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XUZHOU CONSTRUCTION MACHINERY GROUP IMP. & EXP. CO., LTD
Add: No.1，Tuolanshan Road, Xuzhou Economic Developing Zone, Jiangsu, China 221004
Fax: (+86-516) 87739230
E-mail: export@xcmg.com

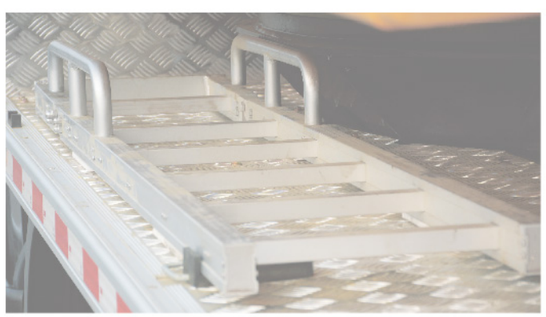
FOR YOUR SUCCESS

QY85KA_Y

Truck Crane

把大往行大道成大器

QY85KA_Y TRUCK CRANE



QY85KA_Y

TRUCK CRANE

I. Five Advantages

Highlight I: optimized structure design with the largest lifting capacity in the industry.

- Five U-shaped boom with plug-in boom head. The lifting height and working radius surpass the competitors with 5%-15% higher lifting performance in the same class.

- Working radius: boom length is 47m and jib length is 17.5m. The working radius surpasses all the competitors.

- Mature combined counterweight technology: various combinations of counterweight slabs are available to provide customers with more working conditions.

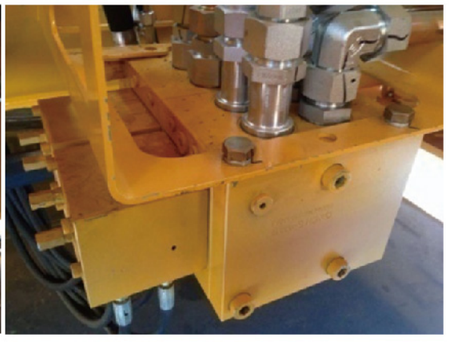
Item	Slab ①, fixed on the crane	Slab ②, removable	Slab ③, removable
Weight of counterweight	1t	3t	4t
Qty	1	1	2

No.	Weight of counterweight	Counterweight Combination
1	1 t	①
3	4 t	①+②
4	8 t	①+②+③
5	12 t	①+②+③+③

- Brand new counterweight mechanical fixing device: it can make the counterweight stable on the frame by multi-point fixing mode, which is very quick and convenient and will eliminate shaking and overturning of counterweight slabs during travel.

Highlight II: the adoption of mature hydraulic control variable pump with load-sensitive filter technology and the multi-way valve of large drift diameter contributes to small heating, high efficiency and reliable stability.

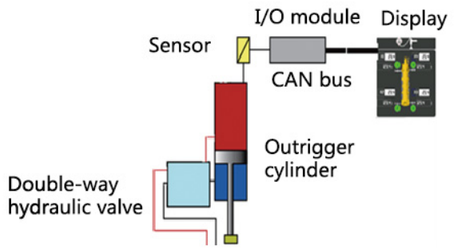
- The adoption of the load-sensitive variable pump and motor system can realize high speed with light load and low speed with heavy load. The working speed with no load raises to 140m/min with working efficiency leading the industry.
- Enlarged diameter of the multi-way valve rod contributes to improved main valve flow, reduced pressure loss and heating, which is environmental-friendly and saves more energy.



- The function of main and auxiliary winch compound movement is added to provide customers with more working condition, which brings higher working efficiency.

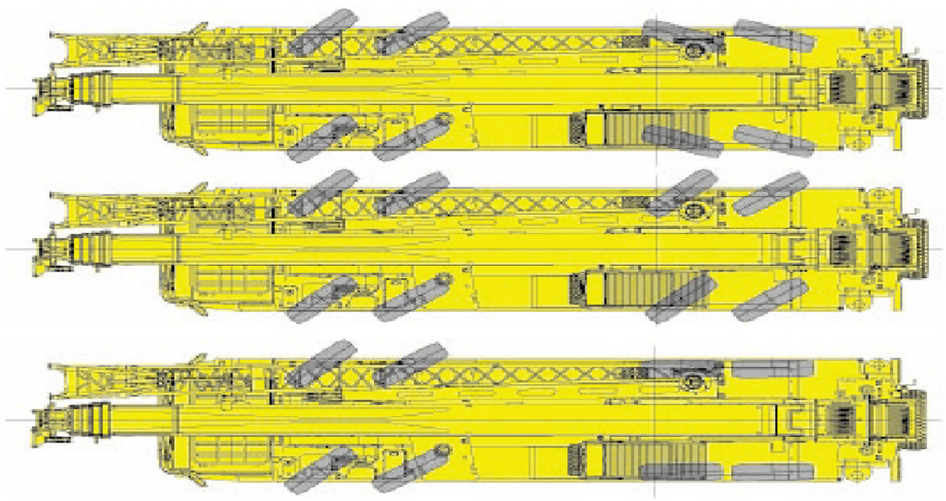
Highlight III: improved reliability of key system contributes to safer operation and traveling.

- Hoisting system: drum with Lebus-type grooving can efficiently avoid rope disorder and realize a more stable and reliable operation; a stable oil source is connected to control the on and off the brake system, which efficiently avoid the troubles such as winch stalling and gliding.
- Winch monitoring system: optional winch monitor ensures the operation safety.
- Outrigger pressure inspection system: inspect the force condition of the outriggers timely. The user will be warned when the stability is insufficient or the outrigger pressure is beyond the setting range, so the tipping accident is avoided.
- ABS system: optional ABS system can effectively avoid the wheel locking during travelling.



Highlight IV: all wheel steering makes the vehicle more flexible during traveling.

- With multi-axle, multi-mode steering technology applied, tight turning radius mode, crab walk mode and rear axle locked mode are available to make the steering more flexible in low speed and the travelling more stable in high speed.



Highlight V: brand new appearance design and humanized design bring more comfortable driving operation

- New driver's cab of right-hand drive, operator's cab, engine bonnet and hood with streamlined outline and elegant appearance
- A sliding door adopted in the operator's cab contributes to safer and more convenient operation; the operator's cab is spacious with air-conditioner equipped, which brings a comfortable operation; front and side pedals are available to make it easy and safe as access and egress the operator's cab.
- A sleeper is equipped in the driver's cab for temporary rest; The head lamp with daytime running light brings safer travel. Ladders are equipped in both sides to facilitate getting on and off the crane.

II. Technical Specifications

Main Technical Data Table of QY85KA_Y in Travel configuration

（Subject to technical improvement）

Category	Item		Unit	Parameter	
Outline Dimensions	Outline size (length×width×height)		mm	14650×2800×3880	
	Wheel base		mm	1500+4665+1500	
	Track(Front/Rear)		mm	2380/2300	
	Front/Rear overhang		mm	2470/2450	
	Front/Rear extension		mm	2065/0	
Weight Dimensions	Dead weight of the whole crane in travel configuration		kg	48000	
	Axle load	1st and 2nd axles	kg	12000+12000	
		3rd and 4th axles	kg	12000+12000	
Power Dimensions	Engine model		—	WP10.375E53	WP10.375
	Rated power/rotating speed		kw/(r/min)	276/1900	276/2200
	Max.net power/rotating speed		kw/(r/min)	271/1900	274/2200
	Max.output torque/rotating speed		N.m/(r/min)	1650/1200-1500	1460/1200-1600
Travel Performance	Max. travel speed		km/h	80	
	Min. turning diameter		m	20	
	Min. ground clearance		mm	427	
	Approach angle		°	19 (without front protective device) 12 (front protective device included)	
	Departure angle		°	15	
	Braking distance (at 30km/h)		m	10	
	Max. grade ability		%	37	
	Oil consumption per 100km		L	48	
	Exterior noise level in acceleration		dB(A)	≤88	
	Noise level at seated position		dB(A)	≤90	

Main Technical Data Table for Lifting Operation

Category	Item			Unit	Parameter
Main lifting performance	Max. total rated lifting capacity			t	85
	Min. rated working radius			m	3
	Turning radius at turntable tail	Counterweight		mm	4025
		Auxiliary winch		mm	4330
	Max. load moment	Base boom		kN.m	2969
		Fully-extended boom		kN.m	1428
	Outrigger span	Longitudinal		m	6.4
		Lateral		m	7.6 (5.0)
	Lifting height	Base boom		m	12.6
		Fully-extended boom		m	47
		Fully-extended boom + jib		m	64
	Boom length	Base boom		m	12.2
		Fully-extended boom		m	47
		Fully-extended boom + jib		m	64.5
	Jib offset angle			°	0, 15, 30
Working speed	Boom elevating time	Boom raising time		s	≤55
	Boom telescoping time	Fully-extending time		s	≤110
	Max. slewing speed			m/min	≥1.9
	Outrigger extending and retracting time	Outrigger beam	Extending	s	≤30
			Retracting	s	≤25
		Outrigger jack	Extending	s	≤50
			Retracting	s	≤50
	Outrigger extending and retracting time	Main winch system	No load	m/min	≥140
		Auxiliary winch system	No load	m/min	≥108
	Exterior noise level			dB (A)	≤122
	Noise level at seated position			dB (A)	≤90

III. Rated load charts of QY85KA_Y

3.1、Rated lifting load tables for boom (with full counterweight)

Rated lifting load table for boom (Unit of lifting capacity is t, unit of boom angle is °, and unit of lifting height is m)

With 7.6m fully-extended outrigger, 12t counterweight, side and rear operation without 5th jack; 360°operation with 5th jack

Radius	Side and rear operation without 5th jack;									360°operation with 5th jack												
	12.2			16.5			20.9			27.4			34			40.5			47		
	Lifting load t	Boom angle °	Lifting height m	Lifting load t	Boom angle °	Lifting height m	Lifting load t	Boom angle °	Lifting height m	Lifting load t	Boom angle °	Lifting height m	Lifting load t	Boom angle °	Lifting height m	Lifting load t	Boom angle °	Lifting height m	Lifting load t	Boom angle °	Lifting height m
3	85*	68	12.6																		
3.5	75	66	12.3																		
4	68	63	12.1	61	71	16.9															
5	58	57	11.4	55	67	16.4	42	73	21.2												
6	50.5	51	10.5	47	63	15.9	38.2	70	20.8	30	75	27.7									
7	42	44	9.5	40	59	15.2	34.2	67	20.3	28	73	27.4	22	77	34.3						
8	37	36	8.1	36.5	55	14.5	31.5	64	19.8	25.5	71	27	21	75	34	17	79	40.8			
9	30	26	6.2	29.9	50	13.6	28.6	60	19.2	23.5	69	26.6	20	74	33.7	15.8	77	40.5			
10				24.1	45	12.6	23.8	57	18.5	21.8	66	26.1	18	72	33.3	14.8	76	40.2	11.5	78	47
12				16.8	33	9.8	16.5	50	16.8	17.8	62	25	15.8	68	32.5	12.6	73	39.5	10.5	76	46.4
14							12.1	42	14.7	13.3	56	23.6	13.5	64	31.5	11.5	70	38.7	10	73	45.8
16							9.1	32	11.7	10.2	51	22	11	61	30.3	10	66	37.8	9	71	45
18										8	45	20	8.7	56	28.9	8.9	63	36.7	8.1	68	44.1
20										6.4	38	17.5	7.1	52	27.3	7.45	60	35.4	7.25	65	43
22										5.1	30	14.2	5.8	47	25.4	6.2	56	34	6.4	62	41.9
24													4.7	42	23.2	5.1	53	32.4	5.35	59	40.6
26													3.8	37	20.4	4.3	49	30.6	4.5	56	39.2
28																3.5	45	28.5	3.7	53	37.6
30																2.9	40	26	3.2	50	35.8
32																			2.7	47	33.8
34																			2.2	43	31.5
36																			1.8	39	28.9

Percentage of cylinder extended	I-stage cylinder 0% II-stage cylinder 0%	I-stage cylinder 50% II-stage cylinder 0%	I-stage cylinder 50% II-stage cylinder 0%	I-stage cylinder 100% II-stage cylinder 25%	I-stage cylinder 100% II-stage cylinder 50%	I-stage cylinder 100% II-stage cylinder 75%	I-stage cylinder 100% II-stage cylinder 100%
Parts of line	12	10	8	6	4	3	3
Weight of hook block	Main hook: 616 Medium hook: 370						

3.2 Rated lifting load tables for jib (with full counterweight)

With 7.6m fully-extended outrigger, 12t counterweight, side and rear operation without 5th jack; 360°operation with 5th jack

Boom length	47m																	
Jib length	10.5m									17.5m								
Jib offset angle	0			15			30			0			15			30		
Boom angle	Lifting load	Radius	Lifting height	Lifting load	Radius	Lifting height	Lifting load	Radius	Lifting height	Lifting load	Radius	Lifting height	Lifting load	Radius	Lifting height	Lifting load	Radius	Lifting height
80°	5.50	11.6	57.1	3.80	13.9	56.1	3.30	16.0	55.0	3.30	13.8	63.8	2.00	17.8	62.1	1.45	21.3	59.8
75°	4.30	16.4	55.4	3.60	18.7	54.3	2.80	20.6	52.9	2.40	19.2	61.9	1.80	23.0	59.9	1.25	26.3	57.3
70°	3.85	21.1	53.4	3.10	23.3	52.0	2.40	25.0	50.5	1.90	24.4	59.6	1.50	28.1	57.2	1.15	31.1	54.4
65°	2.90	25.6	50.9	2.60	27.6	49.4	2.15	29.3	47.7	1.60	29.4	56.8	1.25	32.9	54.1	1.10	35.6	51.0
60°	2.70	29.9	48.1	2.30	31.8	46.4	2.05	33.2	44.6	1.40	34.2	53.6	1.15	37.5	50.6	1.05	39.9	47.3
58°	2.40	31.5	46.8	2.20	33.4	45.1	2.00	34.8	43.3	1.35	36.0	52.2	1.10	39.2	49.2	1.00	41.5	45.8
56°	2.00	33.1	45.6	1.90	34.9	43.7	1.80	36.2	41.9	1.30	37.8	50.8	1.05	40.9	47.6	0.95	43.1	44.1
54°	1.50	34.7	44.2	1.60	36.4	42.3	1.50	37.7	40.4	1.00	39.6	49.3	0.80	42.5	46.0	0.70	44.6	42.4
52°	1.20	36.2	42.8	1.10	37.9	40.9	1.10	39.1	38.9	0.80	41.3	47.7	0.70	44.1	44.3			
50°	1.00	37.7	41.4	0.90	39.3	39.4	0.80	40.4	37.4									

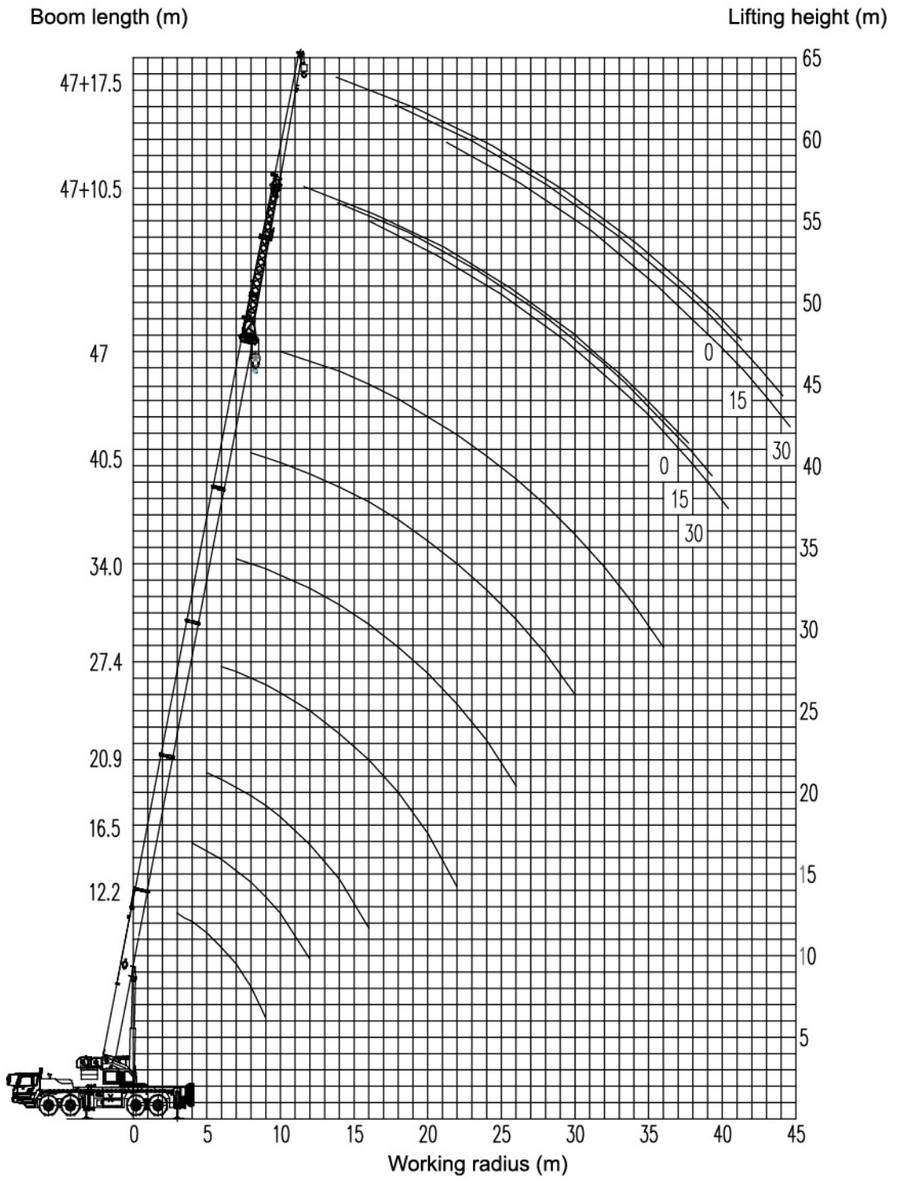
Hook block weight: 150Kg

Notes on rated load charts:

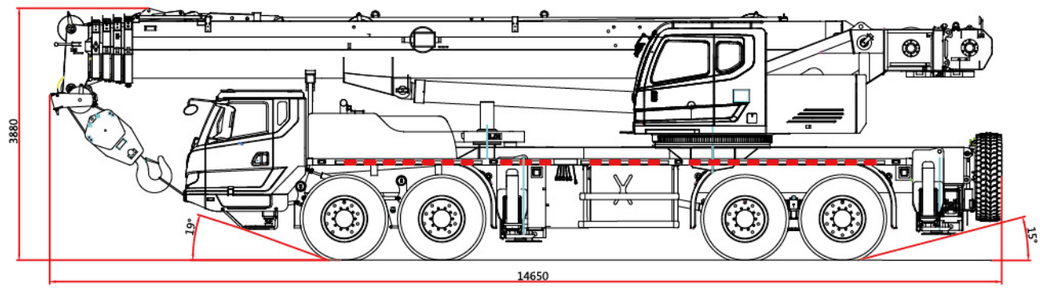
- The total rated loads given in the rated load charts are the maximum lifting capacity when the crane is set up on firm and level ground, which does not exceed 75% of tipping load.
- The total rated load includes the weight of the hook block and slings.
- The working radius shown in the rated load charts is the radius when load is lifted off the ground, and it is the actual value including loaded boom deflection. The lifting height in all tables, the boom angle in tables for boom and the radius in tables for jib are values for reference.
- As to 75% of tipping load, the wind of grade 5 is taken into consideration. A lifting operation is permissible only when wind force is below grade 5 (wind speed is 14.1 m/s).
- Total rated load shown in tables is the value without the jib attached. When operating the boom with the jib attached, at least 2000 kg must be deducted from the total rated lifting load.
- Observe the boom angle limit. Never operate the crane with the boom angle beyond the recommended limit even if a load is not being carried.
- The total rated load for single top is the same as that for boom, and the max. lifting load should not exceed 5500 kg.
- When the operator adopts the working condition of (3m, 85t), (marking * in the chart), the additional special device should be applied and adjust according to the actual condition.

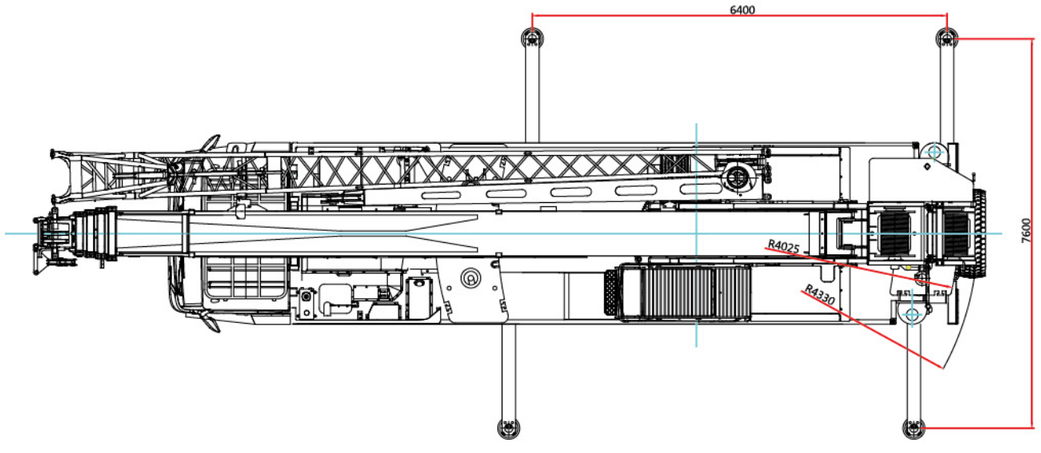
Lifting Height Charts

Crane working range (with fully-extended outriggers)



IV. The sketch of the vehicle





Turning track of crane in travel configuration