



## YUANTAI CRANE

### Specification for Wire Rope Type Electrical Hoist



- Compact structure, light weight, safe and reliable.
- High universality, interchangeability and lifting capacity.
- Convenient ,easy maintenance and operation ,stable lifting.
- It is the most widely used and popular light lifting equipment.

## Part 1 Introduction

### ◆ Features

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- 1.2 High universality, interchangeability and lifting capacity.
- 1.3 Convenient ,easy maintenance and operation ,stable lifting.
- 1.4 It is the most widely used and popular light lifting equipment.



### ◆ Product category

Our company mainly manufactures electric hoists with lifting capacity of 0.25~63t, lifting height of 1~100m, working class of M3~M4, also can design and manufacture according to requirements.

### ◆ Application

Traveling electric hoists can be installed on various kinds of cranes or suspended on I-beam to do some straight or curve motions. Fixed electric hoists can be installed on fixed support to do some vertical motions. Widely used in industrial and mining, rail way, port, warehouse sites.

### ◆ Working conditions

It is applicable in the temperature of -25°C ~+40°C, Humidity≤85%, Altitude below 1000m, Power is 3-phase 380v 50HZ(also can be customized according to customer's requirements)

### ◆ Classification

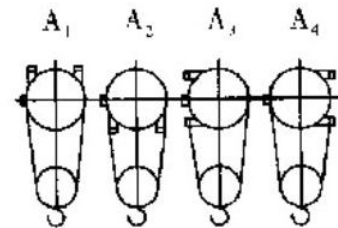
Single speed CD1, Double speed Md1, Explosion-proof, Metallurgic, Low headroom hoists etc.



### ◆ Structure Layout

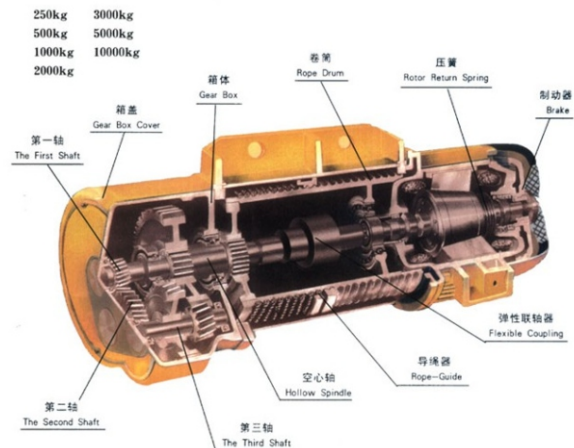
Stationary type and operation type both included.

As shown on the right: A1、A2、A3、A4 separately fixed on the up, down, left and right side. A2 always used on the trolley of double beam crane with hoist. It is usually operation type without special explanation, traveling along with beams.



### ◆ Main Structure and Features

Electric hoist is composed of lifting mechanism, traveling mechanism (except fixed type) and electric parts as shown below:



### (1) Lifting Mechanism

Lifting motor drive winding drum rotating through coupling and hollow spindle of reducer, in order to make wire rope of drum drive the hook up and down.

#### ▣ Lifting Motor

1. Tapered rotor three-phase asynchronous braking motors
2. High starting torque, effective braking, compact structure
3. Stable operation, small volume and light weight
4. Safety in use, convenient maintain
5. B or F class insulation, IP44, IP54 protection



CD1 type hoist fitted with ZD type single speed motor, MD1 type hoist fitted with ZDS type double speed motor, its ratio of usual speed and low speed is 10:1.

#### ▣ Reducer

1. Three-level dead axle helical gear rotating body, long service life
2. Gear and the axle made by alloy steel after heat treatment, high intensity
3. Box and cover made from superior cast iron, fully covered
4. Great speed ratio, high accuracy
5. Compact structure, silent operation, high efficiency
6. Machinery oils
7. Easily assemble and disassemble



#### ▣ Rope Drum

1. Made of cast iron or seamless steel tube, light weight, transmit the dynamic force by splines.
2. Coil casing made from superior cast iron, high intensity
3. The drum is the central part of the hoist. It connect with travelling mechanism above through balance beam, with reducer and motor both sides, and with wire rope and hook below. Installed limited guide bar equipment to the up front of the outer cover.



#### ▣ Hook

1. Forge with special steel; thrust ball bearing connect with casing through hook and beam to make the hook operate freely.
2. No more than 5t :single pulley hook; More than 10t: double pulley hook.
3. High security, safety buckle, mousing hook



(2) Travelling Mechanism

- ▶ Consist of electric trolley, travelling reducer, travelling motor, driven trolley, etc. The mechanism do reciprocating motion through main engine driven by side plate and drum.
- ▶ The wheel tread is straight when used with box type girder or H beam.
- ▶ The wheel tread is circular arc when used with I-beam.
- ▶ Its travelling speed is 20m/min, but 30m/min is possible; if 1~5t capacity with 12m or higher lifting height, a driven trolley is necessary.



▶ Travelling Motor

1. Use tapered rotor of three-phase asynchronous braking motors
2. Stable starting, safe braking, can be used with reducer
3. B grade or F grade of insulation, closed structure, motor protection grade is IP44 or IP54.

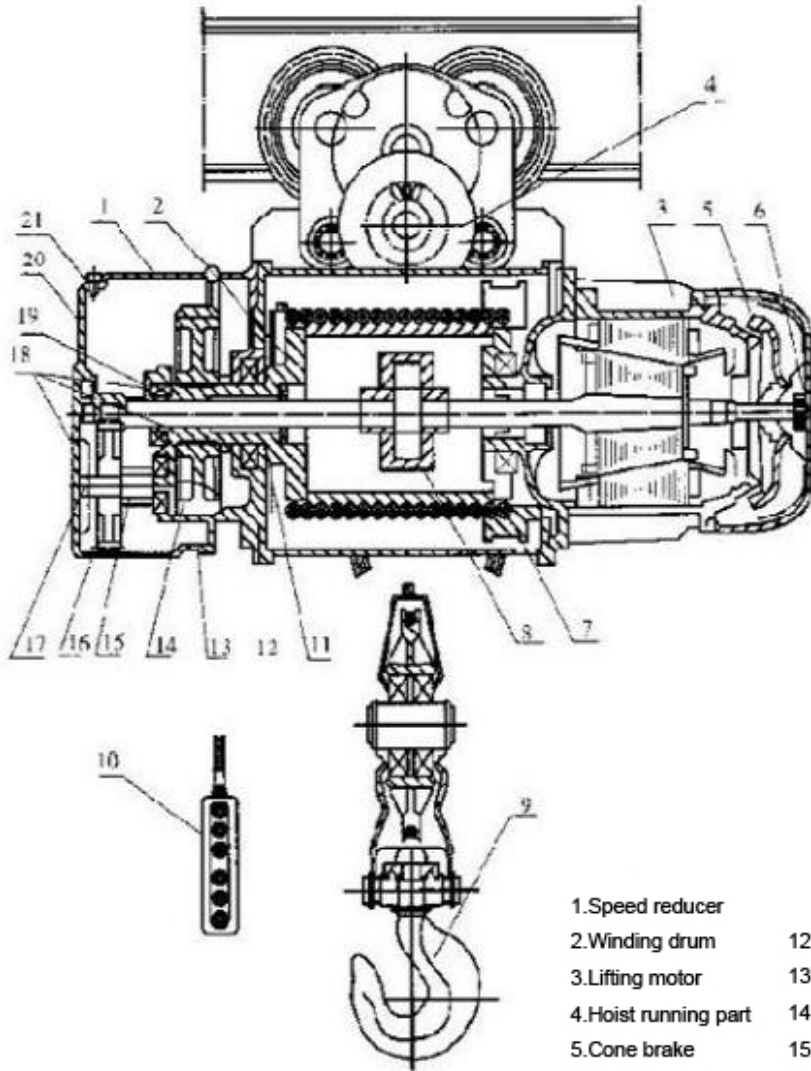


(3) Electrical Device

- ▶ Control box is rational layout, convenient for maintain
- ▶ The Control box protection grade is IP55, and have water proof
- ▶ The main power source is optional
- ▶ Safe touch line has high electrical conduction and low pressure
- ▶ Current collector has high planing speed, to ensure the sustaining power supply
- ▶ Consisted with controlling box(0.25t capacity has no it), switch button, stopper and connecting wire
- ▶ The switch button power voltage is 380v or 36v, standard product is 360v, operating the switch accords to the direction symbols on it, via the disconnecter's connect and disconnect(in controlling wire) to control the hoist's moving.
- ▶ Safe and Standard Protecting Function:
  - novoltage protection, ground protection, short-circuit protection, thermal protection, over-loading protectgion, limit protection, overcurrent protection, power-off protection
- 1. Lifting limiter: broken fire limit device during up and down travelling
- 2. Overloading protection: overload limiter, according to the working conditions on site to preinstall related parameters
- 3. Top-clashing proof device: heavy punch limiter, sensitive reaction, compact appearance

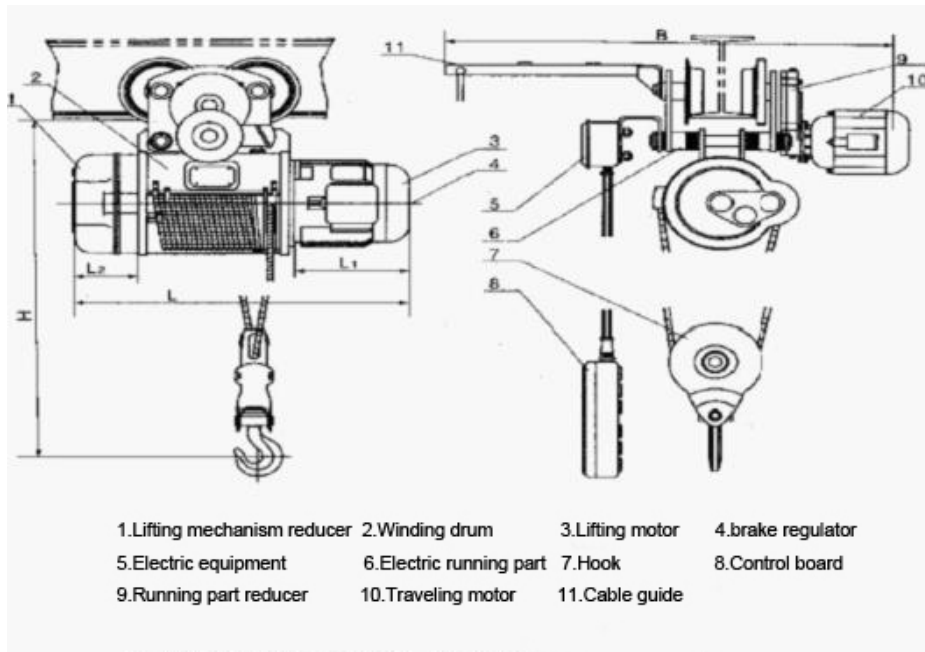


## Part 2 Drawing

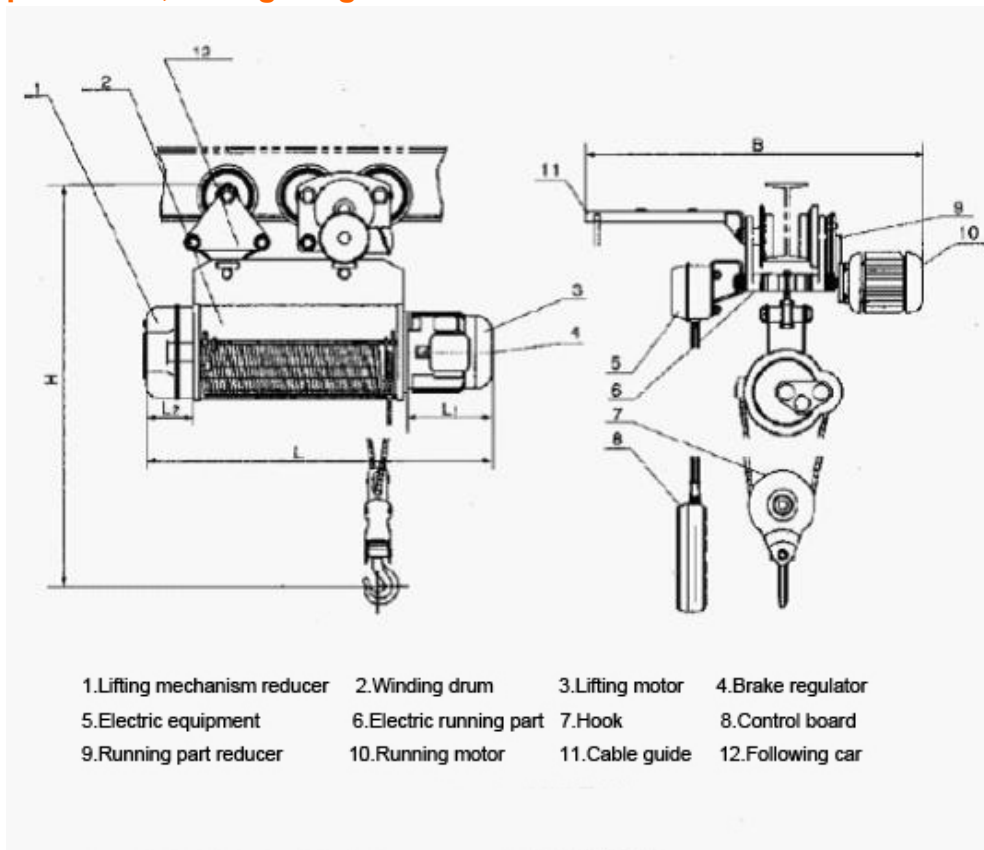


- |                      |                          |
|----------------------|--------------------------|
| 1.Speed reducer      | 12.Box body              |
| 2.Winding drum       | 13.Seal ring             |
| 3.Lifting motor      | 14.09 gear               |
| 4.Hoist running part | 15.06 gear shaft         |
| 5.Cone brake         | 16.05 gear               |
| 6.Adjusting nut      | 17.04gear shaft          |
| 7.Rope guide         | 18.Ball bearing          |
| 8.Coupling           | 19.needle roller bearing |
| 9.Hook               | 20.Box cover             |
| 10.Control board     | 21.Vent plug             |
| 11.Hollow spindle    |                          |

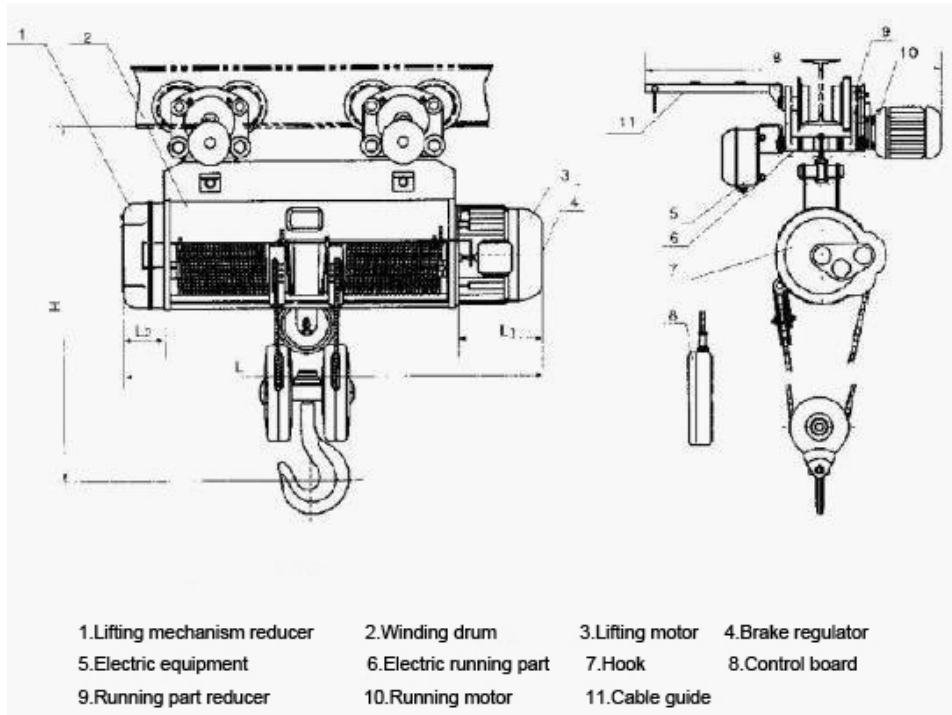
◆ Cd1 type 0.5t-5t, lifting height 6m-9m electric hoist outline drawing



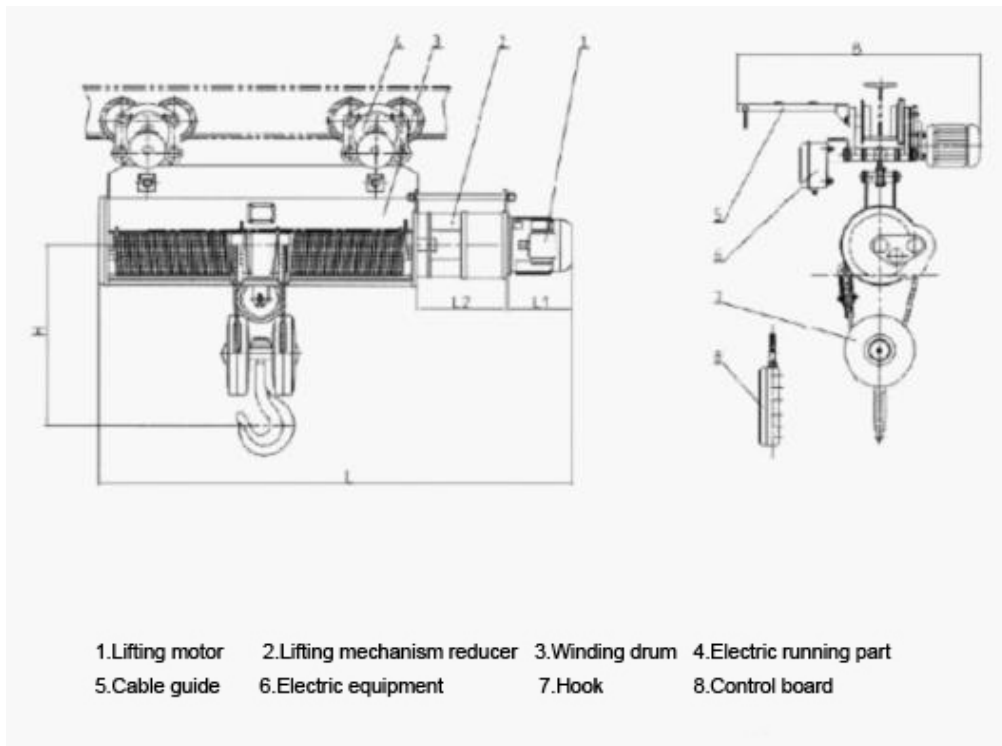
◆ Cd1 type 0.5t-5t, lifting height 12m-30m electric hoist outline drawing



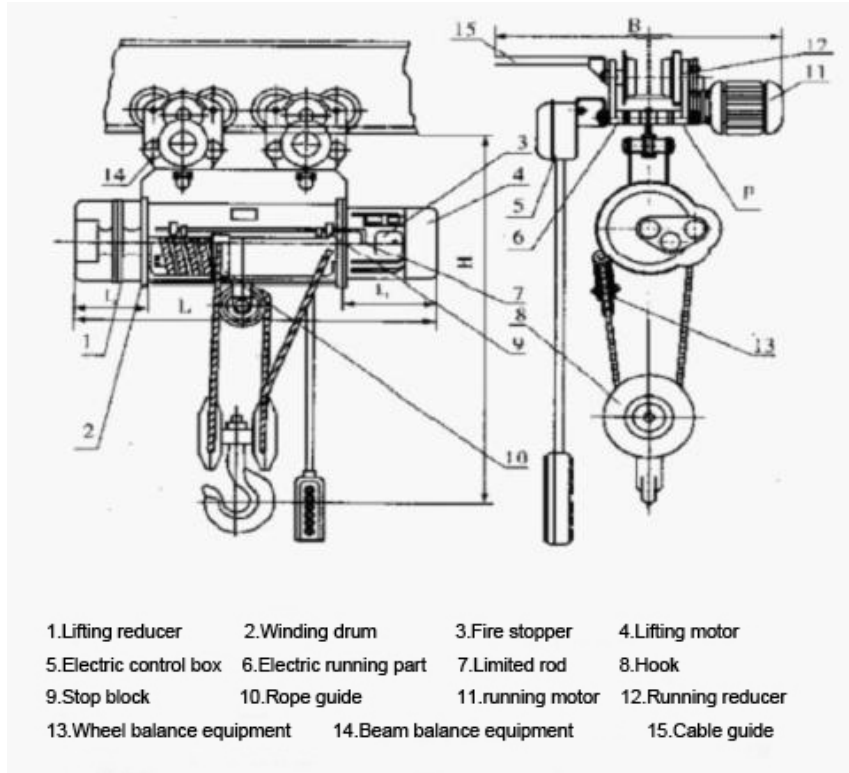
◆ Cd1 type 10t, lifting height 9m-30m electric hoist outline drawing



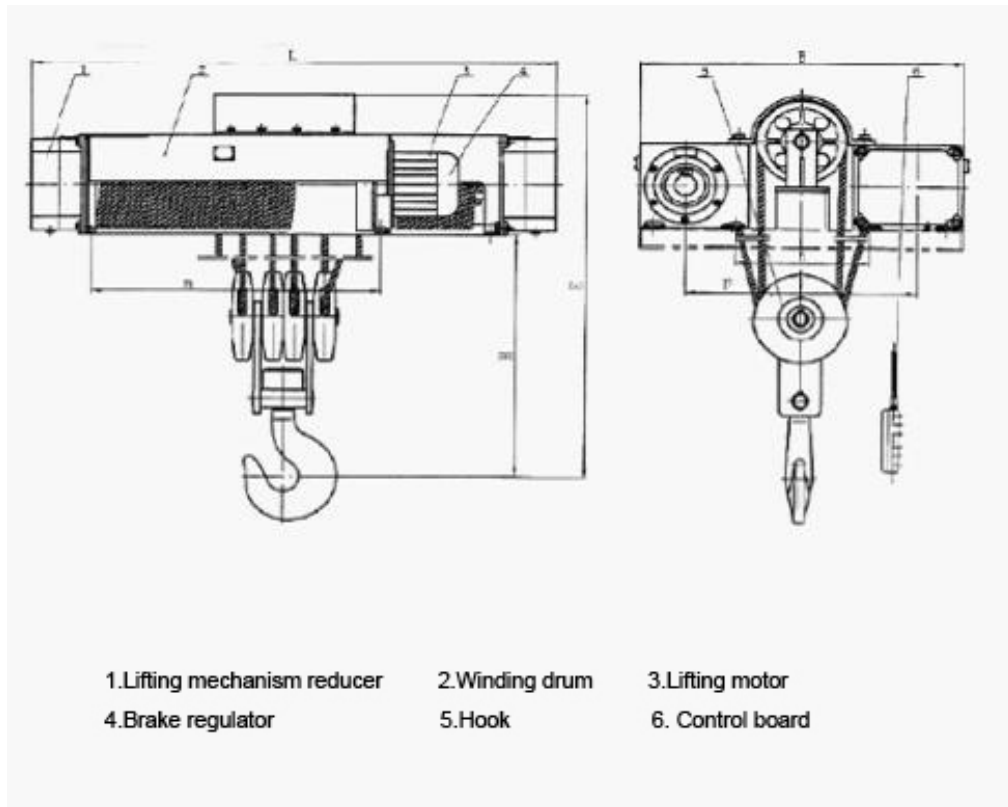
◆ Cd1 type 10t, lifting height 35m-100m electric hoist outline drawing



◆ Lifting capacity 16t electric hoist outline drawing



◆ Lifting capacity 50t electric hoist outline drawing





### Part 3 Parameters

CD1 Electric Hoist							
Capacity	t	0.25					
Hoisting speed	m/min	8					
Travel speed	m/min	20、30					
Lifting motor	Type	ZD1 12-4/0.4kw					
Operation motor	Type	ZDY1 10-4/0.06kw					
Track		10~22b					
Wirope	Dia.(mm)	3.6					
	Specification	6×19+FC					
Hoisting height	m	6	9	12			
Min curvature radius	m	0.8	0.8	0.8			
Weight (Operation type)	kg	44	45	46			
Weight (Stationary type)	kg	30	31	32			

Capacity	t	0.5					
Hoisting speed	m/min	8					
Travel speed	m/min	20、30					
Lifting motor	Type	ZD1 21-4/0.8kw					
Operation motor	Type	ZDY1 11-4/0.2kw					
Track		16~28b					
Wirope	Dia.(mm)	4.8					
	Specification	6×37+FC					
Hoisting height	m	6	9	12			
Min curvature radius	m	1.5	1.5	1.5			
Weight (Operation type)	kg	121	125	130			
Weight (Stationary type)	kg	89	94	99			

Capacity	t	1					
Hoisting speed	m/min	8					
Travel speed	m/min	20、30					
Lifting motor	Type	ZD1 22-4/1.5kw					
Operation motor	Type	ZDY1 11-4/0.2kw					
Track		16~28b					
Wire rope	Dia.(mm)	7.4					
	Specification	6×37+FC					
Hoisting height	m	6	9	12	18	24	30
Min curvature radius	m	1.5	1.5	2	2	3	4
Weight (Operation type)	kg	137	145	172	188	204	220
Weight (Stationary type)	kg	105	112	120	135	159	165

Capacity	t	2					
Hoisting speed	m/min	8					
Travel speed	m/min	20、30					
Lifting motor	Type	ZD1 31-4/3kw					
Operation motor	Type	ZDY1 12-4/0.4kw					
Track		20~32c					
Wire rope	Dia.(mm)	11					
	Specification	6×37+FC					
Hoisting height	m	6	9	12	18	24	30
Min curvature radius	m	2.0	2.0	2.5	2.5	3	4
Weight (Operation type)	kg	221	232	285	309	332	353
Weight (Stationary type)	kg	166	179	186	209	229	249

Capacity	t	3					
Hoisting speed	m/min	8					
Travel speed	m/min	20、30					
Lifting motor	Type	ZD1 32-4/4.5kw					
Operation motor	Type	ZDY1 12-4/0.4kw					
Track		20~32c					
Wire rope	Dia.(mm)	13					
	Specification	6×37+FC					
Hoisting height	m	6	9	12	18	24	30
Min curvature radius	m	2.0	2.0	2.5	2.5	3	4
Weight (Operation type)	kg	281	297	354	390	420	451
Weight (Stationary type)	kg	222	236	250	284	312	340

Capacity	t	5					
Hoisting speed	m/min	8					
Travel speed	m/min	20、30					
Lifting motor	Type	ZD1 41-4/7.5kw					
Operation motor	Type	ZDY1 21-4/0.8kw					
Track		25~50b					
Wire rope	Dia.(mm)	15					
	Specification	6×37+FC					
Hoisting height	m	6	9	12	18	24	30
Min curvature radius	m	2.5	2.5	3	3	4	4.5
Weight (Operation type)	kg	437	495	597	646	686	726
Weight (Stationary type)	kg	377	400	415	456	493	529

Capacity	t	10					
Hoisting speed	m/min	7					
Travel speed	m/min	20、30					
Lifting motor	Type	ZD1 51-4/13kw					
Operation motor	Type	ZDY1 21-4/0.8kw×2					
Track		32b~50b					
Wire rope	Dia.(mm)	15					
	Specification	6×37+FC					
Hoisting height	m	6	9	12	18	24	30
Min curvature radius	m		3.5	4	6	7.5	9
Weight (Operation type)	kg		1048	1098	1209	1301	1411
Weight (Stationary type)	kg		795	841	943	1035	1127

Capacity	t	16					
Hoisting speed	m/min	3.5					
Travel speed	m/min	18					
Lifting motor	Type	ZD1 51-4/13kw					
Operation motor	Type	ZDY1 21-4/0.8kw×2					
Track		32b~63c					
Wire rope	Dia.(mm)	15					
	Specification	6×37+FC					
Hoisting height	m	6	9	12	18	24	30
Min curvature radius	m		3.5	4	6	8.0	11
Weight (Operation type)	kg		1130	1183	1286	1463	1563
Weight (Stationary type)	kg		850	903	1006	1183	1283

Model		CD1 MD1								
Capacity		Tons	0.25	0.5	1	2	3	5	10	16
Hoisting height		M	3,6,9	6,9,12	6,9,12,18,24,30				9,12,18,24,30	
Hoisting speed		M/MIN	8(0.8/8)	8(0.8/8)	8(0.8/8)				7(0.7/7)	3.5 (0.35/3.5)
Travel speed		M/MIN	20	20/30	20/30	20/30	20/30	20/30	20/30	18
Wirope		Dia.(m m)	3.6	4.8	7.4	11	13	15	15	17.5
		Spec.	6×39	6×37+ FC	6×37+FC				6×37+FC	6×37+FC
Hoisting motor	Type	Type	ZD112-4	ZD1 21-4	ZD1 22-4	ZD1 31-4	ZD1 32-4	ZD1 41-4	ZD1 51-4	ZD1 51-4
		Type		ZDS1 0.2/0.8	ZDS1 0.2/1.5	ZDS1 0.4/3.0	ZDS1 0.4/4.5	ZDS1 0.8/7.5		
	Power	Power (kW)	0.4	0.8(0.2/0.8)	1.5 (0.2/1.5)	3.0 (0.4/3.0)	4.5 (0.4/4.5)	7.5(0.8/7.5)	13 (1.5/13)	13(1.5/13)
	Rotatio n speed	Rotatio n speed( r/min)	1380	1380	1380	1380	1380	1400	1400	1400
	Curren t	(A)	1.25	2.2 (0.72/2.4)	4.3 (0.72/4.3)	7.6(1.2 5/7.6)	11(2.4/1 1)	18 (2.4/18)	30 (5.2/30)	30(5.2/30)
Travel motor	Type	Type	ZDY1 10-4	ZDY1 11-4	ZDY1 11-4	ZDY1 12-4	ZDY1 12-4	ZDY1 21-4	ZDY1 21-4	ZDY1 21-4
	Power	Power (kW)	0.06	0.2	0.2	0.4	0.4	0.8	0.8x2	0.8x2
	Rotatio n speed	Rotatio n speed( r/min)	1400	1380	1380	1380	1380	1380	1380	1380
	Curren t	Curren t(A)	0.3	0.72	0.72	1.25	1.25	2.4	2.4	2.4
Power	AC 380V,50HZ,3P									



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**Tips:**

You can use the phone dimensional code recognition software to scan the right side of the two-dimensional code, to quickly and easily access our web site for more information.