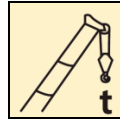
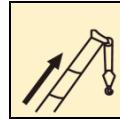


XCT50_Y1 Truck Crane

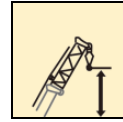
Technical specifications



50t



45m



60.1m

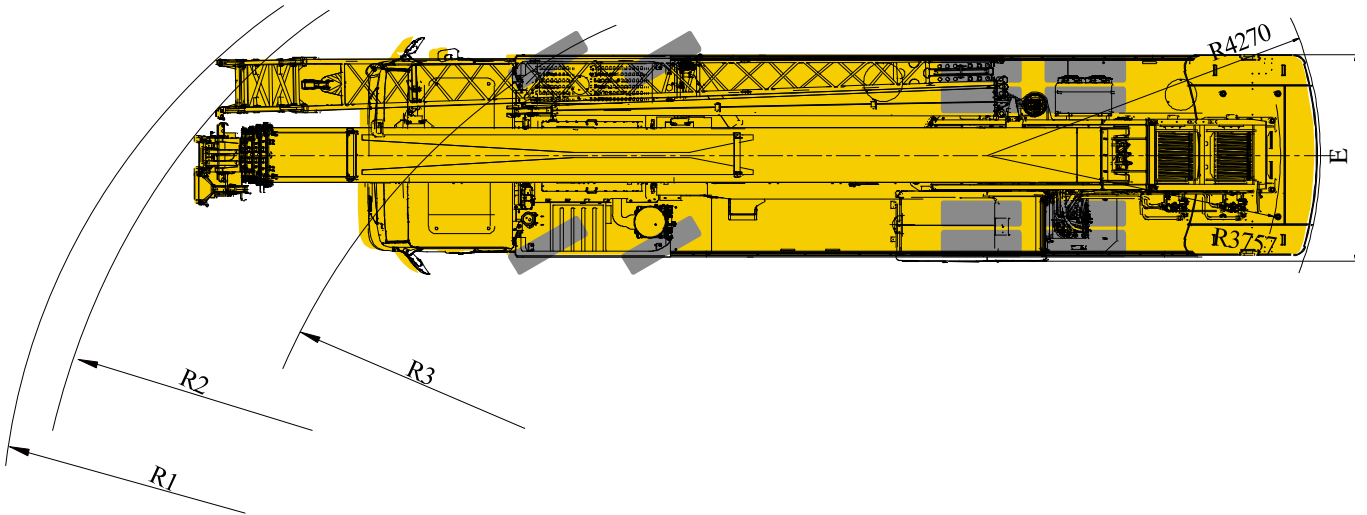
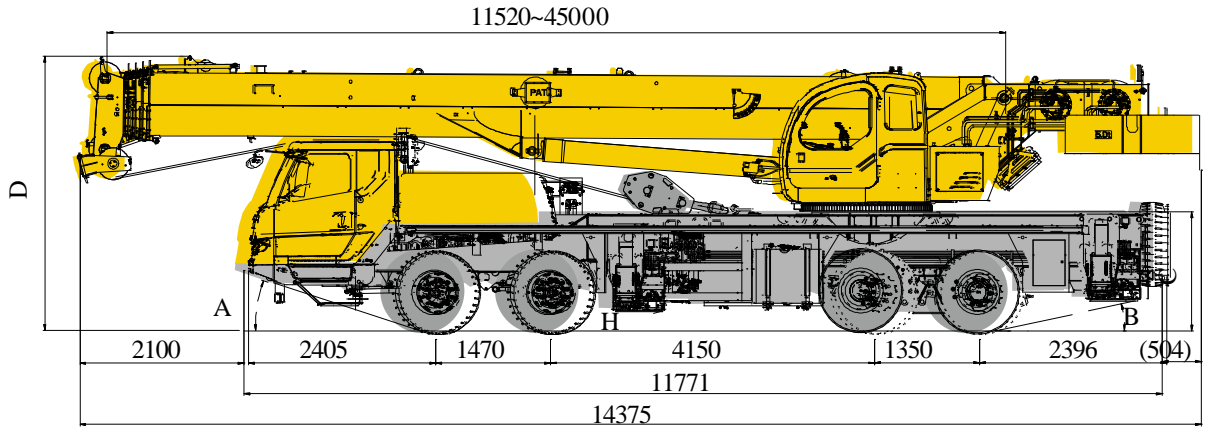


Second edition, December 2023

Contents

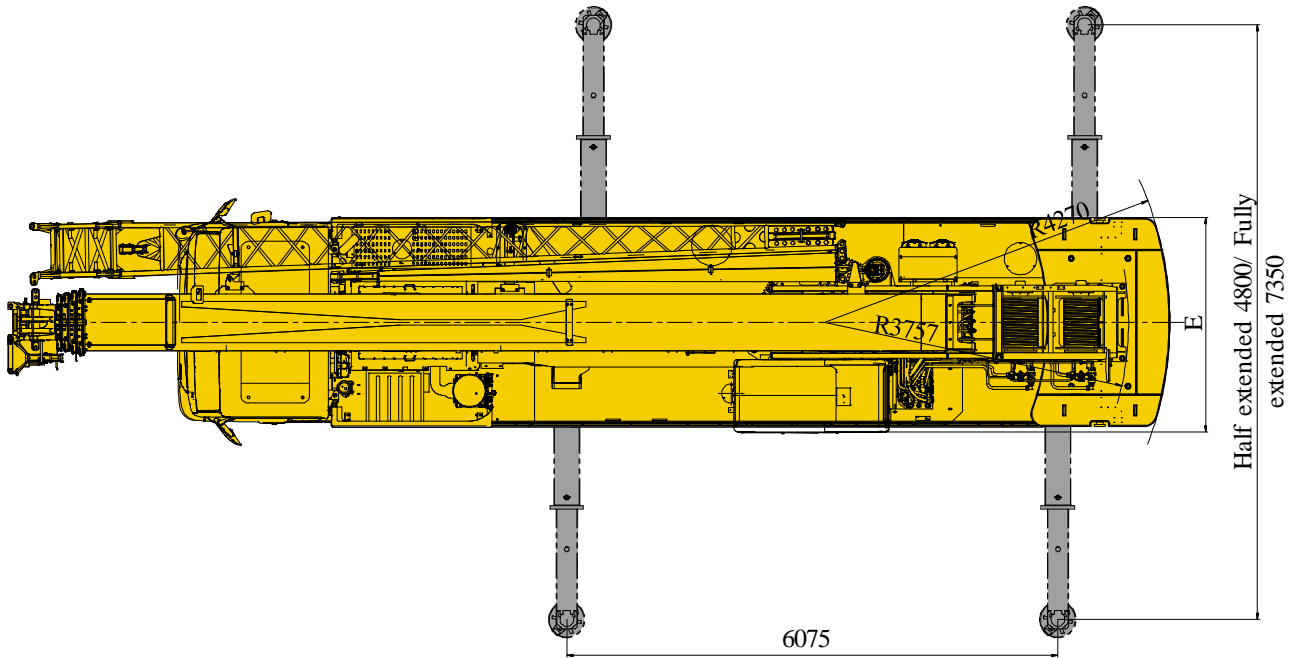
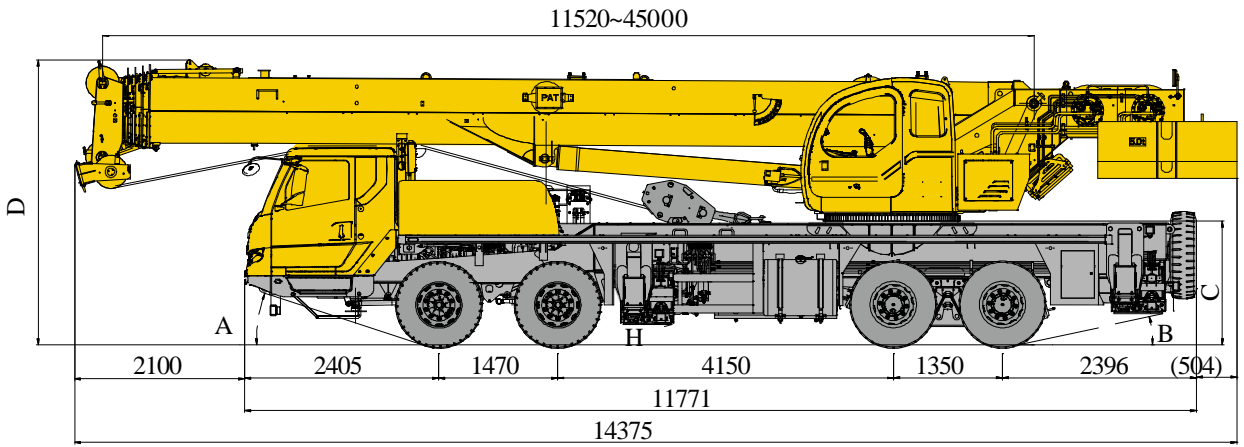
Dimensions	3-4
Technical specifications	5-6
Weight/working speed	7
Counterweight	8
Boom / Jib combinations	9
Boom	10-12
Jib	13-15
Description of symbols	16
Table of main technical parameters	17-18
Notes	19

Dimensions



	A	B	C	D	E	H	R1	R2	R3
12.00R22.5	18°	12 °	1530	3520	2650	250	14800	14500	12000

Dimensions



	A	B	C	D	E	H
12.00R22.5	18°	12°	1530	3520	2650	250

Technical specifications





Chassis

Frame	The frame, designed and manufactured by XCMG, is made of high-strength steel with fully-covered walking surface and anti-torsion box-typed structure.	●
Outrigger	Four outriggers, H-type arrangement, double-stage outrigger beam. Hydraulic control is used to extend and retract the outrigger beams and jacks. There are manual control levers fitted at each side of the chassis. There is a level gauge and a speed regulating button on each control panel. Each outrigger jack is equipped with a double-way hydraulic lock. Outrigger float diameter: Φ450mm Reaction force of outrigger at max. lifting load: 494kN	●
Engine	WP8G350E670, in-line, 6-cylinder, water cooled, electric control diesel engine, made by Weichai Engine, with rated power of 257kW/2100 rpm and max. torque of 1400Nm/1200~1600 rpm, Max. reference torque: 1539N.m; Compliant with off-road India V emission standard Fuel tank capacity: 350 L; AdBlue tank capacity: 35 L.	●
Transmiss ion	Mechanical nine gears transmission, made by Shaanxi Fast Gear Co., Ltd., 9-forward speed and 1-reverse speed, with a synchronizer.	●
Axles	High strength axles, made by famous manufacturers. 1st and 2nd axles are for steering, and 3rd and 4th axles are for driving.	●
Suspensio n system	Leaf spring suspensions are adopted for front axle. The rear axle applies rubber spring suspensions with V-type push rods, which improves chassis stability and reduces tire wear.	●
Tires	12 tires and 1 spare tire. Tire specification: 12R22.5	●

Brake	Service brake: dual-circuit air pressure brake acting on all wheels. Parking brake: spring-loaded brake, acting on wheels of axles 2,3 and 4. Auxiliary brake: engine exhaust brake.	●
Steering system	Axles 1 and 2 are mechanically steered + hydraulic power assistance.	●
Driver's cab	Windshield with wide visual field, electric wiper and electric window lifters are available; heater and air conditioner can let the air blow face or feet or realize defrosting; radio player is also equipped. A mechanical shock absorber seat for the driver is installed to supply comfort and convenience. A coupled sleeper is available for the co-driver's seat. Fire extinguisher of 3kg.	●
Electrical system	24 V DC, two sets of 12 V battery in series. Generator: 28V-120A	●
Safety devices	Backup camera	●
	ABS	○
	Front protective device	○
	Beacon light	○

Technical specifications

 Superstructure		
Structure	Designed and manufactured by XCMG, made of high strength steel.	●
Hydraulic system	The chassis engine drives the gear pump via transmission to carry out lifting, luffing, telescoping and slewing operations. Special throttle load sensitive design, more stable system minimum flow, more reasonable system rigidity, more prominent fine-control and smoothness; confluence technology for lifting, luffing and telescoping double-pump confluence; air-cooled hydraulic oil cooler is fitted. Hydraulic oil tank capacity: 735L	●
Operating method	Pilot hydraulic proportional control through left and right levers is used for controlling the superstructure.	●
Winch system	Equipped with Lebus grooved drum, driven by a hydraulic motor, with build-in planetary gear reducer, constant closed brake and balance valve. The main winch and auxiliary winch can be independently operated.	●
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 slewing function as well as stepless speed regulation are available.	●
Luffing system	A front support dual-acting hydraulic cylinder is equipped for luffing operation, with a counterbalance valve fitted.	●
Operator's cab	Large arc-shaped cab is equipped with a front window. Safety glass and sun shield are used for windows. The cab features a new ergonomic seat design with backrest adjustment and armrests with joysticks fitted. Wipers are fitted for the windshield and roof window. 2.5L kettle is also available. Standard air conditioner for cooling is equipped. T3 cooler are standard. HVAC	● ○
Battery	24 V DC, two batteries in series.	●
Safety devices	Hydraulic counterbalance valve, hydraulic relief valve, hydraulic double-way valve, slewing beacon light and LMI are available. 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. Winch monitoring device is equipped to monitor the winch status in real time.	●
LMI	When the actual load moment is approaching the overloading value, audible and visual warning will be sent out, and the dangerous operation will be automatically cut off before overloading occurs. Overload memory function (black box) and fault diagnosis function are available.	●
Hook block	40t hook block	●
	5 t hook block	●
	50t hook block	○
Counter weight	7t in total, with two counterweight combinations of 7 t and 5 t available.	●
 Boom and jib system		
Boom	Boom length: 11.5m~45m. 5-section boom with U cross-section, welding structure, made of high-strength structural steel; double-cylinder plus ropes telescoping system.	●
Jib	Jib length: 9.5/16m. Lattice structure for 1st section and box-type structure for 2nd section. Three offset angles of 0°, 15° and 30°.	●
Auxiliary sheave	Installed at the boom top, used for single line operation. Its lifting performance is the same with that of boom, but the max. lifting load can not exceed 4000kg.	●
<p>Product parts list is as mentioned above. Please refer to the product quotation for specific parts.</p> <p>Symbol explanation</p> <p>● — Standard configurations; ○ — Optional configurations.</p>		

Weight



Axle	1	2	3	4	Total weight
t	6.95	6.95	12.55	12.55	391
t	6.45	6.45	14.05	14.05	412

1. In traveling configuration: 2t counterweight slab is carried on the tail of turntable; 50t hook block is not carried on the crane; 40t hook block is fastened in the middle of the frame, and auxiliary hook block is secured at the frame tail.

2. Heavy load jobsite transfer: all counterweight slabs are carried on the tail of turntable; 50t hook block is not carried on the crane; 40t hook block is fastened in the middle of the frame, and auxiliary hook block is secured at the frame tail.



Hook block	Parts of line	Weight of hook block	Hook dimension	Remark
50 t	10	397	439×544×1325	Single hook block (optional)
40 t	9	360	389×504×1362	Single hook block
5 t	1	100	300×300×535	Single hook block

Working speed



12R22.5



2.548



45%



Operation mechanism

Working speed

Max. single line pull

Rope diameter/ length



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

49kN

18 mm/208 m



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

49kN

18 mm/140 m



0-2.5 r/min

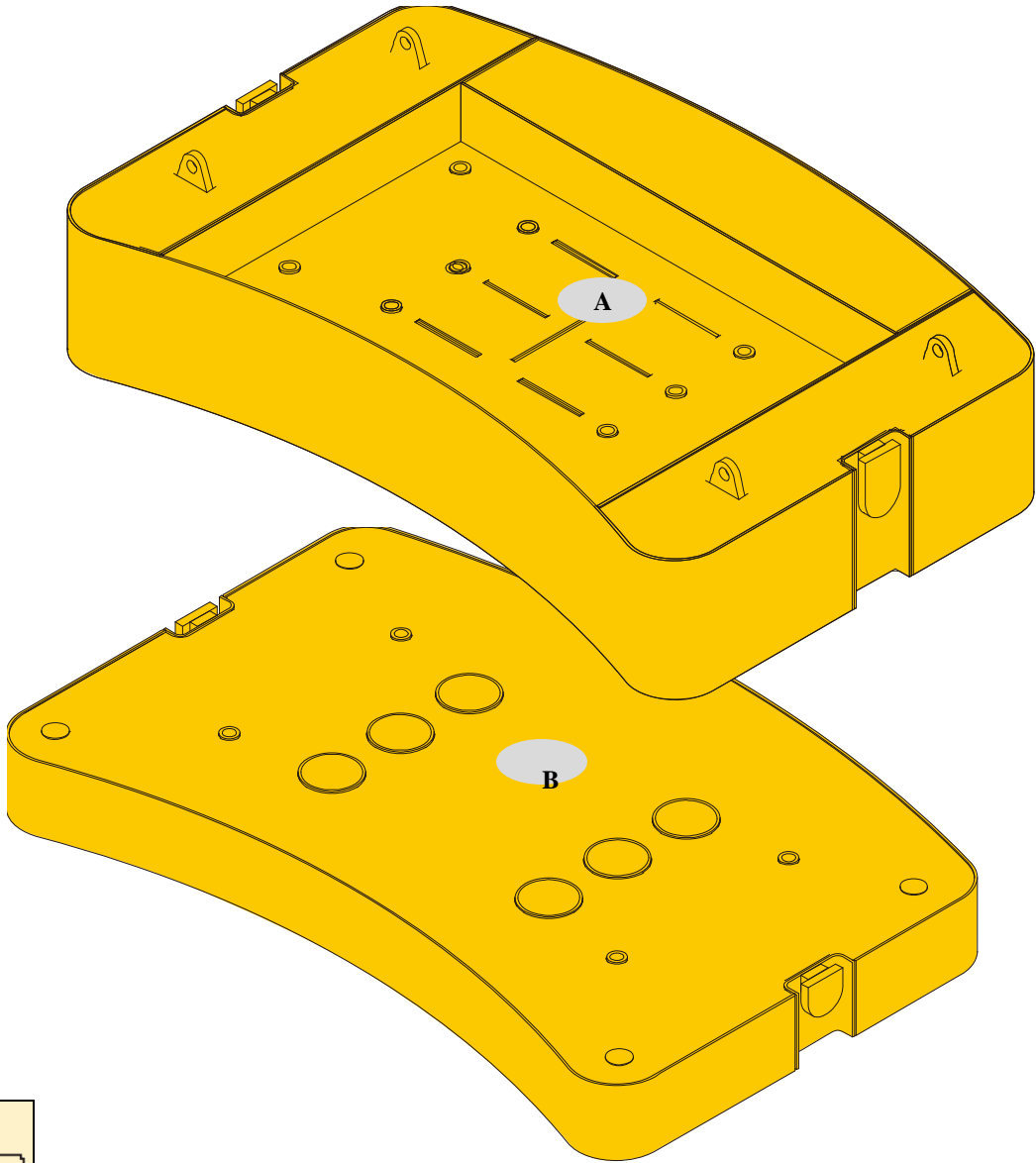


Approx. 40 s for boom luffing up from -0.3° to 80.3°



Approx. 88 s for boom extending from 11.5m to 45m

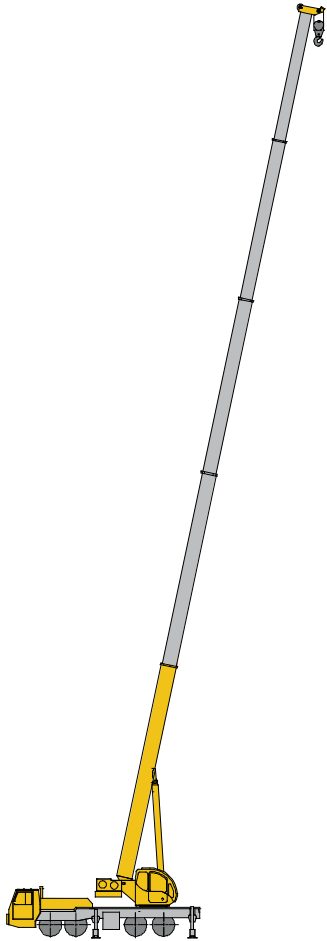
Counterweight



Counterweight	A	B
Dimensions (L×W×H) (mm)	2580×1722×495	2580×1722×209
Weight (t)	5	2

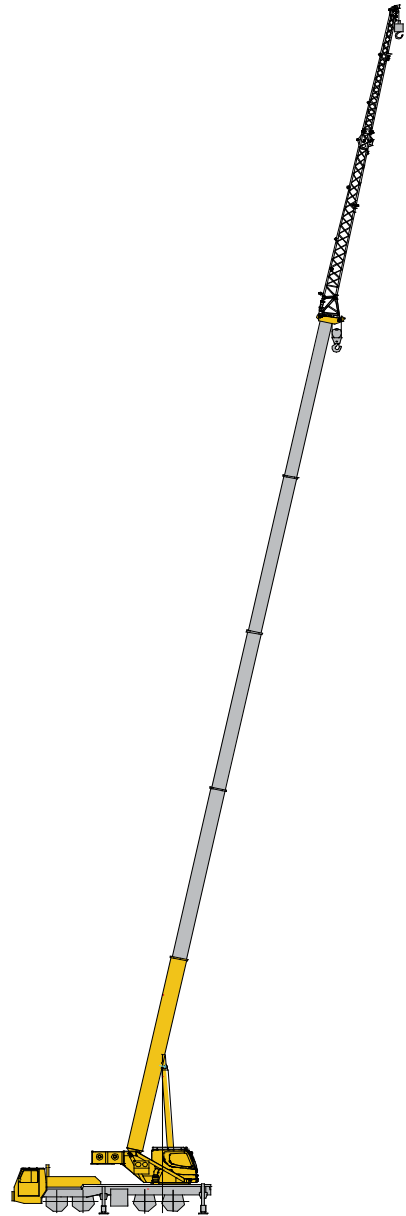
Operation modes	7t	5t
Combinations	A+B	A

Boom/ Jib combinations



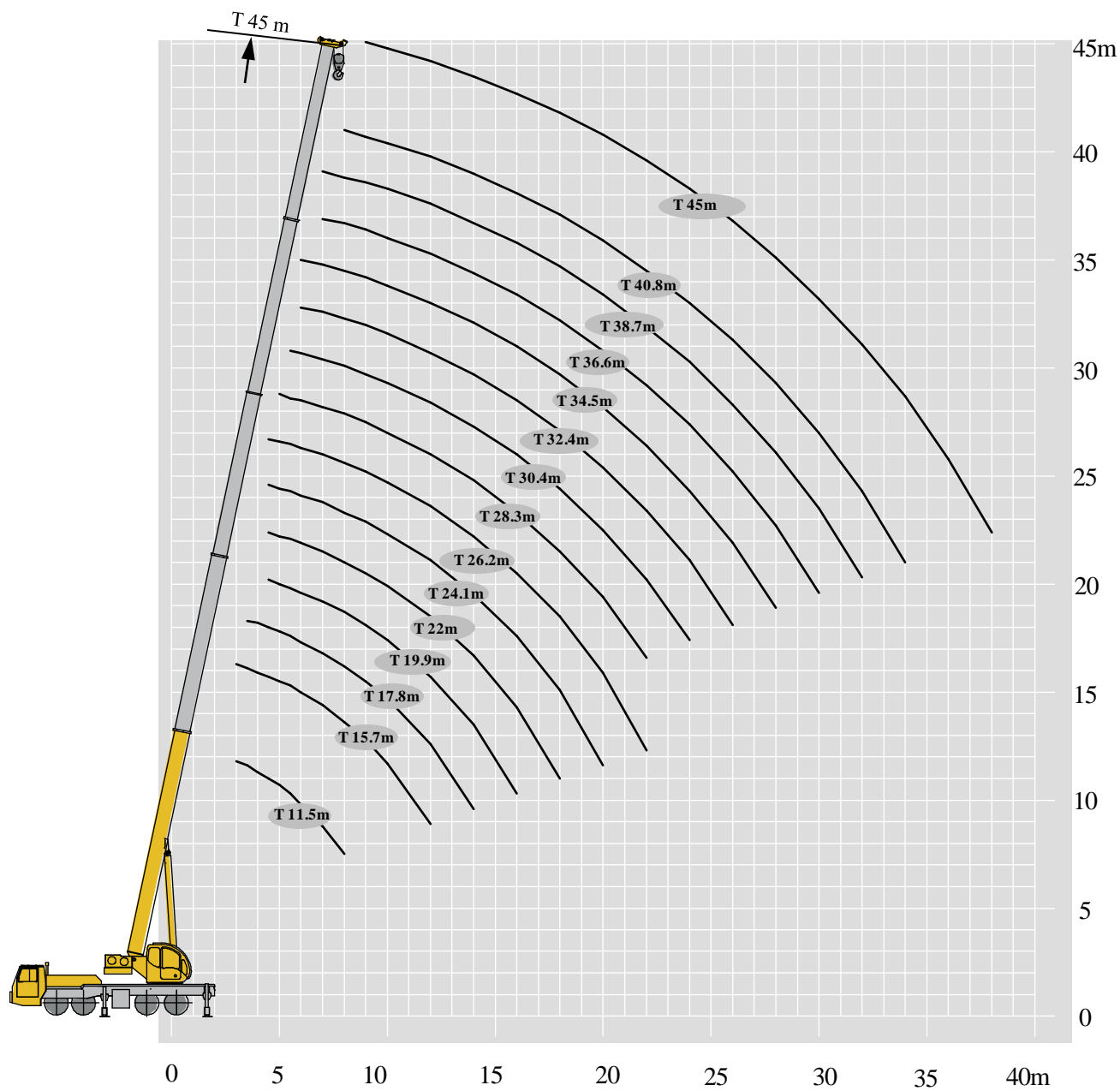
Boom

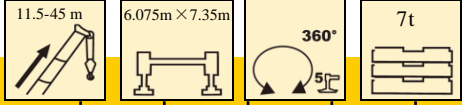
T: 11.5~45m




Jib

**T: 45m
J: 9.5m/16m**

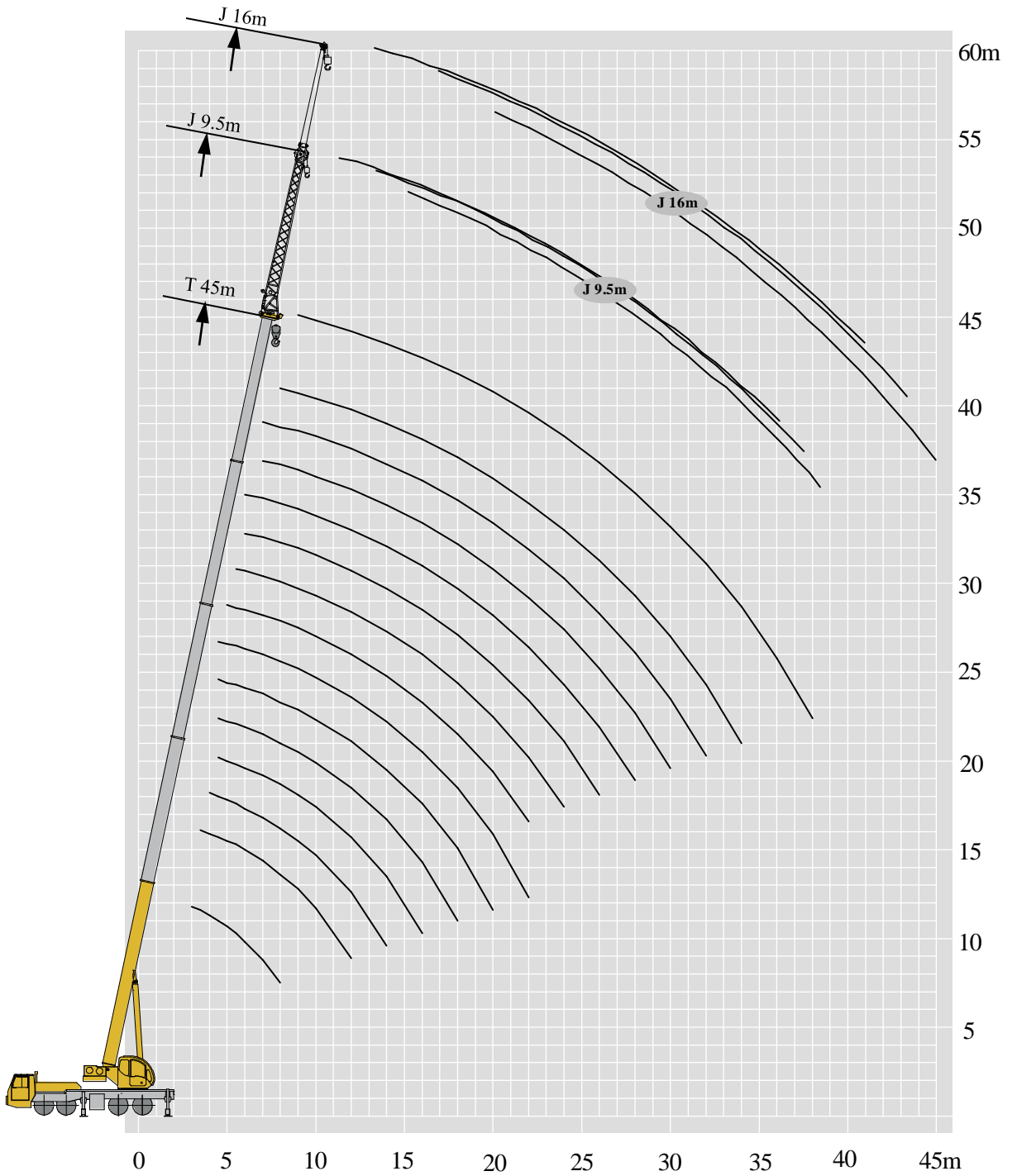




	11.5	15.7	19.9	26.2	32.4	38.7	45	17.8	24.1	30.4	36.6	22	28.3	34.5	40.8	
3	50															3
3.5	40	38														3.5
4	35.5	36						26.5								4
4.5	33.5	33	27.5	25.5				26.5	26			26				4.5
5	32.5	30.6	27.5	25.5				26.5	26			26	25			5
5.5	29.7	28.5	27	25				26.5	26	15.2		25.6	25			5.5
6	27	26.5	24.5	24	20			25.8	25.2	15.2		25	24.5	15.5		6
7	23	22.3	22	22	20	14.2		23.5	23.6	15.2	11.5	22	22.5	15.5		7
8	19.2	18.6	19	18.5	18.5	14		20	20	15.2	11.5	19.5	18.9	15.5	11	8
9		15.8	16.2	16.7	16.8	13.7	9.2	17.4	17.5	14.5	11.3	17	17	14.6	11	9
10		13.5	13.3	14.3	14.6	13.2	9	15.2	15.8	13.5	10.6	14.7	15.3	13.8	10.4	10
12		9.4	9.2	10.2	10.7	11.1	9	11	11.6	11.4	9.4	10.5	11.1	11.5	9.3	12
14			6.6	7.5	8.1	8.4	8.1	8.3	8.9	9.2	8.4	7.9	8.4	8.8	8.2	14
16			4.8	5.7	6.2	6.6	6.8		7	7.3	7.4	6	6.6	6.9	7.1	16
18				4.4	4.9	5.2	5.5		5.6	5.9	6.1	4.7	5.2	5.5	5.8	18
20				3.4	3.9	4.2	4.4		4.6	4.9	5		4.2	4.5	4.7	20
22				2.5	3	3.4	3.6			4	4.2		3.3	3.7	3.9	22
24					2.4	2.7	2.9			3.4	3.5			3	3.2	24
26					1.8	2.1	2.4				3			2.4	2.6	26
28						1.7	1.9				2.5			2	2.2	28
30							1.3	1.5			2.1				1.8	30
32								1.2							1.4	32
34															1.1	34

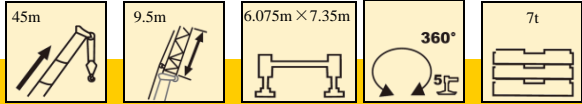


	11.5	15.7	19.9	26.2	32.4	38.7	45	17.8	24.1	30.4	36.6	22	28.3	34.5	40.8	
3	50															3
3.5	40	38														3.5
4	35.5	36						26.5								4
4.5	33.5	33	27.5	25.5				26.5	26			26				4.5
5	32.5	30.6	27.5	25.5				26.5	26			26	25			5
5.5	29.7	28.5	27	25				26.5	26	15.2		25.6	25			5.5
6	27	26.5	24.5	24	20			25.8	25.2	15.2		25	24.5	15.5		6
7	23	22.3	22	22	20	14.2		23.5	23.6	15.2	11.5	22	22.5	15.5		7
8	19.2	18.6	18.4	18.5	18.5	14		20	20	15.2	11.5	19.5	18.9	15.5	11	8
9		14.8	14.5	15.5	16.2	13.7	9.2	16.6	17.1	14.5	11.3	16	16.6	14.6	11	9
10		12.1	11.8	12.7	13.3	13.2	9	13.7	14.2	13.5	10.6	13.1	13.7	13.8	10.4	10
12		8.4	8.1	9	9.5	9.9	9	9.9	10.4	10.7	9.4	9.4	9.9	10.2	9.3	12
14			5.8	6.6	7.1	7.5	7.7	7.5	7.9	8.2	8.4	7	7.5	7.8	8	14
16			4.1	4.9	5.4	5.8	6		6.3	6.5	6.7	5.3	5.8	6.1	6.3	16
18				3.7	4.2	4.5	4.7		5	5.2	5.4	4	4.5	4.8	5	18
20				2.7	3.2	3.5	3.8		4	4.3	4.4		3.6	3.9	4.1	20
22				2	2.5	2.8	3			3.5	3.6		2.8	3.1	3.3	22
24					1.9	2.2	2.4			2.9	3			2.5	2.7	24
26					1.4	1.7	1.9				2.5			2	2.2	26
28						1.2	1.5				2.1			1.5	1.7	28
30							1.1				1.7				1.4	30



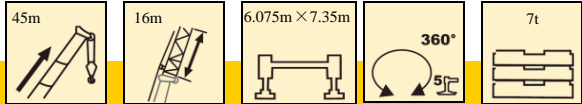
Rated lifting load table

T 45m



9.5m

	0°	15°	30°	
80	4	3.1	2.5	80
78	4	2.9	2.3	78
75	3.55	2.6	2	75
72	3.2	2.4	1.9	72
70	3	2.1	1.8	70
65	2.5	2	1.7	65
60	1.9	1.6	1.3	60
55	1.2	1.1	1.1	55
50	0.7	0.7	0.6	50



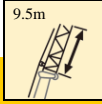
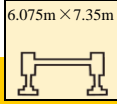

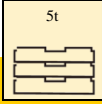



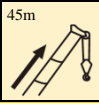
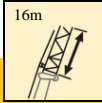
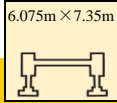

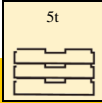
16m

	0°	15°	30°	
80	2.7	1.8	1.2	80
78	2.5	1.6	1.2	78
75	2.2	1.5	1.1	75
72	1.9	1.4	1	72
70	1.8	1.3	0.95	70
65	1.6	1.15	0.85	65
60	1.1	0.9	0.81	60
55	0.8	0.8	0.7	55

Rated lifting load table

T 45m

     				
9.5m				
	0°	15°	30°	
80	4	3.1	2.5	80
78	4	2.9	2.3	78
75	3.55	2.6	2	75
72	3.2	2.4	1.9	72
70	3	2.1	1.8	70
65	2.4	2	1.7	65
60	1.5	1.4	1.3	60
55	0.8	0.8	0.8	55

     				
16m				
	0°	15°	30°	
80	2.7	1.8	1.2	80
78	2.5	1.6	1.2	78
75	2.2	1.5	1.1	75
72	1.9	1.4	1	72
70	1.8	1.3	0.95	70
65	1.6	1.15	0.85	65
60	1.1	0.9	0.81	60

Description of symbols

General symbols



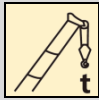

















	Superstructure		Chassis
	Lifting capacity		Axle
	Boom length		Travel speed
	Working radius		Grade ability
	Boom angle		Tires
	Boom hoisting height		Outriggers
	Fixed jib length		Hook block
	Jib offset angle		Counterweight
	Jib lifting height		Winch
	Boom over side or over rear of the crane without 5th jack		With 5th jack down, 360° operation of the boom

Table of main technical parameters

Category	Item	Unit	Parameters	
Dimensions	Dimensions (L×W×H)	mm	14375×2650×3520	
	Axle spacing	mm	1470+4150+1350	
	Track (front/rear)	mm	2059/1854	
	Front overhang/rear overhang	mm	2405/2396	
	Front extension/rear extension	mm	2100/504	
Weight	Maximum permissible weight	kg	39000	
	Axle load	Axle 1	kg	6950
		Axle 2	kg	6950
		Axle 3	kg	12550
Axle 4		kg	12550	
Power	Engine model	—	WP8G350E670	
	Rated power/rotation speed	kW/(r/min)	257/2100	
	Max. net power/rotation speed	kW/(r/min)	252/2100	
	Max. torque/rotation speed	N.m/(r/min)	1400/1200-1600	
Travel	Max. travel speed	km/h	48	
	Min. stable travel speed	km/h	2.5~3	
	Min. turning diameter	m	≤24	
	Min. turning diameter at boom head	m	≤29	
	Min. ground clearance	mm	250	
	Approach angle	°	18	
	Departure angle	°	12	
	Braking distance (initial speed at 38.4 km/h)	m	≤15.2	
	Maximum grade ability	%	≥45	
	Fuel consumption per 100 km	L	38	
Noise	Exterior noise level when accelerating	dB(A)	≤88	
	Noise level at seated position	dB(A)	≤90	

Table of main technical parameters

Category	Item		Unit	Parameters	
Main performance	Max. rated lifting capacity		t	50	
	Minimum rated working radius		m	3	
	Turning radius at turntable tail	Counterweight	mm	4270	
		At main winch	mm	3757	
	Maximum load moment	Base boom	kN.m	1600	
		Fully-extended boom	kN.m	1111	
		Fully-extended boom + jib	kN.m	603	
	Outrigger span	Longitudinal	m	6.075	
		Lateral	m	7.35	
	Lifting height	Basic boom	m	11.7	
		Fully-extended boom	m	44.9	
		Fully-extended boom + jib	m	60.1	
	Boom length	Base boom	m	11.5	
		Fully-extended boom	m	45	
Fully-extended boom + jib		m	61		
Jib offset angle		°	0, 15, 30		
Working speed	Time for raising boom		s	≤40	
	Time for fully extending the boom		s	≤88	
	Max. slewing speed		r/min	≥2.5	
	Time for extending / retracting the outriggers	Outrigger beam	Retract	s	≤30
			Down	s	≤30
		Outrigger jack	Up	s	≤40
			Down	s	≤45
	Lifting speed (single line at 4th layer, no load)	Main winch	m/min	≥130	
Auxiliary winch		m/min	≥130		
Noise	Exterior noise level		dB(A)	≤108	
	Noise level at seated position		dB(A)	≤85	

Notes

1. This manual is for reference only, and all information is for illustration only. It should not be relied on to operate the crane. For correct crane operating instructions, please refer to the operation manual and rated lifting load manual.
2. The load capacity values in the tables are stated in t, which are the maximum total load capacity of the crane on a stable and even surface under the current boom length and radius, including the weight of hooks and riggings. The weight of the above devices must be subtracted during lifting operations.
3. The working radius is the horizontal gravity center distance of the load from the rotational axis of the crane superstructure measured at the ground.
4. 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.
5. A lifting operation is permissible only when the wind force is below grade 5 (instantaneous wind speed of 14.1 m/s, wind pressure of 125N/m²).



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