

XCT70BR Truck Crane

Technical specifications



70 t



48 m



40 m



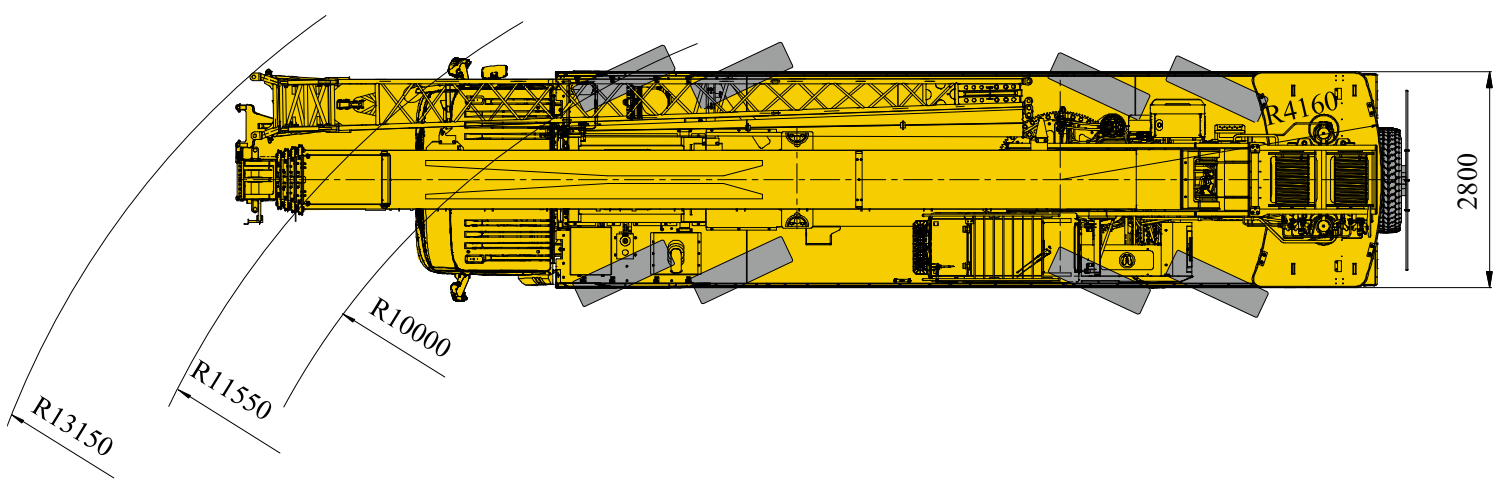
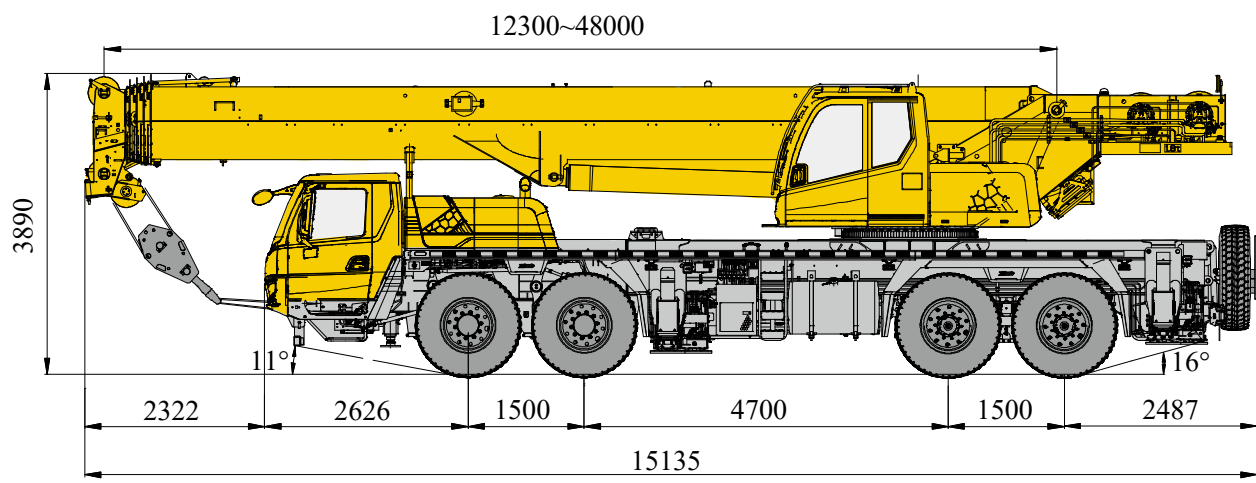
64.3 m



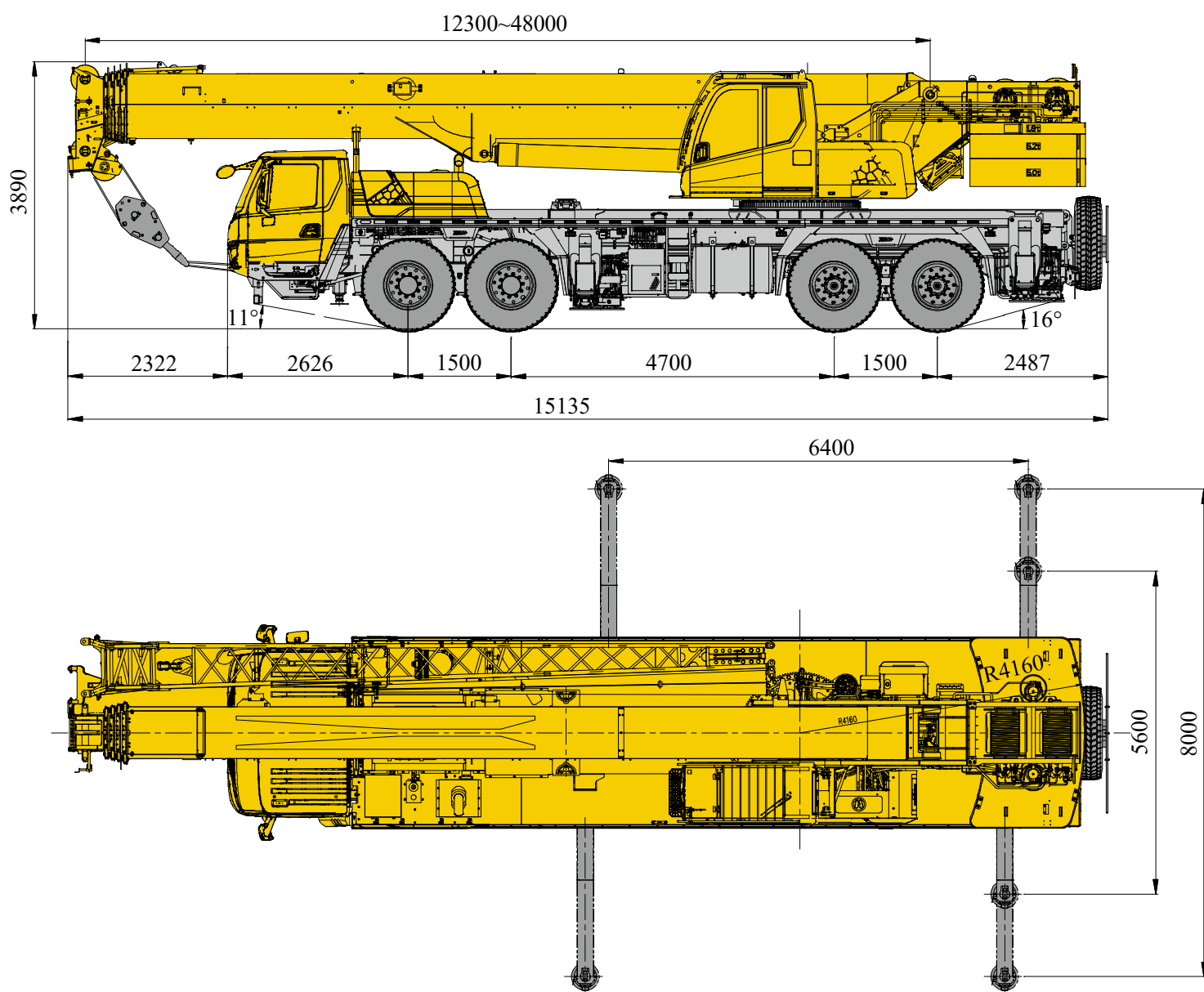
Contents

Dimensions	5-6
Technical specifications	7-9
Configuration and optional equipment	10
Weight/ working speeds	11-13
Counterweight	14
Dimensions of parts to be transported	15-16
Boom/ jib combinations	17-18
Load charts	19-24
Table of main technical parameters	25-26
Description of symbols	27-28
Notes	29

Dimensions



Dimensions



Technical specifications



Chassis

Frame	Designed and manufactured by XCMG, the frame is made of high strength steel with fully covered walking surface and anti-torsion box-typed structure.
Outriggers	Four outriggers arranged in H-shape are hydraulically controlled by control levers. There is an outrigger control station located at each side of the chassis, and there is a level gauge on each control station. The outrigger movements can be simultaneously or separately controlled at any side of the chassis. A fifth jack is available. Each jack cylinder is equipped with a double-way hydraulic lock. Outrigger float diameter: $\varnothing$ 450 mm. Reaction force of outrigger at maximum lifting load: 600 kN.
Engine	WP12G375E300, in-line, 6 cylinders, water cooled, electric control diesel engine made by Weichai power. Engine displacement: 11.596 L; Engine emission standard: MAR-I; Maximum reference torque: 1948 N.m; Rated power: 276 kW / 1900 rpm; Maximum torque: 1800 Nm / 1000-1400 rpm; Fuel tank capacity: 470 L.
Transmission	FAST automatic transmission with retarder; 12 forward gears and 2 reverse gears available.
Safety devices	Outrigger pressure detector, Beacon light at the top of the driver's cab, backup camera, emergency stop switch, tail sign, etc.
Axles	High strength axles with two reducers, with disc brake for axles 1-2 and drum brake for axles 3-4. All-axle steering, and axles 3 and 4 for driving. Driving /steering mode: 8×8×4
Suspension	Front suspension: longitudinal leaf spring balanced suspension, with cylindrical shock absorber. Rear suspension: double trailing arm balanced suspension, V-type upper control arm.
Tires	8 tires and 1 spare tire; Front axles and rear axles are equipped with single-tires. Tire specifications: 385 / 95R25.
Braking system	Service brake: dual-circuit air pressure brake, acting on all wheels. Parking brake: spring-loaded brake, acting on the wheels of axles 2, 3 and 4. Auxiliary brake: engine exhaust brake and transmission retarder brake.
Steering	Mechanical steering mechanism with hydraulic power assistance and rear axle steering system
Driver's cab	New full dimension steel structure cab is equipped with electric adjusting and heating rearview mirror and central lock. The driver's seat is mechanical, while a coupled sleeper is available for the co-driver's seat. There are a brand-new combined central control panel, 10-inch large screen color LCD display, fire extinguisher and HVAC system.
Electrical system	24 V DC, two 12 V batteries in series.

Technical specifications



Superstructure

Structure	Designed and manufactured by XCMG, made of high strength steel.
Hydraulic system	Large displacement dual-variable pump is used for lifting, luffing, and telescoping operations; while gear pump is used for slewing operation; The main valve integrates pilot oil supply module and adopts new pressure compensator to realize simultaneous operation between any actions; High power air-cooled hydraulic oil radiator effectively reduces system oil temperature.
Control mode	Hydraulic pilot control, stepless speed regulation, all movements of the crane are controlled by two levers at left and right sides and panel.
Main winch system	Hydraulic control is used for speed regulation. The system is driven by a hydraulic motor through a planetary gear reducer, with a normally closed brake, a counterbalance valve and a grooved drum equipped. The main and auxiliary winches can be operated independently. Wire rope has a rope head, which is directly installed in wedge socket.
Auxiliary winch system	Hydraulic control is used for speed regulation. The system is driven by a hydraulic motor through a planetary gear reducer, with a normally closed brake, a counterbalance valve and a grooved drum equipped. The main and auxiliary winches can be operated separately.
Slewing system	Single-row, four-point contact-ball external slewing ring, single slewing mechanism, driven by a planetary gear reducer, which is driven by a hydraulic motor, with constant-closed brake equipped, may continuously slew 360°. Power control and free swing function as well as stepless speed regulation are available. Lever is furnished with a horn button.
Luffing system	Single luffing cylinder and the luffing counterbalance valve with the load compensation function. Gravity for lowering boom is used for boom luffing down.
Operator's cab	Steel fully-enclosed operator's cab can tilt backward about 20°, and features a spacious, panoramic, and multi storage layout. All-round view safety glass with an openable windshield. Push-pull sliding door, protective grilles, pull-out step, front and roof wipers are equipped. Stylish interior design. Sun screens for front, rear and side windows; double-layer sun screen for the roof window. Adjustable and spacious seats with mechanical shock absorption, dual LED interior lights and electric fan are available. LMI, HMI control panel, display, armrests, engine accelerator pedal, engine start switch, etc. Heating & air conditioning are available.
Safety devices	Hydraulic counterbalance valve, hydraulic relief valve, double-way hydraulic lock, LMI, length sensor, angle sensor, lowering limiter for preventing wire rope from over-releasing, anti-two block at boom head for preventing wire rope from over-winding and winch monitoring mirror.
Electrical system	24 V DC.
Load moment indicator (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.
Counterweight	Total weight is 12 t, with 4 counterweight combinations.
Hook block	60 t, 5 t



Superstructure

Boom	5-section boom with U-shaped cross-section, welded structure. Dual-cylinder wire-rope-type telescoping system Boom length: 12.3 m ~ 48 m.
Fixed jib	One-section lattice jib, and two-section jib with quadrilateral 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. Jib length: 9.5 m and 16 m.
Auxiliary sheave	Installed at the boom top, used for single line operation. Its lifting performance is the same with that of boom, but the maximum lifting capacity can not exceed 5 t.

Models and options



Function description

Standard

5-section boom of 48 m, fixed jib of 16m.

Note: only standard configuration is available for this model.



Component description

Hook block

40 t hook block

Monitoring system assembly

Winch monitor, counterweight attachment monitor, and boom head monitor are included.

Level gauge

Measures crane levelness to ensure stability and safety during crane installation, calibration, and operation.

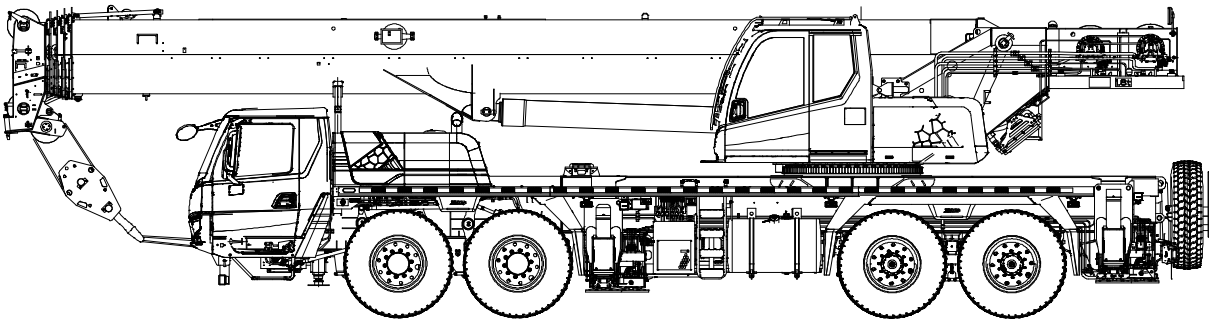
Data recorder

Monitor and record various parameters of the crane operation.

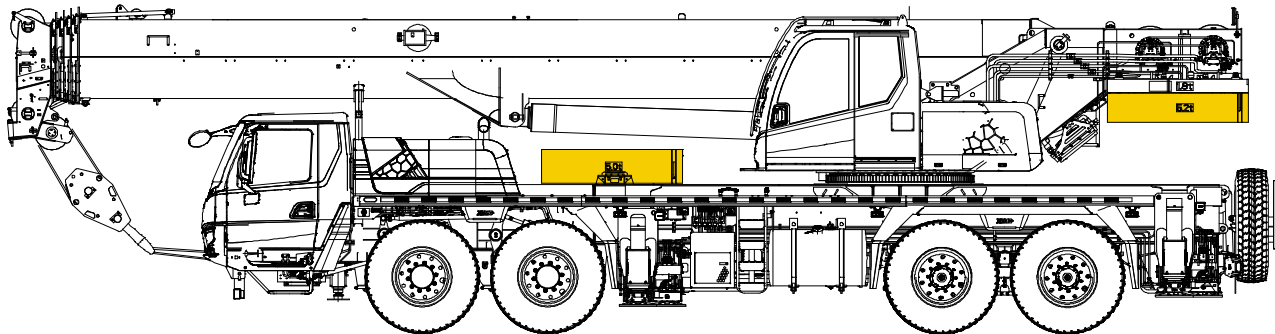
Weights

	1	2	3	4	Total weight
t	11.25	11.25	11.25	11.25	45 ¹⁾
t	12.6	12.6	15	15	55.2 ²⁾

1) Road travel configuration
Superstructure: 60 t hook block, 5 t counterweight, jib and 1.8 t counterweight are included.
Chassis: spare tire and its bracket are carried.
Maximum travel speed: 80 km/h.



2) In the short-distance transfer configuration
Superstructure: 60 t hook block, 5 t hook block and jib are carried; counterweight slabs of 1.8 t+ 5.2 t are carried below the turntable; 5 t counterweight is carried in front of the frame.
Chassis: spare tire and its bracket are carried.
Maximum travel speed: 20 km/h.



Weights

	Parts of line	Hook block weight (kg)	Dimensions (mm)	Notes
60 t	12	520	477×572×1501	Single hook
40 t	8	360	430×504×1362	Single hook
5 t	1	100	300×300×535	Single hook

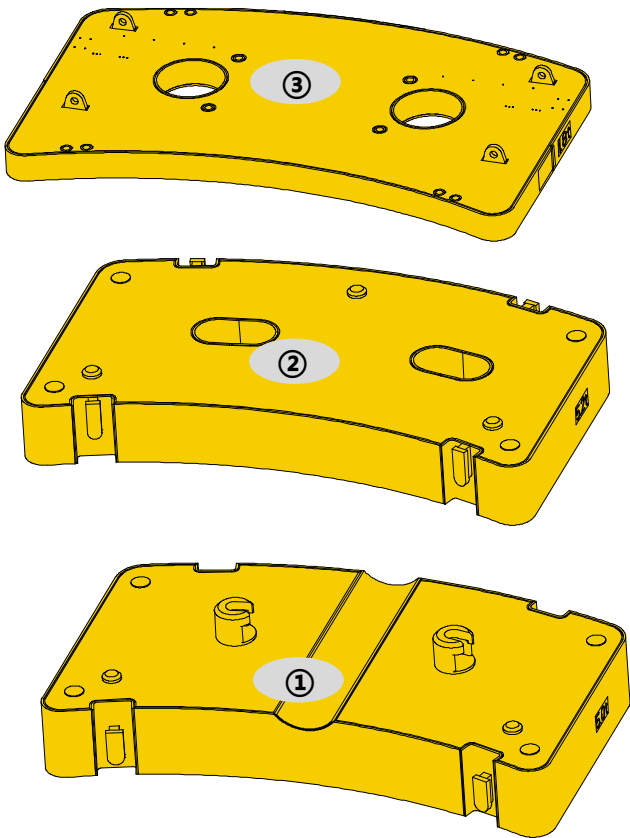
Working speeds



385 / 95R25	80	48%



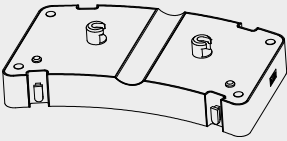
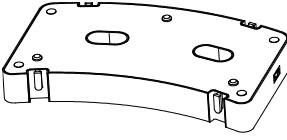
	0-130 m/min, single line, 4th layer	50 kN	18 mm	222 m
	0-130 m/min, single line, 4th layer	50 kN	18 mm	140 m
	0-1.6 r/min			
	Approx. 50 s for boom luffing up from -1° to 80°			
	Approx. 110 s for boom extending from 12.3 m to 48 m			



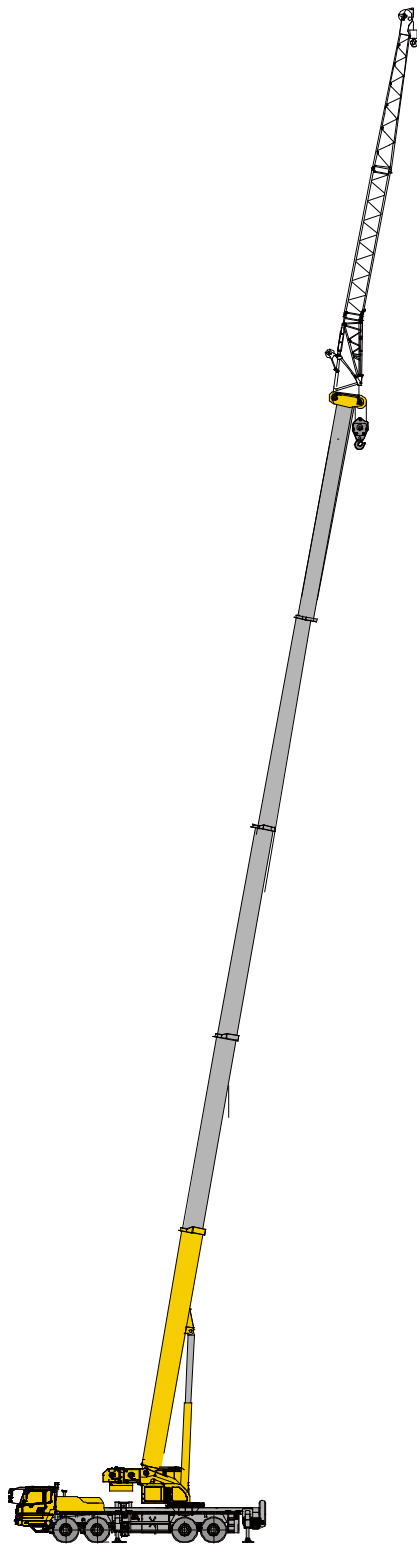
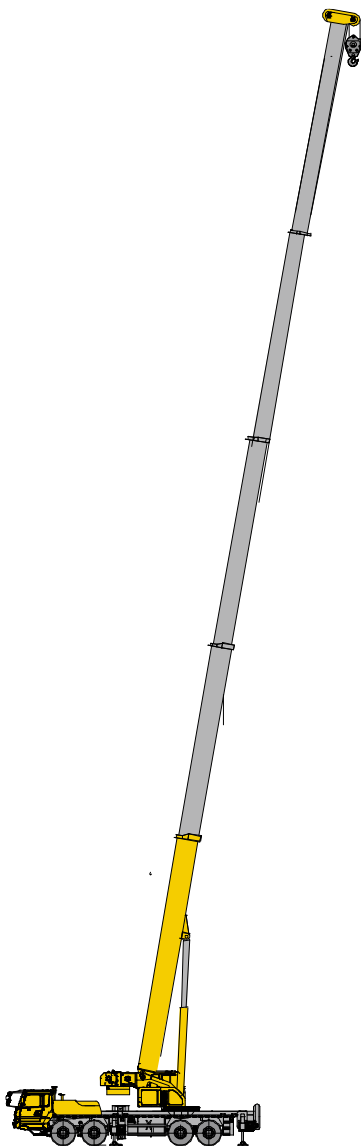
	①	②	③
Dimensions (L×W×H) (mm)	2790×1686×583	2790×1686×386	2790×1686×244
Weight (t)	5	5.2	1.8

Operation modes	12 t	7 t	6.8 t	1.8 t
Combinations	①+②+③	②+③	①+③	③

Dimensions of parts to be transported

Name	Illustration	Single weight (kg)	Qty	Dimensions (mm)
Counterweight slab ①		5000	1	2790×1686×583
Counterweight slab ②		5200	1	2790×1686×386
40 t hook block		360	1	430×504×1362

Boom / jib combinations



Boom

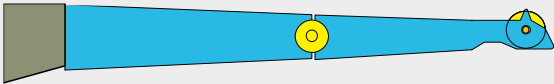
T: 12.3~48 m

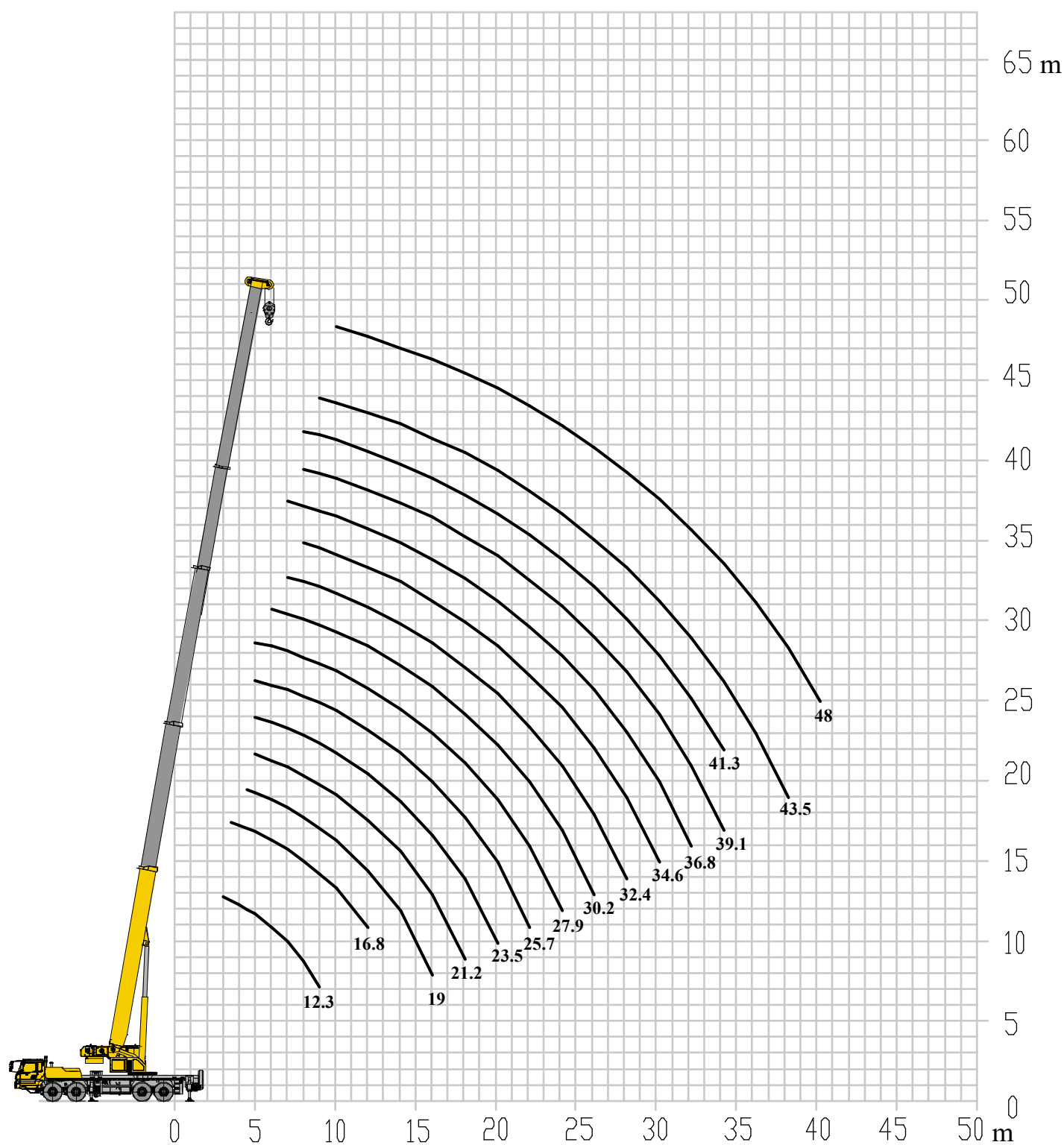
Jib

**T: 48 m
F: 9.5 / 16 m**

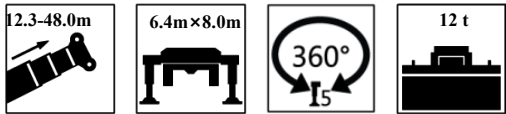
Boom / jib combinations

Components	Structure
Connecting bracket	
1st jib section	
2nd jib section	

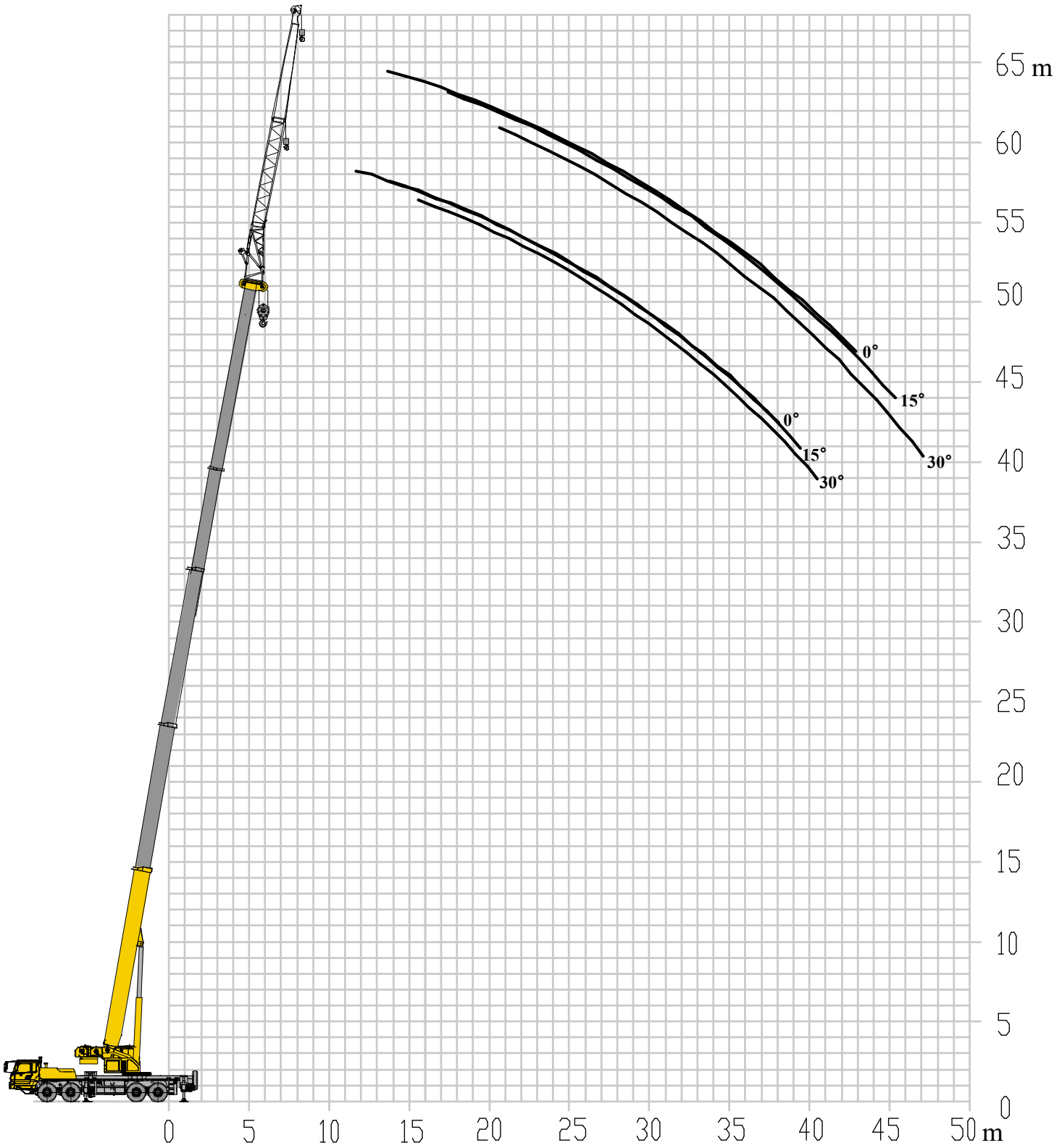
Jib – 9.5 m	
Jib – 16 m	

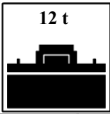
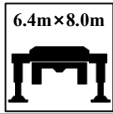
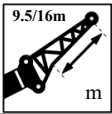


T 12.3-48.0m



	12.3	16.8	19.0	21.2	23.5	25.7	27.9	30.2	32.4	34.6	36.8	39.1	41.3	43.5	48.0	
3	70.0															3
3.5	56.0	50.0														3.5
4	55.0	50.0														4
4.5	51.5	48.5	32.0													4.5
5	46.0	46.0	32.0	38.0	30.5	30.0	30.0									5
6	37.5	36.5	32.0	36.0	30.5	29.0	30.0	25.3								6
7	31.0	31.0	31.6	30.2	30.5	28.2	29.7	25.3	20.0	25.4						7
8	26.5	26.0	28.0	25.0	27.0	26.0	26.6	25.3	19.9	24.0	20.2	15.0	18.3			8
9	22.8	22.5	24.2	22.1	23.6	24.2	23.0	24.4	18.6	22.1	19.1	15.0	18.3	14.6		9
10		19.8	21.0	19.0	20.9	22.0	20.1	21.2	17.3	20.2	17.9	14.3	17.3	14.0	12.0	10
12		15.1	16.8	14.6	16.2	17.2	15.2	16.8	15.0	16.7	16.0	12.7	15.2	12.9	12.0	12
14			13.0	10.9	12.4	13.6	12.0	13.1	13.2	12.7	13.5	11.2	13.1	11.7	11.4	14
16			10.2	8.3	9.7	10.9	9.4	10.4	11.2	10.0	10.8	10.1	10.4	10.6	10.3	16
18				6.3	7.7	8.9	7.3	8.4	9.2	8.0	8.8	9.1	8.4	9.0	8.7	18
20					6.2	7.3	5.8	6.8	7.6	6.4	7.2	7.9	6.8	7.5	7.1	20
22						6.1	4.6	5.6	6.4	5.2	6.0	6.6	5.6	6.2	5.9	22
24							3.7	4.6	5.4	4.3	5.0	5.7	4.7	5.3	4.9	24
26								3.9	4.6	3.5	4.2	4.9	3.9	4.5	4.2	26
28									4.0	2.8	3.6	4.2	3.2	3.8	3.5	28
30										2.3	3.0	3.6	2.7	3.2	2.9	30
32											2.5	3.1	2.2	2.8	2.4	32
34												2.7	1.8	2.3	2.0	34
36														2.0	1.7	36
38														1.7	1.3	38
40															1.1	40





	9.5			16			
	0°	15°	30°	0°	15°	30°	
80	5.0	4.5	2.7	3.6	2.3	1.4	80
78	5.0	4.2	2.5	3.2	2.1	1.3	78
75	5.0	3.8	2.3	3.0	1.9	1.2	75
72	4.8	3.5	2.1	3.0	1.7	1.1	72
70	4.5	3.3	2.0	2.8	1.6	1.0	70
65	3.8	3.0	2.0	2.4	1.5	0.9	65
60	2.6	2.5	2.0	2.0	1.4	0.8	60
55	1.9	1.8	1.7	1.4	1.3	0.7	55
50	1.3	1.2	1.2	1.0	0.9	0.6	50

Table of main technical parameters

Category	Item		Unit	Parameters
Dimensions	Dimensions (L×W×H)		mm	15135×2800×3890
	Axle spacing		mm	1500+4700+1500
	Track (front/rear)		mm	2400 / 2336
	Front overhang / rear overhang		mm	2626 / 2487
	Front extension / rear extension		mm	2322 / 0
Weights	Maximum permissible total weight		kg	45000
	Axle load	Axle 1	kg	11250
		Axle 2	kg	11250
		Axle 3	kg	11250
		Axle 4	kg	11250
Power	Engine model		—	WP12G375E300
	Rated power/rpm		kW / (r / min)	276/1900
	Maximum output torque/rpm		N.M / (r / min)	1800 /1000-1400
Travel	Maximum travel speed		Km / h	80
	Minimum stable travel speed		Km / h	1.5~2.5
	Minimum turning diameter		m	≤ 20
	Minimum turning diameter at boom head		m	≤ 26.3
	Minimum ground clearance		mm	280
	Approach angle		°	11
	Departure angle		°	16
	Braking distance (initial speed at 30km/h)		m	≤ 10
	Maximum grade ability		%	≥ 48
	Fuel consumption per 100 km		L	45
Noise	Exterior noise level when accelerating		dB (A)	≤ 84
	Noise level at seated position		dB (A)	≤ 90

Table of main technical parameters

Category	Item			Unit	Parameters
Main performance	Maximum rated total lifting capacity			t	70
	Minimum rated working radius			m	3
	Slewing radius at turntable tail	At counterweight		mm	4160
		At auxiliary winch		mm	4110
	Maximum load moment	Base boom section		kN.m	2377
		Fully-extended boom		kN.m	1615
		Fully-extended boom + jib		kN.m	953
	Outrigger span	Longitudinal		m	6.4
		Lateral		m	8 / 5.6
	Lifting height	Base boom section		m	13
		Fully-extended boom		m	48.3
		Fully-extended boom + jib		m	64.3
	Boom length	Base boom section		m	12.3
		Fully-extended boom		m	48
		Fully-extended boom + jib		m	64
	Jib offset angle			°	0, 15, 30
Working speeds	Time for raising boom			s	≤ 50
	Time for fully extending the boom			s	≤ 110
	Maximum slewing speed			r / min	≥ 1.6
	Time for extending / retracting outriggers	Outrigger beams	Retracting	s	≤ 30
			Extending	s	≤ 30
		Outrigger jacks	Retracting	s	≤ 40
			Extending	s	≤ 45
	Lifting speed (single line, at outermost layer, no load)	Main winch system		m / min	≥ 130
Auxiliary winch system		m / min	≥ 130		
Noise	Exterior noise level			dB (A)	≤ 108
	At driver position			dB (A)	≤ 85

Description of symbols

	Superstructure
	Rated lifting load
	Counterweight
	Slewing radius of variable-position counterweight
	Hook block
	Parts of line
	Boom length combination
	Wind speed
	Configuration
	Optional equipment
	Rope length
	Wire rope diameter
	Maximum single line pull
	Maximum working speeds
	Main winch
	Auxiliary winch

	Boom
	Boom length
	Working radius
	Lifting height with boom
	Boom angle
	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

Description of symbols

	Chassis
	Outrigger span
	Tires
	Axle load
	Grade ability
	Travel speed
	EN 13000 standard

	Luffing
	Telescoping
	Slewing
	360° slewing
	360° slewing with the 5th jack down
	Side and rear operation