Crane Logistic & Transport Expert

Henan Yuantai Crane Machinery Import&Export Co.,Ltd.

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Crane Logistic & Transport Expert

Explosion-proof Single-girder Overhead Crane with Electric Hoist

Specification

YUANTAI CRANE

Everything is for Customer-Yuantai Crane

Henan Yuantai Crane Machinery Import&Export Co.,Ltd.

Part 1: Introduction

1 Features

1.1 Simple structure，strong rigidity.
1.2 Good in usability, easy to manufacture.
1.3 Normal speed or frequency control, stable traveling.
1.4 The explosion-proof form is Exd
1.5 Explosion-proof mark is ExdIIBT4 or ExdIICT4，temperature group is T1—T4 inflammable gas, explosive gas of steam and air mixture(reference to table I and II).
1.6 Motor and other electrical parts should be chosen according to the explosion class.
1.7 The manufacture and inspection of Explosion-proof motor electrical parts should be according to GB3836.2-2000.

2 Scope of supply

Our company mainly manufactures cranes with lifting capacity of 1t-20t, span of 7.5m-28.5m, lifting height of 1m-30m, working class（A3), also can design and manufacture non-standard products according to requirements.

3 Applications

3.1 According to JB/T 10219-2001 《explosion-proof overhead crane》design、manufacture、installation and applied to use.
3.2 Matched with explosion-proof hoist to use.
3.3 Widely used in factories, warehouse, etc to lift and transport goods.
3.4 Applied to use in factories,the explosion transfer ability is no more than classIIB orIIC.

Appendix:

Explosion-proof class

Electrical equipment that will not ignite the explosive environment under specified conditions.

Classified into two grades:

Grade I: underground coal mine electrical equipment

Grade II: all of the electrical equipment under environment with explosive gas except coal mine, underpit operation.

Class II is classified into three categories: IIA, IIB, IIC. IIB equipment can be applied to IIA conditions, and IIC equipment can be applied to IIA, IIB conditions.

Notes: IIC means higher explosive grade but doesn't mean the best performance.

Maximum surface temperature means when the electrical equipment work in adverse operating conditions within specified scope, the highest temperature of any component of the electrical equipment caused by the possibility of ignite the surrounding explosive environment.

For example, the ignition temperature of the explosive gas in sensor operating environment is 100°C. So the highest surface temperature of any components of it should below 100°C under the extreme operating conditions.

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Part 1: Introduction

Temperature group: electrical apparatus for explosive gas atmosphere is divided into Group T1-T6 by its highest surface temperature.

T1	T2	T3	T4	T5	T6
450 °C	300 °C	200°C	135 °C	100 °C	85°C

Dangerous Area Classification

Dangerous area means the measurement of risk possibility in the region, which provides for its applicable explosion-proof types.

Dangerous area classification which is divided by IEC or CENELEC

Zone 0: Explosive gas exist a long time or all the time. And continuously exist in the area full of risks more than 1000 hours per year.

Zone 1: Explosive gas may occur or exist in the working process of instruments. And intermittent exist in the dangerous area with 10-1000 hours per year.

Zone 2: Normally, explosive gas doesn't exist or exist for a short time when happens occasionally. During accident situation, it exist in the dangerous area with 0.1-10 hours per year.

The Chinese classification is the same as the one above.

Explosion-proof Standard Analysis

1、Gas Group

Typical dangerous gases	CENELEC EN50014EC	North American NEC500 Terms CLASS1	Chinese GB-3836-1	Minimum ignition energy (μ J)
Acetylene	ⅡC	A	ⅡC	20
Hydrogen	ⅡC	A	ⅡC	20
Ethylene	ⅡB	C	ⅡB	60
Propane	ⅡA	D	ⅡA	180

Gas group and ignite temperature relate to mixture strength of explosive gas and air under certain ambient temperature and pressure.

Based on the minimum spark energy, the explosive gas has been divided into four danger classes in IEC standard adopt by China, Europe and most of the countries and regions in the world.

Part 1: Introduction

Temperature Group	T1	T2	T3	T4	T5	T6
Class						
ⅡA	methane, toluene, methyl ester, ethane, propane, acetone, acrylic acid, benzene, styrene, carbon monoxide, acetic ether, acetic acid chlorobenzene, methyl acetate, ammonia	methanol, ethanol, ethyl benzene, propanol, propylene, butanol, butane, butyl acetate, amyl acetate,cyclopentane	Pentane, amyl alcohol, hexane, hexanol, heptane, octane, ring ethanol, turpentine, naphtha, petroleum, (including gasoline), fuel oil, amyl alcohol tetrachloro	Acetaldehyde, trimethylamine		ethyl nitrite
ⅡB	Propylene, dimethyl ether, town gas	Butadiene, propylene oxide, ethylene	Dimethyl ether, acrolein, and hydrocarbon	diethyl etherethyl oxide		
ⅡC	Hydrogen, water gas	Acetylene		carbon disulfide	ethyl nitrate	

2. Temperature Group

Max. Surface Temperature (℃)	Temperature Group IEC79-8	Common Explosive Gases GB3836-1	Gas Type
450℃	T1	T1	46 kinds e.g. hydrogen, acrylonitrile, etc.
300℃	T2	T2	47 kinds,e.g. Acetylene, ethylene, etc.
200℃	T3	T3	36 kinds e.g. gasoline, butenoic aldehyde, etc.
135℃	T4	T4	6 kinds e.g. acetaldehyde, tetrafluoroethylene, etc.
100℃	T5	T5	carbon disulfide
85℃	T6	T6	ethyl nitrate and ethyl nitrite

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Part 1: Introduction

3. Explosion-proof Form

Explosion-proof Form	Mark	Explosion-proof Form	Mark
Flameproof type	Ex d	Sand type	Ex q
Increased safety type	Ex e	Encapsulated type	Ex m
Pressurized type	Ex p	n type	Ex n
Oil-immersed type	Ex o	Special type	Ex s
Intrinsically safe type	Ex ia Ex ib	Dust explosion-proof type	DIPA DIPB

4. Ex-mark

IEC Ex-mark format ExdIICT4

E: recognized by CENELEC	Ex: Ex. public mark
d: Ex. Form (Flameproof type)	Ⅱ: Equipment Group
C: Gas Group	T4: Temperature Group

4 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 Classification and specifications

Single girder explosion-proof overhead crane single speed and double speed.

Mark：for example, single girder explosion-proof overhead crane with lifting capacity of 5t, span of 10.5m, it is LB5t-10.5m, A3.

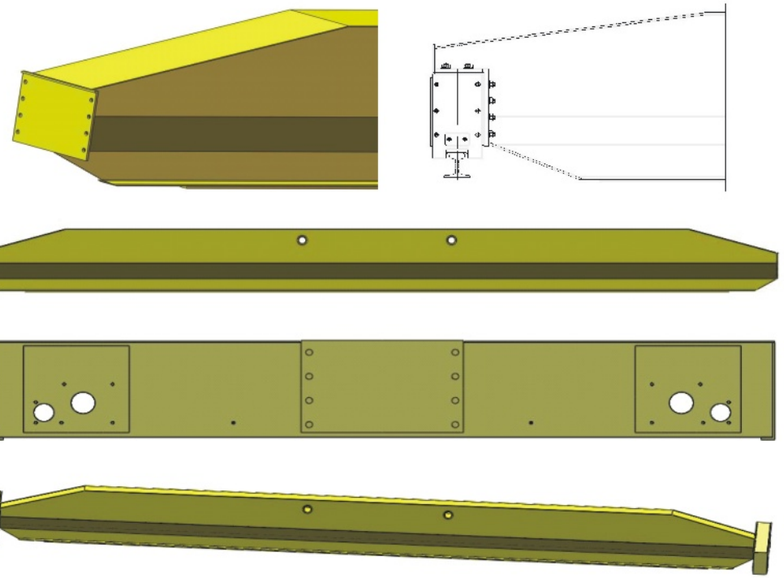
6 Main structure

Mainly composed of metal structure(main girder, end truck), explosion-proof electric wire rope hoist (lifting mechanism), traveling mechanism and electrical equipments.

Part 1: Introduction

Metal structure

1. Main girder is welded by high quality I-beam and one time molding, stamping U-slots, or welded by steel plate of box beam.
2. Steel quality is Q235B or Q345B(international Fe37 or Fe52).
3. The end truck is welded by rectangular tube or high quality steel plate.
4. The main girder and end truck is connected by hanging panel or half sit half hanging bolts, easy to transport.
5. There are holes left for installation on the main girder, easy to assemble.
6. On each end of the main girder equipped with Polyurethane buffer, to ensure the safe traveling of hoists.



Explosion-proof electric wire rope hoist

Mainly composed of lifting, traveling mechanism and electrical parts.

Lifting mechanism

Mainly composed of lifting motor,reducer,drum,coupling, wire rope, hook etc.

➢ Lifting motor

1. Adapts whole sealing tapered rotor asynchronous motor, special made from explosion-proof motor series, when cutting of the motor, make the explosion-proof hoist stop in short time.
2. The peak torque is 2-3 times of full-load torque, safe and reliable.
3. Insulation class is B or F, motor protection class is IP44/IP54.
4. The shell of explosion-proof adopts cast iron HT200, after processing, to do one minute 1×105pa hydrostatic test, ensure safety.

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Part 1: Introduction

➢ Reducer

1. Adopts standard modulus of cylindrical gears, convenient in maintenance, installed with antifriction bearing.
2. Gear and gear shaft are made up of heat treating alloy steel, with high strength.
3. The shell is high quality cast iron, assembly close, the dust can't enter easily.
4. Be composed of box cover, the primary shaft, the second shaft, the third shaft and box, reducer is one component, assembly and disassembly very convenient.
5. Reliable drive and high efficiency.
6. Box , box cover, axle hole, connection hole are automatically processed, accurately positioning, high precision, reduce the noise of traveling and prevent oil leakage.

➢ Drum

1. Drum is made of cast iron or seamless steel tube, inside the steel shell.
2. It is connected with reducer by flat key and spline, the other end is in the front of motor.
3. The wire rope is winded according to the thread groove on the drum, also with rope guide, and adjust limit switch through the block piece, ensure the hook to the limit position to cut off the power.
4. There is pressure plate in the end of the wire rope, and fixed on the drum through bolts, changing the wire rope, just remove the rope guide, don't need to remove the shell, easy maintenance.

➢ Coupling

1. The motor torque is transmitted through this elastic coupling.
2. The coupling can absorb impact load, ensure stable starting.

➢ Wire rope

1. Wire rope is the main parts of electric hoist in lifting mechanism, it influences the safely using directly, usually scrapped because of abrading, rupture,so it should be always in good lubrication state, and check the fixed situation of the end part regularly.
2. The wire rope should be scrapped when the condition is accord with the provision in GB5972, and change new rope.

➢ Hook device

1. The hook is forging by high quality carbon steel, hanging on the pressure ball bearing, and connecting with the shell by cross,make the hook moving freely.
2. The end of hook adopts card board structure.
3. When the explosion-proof is dIICT4, the head of hook adopts stainless steel.

Traveling mechanism

Mainly composed of electric trolley,operating motor.

➢ Electric trolley

1. Traveling mechanism uses electric trolley, the gear of reducer is forging by high quality steel, and adopts heat process, using rolling bearings; when the lifting height is very high, traveling mechanism and lifting mechanism use ball joints connection, ensure flexible moving, turning radius is small, long-life service.
2. The traveling speed is usually 20m/min, also can choose 30m/min.lifting height h≥12m, lifting capacity is 1t-5t, increasing a driven trolley.
3. Trolley adopts two wheel drive, and positioned on the both sides of crane, Can provide uniform efficient traction.

Part 1: Introduction

➢ Operating motor

1. Adopts BZDY series explosion-proof tapered rotor three-phase asynchronous motor, the braking part is plane brake, brake moment is small, braking process is slow, avoid swing of lifting objects when stopped
2. The working system of motor is S4, basic loading rate is 25%, 120 times starts per hour.

Crane traveling

1. Adopts separate driving, moving on the rails on both sides of span, install one driving wheel and one driven wheel, every driving wheel has one set of driving devices.
2. Driving device is made up of tapered rotor motor, reducer, explosion-proof wheels, also can adopts trinity drive, adjustment is simple and quick.
3. Compact structure, good-looking, small size, light weight.
4. Traveling stably, braking effectively, long-life service.

Electrical parts

1. The conductor of crane is cable.
2. Lifting and crane traveling can be controlled separately or working at the same time.
3. Composed of galvanized slide rail and cable pulley, sliding stably.
4. The electrical appliance adjusts speed without contact or spark module.
5. Traveling, lifting, starts are very stable.
6. The layout of control box is reasonable, easy maintenance.

Protection

1. Outside cranes equipped with lifting mechanism, control box and rainproof for driving mechanism.
2. Equipped with overload alarm, prevent the hook clashing the top.
3. Install buffer block for crane.
4. With sound and light alarm devices.
5. Other protections

Under-voltage protection、ground fault protection,short-circuit protection、 over-heating protection、overload protection、position limit protection、over-current protection、power-off protection etc.

Control ways

1. Ground control and cabin contro
2. The cabin has open style and closed style, can fixed on left or right.
3. The open direction include end open, side open and top open.
4. With special cabin used for single girder and capsule cabin.
5. Ground control includes hand shank operation and remote control operation, don't need driver.
6. Electrical control box, controlling button, position limiter are all explosion-proof, ensure safety.

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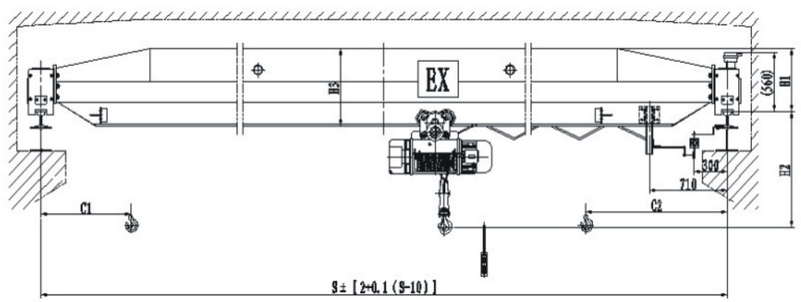
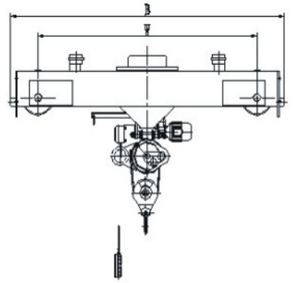
Part 2: Drawing Parts

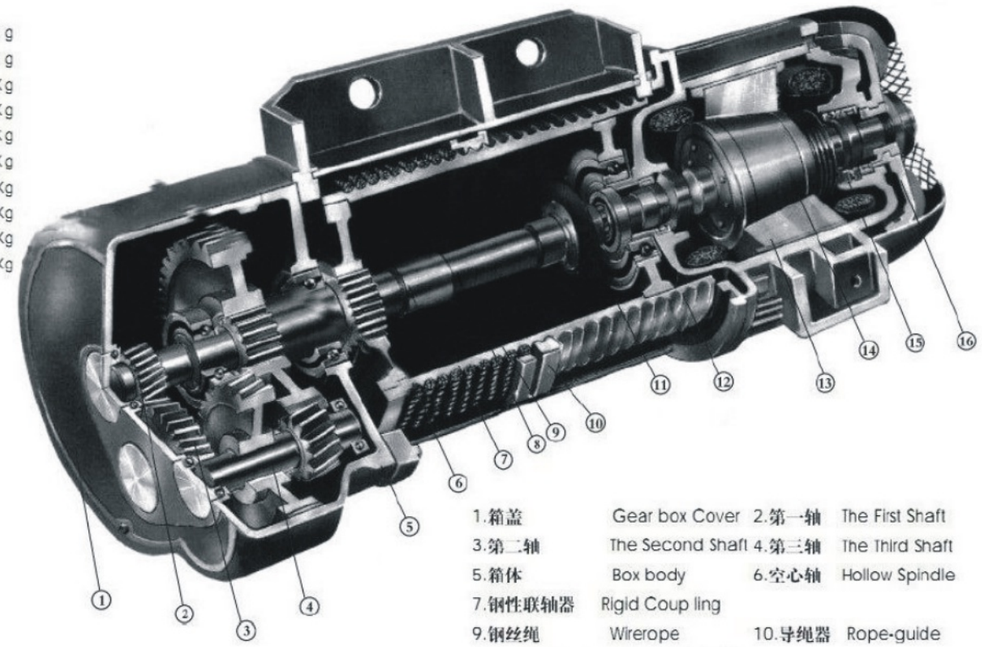
General structure





Hoist section parts

250Kg
500Kg
1000Kg
2000Kg
3000Kg
5000Kg
10000Kg
16000Kg
20000Kg
32000Kg



1.箱盖	Gear box Cover	2.第一轴	The First Shaft
3.第二轴	The Second Shaft	4.第三轴	The Third Shaft
5.箱体	Box body	6.空心轴	Hollow Spindle
7.钢性联轴器	Rigid Coup ling		
9.钢丝绳	Wirerope	10.导绳器	Rope-guide
11.弹性连轴器	Flexible coupling		
12.卷筒	Winding drum	13.定子	Stator
14.转子	Rotor	15.压簧	Return spring
16.制动器	Brake		

Part 3: Technical parameters

Part 3: Technical parameters

1.Hoist parameters

The electric hoist specifications and main technical parameters and outside dimension

type			H8（BCD）																					H8S（BMD）																	
Capacity		t	0.5			1						2						3						5						10						16					
Lifting height		m	6	9	12	6	9	12	18	24	30	6	9	12	18	24	30	6	9	12	18	24	30	6	9	12	18	24	30	6	9	12	18	24	30	6	9	12	18	24	30
Lifting speed normal/		m/min	8(0.8)			8(0.8)						8(0.8)						8(0.8)						8(0.8)						8(0.8)						4(0.4)					
Traveling speed		m/min	10			10						10						10						10						10						10					
wire rope	Rope	mm	4.8			7.4						11						13						15.5						15.5						17.5					
	wire diameter	mm	0.22			0.34						0.5						0.6						0.7						0.7						0.7					
	Structure		D-6x37+1			D-6x37+1						D-6x37+1						D-6x37+1						D-6x37+1						D-6x37+1						D-6x37+1					
I beam rail type (GB706-65)			16~28b			16-28b						20a~32c						20a~32c						25a~63c						25a~63c						25a~63c					
Ring track min		m	1.5			1.5		2		3	4	2			2.5	3	4	2.5			3	4	5	2.5			3	4	5	2.5	3.5	4	6	7.5	9	2.5	3.5	4	6	7.5	9
Lifting motors	Type		BZD21-4			BZD22-4						BZD31-4						BZD32-4						BZD41-4						BZD51-4						BZD51-4					
	Power	kw	0.8			1.5						3						4.5						7.5						13						13					
	Rotate	r/min	1380			1380						1380						1380						1400						1400						1400					
	Phase		3			3						3						3						3						3						3					
	Voltage	V	380			380						380						380						380						380						380					
	Current	A	2.4			4.3						7.6						11						18						30						30					
	Frequency	r/s	50			50						50						50						50						50						50					
Travelin motors	Type		BZDY11-4			BZDY11-4						BZDY12-4						BZDY12-4						BZDY21-4						BZDY21-4						BZDY21-4					
	Power	kw	0.2			0.2						0.4						0.4						0.8						0.8x2						0.8x2					
	Rotate	r/min	1380			1380						1380						1380						1380						1380						1380					
	Phase		3			3						3						3						3						3						3					
	Voltage	V	380			380						380						380						380						380						380					
	Current	A	0.72			0.72						1.25						1.25						2.4						2.4x2						2.4x2					
	Frequency	r/s	50			50						50						50						50						50						50					
Connecting times		times/h	120			120						120						120						120						120						120					
Working duty		JC%	25%			25%						25%						25%						25%						25%						25%					
Outside dimens ±2%	H	mm	~630			~635			~780			~860			~960			~958			~1085			1160			1310			1350						1350					
	L2		126			159						187						230						274						303						303					
	L1		276			315						341						372						425						458						458					
	L		675	747	820	818	916	1014	1210	1408	1620	880	980	1080	1280	1480	1680	991	1094	1197	1403	1815	1112	1112	1217	1322	1532	1742	1952	1650	1834	2015	2377	2730	3101	1650	1834	2015	2377	2730	3101
	m		318	390	462	401	499	597	793	989	1185	412	512	612	812	1012	1212	457	561	658	869	1075	1281	486	615	704	895	1105	1315	967	1148	1329	1691	2053	2415	967	1148	1329	1691	2053	2415
	n		190			196						240						264						320						375						375					
	h		120			124						155						173						203						243						243					
	Φ		14.5			19						23						25						31						37						37					
	B		~950			~950						~1010						~1010						~1120						~1120						~1120					
	E		490			584						740						848						998						1068						1068					
	Frequency		355			354						400						438						472						612						612					
Whole weight	D type	KG	215	218	223	247	256	254	282	300	318	325	344	363	401	439	477	411	431	471	511	551	591	617	640	688	733	778	823	1070	1190	1310	1510	1710	1910	1070	1190	1310	1510	1710	1910
	A type	KG	150	147	155	179	188	196	214	232	250	246	285	284	322	360	398	332	357	392	432	472	512	479	502	550	595	610	685	794	914	1034	1234	1434	1634	794	914	1034	1234	1434	1634

Note: lifting speed HB(BCD) type only normal speed 0.5 t~10t 8m/min, 16t 4m.min; HBS(BMD) type with normal speed & slow speed 0.5t~10t 8/0.8/min, 16t 4/0.4m/min.

Part 3: Technical parameters

2.Crane parameters

LB Explosion-proof Single-girder Crane with Electric Hoist 1t									
Span(S)	m	7.5	10.5	13.5	16.5	19.5	22.5	25.5	28.5
Lifting speed(normal)	m/min	8（0.8）							
Trolley speed	m/min	20							
Crane speed	m/min	20							
Lifting motor	kw	1.5/0.2							
Trolley motor	kw	0.2							
Ground control									
Total weight	t	1.67	1.96	2.19	2.63	3.02	3.49	4.39	5.76
Max. Wheel load	KN	8.9	9.8	10.5	11.7	12.7	13.9	16.2	19.6
Min. Wheel load	KN	3.9	4.6	5.2	6.3	7.2	8.4	10.6	14.1
Main dimensions	mm	7.5	10.5	13.5	16.5	19.5	22.5	25.5	28.5
Wheel tread to Main girder top	H1	490	490	490	490	530	580	660	745
Wheel tread to Hook centre	H2	910	910	910	955	970	970	990	1010
Main girder height	H3	550	550	550	595	650	700	800	900
End truck wheels' distance	W	2000	2000	2000	2500	2500	3000	3500	4000
End truck length	B	2500	2500	2500	3000	3000	3500	4000	4500
Hook left limitation	C1	796	796	796	796	796	796	796	796
Hook right limitation	C2	1274	1274	1274	1274	1274	1274	1274	1274
LB Explosion-proof Single-girder Crane with Electric Hoist 2t									
Span(S)	m	7.5	10.5	13.5	16.5	19.5	22.5	25.5	28.5
Liftng speed(nomal)	m/min	8（0.8）							
Trolley speed	m/min	20							
Crane speed	m/min	20							
Lifting motor	kw	3/0.4							
Trolley motor	kw	0.4							
Ground control									
Body weight	t	1.79	2.07	2.45	2.85	3.49	4.47	5.75	6.89
Max wheel load	KN	13.8	14.8	16.0	17.1	18.8	21.3	24.6	27.5
Min wheel load	KN	4.1	4.7	5.6	6.6	8.2	10.7	13.8	16.7
Main dimension	mm	7.5	10.5	13.5	16.5	19.5	22.5	25.5	28.5
Wheel tread to Main girder top	H1	490	490	490	580	660	785	820	875
Wheel tread to Hook centre	H2	1080	1080	1125	1140	1160	1135	1200	1250
Main girder height	H3	550	550	595	700	800	900	1000	1100

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Part 3: Technical parameters

End truck wheels' distance	W	2000	2000	2000	2500	2500	3000	3500	4000
End truck length	B	2500	2500	2500	3000	3000	3500	4000	4500
Hook left limitation	C1	871	871	871	871	871	871	871	871
Hook right limitation	C2	1274	1274	1274	1274	1274	1274	1274	1274
LB Explosion-proof Single-girder Crane with Electric Hoist 3t									
Span(S)	m	7.5	10.5	13.5	16.5	19.5	22.5	25.5	28.5
Liftng speed(nomal)	m/min	8（0.8）							
Trolley speed	m/min	20							
Crane speed	m/min	20							
Lifting motor	kw	4.5/0.4							
Trolley motor	kw	0.4							
Ground control									
Body weight	t	1.93	2.25	2.64	3.27	4.14	5.36	6.17	8.59
Max wheel load	KN	18.9	20.2	21.5	23.2	25.5	28.7	30.8	36.9
Min wheel load	KN	4.2	4.9	5.9	7.4	9.6	12.6	14.6	20.7
Main dimension	mm	7.5	10.5	13.5	16.5	19.5	22.5	25.5	28.5
Wheel tread to Main girder top	H1	530	530	580	660	745	820	875	925
Wheel tread to Hook centre	H2	1255	1255	1255	1275	1290	1315	1360	1660
Main girder height	H3	650	650	700	800	900	1100	1100	1200
End truck wheels' distance	W	2000	2000	2000	2500	2500	3000	2500	4000
End truck length	B	2500	2500	2500	3000	3000	3500	4000	1500
Hook left limitation	C1	820	820	820	820	820	820	820	820
Hook right limitation	C2	1290	1290	1290	1290	1290	1290	1290	1290
LB Explosion-proof Single-girder Crane with Electric Hoist 5t									
Span(S)	m	7.5	10.5	13.5	16.5	19.5	22.5	25.5	28.5
Liftng speed(nomal)	m/min	8（0.8）							
Trolley speed	m/min	20、30							
Crane speed	m/min	20							
Lifting motor	kw	7.5/0.8							
Trolley motor	kw	0.8							
Ground control									
Body weight	t	2.2	2.59	3.2	3.83	4.76	5.7	7.67	9.72
Max wheel load	KN	28.7	30.5	32.5	34.4	37.0	39.5	44.5	49.7
Min wheel load	KN	4.6	5.5	6.9	8.5	10.8	13.1	18.0	23.2

Part 3: Technical parameters

Main dimension	mm	7.5	10.5	13.5	16.5	19.5	22.5	25.5	28.5
Wheel tread to Main girder top	H1	580	580	660	745	820	875	925	1015
Wheel tread to Hook centre	H2	1460	1460	1460	1540	1500	1545	1595	1670
Main girder height	H3	720	720	800	900	1000	1100	1200	1300
End truck wheels' distance	W	2000	2000	2000	2500	2500	3000	3500	4000
End truck length	B	2500	2500	2500	3000	3000	3500	4000	4500
Hook left limitation	C1	840	840	840	840	840	840	840	840
Hook right limitation	C2	1310	1310	1310	1310	1310	1310	1310	1310
LB Explosion-proof Single-girder Crane with Electric Hoist 10t									
Span(S)	m	7.5	10.5	13.5	16.5	19.5	22.5	25.5	28.5
Liftng speed(nomal)	m/min	7（0.7）							
Trolley speed	m/min	20							
Crane speed	m/min	20							
Lifting motor	kw	13/1.5							
Trolley motor	kw	0.8							
Ground control									
Body weight	t	3.26	3.76	4.4	5.17	5.92	7.48	9.71	14.05
Max wheel load	KN	51.3	55.3	58.4	61.3	63.9	68.2	74.2	85.4
Min wheel load	KN	6.1	7.2	8.7	10.5	12.3	16.2	21.7	32.6
Main dimension	mm	7.5	10.5	13.5	16.5	19.5	22.5	25.5	28.5
Wheel tread to Main girder top	H1	720	720	820	875	875	925	1100	1200
Wheel tread to Hook centre	H2	1850	1850	1850	1900	1940	2000	1920	1920
Main girder height	H3	900	900	1000	1100	1140	1250	1350	1450
End truck wheels' distance	W	2000	2000	2000	2500	2500	3000	3500	4000
End truck length	B	2500	2500	2500	3000	3000	3500	4000	4700
Hook left limitation	C1	1293	1293	1293	1293	1293	1293	1293	1293
Hook right limitation	C2	1893	1893	1893	1893	1893	1893	1893	1893
LB Explosion-proof Single-girder Crane with Electric Hoist 16t									
Span(S)	m	7.5	10.5	13.5	16.5	19.5	22.5	25.5	28.5
Liftng speed(nomal)	m/min	3.5（0.35）							
Trolley speed	m/min	18							
Crane speed	m/min	20							
Lifting motor	kw	13/1.5							

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Part 3: Technical parameters

Trolley motor	kw	0.8							
Ground control									
Body weight	t	3.64	4.24	4.97	6.43	7.75	9.34	13.43	15.42
Max wheel load	KN	77.2	82.9	87.1	92.2	96.5	101.3	112.0	117.5
Min wheel load	KN	7.0	8.3	10.0	13.6	16.8	20.8	31.0	35.9
Main dimension	mm	7.5	10.5	13.5	16.5	19.5	22.5	25.5	28.5
Wheel tread to Main girder top	H1	820	820	875	975	1075	1130	1280	1300
Wheel tread to Hook centre	H2	2480	2480	2525	2525	2525	2570	2570	2600
Main girder height	H3	1000	1000	1100	1200	1300	1400	1500	1600
End truck wheels' distance	W	2000	2000	2000	2500	2500	3000	3500	4000
End truck length	B	2500	2500	2500	3000	3000	3500	4200	4700
Hook left limitation	C1	1293	1293	1293	1293	1293	1293	1293	1293
Hook right limitation	C2	1893	1893	1893	1893	1893	1893	1893	1893
LB Explosion-proof Single-girder Crane with Electric Hoist 20t									
Span(S)	m	7.5	10.5	13.5	16.5	19.5	22.5	25.5	
Liftng speed(nomal)	m/min	4.2（0.42）							
Trolley speed	m/min	14							
Crane speed	m/min	20							
Lifting motor	kw	18.5/2.2							
Trolley motor	kw	0.8							
Ground control									
Body weight	t	5.45	6.22	7.6	9.37	11.28	12.96	14.96	
Max wheel load	KN	97.9	105.7	112.3	118.8	125.0	130.5	135.6	
Min wheel load	KN	10.2	11.8	15.1	19.4	24.1	28.5	33.1	
Main dimension	mm	7.5	10.5	13.5	16.5	19.5	22.5	25.5	
Wheel tread to Main girder top	H1	900	900	970	1050	1130	1200	1300	
Wheel tread to Hook centre	H2	2450	2450	2480	2530	2560	2600	2600	
Main girder height	H3	1050	1050	1150	1280	1390	1500	1600	
End truck wheels' distance	W	2000	2000	2000	2500	2500	3000	3500	
End truck length	B	2700	2700	2700	3200	3200	3700	4200	
Hook left limitation	C1	1394	1394	1394	1394	1394	1394	1394	
Hook right limitation	C2	1933	1933	1933	1933	1933	1933	1933	

Remarks: the width of rail 37～70mm, if Cabin control the total weight increases 0.5t, the Max. and Min. Wheel load increase 2KN。

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Part 4: Spare parts

Number	Name	Material	Remark
1	Gear shaft	20CrMnTi	
2	Tooth circle	40Cr	
3	Driving wheel	45	
4	Driven wheel	45	
5	Hoist rope guide		
6	High speed small gear in the shaft end of hoist operating motor		
7	Tapered braking ring Plane braking ring		

Part 5: Usage

1. Commissioning: Under the condition of no-load, switch on the power, check the control system and protection devices of running mechanisms, all should be flexible and safe, then can be put in use.
2. Adjust the limit of crane and the upper and lower limit of lifting.
3. It is not allowed to exceed the stipulated lifting weight when using the crane.
4. It is not allowed to incline goods along the main girder.

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