27	Chain splint fixing pin	28	Down hook screws	29	Down hook splint	30	Safety latch	31	Down hook	32	One-way thrust bearing
33	Down hook nut	34	Two semi-circle fixing rings for the lower hook	35	Limited switch	36	Chain guide fixing screws	37	Chain out cover	38	Chain guide	39	Oil seal	40	Chain guide
41	Up hook shaft	42	Chain wheel bearing	43	Chain wheel	44	Rotor shaft	45	Rotor bearing	46	Middle gear	47	Middle gear bearing	48	Middle gear 2
49	Output gear	50	Middle gear 1	51	Gear box cover	52	copper joint	53	Electrical equipment	54	Electrical equipment cover screws	55	Electrical cover	56	Flight plug
57	Safety Rail	58	Terminals	59	High voltage contactor	60	Rectifier	61	Up hook ring	62	Chain	63	Chain lock block	64	Chain bag pendant
65	Safety protection chain	66	Ring link	67	Chain bag										

The fos Kyra Series electric chain hoist complies with the requirements of the EC Directive and the corresponding EN European standards. The electric hoist case is made of a strong die-cast aluminum alloy. The heat dissipation of the motor ensures the best cooling effect. Chain box can be fixed to a compact case. One hole is provided for the power cord and one for the control cable. The case is fixed with ring suspension or optional hook suspension.

The Kyra Series electric chain hoist is driven by an asynchronous motor. The braking system consists of two (D8 PLUS, C1) DC driven electromagnetic brakes. In the state of power failure, the pressure spring produces brake torque. The slip clutch should be set up properly before installing the braking system. It prevents overloading and functions as an emergency stop for the highest and lowest hook positions that have been set.

Kyra Series adopts G100 chain in accordance with DIN 15401 / DIN EN 13001 standard. The lifting hooks are equipped with safety catch. Three-stage closed spur gearing is usually by bevel gears. Rolling bearing is maintenance-free.

9. Debugging

Adjustment and installation should only be performed by authorized professionals

Read instructions before installation. Check for safety and then turn the power on. Unauthorized personnel cannot carry out this duty.

Before operation, the user needs to create a check log, The check log must contain all technical parameters and dates before installation. (See Table 3-1)

9.1 Transportation and Installation

When transporting and installing electric chain hoists, pay attention to the safety information for handling loads (see Section 7). Electric chain hoists must be properly installed by a professional in accordance with accident prevention regulations (see Section 6). Electric hoists should be stored in an enclosed room or a place with a roof before installation. If electric chain hoists are used outdoors, it is recommended to install a protective shed to prevent weather effects. It is best to be packed in original package for transportation. Check the delivery list and dispose of packaging materials correctly. At the site of operation, the installation and connection of the hoist must be completed by qualified personnel. Check the nameplate to determine if the electric chain hoist is consistent with the ordered model.

Electric chain hoists must have the following identification marks:

- D8 Electric Chain Hoists.....: Triangle 

- D8 PLUS Electric Chain Hoists.....: Square 

- C1 Electric Chain Hoists.....: Circle 

9.2 Connection

9.2.1 Electrical Connection

Electrical devices should only be installed by authorized professionals.

In order to connect the electric chain hoist to the power supply, the site must provide the power cord with leakage protection device and the main switch. Use a 4-core wire with grounding wire as the power supply cable. The length and cross section are determined according to the current consumption of the electric chain hoist. As to D8 PLUS Electric Chain Hoists, the power supply must be turned off after the desired position has been reached.

The control system must provide an emergency stop button for monitoring. If the electric chain hoist is no longer used, the power supply is interrupted. Only experienced, trained personnel can operate the system or electric chain hoist.

- Before connecting the electric chain hoist, check whether the operating voltage and frequency specified on the nameplate are consistent with the current power supply.
- Install it according to the circuit drawing. (See technical parameters at circuit diagram 1)

Grounding wires are non-conductive under normal operating conditions. When the motor protection switch is used, it must be installed according to the current intensity of the electric chain hoist.

9.2.2 Braking System

The brake must be able to hold the rated load in the state of power failure. If the chain hoist is equipped with double brakes, the function of both brakes must be checked before using.

9.2.3 Lifting Chain

The lifting chain must be fully oiled during commissioning and use. Interlocking links/friction surfaces must always be oiled. Lubrication is done by dipping chain into oil or by using an oil can. When measuring the lifting height, the hook suspension must be placed on the floor at the lowest position.

- Only original chains can be used
- When using a chain hoist, note that the chain does not converge or obstruct the entrance or exit.

10 Maintenance and Repair

10.1 General Guidelines For Maintenance And Inspection

Immediately eliminate operating faults on the electric chain hoist which affect work safety.

Maintenance of electric chain hoists can only be carried out by qualified professionals with appropriate training.

If the user is responsible for the maintenance work of the electric chain hoist, the projects and execution dates of the maintenance work must be recorded in the inspection log

Any changes or remodels of the electric chain hoist must be approved by the manufacturer in advance. Otherwise the manufacturer is not responsible for any damage. Material warranty claims are only allowed if the manufacturer's original parts are used.

Routine work: Maintenance is considered necessary to keep the electric chain hoist in full function. Failure to follow maintenance timetable can lead to reduced service life and damage of electric chain hoists.

Maintenance should be performed according to timetable (Table 10-1 and 10-2). Maintenance work shall be carried out in accordance with the general accident prevention regulations, in particular the safety information (Section 2) and the hazard precaution information (Section 3)

Maintenance work can only be carried out when the electric chain hoist is not loaded. The main switch must be off; The equipment must be placed on the ground or maintenance platform

Maintenance work including observation, cleaning and additional functional checks. When performing a functional check, you must check the fixed units and cable terminals. Check the cable for dirt, discoloration and corrosion, Check the chain for wear.

Maintenance Timetable:

MC(Every time when used)，6M(Every six months)，12M(Every 12 months)

If the load of the electric chain hoist is over average level and adverse conditions occur frequently during operation (such as dust, overheat, moisture, steam etc.), the prescribed maintenance intervals need to be shortened.

10.2.1 Overview

Table 10.2.1 Maintenance Items

Name	MC	6M	12M	Project	Remarks
1. Lifting Chain	√			Observation and cleaning, grease if needed	
2.Trolley Parts		√	√	Inspect screws and connecting shafts	
3. Motor		√	√	Noise and Seals	
4.Power Cord	√			Wear condition	
5. Controller and Cable	√			Wear condition and emergency stop button	
6.Limit Switch	√			Optional	
7.Case			√	Damage	
8. Hook Assembly	√			Screws	If there’s dislocation of screws

10.2.2 Maintenance Overview

Table 10.2.2 Maintenance Overview

Name	MC	6M	12M	Project	
1. Lifting Chain		√		Grease the chain Wear condition	
2. Braking System		√	√	If functional under W.L.L.	
3. Electrical System		√	√	Make sure the case is non-conductive	
4. Hooks and Accessories		√	√	Defects Screw torque	
5. Limit Switch		√	√	Optional	
6. Gear Box Seal		√	√	Screw torque	
7. Electrical Seal		√	√	Screw torque Connection	
8. Gearbox Grease			√	Replace with corresponding type	

10.2.3 Braking System

A spring force brake is a single-disc electromagnetic brake with two friction surfaces. Braking force is generated by compressing springs. Braking torque is generated in a no-current state. The brake is switched on and off by a contactor.

The brake must be able to hold the load in power failure. Check regularly and annual inspection is carried out by our certified technicians.

10.2.4 Lifting Chain

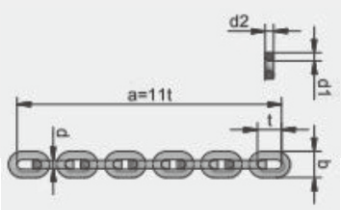
Check the lifting chain regularly. The inspection is based on three measurements: see wear values (Table 10.2.3) and measuring points (Figure 10.2-1).

If it falls below or exceeds the table values, the chain must be replaced. At the same time, check whether the load wheel and chain guide are worn and replacement is needed. Only original chains can be used. The joints shall not be welded.

Table 10.2.3 Wear Value Of Lifting Chain

Name	Chain Size d×t	Pitch Measurement a=11t	Chain Diameter Measurement dm=d1+d2/2(dm 最小值 minimum=0.9×d)
D8 320Kg	4×12	209	3.95
D8PLUS 250Kg	4×12	209	3.95
C1 V500 Kg	7.1×21	231	6.96
D81000Kg	7.1×21	231	6.96
D8PLUS 1000Kg	7.4×21	231	7.395
D82000Kg	7.1×21	231	6.98

graph 10.2-1



10.2.5 Chain Guide

Visual inspection of the chain guide

The chain guide holder must be replaced if damaged (screw tightening torque :4.5Nm)

10.2.6 Limit Switch

Check the screw connections and tighten them using the correct torque. Refer to Section 10.2.9 for standard values

The four-point limit of C1 is equipped according to the four-point limit adjustment instructions.(Attached drawing: 10.2.6-2)

10.2.7 Gearbox

The gearbox must be lubricated constantly.

The casing of the gearbox must not be opened, and oil can only be injected through the oil injection hole

10.2.8 Slip Clutch

The slip clutch is set to 128% when leaving the factory, which can avoid accidents when overloaded, (according to DINEN14492-2, the force limiting factor is ϕDAL=1.6．)

Setup and inspection of the slip clutch should only be performed by authorized professionals and must be noted in the inspection log. If the rated load cannot be lifted, or the lifting speed is reduced, the slip clutch must be re-adjusted.

10.2.9 Suspension Bracket

All static load components are suspension components. The supporting surface of the suspension must be regularly greased. Must be tightened according to the corresponding the screw torque (the following is grade 8.8 tightening torque reference table)

M4	M5	M6	M8	M10	M12
3.3 Nm	6.5 Nm	10Nm	24Nm	48Nm	83Nm

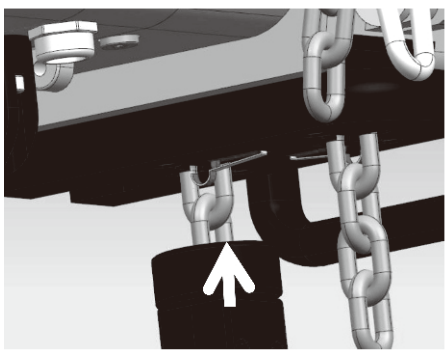
If the hook or ring is damaged, broken, deformed or corroded, it must be replaced. If the size of the chain isn’t in line with the table 10.2.3,it must be replaced(standard size of hook and ring see appendix 2). Hook safety must function properly and be fully closed and replaced as needed.

11 Approaches for Safety Cycle

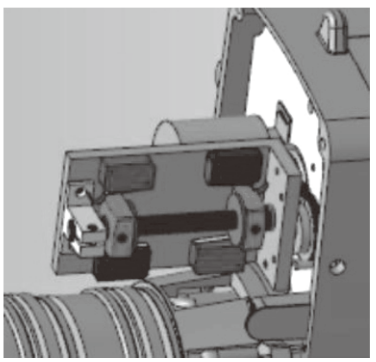
Due to the safety and health requirements of national standards and EU directives, special hazards such as those that may arise from fatigue and aging are legally required to be excluded. Record actual usage for the annual customer service inspection. After reaching the theoretical load cycle or at the latest 10 years, Overhaul must be carried out. All the cost of testing and maintenance must be arranged by the user.

For the electric chain hoists in accordance with DIN EN14492-2 and JB/T5317-2016, the following theoretical service life of full load are applied according to the total number of loads:

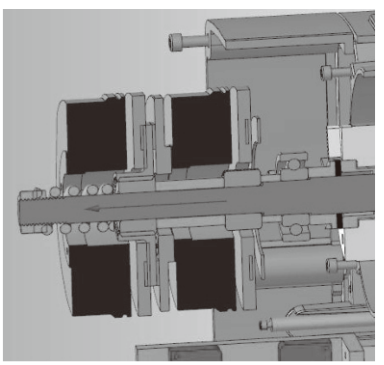
DINEN14492-2(ISO4301-1) Standards	A3(M3)	A4(M4)	A5(M5)	A6(M6)
Total number of loading times	Number of load cycles in total service life			
Q2=0.5	250 000	500 000	1 000 000	2 000 000
Q3=0.63	125 000	250 000	500 000	1 000 000
Q4=0.8	63 000	125 000	250 000	500 000
Q5=1	31 500	63 000	125 000	250 000



See Figure 10.2.6-2



See Figure 10.2.6-2



See Figure 10.2.8

11.1 Identify Actual Usage

The actual usage depends on the actual number of cycles and the total number of loads. Identify the number of cycles based on user information. The annual usage can be calculated according to Table 11.1-1.

Periodically calculated or read values are recorded in the inspection log.

Instance:

Load form of the electric chain hoist with A4 units (Q = 0.80, see Table 11-1). The usage is 60 cycles per working day. According to Table 4-1, the theoretical annual usage is 6,300 full load cycles. Based on the theoretical total service life of 125,000 full load cycles, the theoretical service life is 19.8 years. If it is determined to continue to use, it must be overhauled after 10 years at the latest.

Table 11.1-1 Annual Usage

Cycle Number Per Working Day	<= 15 (15)	<= 30 (30)	<= 60 (60)	<= 120 (120)	<= 240 (240)	<= 480 (480)	<= 960 (960)	<= 1920 (1920)
Total load	Full Load Annual Usage							
Q2 = 0.50	400	800	1 600	3 150	6 300	12 500	25 000	50 000
Q3 = 0.63	800	1 600	3 150	6 300	12 500	25 000	50 000	100 000
Q4 = 0.80	1 600	3 150	6 300	12 500	25 000	50 000	100 000	200 000
Q5 = 1.00	3 150	6 300	12 500	25 000	50 000	100 000	200 000	400 000
Q2 = 0.50	400	800	1 600	3 150	6 300	12 500	25 000	50 000

11.2 Overhaul

When theoretical full load cycle is reached (at latest 10 years without records), and the overhaul is required. To this end, the equipment is placed in a state where it can be safely operated . Therefore, you must check or replace the components according to Table 4-2. The other inspections are carried out by professional companies authorized by the manufacturer or by the manufacturer itself.

Inspector Duties:

- Make sure of the full load working
- Make sure of timetable for next overhaul

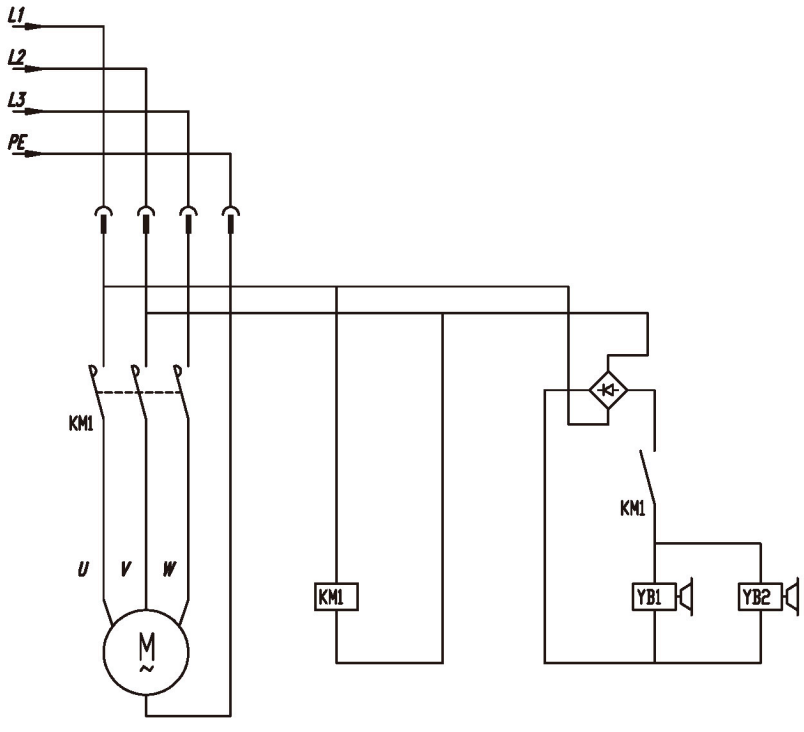
Data should be recorded in the inspection log.

Table 11.2-1 (⚠Pay attention to wear condition)

Applicable for All Series	Check for Wear Condition	Replacement
Brakes	√ ⚠	
Motor Shaft	√	
Gear Tooth		√
Rolling Bearing		√
Seals		√
Chains	√ ⚠	
Chain Guide		√
Suspension	√ ⚠	

3ph/High voltage directly control-double brake-3ph

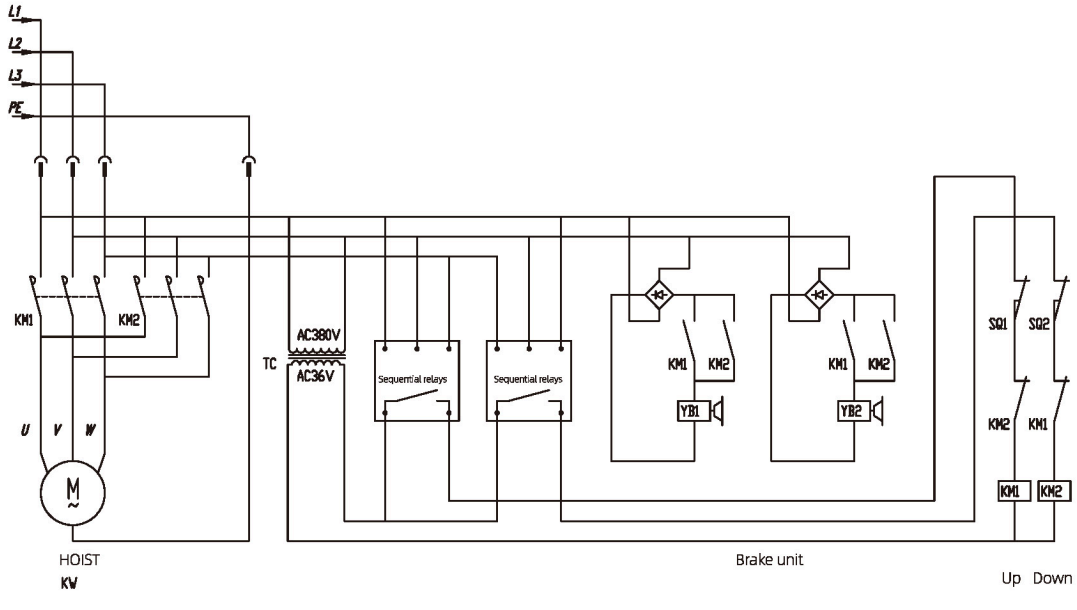
Figure 6



Note: without limit switch

3ph/High voltage directly control-double brake-3ph

Figure 8

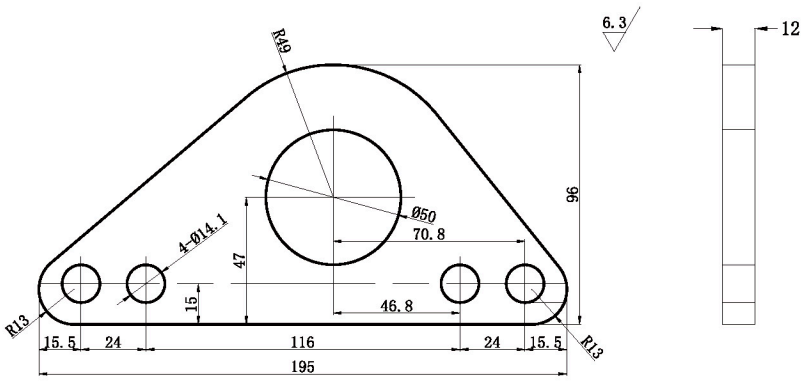


Note: with limit switch

OPTIONAL HOOK SUSPENSION ASSEMBLY

Figure 2

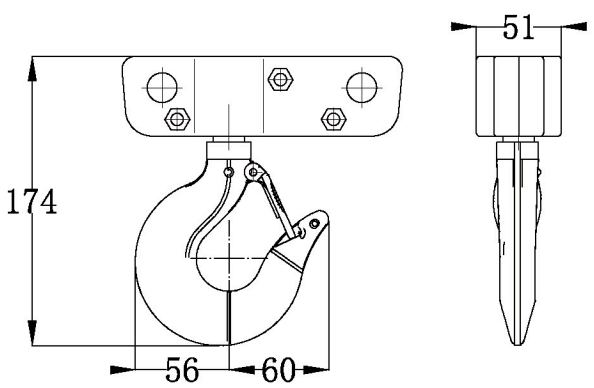
Standard 1: Single hole suspension plate assembly



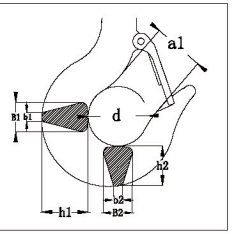
Note:Unit mm

Figure 3

Standard 2: 360° rotating hook suspension assembly



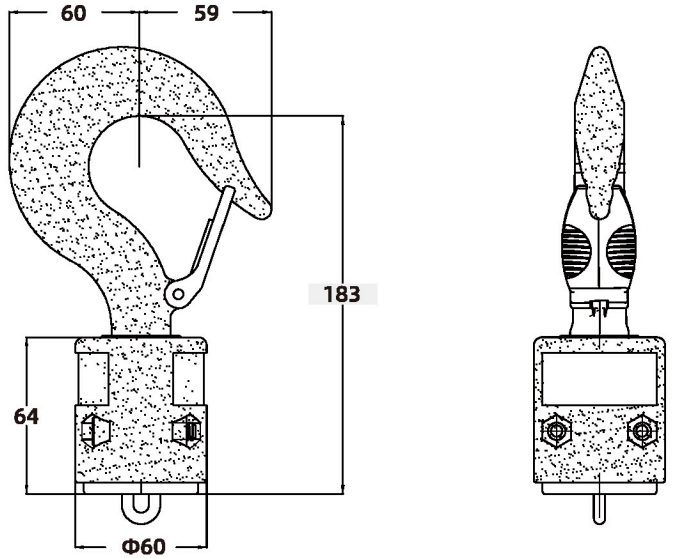
HOOK SPECIFICATION	
J-D-1T	
B2	21
a1	33
b1	7
b2	7
h1	37
h2	35
B1	21
d	40



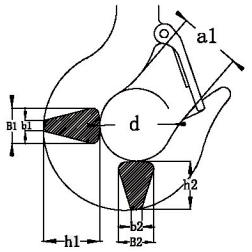
Note:Unit mm

HOOK ASSEMBLY

Figure 4



HOOK SPECIFICATION	b1	B1	b2	B2	h1	h2	d	a1
J-D-1T	7	22.3	7	37	34	21.7	40	34



Note:Unit mm