

LD 型 1-10 吨  
Mode LD 1-10t

# 电动单梁起重机 Motor Single-Track Crane

## 说明书 Operation Instruction



河南鸿升起重机有限公司  
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# 1.产品简介

## 1. Product introduction

### 1.1 综述

#### 1.1 General description

LD-A 型电动单梁起重机（以下简称起重机）是按 JB/T1306 标准设计制造的，与 CD<sub>1</sub>、MD<sub>1</sub> 等形式的电动葫芦配套使用，成为一种有运行轨道的轻型起重设备。其额定载荷 1t-10t；跨度 7.5m~22.5m，适用温度 -25℃~+40℃，湿度 ≤85%，无火灾、爆炸危险和腐蚀性介质的环境中工作，禁止吊运熔化金属，有毒、易燃、易爆物品。

The LD-A Motor Single-Track Crane (hereafter referred as the crane) is designed and manufactured according to the JB/T1306 standard. Operated with electric hoists of CD<sub>1</sub> and MD<sub>1</sub>, it is a railed light crane. Its rated load is 1-10t; the span is 7.5m-22.5m; range of working temperature is -25℃- +40℃; the humidity is ≤85%. The crane is not suitable to be used in environment with the danger of fire and explosion and corrosive media. Hoisting melted metal and toxic, flammable and explosive substances is prohibited.

为方便用户，设有地面和操纵室两种操纵形式，操纵室又设有端面及侧面开门两种形式，供用户选择使用。

To meet the customer's need, the crane has two operation modes of ground operation and operator cab operation. The operator cab has two types of top-open and side-door open for the customers to choose from.

本产品广泛用于机械制造、装配、仓库等场所。

The crane can be used widely in machinery manufacture, assembly and storehouse.

### 1.2 结构特点

#### 1.2 Structural features

##### 1.2.1 金属结构部分

##### 1.2.1 Metallic structure

主梁采用钢板焊接梁与工字钢的组焊结构，横梁也是用钢板组焊成箱形横梁，为贮运方便，主、横梁之间用高强度螺栓连接。

The main girder is welded structure of beam welded by steel plate and I-iron. The cross beam is also box beam welded with steel plates. For the convenience of storage and transportation, the main girder and the cross beam is connected with high-strength bolt.

##### 1.2.2 运行机构

##### 1.2.2 Operating mechanism

本产品是采用分别驱动形式，驱动和制动靠锥形电动机来完成，传动是采用“开△闭”式齿轮传动。

The crane adopts separate driving model. The driving and brake is done by conical electromotor. “open△close” gearing is employed in transmission.

##### 1.2.3 电气设备

##### 1.2.3 Electric equipment

本产品所用运行电机为单速异步电动机，运行速度：地面操作为 20m/min,30m/min；操纵室操作为 45m/min、60m/min、75m/min。起重机设有安全装置，可靠性高。

The crane adopts single-speed asynchronous electromotor. Operating speed : The speed for ground operation is 20m/min and 30m/min; the speed for operator cab operation is 45m/min, 60m/min and 75m/min. The crane is highly reliable with safety apparatus.

##### 1.2.4 电动葫芦

##### 1.2.4 Electric hoist

起升机构配用 CD 型钢绳电动葫芦，符合 JB/T9008《钢丝绳电动葫芦型式和基本参数——技术条件》等标准。

The hoisting mechanism adopts CD steel cable electric hoist, which meets the standards of JB/t9008 *Technical Conditions—the Mode and Basic Parameters of Steel Cable Electric Hoist*.

电动葫芦可起升重物，并沿主梁纵向移动，其结构特点详见有关电动葫芦说明书。

Electric hoist can hoist weights and move it vertically along the main girder. Please refer to the operation instruction of electric hoist for its specific structures.

1.2.5 产品型号注解

1.2.5 Representation of product specification

a)地面操纵、起重量 3t、跨度 10.5m、工作级别 A<sub>5</sub>,表示方法为: LD3t-10.5A<sub>5</sub>D

a) Ground operation: hoisting capacity: 3t; span: 10.5m; working class: A<sub>5</sub>. Represented as: LD3t-10.5A<sub>5</sub>D

b)操纵室操纵、起重量 5t、跨度 16.5m、工作级别 A<sub>5</sub>表示方法为: LD5t-16.5A<sub>5</sub>S

b) operator cab operation: hoisting capacity: 5t; span: 16.5m; working class: A<sub>5</sub>. Represented as: LD5t-16.5A<sub>5</sub>S

2.外形总图

2. General chart of figuration

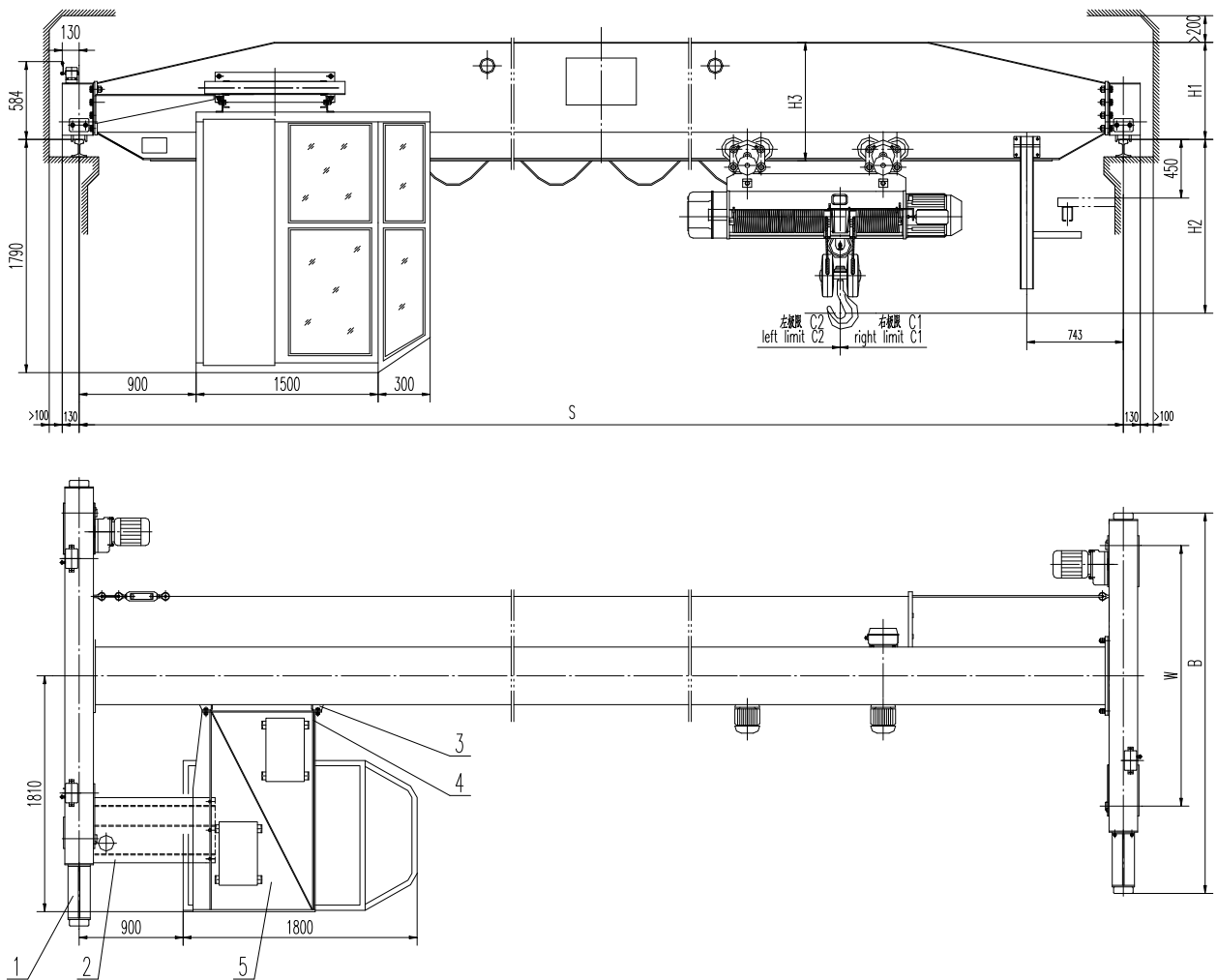


图 1  
Fig 1

### 3.性能参数

### 3. Performance parameter

表 1 Table 1

序号 No.	名称 Name	model 型号 unit 单位	LD3																								
1	起重量 Gn Hoisting Capacity	t	3																								
2	操作型式 Type of operating	t	地面操作 Ground operation										操纵室操作 Operation in operator's cab														
3	起重机 运行机构 Crane operating mechanism	运行速度 V Operating speed	20					30					45					60					75				
4		型号 model	ZDY21-4										ZDR12-4														
5		功率 Rate	2X0.8										2X1.5														
6		转速 Revolution speed	1380										1380														
7	型号 model	CD <sub>i</sub> (MD <sub>i</sub> )																									
8	电动葫芦 Electric Hoisting	起升高度 H Hoisting high (H)	6,9,12,18,24,30																								
9		起升速度 V <sub>1</sub> Hoisting speed	8(8/0.8)																								
10		运行速度 V <sub>2</sub> Operating speed	20(30)																								
11	工作级别 Working class	A3 ~ A5																									
12	电源 Power supply	3 相 phase 50Hz 380V																									
13	车轮直径 Wheel diameter	mm	270																								
14	轨道面宽 width of the rail	mm	37 - 70																								
15	跨度 S Span	m	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5	15	15.5	16	16.5	17	19.5	22.5			
16	最大轮压 Pmax Wheel pressure (Pmax)	t	2.15	2.16	2.18	2.19	2.20	2.22	2.23	2.24	2.25	2.28	2.31	2.32	2.34	2.35	2.48	2.50	2.52	2.54	2.55	2.57	2.80	2.94			
17	最小轮压 Pmin Wheel pressure (Pmin)	t	0.41	0.42	0.44	0.45	0.46	0.48	0.49	0.50	0.52	0.54	0.57	0.58	0.60	0.61	0.74	0.76	0.79	0.80	0.81	0.83	0.86	1.20			
18	总质量 m Total mass	t	0.44	0.45	0.47	0.48	0.49	0.50	0.51	0.52	0.54	0.55	0.59	0.60	0.62	0.63	0.76	0.78	0.80	0.82	0.83	0.85	1.02	1.21			
19			1.88	2.01	2.06	2.12	2.17	2.22	2.28	2.34	2.52	2.58	2.64	2.73	2.78	2.81	3.09	3.41	3.55	3.62	3.70	3.79	4.43	5.41			
20			2.40	2.53	2.58	2.64	2.69	2.74	2.80	2.86	3.02	3.08	3.14	3.25	3.31	3.37	3.91	4.00	4.07	4.14	4.22	4.31	4.95	5.93			
19	基本尺寸 Basic size	H <sub>1</sub>	530										580					660					745	820			
20		H <sub>3</sub>	650										700					800					900	1000			
21		H <sub>2</sub>	1150										1170					1185					1120				
22		C <sub>2</sub>	818.5										1170					1185					1120				
23		C <sub>1</sub>	1291																								
24		W	2000										2500					3000									
25		B	2500										3000					3500									

注：1、起重机总质量包括电动葫芦质量；2、起重机总质量和最大轮压按 H=12m；3、序号 16、17、18 三栏中上限数字为地面操作数据，下限为操纵室操作数据。

1.The total quality including the electric hoist quality ;2. The total quality of crane and the max wheel pressure following H=12M. 3. The high-limit data of No.16; 17; 18 is the ground operating data; the low-limit data is the data of operation in operator' cab.

表 2 Table 2

序号 No.	名称 Name	model 型号 unit 单位	LD5																					
1	起重量 Gn Hoisting Capacity	t	5																					
2	操作型式 Type of operating	t	地面操作 Ground operation										操纵室操作 Operation in operator's cab											
3	起重机 运行机构 Crane operating mechanism	运行速度 V Operating speed	20					30					45			60			75					
4		型号 model	ZDY21-4										ZDR12-4											
5		功率 Rate	kw	2X0.8										2X1.5										
6		转速 Revolution speed	r/min	1380										1380										
7	电动葫芦 Electric Hoisting	型号 model	CD <sub>1</sub> (MD <sub>1</sub> )																					
8		起升高度 H Hoisting high (H)	m	6,9,12,18,24,30																				
9		起升速度 V <sub>1</sub> Hoisting speed	m/min	8(8/0.8)																				
10		运行速度 V <sub>2</sub> Operating speed	m/min	20(30)																				
11	工作级别 Working class		A3 ~ A5																					
12	电源 Power supply		3 相 phase 50Hz 380V																					
13	车轮直径 Wheel diameter	mm	270																					
14	轨道面宽 width of the rail	mm	37 ~70																					
15	跨度 S Span S	m	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5	15	15.5	16	16.5	17	19.5	22.5
16	最大轮压 Pmax Wheel pressure (Pmax)	t	3.28	3.29	3.30	3.32	3.33	3.35	3.36	3.37	3.48	3.50	3.53	3.55	3.57	3.59	3.68	3.70	3.73	3.74	3.76	3.78	4.06	4.38
			3.51	3.52	3.53	3.55	3.56	3.58	3.60	3.61	3.72	3.74	3.77	3.79	3.81	3.83	3.92	3.94	3.96	3.98	4.01	4.03	4.31	4.61
17	最小轮压 Pmin Wheel pressure ( Pmin)	t	0.42	0.43	0.44	0.46	0.47	0.48	0.50	0.51	0.62	0.64	0.67	0.69	0.71	0.73	0.82	0.84	0.86	0.88	0.90	0.92	1.20	1.50
			0.46	0.47	0.48	0.49	0.50	0.52	0.53	0.54	0.64	0.66	0.69	0.71	0.73	0.75	0.84	0.86	0.88	0.90	0.92	0.94	1.21	1.51
18	总质量 m Total quality (m)	t	2.47	2.55	2.62	2.68	2.75	2.85	2.90	2.95	3.13	3.20	3.31	3.40	3.47	3.55	3.84	3.94	4.02	4.11	4.19	428	5.08	6.28
			2.98	3.06	3.13	3.19	3.26	3.32	3.41	3.47	3.65	3.72	3.83	3.92	3.95	4.07	4.36	4.46	4.54	4.63	4.71	4.80	5.60	6.80
19	基本尺寸 Basic size	H <sub>1</sub>	580					660					785					820		875				
20		H <sub>3</sub>	720					810					910					1010		1100				
21		H <sub>2</sub>	1380					1400					1415					1440		1485				
22		C <sub>2</sub>	841.5																					
23		C <sub>1</sub>	1310																					
24		W	2000										2500					3000						
25		B	mm	2500										3000					3500					

注：1、起重机总质量包括电动葫芦质量；2、起重机总质量和最大轮压按 H=12m；3、序号 16、17、18 三栏中上限数字为地面操作数据，下限为操纵室操作数据。  
 1.The total quality including the electric hoist quality ;2. The total quality of crane and the max wheel pressure following H=12M. 3. The high-limit data of No.16; 17; 18 is the ground operating data; the low-limit data is the data of operation in operator' cab.

表 3 Table 3

序号 No.	名称 Name	model 型号 unit 单位	LD10-																													
1	起重量 Gn Hoisting Capacity	t	10																													
2	操作型式 Type of operating	t	地面操作 Ground operation										操纵室操作 Operation in operator's cab																			
3	起重机 运行机构 Crane operating mechanism	运行速度 V Operating speed	20					30					45					60					75									
4		型号 model	YSE802-4D										ZDR12-4																			
5		功率 Rate	2X1.5										2X1.5																			
6		转速 Revolution speed	1380										1380																			
7	电动葫芦 Electric Hoisting	型号 model	CD <sub>1</sub> (MD <sub>1</sub> )																													
8		起升高度 H Hoisting high (H)	6,9,12,18,24,30																													
9		起升速度 V <sub>1</sub> Hoisting speed	7(7/0.7)																													
10		运行速度 V <sub>2</sub> Operating speed	20(30)																													
11	工作级别 Working class		A3~A5																													
12	电源 Power supply		3 相 phase 50Hz 380V																													
13	车轮直径 Wheel diameter (mm)	mm	270																													
14	轨道面宽 width of the rail (mm)	mm	60~70																													
15	跨度 S Span S	m	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5	13	14	14.5	15	15.5	16	16.5	17	19.5	22.5									
16	最大轮压 Pmax Wheel pressure (Pmax)	t	5.49	5.51	5.53	5.56	5.58	5.60	5.62	5.65	5.71	5.73	5.76	5.78	5.83	5.92	5.95	5.98	6.00	6.03	6.05	6.30	6.60									
			5.72	3.74	5.78	5.79	5.81	5.83	5.86	5.89	5.95	5.97	6.00	6.02	6.07	6.16	6.19	6.22	6.24	6.28	6.30	6.57	6.85									
17	最小轮压 Pmin Wheel pressure (Pmin)	t	0.44	0.46	0.48	0.53	0.51	0.55	0.57	0.60	0.66	0.68	0.70	0.73	0.78	0.87	0.90	0.93	0.95	0.98	1.00	1.27	1.55									
			0.48	0.49	0.57	0.54	0.56	0.58	0.60	0.62	0.68	0.70	0.72	0.75	0.80	0.89	0.92	0.95	0.97	1.00	1.02	1.28	1.56									
18	总质量 m Total quality (m)	t	3.39	3.48	3.59	3.70	3.79	3.82	3.99	4.08	4.37	5.00	5.13	5.23	5.50	5.62	5.72	5.86	6.00	6.05	6.15	7.21	8.23									
			3.92	4.00	4.05	4.21	4.29	4.39	4.51	4.60	4.89	5.22	5.53	5.25	5.72	5.84	5.94	6.06	6.22	6.27	6.37	7.43	8.45									
19	基本尺寸 Basic size	H <sub>1</sub>	745										820					875					865					875				
20		H <sub>3</sub>	910										1010					1110					1060					1210				
21		H <sub>2</sub>	1470										1495					1540					1600					1640				
22		C <sub>2</sub>	1230																													
23		C <sub>1</sub>	1291																													
24		W	2000										2500					3000														
25		B	2500										3000					3500														

注：1、起重机总质量包括电动葫芦质量；2、起重机总质量和最大轮压按 H=12m；3、序号 16、17、18 三栏中上限数字为地面操作数据，下限为操纵室操作数据。  
 1.The total quality including the electric hoist quality ;2. The total quality of crane and the max wheel pressure following H=12M. 3. The high-limit data of No.16; 17; 18 is the ground operating data; the low-limit data is the data of operation in operator' cab.

## 4.安装

### 4.Installation

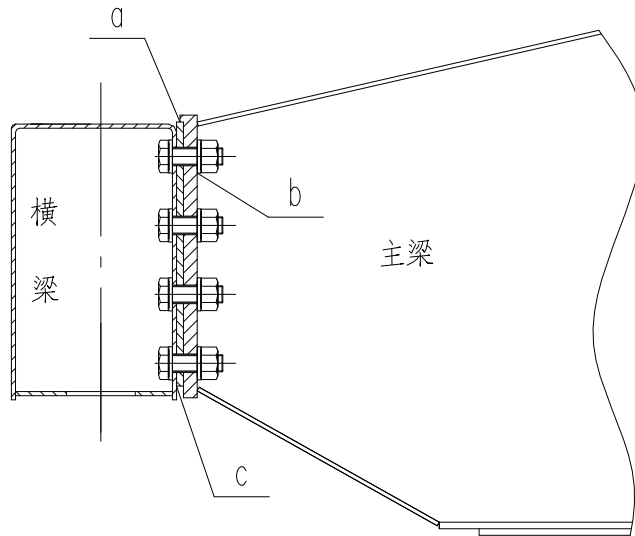


图 2  
Fig 2

#### 4.1 主横梁连接

##### 41 The connection of girder and beam

4.1.1 在现场将起重机运行机构的驱动装置安装在横梁上。

4.1.1 Install the driving engine of the crane's traveling mechanism on to the beam at the site.

4.1.2 按图 2 所示，将主、横梁用螺栓连接起来，此螺栓为精制螺栓，其性能可保证主、横梁连接可靠，为更安全允许用户按图 2 在 a、b、c 处稍加间断施焊不宜焊得太满，以防变形。主、横梁组装后按标准 JB/T1306 中有关要求要求进行检验。主、横梁组装连接面应清理干净。

4.1.2 Following Fig 2 to joint the girder and the beam with bolt, which is finished bolt and whose performance can insure the jointing of the girder and beam to be reliable. To make the jointing sounder, customer is allowed to apply slight welding at a, b and c according to Fig 2 to prevent deforming. The installed girder and beam is tested according to requirements in JB/T1306 standard. The jointing surface of girder and beam should be cleaned.

4.1.3 将起重机的行程开关及开关箱等电器组装到横梁上，接通电器，调试两个运行电机，使其转向一致。

4.1.3 The limit switch and switch box of the crane is installed on to the beam. Connect power and adjust the two motors to the same turning direction.

4.1.4 电动葫芦可预先装在主梁上，同起重机一起架设到轨道上，也可以分别安装。

4.1.4 The electric hoist can be either pre-installed on the main girder and placed on the rail with the crane, or installed separately.

4.1.5 操纵室操纵的起重机。操纵室须在起重机架设到轨道之后，再组装到起重机上。

4.1.5 For crane operated by operator cab, the operator cab should be assembled on to the crane after the crane is placed on to its rail.

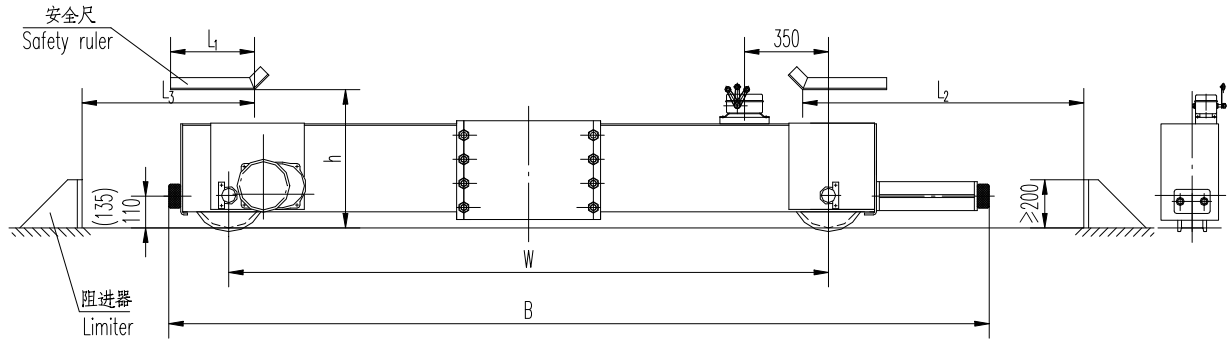
4.1.6 按电器图接通线路，并调试起重机动作方向与操纵按钮规定的方向一致。

4.1.6 Connect the wires according to the schematic drawing and adjust the crane's operating direction same to the rated direction of the operation button.

4.1.7 阻进器和安全尺参照图 3 架设。

4.1.7 Refer to Fig 3 for the installation of the limiter and the safety ruler.





操纵形式 Operation mode	地操 Ground operation						空操 Air operation		
	20			30			45	60	75
V(m/min)									
W(mm)	2000	2500	3000	2000	2500	3000	2000	2500	3000
B(mm)	2500	3000	3500	2500	3000	3500	2500	3000	3500
L <sub>1</sub> ≥(mm)	352	350	350	500	500	500	1200	1200	1200
L <sub>2</sub> (mm)	900	900	900	1050	1050	1050	1750	1750	1750
L <sub>3</sub> (mm)	2200	2700	3200	2350	2850	3350	3050	3550	4050

图3  
Fig 3

4.1.8 操纵室安装见图 1 所示，将连接座 2 同横梁 1 用螺栓组装好，连接架 4 和操纵室 5 连成一体，最后同四连接座 2 和 3 相连接。

4.1.8 Refer to Fig 1 for the installation of operator cab. Joint connection base 2 and beam 1 with bolts, then the connecting rack 4 and operator cab 5, and finally joint them to connection base 2 and 3.

4.1.9 起重机运行轨道的选择参照图 4 和表 4，车轮槽宽与轨道面应保证有一定的间隙  $\Delta=8\sim 12\text{mm}$ 。

4.1.9 Refer to Fig 4 and Table 4 for the choosing of the crane's traveling rail. A certain clearance  $\Delta=8\text{-}12\text{mm}$  between the wheel channel and the rail surface should be insured.

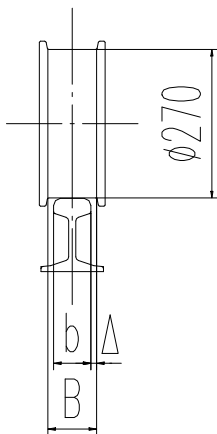


图 4 车轮与轨道  
Fig 4 Wheel and rail

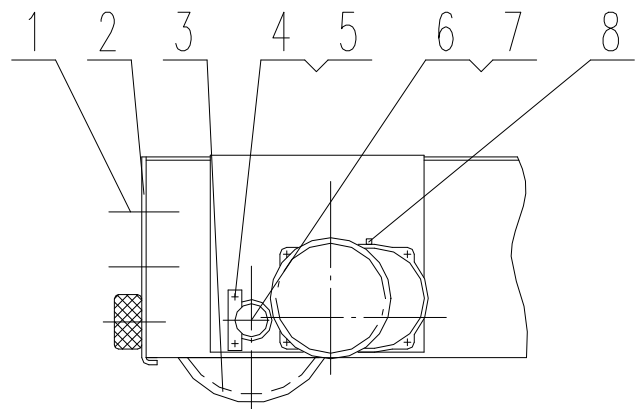


图 5 运行机构  
Fig 5 Traveling mechanism

- |               |                    |               |             |
|---------------|--------------------|---------------|-------------|
| 1.螺栓          | 2.盖板               | 3.车轮          | 4.螺栓        |
| 1. Bolt       | 2. Cover plate     | 3. Wheel      | 4. Bolt     |
| 5.挡轴板         | 6.油杯               | 7.车轮轴         | 8.油塞        |
| 5. Axle plate | 6. lubricating cup | 7. Wheel axle | 8. Oil plug |

表 4 Table 4

车轮与轨道 Wheel and rail						车轮槽宽 B Width of wheel channel (B)	标准代号 Standard code
钢轨 Steel rail	轻轨 Light rail	钢轨类型 (kg/m) Steel rail type (kg/m)	15	18	24	70	24kg/m YB222-63
		钢轨顶面宽 (mm) Top surface width of steel rail (mm)	37	40	51		
	重轨 Heavy rail	钢轨类型(kg/m) Steel rail type (kg/m)	38	43	50	90	33kg/m-YB350-63 38kg/m GB2585-1981 43kg/m GB2585-1981 50kg/m GB2585-1991
		钢轨顶面宽 (mm) Top surface width of steel rail (mm)	68	70	70		
方钢 Square steel	(mm x mm)		36x36 38x38 40x40 42x42 45x45 48x48 50x50			70	GB906-1982
			53x53 56x56 60x60 63x63 65x65 70x70			90	

A)轨道跨度公差:  $\pm 5\text{mm}$ A) Tolerance of rail span:  $\pm 5\text{mm}$ B)轨道顶面标高差:  $\leq \frac{S}{1000}\text{mm}$ B) Height difference of the rail top surface:  $\leq \frac{S}{1000}\text{mm}$ 

C)轨道接头公差: 2-3mm

C) Rail joint tolerance: 2-3mm

D)轨道弯曲公差:  $\pm 3\text{mm}$ D) Rail bending tolerance:  $\pm 3\text{mm}$ E)轨道倾斜度:  $\frac{L}{1000} \sim \frac{L}{2000}$ E) Rail gradient:  $\frac{L}{1000} \sim \frac{L}{2000}$ 

上式: S——起重机跨度; L——轨道长度

In the above representation: S----the crane's span; L----the length of rail

## 5.使用

### 5. Operation

5.1 试车在无载荷情况下，接通电源，开动并检查各运转机构控制系统和安全装置均应灵敏准确，安全可靠方可使用。

5.1 During driving test, under the condition of no load, connect the power, turn on and check each operating system, controlling system and safety system. They should be accurate and safe to be used.

5.2 不准超过起重机额定载荷起吊。

5.2 Hoisting weights exceeding the rated hoisting capacity of the crane is not allowed.

5.3 不准斜吊物品。

5.3 Slant hoisting is prohibited.

5.4 物品重量不清不准起吊。

5.4 Hoisting is not allowed if the weight is unknown.

## 6.维护

### 6. Maintenance

6.1 用户应做到经常检查起重机各部位是否有异常现象尤其是主横梁连接处，若未加施焊，更要经常检查。

6.1 The customer should regularly check each part of the crane for any abnormal condition. The connection place of the girder and beam should be often checked, especially in the case where they are not welded.

6.2 润滑（如图 5 所示）

6.2 Lubrication (as shown in Fig 5)

6.2.1 通过油杯 6 注入钙基润滑脂（BG491）润滑车轮轴承，润滑周期 3 个月，油量为 1/2~1/3 轴承容量。

6.2.1 Inject by lubricating cup 6 the calcium grease (BG491) to lubricate the wheel axle. The lubricating period is 3 months and the grease amount is 1/2~1/3 of the capacity of the axle.

6.2.2 取下油塞 8 注入粘度为 5.M~5.89 °E 50#机械油（GB443）。建议润滑周期 6 个月。

6.2.2 Take off the oil plug 8 to inject 50# mechanical oil (GB443) with viscosity of 5.M---5.89 °E. The suggested lubricating period is 3 months.

6.3 随时检查车轮，不应有裂缝、压痕及过分的磨损，上述缺陷深度超过 3mm 时，应立即报废，更换方法见图 5，取下螺栓 4 和挡轴板 5，压出车轮轴 7，取出车轮 3，装配时按反顺序进行。

6.3 Check the wheels regularly, which should have no crack, impressed mark and abrasion. In case of where the above mentioned defects have reached a depth of over 3mm, it should be disposed and please refer to Fig 5 for specific changing method. Take off bolt 4 and axle plate 5 to press out the wheel axle 7. take out wheel 3 and assemble the new one in backward sequences.

6.4 起重机制动器的调整如图 6，取下电动机风扇罩 8，松开紧定螺钉，拧紧调整螺母 6，然后再将螺母 5 松一圈半，固定好即为调整完毕。

6.4 Refer to Fig 6 for the adjustment of the crane's brake. Take off the fan case of the electromotor 8. Loosen the fixing nut and fasten the adjusting nut 6 and loosen bolt 5 by one and a half circle. The adjustment is done when they are fixed.

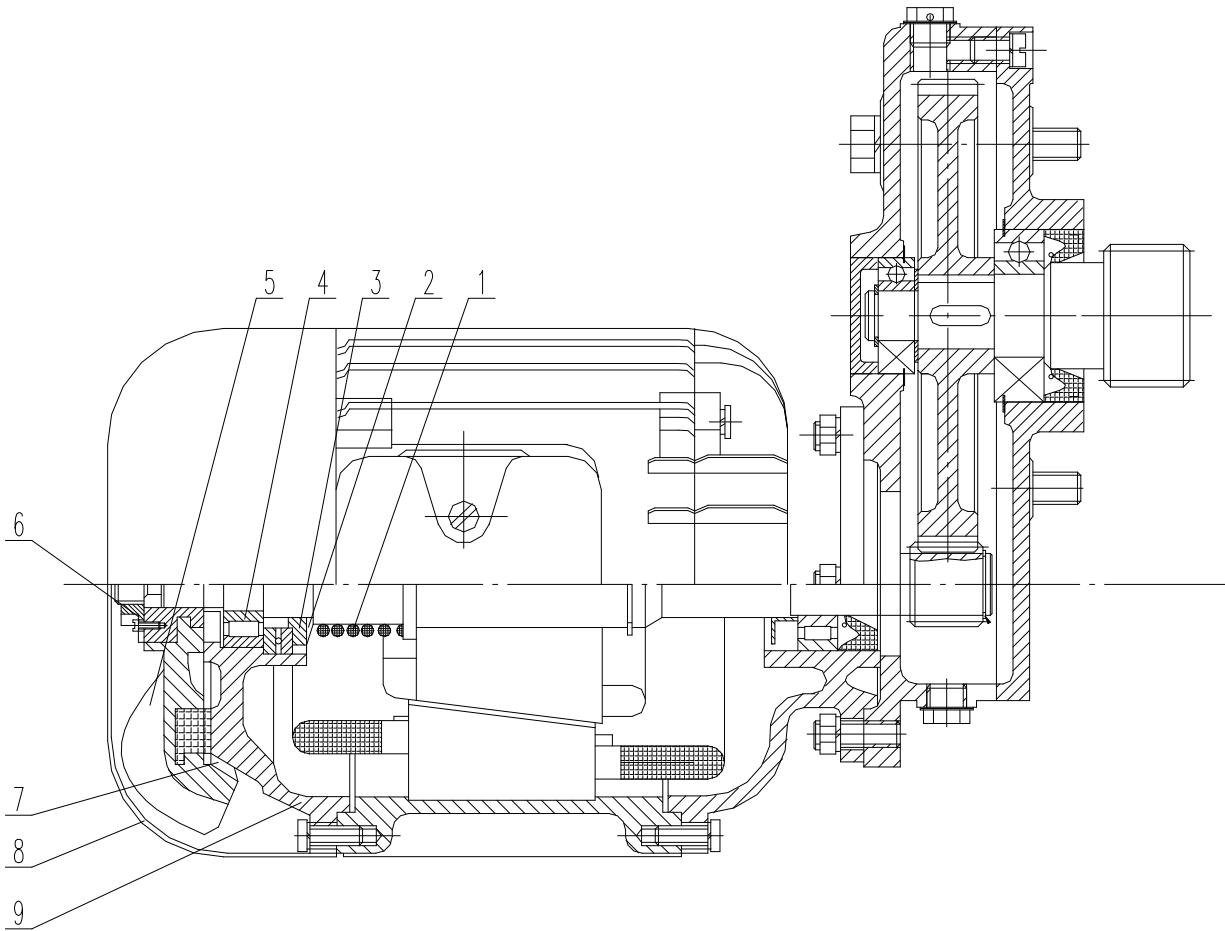
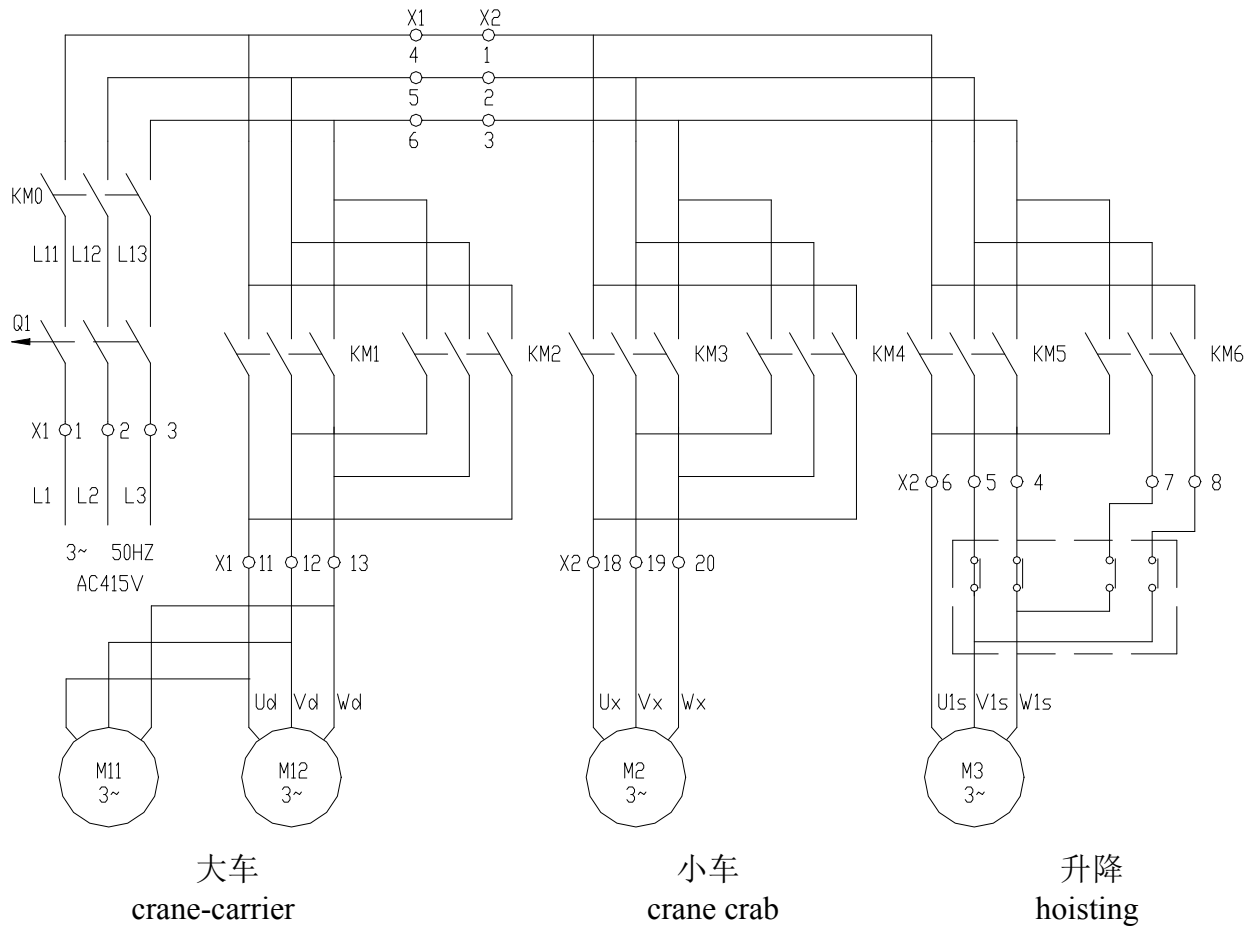


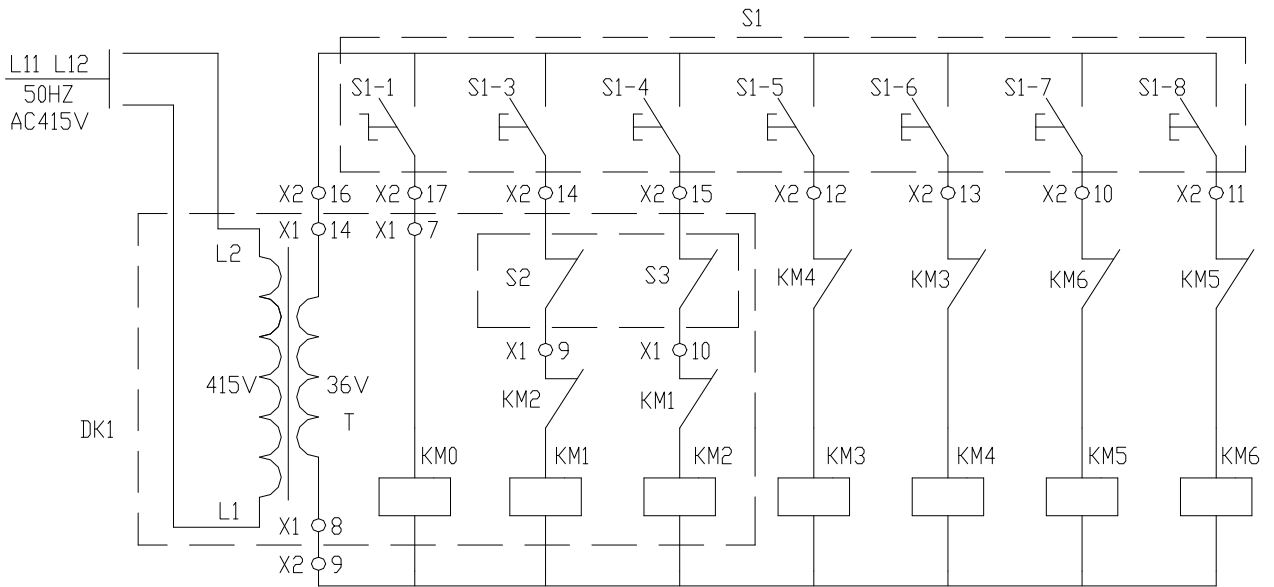
图 6 锥形转子电动机

Fig 6 Conical rotor electromotor

- |                    |                       |                      |                  |
|--------------------|-----------------------|----------------------|------------------|
| 1.制动弹簧             | 2.缓冲碟形弹簧              | 3.支承圈                | 4.推力轴承           |
| 1.Brake spring     | 2. Disc buffer spring | 3.Supporting ring    | 4.Thrust bearing |
| 5.风扇制动轮            | 6.调整螺母                | 7.锥形制动环              | 8.风扇罩            |
| 5. Fan brake wheel | 6.Adjusting nut       | 7.Conical brake ring | 8. Fan case      |
|                    |                       |                      | 9.后端盖            |
|                    |                       |                      | 9. Rear cover    |

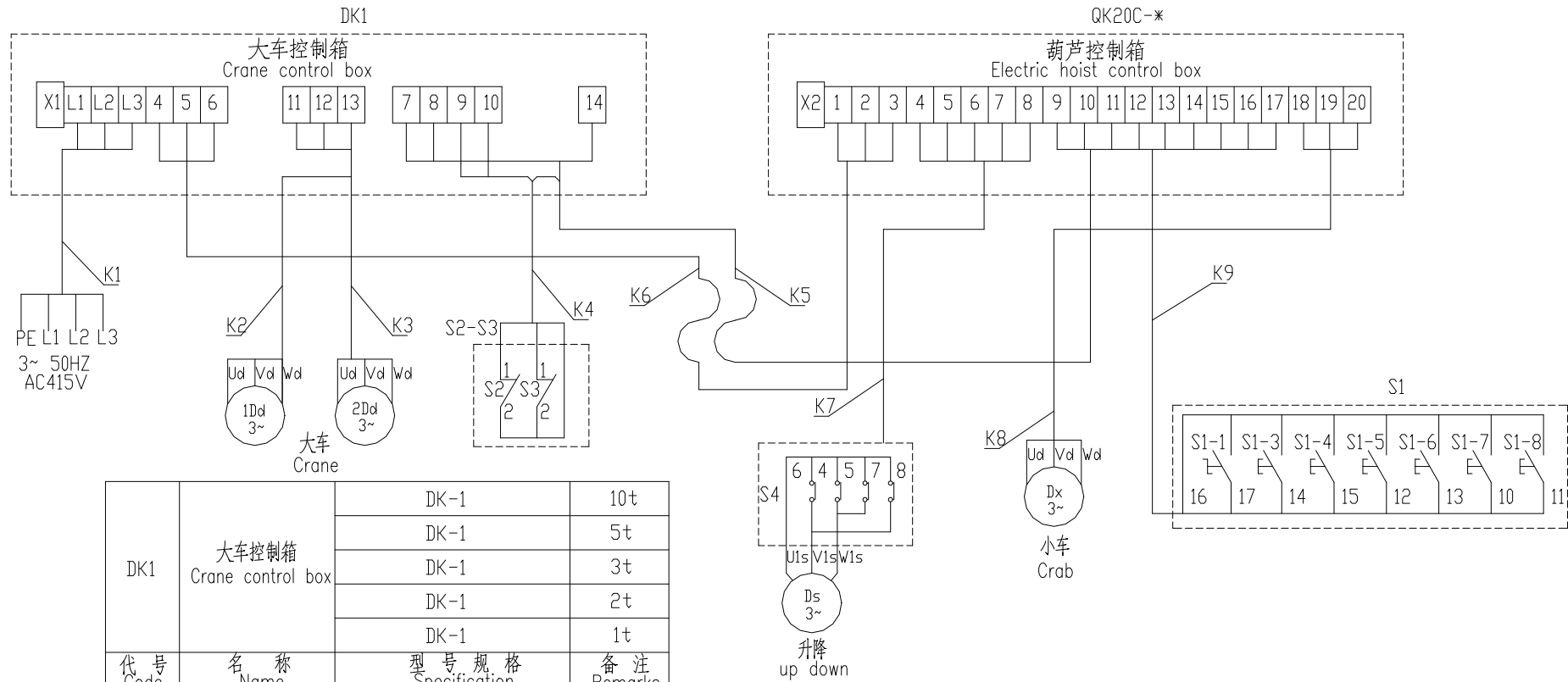


元件 Item 吨位 tonnage	KMO	起升电机 功率 Hoisting motor power	KM1、2	Q1	大车控制 箱型号 Model of crane control box	葫芦控制箱 型号 Model of electric hoist control box
1t	CJX2-3201	1.5KW	CJX2-1801	DZ47-63/3P	DK1	QK20C-1
2t	CJX2-3201	3.0KW	CJX2-1801	DZ47-63/3P	DK1	QK20C-3
3t	CJX2-3201	4.5KW	CJX2-1801	DZ47-63/3P	DK1	QK20C-3
5t	CJX2-5011	7.5KW	CJX2-1801	DZ47-63/3P	DK1	QK20C-5
10t	CJX2-5011	13KW	CJX2-1801	DZ47-63/3P	DK1	QK20C-10



b 电源 大车左 大车右 小车前 小车后 上升 下降  
 Power left of the right of the front of the back of the up down  
 crane-carrier crane-carrier crane crab crane crab

9	S4	断火限位器 Power cut stroke limiter	LX44-*	1		
8	S2~ S3	大车限位开关 Crane limit switch	LX10-12	2		
7	S1	按钮盒 Button box	七钮按钮盒 7buttons box	1		
6	T	控制变压器 Control transformer	BK-63 415V/36V	1		装于葫芦控制箱
5	KM5, KM6	起升接触器 Hoisting contactor	CJX2-*	2	控制电压 交流 36V Control V , AC 36 V	Fitting-up control box of Electric hoist
4	KM3, KM4	小车接触器 Crab contactor	CJX2-0901	2	控制电压 交流 36V Control V , AC 36 V	
3	Q1	断路器 Breaker	CZ47-63/3P	1		装于大车控制箱
2	KM1, KM2	大车接触器 Crane contactor	CJX2-1801	2	控制电压 交流 36V Control V , AC 36 V	Fitting-up control box of the crane
1	KM0	总接触器 Total contactor	CJX2-*	1	控制电压 交流 36V Control V , AC 36 V	
序号 No.	代号 Code	名称 Name	型号规格 Specification	数量 Amount	备注 Remarks	
LD 型电动单梁起重机电气原理图 (CD) 地操 Circuit and air principle diagram of LD motor single-track crane (Ground operation , CD)						

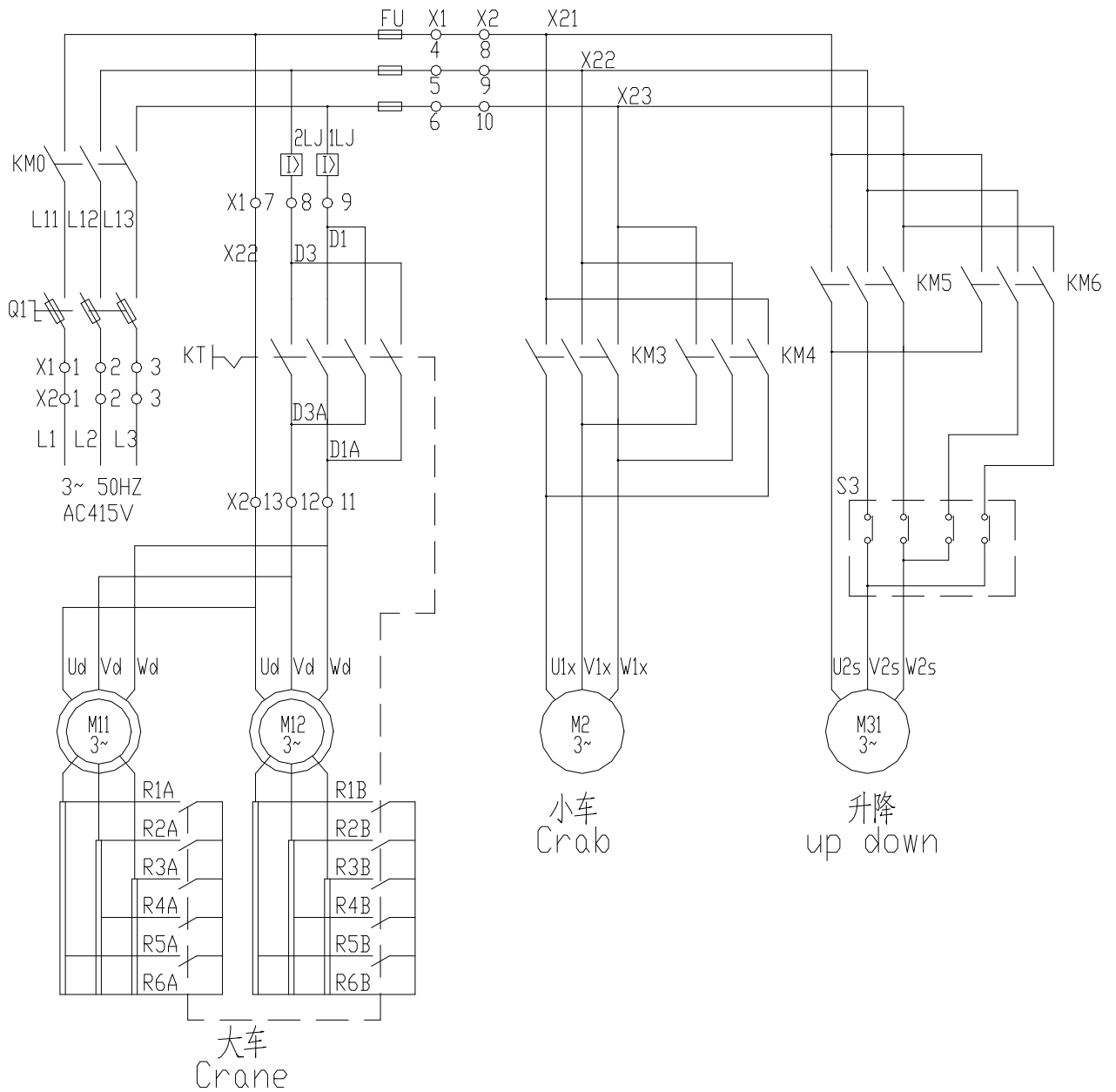


5	S4	断火限位器 Power cut stroke limiter	LX44-*	1	
4	S1	7 钮手电门 7 buttons switch	ZA53-7	1	
3	S2~S3	大车限位开关 Crane limit switch	LX10-12	2	
2	QK20C-*	葫芦控制箱 Electric hoist control box		1	
1	KD1	大车控制箱 Crane control box	DK-1	1	
序号 No.	代号 Code	名称 Name	型号规格 Specification	数量 Amount	备注 Remarks

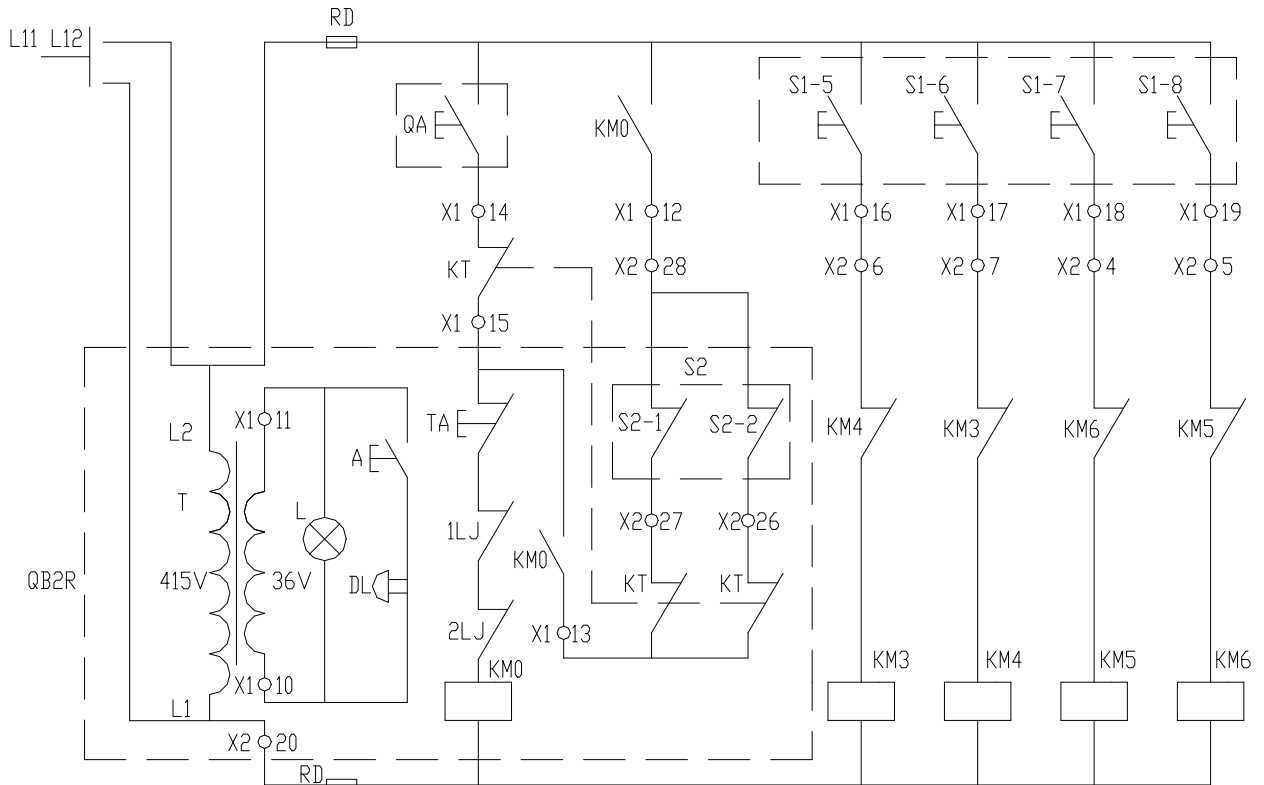
LD 型电动单梁起重机电气路线图 (CD) 地操 Circuit diagram of LD motor single-track crane (Ground operation, CD)

K9	CEFR	10X1.5mm <sup>2</sup>	Φ 18	随葫芦配套 Coordinated with electric hoist	X2-10 11 12 13 14 15 16 17-S1	S1—QK	
K8	YC-50	3X2.5mm <sup>2</sup>	Φ 17		U1x V1x W1x	Dx---QK	
K7	YC-50	5X6mm <sup>2</sup>	Φ 18		(S+5)m	X1-4---X2-1 X1-5---X2-2 X1-6---X2-3	DK1-QK 20C
	YC-50	5X4mm <sup>2</sup>	Φ 17	3t 5t			
	YC-50	6X2.5mm <sup>2</sup>	Φ 15	0.5t 1t 2t			
K6	YC-50	3X6mm <sup>2</sup>	Φ 18	(S+5)m	X1-7 8 9 10 14	DK1-QK 20C	10t
		3X4mm <sup>2</sup>	Φ 17				3t 5t
		3X2mm <sup>2</sup>	Φ 15				1t 2t
K5	CEFR	7X1.5mm <sup>2</sup>	Φ 16	(S+5)m	X1-9 10---X2- 14 15	DK1	
K4	YC-50	4X2.5mm <sup>2</sup>	Φ 15	2m+k	Ud Vd Wd	DK1	
K3	YC-50	3X2.5mm <sup>2</sup>	Φ 15	(s+4)m	Ud Vd Wd	DK1	
K2	YC-50	3X2.5mm <sup>2</sup>	Φ 15	3m	Ud Vd Wd	DK1	
K1	YC-50	3X6+1X4mm <sup>2</sup>	Φ 18	用户确定 User decided	L1 L2 L3 PE	电源引入 Power connector	10t
	YC-50	3X4+1X2.5mm <sup>2</sup>	Φ 17				3t 5t
	YC-50	4X2.5mm <sup>2</sup>	Φ 15				1t 2t
线束号 Line No.	型号 model	规格 Specification	电缆 外径 Cable OD	长度 (m) Length	线端标号 Mark on the end of line	起止点 Beginning and end point	备注 Remarks





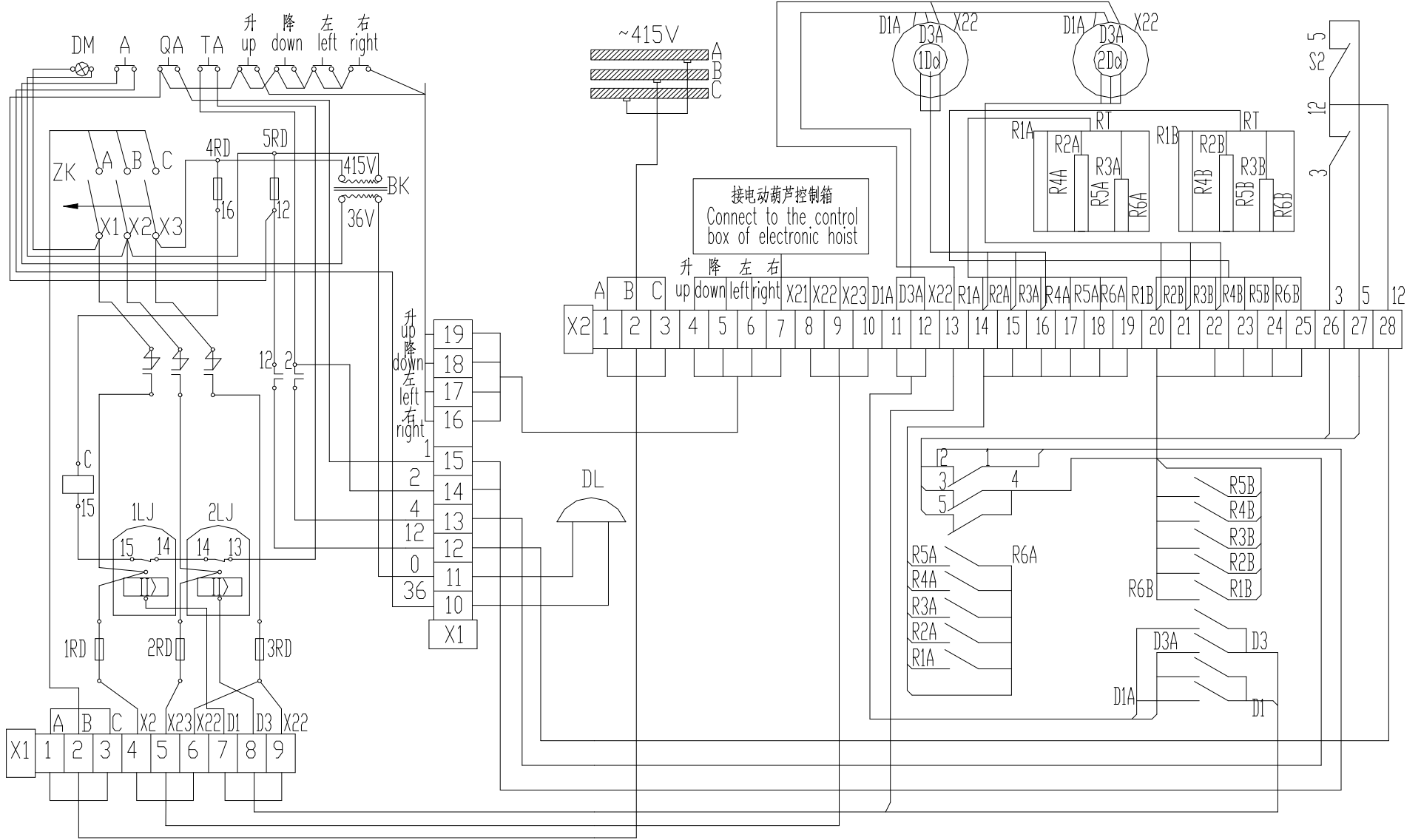
元件 Item 吨位 tonnage	KMO	起升电机功率 Hoisting motor power	KM1、2	Q1	大车控制 箱型号 Model of crane control box	葫芦控制箱 型号 Model of electric hoist control box
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2t	CJX2-3201	3.0KW	CJX2-1801	DZ47-63/3P	QB2R	QK20E-3
3t	CJX2-3201	4.5KW	CJX2-1801	DZ47-63/3P	QB2R	QK20E-3
5t	CJX2-5011	7.5KW	CJX2-1801	DZ47-63/3P	QB2R	DQ20E-5
10t	CJX2-5011	13KW	CJX2-1801	DZ47-63/3P	QB2R	CQ20E-10



电源 大车左 大车右 小车前 小车后 上升 下降  
 Power left of the right of the front of the back of the up down  
 crane-carrier crane-carrier crane crab crane crab

9	S3	断火限位器 Power cut stroke limiter	LX44-*	1	
8	S2	大车限位开关 Crane limit switch	LX10-12	2	
6	T	控制变压器 Control transformer	BK-63 415V/36V	1	
5	KM5, KM6	起升接触器 Hoisting contactor	CJX2-*	2	装于葫芦控制箱 Fitting-up control box of Electric hoist
4	KM3, KM4	小车接触器 Crab contactor	CJX2-0901	2	
3	Q1	断路器 Breaker	CZ47-63/3P	1	装于大车驾驶室 Fitting-up driver cab of the crane
2	KT	大车控制器 Crane control box	KT10-25J/5	1	
1	KM0	总接触器 Total contactor	CJX2-*	1	
序号 No.	代号 Code	名称 Name	型号规格 Specification	数量 Amount	备注 Remarks

LD 型电动单梁起重机电气原理图 (CD 地操) Circuit and air principle diagram of LD motor single-track crane (Air operation , CD)



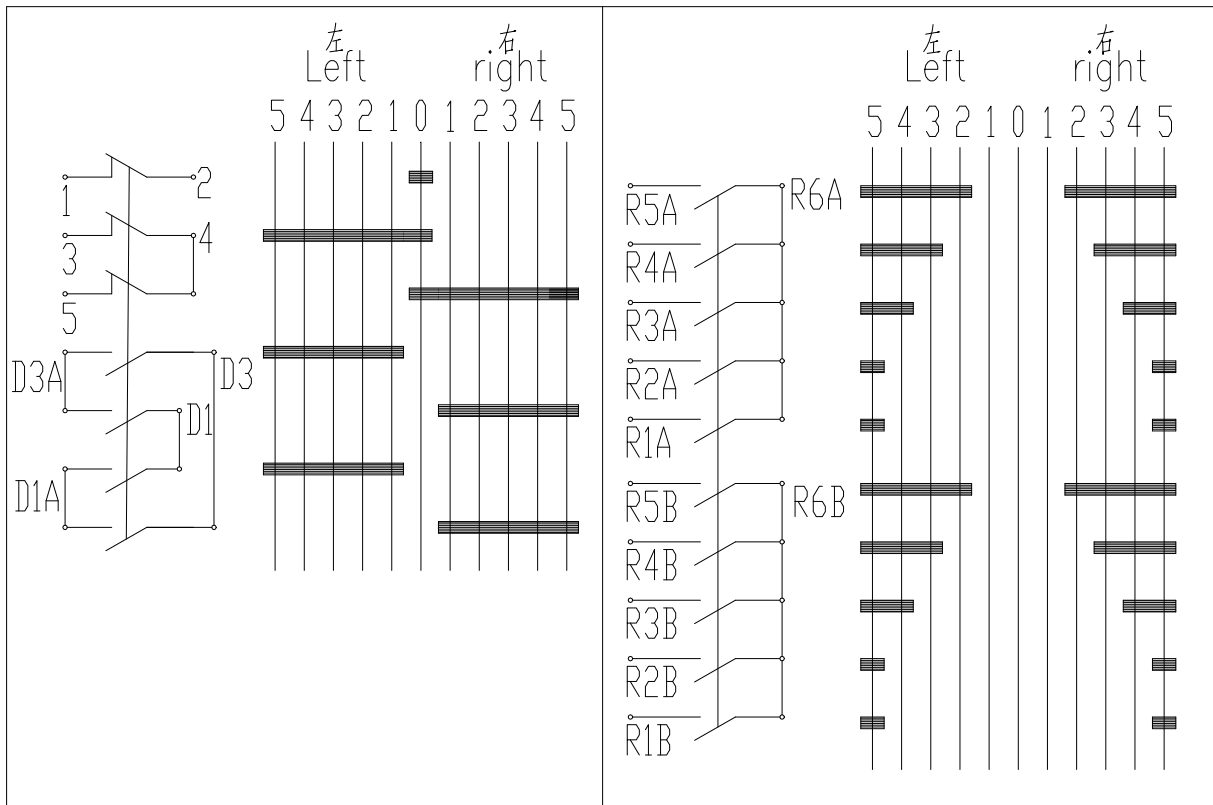
**技术要求:**

- 1.过流继电器整定值为两运行电机额定电流值之和。
- 2.调整两电机相序使之转向一致。
- 3.大车运行速度：30 米/分-75 米/分之间选择。

**Technical Requirements**

1. Set value of over current relay is the rated current of two operating motors.
2. To adjust the phase sequences of the two motors to make sure that the diversion is same .
3. The crane operating speed : 30-75 m/min

KT10—25J/5 闭合表  
Closing table KT10—25J/5



LD 型电动单梁起重机电气线路图 (CD 空操)  
Circuit diagram of LD motor single-track crane (Air operation , CD)