

XCR50_E Rough Terrain Crane

Technical specifications



50 t



37.4 m



36 m



45.8 m



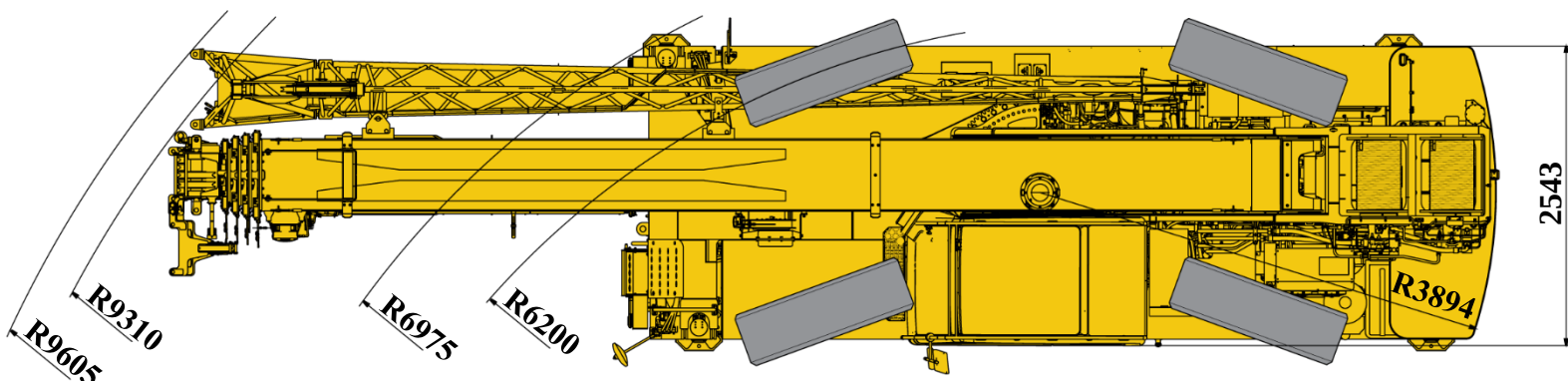
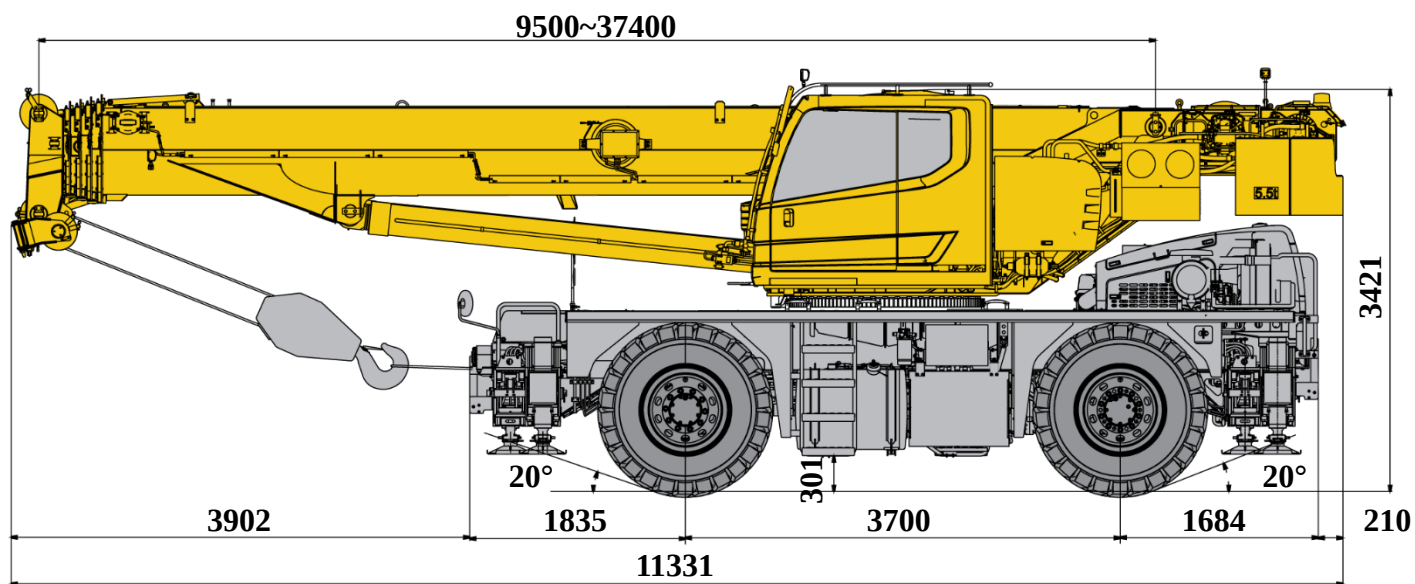
Note: No vehicle photo temporarily, and we will add it soon.

1st edition, October 2024

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Dimensions



Technical specifications



Configuration

Boom	The boom consists of one basic section and four telescopic sections with U-type cross-section, and is extended and retracted by double-cylinder plus ropes telescoping system. 4 sheaves on boom head are standard. Boom length: 9.5 m ~ 37.4 m.
Frame	Made of high strength fine grained steel, welded torsion-resistant frame type construction with large cross-section, high load-bearing capacity.
Outriggers	4 outriggers are arranged in H shape, located at both sides of chassis frame, controlled by hydraulic valves and the cylinders are controlled by electric signals. Outrigger float dimension: 400 mm × 400 mm. Reaction force of outrigger at max. lifting load: 227.36 kN.
Engine	B6.7, in line six-cylinder water-cooled compression ignition diesel engine, manufactured by Cummins, US, with rated power of 168 kw /2200 rpm and max. output torque of 1186 N.m /1300 rpm, compliant with EU Stage V emission standards. Fuel tank capacity: approx. 300 L; AdBlue/DEF tank capacity: 33 L.
Transmi- ssion	ZF hydraulic automatic transmission.
Axle	Both front and rear axles for driving and steering, with large load bearing capacity. Driving/steering type: 4×4.
Suspension	The front axle is connected to the frame in the locked state. The rear axle is attached to the swing-type hydraulic suspension. During highway driving operation, shock absorption function is activated, which buffers the road shock. When driving with a suspended load, rear suspension cylinder is locked to blocked state to enhance operation stability.
Tire	4 tires exclusive for rough terrain cranes. Each axle is equipped with a single tire, with large load bearing capacity. Tire specifications: 16.00-25.
Braking system	Service brake: dual-circuit full-hydraulic disc brake, acting on all wheels. Automatic alarm will be sent out when the pressure in the braking system becomes too low. Parking brake: spring-loaded, hydraulic-released independent disc brake, acting on the front axle.
Steering	Four steering modes include front axle independent steering mode, all-wheel steering mode, crab steering mode and rear axle independent steering mode. Automatic adjustment of steering degree can be realized when switching modes.
Hydraulic system	The variable plunger pump is used for lifting, luffing and telescoping operations. The gear pump is used for slewing, outrigger, steering and braking operation. The main valve adopts a load sensitive proportional multi-way change valve; an independent hydraulic oil cooler is fitted. Oil tank capacity: Approx. 650 L.
Electrical system	24 V DC, two 12 V batteries in series. LMI, head lights, steering lights, reversing lights, turntable lights, boom lights and slewing beacon lights are equipped.

Technical specifications



Configuration

Operating method	Hydraulic controlled pilot operation system is equipped with two control levers controlling the main movements of the crane.
Main winch and auxiliary winch	The system is driven by a hydraulic motor through a planetary gear reducer, with a normally closed brake and a balanced valve equipped.
Slewing system	Single-row four-point ball contact slewing bearing, single slewing mechanism, driven by a hydraulic motor, with built-in planetary gear reducer and constant closed brake equipped.
Driver’s cab	Fixed driver's cab is equipped with a sliding door and an adjustable seat. Safety glass, roof guardrails and sun shields for windshield, side, rear and roof windows are also available. Heater and air conditioner, audio system and 12/24V power ports are configured.
Safety devices	Hydraulic counterbalance valve, relief valve, double-way lock 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. Winch monitor, backup camera and right-sided blind-spot camera. Vibration lever is equipped to perceive the working speed easily.
Counter-weight	Fixed counterweight of 5.5 t.
Hook block	40 t, 5 t
Luffing system	A single cylinder is used for boom luffing, and counterbalance valve with the load compensation function is equipped.

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

Optional equipment / weight

 Optional equipment	Part description
Fixed jib	Jib length of 8.3 m; Lattice jib, welded structure. Jib offset angles may be changed with jib angle adjusting link, with 0°, 15° and 30° jib offset angles available. It is stowed at the side of boom.

 Axle	1	2	Total weight
t	13.95	16.56	30.51 (Fixed counterweight of 5.5 t)
t	14.5	16.5	31.0 (Fixed counterweight of 5.5 t+ optional jib)

 Hook block	Parts of line	Weight (kg)	Dimension (mm)	Notes
40 t	9	278	1320×430×366	Single hook
5 t	1	100	535×φ300	Single hook

Working speed

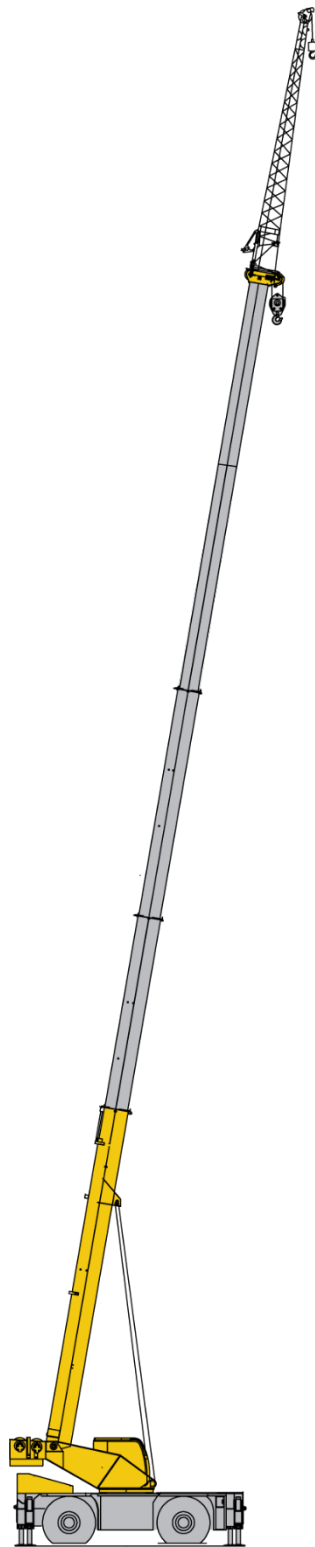
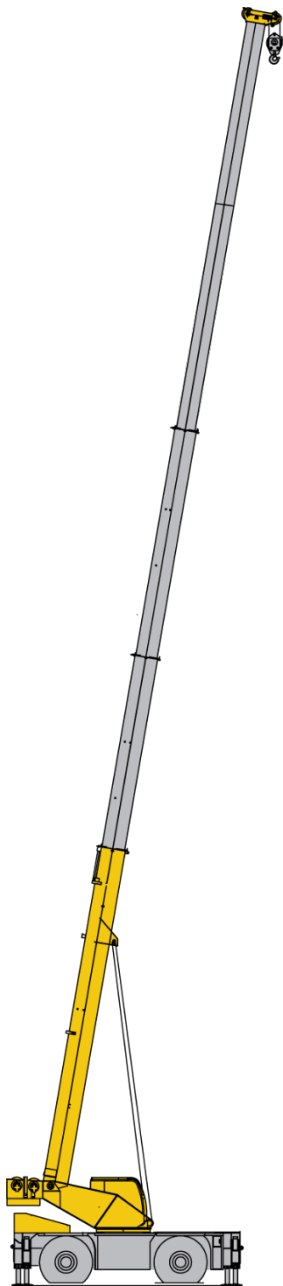


16.00-25	1.8~25 km/h	75%



	0-140 m/min, single line, no load	47 kN	16 mm	178 m
	0-140 m/min, single line, no load	47 kN	16 mm	95 m
	0-1.5 r/min			
	Approx. 45 s for boom luffing from 0° to 80°			
	Approx. 90 s for boom extending from 9.5 m to 37.4 m			

Boom/jib combinations



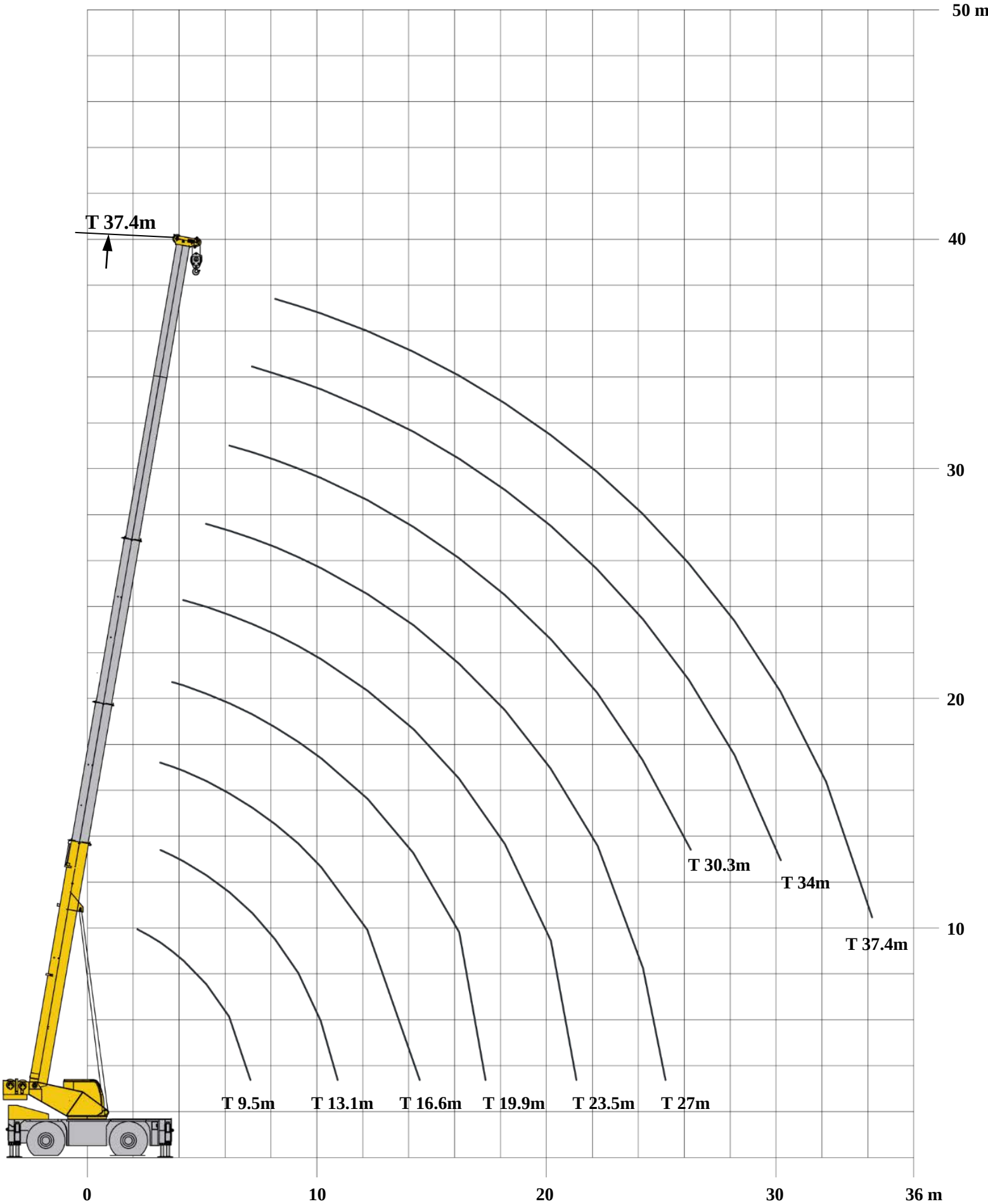
Boom

T: 9.5-37.4 m

Fixed jib

T: 37.4 m

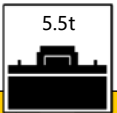
F: 8.3 m



Working range diagram

Boom

T 9.5-23.5 m

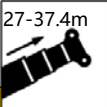
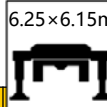
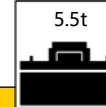
										
	9.5	13.1	16.6	19.9	19.9	19.9	23.5	23.5	23.5	
2.5	50*									2.5
3	42*	37.0	28.0	14.8	15.8	15.3				3
3.5	38.2	36.0	26.0	15.0	15.8	15.3				3.5
4	35.0	33.0	23.0	15.2	16.0	15.5	13.8	15.8	15.3	4
4.5	33.2	31.0	22.0	15.4	16.0	15.8	13.2	16.0	15.4	4.5
5	28.3	27.0	20.0	15.5	16.0	16.0	12.5	16.0	15.5	5
6	20.0	23.0	18.2	16.1	14.9	16.0	11.2	15.0	13.9	6
7	12.0	17.0	16.8	14.2	13.7	16.0	10.1	14.6	12.6	7
8		13.1	12.9	12.6	12.7	14.7	9.1	13.1	11.5	8
9		10.4	10.2	10.8	11.4	11.8	8.3	12.0	10.3	9
10		8.5	8.3	8.8	10.3	9.8	7.6	10.0	9.3	10
12			5.7	6.2	7.6	7.0	6.6	7.3	6.6	12
14			4.1	4.6	5.8	5.3	5.7	5.5	4.9	14
16				3.4	4.6	4.1	4.8	4.3	3.7	16
18							3.9	3.4	2.9	18
20							3.2	2.7	2.2	20

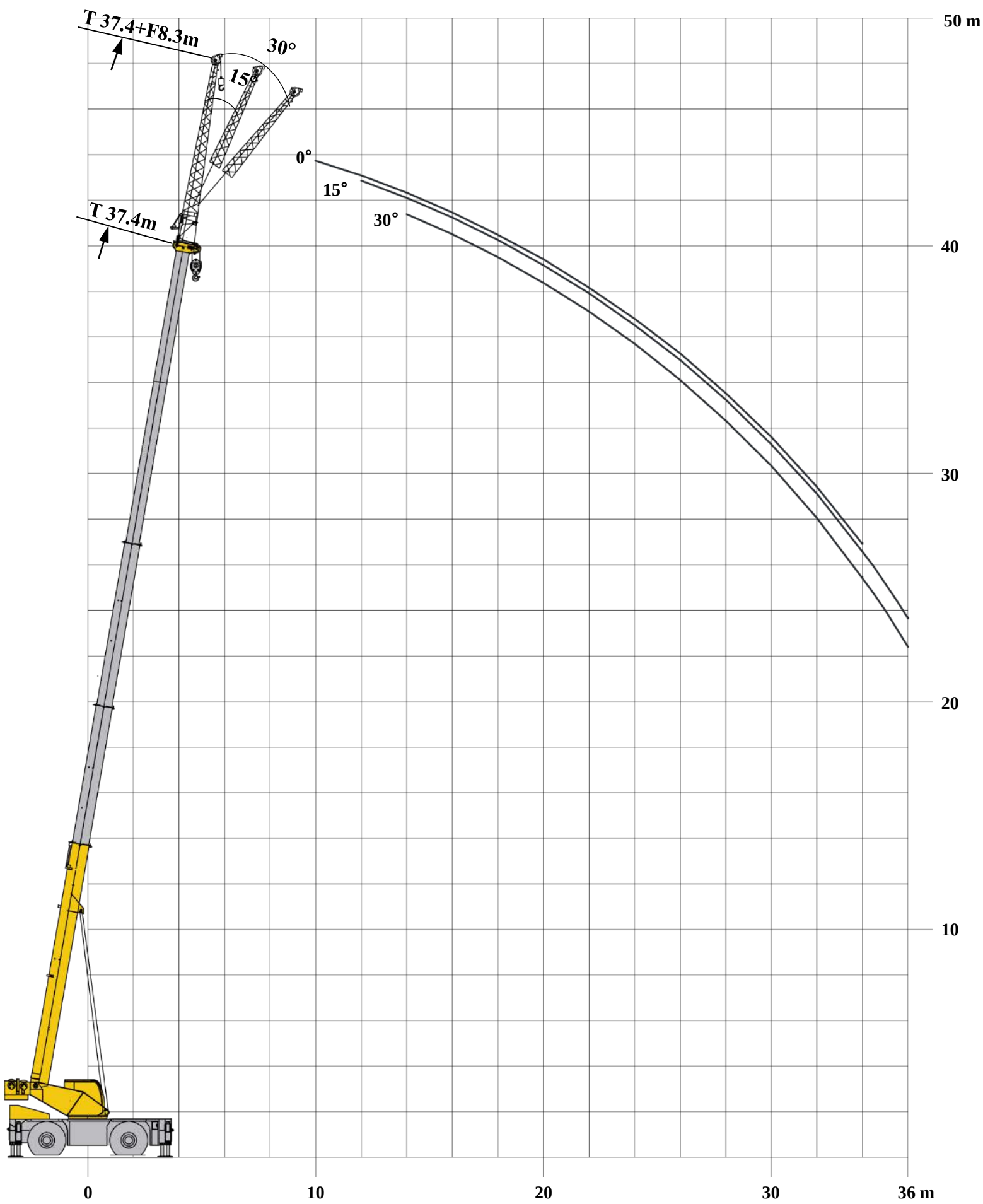
Note: *50 t hook block and 12 parts of line are applied

Working range diagram

Boom

T 27-37.4 m

	 27-37.4m	 6.25×6.15m	 360°	 5.5t	 EN						
	27.0	27.0	27.0	30.3	30.3	30.3	34.0	34.0	37.4		
4.5	13.5	14.5	9.8								4.5
5	12.9	13.4	9.8								5
6	12.0	12.1	9.7	10.7	8.5	9.3					6
7	10.9	11.0	8.8	9.8	8.0	9.1	7.9	8.5			7
8	9.9	10.1	8.2	8.9	7.1	8.5	7.5	7.7	7.1		8
9	9.1	9.2	7.4	7.9	6.5	7.6	6.8	7.0	6.5		9
10	8.4	8.4	6.8	7.3	6.1	6.9	6.2	6.4	5.9		10
12	7.0	6.8	5.9	6.1	5.1	6.1	5.4	5.4	5.0		12
14	5.7	5.1	5.2	5.2	4.4	5.2	4.6	4.6	4.2		14
16	4.5	4.0	4.5	4.1	3.8	4.5	4.0	4.0	3.7		16
18	3.6	3.1	3.6	3.3	3.4	3.7	3.5	3.4	3.1		18
20	2.9	2.4	2.9	2.6	3.0	3.0	3.1	2.8	2.8		20
22	2.3	1.9	2.7	2.1	2.7	2.5	2.5	2.2	2.4		22
24	1.9	1.5	2.3	1.6	2.3	2.0	2.1	1.8	1.9		24
26				1.3	2.0	1.7	1.7	1.5	1.6		26
28				1.1	1.5	1.3	1.4	1.2	1.3		28
30							1.2	0.9	1.0		30
32									0.8		32
34									0.6		34
35									0.5		35



F 8.3 m

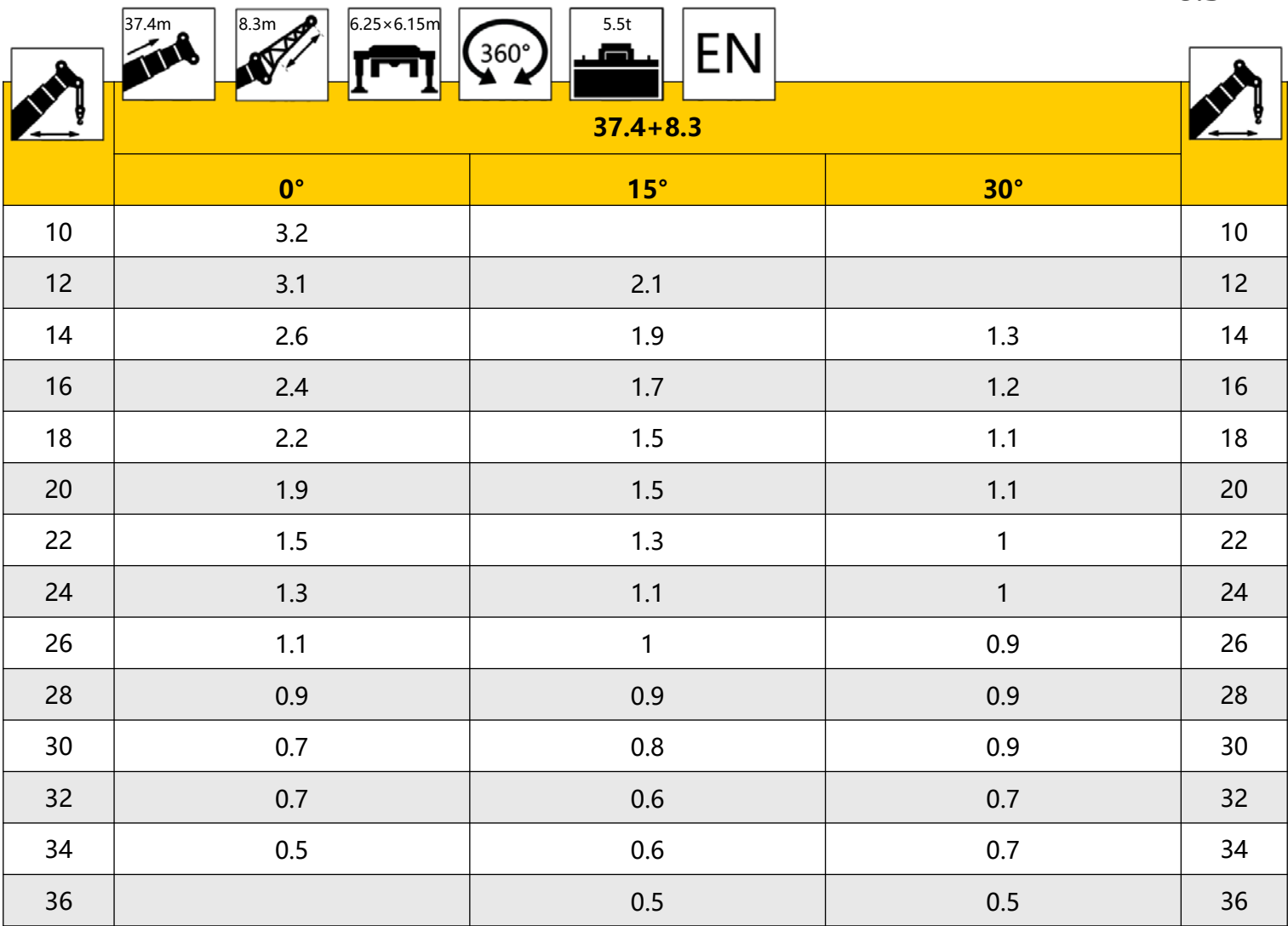


Table of main technical parameters

Type	Item		Unit	Parameters
Dimensions	Dimensions (L×W×H)		mm	11331×2543×3421
	Axle spacing		mm	3700
	Wheel track (front/rear)		mm	2040/2040
	Front overhang / rear overhang		mm	1835/1684
	Front extension / rear extension		mm	3902/210
Weight	Maximum permissible total weight		kg	31000 (Fixed counterweight of 5.5 t+ optional jib)
	Axle load	Axle 1	kg	14500
		Axle 2	kg	16500
Power	Engine model		——	B6.7
	Rated power / rotation speed		kW/(r/min)	168/2200
	Maximum output torque / rotation speed		N.m/(r/min)	1186/1300
Travel	Maximum travel speed		km/h	≥25
	Minimum stable travel speed		km/h	≤1.8
	Minimum turning diameter		m	≤12.4
	Minimum turning diameter of boom head		m	≤19.21
	Minimum ground clearance		mm	301
	Approach angle		°	20
	Departure angle		°	20
	Braking distance (initial speed at 24 km/h)		m	≤9
	Maximum grade ability		%	≥75

Table of main technical parameters

Type	Item			Unit	Parameters
Main performance	Maximum rated lifting capacity			t	50
	Minimum rated working radius			m	2.5
	Turning radius at turntable tail	At counterweight		mm	3894
	Maximum load moment	Base boom		kN.m	1464
		Fully-extended boom		kN.m	588
		Fully-extended boom + jib		kN.m	388
	Outrigger span	Longitudinal		m	6.25
		Lateral		m	6.15
	Lifting height	Base boom		m	9.5
		Fully-extended boom		m	37.2
		Fully-extended boom + jib		m	45.7
	Boom length	Base boom		m	9.5
		Fully-extended boom		m	37.4
		Fully-extended boom + jib		m	45.8
	Jib offset angle			°	0, 15, 30
Parameters of working speed	Time for raising boom			s	≤45
	Time for fully extending the boom			s	≤90
	Maximum slewing speed			r/min	≥1.5
	Time for extending / retracting the outriggers	Outrigger beam	Retracting	s	≤20
			Extending	s	≤25
		Outrigger jack	Retracting	s	≤25
			Extending	s	≤25
	Hoisting speed (single line, no load)	Main winch system		m/min	≥140
		Auxiliary winch system		m/min	≥140

Description of symbols

	Superstructure
	Rated lifting load
	Counterweight
	Variable-position counterweight Slewing radius
	Hook block
	Parts of line
	Wind speed
	Rope length
	Wire rope diameter
	Breaking force of wire rope
	Maximum working speed
	Main winch
	Auxiliary winch
	Luffing
	Telescoping

	Slewing
	360° slewing
	360° slewing with the fifth jack down
	Slewing in side and rear areas
	Boom over front or over rear
	Chassis
	Outrigger span
	Tire
	Axle load
	Grade ability
	Travel speed
	Configuration
	Optional equipment
	Engine

Description of symbols

	Boom
	Boom length
	Working radius
	Boom lifting height
	Boom angle
	Boom combinations
	Extension
	Independent jib head
	Simple jib head

	Fixed jib
	Fixed jib length
	Fixed jib offset angle
	Luffing jib
	Maximum lifting height
	Maximum working radius
	Super lift
	Wind power jib
	Standard

Notes

1. The document is intended as reference only. It is only a guide and should not be used to operate the crane. See product manuals for correct operation instructions.
2. The load capacity values in the tables are stated in metric tons (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 125 N/m²).



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