

Rough terrain crane

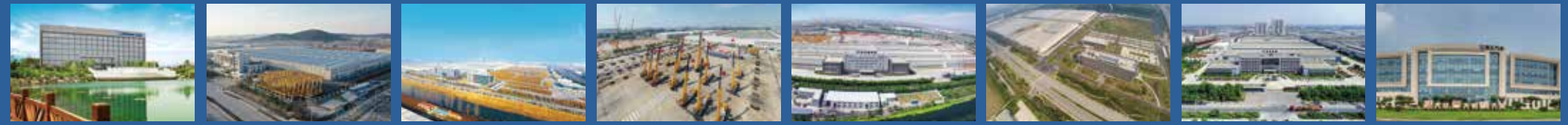
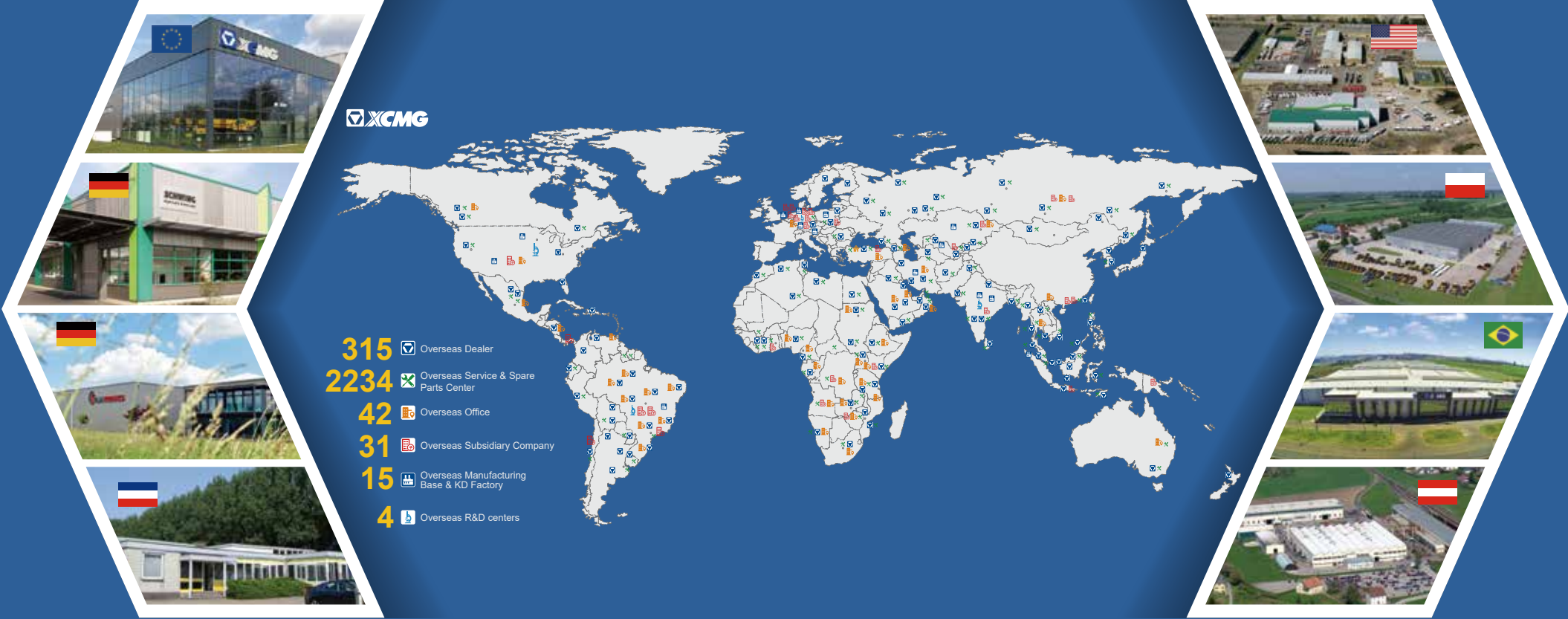
# XCR100\_U



U.S.EPA TIER 4F

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# INTRODUCTION OF XCMG

XCMG, as a leading enterprise valued of 100 billion RMB, with the largest scale, the best technology level, the largest export volume, and high competitiveness and influence in China's construction machinery industry, has been occupying the first place in China's construction machinery industry for decades, and it now ranks the third in the world industry and the 395th among the world's top 500 brands.

The main products by XCMG consists of 16 categories of equipment such as hoisting machinery, excavation machinery, concrete machinery, mining machinery, earth-moving machinery and road machinery, etc., as well as three categories of key components such as hydraulic system, transmission system and electric control system. Among above-mentioned, hoisting machinery ranks first in the world, and package solution of road construction and maintenance machinery, piling machinery and concrete machinery are among the first-class bloc in the world.

XCMG has accumulated more than 8000 approved patents, including more than 1900 invention patents and more than 130 PCT international patents. Entities of R&D centers, manufacturing plants or KD factories are in operation in more than 10 countries such as Germany, the United States, Brazil and India, XCMG has also acquired three European enterprises including Schwing in Germany. The Brazil manufacturing plant, with an investment of 350 million dollars to build up factories on a bare ground, has become a model of economic cooperation between China and Brazil. At present, XCMG products are exported to 187 countries and regions, covering 97% of the countries along "The Belt and Road" area. In export business to 35 countries, XCMG's proportion ranks NO. 1, with a steady first place within Chinese industry in terms of annual export volume and overseas income.





100USt



157.5ft



207ft

## OVERVIEW

XCR100\_U is widely used for lifting operations in oilfields, mines, road and bridge construction, etc.

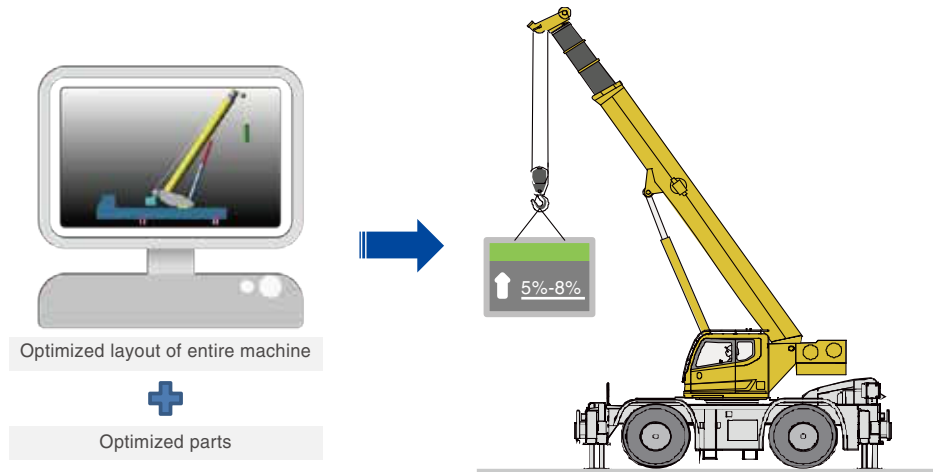
The XCR100\_U is part of XCMG's G1 generation of cranes that are designed to emphasize ultra high performance, energy savings, and efficient and intelligent operation.



# STRENGTHS AND HIGHLIGHTS

## Wide working range, industry leading lifting capacity

Using the latest multi-body dynamic optimization tools, XCMG engineers were able to reduce the formed boom's deflection and increase the rigidity while giving it 5-8% more capacity.



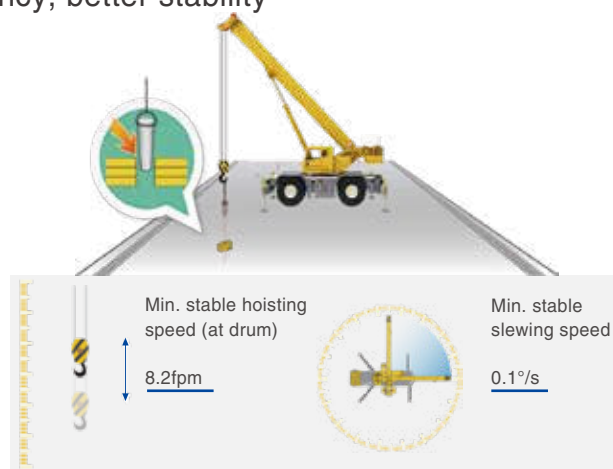
## High mobility and efficiency

- The XCR100\_U has 2 and 4 wheel drive modes, 4 steering modes, and the ability to drive with the boom over the rear. It has the smallest turning radius of any 100ton Rough Terrain Crane;
- High power engine combined with torque converter power shift transmission gives the XCR100\_U up to 10% better acceleration and fast job-site transfer;
- 4 wheel drive with differential locks along with deep lugged off road tires enable worry free driving on almost any terrain.



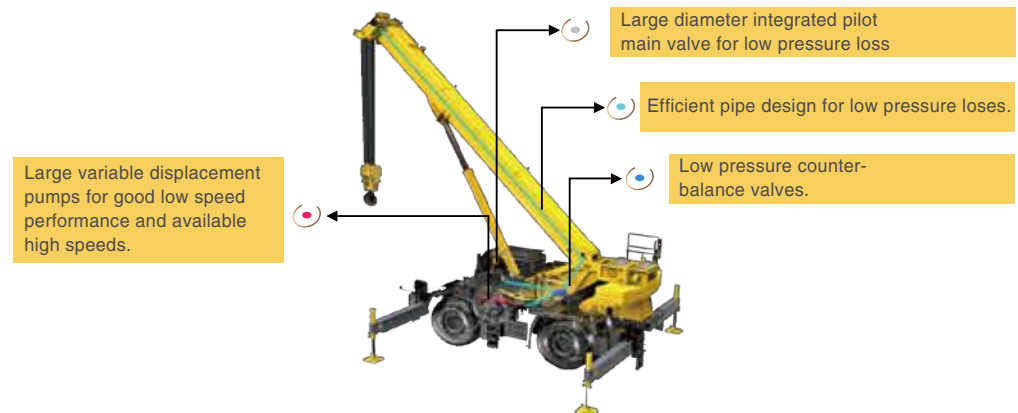
## High working efficiency, better stability

- Independent pumps for winch and boom functions give completely independent operation between functions and when needed, the flow can be combined for maximum speed;
- Oversized hydraulic cooler with automatic control along with optional oil heaters allow operation in the most extreme environments;
- Precise and smooth controls contribute to higher operator efficiency.



## Three major energy-saving measures lead to lower use cost

- A dual variable displacement load sense hydraulic system along with gravity assisted boom lowering contribute to a 10-15% reduction in fuel use under varied working conditions.



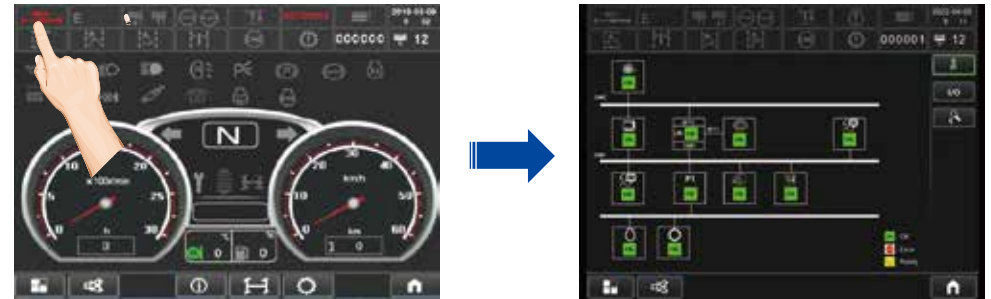
## Three major energy-saving measures lead to lower use cost

- ECO energy-saving control function lead to 5%~9% reduction in fuel consumption under various working conditions.
- The torque converter with lockup function features large torque at low speeds and high efficiency at high speeds, leading to 20% reduction in fuel consumption.



## Fault self-diagnosis

- Faults are automatically detected and in most cases, a diagnoses can be displayed from the built in monitor.
- Fault can be inquired at the touch of a button.



## More intelligent

### Automatic planning of working conditions

- After entering information about the load to be lifted and the details of the lift, the LMI will list out possible crane configurations that can be selected to complete the job.



### Steering mode is selected only by one key

- All steering movements are controlled by the steering wheel. Any steering mode can be selected at any time and the rear wheels will automatically align to the correct angles.





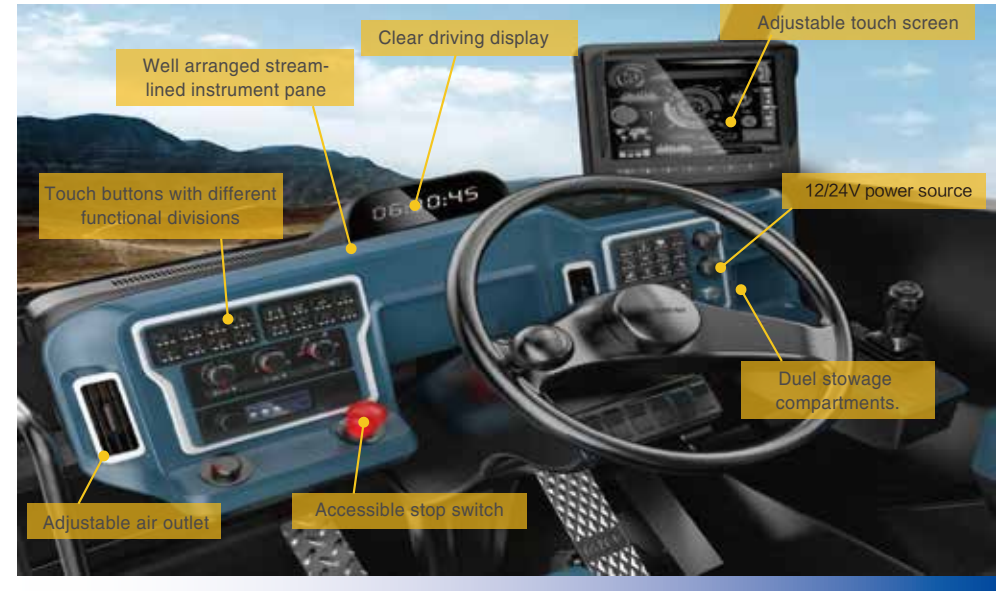
## Active safety protection

- With European, North American, GCC and Chinese standards complied, maximum active protection is ensured;
- For increased transportation safety, the XCR100\_U includes automatic fault warnings, automatic braking, automatic shifting and speed limiting depending on the driving modes and crane configuration.



## XCMG human-machine interaction system

- Controls designed around the operator include buttons grouped into functional areas, full display of of crane information, ingratiated fault diagnosis, lift planning, crane set up and active load monitoring.



## People-oriented design, comfortable to drive

- Complete climbing/maintenance access, dedicated human-machine engineering simulation analysis and user-oriented detail design contribute to perfect combination of functionality and aesthetics.





# TECHNICAL SPECIFICATIONS

Boom	5 section, with 3 telescoping modes. Formed U-shaped cross section from ultra high strength steel. 6 lower boom head sheaves. Boom length 40.7ft ~ 157.5ft.	●
Jib	Two-section lattice structure. Three offset angles of 0°, 15° and 30° are available. It is stowed along the side of the boom. Jib length 34.4ft ~ 57.4ft.	●
Engine	B6.7, in line, six-cylinder water-cooled compression ignition diesel engine, manufactured by Cummins, with rated power of 280/2200(bhp/rpm), max. torque of 850/1500(lb-ft/rpm), compliant with U.S. EPA Tier 4F emission standard. Fuel tank capacity: approx. 80.6 gal.	●
Transmission	6WG210, automatic transmission from ZF Germany, with 6 forward and 3 reverse gears.	●
Axles	High strength axles with front and rear steering and driving.	●
Tires	4 specialized off-road tires, with large load capacity. Tire specifications: 29.5R25.	●
Steering	Front axle independent steering, tight turning radius steering, crab walk steering and rear axle independent steering modes are available. The steering angle can be self-adjusted when changing mode.	●
Brakes	Service brake: double-circuit hydraulic disc brake, acting on all wheels. Automatically braking and alarm are available when the pressure in braking system is too low. Parking brake: Spring applied, hydraulic released disk brake on front axle.	●
Electrical System	24 V DC, two sets of 12 V battery in series. The LMI, headlamp, left/right turn lamps, reversing lamp, turntable working lamp, boom working lamp and slewing warning lamp are standard.	●
Hydraulic system	A dual-variable displacement pump, used for hoisting, luffing and telescoping operations, and a gear pump, used for slewing, outriggers, steering and braking operations; a load sensitive proportional multi-way directional valve is used as main valve; includes an independent hydraulic oil cooler. Tank capacity: approx. 279.2 gal.	●
Main winch system	The system is driven by a hydraulic motor through a planetary gear reducer, with a normally closed brake and a balance valve equipped.	●
Auxiliary winch system	The system is driven by a hydraulic motor through a planetary gear reducer, with a normally closed brake and a equipped with counter balance valve.	○
Slewing system	Single-row four-point ball contact slewing ring, driven by a hydraulic motor through planetary gear reducer, and with a normally closed brake fitted.	●
Operator's cab	Tiltable cab, with sliding door and adjustable seat. It is equipped with safety glass and roof protective grille. Sun shade is installed on for windshield and roof window. Heater and air conditioner, radio, 12 V and 24 V DC outlets are standard.	●
Safety devices	Hydraulic balance valve, hydraulic relief valve, hydraulic double-way valve and LMI. Lowering limiter is equipped in winch to prevent rope over-releasing. Anti-two block is fitted on the boom head to prevent rope over-winding, 360° turntable locking device.	●
Counterweight	22046lb. 3306lb.	● ○
Hook Block	60USt hook block, 7.7USt hook block.	●

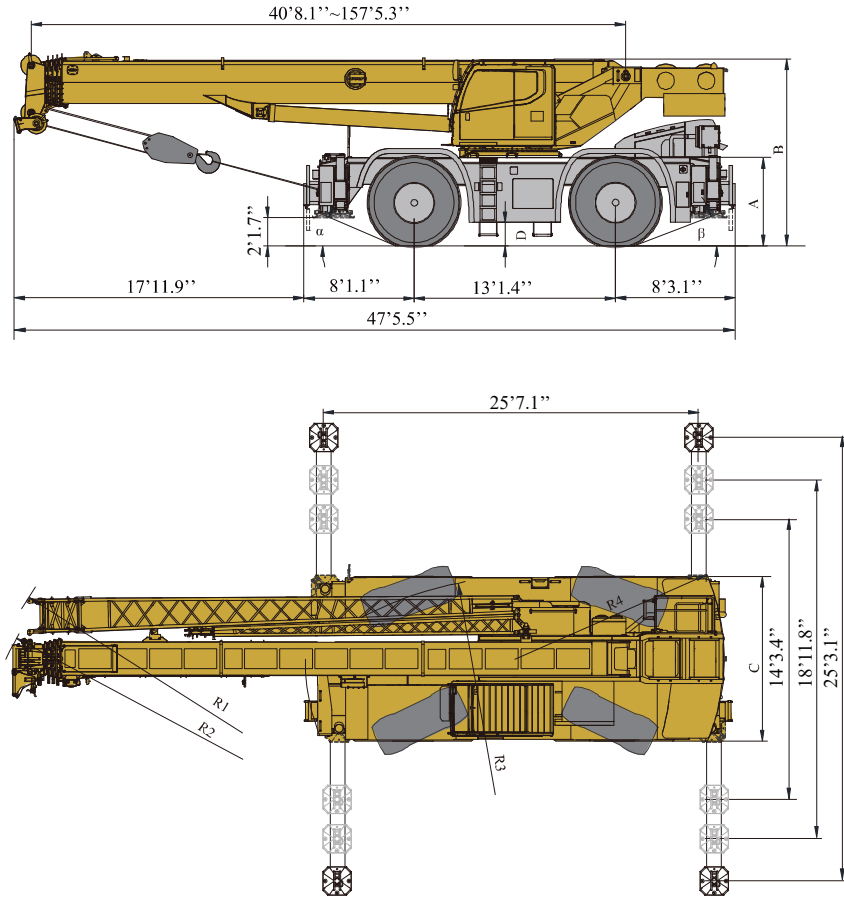
Product parts list is as mentioned above. Please refer to the product quotation for specific parts.


Symbol explanation:

● —it means the standard configuration;

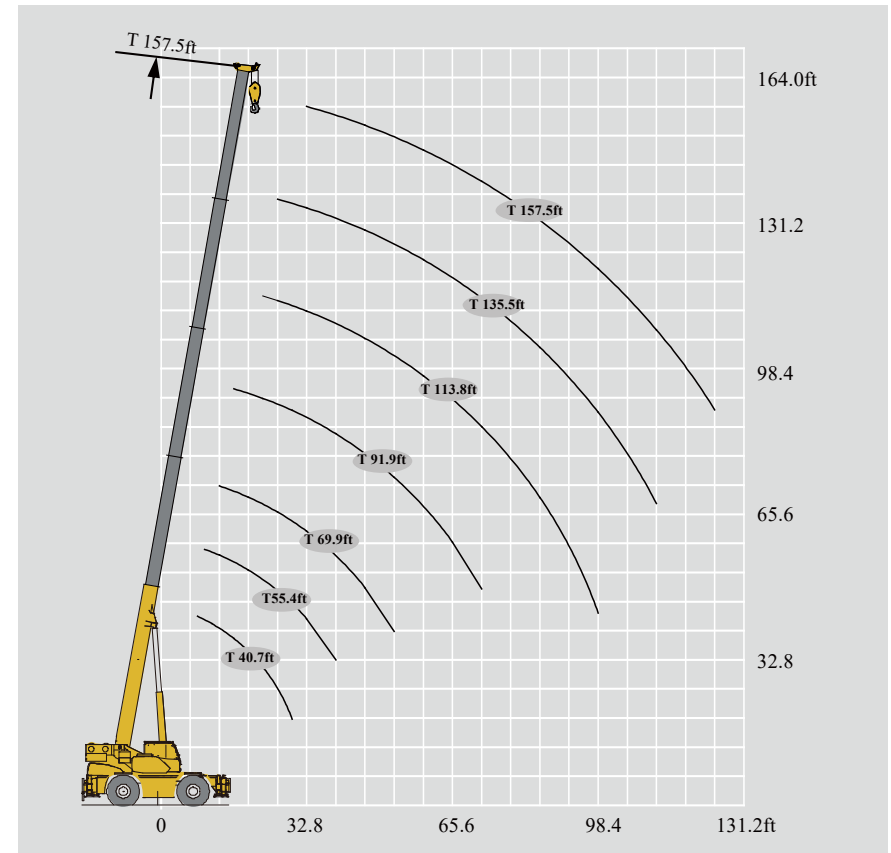
○ —it means the optional configuration.

## Dimensions



	$\alpha$	$\beta$	A	B	C	D	R1	R2	R3	R4
29.5R25	24°	24°	6'2.6"	12'9.4"	10'9.1"	1'9.6"	36'11.4"	38'0.1"	21'3.8"	14'10.8"

## Lifting heights





## Lifting capacities (T 40.7~157.5ft)



	40.7ft	55.4ft	69.9ft	91.9ft	113.8ft	135.5ft	157.5ft	62.7ft	84.6ft	106.3ft	128.3ft	77.1ft	99.1ft	121.1ft	143.0ft
8.2	200000*														
9.8	176370*	139552													
11.5	165347	139552													
13.1	159614	139552	101413					77382							
16.4	127647	127647	99208	73855				77162	77823			76721			
19.7	106483	106483	88185	73855				77162	74653	51369		76721	71430		
23	91271	90389	83776	70327	55997			77162	69666	48356		76721	65477		
26.2	77162	77162	80248	65036	51368	38167		77162	65481	45649	35494	76721	61509	46334	
29.5	63493	61729	65036	60627	48281	38140		73193	61452	42898	33976	71209	58863	44216	28881
32.8		55116	52249	55777	45195	37919	25112	59525	58117	40563	32628	57761	55777	42253	26455
39.4		37479	37479	42108	40345	36597	25133	43431	46297	36726	29939	41888	42329	38729	27558
45.9			26455	31085	30865	31747	25133	32849	34833	33193	26568	31306	34392	35461	26455
52.5			19842	23589	23810	24912	22708		27558	29321	23854	24030	26676	27999	23369
59.1				18298	20283	20062	20062		21826	23810	21653	18739	21385	22487	20944
65.6				14330	16094	17416	16976		17637	19621	19621		17196	18298	17857
72.2				11244	13007	14110	14991			16314	16976		14110	15212	15873
78.7					10582	11684	12346			13889	14330		11464	12566	13228
85.3					8378	9480	10362			11684	12346		9480	10582	11244
91.9					6614	7716	8598					10582		8818	9480
98.4					5291	6393	7055					9039		7275	7937
105						5071	5732					7716			6614
111.5						3968	4630								5512
118.1							3748								4630
124.7							2866								3748
2nd	0	50%	100%	100%	100%	100%	100%	0%	0%	0%	0%	50%	50%	50%	50%
3rd	0	0	0	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%
4th	0	0	0	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%
5th	0	0	0	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%

Notes: The lifting capacity with \* can only be applied for operations with special devices.

## Table of main technical parameters

Category	Item	Unit	Parameter	
Dimensions	Outline size (lengthxwidthxheight)	ft	47.5x10.8x12.8	
	Wheel base	ft	13.1	
	Track (Front/ Rear )	ft	8.3/8.3	
	Front/ Rear overhang	ft	8.1/7.8	
	Front/ Rear extension	ft	18.0/0.4	
Weight	Total vehicle mass in travel configuration	lb	120915	
	Axle load	1st axle	lb	61004
		2nd axle	lb	59911
Power	Engine model	—	B6.7	
	Engine rated power/rpm	bhp/(rpm)	280/2000	
	Engine rated torque/rpm	lb.ft/(rpm)	850/1500	
Travel	Max. travel speed	mph	≥21.6	
	Min. turning diameter	ft	≤42.7	
	Min. ground clearance	ft	1.8	
	Approach angle	°	24	
	Departure angle	°	24	
	Braking distance (at 14.91 mph)	ft	≤29.5	
Max. grade ability	%	≥64.6		

Category	Item	Unit	Parameter	
Main performance	Max. total rated lifting capacity		100	
	Min. rated working radius		8.2	
	Tail swing at turntable tail	Counterweight		14.9
		Base boom		2096559
	Max. load moment	Fully-extended boom		1192233
		Outrigger span	Longitudinal	
	Lateral			25.3
	Hoist height	Base boom		42.7
		Fully-extended boom		157.5
	Boom length	Base boom		40.7
Fully-extended boom			157.5	
Jib offset angle			0°, 15°, 30°	
Working speed	Boom raising time		≤55	
	Boom fully extending time		≤110	
	Max. slewing speed		≥1.5	
	Hoisting speed (single line, 4th layer, no load)	Main winch		≥475.7
Auxiliary winch			≥295.3	

# OPTIMUM SERVICES , XCMG GUARANTEED



XCMG approved attachments



Genuine parts



Financial solutions



Maintenance contract



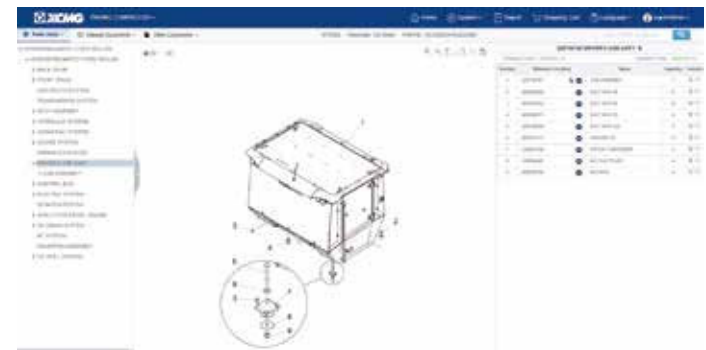
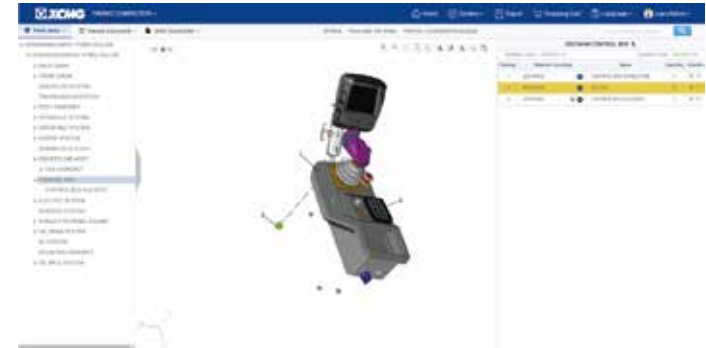
## Professional Integrated Complete Solutions

XCMG group has built a strong reputation based on the quality, reliability and durability of its construction machinery. What's more, XCMG has gradually established a service network to constantly provide its local integrated and highly efficient complete solutions for all customers.

## Full Range of Services Ready for you

In order to respond to your needs as fast as possible, XCMG experts are on their way to your job site from one of our facilities near you. Full range of services are available in order to reduce your total cost of ownership and increase your revenue.

## XCMG Global Spare parts System



Mobile cranes



Excavators



Aerial work platforms



Wheel loaders



Road machinery







 **XCMG**

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