https://truckmanualshub.com/

QY50K-Ⅱ Truck Crane Highlights

1. Specialized boom of U-type cross section has features of light deadweight, better strength and strong lifting capacity.
2. Advanced built-in boom head, strong structural members and lower sliders with larger area contribute to better stress-bearing capacity and more smooth telescoping movement, and efficiently prevent boom torsion after side loading.
3. Telescoping mechanism is designed reliably. In the telescoping mechanism, both rotation-resistant rope used for thick cable and guide pulley bearing are imported parts and have reliable performance.
4. Excellent welding technology for structural members. Welding robot with advance process used for key welding make reliable quality products.

We reserve the right to modify the design without notice for improvement.

QY50K-Ⅱ Truck Crane Technical Specifications

Telescoping truck crane model: QY50K-Ⅱ

Maximum rated lifting capacity: 50t

Ⅰ. Instruction

1. Carrier

Designed and manufactured by XCMG, with luxury, spacious cab, four axles, drive/steering type is 8×4×4.

1.1 Frame

Designed and manufactured by XCMG, with anti-torsion box structure, made of imported high strength steel.

Outrigger boxes are located between axles 2 and 3, and the rear end of frame. Front and rear towing hooks are available.

1.2 Carrier engine

Manufacturer: Hangzhou Engine Co., Ltd.

Model: WD615.334;

Type: six-cylinder, in line, water cooled, turbocharged, fuel straight injection, compression ignition engine

Environmental protection compliance: compliant with Euro Ⅲ standard.

Fuel tank capacity: about 360L.

1.3 Drive line

1.3.1 Transmission

Manually mechanical control, 9-speed transmission, 9-forward and 1 reverse, performance is stable and reliable.

1.3.2 Axle

High strength axle, easy maintenance

1st axle: single tire, for steering;

2nd axle: single tire, for steering;

3rd axle: double tire, for driving, 1-stage main reduction plus wheel rim reduction;

4th axle: double tire, for driving, 1-stage main reduction plus wheel rim reduction;

1.3.3 Drive shaft

Cross serrated flange is adopted for connection of drive shaft, force transmission is optimized, and transmission torque is enlarged, easy maintenance, disassembly and assembly.

1.4 Suspension

Front suspension: longitudinal plate spring, with barrel shock absorber;

We reserve the right to modify the design without notice for improvement.

Rear suspension: double-axle balance, longitudinal plate spring, plate spring and push rod for guiding.

1.5 Steering

Mechanical steering system has hydraulic boosting devices. The location of steering wheel is adjustable.

1.6 Tire

Diagonal tire, 12.00-20, suitable for heavy truck, has good commonality. One spare tire is standard.

1.7 Brake

Service brake: double-circuit air brake, acting on the brake drums of front and rear axles;

Parking brake: spring-loaded brake, acting on the brake drums of mid and rear axles;

Auxiliary brake: diesel engine exhaust brake.

1.8 Driver's cab

New luxury cab, equipped with CD player, adjustable seats, adjustable steering wheel, large-view rear mirrors, electrically controlled windshield washer, and electrically operated door window.

Heater and air conditioner are available.

1.9 Hydraulic system

Fixed displacement pump, connected with transmission through PTO, controls carrier hydraulic outriggers and supplies power for lifting operation.

1.10 Hydraulic outriggers

Four-point supporting, outrigger beams and jacks are controlled hydraulically. Control stations are located on both sides of the carrier. Level gauges are equipped on the front outriggers. Outrigger beam is one-stage extended, and outrigger floats are attached under jacks.

The 5th jack: located in the front of frame, with it applied the crane could perform 360º fully slewing operation.

1.11 Electric equipments

24V DC, negative ground, 2 batteries. Illumination complies with Chinese Road Traffic Legislation, including head lamp, fog lamp and reversing lamp.

1.12 Tools

A set of service tool is supplied.

2. Superstructure

2.1 Slewing ring

External meshing single row four-point contact ball slewing ring, it can slew 360° continuously, roller raceway seal is water proof and dust proof.

We reserve the right to modify the design without notice for improvement.

https://truckmanualshub.com/

2.2 Turntable

Welded by fine grained high strength steel, with anti-torsion frame structure, has strong load bearing capacity.

2.3 Hydraulic system

In the electro hydraulic pilot control system, the moving angle of the pilot valve handle is directly proportional to the output pressure, the output pressure of the pilot valve is directly proportional to the valve spindle displacement of main control valve, and the valve spindle displacement of main control valve is directly proportional to the moving speed of actuator such as motor and oil cylinder. Thus fine inching control is available in the whole machine.

The main control valve is load sensitive proportional multi-way change valve. The speed of actuator and the force which operator moves the pilot handle have no relationship with load, so better comfort is gained in the pilot control system.

Winch system has features of high speed with light load and low speed with heavy load.

Free fall is adopted in elevating system, energy saving.

The swing circuit has free sliding function. Fine inching control and smooth operation are available in the swing system.

Oil tank capacity: about: 740L

2.3.1 Oil cooler

Connected with hydraulic system in series, with larger power, can efficiently reduce the oil temperature in the hydraulic system

2.4 Control

Hydraulic pilot control, easy operation, high sensitivity, stepless speed regulation is available.

2.5 Main/auxiliary hoist system

Driven by hydraulic motor, with built-in planetary gear reducer and normally closed brake, anti-winding wire rope equipped. Main and auxiliary hoist systems can be operated separately.

Main hoist system: single line pull is 50KN, diameter of wire rope is 18mm, length 180m;

Auxiliary hoist system: single line pull is 50KN, diameter of wire rope is 18mm, length 125m.

2.6 Elevating system

One differential oil cylinder with balance valve equipped.

Elevating angle: -2°～78°

2.7 Slewing system

Driven by hydraulic motor, with built-in planetary gear reducer and normally closed brake. Stepless slewing speed regulation is available.

We reserve the right to modify the design without notice for improvement.

https://truckmanualshub.com/

2.8 Main boom

It consists of one base boom and four-telescoping section, is made of high strength structural steel, with U-type cross section. Good stability in lifting operation is available. Clearance between sliders is adjustable. Double-cylinder plus ropes telescoping mechanism is for synchronous plus sequential telescoping. Six pulleys on boom head are standard.

2.9 Operator's cab

Ergonomically designed cab, safe and comfortable, high-visibility, with safety glass, sun visor and protective rails equipped. Outward open door and adjustable seat are available.

Heater and air conditioner are available.

2.10 Safety devices

Hydraulic balance valve, hydraulic relief valve, double-way hydraulic valve, etc are fitted in the hydraulic system to ensure the system stable and safe.

Hirschmann Load moment limiter system employs advanced micro-processing technology, has features of less power consumption, powerful function, high sensitivity and easy operation. LCD with large screen will show the lifting operation data, such as moment percentage, actual lifting capacity, rated lifting capacity, working radius, boom length, boom angle, max. lifting height, working condition code, parts of line, limited angle, information code, etc. by means of Chinese and graphical symbol. It has complete forewarning and overloading cutout function, as well as overloading memory (black box) and fault self-diagnosis function.

Rope end limiter is equipped in winch to prevent rope over-releasing.

Height limiter is fitted on the boom head to prevent rope over-winding.

2.11 Counterweight

Counterweight is secured at the tail of turntable.

Weight: 4300kg

2.12 Jib

Made of high strength steel, one section is lattice and another is box structure, the length of first section is 8.5m, combined length of two sections is 15m, three offset angles of 0°, 15° and 30°.

It can be taken with while located on the side of boom during the vehicle is driving on a road.

2.13 Hook block

No.	Lifting capacity (t)	Sheave block	Weight (kg)	Quantity	Remark
1	50	6	517	1	Single hook
2	4	0	100	1	Single hook

3. Color

The colour of carrier is deep grey.

The colour of driver's cab and superstructure is yellow.

We reserve the right to modify the design without notice for improvement.

Ⅲ. QY50K-Ⅱ Truck Crane Technical Specifications

1. Main Technical Data Table in Travel configuration (Subject to improvement)

Category	Item		Unit	Parameter
Outline Dimensions	Overall length		mm	13750
	Overall width		mm	2800
	Overall height		mm	3520
	Wheel base	1st and 2nd Axle	mm	1470
		2nd and 3rd Axle	mm	4105
		3rd and 4th Axle	mm	1350
	Track	Front wheel	mm	2304
		Rear wheel	mm	2075
Weight	Total vehicle mass in travel configuration		kg	41000
	Axle load	1st and 2nd Axle	kg	15000
		3rd and 4th Axle	kg	26000
Power	Engine rated power		kw/(r/min)	247/2200
	Engine rated torque		N.m/(r/min)	1350/1400
	Engine rated speed		r/min	2200
Travel Performance	Max. travel speed		km/h	75
	Min. travel speed		km/h	3
	Min. turning diameter		m	24
	Min. turning diameter at boom tip		m	26.8
	Min. ground clearance		mm	261
	Approach angle		°	17.5
	Departure angle		°	11.6
	Braking distance (at 30 km/h)		m	≤10
	Max. grade ability		%	40

We reserve the right to modify the design without notice for improvement.

https://truckmanualshub.com/

2. Main Technical Data Table for Lifting Operation

Category	Item			Unit	Parameter
Main Lifting Performance	Max. total rated lifting capacity			t	50
	Min. rated working radius			m	3
	Turning radius at turntable tail			mm	3482
	Max. load moment	Base boom		KN.m	1764
		Fully-extended boom		KN.m	882
		Fully-extended boom + Jib		KN.m	547
	Outrigger span	Longitudinal		m	5.91
		Lateral		m	6.9
	Hoist height	Base boom		m	11.5
		Fully-extended boom		m	42.7
		Fully-extended boom + Jib		m	57.6
	Boom length	Base boom		m	11.3
		Fully-extended boom		m	42.7
		Fully-extended boom + Jib		m	57.7
	Jib offset angle			°	0, 15, 30
Working Speed Parameter	Elevating time	Boom raising		s	88
		Boom lowering		s	60
	Telescoping time	Extend fully		s	180
		Retract fully		s	140
	Max. slewing speed			r/min	2
	Outrigger extending and retracting time	Outrigger beam	Extending Simultaneously	s	30
			Retracting Simultaneously	s	20
		Outrigger jack	Extending Simultaneously	s	35
			Retracting Simultaneously	s	30
	Hoisting speed (single line, 4th layer)	Main winch	Full load	m/min	85
			No load	m/min	110
		Auxiliary winch	Full load	m/min	85
			No load	m/min	110
Noise	Exterior noise level			dB (A)	≤118
	Noise level at seated position			dB (A)	≤90

We reserve the right to modify the design without notice for improvement.

https://truckmanualshub.com/

3. QY50K-Ⅱ Truck Crane Lifting Load Tables

Table 1 Total Rated Lifting Load Table for Boom

QY50K-Ⅱ Truck Crane Lifting Capacity Table for Boom							
Without fifth jack, boom over side or over rear; with fifth jack down, 360°operation of the boom							
Working radius (m)	Base boom	Mid-extended boom					Fully extended boom
	11.3m	15.22m	19.15m	25.03m	30.92m	36.81m	42.7m
	Lifting load（kg）	Lifting load（kg）	Lifting load（kg）	Lifting load（kg）	Lifting load（kg）	Lifting load（kg）	Lifting load（kg）
3	50000						
3.5	50000						
4	44000	40000	33000				
4.5	40000	37000	31200	24500			
5	36000	34000	29300	22500			
5.5	31500	31000	27500	21000			
6	26500	30000	26000	20000	16500		
7	22000	25300	24000	18200	15000	12800	
8	19400	19400	19400	16500	13800	12000	
9	15400	15400	15400	15300	12500	11100	9000
10		12400	12400	13600	11300	10100	9000
12		8300	8300	9400	10100	8800	7800
14			5800	6800	7400	7800	6800
16			4000	5000	5600	6100	6000
18				3700	4300	4700	5000
20				2800	3300	3700	4000
22				2000	2500	2900	3200
24					1900	2300	2600
26					1400	1800	2000
28						1300	1600
30						900	1200
32							900
Parts of line	12	9	8	6	4	3	3

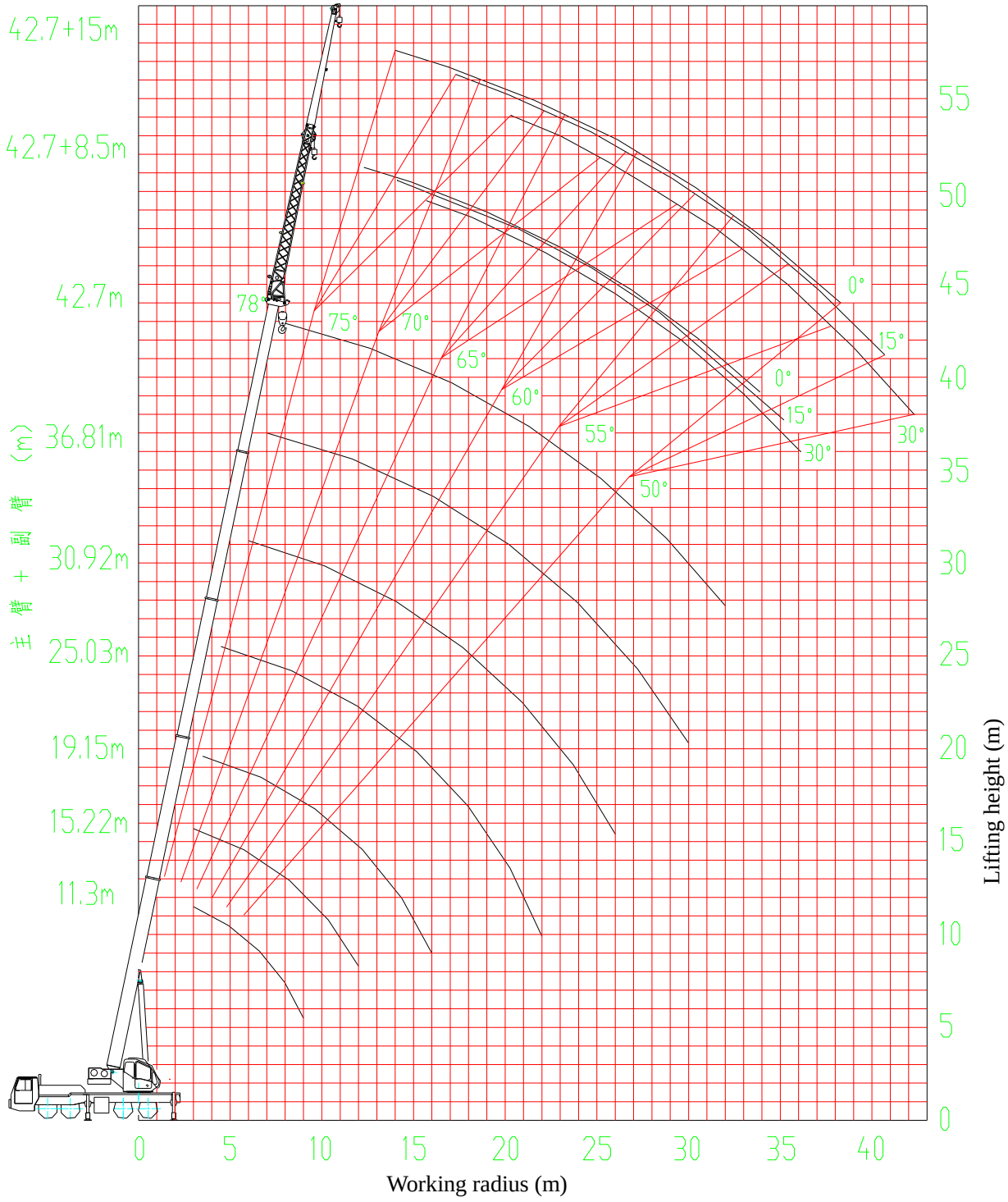
We reserve the right to modify the design without notice for improvement.

Table 2 Total Rated Lifting Load Table for Jib

With 6.9 m of outriggers fully-extended, without fifth jack, boom over side or over rear; with fifth jack down, 360°operation of the boom						
Boom length	42.7m					
Jib length	8.5m			15m		
Jib offset angle	0	15	30	0	15	30
Boom angle	Lifting load	Lifting load	Lifting load	Lifting load	Lifting load	Lifting load
78	4000	2700	2400	2500	1400	1100
75	3600	2500	2300	2100	1250	1000
72	3200	2300	2200	1800	1150	990
70	2900	2200	2100	1700	1100	950
65	2300	2000	1900	1400	950	850
60	1800	1600	1500	1100	800	750
55	1000	1000	900	800	700	650
50	600	500	500	500	400	400
With 4.7 m of outriggers half-extended, without fifth jack, boom over side or over rear; with fifth jack down, 360°operation of the boom						
78	4000	2700	2400	2000	1400	1100
75	3600	2500	2300	2000	1250	1000
72	2800	2300	2200	1800	1150	950
70	2200	2000	1800	1700	1100	900
65	1200	1100	1100	900	700	600
60	600	500	500	300	200	200

We reserve the right to modify the design without notice for improvement.

4. Lifting Height Chart



We reserve the right to modify the design without notice for improvement.