

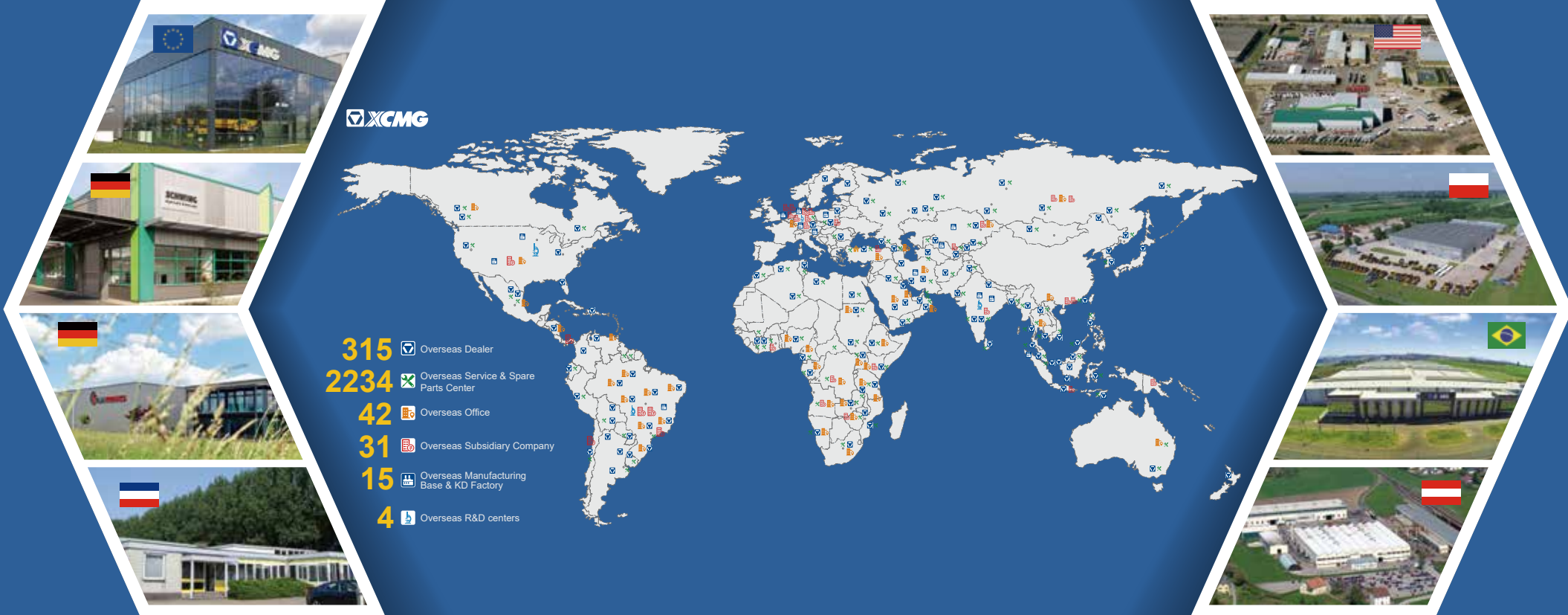
All Terrain Crane XCA110_U



EU STAGE IV/TIER 4F

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INTRODUCTION OF XCMG

XCMG is the leading construction equipment manufacture in China and is the third largest equipment manufacture in the world. In addition, XCMG ranks 305th among the worlds top brands.

XCMG builds 16 categories of equipment including cranes, excavators, concrete production and transporting, earth moving, mining, and road reclamation and paving. XCMG also produces many of its own hydraulic, power transmission, and electronic control systems components. XCMG is the top manufacture in the world of cranes, foundation machines and concrete production and distribution equipment.

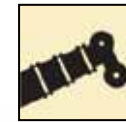
XCMG's research and development groups have accumulated more than 9000 patents in China and 130 international patents. There are R&D centers and manufacturing facilities in 10 countries including Germany, the United States, Brazil and India. The manufacturing facility in Brazil has become a model of economic cooperation between China and Brazil. XCMG exports equipment to 187 countries around the world.

OVERVIEW

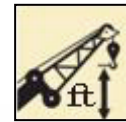
The 4-axle 110 USt All-terrain crane leads the industry in capacity and is built in intelligence.



110 USt



196.9 ft



288.7 ft

7-section pinned boom: 38.4 ft ~ 196.9 ft
Fixed jib: 34.8 ft ~ 105.3 ft;
0°, 15° and 30° jib offset angles
Max. single line pull: 7.2 USt
Max. hoisting speed (single line, no load): 410 ft/min

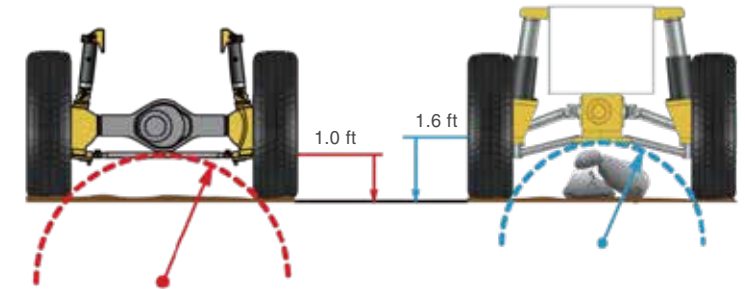


STRENGTHS AND HIGHLIGHTS



Innovative heavy-duty single-transverse arm independent suspension system

- The wheels on the left and right sides of the crane move up and down independently. The differentials are mounted higher for better ground clearance and the independent suspension give excellent stability and control on road and increased maneuverability in difficult conditions.



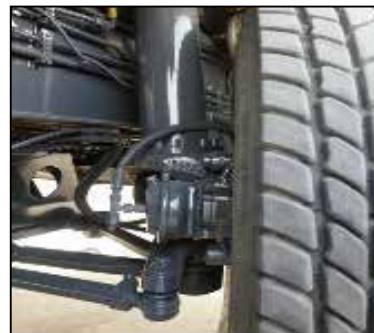
Proven power train and superb driving performance

- Mercedes-Benz diesel engine, rated power 456 bhp, max. torque 1623 lb-ft, Tier 4F emission standards and 12-speed ZF automatic gearbox.
- Max. travel speed: 53.0 mph (20.5R25)
Max. grade ability: 52% (20.5R25)



Suspension system

- The suspension includes an automatic leveling mode as well as manual raising and lowering of the crane and elastic and rigid modes.
- Wheel travel: +/- 150mm (5.9in)



Brake system

- Dual circuit air disk brakes
- Spring applied, air released parking brakes on axles 1, 3, and 4.
- Auxiliary: engine retarder brake, transmission retarder brake.

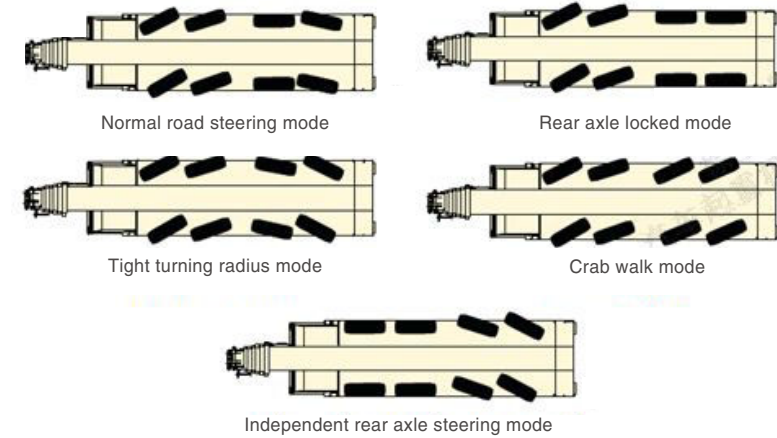


STRENGTHS AND HIGHLIGHTS



5 steering modes

- Easy selection of steering mode by rotary dial.
- Clear layout of control elements and displays.
- Steering modes can be changed anytime the crane is stopped.



Compliant to the strictest standards

- Designed and certified to meet ASME B30 standards and OSHA regulations.



Steering system

- Axles 1 and 2 are mechanically steering and axles 3 and 4 are electric-hydraulic proportional steering.
- Tires: 385/95R25 (14.00R25), 445/95R25 (16.00R25) and 525/80R25 (20.5R25).



STRENGTHS AND HIGHLIGHTS



Luffing mechanism

- Single boom hoist cylinder with a power assist gravity down system
- Direct acting electric proportional boom hoist balance valve with self compensating function is utilized.



Slewing mechanism

- Planetary gear reducer, normally closed brake.
- Continuous 360° slewing.
- Slewing speed: 0-1.7 rpm.

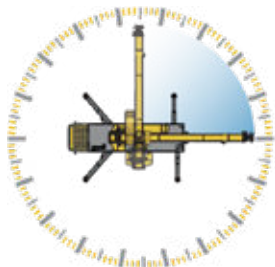


Superb lifting performance

- 7-section pinned boom: 38.4 ft ~ 196.9 ft.
- Fixed jib: 34.8 ft ~ 59.4 ft + two 23 ft inserts for max. jib of 105.3 ft.
- 0°, 15° and 30° jib offset angles.
- 9.5 ft independent jib.

New highly efficient energy-saving hydraulic system

- Independent hydraulic systems for lifting and slewing. Stable minimum speeds and high working speeds even with maximum loads.
- Proven variable displacement pumps and motors tuned to give excellent slow speed and smooth starting and stopping performance.
- Min. stable lifting speed (at drum): 8.2 fpm
- Min. stable slewing speed: 0.1°/s

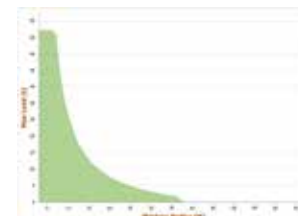


Minimum speed of slewing: 0.1°/s
Minimum speed of winch: 8.2 fpm



Asymmetric operation mode safety system

- It supports any outrigger combination of 0%, 28%, 55%, 76% and 100% extensions and calculates in real time the capacity of the crane. It provides limits to the operator and an audible alarm and will stop slewing as limits are approached.



STRENGTHS AND HIGHLIGHTS



Automatic working condition planning technology

- Recommend crane configuration based on load, radius and working height.



Automatic luffing compensation technology

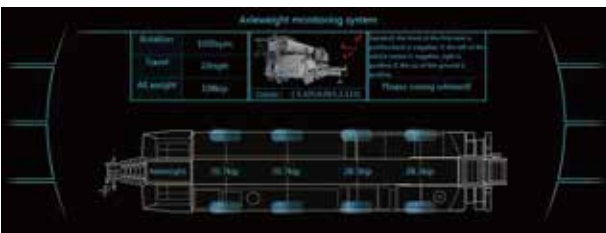
- With luffing compensation technology applied, the boom angle is automatically adjusted as a load is applied or removed to maintain a constant load radius.

Winch servo control technology

- With winch servo technology, the winches will automatically pay in or out rope depending on the conditions taking the burden off of the operator to have to stop and start telescope or luffing functions.



- The winches can be set to either maintain the hook height above the ground or to maintain the distance between the boom tip and the hook. This works while telescoping and/or luffing the boom.



Intelligent travel and efficient & excellent off-road performance

- With active axle load monitoring and user selected travel modes, the crane automatically selects the optimum power transmission and suspension settings.
- The crane incorporates an integrated dynamic brake control system to ensure minimum stopping distances in all conditions.



STRENGTHS AND HIGHLIGHTS



— XCMG man-machine interactive system

- Industry pioneering automotive style man-machine interface provides user friendly interaction between the operator and the crane.



— Driver cab

- Large color 312mm (12.3in) touch screen in the drivers cab provides for setup, information, chassis configuration settings and diagnostic checking.
- Virtual drivers cab instruments and chassis monitoring are within easy reach of the driver, and provides extensive chassis information.



— Operator cab

- Ergonomically designed working space makes operation safer and more comfortable.
- 10.4 in color touch screen display.



- Three control areas: Safety protection, lifting operation and operating environment. Make for easy and convenient control.



— Outrigger jack cylinder extending/retracting can be realized in the operator cab

- Controls for the outriggers are in the operator cab as well as on each side of the crane for operation from the ground.





TECHNICAL SPECIFICATIONS

Chassis

Frame	High strength torsion resisting box structure designed and manufactured by XCMG.
Outrigger	H-shaped outrigger configuration with single stage outrigger beams and hydraulic jack cylinders. 0%, 28%, 55%, 76% and 100% beam extension settings. Controls on either side of the chassis with level indicators and engine controls. Each jack cylinder is equipped with load detection that is tied into the crane control system to sense when an outrigger is becoming unloaded.
Engine	OM471LA, in-line six-cylinder water-cooled EFI diesel engine, manufactured by Mercedes Benz, with rated power of 456 bhp/1700 rpm, max. torque of 1623 lb-ft/1300 rpm and Stage IV/ Tier 4F emission standards. Fuel tank capacity: 79 gal.
Hydraulic system	Load sensing proportional control system. The hydraulic pumps are connected to the engine through PTO for controlling the movements of outriggers and suspensions.
Transmission	ZF AS Tronic transmission with 12 forward and 2 reverse speeds. It includes fully automatic and manual modes. Standard retarder can be included
Transfercase	Kessler transfer case includes emergency steering pump to maintain steering control anytime the crane is moving.
Steering	Steering on all axles with direct power steering on axles 1 and 2 and electro-mechanical steering on axles 3 and 4. On and off highway steering modes can be selected.
Axles	Kessler differentials with inter-axle and cross-axle locks and spring set, air release disk parking brakes.
Tires	9 tires, each axle is equipped with single tire, large bearing capacity. Tire specifications: 525/80R25 (20.5R25).
Brakes	Dual circuit air disk brakes on all wheels with parking brake on axles 1, 3 and 4. Includes engine brake and transmission retarder.
Driver cab	Modern full width driver cab. Fitted with passenger seat, HVAC, DVD navigation, safety glass, electric windows and mirrors, multifunctional steering wheel, back up camera and full suspension system.
Electrical system	24 V DC negative ground system. 150 Amp alternator and two 12 V batteries.



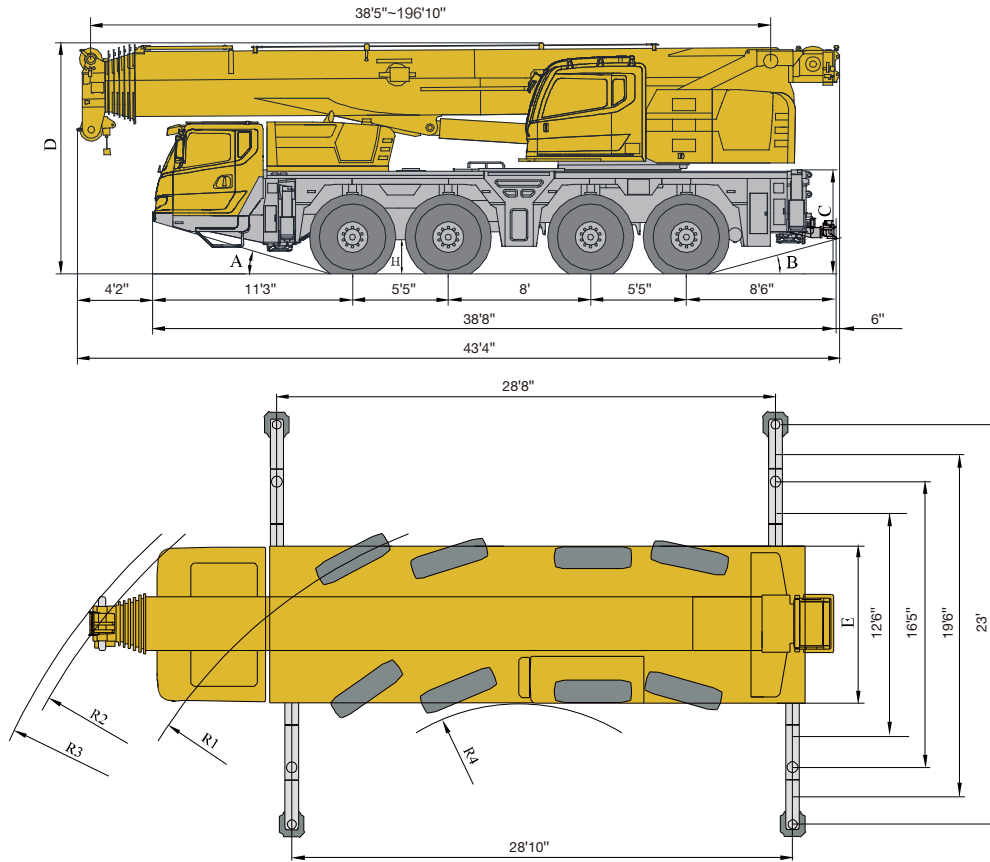
Superstructure

Frame	Designed and manufactured by XCMG, made of high-strength steel.
Superstructure engine	OM934LA, in-line four-cylinder water-cooled EFI diesel engine, manufactured by Mercedes, with rated power of 175 bhp/2200 rpm, max. torque of 553 lb-ft/1200~1600 rpm and Stage IV/Tier 4F emission standards. Fuel tank capacity: 69 gal.
Hydraulic system	Variable displacement pumps driven by the superstructure engine for hoisting, luffing, telescoping and slewing functions. World class electro-hydraulic directional control valves tuned for fine control. Oversized hydraulic oil cooler to keep the system cool in the most demanding conditions.
Operating mode	Left and right electronic joy sticks control all crane movements.
Main winch system	Lebus grooved drum driven by variable displacement piston motor through planetary gearbox with counterbalance valve and integral brake. Fitted with high strength rotation resistant rope and third wrap indicator.
Slewing system	Single row ball slew bearing with external teeth. Driven by a piston hydraulic motor through a planetary gear reducer with internal brake. Continuous rotation and selectable free swing mode.
Operator cab	Ergonomically designed for operator comfort. Sliding door and extending side and fixed from steps, grab handles and mirrors. Can be tilted up to 20 degrees and includes heat and AC.
Safety devices	Counterbalance valves fitted on all cylinders and winch motors. Relief valves included in all circuits. Anti-two block and third wrap stops on winches. Full function Wika LMI system and anemometer.
LMI	Measures boom length and angle, rotation position, outrigger extension and jack and hoist cylinder pressures to calculate the load on the crane. It will visually and audibly indicate when the crane approaches or reaches capacity. It includes event recording and self diagnosis functions.
Combined counterweight	Total removable counterweight is: 63200 lb 8 counterweight combinations of 0 lb, 9500 lb, 20100 lb, 24000 lb, 32400 lb, 43400 lb, 47400 lb and 63200 lb are available.
Electrical System	24 V DC negative ground system. 120 Amp alternator and two 12 V batteries.
Boom	7-section, U-shape cross section, welded structure. Single-cylinder pinning interlocked telescoping system, 46%, 92% and 100% telescoping positions can be selected. Boom length: 38.4 ft ~ 196.9 ft
Single top	Pinned at the boom tip and able to be folded to the side when not in use. Single part of line maximum capacity of 7.2 USt



Boom system

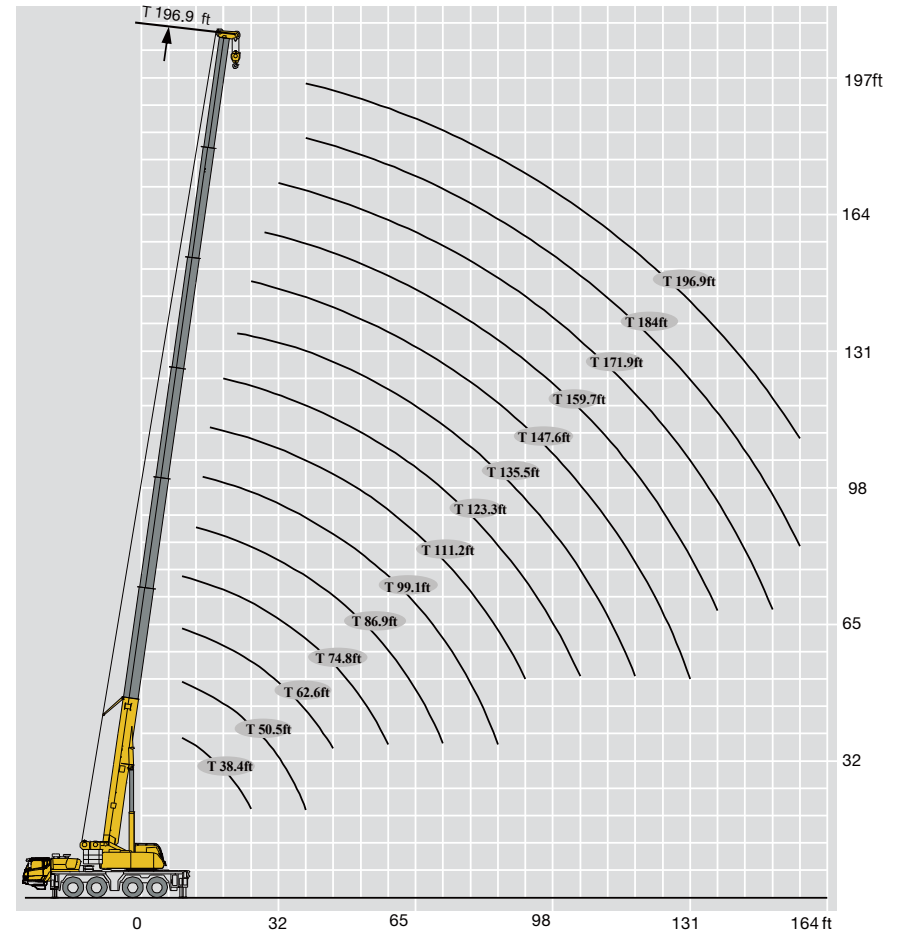
Dimensions



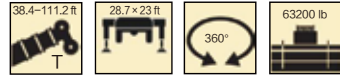
	A	B	C	D	E	H	R1	R2	R3	R4
○ 385/95R25 (14.00R25)	16.5°	13.5°	5'11"	13'2"	9'	1'2"	25'11"	32'8"	33'7.7"	14'10"
○ 445/95R25 (16.00R25)	17°	14°	6'1"	13'3"	9'	1'4"	30'8"	37'1"	37'0.9"	20'1"
● 525/80R25 (20.5R25)	17°	14°	6'1"	13'3"	9'6"	1'4"	32'8"	38'9"	38'8.6"	21'11"

Note: The stroke of suspension cylinder : -6"-6".

Lifting heights



Lifting capacities (T 38.4~111.2 ft)



	38.4 ft	38.4 ft	50.5 ft	50.5 ft	50.5 ft	62.7 ft	62.7 ft	62.7 ft	74.8 ft
9.8	220*	143.0	143.0	139.7	134.9	133.1	130.9	129.8	122.1
11.5		135.7	136.0	132.0	130.9	126.9	125.0	123.9	121.2
13.1		131.1	129.8	128.7	125.4	120.1	118.6	116.8	114.4
14.8		121.2	121.9	121.0	113.8	114.0	112.2	109.1	109.3
16.4		99.4	110.9	106.7	100.3	109.1	106.9	105.6	103.4
19.7		92.6	96.8	98.6	88.0	96.6	99.4	94.6	95.0
23.0		85.6	85.8	86.9	83.6	84.3	86.0	88.4	84.5
26.2		75.5	73.9	76.8	77.7	75.0	76.6	78.8	75.5
29.5			68.2	69.5	67.8	69.3	70.0	70.6	70.0
32.8			60.5	61.6	61.8	60.5	62.0	63.4	59.4
39.4			48.4	49.3	49.7	49.5	50.6	51.0	50.2
45.9						40.0	42.0	42.2	41.8
52.5									34.1
59.1									27.5
Code	000000	000000	010000	000100	000010	011000	001100	000110	011100



	74.8 ft	74.8 ft	86.9 ft	86.9 ft	86.9 ft	99.1 ft	99.1 ft	99.1 ft	111.2 ft
9.8	120.6	119.9							
11.5	119.2	118.4							
13.1	112.9	111.5	107.8	107.1	106.7				
14.8	108.0	106.9	101.6	101.2	100.3	99.4	99.0	90.8	
16.4	101.4	100.5	96.4	95.9	94.6	95.0	93.5	86.3	85.8
19.7	93.5	92.6	87.8	86.9	85.6	86.5	84.7	79.0	82.3
23.0	88.7	83.6	79.2	81.0	78.5	79.2	77.4	73.1	75.2
26.2	79.2	79.2	74.8	75.2	75.9	71.5	74.1	66.7	70.0
29.5	70.8	70.8	69.3	70.0	70.6	69.1	70.0	62.4	65.6
32.8	60.5	61.8	65.6	65.6	67.5	61.6	62.5	58.4	61.3
39.4	50.6	51.7	48.6	49.5	50.4	51.3	54.8	48.8	48.8
45.9	42.2	42.7	40.0	41.4	42.5	41.6	42.5	43.1	41.8
52.5	36.1	37.4	33.0	35.9	38.1	34.3	37.0	37.8	36.7
59.1	29.5	31.5	26.4	29.3	31.5	28.2	31.0	32.3	30.4
65.6			21.6	24.4	26.6	23.1	25.7	27.9	25.5
72.2			18.0	20.5	22.7	19.4	21.8	24.0	21.6
78.7						16.5	18.9	20.7	18.3
85.3						13.4	16.1	18.3	15.8
91.9									13.9
Code	001110	000111	111100	011110	001111	111110	011111	001112	012111

Lifting capacities (T 111.2~196.9 ft)

16.4
19.7
23.0
26.2
29.5
32.8
39.4
45.9
52.5
59.1
65.6
72.2
78.7
85.3
91.9
98.4
105.0
111.5
118.1
124.7
131.2
Code

26.2
29.5
32.8
39.4
45.9
52.5
59.1
65.6
72.2
78.7
85.3
91.9
98.4
105.0
111.5
118.1
124.7
131.2
137.8
144.4
150.9
157.5
Code

Performance parameters

Category	Item	Unit	Parameter			
Dimensions	Tire configuration		385/95 R 25 (14.00 R 25)	445/95 R 25 (16.00 R 25)	525/80 R25 (20.5 R25)	
	Dimensions (length×width×height)	ft	43.3×9.0×13.1	43.3×9.0×13.3	43.3×9.5×13.3	
	Wheel base	ft	5.4+8.0+5.4			
	Track (Front/ Rear)	ft	7.7	7.5	7.7	
	Front/ Rear overhang	ft	11.3/8.5			
	Front/ Rear extension	ft	4.2/0.5			
Weight	Max. permissible total weight	lb	104500	105672	107074	
	Axle load	1st axle	lb	26455	26748	27099
		2nd axle	lb	26455	26748	27099
		3rd axle	lb	25795	26088	26438
		4th axle	lb	25795	26088	26438
Power	Engine model	—	OM471LA.E4/4			
	Rated power/rpm	bhp/rpm	456/1700			
	Max. net power/rpm	bhp/rpm	456/1700			
	Rated torque/rpm	lb-ft/rpm	1623/1300			
Travel	Max. travel speed	mph	50.0	53.0	53.0	
	Min. stable travel speed	mph	1.2	1.4	1.4	
	Min. turning diameter	ft	51.8	61.4	65.2	
	Min. turning diameter at boom tip	ft	67.3	74.2	77.4	
	Min. ground clearance	ft	1.1	1.3	1.3	
	Approach angle	°	16	17	17	
	Departure angle	°	13.5	14.5	14.5	
	Max. grade ability	%	≥60	≥52	≥52	

Category	Item	Unit	Parameter		
Performance	Max. total rated lifting capacity	Ust	110		
	Min. rated working radius	ft	9.8		
	Tail swing at turntable tail	Counterweight	ft	13.9	
		Auxiliary winch	ft	14.8	
	Max. load moment	Base boom	lb-ft	2220642	
		Fully-extended boom	lb-ft	1662080	
		Fully-extended boom + Jib	lb-ft	599760	
	Outrigger span	Longitudinal	ft	28.7	
		Lateral	ft	0,12.5,16.4,19.5,23	
	Hoist height	Base boom	ft	38.4	
		Fully-extended boom	ft	198.8	
		Fully-extended boom + Jib	ft	288.7	
	Boom length	Base boom	ft	38.4	
		Fully-extended boom	ft	196.9	
Fully-extended boom + Jib		ft	289.4		
Jib offset angle	°	0, 15, 30			
Working speed	Boom raising time	s	≤55		
	Boom fully extended time	s	≤600		
	Slewing speed	rpm	0~1.7		
	Outrigger extending and retracting time	Outrigger beam	Retracting	s	≤20
			Extending	s	≤25
		Outrigger jack	Retracting	s	≤40
			Extending	s	≤50
	Hoisting speed (single line, 4th layer, no load)	Main winch	fpm	≥410	
		Auxiliary winch	fpm	≥361	

OPTIMUM SERVICES , XCMG GUARANTEED



XCMG approved attachments



Genuine parts

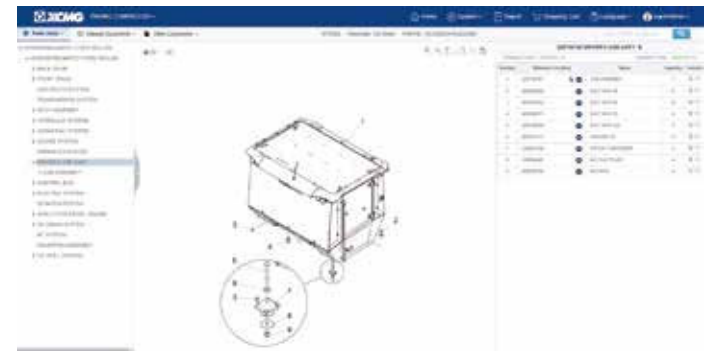
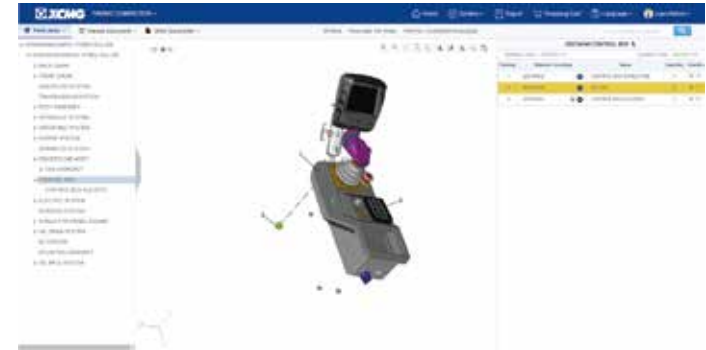


Financial solutions



Maintenance contract

XCMG Global Spare Parts System



Professional Integrated Complete Solutions

XCMG group has built a strong reputation based on the quality, reliability and durability of its construction machinery. What's more, XCMG has established a world wide service and parts network to provide support to every customer regardless of location.



Full Range of Services Ready for You

In order to respond to your needs as fast as possible, XCMG experts can be dispatched to your job site from a facility near you. A full range of services are available to reduce your total cost of ownership and increase your revenue.



Mobile cranes



Excavators



Aerial work platforms



Wheel loaders



Road machinery





 **XCMG**



