



Specification for Wire Rope Type Electrical Hoist



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Part I Introduction

1.Features:

- 1.1 Compact structure, light weight, safe and reliable.
- 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.



2.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.

3.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.

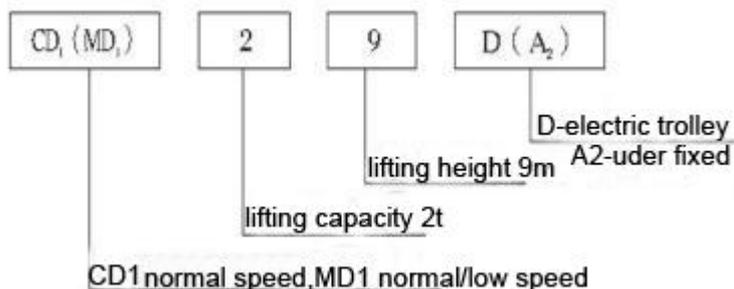
Widely used in industrial and mining, rail way, port, warehouse sites.

4.Working conditions

It is applicable in the temperature of $-25^{\circ}\text{C} \sim +40^{\circ}\text{C}$, Humidity $\leq 85\%$, Altitude below 1000m, Power is 3-phase 380v 50HZ(also can be customized according to customer's requirements)

5.Classification

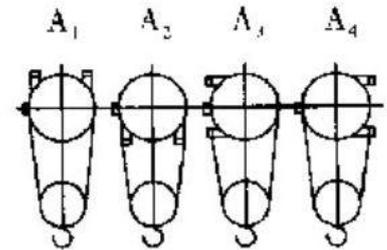
Single speed CD1, Double speed MD1, Explosion-proof, Metallurgic, Low headroom hoists etc.



6. Structure Layout

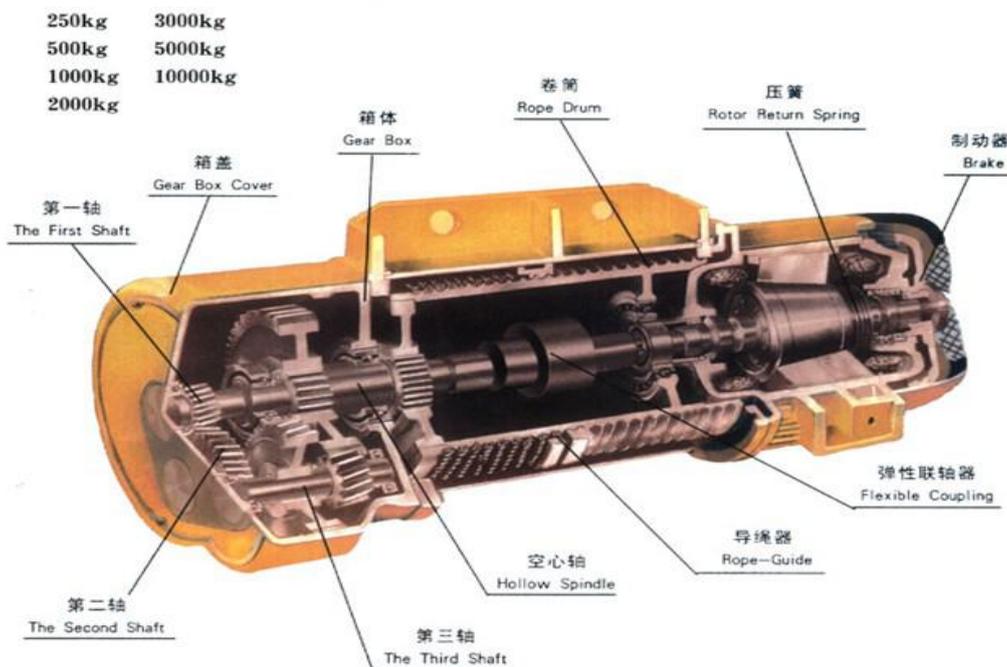
Stationary type and operation type both included.

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.



7. Main Structure and Features

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



7.1 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



7.2 Travelling Mechanism

7.2.1 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.



7.2.2 The wheel tread is straight when used with box type girder or H beam.

7.2.3 The wheel tread is circular arc when used with I-beam.

7.2.4 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

7.2.5 Travelling Motor

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



7.3 Electrical Device

7.3.1 Control box is rational layout, convenient for maintain

7.3.2 The Control box protection grade is IP55, and have water proof

7.3.3 The main power source is optional

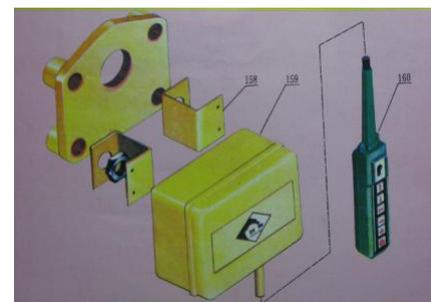
7.3.4 Safe touch line has high electrical conduction

and low pressure

7.3.5 Current collector has high planing speed, to ensure the sustaining power supply

7.3.6 Consisted with controlling box(0.25t capacity has no it), switch button, stopper and connecting wire

7.3.7 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



disconnector's connect and disconnect(in controlling wire) to control the hoist's moving.

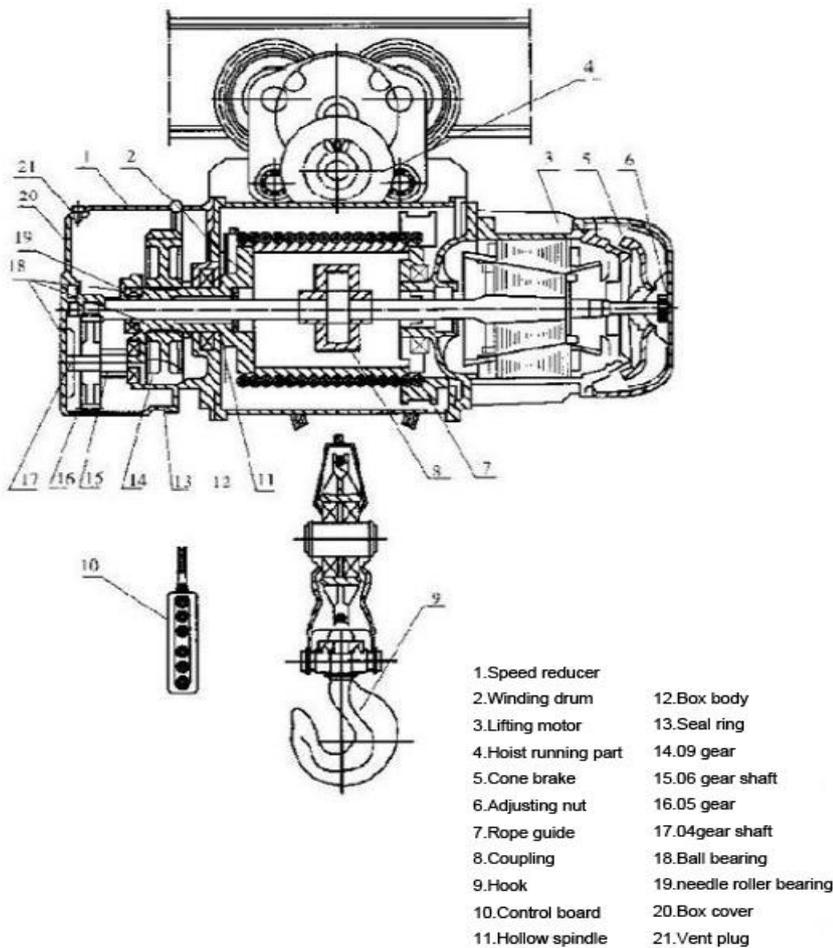
7.3.8 Safe and Standard Protecting Function:

novoltage protection, ground protection,short-circuit protection,thermal protection,over-loading protectgion,limit protection,overcurrent protection,power-off protection

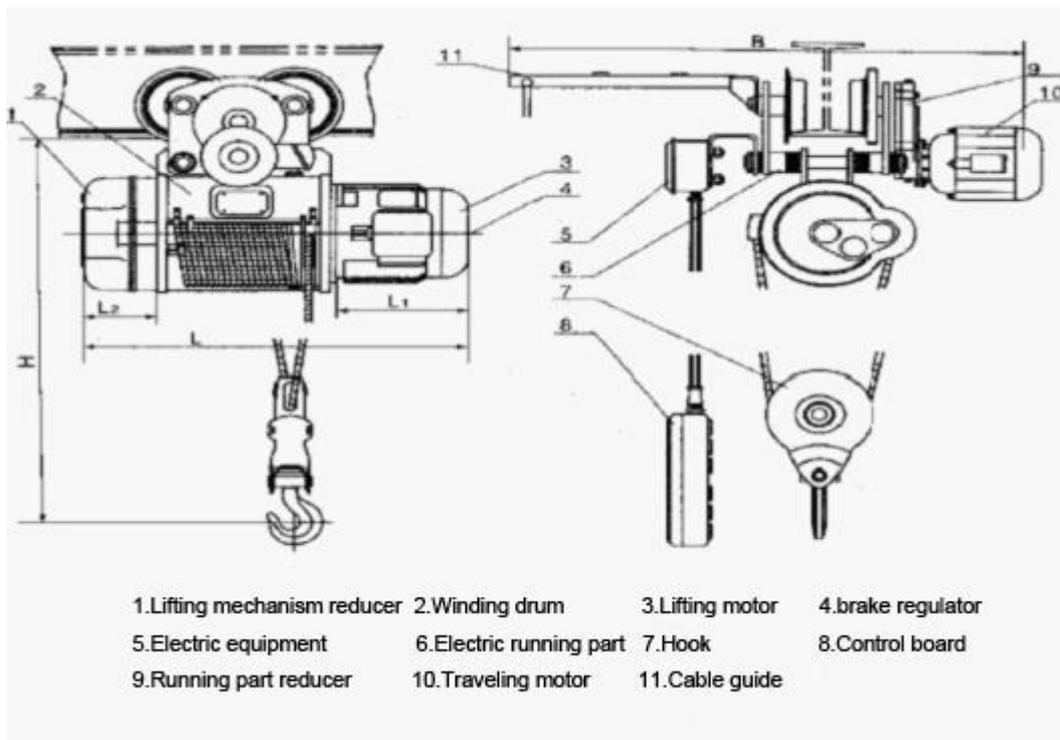
- ◇ Lifting limiter:broken fire limit device during up and down travelling
- ◇ Overloading protection: overload limiter, according to the working conditions on site to preinstall related parameters
- ◇ Top-clashing proof device: heavy punch limiter,sensitive reaction,compact appearance



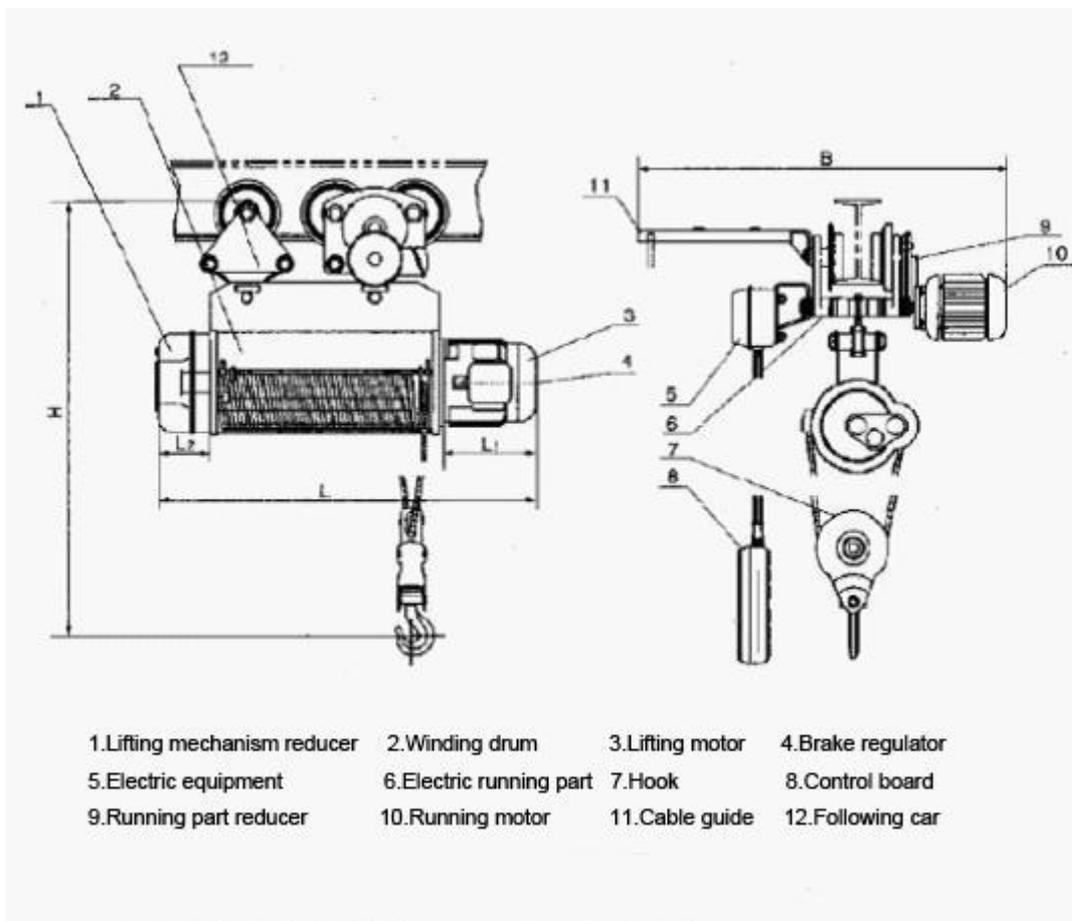
Part 2: Drawing



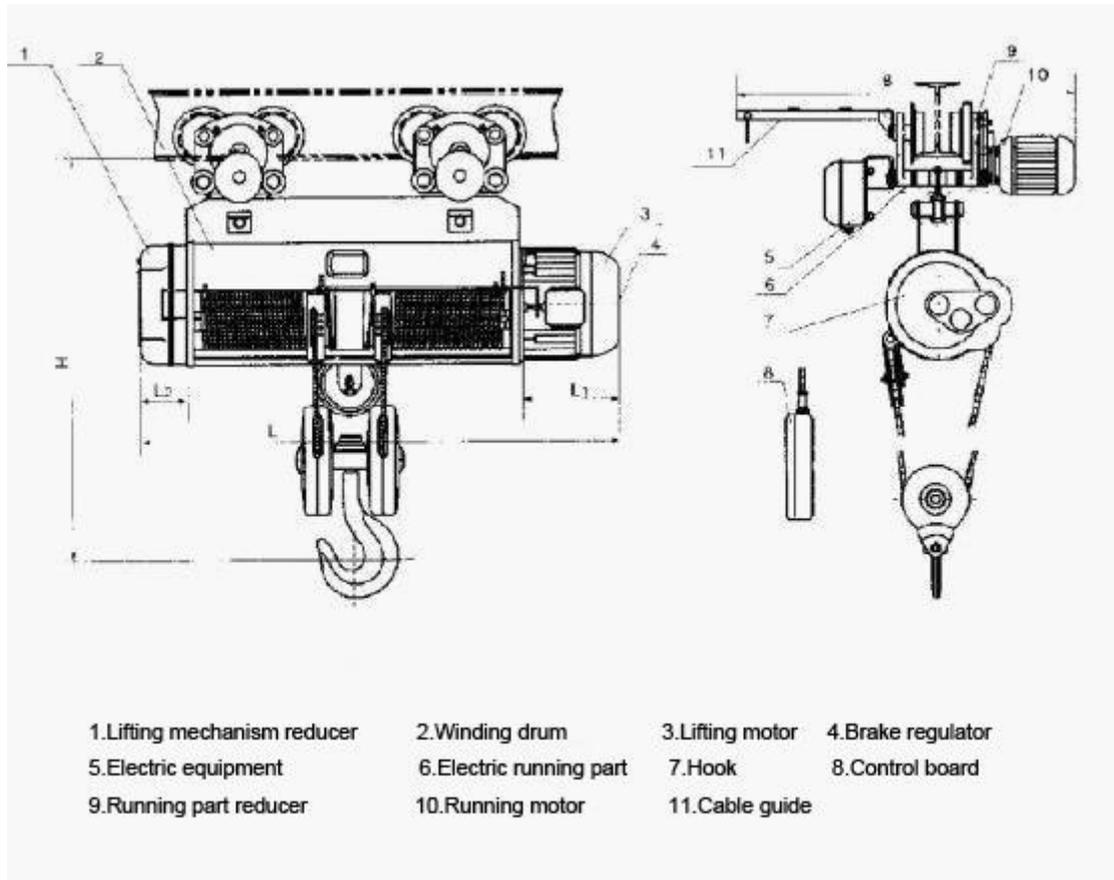
1. CD1 type 0.5t-5t, lifting height 6m-9m electric hoist outline drawing



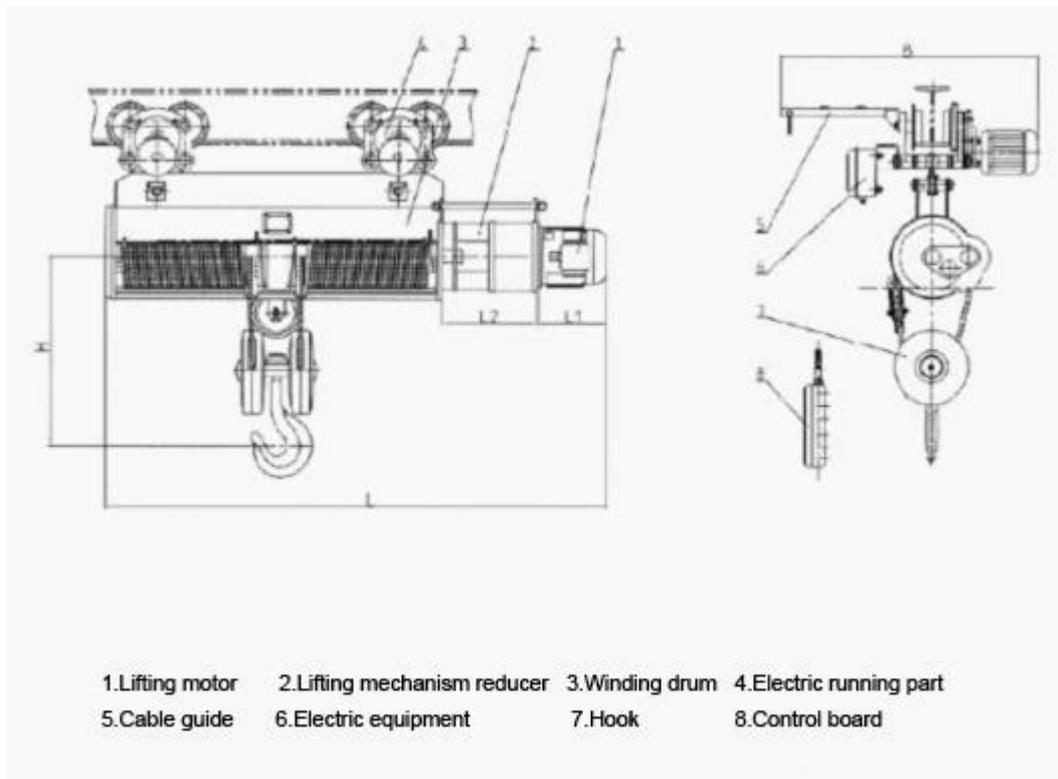
2. CD1 type 0.5t-5t, lifting height 12m-30m electric hoist outline drawing



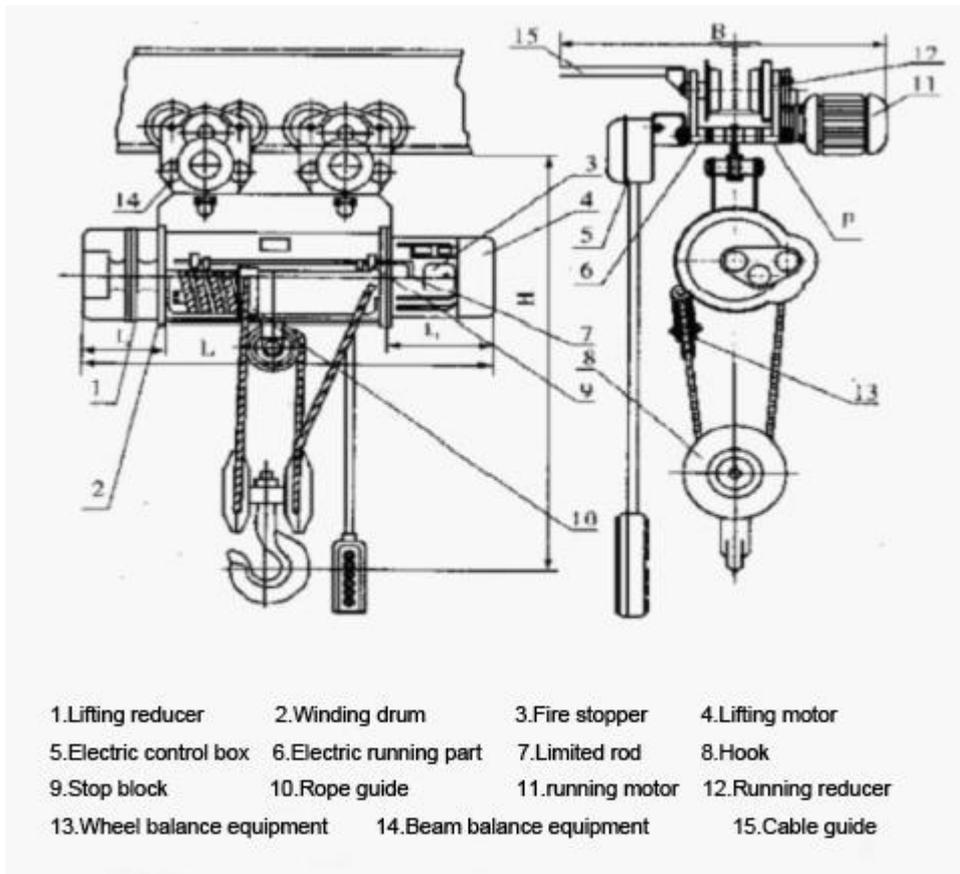
3. CD1 type 10t, lifting height 9m-30m electric hoist outline drawing



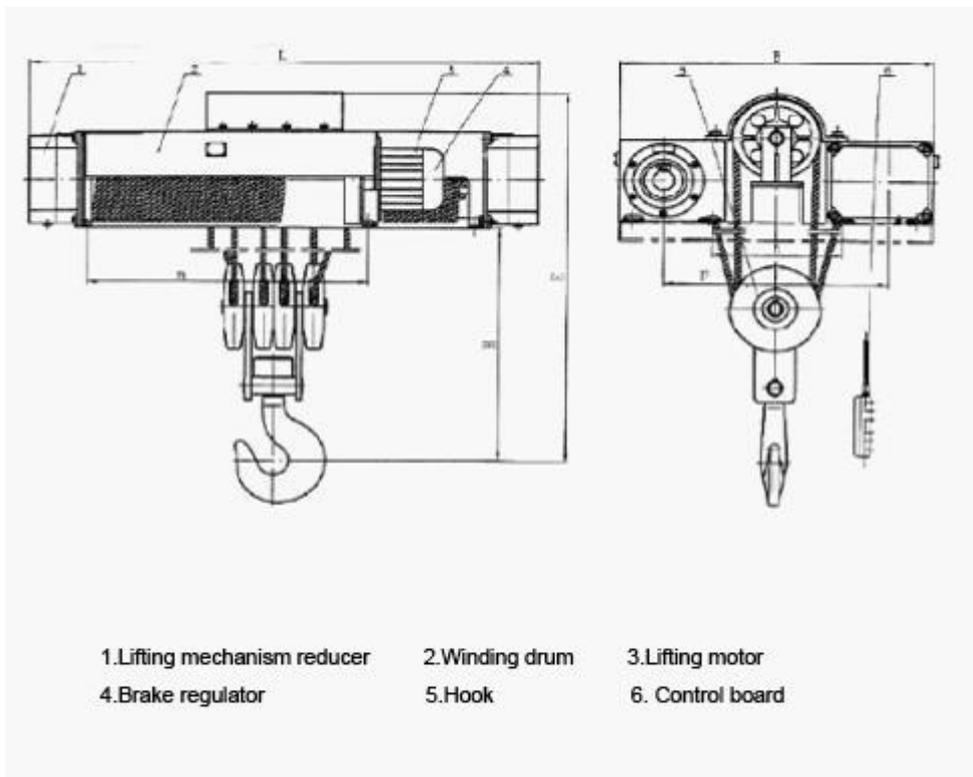
4. CD1 type 10t, lifting height 35m-100m electric hoist outline drawing



5. Lifting capacity 16t electric hoist outline drawing



6. Lifting capacity 50t electric hoist outline drawing



Part 3: Parameters

CD1 type wire rope electric hoist		2t					
Lifting speed	m/min	8					
Traveling speed	m/min	20、30					
Lifting motor	kw	3					
Traveling motor	kw	0.4					
Traveling orbit		20a~32c					
Lifting height	m	6	9	12	18	24	30
Min curvature radius	m	1.2	1.2	1.5	2	2.5	3.5
Dead weight	kg	221	232	285	309	332	353

CD1 type wire rope electric hoist		3t					
Lifting speed	m/min	8					
Traveling speed	m/min	20、30					
Lifting motor	kw	4.5					
Traveling motor	kw	0.4					
Traveling orbit		20a~32c					
Lifting height	m	6	9	12	18	24	30
Min curvature radius	m	1.2	1.2	1.5	2	2.5	3.5
Dead weight	kg	281	297	354	390	420	451

CD1 type wire rope electric hoist		5t					
Lifting speed	m/min	8					
Traveling speed	m/min	20、30					
Lifting motor	kw	7.5					
Traveling motor	kw	0.8					
Traveling orbit		25a~63c					
Lifting height	m	6	9	12	18	24	30
Min curvature radius	m	1.5	1.5	1.5	2.5	3.0	4.0
Dead weight	kg	473	495	597	646	686	726

CD1 type wire rope electric hoist		10t					
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	speed	speed(r/min)								
	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							