

# XCMG Truck Crane

XCT60\_Y



# Main Components - XCT60\_Y

XCMG truck crane XCT60\_Y has the maximum lifting capacity of 60 t. Its longest boom length is 44 m and the maximum lifting height is 59.8 m (including the jib).

## Chassis

### Frame

Designed and manufactured by XCMG, it is made of high strength steel with fully covered walking surface and anti torsion box-typed structure.

### Outriggers

Four outriggers arranged in H-shape are hydraulically controlled by control levers. There is an outrigger control station located at each side of the chassis and there is a level gauge on each control station. The outrigger movements can be simultaneously or separately controlled at either side of the chassis. A fifth jack is available. Each jack cylinder is equipped with a doubleway hydraulic valve. Outrigger float diameter is  $\phi 450$  mm and reaction force of outrigger at max. lifting load is 504 KN.

### Engine

WD615.334, in-line, six-cylinder, water-cooled, four-stroke, supercharging, high pressure common rail engine with rated power of 247 kW / 2200 rpm and max. torque of 1350 Nm / 1100 - 1600 rpm. It is compliant to China III emission standard. Fuel tank capacity is 300 L.

### Transmission

Mechanical transmission is 9JS135TA with manual flexible shaft control, 9-forward speed and 1-reverse speed with a synchronizer.

### Axles

High strength axles, made by famous makers through adoption of foreign advanced technology having reliable performance.

### Suspensions

Rubber suspensions with V-type push rods are adopted for rear suspension system leading to improved chassis stability and reduced tyre wear.

### Tyres

315/80R22.5-22PR tubeless tyre is light weight. It has good heat dissipation with low noise during traveling. It has strong bearing capacity and long service life.

## Brakes

**Service braking:** Foot pedal is operated by double-circuit air pressure brake. The first circuit acts on the wheels of axles 1 and 2 and the second circuit acts on the wheels of axles 3 and 4.

**Parking brake:** Spring-loaded brake acts on the wheels of axles 2, 3 and 4.

**Auxiliary brake:** Engine compression and exhaust brake is safe, reliable and prolongs the brake lining service life.

## Steering

Mechanical steering mechanism with a hydraulic booster.

## Electrical system

DC 24 V, two sets of 12 V battery in series. Generator is  $28 \pm 0.3$ V, 70 A.

## Safety devices

Hydraulic balance valve, hydraulic relief valve, LMI, spring centering system for control levers, lowering limiter for preventing wire rope from over-releasing, anti-two block at boom head for preventing wire rope from over-winding, double-way hydraulic valve, free sliding and slewing locking are available. Beacon lamp, backup camera, ABS, Winch monitoring device, tricolored light bar, slewing warning lamp, angle indicator and yellow reflective marking are optional.

## Superstructure

### Frame

Designed and manufactured by XCMG, made of high strength steel.

### Hydraulic system

Load sensitive design of compensation at the rear valve with special throttling device makes the system stable with minimum flow while making the system rigid with more prominent fine-control and smoothness; confluence technology for lifting, elevating and telescoping double-pump confluence; air-cooled hydraulic oil cooler is fitted. Oil tank capacity is 600 L.

### Operator's cab

Luxurious driver's cab is equipped with adjustable seats, simple sleeper, safety glass, electrically operated door window lifters, electric adjustable mirrors, steering wheel adjustable in height and angle, liquid crystal display, radio, etc. Heater and air conditioner are standard.

# Main Components - XCT60\_Y

New steel cab with safety glass and sun shield are used for windows. A swing-out door is equipped. The cab features a new ergonomic seat design with backrest adjustment. Wipers are fitted for the windshield and roof window; standard controls and indicators are ergonomically arranged in the cab. Air conditioner is standard. Extension of control lever is an optional in mechanical control system.

## Operating mode

Mechanical control is available. Pilot hydraulic proportional control through left and right levers are used for controlling the superstructure. Stepless speed regulation is available.

## Main and auxiliary winch system

Hydraulic control is used for speed regulation. The system is driven by a hydraulic motor through a planetary gear reducer with a normally closed brake, a balance valve and a grooved drum is equipped. It has features of high speed with a light load and low speed with a heavy load.

## Slewing system

A single-row, four-point contact-ball slewing ring is driven by the planetary gear reducer of slewing mechanism which is driven by a hydraulic motor and can continuously slew 360°. Power control and free slewing function as well as stepless speed regulation are available.

## Elevating system

A front support hydraulic cylinder is equipped for elevating operation with a balance valve fitted.

## Counterweight

Fixed counterweight of 5.5t is available with removable counterweight of 1t.

## Hook block

60t hook block alongwith 4.5t hook block is standard and 35t hook block is optional.

## Boom and jib system

### Boom

Comprises of one basic boom and four telescoping boom sections. The boom adopts anti-distortion design and is made of high strength structural steel. Double hydraulic cylinders plus wire ropes mechanism is used to telescope the boom. Main boom length is 11.5m - 44m.

### Swing-away jib

It is of two-section, lattice, welded structure with three offset angles of 0°, 15° and 30°. Fixed jib length is 9.5m / 16m.

### Under lung jib

An optional, two-section box-type under lung jib is available. One jib section is 9.8 m and the total length of two jib sections is 16 m. The jib has offset angles of 5°, 15° and 30°.

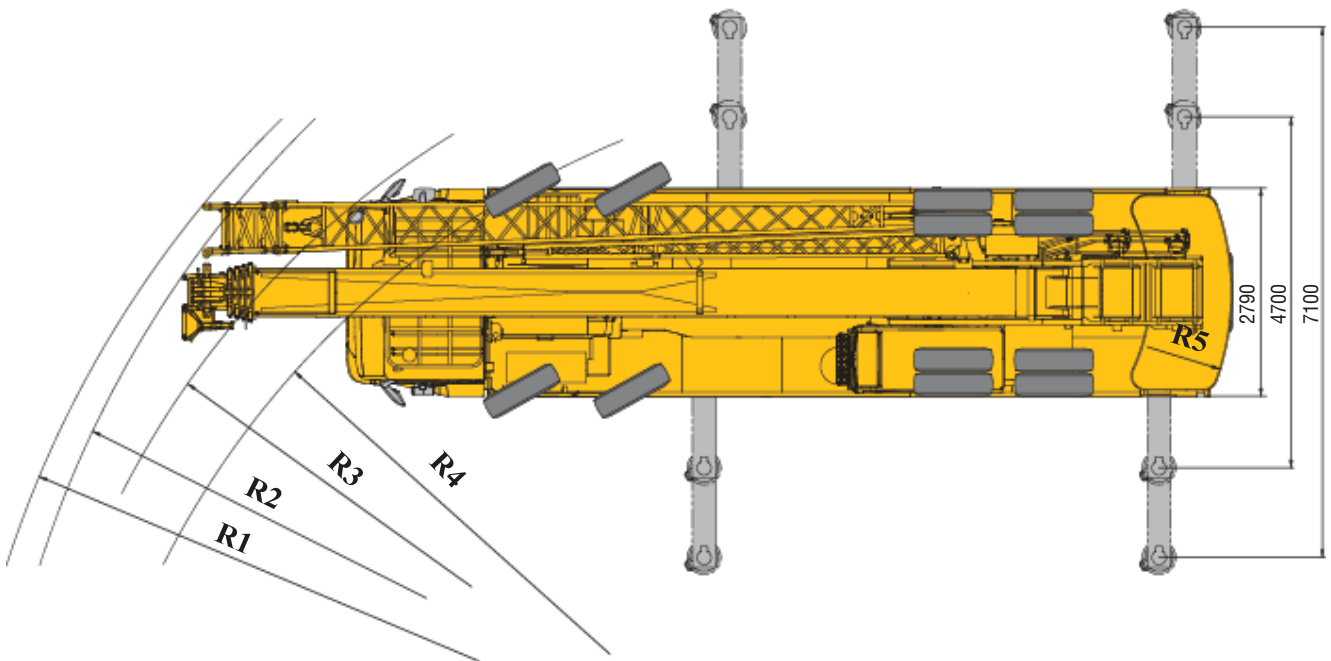
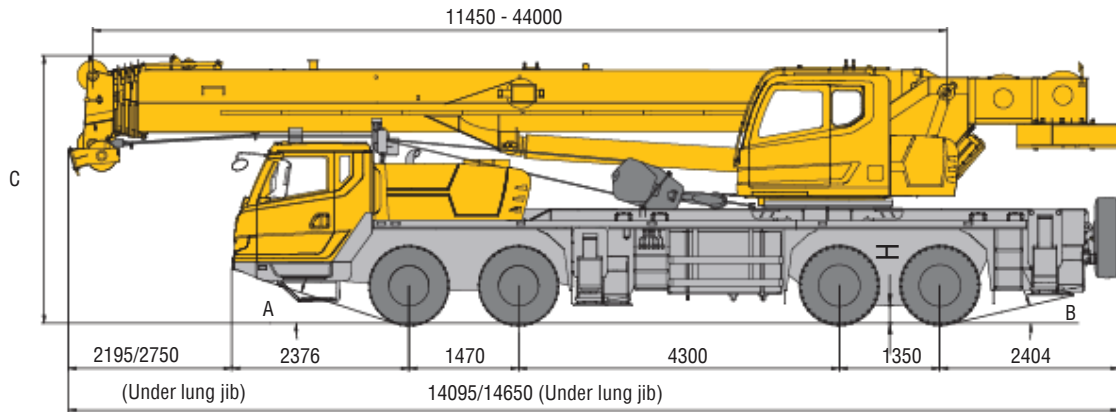
### Single top

It is fitted at the boom head and is used for single line operation. Its lifting performance is the same as that for boom but the maximum lifting load does not exceed 4500kg.


## Operational Safety Instructions

1. The total rated loads given in the rated load charts are the maximum lifting capacities when the crane is set up on firm and level ground which includes the weight of the hook block and slings. The weight of above-mentioned devices should be deducted from the rated lifting load.
2. The working radius shown in the rated load charts is the radius when the load is lifted off the ground and it is the actual value including loaded boom deflection. Take boom deflection into consideration before beginning the lifting operation.
3. A lifting operation is permissible only when the wind force is below grade 5 (instantaneous wind speed is 14.1m/s, wind pressure is 125 N/m<sup>2</sup>).
4. Before beginning the lifting operation, the operator should know the weight of the load to be lifted and its working range. Then select proper working conditions. Never operate the crane beyond the limit shown in the chart. Use the lower value from the chart when the boom length or working radius is between the range of values.
5. Observe the boom angle limit. Never operate the crane with the boom angle beyond the recommended limit even if the load is not being carried. Otherwise, the crane will tip.
6. The boom should be extended according to the telescoping code shown by percentage (or digits, which means the percentage of boom sections extended).

# Dimensions - XCT60\_Y



The medium and large tonnage products increase the full-scale shape and size parameter map, and the corresponding weight tail radius of gyration A: Approach angle B: Departure angle C: plane height on the frame D: vehicle height E: vehicle width R1: minimum turning radius of the arm head (the main arm and the jib are determined according to the size) R2: Minimum turning radius of the body R3: minimum turning radius H: minimum ground clearance.

Jib		A	B	C	H	R1	R2	R3	R4	R5
Swing - away jib	315/80R22.5	19°	13°	3615	260	15100	14780	13600	12000	3900
Under lung jib	315/80R22.5	19°	13°	4085	260	—	15170	13600	12000	3900

# Technical Specifications





















## Travel Configuration

Category	Item	Unit	Parameter	
Dimensions	Dimensions (length×width×height)	mm	14045×2790×3615 (Swing - away jib)	
			14650×2790×4050 (Under lung jib)	
	Wheel base	mm	1470+4300+1350	
	Track (Front / rear)	mm	2304 / 2081	
	Front / rear overhang	mm	2376 / 2404	
	Front / rear extension	mm	2195 / 0 (Swing - away jib)	
2750 / 0 (Under lung jib)				
Weight	Total vehicle mass in travel configuration		Kg	41700
	Axle load	1st axle and 2nd axle	Kg	8350
		3rd axle and 4th axle	Kg	12500
Power	Engine model		—	WD615.334    QSL8.9 - C325 - 30
	Rated power / rpm		kW / (r/min)	247 / 2200    242 / 2100
	Max. net power / rpm		kW / (r/min)	245 / 2200    --
	Max. output torque / rpm		m / (r/min)	1350 / 1100 - 1600    1385 / 1500
Travel	Max. travel speed		km / h	90    50
	Min. stable travel speed		km / h	2 - 3
	Min. turning diameter		m	≤24
	Min. turning diameter at boom tip	m	≤29.56 (Swing - away jib)	
			≤30.34 (Under lung jib)	
	Min. ground clearance		mm	260
	Approach angle		°	19
	Departure angle		°	13
	Braking distance (at 30 km / h)		m	≤10
	Max. gradeability		%	≥38
Fuel consumption per 100 km		L	40	
Noise	Exterior noise level		dB(A)	≤84 - ≤122
	Noise level at seated position		dB(A)	≤90


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Category	Item		Unit	Parameter	
Main performance	Max. total rated lifting capacity		t	60	
	Min. rated working radius		m	3	
	Turning radius at turntable tail		mm	3900	
	Max. load moment	Base boom		kN.m	2009
		Fully - extended boom		kN.m	1113
		Fully - extended boom + jib		kN.m	703
	Outrigger span	Longitudinal		m	6.1
		Lateral		m	7.1
	Hoist height	Base boom		m	11.3
		Fully - extended boom		m	43.6
		Fully - extended boom + jib		m	59.8
	Boom length	Base boom		m	11.5
		Fully - extended boom		m	44
		Fully - extended boom + jib		m	60
Jib offset angle			°	0, 15, 30 (Swing - away jib) 5, 15, 30 (Under lung jib)	
Working speed	Boom raising time		s	≤40	
	Boom fully extending time		s	≤90	
	Max. slewing speed		r / min	≥2	
	Outrigger extending and retracting time	Outrigger beam	Retracting	s	≤30
			Extending	s	≤35
		Outrigger jack	Retracting	s	≤35
			Extending	s	≤40
	Hoisting speed (single line, 4th layer, no load)		Main winch and Auxiliary winch	m / min	≥128

# Description of Symbols XCT60\_Y

General symbols		
 Superstructure	 Jib offset angle	 Tyres
 Lifting capacity	 Hoist height with jib	 Outriggers
 Boom length	 360° operation of the boom with 5th jack down	 Hook block
 Radius	 Chassis	 Counterweight
 Boom angle	 Axle	 Winch
 Hoist height with boom	 Driving speed	 360° operation of the boom
 Fixed jib length	 Gradeability	







## Weight

	Axle	1	2	3	4	Total weight
	t	8.5	8.5	12.5	12.5	41.7

	Hook	No. of lines	Weight (kg)	Dimensions(mm)	Remarks
	60t	13	517	1325x544x537	Single hook, standard
	35t	10	403	1334x544x419	Single hook, optional
	4.5t	1	100 (Swing - away jib) /70 (Under lung jib)	536x298x298 /920x240x240	Single hook, standard

## Working speeds

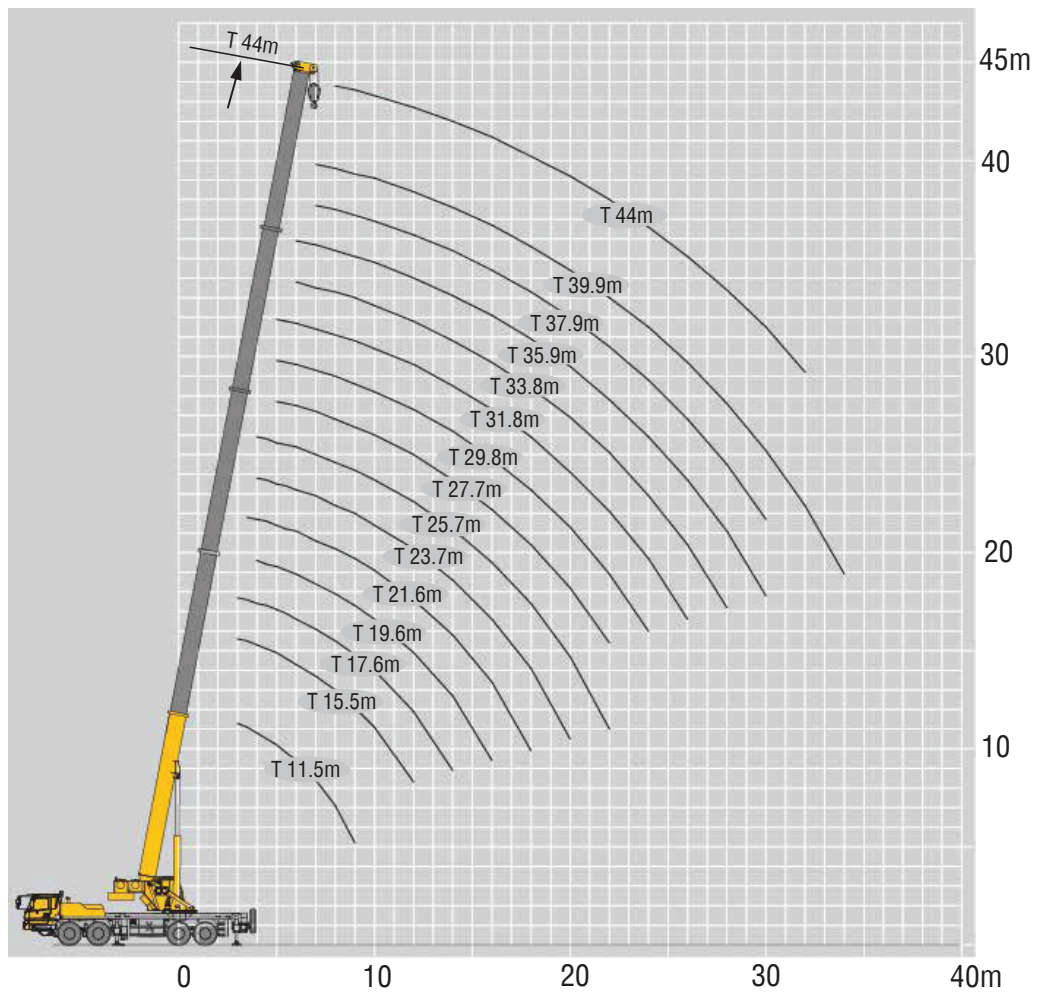
			
	315/80R22.5	2~90	38%

	Drive	Working speed	Max. single line pull	Rope diameter/ length
		0-128 m / min, single line, 4th layer	45 kN	18mm / 190m
		0-128 m / min, single line, 4th layer	45 kN	18mm / 125m
		0-2 r / min		
		Approx. 40s for boom elevation from - 1° to 81°		
		Approx. 90s for boom extension from 11.45m to 44m		

# Boom / Jib combinations - XCT60\_Y

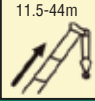






Telescopic boom	Jib
T : 11.5 - 44m	T : 44m J : 9.5m / 16m (Swing - away jib) J : 9.8m / 16m (Under lung jib)



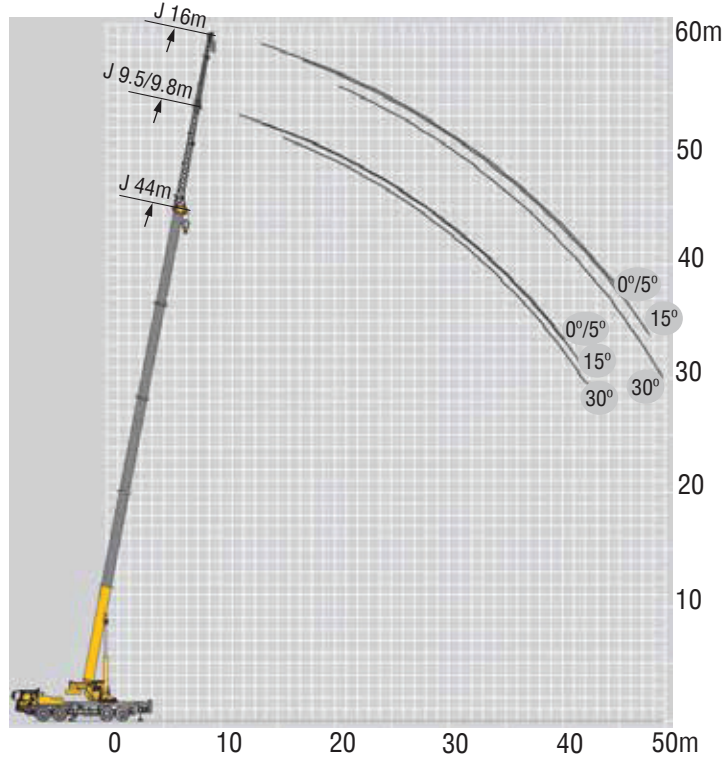


# Lifting Capacities - XCT60\_Y







									
	11.5m	15.5m	19.6m	25.7m	31.8m	37.9m	44m		
m	11.5m	15.5m	19.6m	25.7m	31.8m	37.9m	44m	m	
3	60000	45000						3	
3.5	55000	45000						3.5	
4	48000	45000	33300	25000				4	
4.5	45000	43000	33000	25000				4.5	
5	41000	40000	32000	25000	18500			5	
5.5	36500	36000	29000	25000	18500			5.5	
6	33000	32500	27000	23300	18500			6	
7	27000	26600	24500	21000	18500	14000		7	
8	22200	22600	22500	19000	17700	13200		8	
9	17500	18000	17600	17000	16300	12500	9000	9	
10		14600	14200	15400	15000	11800	9000	10	
12		10000	9800	10700	11300	10300	8600	12	
14			7000	7900	8400	8800	7900	14	
16			5000	6000	6500	6800	7100	16	
18				4500	5100	5400	5600	18	
20				3400	3900	4300	4500	20	
22				2500	3100	3400	3700	22	
24					2400	2700	3000	24	
26					1800	2100	2400	26	
28						1700	1900	28	
30						1200	1500	30	
32							1100	32	









# Lifting Heights - XCT60\_Y



# Lifting Capacities - XCT60\_Y

    						
m	0°/5° (Under lung jib)	15°	30°	m	m	
78	4500	3000	2500	78	78	
75	4100	2800	2400	75	75	
72	3800	2600	2300	72	72	
70	3500	2500	2200	70	70	
65	2800	2300	2000	65	65	
60	1900	1700	1700	60	60	
55	1200	1100	1100	55	55	
50	700	700	700	50	50	

    						
m	0°/5° (Under lung jib)	15°	30°	m	m	
78	2800	1500	1200	78	78	
75	2400	1400	1100	75	75	
72	2000	1200	1000	72	72	
70	1900	1200	950	70	70	
65	1700	1000	850	65	65	
60	1200	900	750	60	60	
55	850	700	650	55	55	
50	450	400	300	50	50	