



## Crane Logistic & Transport Expert

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*Electric Overhead Crane  
with Hoist  
Specification*

**YUANTAI CRANE**  
*Everything is for Customer - Yuantai Crane*

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## Part 1: Overview

### 1 In General

- 1.1 Reasonable design, small size, Low headroom
- 1.2 Maximize lifting height, so as to play workshop's efficacy
- 1.3 Light dead weight, low wheel loading.
- 1.4 Advanced technology, functional, energy saving and efficient
- 1.5 Frequency control of motor speed, stable travelling



### 2 Supply Scope

Yuantai mainly manufactures electric bridge cranes with lifting capacity of 5t-32t, span of 7.5m-31.5m, lifting height of 3m-30m, working class (A3、A4), also can design and manufacture according to requirements.

### 3 Application

- 3.1 Matched using with electric hoists of CD1 model, MD1 model, etc
- 3.2 Widely used in processing workshop, metallurgical assisting warehouse, storage, yard and power station.
- 3.3 It is also used in textile and food industry instead of double-girder bridge crane.
- 3.4 Banned to be used in inflammable, explosive corrosive medium environment

### 4 Applicable scope & 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)

### 5 Products Description

Mark: For example: lifting capacity: 5t, span:10.5m, electric double girder overhead crane can be marked as LH5t-10.5m.

### 6 Structure

Mainly have bridge frame, trolley, crane travelling mechanism and electrical equipments.

#### Bridge Frame

Consisted with main girder, end girder, walking board, column, testing cage, cabin and its platform.



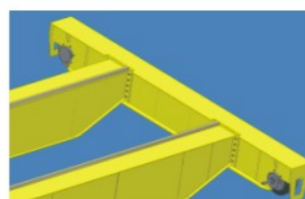
#### Main Girder

1. Double main girder, welded in box shape, The arch degrees comply with the national requirements.
2. Steel material model is Q235B or Q345B(similar as Fe37 or Fe52)
3. Main and end girders are connected by strong bolts
4. The rail can be fixed on middle of main girder or partial of main girder.
5. Metall structure is Steel with pretreatment process
6. Main welding submerged are welded automaticly, nondestructive flaw detection



#### End Girde

1. End girder is welded by reclangle tube or quality steel plate
2. Main girder and end girder is connected by bolts.



## Part 1: General Introduction

### Trolley

1. Compact structure, small size, light weight
2. Travelling rail is P-shape rail or square-steel rail
3. consisted with motor, reducer, trolley frame and hoist
4. Trinity travelling structure
5. The lifting machanism is same as hoist's



### Crane Travelling Mechanism

1. When ground control, it use soft start, small current, No axial sway
2. Motor has few and adapt to frequent starting, remarkable energy saving
3. Cabin control use ZDR series cone winding rotor,three-phase asynchronous motor or electromagnetic brake motor
4. High mechanical strength,compact structure,brake moment is adjustable
5. Motor starting is stable,safe brake
6. Crane wheel, trolley wheel and brake wheel use mid frequency induction hardening and Industrial frequency quenching processing, and Leeb hardness tester control heat treatment hardness
7. QS trinity-drive and special wheel for doble-girder crane



### Electric Parts

1. Safe touch line conductive rate is high, low pressure, set electric taxi speed is high
2. The wire ropes in electrical box are in order, convenient to repair.
3. Trolley moving's power is supplied by flat cable
4. Sliding smooth, and beautiful outlooking.

### Protection Devices

1. Outdoor cranes are equipped with lifting mechanism , electrical control box and rainproof devices
2. Set the trolley trip spacing device,
3. Anti-collision device
4. Audible and visual alarm device



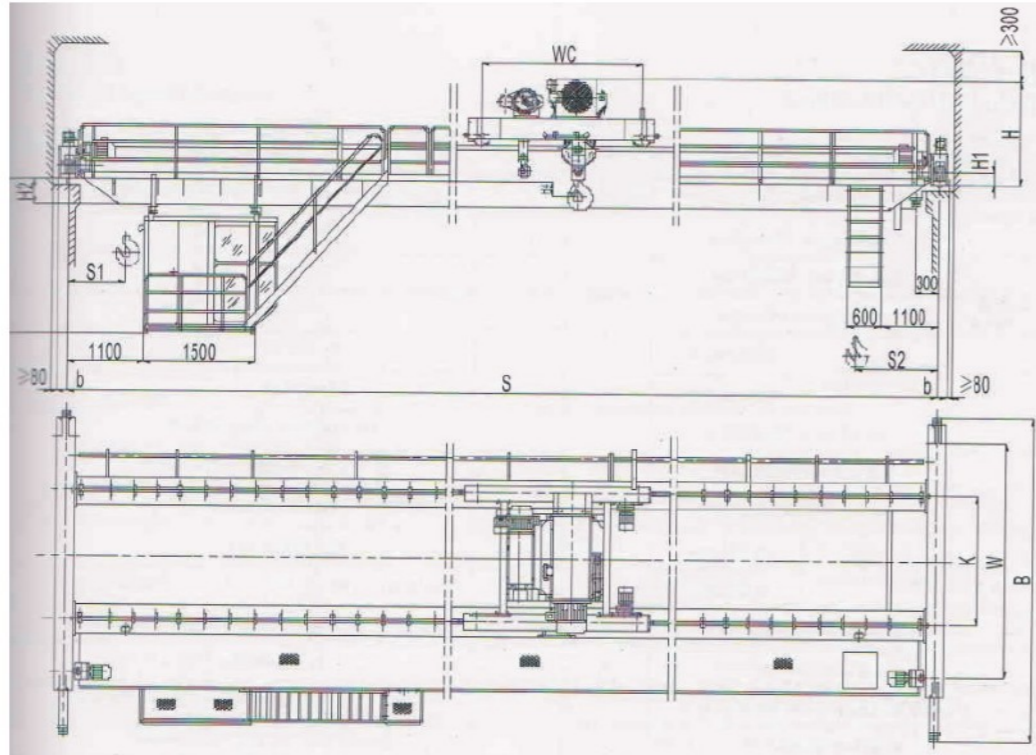
### Operation Device

1. Ground control and cabin control
2. Special cabin for bridge crane or capsule driver room
3. Open vision, comfortable operation.
4. Cam controller ,linkage platform controller
5. The cabin has open style, close style,can fixed on left or right

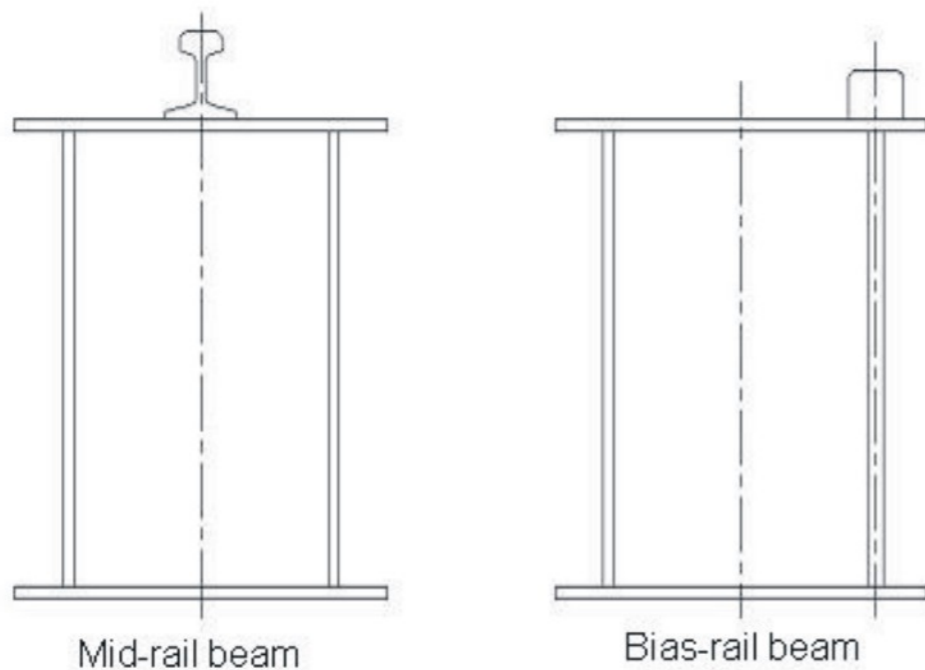


## Part 2: Diagram Part

### 1 Overall structure sketch



### 2 Main girder section view



## Part 3: Parameter

LH Electric Overhead Crane with Hoist		5t						
span(S)	m	7.5	10.5	13.5	16.5	19.5	22.5	25.5
Lifting Speed(slow)	m/min	8 (0.8)						
Trolley Speed	m/min	20						
Crane speed	m/min	20 (ground control) ; 45 (cabin control)						
Lifting Motor	kw	7.5/0.8						
Trolley Motor	kw	0.8×2						
Body weight (ground control)	kg	5230	6400	7450	8600	10560	12350	14850
Body weight (room control)	kg	5730	7100	8150	9300	11260	13100	15560
Max wheel load	KN	39	43	48	53	59	62	71
Recommended Rail		P38						
Main dimension	mm	7.5	10.5	13.5	16.5	19.5	22.5	25.5
Wheel tread to hoist top	H	1350	1350	1350	1350	1350	1350	1550
Wheel tread to main girder bottom	H2	165	165	165	265	365	465	370
Wheel tread to hook centre	H4	385	385	385	385	385	385	540
End girder wheels' distance	W	3200~3900				3200~3600		3800
End girder lenth	B	2700~3100				3700~4200		5300
Trolley track gauge	K	1400~1800						
Hook left limitation	S1	1200						
Hook right limitation	S2	1200						

## Part 4: Easily Damaged Parts

No	Name	Material
1	Active drive wheel	45
2	Passive drive wheel	45
3	Taper brake ring Plane brake ring	
4	Gear axle	45

## Part 5: Manufacture

1. The main bearing carrier (main girder) accord with JB/T3695-2008, We also purchase the steel plate according to client's requirement or crane's application.
2. The wheel material is 45# steel, gear is 20CrMnTi, axle is 45# steel.
3. Wheel heat-treating rigidity: 300 HB~380 HB, smallest hardening layer 20mm, rigidity is 260HB, there is no imperfection on wheel tread and rim inside.

## Part 6: Standards for Design, Manufacture and Installation

- |                  |  |
|------------------|--|
| 1. GB3811-2008   | Crane Design Rules                               |
| 2. GB5905-86     | Crane Testing Criterion & Procedure              |
| 3. GB6067-85     | Crane Safety Rules                               |
| 4. GB8918-1996   | Steel Wire Rope                                  |
| 5. JB/T3695-2008 | Electric Overhead Crane with Hoist               |
| 6. GB8197-87     | Mechanical Equipment Shields Safety Requirements |

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Network spread all over the world Service nearly around

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