

XZJ5410JQZ65K

XZJ5412JQZ65K

(QY65K)

TRUCK CRANE

OPERATION AND MAINTENANCE MANUAL



XUZHOU HEAVY MACHINERY CO., LTD.

XUZHOU CONSTRUCTION MACHINERY GROUP CO., LTD. CHINA

III. TECHNICAL PERFORMANCE AND SPECIFICATIONS

3.1 QY65K Truck Crane Outline and Specifications

(1). QY65K Truck Crane Outline

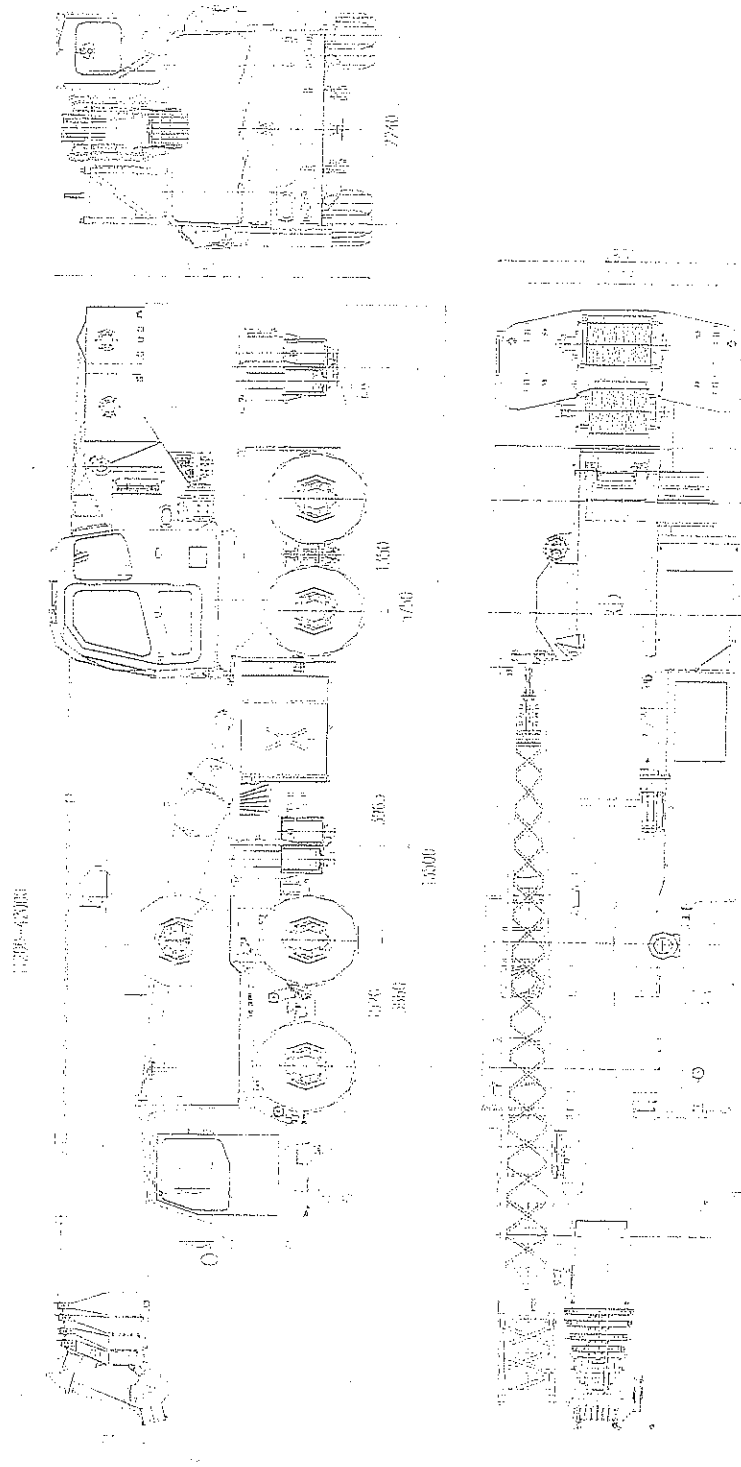


Fig. 3-1a XZJ5410JQZ65K Truck Crane Outline

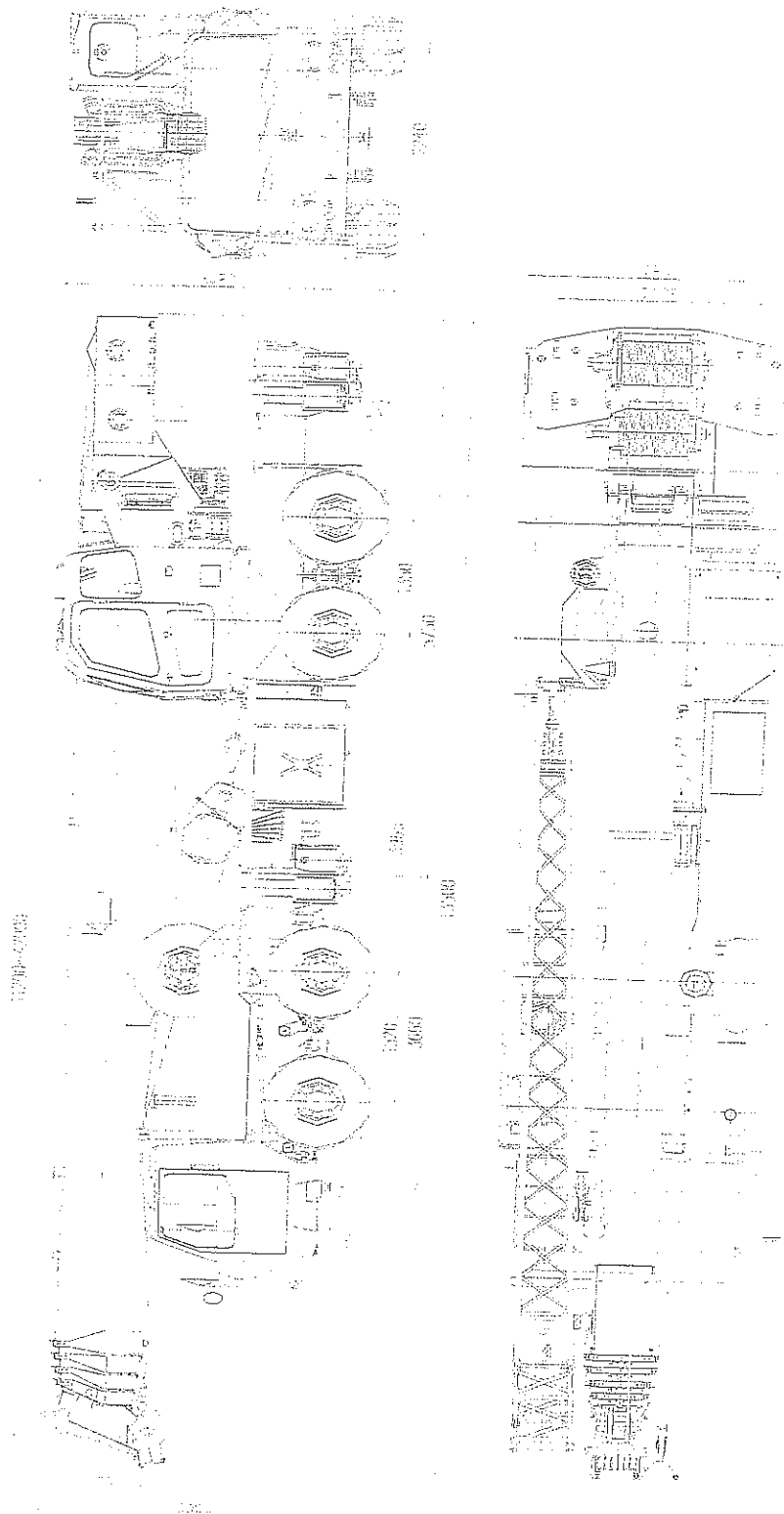


Fig. 3-1b XZJ5412JQZ65K Truck Crane Outline

(2). Technical Specifications

Main Technical Data in Travel configuration

Table 3-1

Category	Item		Unit	Parameter		
				WD615.44	WD615.46	ISLE+350
Outline Dimensions	Overall length		mm	13500		
	Overall width		mm	2800		
	Overall height		mm	3450	3450	3480
	Wheel base	1st and 2nd Axle	mm	1520		
		2nd and 3rd Axle	mm	3965		
		3rd and 4th Axle	mm	1350		
	Track	Front wheel	mm	2240		
		Rear wheel	mm	2105	2105	2075
Weight	Total vehicle curb weight in travel configuration		kg	40600	40600	41000
	Axle load	1st and 2nd Axle	kg	14600	14600	15000
		3rd and 4th Axle	kg	26000		
Power	Engine rated power		kW/ (r/min)	235/2200	266/2200	257/2100
	Engine rated torque		N.m (r/min)	1250/1500	1460/1400	1550/1400
	Engine rated rotation speed		r/min.	2200	2200	2100
Travel Performance	Travel speed	Max. travel speed	km / h	75		
		Min. travel speed	km / h	3		
	Turning diameter	Min. turning diameter	m	24		
		Min. turning diameter at boom tip	m	29		
	Min. ground clearance		mm	270		
	Approach angle		°	16.5	16.5	16
	Departure angle		°	11.3	11.3	10
	Braking distance (at 30 km/h)		m	≤10		
	Max. grade ability		%	35	41	41
	Fuel consumption of per100 km		L	42	46	46

Main Technical Data for Lifting Operation

Table 3-2

Main Technical Data for Lifting Operation					Table 3-2	
Category	Item			Unit	Parameter	
Main Lifting Performance	Max. total rated lifting capacity			t	65	
	Min. rated working radius			m	3	
	Turning radius at turntable tail			mm	3550	
	Max. load moment	Base boom		kN.m	2278.5	
		Fully-extended boom		kN.m	1029	
		Fully-extended boom + Jib		kN.m	492.8	
	Outrigger span	Longitudinal		m	5.75	
		Lateral		m	6.9	
	Hoist height	Base boom		m	11.2	
		Fully-extended boom		m	42	
		Fully-extended boom + Jib		m	58	
	Boom length	Base boom		m	11.2	
		Fully-extended boom		m	42	
		Fully-extended boom + Jib		m	57	
	Jib offset angle			°	0, 15, 30	
Working Speed	Elevating time	Boom raising		s	60	
		Boom lowering		s	80	
	Telescoping time	Fully extended		s	150	
		Fully retracted		s	100	
	Max. swing speed			r/min	2.0	
	Hoisting speed (single line)	Main winch	Full load	m/min	75	
			No load	m/min	130	
		Auxiliary winch	Full load	m/min	98	
			No load	m/min	108	
Working speed	Outrigger extending and retracting time	Outrigger beam	Extending	s	30	
			Simultaneously			
			Retracting			
		Outrigger jack	Extending	s	35	
			Simultaneously			
			Retracting			
	Exterior noise level			db(A)	≤122	
Noise level at seated position			db(A)	≤90		

(3) Total Rated Lifting Load for Boom

Working radius (m)	With 6.9m of fully-extended outriggers, without front jack, boom over side or over rear; with front jack down, 360° operation of the boom																	
	Base boom 11.2 m			Mid-extended boom 15.05 m			Mid-extended boom 18.9 m			Mid-extend boomed 26.6 m			Mid-extended boom 34.3 m			Fully-extended boom 42 m		
	Lifting load (kg)	Boom angle (°)	Lifting height (m)	Lifting load (kg)	Boom angle (°)	Lifting height (m)	Lifting load (kg)	Boom angle (°)	Lifting height (m)	Lifting load (kg)	Boom angle (°)	Lifting height (m)	Lifting load (kg)	Boom angle (°)	Lifting height (m)	Lifting load (kg)	Boom angle (°)	Lifting height (m)
3	65000	70.11	11.2															
3.5	61000	67.31	11.1															
4	54000	64.40	11.0	45000	72.0	15.2	36000	79.36	19.2									
5	46500	58.35	10.7	40000	67.91	14.8	35000	73.38	19.0	22000	79.23	27.0						
6	38000	51.78	9.5	33000	63.58	14.2	32000	70.22	18.5	22000	77.31	26.7						
7	28000	44.36	8.5	26000	59.0	13.6	25000	66.75	18.0	21000	75.25	26.4	16500	80.0	34.5			
8	20000	35.59	7.1	19500	54.13	12.8	18500	63.14	17.5	19000	73.01	26.0	15500	78.52	34.1			
9	16000	23.90	5.0	15500	48.97	12.0	15000	59.47	16.9	16000	70.55	25.6	14500	76.91	33.8	9000	79.96	42.0
10				12800	43.37	10.8	12500	55.61	16.2	13500	68.05	25.2	13000	75.10	33.5	8800	78.82	41.6
12				9000	29.51	7.7	8500	47.43	14.4	10000	63.02	24.1	10500	71.44	32.7	8000	76.29	41.0
14							6000	37.95	11.9	7500	57.79	22.8	8000	67.51	31.7	7300	73.69	40.2
15							5000	32.30	10.3	6500	55.06	22.0	7000	65.52	31.1	7000	72.37	39.8
16										5500	52.26	21.1	6200	63.54	30.6	6400	70.85	39.3
18										4500	46.34	19.2	4800	59.47	29.3	5000	67.55	38.3
20										3200	39.60	16.8	3800	55.29	27.8	4000	64.31	37.2
22										2500	31.84	13.4	2900	50.85	26.0	3100	60.93	35.9
24													2200	45.90	23.9	2500	57.59	34.5
26													1700	41.08	21.5	2000	54.13	32.8
28													1200	35.37	18.5	1600	50.55	31.0
29													1000	32.20	16.6	1400	48.67	29.9
30																1200	46.72	28.8
32																850	42.6	26.2
34																550	38.2	23.2
Parts of line	12			10			8			5			4			3		
Telescoping rate of boom section	2nd	0%		50%			100%			100%			100%			100%		
	3rd	0%		0%			0%			33%			33%			100%		
	4th	0%		0%			0%			33%			33%			100%		
	5th	0%		0%			0%			33%			33%			100%		
Min. boom angle	23.9~70.11°			29.51~72.0°			32.3~79.36°			31.84~79.23°			32.20~80.0°			38.2~79.96°		
Weight of hook block							616kg (main hook block), 300kg (medium hook block)											

(4) Table 3-4 Total Rated Lifting Load for Jib

With 6.9m of fully-extended outriggers, without front jack, boom over side or over rear; with front jack down, 360° operation of the boom												
42m						15m						
8.5m			0°			15°			30°			Lifting height (m)
Jib offset angle	Working radius (m)	Lifting height (m)	Lifting load (kg)	Working radius (m)	Lifting height (m)	Lifting load (kg)	Working radius (m)	Lifting height (m)	Lifting load (kg)	Working radius (m)	Lifting height (m)	
Boom angle												
78°	4000	11.9	51.8	2700	13.7	50.9	2400	15.2	49.5	14	57.9	53.7
75°	3600	14.4	51	2500	16.1	50	2300	17.6	48.5	16.8	57	52.5
72°	3200	16.9	50.1	2300	18.5	49	2200	19.9	47.4	19.6	56	51.1
70°	2900	18.5	49.4	2200	20.1	48.2	2100	21.4	46.6	21.4	55.2	50.1
65°	2400	22.4	47.5	2000	23.9	46.2	1900	25.1	44.4	25.8	53	47.4
60°	1850	26.1	45.2	1800	27.5	43.8	1700	28.6	41.9	30	50.4	44.4
55°	1250	29.6	42.7	1200	30.9	41.1	1100	31.9	39.1	34	47.5	41.1
50°	700	32.9	39.8	650	34.1	38.1	600	34.9	36			
With 5.6m of half-extended outriggers, without front jack, boom over side or over rear; with front jack down, 360° operation of the boom												
78°	4000	11.9	51.8	2700	13.7	50.9	2400	15.2	49.5	14	57.9	53.7
75°	3600	14.4	51	2500	16.1	50	2300	17.6	48.5	16.8	57	52.5
72°	3200	16.9	50.1	2300	18.5	49	2200	19.9	47.4	19.6	56	51.1
70°	2900	18.5	49.4	2200	20.1	48.2	2100	21.4	46.6	21.4	55.2	50.1
65°	1600	22.4	47.5	1500	23.9	46.2	1400	25.1	44.4	25.8	53	47.4
60°	800	26.1	45.2	800	27.5	43.8	700	28.6	41.9	30	50.4	44.4
Weight of hook block	100 kg (for 4000 kg load)											

Notes on Table 3-3 and Table 3-4:

- ✧ Total rated loads shown in the tables are based on condition that the crane is set on firm ground horizontally.
- ✧ Use the next lower rated capacity when working radius between the figures on the table.
- ✧ The boom telescopes in sequence plus synchronization, i.e. when extend boom, fully extending 2nd boom section before extending 3rd, 4th and 5th ones; when retract boom, fully retracting 3rd, 4th and 5th boom sections before retracting 2nd one.
- ✧ Each total rated load includes weight of the hooks and slings. The working radius in the tables is the actual value including loaded boom deflection.
- ✧ Boom angle, working radius and lifting height in table 3-3 and table 3-4 are values for reference.
- ✧ When boom angle is 0°, max. permitted boom length is 34m.
- ✧ Total rated loads shown in table 3-3 are the values without jib attached. When a jib is attached on the boom head, reduce 2000kg from the total rated load.

Table 3-5

Total Rated Lifting Load for single top (in kg)

Boom length (m)	11.2~15.05	18.9	26.6	34.3	42
Oval cross-section boom and 6.9m of fully-extended outriggers	4000	4000	4000 kg at 5~18m radius, others are the same as those with 26.6 m of boom length at 20~22m radius in Table 3-3	4000 kg at 7~18m radius, others are the same as those with 34.3 m of boom length at 20~29m radius in Table 3-3	4000 kg at 9~20m radius, others are the same as those with 42m of boom length at 22~34m radius in Table 3-3
Oval cross-section boom and 5.6m of half-extended outriggers	4000	4000 kg at 4~12m radius, others are the same as those with 18.9 m of boom length at 14~15m radius in Cont'd Table 3-3	4000 kg at 5~15m radius, others are the same as those with 26.6 m of boom length at 16~22m radius in Cont'd Table 3-3	4000 kg at 7~16m radius, others are the same as those with 34.3 m of boom length at 18~28m radius in Cont'd Table 3-3	4000 kg at 9~16m radius, others are the same as those with 42 m of boom length at 18~29m radius in Cont'd Table 3-3

(5) Lifting Height Chart

Min. distance from the center of hook block to the center of sheave block

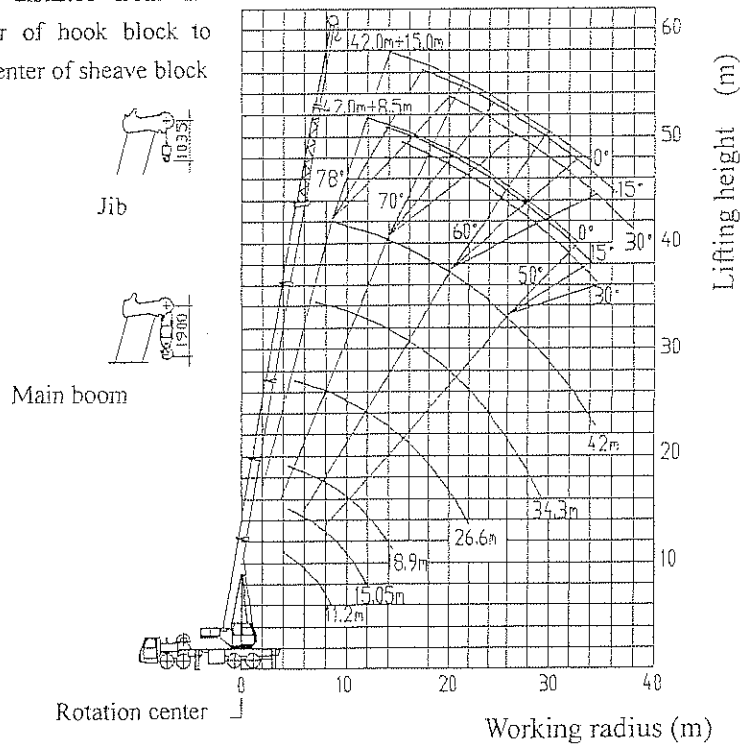


Fig. 3-2 Lifting Height Chart

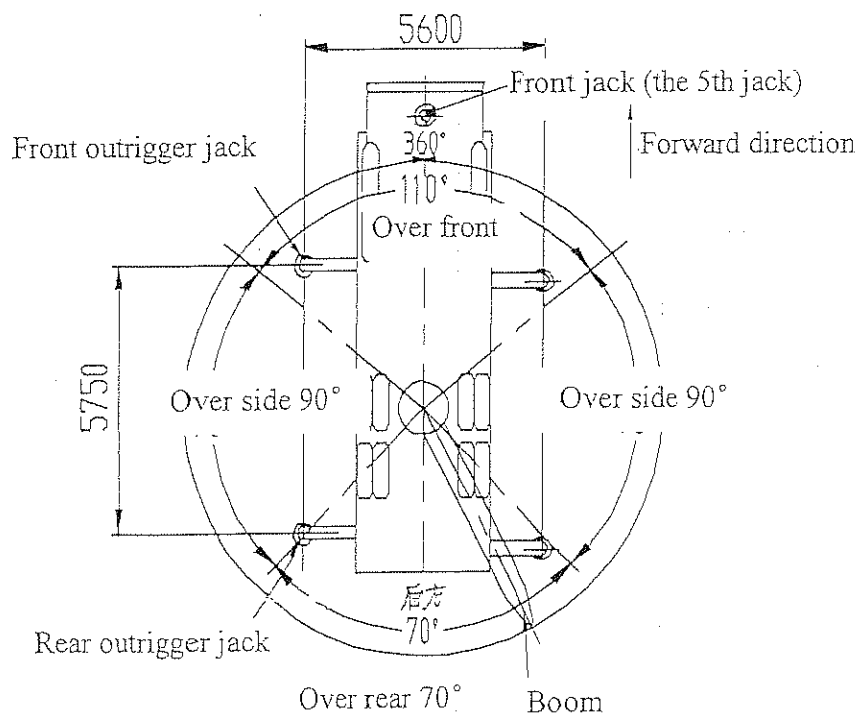
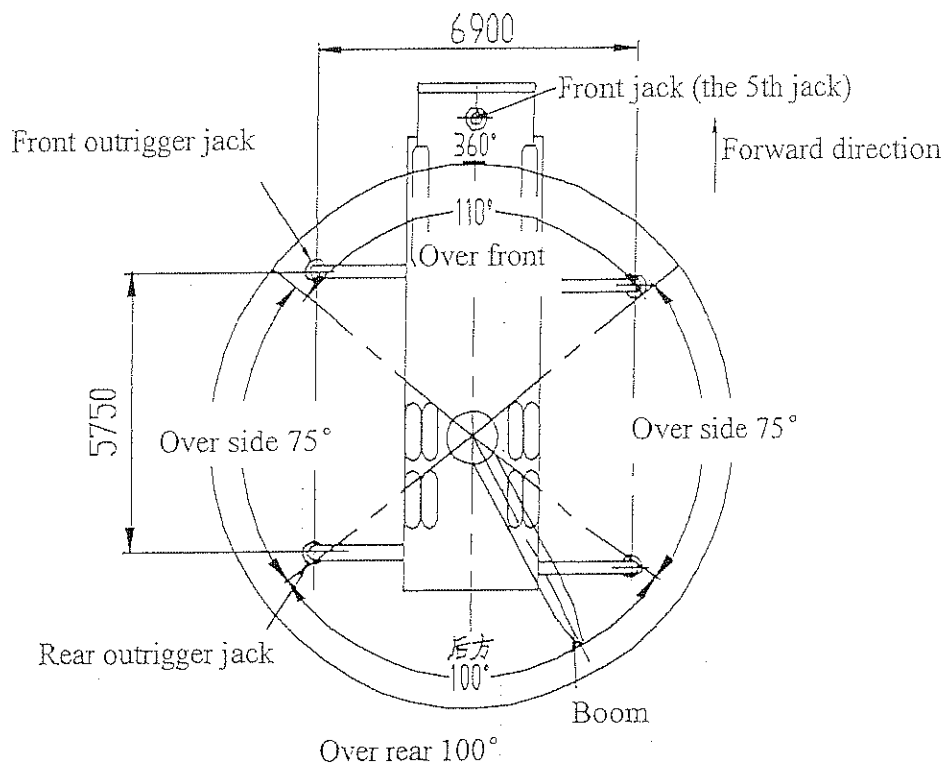


Fig. 3-3 Crane Working Areas

3.2 Structure and Specifications of Main Parts

- (1). Slewing bearing
3-row roller bearing as connection of the crane and the carrier, 360° swing.
Model: 131.25.1480.302.04.03F
- (2). Oil Pump
Model: CBGJ2080EPA2080EPA1040EPA1010
Rated working pressure: 25Mpa Peak pressure: 25MPa
- (3). Slewing Gear
Model: GJB17T3B104-15 planetary reducer
Reduction ratio: 104
Motor: A2F28W2Z6 axial piston motor
- (4). Winch (main and auxiliary)
Model: GJT26W2B51-02 planetary reducer (main winch)
GJT23W2B48-02 planetary reducer (auxiliary winch)
Reduction ratio: 50.5 (main winch), 48.2 (auxiliary winch)
Motor: A6V107EP2D/63W-VZB020B (main winch)
A2FM80/61W-NAL020 (auxiliary winch)
Wire rope: 20NAT4V×39S+5FC-1870 (main winch)
18NAT4V×39S+5FC-1870 (auxiliary winch)
Wire rope length: 185m (main winch), 125m (auxiliary winch)
- (5). Boom
1 base boom and 4-section telescopic boom, with oval (or broad hexagonal) cross-section.
Boom length: 11.2m (min.), 42.0m (max.)
Telescoping way: double cylinders plus wire ropes, telescoping in sequence plus synchronization.
- (6). Jib
Structure: lattice frame
Jib length: 8.5m and 15m
- (7). Elevating Cylinder
Single cylinder for front support elevation Stroke: 2.78m
- (8). Telescoping Cylinder
Double cylinders plus wire ropes, telescoping in sequence plus synchronization.
Stroke: 7.7m (strokes for 1st and 2nd stage cylinder are same.)
- (9). Operator's Cab
All steel structure, equipped with safety glass, heater and control instrumentation, with a wide field of vision.
- (10). Crane Main Valve
Model: LV22-1Y 310A

