XCA40_E
All Terrain Crane

Technical specifications

max	40 t		35 m	m	42.7 m

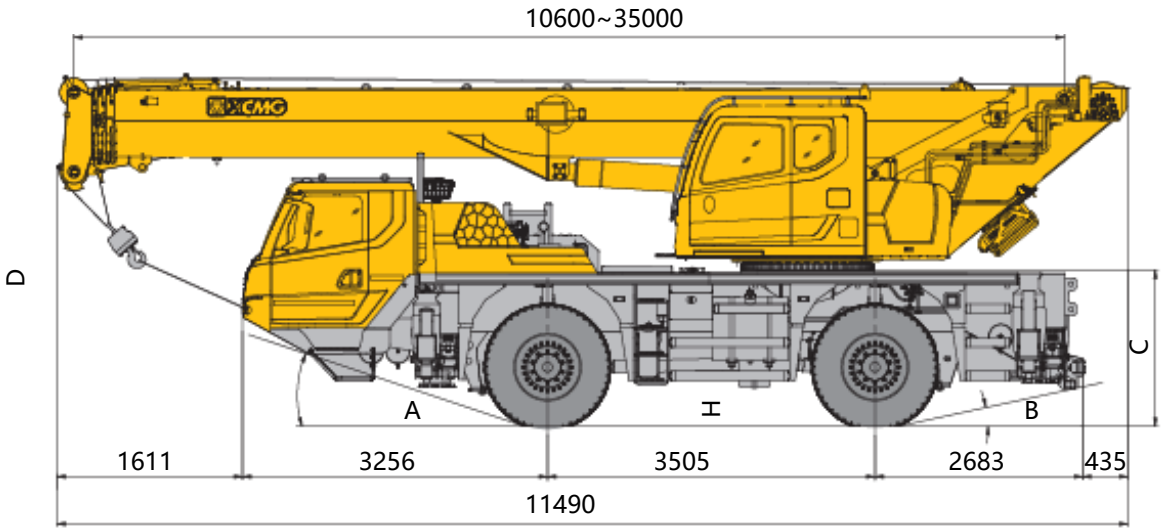
XCA40_E

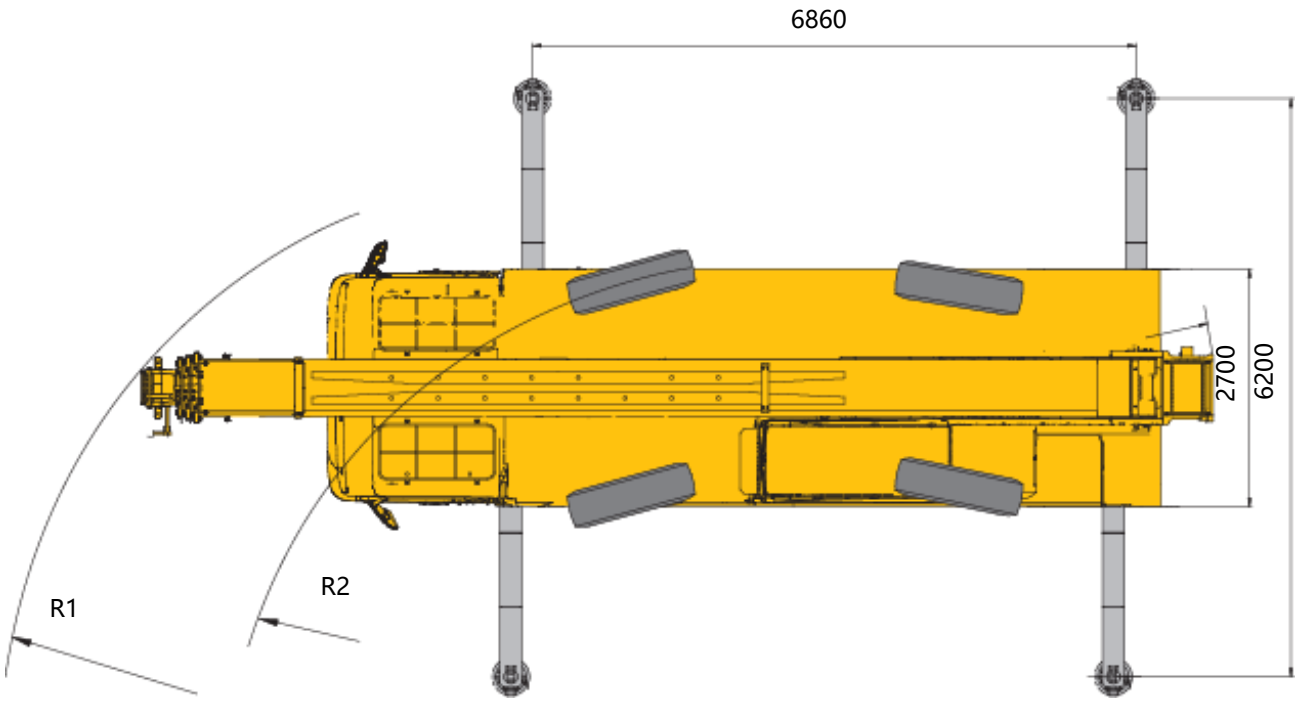
XCMG ALL TERRAIN CRANE
40t LIFTING CAPACITY

Contents

Contents

Dimensions





R:
Tight turning radius mode

	A (°)	B (°)	C (mm)	D (mm)	H (mm)	R1 (mm)	R2 (mm)
525/80 R 25 (20.5 R 25)	20	10.5	1684	3780	382	9000	6000

Technical specifications

	Chassis	Configuration
Frame	Designed and manufactured by XCMG, made of high strength steel with rectangle cross-section.	●
Outriggers	H-type outrigger, outrigger beam is one-stage telescoping with push-pull outrigger float and two telescoping working position (fully-extended and half-extended) to satisfy various working condition requirements. Outrigger control panel is controlled by CAN bus located on the sides of chassis.	●
Engine	6 cylinders, diesel, Daimler AG OM936LA, Rated power/RPM: 230kw/1800rpm, Max. output torque/RPM: 1300Nm/1200-1600rpm, Emission standard: EU stage V. Fuel tank capacity: approx. 260 L.	●
Transmission	ZF automatic transmission, 12 forward gears and 2 reverse gear.	●
Axles	High strength integral axle; all axles for driving: 4×4	●
Suspension	Advanced hydro-pneumatic suspension technology with improved stability; the suspension is equipped with effective damped cylinder and accumulator buffer. The stroke of suspension cylinder : -130mm～+130mm.	●
	525/80 R25（20.5 R 25）	●
Steering system	Axle 1 mechanically steering and axle 2 electric-hydraulic proportional steering.	●
Braking system	Service brake: dual-circuit air pressure brake, acting on all wheels. Parking brake: spring-loaded brake, acting on all wheels. Auxiliary brake: engine retarded brake.	●

Driver's cab	New full dimension steel structure cab. Air-supported seats are provided for driver and co-driver to improve the comfort. Safety glass, electrically operated door window lifters, steering wheel adjustable in height and angle, and large screen liquid crystal display are equipped. New type of combined control panel is reasonably and ergonomically arranged in arch shape. Radio, heating & air-conditioning are standard.	●
Electrical system	DC 24 V, with 2 sets of 12 V batteries in series.	●
Auxiliary devices	Beacon lamp at the driver's cab	●

Technical specifications

	Superstructure	Configuration
Frame	Designed and manufactured by XCMG, made of high strength steel.	●
Hydraulic system	The load-sensing plunger pump and gear pump are used to control hoisting, luffing, telescoping, slewing and auxiliary system. Load-sensing proportional multi-way valve is equipped. Wind-cooled hydraulic radiator is also applied.	●
Control system	Pilot electric proportional control is adopted with distributed CAN bus control technology. Apart from the normal control functions, it also has the functions of real time monitoring, automatic fault diagnosis and intelligent boom control.	●
Winch system	Hydraulic motor with planetary gear reducer and constant-closed brake, specific anti-disorder rope winding drum, anti-coiling wire rope.	●
Slewing system	A single-row, four-point contact-ball external toothed slewing bearing is driven by hydraulic motor, with built-in planetary gear reducer and constant-closed brake equipped, and may continuously slew 360°. Power control and free swing function as well as stepless speed regulation are available.	●
Operator's cab	The cab is ergonomically designed for safety and comfort. It is equipped with safety glass and protective grilles. Windshield sun shade, a sliding door and an adjustable seat are available. The operator's cab can tilt backward 20°. Heating & air conditioning are available.	●
Combined counterweight	Total weight is 7.4 t. There are five counterweight configurations of 1 t, 1.3 t, 2.7 t, 6.0 t, and 7.4 t.	●
Hook block	5t hook block	●
	10t hook block	●
	25t hook block	●
	40t hook block	●
Electrical system	24 V DC.	●
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.	●
Safety devices	Hydraulic balance valve, hydraulic relief valve, hydraulic two-way valve, LMI, display, central controller, length/angle sensor, oil pressure sensor and 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. Anemometer for measuring the speed of the wind.	●
Centralized lubrication system	Controlled by computer program; lubrication points are at slewing ring, bearing pedestals of main winch and auxiliary winch, upper and lower pivots of elevating cylinder, pivot of tilt cylinder and rear pivot of boom.	●
Auxiliary devices	superstructure rotating working lamp, beacon lamp at the driver's cab	●

	Boom and jib	Configuration
Boom	4-section boom with U cross-section, welding structure. Single-cylinder plus ropes telescoping system Boom length: 10.6m～35m.	●
Fixed jib	Lattice jib, welded structure. It can be attached at three angles of 0°, 20°, 40°. Fixed jib length: 9.5m.	○

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	Total weight
t	≤12	≤12	≤24 1)

1) 10t hook block is carried;Jib, counterweight , outrigger floats, spare tire, and storage box are excluded； Driving type: 4×4; Tire specification: 525/80 R25 (20.5 R 25)

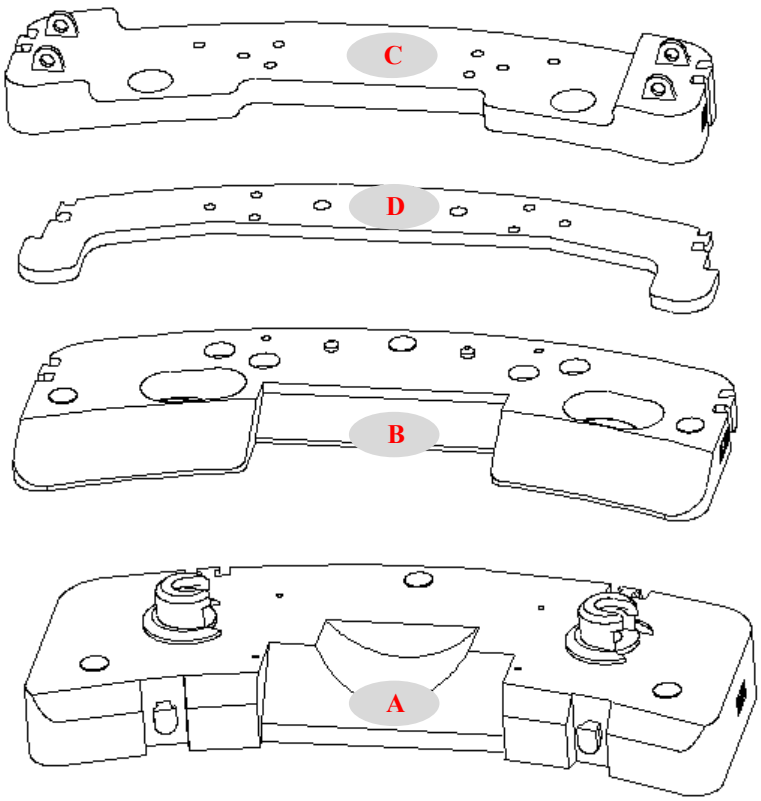
Hook	No. of lines	Weight kg	Remarks
40 t	13	347	Single hook
25 t	7	210	Single hook
10 t	3	123	Single hook
5t	1	62.5	Single hook

Working speeds

	Km/h	
525/80 R25 (20.5 R 25)	3~80	60%

Drive	Working speed	Max. single line pull	Rope diameter/ length
1	0-130 m/min, single line,4th layer, no load	32KN	14 mm/190 m
360°	0-2 r/min		
	Approx. 40s for boom elevation from -1° to 81°		
	Approx. 60s for boom extension from 10.6m to 35m		

Counterweight



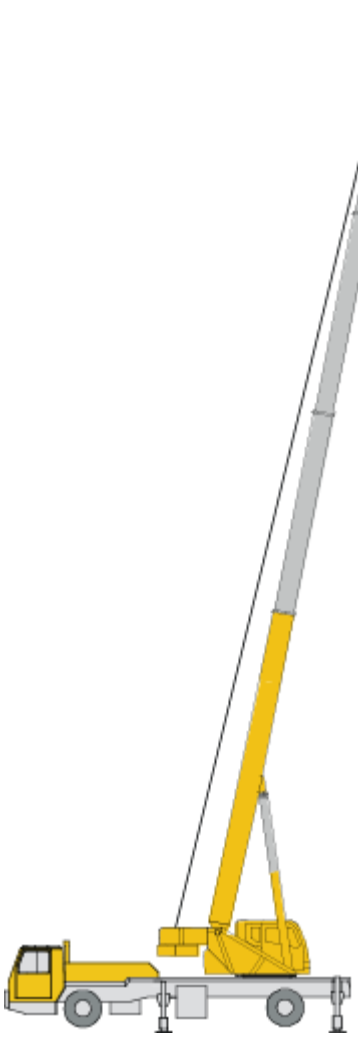
Note: Counterweight A is put in the middle of crane, and counterweight B、 Cand D is fixed at the rear of crane

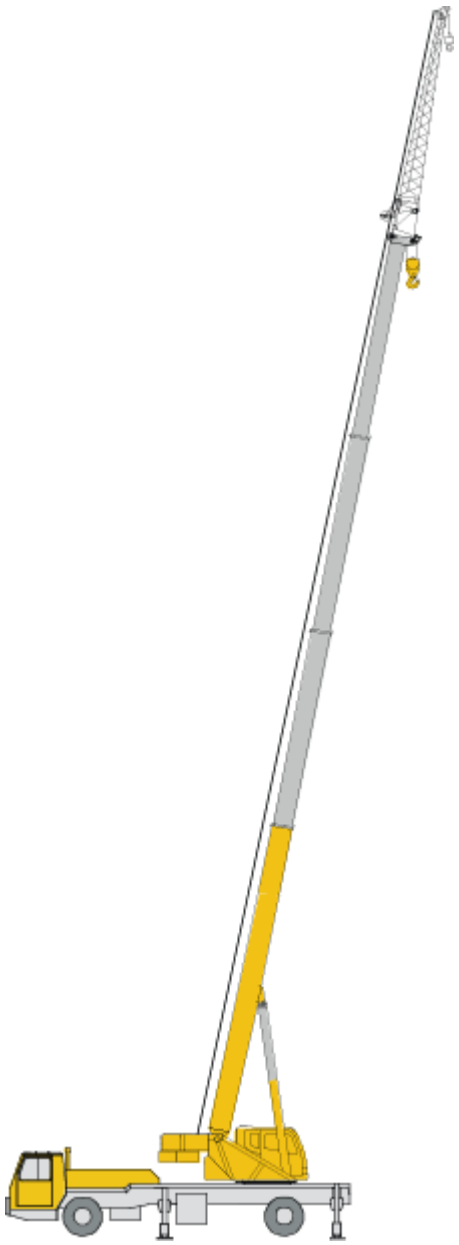
Counterweight	A	B	C	D
Size（L×W×H） m	2.54×1.068×0.495	2.54×1.013×0.178	2.54×0.716×0.288	2.54×0.716×0.05
Weight t	4.7	1.4	1	0.3

Working mode	7.4t	6.0t	2.7t	1.3t	1t	0t
Combinations	A+B+C+D	A+C+D	B+C+D	C+D	C	——

Boom / Jib combinations

T Telescopic boom	J Jib

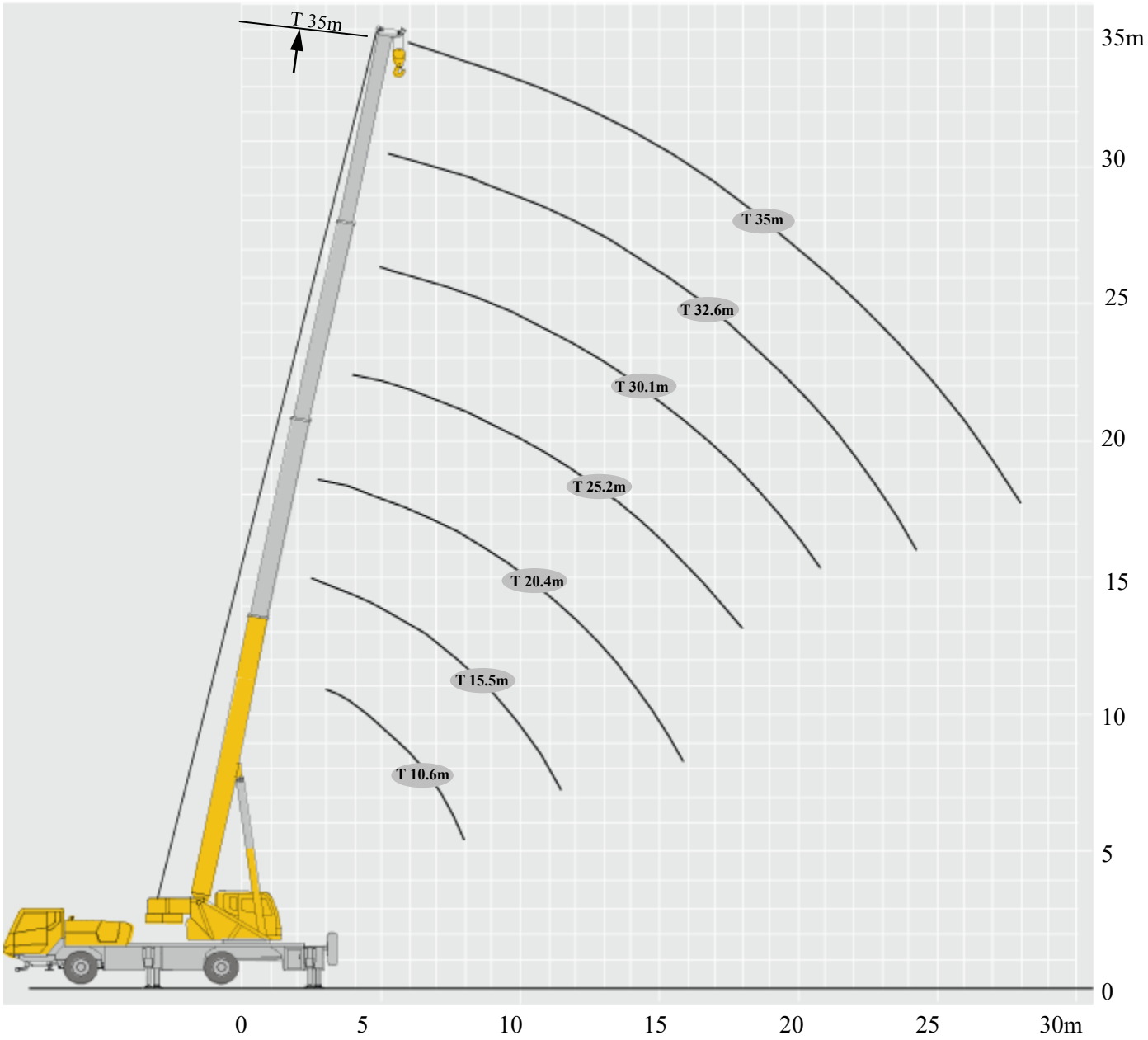




Telescopic boom	Jib
T：10.6~35 m	T：10.6，30.1~35 m J：9.5m

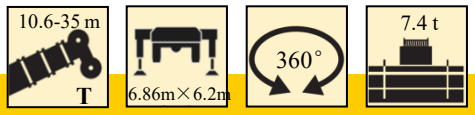
Lifting heights

Boom



Lifting capacities

T 10.6~35m

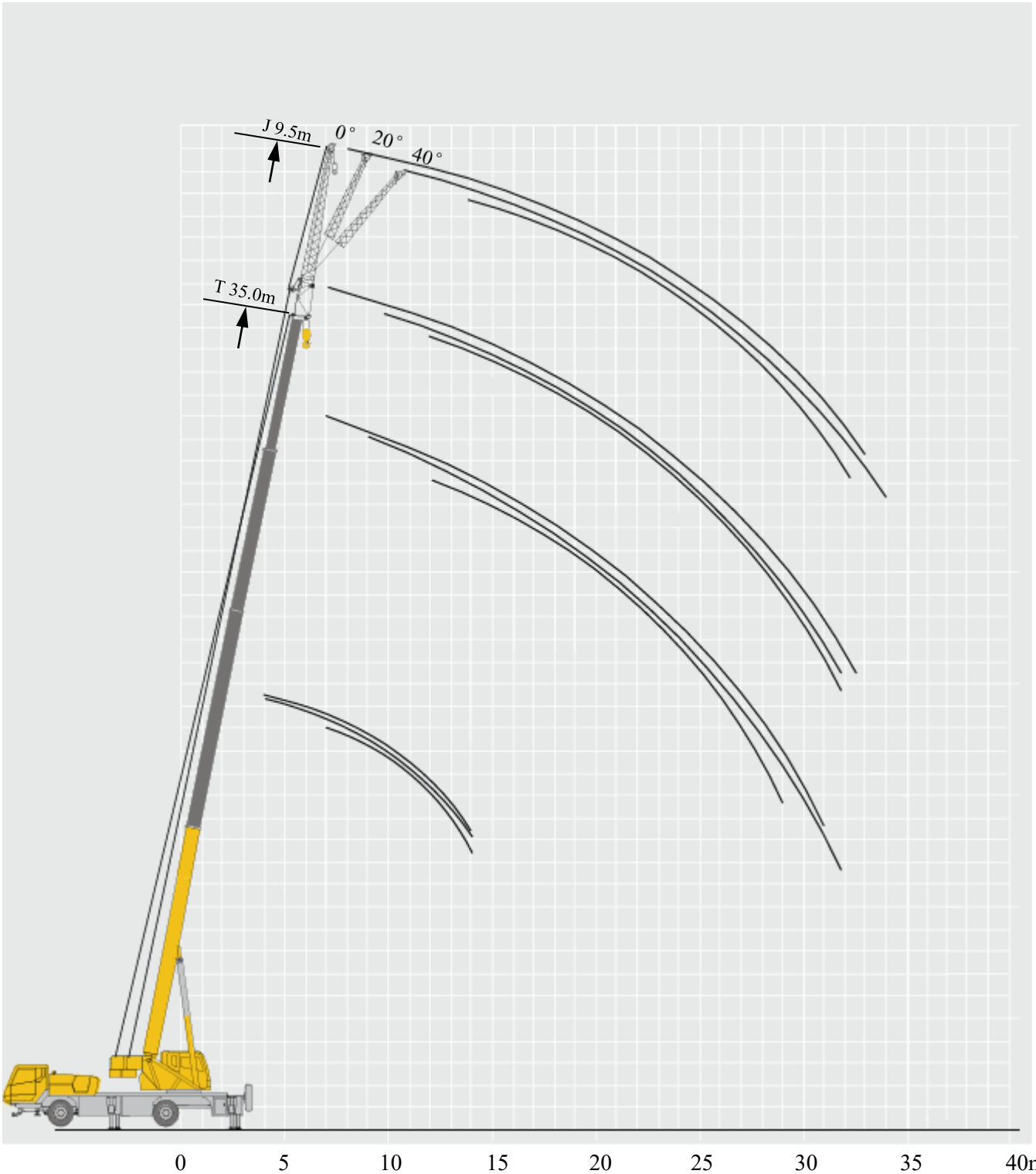


m	10.6 m*	10.6 m	15.5 m	20.4m	25.2m	30.1 m	32.6 m	35 m	m
2.5	40								2.5
3	35.4	30.6	19.7						3
3.5	32.9	28.2	20.2	17.5					3.5
4	29.8	25.6	20.6	18	15.1				4
4.5	26.7	23.5	21.2	18.3	15	12			4.5
5	24.3	21.6	21.3	18.8	14.9	11.9	9		5
6	20	18.5	19	18.7	13.4	10.8	9	7.9	6
7	15.6	15.4	16	15.5	12.1	9.5	8.9	7.9	7
8			13.3	13.2	11	8.7	8.1	7.3	8
9			11	11.2	10.1	7.9	7.3	6.8	9
10			9.2	9.4	9.3	7.3	6.7	6.2	10
11			7.9	8.1	8.2	6.8	6.3	5.8	11
12			6.8	7	7.2	6.2	5.8	5.4	12
13				6.2	6.3	5.9	5.5	5.1	13
14				5.5	5.6	5.3	5	4.8	14
15				4.9	5	5	4.7	4.5	15
16				4.4	4.5	4.6	4.4	4.1	16
17				3.9	4	4.1	4.1	3.8	17
18					3.7	3.7	3.8	3.6	18
19					3.3	3.4	3.4	3.4	19
20					3	3.1	3.1	3.1	20
21					2.7	2.7	2.7	2.8	21
22					2.4	2.5	2.5	2.5	22
23						2.3	2.3	2.3	23
24						2.1	2.1	2.1	24
25						1.9	1.9	1.9	25
26						1.7	1.7	1.8	26
27						1.5	1.6	1.6	27
28							1.3	1.4	28
29							1.2	1.2	29
30								1.1	30
31								1.0	31

Notes: The technical data with a * followed are for the nominal load，special equipment is required.

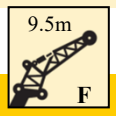
Lifting heights

Jib



Lifting capacities

J 9.5m



m	10.6 m			30.1 m			32.6			35 m			m
	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	
4	5.6	4.2											4
4.5	5.4	4											4.5
5	5.1	3.9											5
6	4.5	3.4											6
7	3.9	3.1	2.9	4.4			4.1						7
8	3.5	2.9	2.7	4.1			4.0			3.8			8
9	3.1	2.7	2.5	4.0	3.5		4.0			3.8			9
10	2.9	2.5	2.4	4.0	3.2		3.8	3.2		3.6			10
11	2.7	2.4	2.3	3.9	3		3.7	3		3.5	2.8		11
12	2.5	2.2	2.2	3.8	2.9	2.5	3.6	2.9	2.4	3.3	2.7		12
13	2.3	2.1	2.1	3.6	2.8	2.5	3.4	2.8	2.3	3.1	2.6		13
14	2.1	2	2	3.4	2.7	2.4	3.1	2.7	2.2	2.8	2.5	2.2	14
15				3.2	2.6	2.3	2.9	2.6	2.2	2.6	2.5	2.2	15
16				3.0	2.5	2.3	2.7	2.5	2.1	2.4	2.4	2.1	16
17				2.8	2.4	2.2	2.6	2.4	2.1	2.3	2.3	2.1	17
18				2.6	2.4	2.2	2.4	2.3	2	2.1	2.2	2	18
19				2.5	2.3	2.1	2.3	2.2	2	2.0	2.2	2	19
20				2.3	2.2	2.1	2.1	2.2	1.9	2.0	2.1	1.9	20
21				2.2	2.2	2	2.0	2.1	1.9	1.8	2	1.9	21
22				2.1	2.1	2	1.8	1.8	1.9	1.7	2.0	1.8	22
23				2.0	2	1.9	1.7	1.7	1.8	1.6	1.8	1.8	23
24				1.8	1.8	1.8	1.6	1.6	1.7	1.4	1.6	1.7	24
25				1.7	1.7	1.8	1.5	1.6	1.7	1.3	1.5	1.6	25
26				1.5	1.6	1.7	1.4	1.5	1.6	1.3	1.4	1.6	26
27				1.4	1.5	1.7	1.3	1.4	1.6	1.2	1.3	1.5	27
28				1.3	1.3	1.6	1.3	1.3	1.4	1.1	1.3	1.4	28
29				1.2	1.3	1.4	1.2	1.2	1.3	1	1.2	1.3	29
30				1.1	1.2		1.1	1.1	1.2	0.9	1.1	1.1	30
31				1	1		1	1	1.1	0.9	1	1	31
32					0.9		0.9	0.9	1	0.8	0.9	0.9	32
33							0.8			0.7	0.9		33
34											0.8		34

Table of main technical parameters

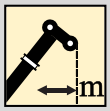
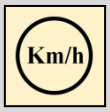
Category	Item		Unit	Parameter
Dimensions	Outline size (length×width×height)		mm	11490×2700×3780
	Axle load		mm	3505
	Track (Front/ Rear)		mm	2143/2143
	Front/ Rear overhang		mm	3256/2683
	Front/ Rear extension		mm	1611/435
Weight	Total vehicle mass in travel configuration		kg	≤24000
	Axle load	1st axle	kg	≤12000
		2nd axle	kg	≤12000
Power	Engine model		——	OM936LA
	Rated power/rpm		kW/(r/min)	230/1800
	Max. output torque/rpm		N.m/(r/min)	1300/1200-1600
Travel	Max. travel speed		km/h	≥80
	Min. travel speed		km/h	3
	Min. turning diameter		m	≤17（公路行驶 Road travel）
	Min. ground clearance		mm	382
	Approach angle		°	20
	Departure angle		°	10.5
	Braking distance (at 30 km/h)		m	≤10
	Max. grade ability		%	60
Noise	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	40
	Min. rated working radius			m	2.5
	Turning radius at turntable tail	Counterweight		mm	3450
	Max. load moment	Base boom		kN.m	1191
		Fully-extended boom		kN.m	662
		Fully-extended boom + Jib		kN.m	529
	Outrigger span	Longitudinal		m	6.86
		Lateral		m	6.2
	Hoist height	Base boom		m	10.4
		Fully-extended boom		m	35.4
		Fully-extended boom + Jib		m	42.7
	Boom length	Base boom		m	10.6
		Fully-extended boom		m	35
		Fully-extended boom + Jib		m	44.5
Working speed	Boom raising time			s	≤40
	Boom fully extended time			s	≤60
	Max. slewing speed			r/min	≥2
	Outrigger extending and retracting time	Outrigger beam	Retracting	s	≤20
			Extending	s	≤30
		Outrigger jack	Retracting	s	≤40
			Extending	s	≤50
	Hoisting speed (single line, 4th layer, no load)	Main winch		m/min	≥130
Noise	Noise level at seated position			dB（A）	≤85

Description of symbols

General symbols

	Outriggers		Axle
	Radius		Driving speed
	Boom position		Grade ability
	Boom length		Tires
	Hook block		Counterweight
	360° rotation		Superstructure
	Winch		Chassis

Crane specific symbols

	Boom		Jib

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 to correctly calculate the load weight.

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.

3. A lifting operation is permissible only when the wind force is below grade 5 (instantaneous wind speed is 14.1/s, wind pressure is 125N/m^2).

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.

XCA40_E All Terrain Crane

RONCO GROUP