

XCA220_AU All Terrain Crane

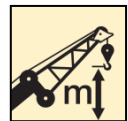
Technical specifications



t



m



m

XCA220_AU

XCMG ALL TERRAIN CRANE

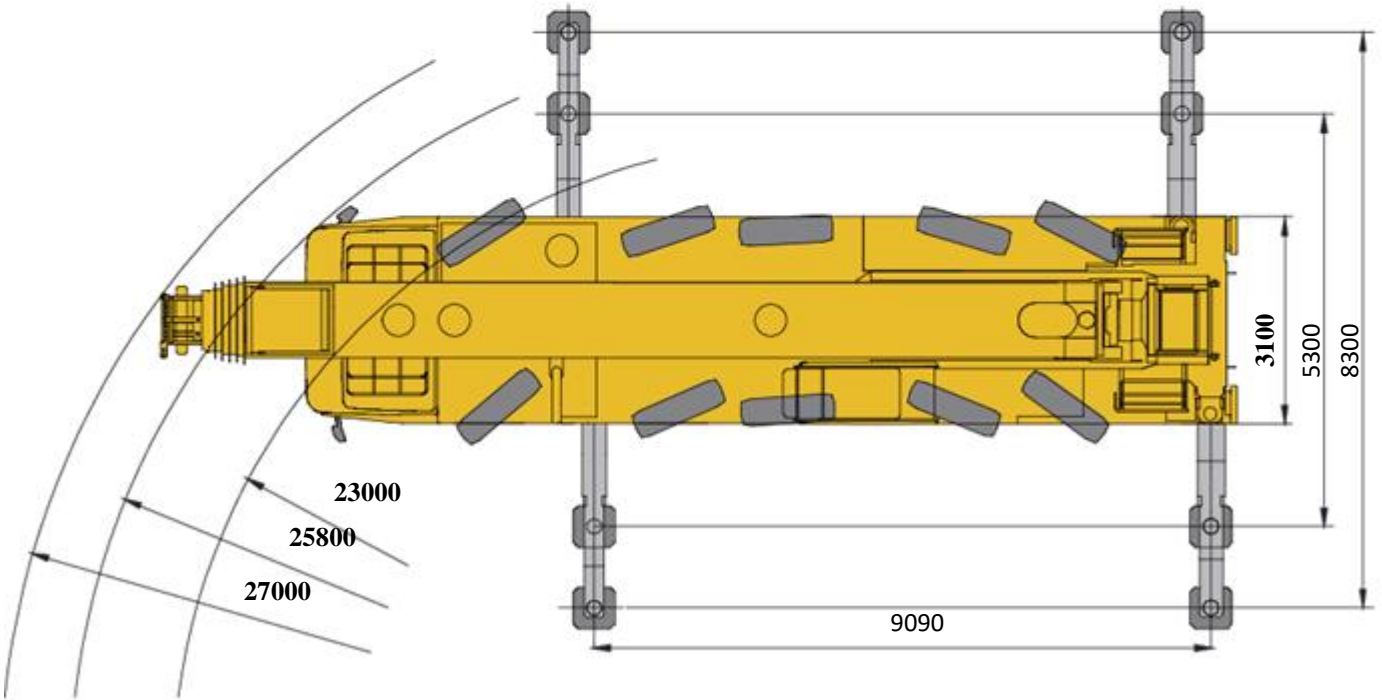
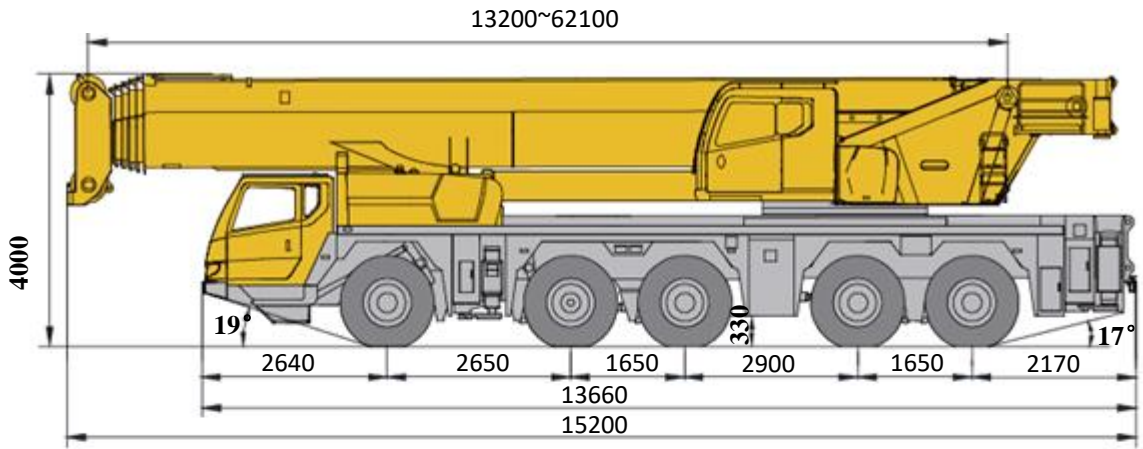
220t LIFTING CAPACITY

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Dimensions



Technical specifications

 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. ●
Outrigger	Four outriggers arranged in H-shape are hydraulically controlled by control levers. Double-stage outrigger beam is adopted. There is an outrigger control station located at each side of the chassis, and there is a level gauge, an illuminator and two speed buttons on each control station. There is a check valve fitted in each outrigger cylinder, and a double-way hydraulic valve fitted in each jack cylinder. ●
Engine	OM460LA.E3B/3, in-line, 6-cylinder, water cooled, electric control diesel engine, made by Daimler, with rated power of 361.1kW/1800rpm and max. torque of 2200Nm/1300rpm, compliant to China V emission standard. Fuel tank capacity: 550l ●
Hydraulic system	The pump unit directly connected to the PTO port of the engine is used for outriggers, steering, suspension and independent cooling for hydraulic system. ●
Transmission	Automatic transmission imported from ZF Germany, equipped with a retarder, 12 forward gears and 2 reverse gears. ●
Transfer box	Mechanical transfer box imported from KESSLER Germany, equipped with an emergency steering oil pump. ●
Axles	High strength axles with reliable performance, imported from KESSLER Germany, equipped with pneumatically controlled disc brakes. ●
Suspension	Hydro-pneumatic suspension is adopted for all axles, providing good shock absorbing effect. Functions of automatic leveling, suspension lifting, elastic/rigid state switch-over, etc. are available. ●


Tires	10 tires and 1 spare tire, each axle is equipped with single tire, large bearing capacity. Tire specifications:525/95R25 (20.5R25) ●
Brakes	Service brake: double-circuit air pressure brake, acting on all wheels. Parking brake: spring-loaded brake, acting on the wheels of 2-5 axles. Auxiliary brake: engine exhaust brake and engine retarder, and transmission retarder, which are safe and reliable, and will prolong the service life of brake lining. ●
Steering	All axles steering, with advanced electro-hydraulic proportional steering control technology applied to ensure various steering modes for meeting the requirements under various working conditions. ●
Driver's cab	New full dimension steel structure cab, with suspension connecting structure adopted, is equipped with shock absorbers at the rear of the cab. Safety glass, electrically operated door window lifters, adjustable seats, electrical adjustable mirrors, steering wheel adjustable in height and angle, reversing display and large screen liquid crystal display & CD player are equipped. New combined central control panel is reasonably arranged with arc shape adopted, presenting human-oriented design concept. Heating & air-conditioning are standard. ●
Electrical System	24 V DC ●

 Superstructure	
Frame	Designed and manufactured by XCMG, made of high strength steel ●
Hydraulic system	The variable pump driven by chassis engine is used for hoisting, elevating, telescoping and slewing operations. Imported electro-hydraulic change valve is adopted and matched perfectly with plunger variable pump. Air-cooled hydraulic oil cooler effectively reduces the temperature of oil in the system. ●

Technical specifications

Operating mode	Pilot electric proportional control and stepless speed regulation are available. Main crane movements are controlled through two control levers at left and right sides.	●
Main winch system	Driven by a hydraulic motor with a planetary gear reducer, a normally closed brake, a balanced valve and a Lebus grooved drum equipped. Imported wire rope with one rope end directly installed in rope socket improves rope replacing speed and makes replacement easy and fast.	●
Auxiliary winch system	Driven by a hydraulic motor with a planetary gear reducer, a normally closed brake, a balanced valve and a Lebus grooved drum equipped.	○
Hook block	160 t hook block	○
	85t hook block	●
	40t hook block	●
	12.5t hook block	●
LMI	When the actual load moment is approaching overloading value, audible and visual warning will be sent out, and the dangerous operation will be automatically stopped ahead of overloading. Overload memory function (black box) and fault self-diagnosis function are available.	●
Operator's cab	It is equipped with safety glass and protective grilles. A windshield sun shade, a sliding door, an adjustable seat, LMI, electric control box, electric windshield wipers, engine accelerator pedal and engine start switch, etc. are available. The cab can be tilted up to 20°. Heating & air conditioning are standard.	●
Slewing system	Single-row four-point ball contact external tooth slewing ring, driven by a hydraulic motor, with built-in planetary gear reducer and normally closed brake equipped, 360° continuous rotation available. Power control or free slewing function is available, and the slewing speed may be infinitely regulated.	●

Wireless remote control device	It is used for remote control of crane movements, in order to improve the convenience and safety of operation.	○
Safety devices	Hydraulic balance valve, hydraulic relief valve, double-way hydraulic valve, LMI, lowering limiter for preventing wire rope from over-releasing, anti-two block at boom head for preventing wire rope from over-winding, anemometer for measuring wind speed, and winch monitor for real-time monitoring winch.	●
Combined counterweight	Total weight is 80t. Seven counterweight combinations of 10t,20t,30t,40t,50t,68t and 80t are available.	●
Electrical System	24 V DC.	●

 Boom system		
Boom	6-section, U-shape cross section, welding structure. Single-cylinder pinning telescoping system. One double-acting cylinder with safe valve is used to control the telescoping movements of all boom sections. Various telescoping modes are available. Boom length: 13.2 ~ 62.1m.	●
Single top	Installed at the boom top, used for single line operation. Its lifting performance is the same as that for boom, but the max. lifting load could not exceed 12.5t.	●
Jib	Lattice structure, a boom extension of 8m, a jib connecting bracket, a rotating bracket, two jib sections, jib inserts of 4m and 8m may be combined to extend the total boom length, with 0°, 20° and 40° jib offset angles available. Jib length: 12m~44m.	○

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.

Weight



Axle	1	2	3	4	5	Total weight
5	12t	12t	12t	12t	12t	60t

Counterweight, single top, hook block, jib, hydraulic hose reel, auxiliary winch, main winch roller bracket on superstructure and turntable ladders are not included;
 Outrigger floats, spare tire, spare tire bracket and removable ladder on chassis are not included.
 Driving type: 10x8; Tire specification:525/95R25



Hook	No. of lines	Weight	Remarks
160 t	14	1900	Double hook, Optional
85 t	7	1000	Double hook, Standard
40t	3	700	Single hook, Standard
12.5t	1	460	Single hook, Standard

Working speeds



525/80 R 25
(20.5 R 25)

Km/h

1 ~ 80



60%



Drive

Working speed

Max. single line pull

Rope diameter/ length



0-130 m/min, single line, 4th layer

12.5t

23mm/300m



0-130 m/min, single line, 4th layer

12.5t

23mm/260m



0-1.5 r/min

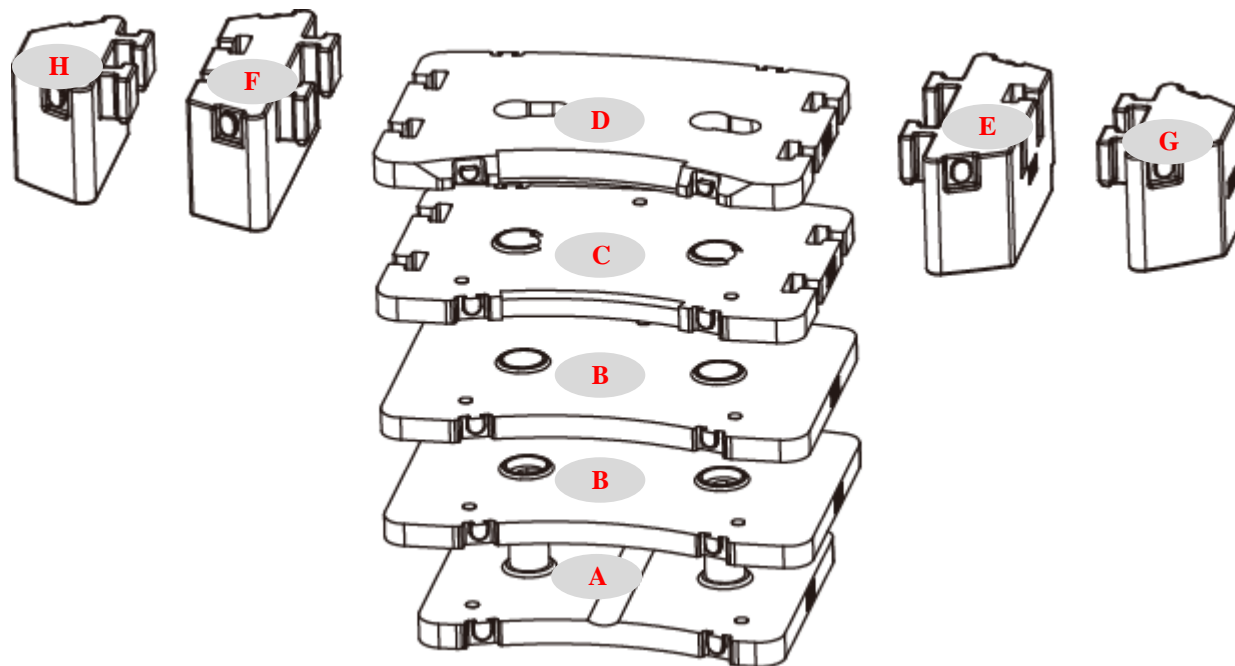
Approx. 60s for boom elevation from 0° to 82°



Approx. 600s for boom extension from 13m to 62.1m



Counterweight

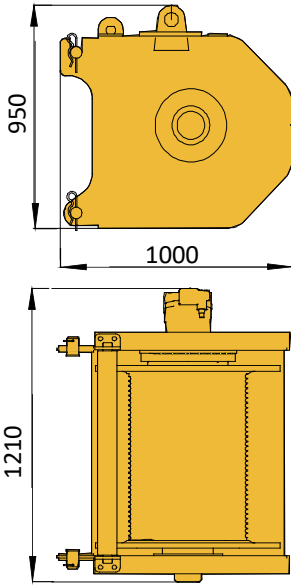


Counterweight	A	B	C	D	E	F	G	H
Dimensions (L×W×H) mm	2990×2350×1024	3500×2350×223	3500×2350×232	3500×2300×216	2118 ×950 ×1008	2118 ×950 ×1008	1461 ×990×1008	1461 ×990×1008
Weight kg	10000	10000	10000	10000	9000	9000	6000	6000

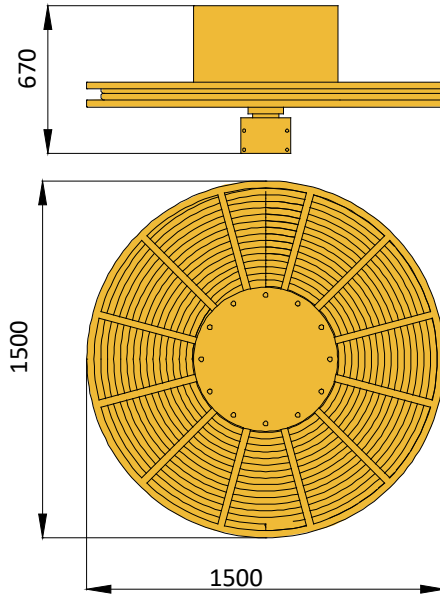
Working mode	80t	68t	50t	40t	30t	20t	10t
code Combinations	A+B×2+C+D+E+F+G+H	A+B×2+C+D+E+F	A+B×2+C+D	A+B×2+C	A+B×2	A+B	A

Dimensions of parts to be transported

2100kg
Auxiliary winch (rope included)

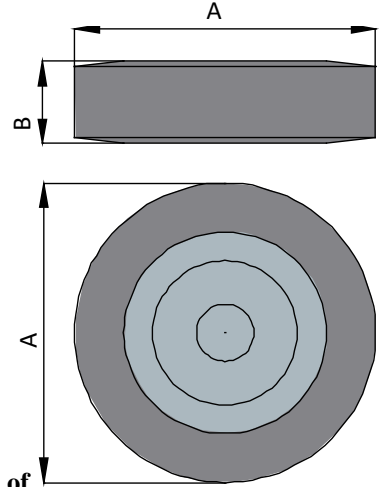


460kg
Hydraulic hose reel

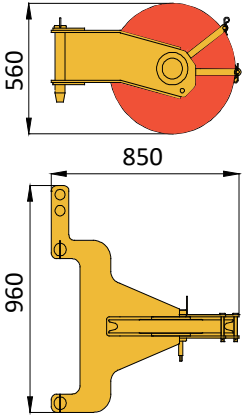


Spare tire

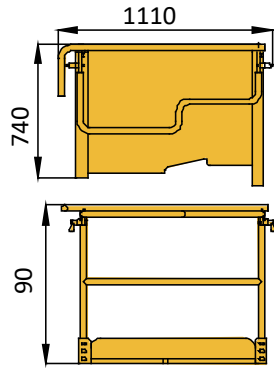
	A	B	重量
445/95R25	1485	445	255kg
525/95R25	1485	525	347kg



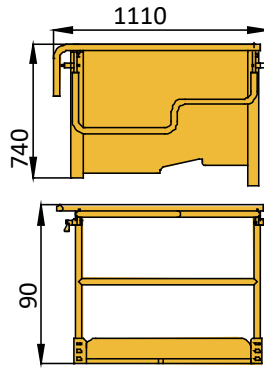
140kg
Single top



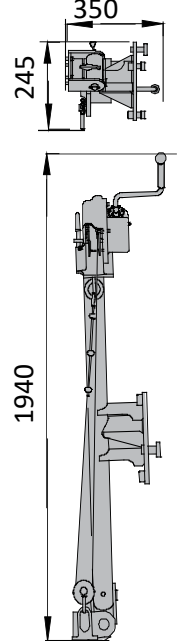
14kg
Ladder at the left side of turntable



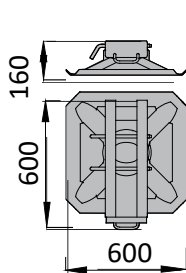
16kg
Ladder at the right side of turntable



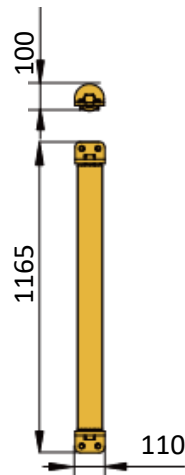
65kg
Bracket of spare tire



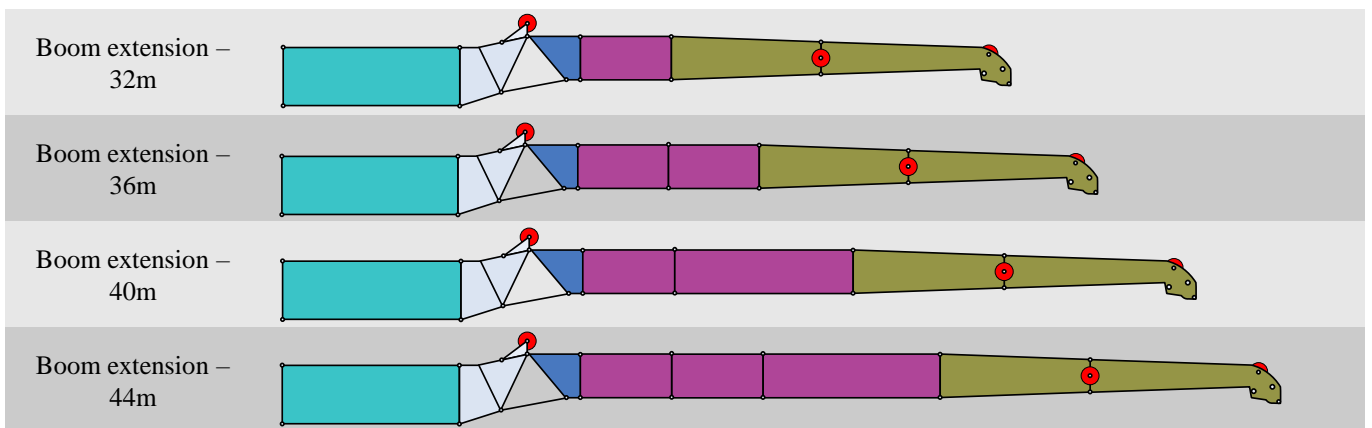
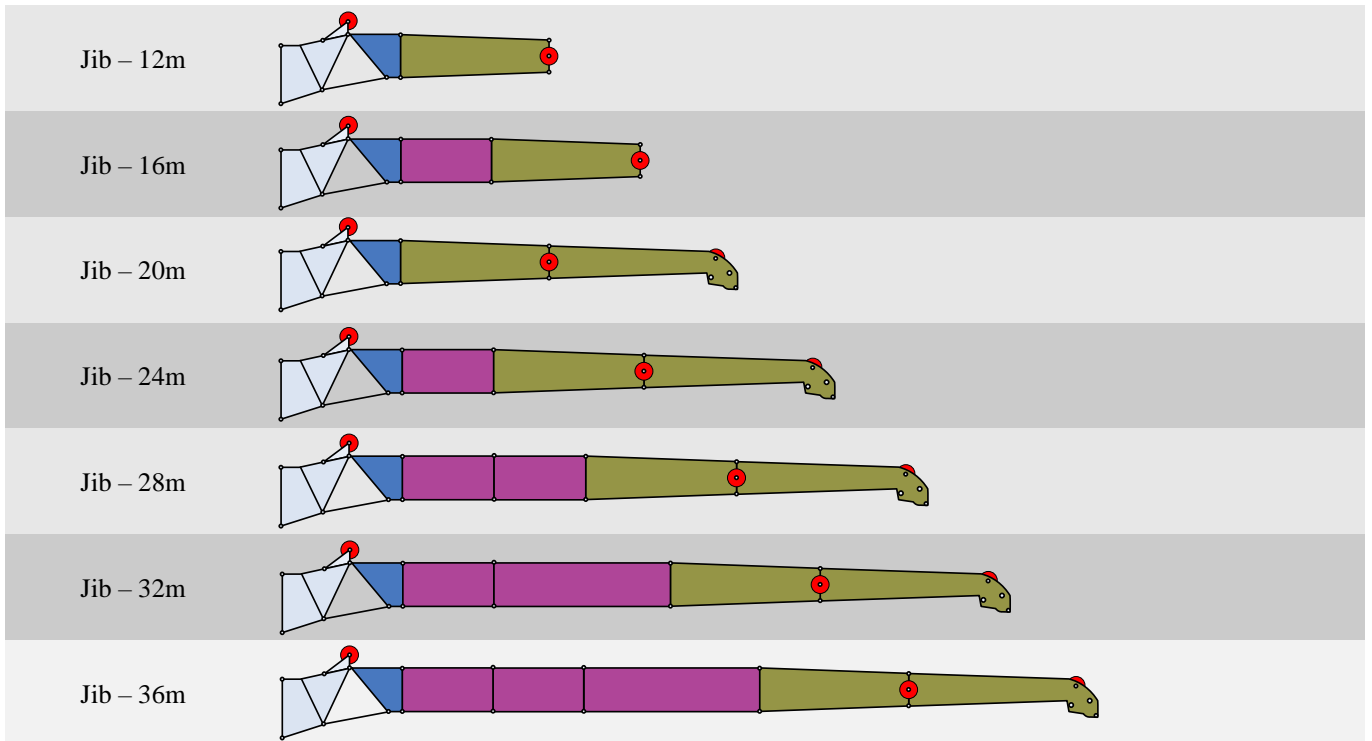
4×63kg=252kg
Outrigger floats










9kg
Main winch roller bracket



Boom / Jib combinations



Boom / Jib combinations

Component	Structure	Dimensions (L×W×H) mm	Weight (kg)
Connecting bracket		1650×1000×2300	320
Rotating bracket		3610×950×1350	390
Boom extension		8200×1050×1400	600
First jib section assembly		7700×950×1100	700
Second jib section assembly		8000×600×700	400
Jib insert I		8200×950×1100	560
Jib insert II		4200×950×1100	320

Boom / Jib combinations



Telescopic boom

T: 13.2~62.1m



Jib

T: 44.7~62.1m
J: 12~36m

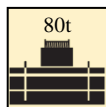
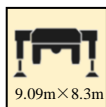
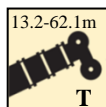


Telescopic boom extension

T: 44.7~58.2m
I: 8m
J: 24~36m

Lifting capacities

T 13.2~62.1m



	13.2	17.7	22.2	26.7	31.2	31.2	35.7	40.2	40.2	44.7	49.2	49.2	53.7	53.7	58.2	62.1	
3	150.0	150.0	140.0														3
3.5	150.0	145.0	140.0														3.5
4	140.0	140.0	135.0	121.0													4
4.5	135.0	130.0	127.0	121.0													4.5
5	122.0	123.0	120.0	117.9	100.0	100.0											5
6	106.0	108.0	107.0	104.4	96.2	99.0	77.7										6
7	95.0	95.0	96.0	93.9	87.8	90.0	73.5	47.2	73.1								7
8	85.0	85.0	86.0	85.5	80.8	81.7	69.7	44.2	66.8	53.9							8
9	77.0	77.0	78.0	78.2	74.4	74.8	66.3	41.6	61.1	49.5	38.3	44.0					9
10	64.5	68.6	70.0	70.4	68.9	68.9	63.3	39.4	56.6	45.8	35.6	40.9	31.2	32.3			10
12		55.7	56.5	56.1	56.5	54.6	55.1	35.5	49.1	39.5	31.1	35.6	29.7	31.6	26.3	21.0	12
14		47.0	47.0	48.3	49.0	47.4	48.0	32.1	43.2	34.8	27.7	31.3	26.4	28.0	25.5	20.8	14
16			40.0	40.3	40.8	39.2	39.8	29.4	38.7	30.8	24.9	27.9	23.6	25.0	22.7	20.6	16
18			35.0	35.4	36.1	34.2	34.9	27.2	33.9	27.7	22.5	25.1	21.5	22.6	20.6	19.0	18
20				31.2	31.5	29.7	30.4	25.5	29.4	25.1	20.5	22.7	19.6	20.5	18.9	17.4	20
22				27.5	27.7	26.0	27.3	23.9	25.7	22.9	19.0	20.8	18.1	18.8	17.3	15.9	22
24					24.6	23.4	24.2	22.5	22.7	21.1	17.7	19.2	16.7	17.3	16.0	14.7	24
26					21.6	20.4	21.2	21.2	19.8	19.2	16.4	17.7	15.5	16.0	14.7	13.6	26
28					17.9	16.4	18.8	19.2	17.3	17.2	15.3	16.4	14.5	14.9	13.7	12.6	28
30							16.7	17.0	15.2	15.4	14.4	15.4	13.6	13.9	12.8	11.7	30
32							14.9	15.2	13.5	13.7	13.6	13.6	12.8	13.0	12.0	11.0	32
34								14.3	12.4	12.2	12.9	12.2	12.0	12.1	11.3	10.4	34
36								12.8	11.2	11.0	12.2	11.3	10.9	11.1	10.7	9.7	36
38										10.3	11.6	10.2	9.7	9.9	10.1	9.2	38
40										9.2	10.5	9.3	9.2	9.2	9.5	8.7	40
42											9.9	8.4	8.7	8.7	8.5	8.3	42
44											9.1	7.6	8.3	8.0	8.0	7.9	44
46													8.0	7.3	7.4	7.3	46
48													7.6	6.6	7.1	6.8	48
50													7.0	6.0	6.5	6.1	50
52															5.9	5.8	52
54															5.4	5.6	54
56																5.2	56
58																4.8	58
code	00000	00100	01100	01110	01111	11110	11111	11112	21111	22111	11222	22211	12222	22221	22222	33333	code

Notes

1. 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 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 a lifting operation.
3. A lifting operation is permissible only when the wind force is below grade 5 (instantaneous wind speed is 14.1 m/s, wind pressure is 125 N/m²).
4. Before beginning lifting operation, the operator should know the weight of the load to be lifted and its working range, and 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 a load is not being carried. Otherwise, the crane will tip.
6. The boom should be extended according to the telescoping code shown by digits, which means the percentage of boom sections extended.

Table of Main Technical Parameters

Category	Item	Unit	Parameter	
Dimensions (445/ 95R25)	Dimensions (L×W×H)	mm	15200×3000×4000	
	Wheel base	mm	2650+1650+2900+1650	
	Track (front/rear)	mm	2540/2540/2540/2540/2540	
	Front/ Rear overhang	mm	2640/2170	
	Front/ Rear extension	mm	1490/0	
Weight (445/ 95R25)	Total vehicle mass in travel configuration		kg	60000
	Axle load (445/95R25)	1st axle	kg	12000
		2nd axle	kg	12000
		3rd axle	kg	12000
		4th axle	kg	12000
		5th axle	kg	12000
Power	Engine model		—	OM460LA.E3B/3
	Max.net power/rpm		kW/(r/min)	360/1800
	Max. output torque/rpm		N.m/(r/min)	2200/1300
Travel (445/ 95R25)	Travel speed	Max. travel speed	Km/h	≥80
		Min. stable travel speed	Km/h	1 ~ 1.5
	Min. turning diameter	Min. turning diameter	mm	≤23000
		Min. turning diameter at boom tip	mm	≤27000
	Min. ground clearance		mm	330
	Approach angle		°	19
	Departure angle		°	17
	Braking distance (at 30 km/h)		m	≤9
	Max. grade ability		%	≥60
	Fuel consumption per 100 km/l		L	72
	Exterior noise level		dB(A)	≤84
	Noise level at seated position		dB(A)	≤90

Table of Main Technical Parameters

Category	Item	Unit	Parameter	
Main performance	Max. total rated lifting capacity	t	220	
	Min. rated working radius	m	3	
	Turning radius at turntable tail	Counterweight	mm	5160
		Auxiliary winch	mm	4900
	Max. load moment	Base boom	kN.m	6791
		Fully-extended boom	kN.m	3469
	Outrigger span	Longitudinal	m	9.09
		Lateral	m	8.3
	Hoist height	Base boom	m	13
		Fully-extended boom	m	62
		Fully-extended boom + jib	m	102
	Boom length	Base boom	m	13
		Fully-extended boom	m	62.1
Fully-extended boom + jib		m	102.2	
Jib offset angle	°	0, 20, 40		
Working speed	Boom raising time	s	≤60	
	Boom fully extending time	s	≤600	
	Max. slewing speed	r/min	≥1.5	
	Hoisting speed (single line, 4th layer, no load)	Main winch	m/min	≥130
Auxiliary winch		m/min	≥130	
Noise	Exterior noise level	dB (A)	≤122	
	Noise level at seated position	dB (A)	≤90	



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xcmg@ronco.com.au