

**XZJ5254JQZ25  
(QAY25)**

**ALL TERRAIN CRANE**

**XUZHOU HEAVY MACHINERY CO., LTD.**

**XUZHOU CONSTRUCTION MACHINERY GROUP CO., LTD.**

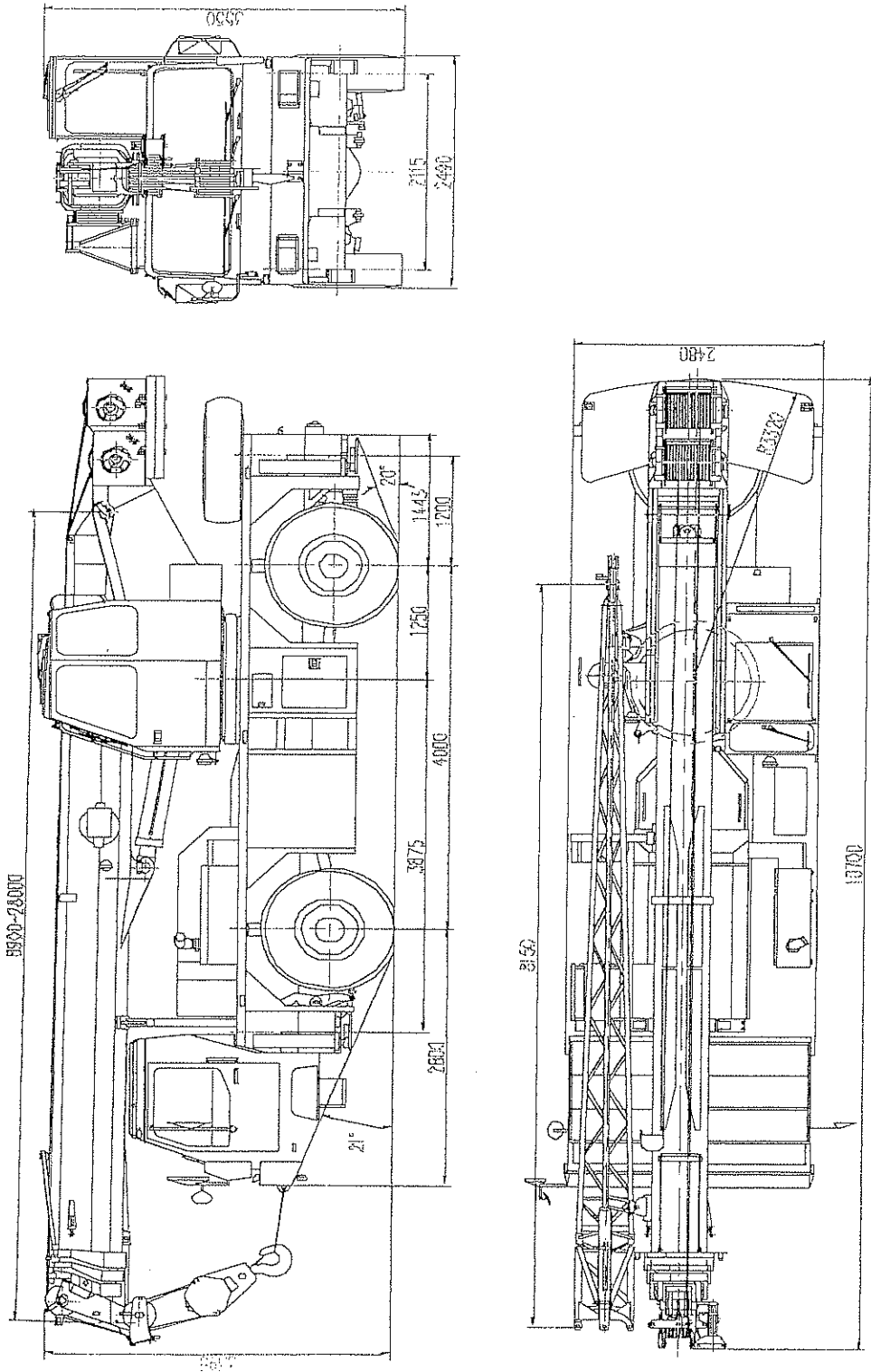


Fig.2-1 QAY25 All Terrain Crane Outline

Total Rated Lifting Load For Boom

—On Full-extend Outriggers ( Extension width 6200mm), 360° Swing

Table 2-3

Working radius (m)	Boom length 8900mm		Boom length 15200mm		Boom length 21600mm		Boom length 28000mm	
	Lifting load (t)	Lifting height (m)	Lifting load (t)	Lifting height (m)	Lifting load (t)	Lifting height (m)	Lifting load (t)	Lifting height (m)
3.0	25	8.86						
3.5	25	8.51						
4.0	24	8.11	15	15.42				
4.5	21.5	7.6	14.2	15.21				
5.0	18.7	7.09	13.5	14.97	9	21.89		
5.5	17	6.43	12.8	14.7	8.5	21.71		
6.0	14.3	5.62	12.2	14.41	7.7	21.52	6.0	28.29
6.5	12.3	4.52	11.5	14.1	7.3	21.32	5.6	28.14
7.0			10.2	13.76	7	21.1	5.3	27.98
8.0			8.7	12.98	6.4	20.63	4.8	27.62
9.0			7.15	12.05	5.9	20.08	4.4	27.22
10.0			6.0	10.93	5.1	19.46	4.1	26.78
11.0			5.1	9.53	4.7	18.77	3.8	26.29
12.0			4.4	7.69	4.4	17.98	3.5	25.75
13.0					3.9	17.1	3.2	25.15
14.0					3.45	16.08	3.0	24.49
15.0					3.0	14.92	2.8	23.78
16.0					2.7	13.58	2.6	22.99
17.0					2.4	11.96	2.5	22.12
18.0					2.1	9.94	2.2	21.16
19.0							2.0	20.1
20.0							1.8	18.93
22.0							1.4	16.09
24.0							1.1	12.19
Parts of line	10		6		4		3	
Weight of hook block	250kg							

Total Rated Lifting Load For Boom

—On Mid-extend Outriggers ( Extension width 4400mm), 360° Swing

Table 2-4

Working radius (m)	Boom length 8900mm		Boom length 15200mm		Boom length 21600mm		Boom length 28000mm	
	Lifting load (t)	Lifting height (m)	Lifting load (t)	Lifting height (m)	Lifting load (t)	Lifting height (m)	Lifting load (t)	Lifting height (m)
3.0	25	8.86						
3.5	25	8.51						
4.0	21.6	8.11	15	15.42				
4.5	16.2	7.6	14.2	15.21				
5.0	13.0	7.09	13.5	14.97	9	21.89		
5.5	11.0	6.43	11.5	14.7	8.5	21.71		
6.0	9.3	5.62	9.8	14.41	7.7	21.52	6.0	28.29
6.5	8.0	4.52	8.5	14.1	7.3	21.32	5.6	28.14
7.0			7.3	13.76	7	21.1	5.3	27.98
8.0			5.8	12.98	5.9	20.63	4.8	27.62
9.0			4.75	12.05	4.9	20.08	4.4	27.22
10.0			3.9	10.93	4.0	19.46	4.1	26.78
11.0			3.3	9.53	3.4	18.77	3.5	26.29
12.0			2.8	7.69	2.9	17.98	3.0	25.75
13.0					2.5	17.1	2.6	25.15
14.0					2.1	16.08	2.2	24.49
15.0					1.85	14.92	1.9	23.78
16.0					1.6	13.58	1.7	22.99
17.0					1.4	11.96	1.5	22.12
18.0					1.2	9.94	1.3	21.16
19.0							1.1	20.1
20.0							0.9	18.93
Parts of line	10		6		4		3	
Weight of hook block	250kg							

Total Rated Lifting Load For Jib

—On Full-extend Outriggers ( Extension width 6200mm), 360° Swing

Table 2-5

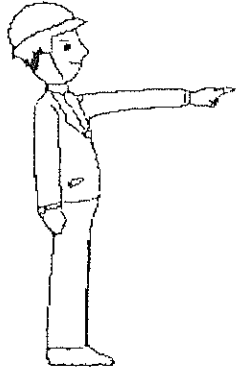
Boom angle (Deg.)	Offset 0°		Offset 15°		Offset 30°	
	Radius (m)	Lifting load (kg)	Radius (m)	Lifting load (kg)	Radius (m)	Lifting load (kg)
78°	7.05	2800	8.84	2500	10.42	1900
75°	8.87	2800	10.63	2400	12.15	1750
72°	10.67	2750	12.4	2200	13.85	1700
70°	11.85	2650	13.54	2100	14.96	1600
65°	14.73	2150	16.34	1800	17.65	1500
60°	17.48	1800	19.0	1600	20.18	1400
55°	20.08	1450	21.5	1350	22.55	1230
50°	22.52	1100	23.83	1050	24.74	1000
40°	26.63	500	27.88	460	28.5	400
Parts of line	1					
Weight of hook block	55kg					

Total Rated Lifting Load For Boom

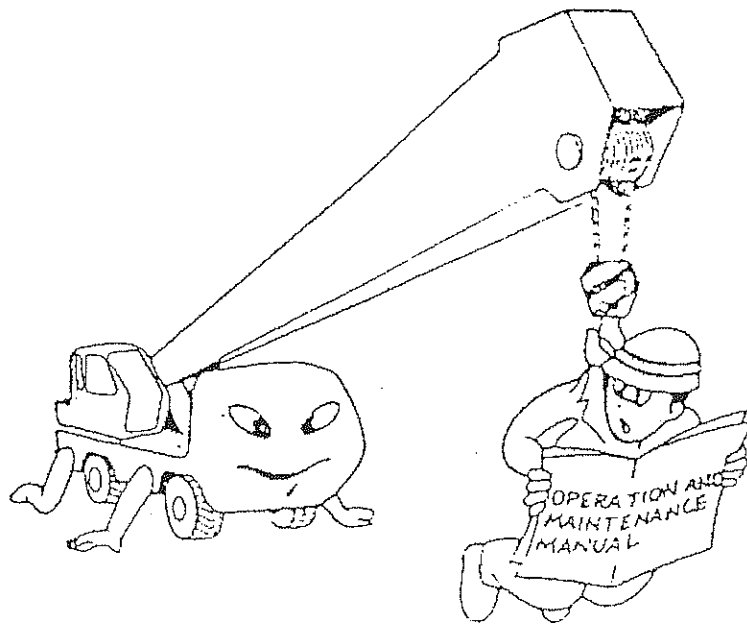
—On Tires

Table 2-6

Radius (m)	Boom at the rear		360° Swing	
	Boom length 8900mm	Boom length 15200mm	Boom length 8900mm	Boom length 15200mm
3.0	6000	5950	5460	4970
3.5	5180	5320	4550	4130
4.0	4620	4760	3820	3500
4.5	4340	4200	3220	2940
5.0	3850	3780	2730	2450
5.5	3320	3430	2340	2100
6.0	2870	3080	2000	1820
6.5	2520	2800	1680	1540
7.0		2520		1330
8.0		1960		980
9.0		1470		700
10.0		1050		500
Boom angle	23°~60°	41°~73°	23°~60°	41°~73°
Parts of line	10	6	10	6
Weight of hook block	250kg			



## 2. TECHNICAL PERFORMANCE AND SPECIFICATIONS



## 2.1 QAY25 All Terrain Crane Outline and Specifications

- (1). QAY25 All Terrain Crane Outline (Fig.2-1)
- (2). Technical Specifications (Table 2-1, Table 2-2)
- (3). Total Rated Lifting Load For Boom (Table 2-3, Table 2-4, Table 2-6)
- (4). Total Rated Lifting Load For Jib (Table 2-5)
- (5). Crane Lifting Height Curves (Fig.2-2)
- (6). Crane Working Area (Fig.2-3)
- (7). Crane In Lifting Operation State (Fig. 2-4)

Main Technical Data in Travel State:

Table 2-1

Category	Item		Unit	Parameters	
Outline Dimensions	Overall length		mm	10700	
	Overall width		mm	2490	
	Overall height		mm	3550	
	Wheel space		mm	4000	
	Track		mm	2110	
Weight	Total weight in travel state		kg	25200	
	Axle load	Front axle	kg	12600	
		Rear axle	kg	12600	
Power	Engine rated output		kW/(r/min)	184 / 2200	
	Engine rated torque		N.m(r/min)	958 / 1400	
	Engine rated running speed		r/min.	2200	
Travel Performance	Travel speed	Max. travel speed		km / h	70
		Min. stable travel speed		km / h	2
	Turning diameter	Min. turning diameter	Front-axle steering	m	20
			All-axle steering	m	14
		Min. turning diameter at boom tip	Front-axle steering	m	24.9
			All-axle steering	m	18.1
	Min. ground clearance		mm	360	
	Approach angle			21 °	
	Departure angle			20 °	
	Braking distance ( at 30 km/h)		m	≤10	
	Max. gradeability			58 %	
	Fuel consumption of 100 km		l	40	



Main Technical Data for Lifting Operation

Table 2-2

Category	Item		Unit	Parameters	
Lifting Performance	Max. total rated lifting capacity		t	25	
	Min. rated working radius		m	3	
	Turning radius at swing table tail		mm	3320	
	Max. load moment	Base boom		kN.m	948
		Full-extend boom		kN.m	416
		Full-extend boom + Jib		kN.m	310
	Outrigger extension	Longitudinal distance		m	6.325
		Lateral distance		m	6.2
	Lifting height	Base boom		m	8.8
		Full-extend boom		m	28.2
		Full-extend boom + Jib		m	36.6
	Boom length	Base boom		m	8.9
		Full-extend boom		m	28
Full-extend boom + Jib		m	28 + 8.15		
Jib offset			0° , 15° , 30°		
Working Speed	Boom elevating time	Boom raising	s	30	
	Boom telescoping time	Full-extend / full-retract	s	40	
	Max. swing speed		m/min	2.5	
	Outrigger extending and retracting time	Outrigger beam	Extending synchronously	s	25
			Retracting synchronously	s	18
		Outrigger jack	Extending synchronously	s	25
			Retracting synchronously	s	18
	Hoisting speed (single line)	Main winch		m/min	140
Auxiliary winch		m/min	60		
Noise limit	Cab exterior noise level		dB (A)	≤118	
	Noise level at seated position		dB (A)	≤90	

Notes:

- ◇ The data shown in the tables are the maximum allowable lifting capacities when the crane is set up on level and firm ground, the figures above the bold lines are based on crane structural strength and those below the bold lines are based on crane stability.
- ◇ The total rated lifting loads include the weight of hook block and slings.
- ◇ The working radii in the tables are the actual values including loaded boom deflection.
- ◇ The total rated lifting loads for single top (boom tip sheave) are the same with those for the jib of offset 0°.
- ◇ The suspension must be locked during load lifting, and do not touch any switch to adjust the suspension.
- ◇ Use off-road (or reverse) gear for pick and carry operation, and the maximum speed restricted to less than 1.5km/h and with boom over the rear.
- ◇ The tire inflation pressure is 1MPa.
- ◇ Except on full-extend outriggers, the boom angle do not exceed the values listed in the tables, even without load.
- ◇ Lifting operation is permissible under the condition of less than wind force 7.

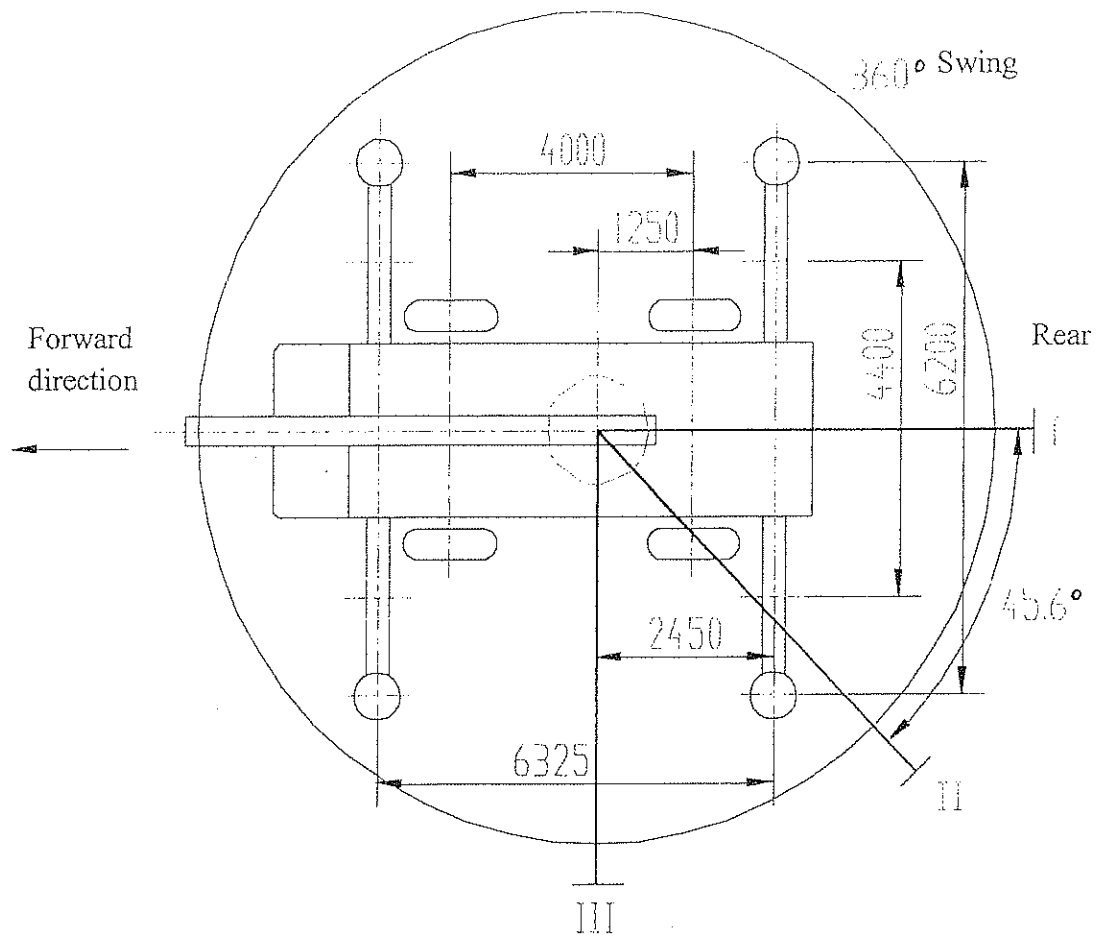


Fig. 2-3 Crane Working Area

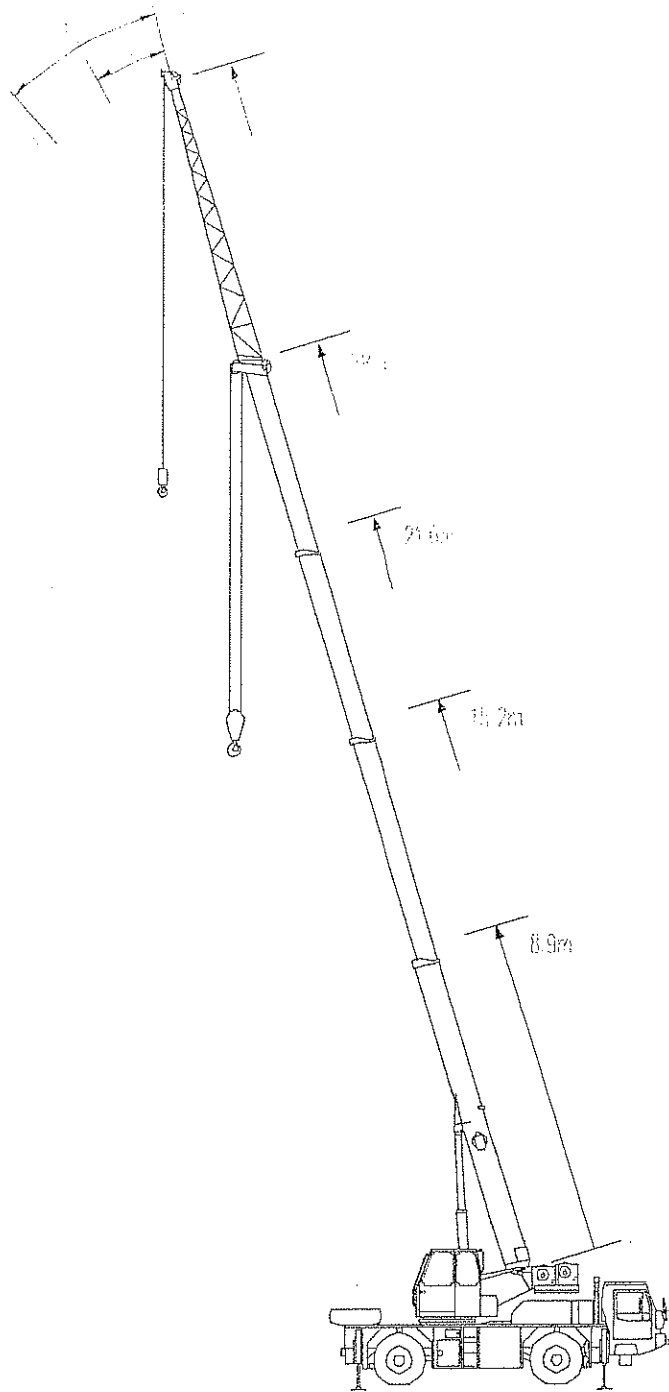


Fig. 2-4 Crane In Lifting Operation State

## 2.2 Main Parts Structure and Specifications

### (1). Slewing Ring

Single-row 4-point contact ball type slewing ring as the connection of the superstructure and the carrier, 360° swing.

Model: 011.45.1250.101.04.11

### (2). Oil Pump

Model: A11VLO145LRDS/10R-NSD12K02

+1PF2G3-3X/038RD07MBK; +1PF2G2-4X/008LN20MHL

Rated working pressure: 31MPa

### (3). Slewing Gear

Model: GJB17T3-79-01 planetary reducer

Reduction ratio: 78.9

Motor: A2F28W6.1Z4 axial piston motor

### (4). Winch (main and auxiliary)

Model: GJT17W2-45-01 planetary reducer

Reduction ratio: 45

Motor: A2FM45/61W-PAB191+BVD20W16L/41B-V01K12D0600S00 axial piston motor

Wire rope type: 14NAT 4V×39S-FC-1870

Wire rope length: 155m (main winch), 90m (auxiliary winch).

### (5). Boom

1 base section and 3 telescopic sections, with round angle hexagonal cross-section.

Single cylinder plus wire ropes for synchronous telescoping.

Boom length: 8.9m (minimum), 28m (maximum).

### (6). Jib

Lattice type structure

Jib length: 8.15m.

### (7). Elevating Cylinder

Single cylinder for front support elevation

Bore:  $\Phi 220$ mm

Stroke: 2.005m

### (8). Telescoping Cylinder

Single cylinder plus wire ropes for synchronous telescoping.

Bore:  $\Phi 160$ mm Stroke: 6.067m

### (9). Operator's Cab

All steel structure, equipped with safety glass, adjustable seat and control instruments, and air-conditioner is for option.

### (10). Crane Main Valve

Model: LV22