SANY®

SPECIFICATION

200t

85.5m

112m

SAC2000S8

SANY ALL TERRAIN CRANE

QUALITY CHANGES THE WORLD

crane.sanyglobal.com

V1.2

It is one of the core business units in SANY Group, specializing in the development and manufacturing of high-end wheel cranes, crawler cranes and tower cranes, including the complete range of wheel cranes from 8 to 2400t, crawler cranes from 25 to 4500t and tower cranes from 6 to 185t.

SANY CRANE

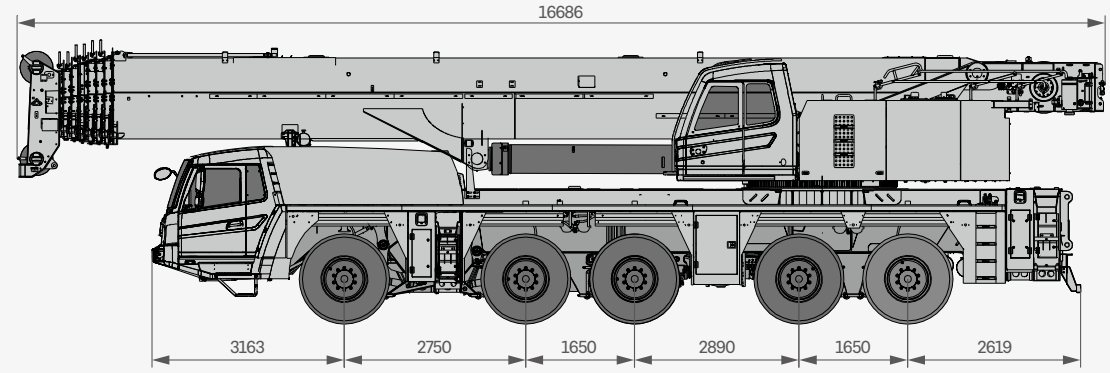

SANY
SANY
SANY

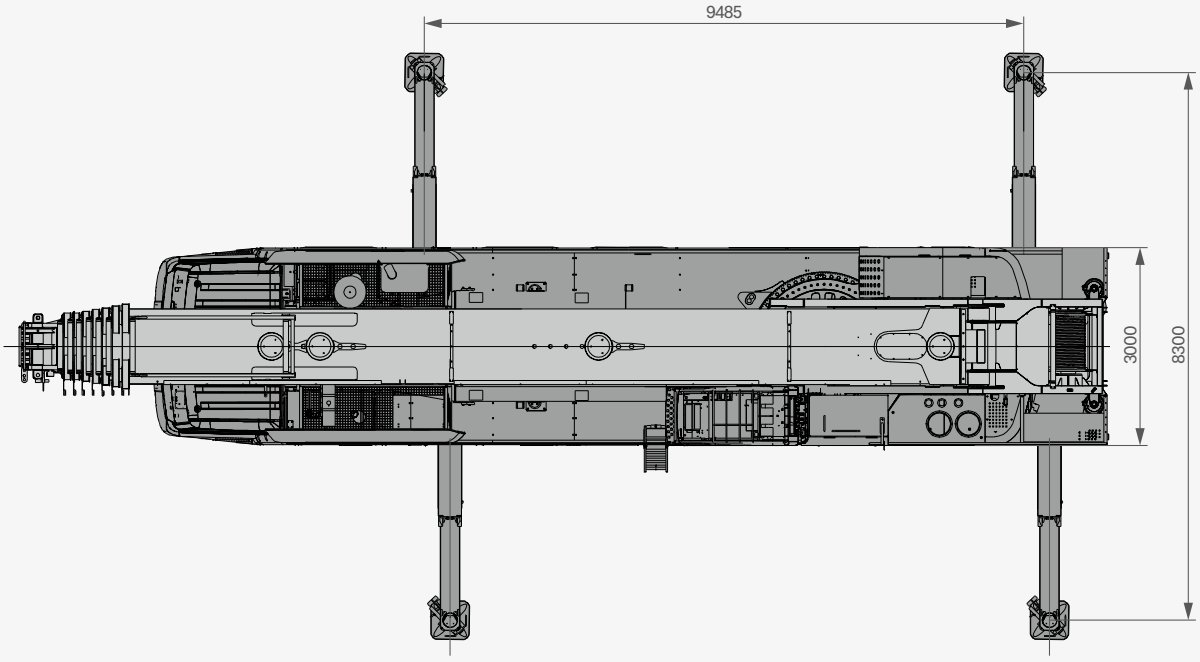
8-section oval boom, with full extension of 85.5 m; jib, with standard extension of 18 m (optional total 34 m with additional two 8 m sections), realizing greater lifting height, radius and capacity.
60t full counterweight, traveling with 18t counterweights allowed with uniform axle load.
Excellent power chain: BENZ OM460LA.E3A/1 engine + German ZF automatic transmission with hydraulic retarder + German Kessler axles with disc brake.
5-axle all-terrain carrier, H-type outriggers, hydro-pneumatic suspension, all-wheel steering, 4-axle drive, 6 steering modes, minimum steering radius of 9.7m.
Low-noise and energy-saving concept is implemented with mechanical single engine, free of risk of upgrades on vehicle emissions, resulting in 35% decrease in maintenance costs.
Independent hydraulic systems for crane and chassis (independent variable piston pump + slewing pump + auxiliary pump + fluid tank hydraulic system for crane), energy saving of 15%-20% than hydraulic single-engine mechanism.
Cable wiring for superstructure, with high reliability.

85.5m
Full-extension boom

9.5×8.3m
Outrigger span

Overall Dimensions





Technical Specification

CATEGORY	ITEM		UNIT	VALUE
CAPACITY	Max. lifting capacity		t	200
WEIGHT	Gross weight		kg	66000
POWER	Engine model		-	BENZ OM460LA (EU Stage III A)
	Max. engine power		kW/rpm	360/1800
	Max. engine torque		N·m/rpm	2200/1300
DIMENSIONS	Overall length		mm	16686
	Overall width		mm	3000
	Overall height		mm	4000
TRAVEL	Max. travel speed		km/h	80
	Min.steering radius		m	9.7
	Wheel formula		-	10 × 8 × 10
	Min.ground clearance		mm	271
	Approach angle		°	16
	Departure angle		°	12
	Max.gradeability		-	45%
	Fuel consumption per 100km		L	70
MAIN PERFORMANCE	Working temperature range		℃	– 20~+40
	Min.rated lifting radius		m	3
	Tail slewing radius		m	4.33 (4.83 with counterweight mounted)
	Boom sections (Qty.)		-	8
	Boom shape		-	U shape
	Max.lifting moment	Basic boom	kN·m	6272
		Full-extension boom	kN·m	2074
	Boom length	Basic boom	m	14.4
		Full-extension boom	m	85.5
		Max. combination of boom + jib	m	96.4 (standard), 112.4 (optional)
	Max. lifting height	Basic boom	m	14.7
		Full-extension boom	m	85
		Max. combination of boom + jib	m	112
	Outrigger span (Longitudinal × Transverse)		m	9.5 × 8.3
	Jib offset		°	0, 15, 30
AIRCONDITIONER	In operator's cab		-	Heating & cooling
	In driver's cab		-	Heating & cooling

Technical Specification

Axle Load

Axle	1	2	3	4	5	Gross weight
Load per axle /t	≤12	≤12	≤12	≤12	≤12	55
Remark	55t for type approval, without hook, counterweight, main winch, and the 5th-8th boom sections					

Hook

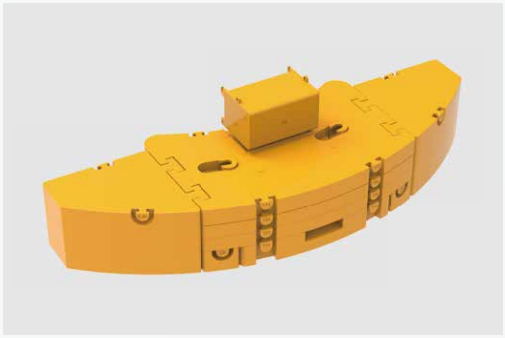
Rated loa /t	Number of sheaves	Rope rate	Hook weight/kg
○ 200	9	19	2440
○ 125	7	15	1491
● 80	3	7	695
○ 32	1	3	504
● 12.5	0	1	270

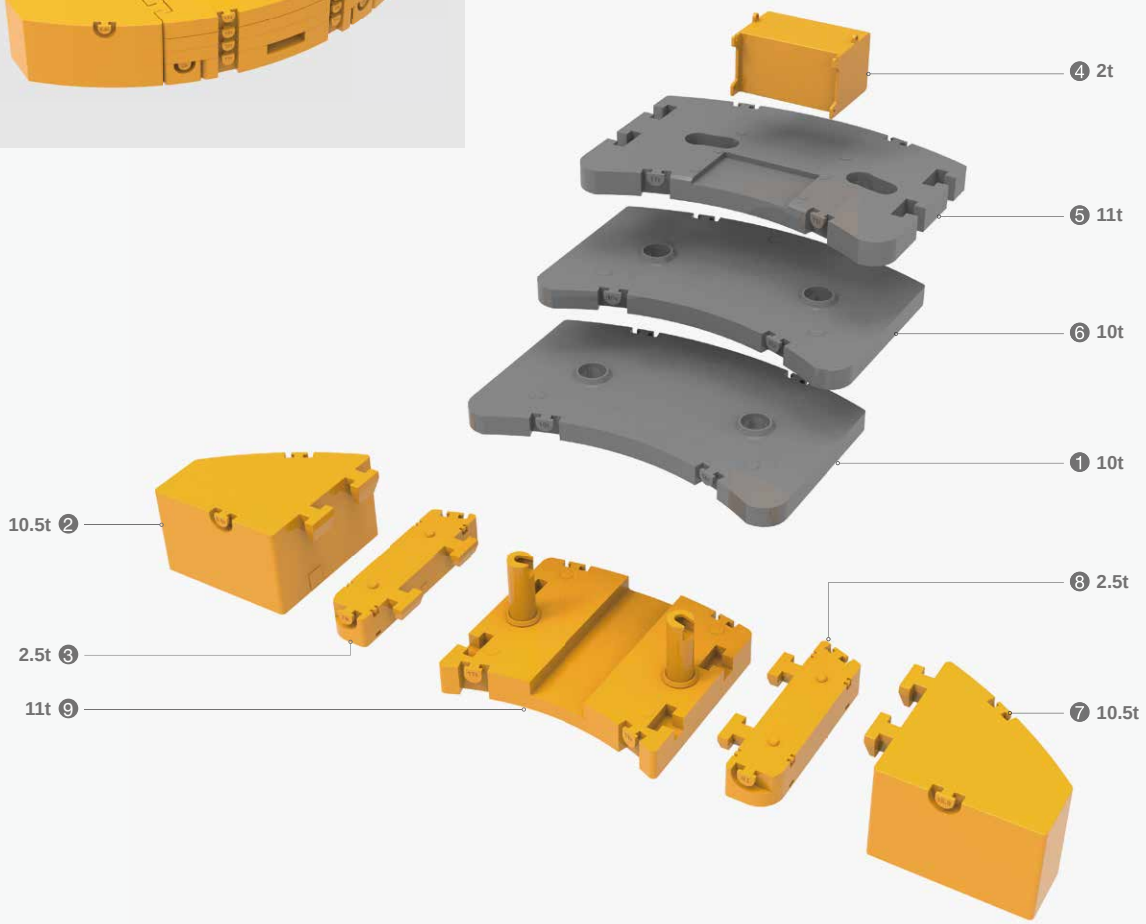
● Standard ○ Optional

Operations

Item		Single rope lifting speed	Rope diameter/length	Max. single line pull
Main winch		0-130 m/min	22 mm/340 m	11t
Slewing speed		0-1.5 r/min		
Full luffing up/down time		65s/115s (0~80°)		
Full extension/retraction time		750s/750s (14.4 m~85.5 m)		
Outrigger jack	Retraction	25s		
	Extension	30s		
Outrigger beam	Retraction	30s		
	Extension	35s		

Counterweight Combinations

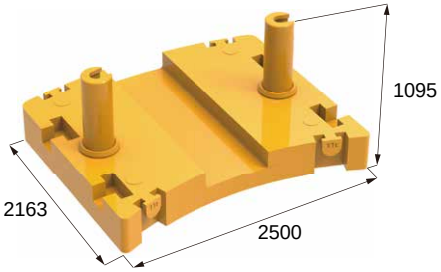




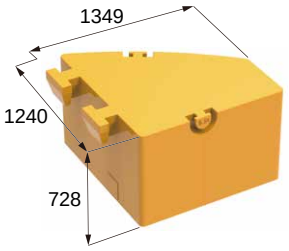
Total weight	①	②	③	④	⑤	⑥	⑦	⑧	⑨
	10t	10.5t	2.5t	2t	11t	10t	10.5t	2.5t	11t
0t									
11t									●
16t			●					●	●
18t			●	●				●	●
28t	●		●	●				●	●
38t	●		●	●		●		●	●
49t	●		●	●	●	●		●	●
70t	●	●	●	●	●	●	●	●	●

Transport Dimensions

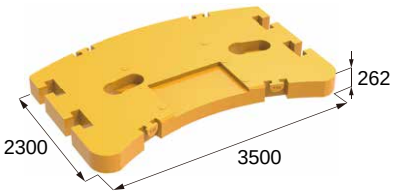
Unit:mm



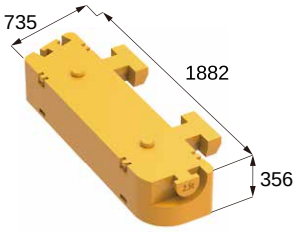
11t



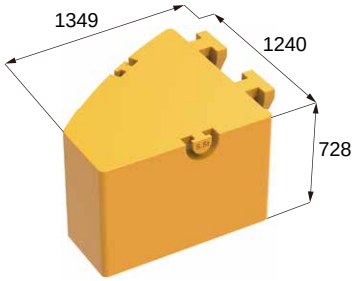
5.5t



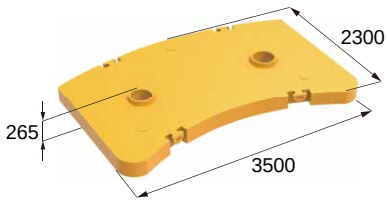
11t



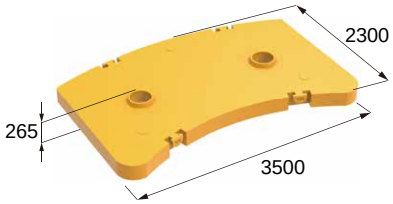
2.5t



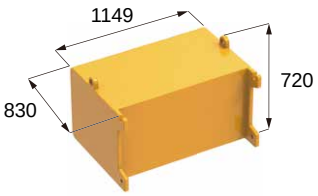
5.5t



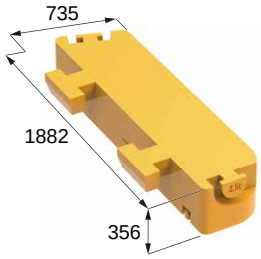
10t



10t

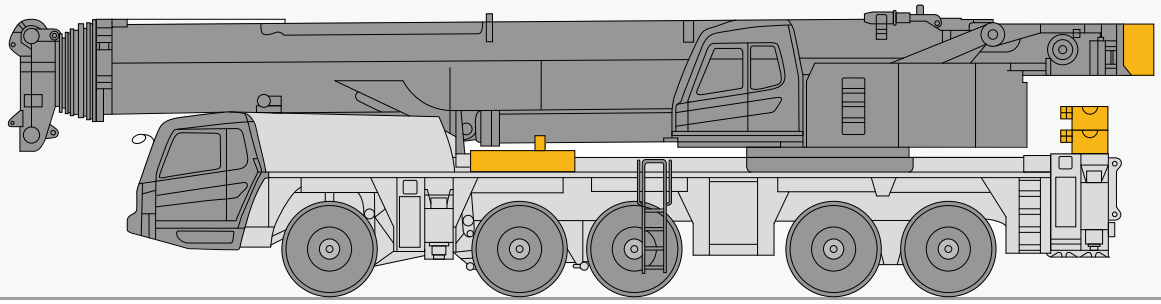


2t



2.5t

On-site transfer with 18t CW



18t

Crane Introduction

Driver's cab

- It is made of SANY independently developed new steel structure with excellent shock absorption and sealing, and designed with outward opening doors, comfortable driver's seat (with head rest) and co-driver's seat equipped with pneumatic suspension, adjustable steering wheel, wide-view rear-view mirror, demister, air conditioner, stereo radio, and complete set of control instruments and meters, which is more comfortable, secure and user-friendly.

Carrier frame

- It is designed and manufactured by SANY in the torsion-proof box-shaped structure welded by fine-grained high-strength steel sheets, which has strong load-bearing capacity.

Chassis engine

- Model: Benz OM460LA.E3A/1 six-cylinder, water-cooled, supercharged intercooler, diesel engine.
- Rated power:360kW/1800rpm.
- Max. torque: 2200N·m/1300rpm.
- Emission standard: EU Stage III A.
- Fuel reservoir capacity: 500L.

Transmission

- German ZF AMT (with hydraulic retarder to run easily on long-downhill path), with 12 forward gears and 2 reverse gears.

Axle

- It is German Kessler axle in full-axle steering and 4-axle drive (drive axles 1, 2, 4, 5). The axles 1, 2 adopt the hydraulic power steering system with rod system feedback, and the axles 3, 4, 5 adopt the electro-hydraulic control steering, so the assistance for speed control and selectable steering modes can be realized, with easy steering and flexible control.

Suspension system

- All axle suspension devices are height-adjustable hydro-pneumatic suspension devices with hydraulic locking. The suspension can be adjusted up by 140mm and down by 150mm. With suspension, rigid locking, automatic leveling, and lifting modes, it can be applied to various harsh working conditions and roads to ensure the smoothness, lateral stability and comfortable driving of the crane.

Steering

- It consists of servo power steering gear, and dual-circuit system hydraulic steering device, with emergency steering pump.
- There are 6 steering modes: 1. Highway driving mode (default mode); 2. All-wheel steering mode; 3. Crab walk mode; 4. No-yaw steering mode; 5. Independent rear axle steering mode; 6. Rear axle lock steering mode.

Tires

- Standard 11 #385 Techking tires, optional spare tire bracket and #445 Techking.

Drive/Steering

- 10 × 8.

Brake

- Parking brake: It is driven by a pressure accumulator, acting on the second to fifth axles.
- Service brake: All wheels are equipped with air servo brakes, dual-circuit braking system, and disc brakes.
- Assist brake: It includes transmission hydraulic retarder brake, engine brake and exhaust brake, which can reduce the wear of brake system and save the use costs.

Outrigger

- With a longitudinal and transverse pan of 9.5 m × 8.3 m, and fully hydraulic horizontal and vertical support telescopic cylinders, the H-type outriggers functions automatic levelling.

Electrical system

- With modern data bus system, 24V DC power supply, 2 battery packs (180 AH for each), the power supply of chassis can be cut off.
- The carrier adopts CAN bus system and multi-functional centralized display system in low power consumption; as well as LCD screen with adjustable contrast.

Crane Introduction

Operator's cab

- 0°~20° tiltable, the operator's cab is made of corrosion-resistant steels, and designed with full-covering softened interior, panoramic sunroof, adjustable seat, etc. to make the operation more user-friendly, comfortable and easy; and equipped with LMI screen to integrate the center console and operation display system and make operation conditions are well monitored from multiple angles.

Boom & telescoping system

- Boom: 8-section boom made of fine-grained high-strength steel, with full extension of 85.5 m, and oval cross-section. Jib: Standard 18 m, and 34 m for optional, mechanically adjusted at 0°, 15°, 30°.
- Telescopic mechanism: With independent hydraulic drive telescopic movement, it is efficient, safe and reliable.

Hoist

- The main winch adopts an electric proportional variable piston motor, which has good inching performance and stability.

Luffing system

- It is designed with passive luffing down, which is more energy-saving. It adopts a single cylinder in front hinged support arrangement to perform the luffing with less effort and improve the force of the boom; and an electric proportional control balance valve is used.

Hydraulics

- It consists of the high-quality main pump, rotary pump, main valve, winch motor, balance and other key hydraulic components to ensure the stability and reliability of the hydraulic system and achieve the superior operating performance through accurate parameter matching; the electric proportional variable piston pump to adjust the pump displacement in real time and realize the high-precision flow control through the change of the electric control handle opening, without energy loss during operation; and the self-developed double-pump confluence/shunt main valve for higher efficiency of single motion, and better diverting control of combined motions.
- With the passive luffing down process with compensation hydraulic system, it has better inching performance and stability. The extension and retraction of boom is realized by a single-cylinder pin telescopic system.
- Under a closed system, the flow and direction are changed by adjusting the angle of the variable pump swash plate to realize superior inching motion and the stable slewing.

Slewing platform

- It is independently designed by SANY in fine-grained high-strength steel, which is more optimized.

Slewing

- It consists of a variable main piston pump for 360° slewing at speed of 0~1.5 r/min; and an electric proportional closed hydraulic circuit and electric proportional pedal to realize emergency braking.

Control system

- The crane is electronically controlled by load moment indicator system; the two multi-directional joysticks can be automatically reset; and the movement of the crane is realized through controlling the hydraulic pump.

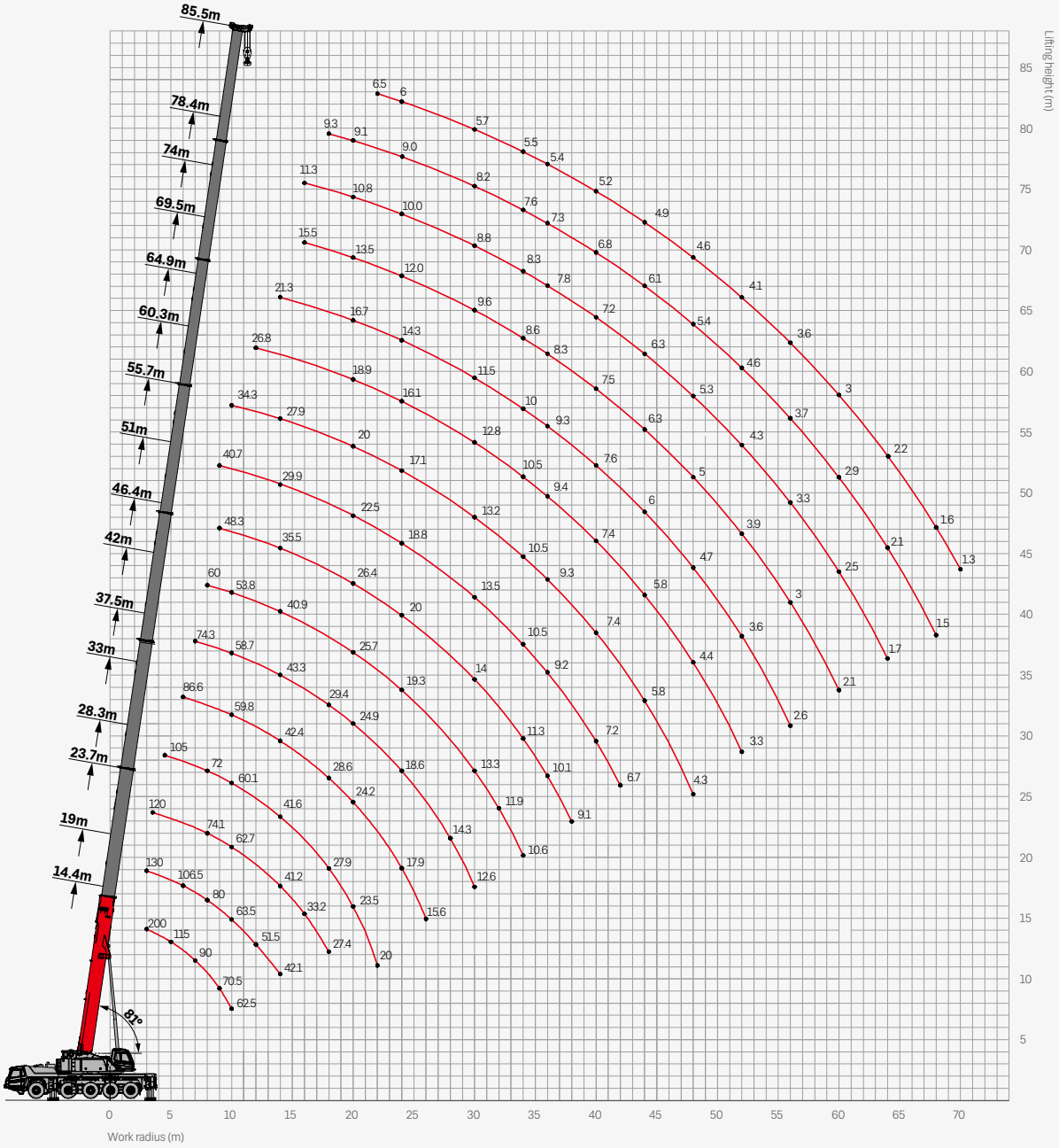
Counterweight

- Combined counterweight of 60t are applied. 18t counterweight can be loaded with the crane when traveling. The counterweight can be raised and lowered by wireless remote control.

Safety equipment

- LMI: Under analytical mechanics, a load moment calculation system based on the lifting mechanics model is established. Through online empty-load calibration, the rated lifting accuracy can reach ±5% for fully protecting the lifting operation. When overloading, the system will automatically give an alarm to provide safety guarantee for operation. The hydraulic system is equipped with hydraulic balance valve, overflow valve, two-way hydraulic lock and other components to ensure its stability and reliability. The winch is equipped with a protector to prevent the wire rope from over-hoisting down.
- The A2B switch is installed at boom head and jib head to prevent the wire rope from over-winding.
- An anemometer is installed at boom head to detect whether the wind speed at heights exceeds the allowable range.

Operating Range - Telescopic Boom



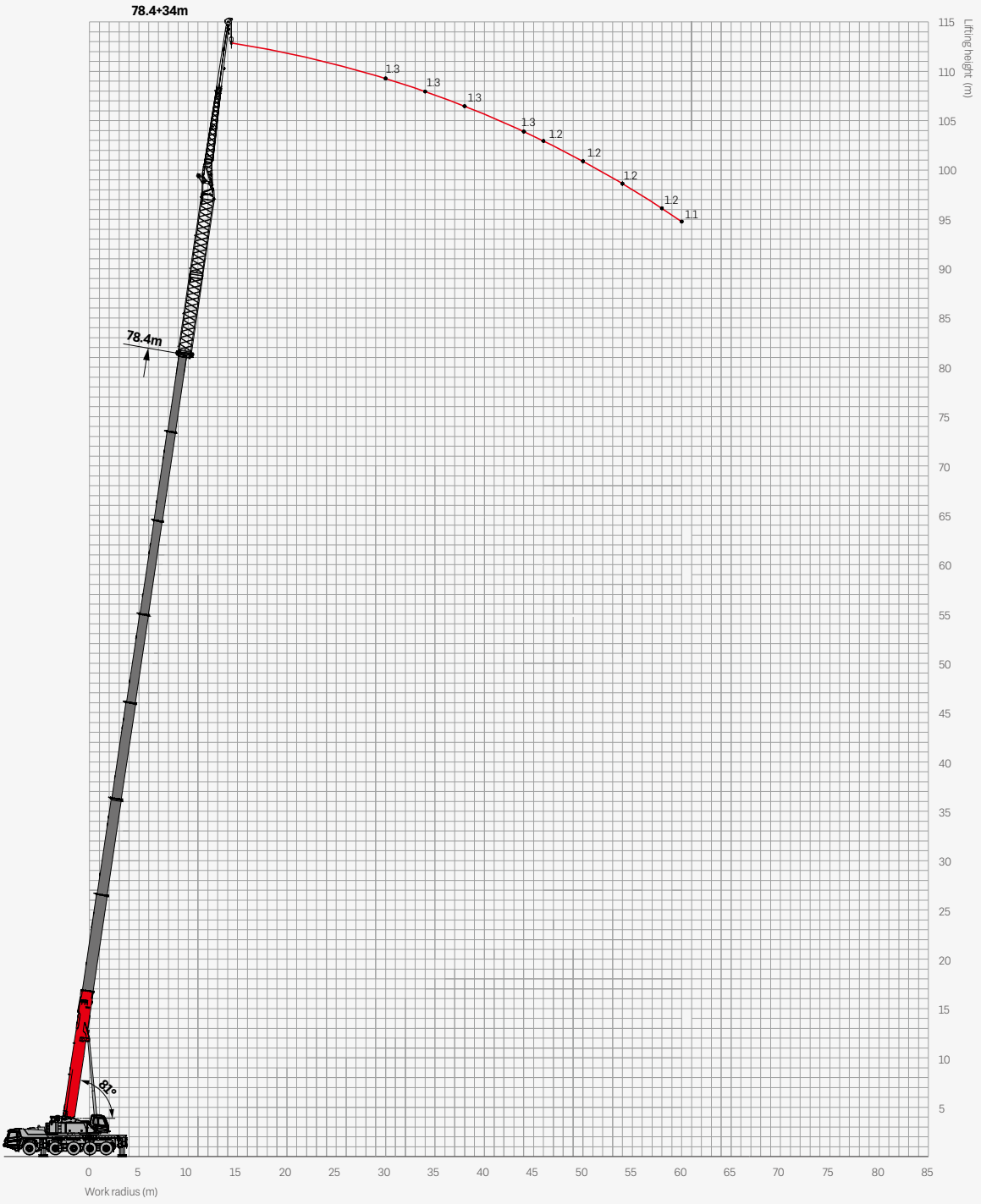
Load Chart-Telescopic Boom

Unit: t

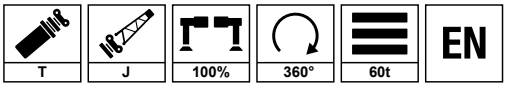
Radius (m)	14.4	19.0	23.7	28.3	33.0	37.5	42.0	46.4	51.0	55.7	60.3	65.0	69.5	74.0	78.4	80.4	83.4	85.5	Radius (m)
3	200.0*	130.0																	3
3.5	136.0	125.0	120.0																3.5
4	128.0	120.0	115.3																4
4.5	121.0	115.0	108.1	105.0															4.5
5	115.0	110.0	101.4	98.4															5
6	103.0	106.5	90.3	87.7	86.6														6
7	90.0	90.0	80.4	78.1	77.6	74.3													7
8	80.0	80.0	74.1	72.0	70.3	68.5	60.0												8
9	70.5	70.5	67.2	66.7	64.8	63.1	57.4	48.3	40.7										9
10	62.5	63.5	62.4	61.5	59.8	58.7	53.8	43.7	37.2	34.3									10
12		51.5	52.7	52.2	51.7	50.7	47.3	39.7	33.4	30.9	26.8								12
14		42.1	41.0	43.0	42.3	43.3	40.9	35.5	29.9	27.9	24.4	21.3							14
16			35.4	35.0	35.8	35.1	36.4	32.5	27.1	25.5	22.3	19.6	15.5	11.3					16
18			29.6	29.2	30.1	30.5	30.5	30.0	24.6	23.2	20.5	18.1	14.5	11.3	9.3	8.8			18
20				25.0	25.6	26.3	25.9	26.5	22.5	20.0	18.9	16.7	13.5	10.8	9.1	8.7	7.3		20
22				22.4	22.1	23.0	22.3	23.1	20.7	18.5	17.4	15.4	12.7	10.3	9.0	8.6	7.1	6.5	22
24					19.6	19.9	20.1	20.2	19.0	17.1	16.1	14.3	12.0	10.0	9.0	8.2	6.8	6.0	24
26					17.3	17.6	18.2	17.6	17.1	15.5	15.0	13.2	11.4	9.5	8.7	8.0	6.7	6.0	26
28						15.6	16.4	15.6	15.1	14.5	13.8	12.3	10.0	9.2	8.5	7.9	6.5	5.8	28
30						14.0	14.7	14.0	13.4	13.2	12.8	11.5	9.6	8.8	8.2	7.7	6.4	5.7	30
32							13.2	12.5	12.0	11.7	11.8	10.7	9.0	8.6	8.0	7.3	6.3	5.6	32
34							12.0	11.3	10.9	10.4	10.5	10.0	8.6	8.3	7.6	7.0	6.2	5.5	34
36							8.0	10.1	9.8	9.5	9.3	9.3	8.3	7.8	7.3	6.7	6.1	5.4	36
38								9.1	8.8	8.7	8.3	8.5	8.0	7.6	7.0	6.6	6.0	5.3	38
40									7.8	7.8	7.4	7.5	7.5	7.2	6.8	6.4	5.9	5.2	40
42									7.0	7.0	6.6	6.9	7.0	6.7	6.4	6.1	5.8	5.1	42
44										6.3	6.1	6.4	6.3	6.3	6.1	5.8	5.5	4.9	44
46										5.5	5.5	5.9	5.9	5.8	5.7	5.5	5.2	4.8	46
48										4.9	4.9	5.4	5.4	5.3	5.4	5.0	4.9	4.6	48
50											4.2	4.9	4.9	4.7	5.1	4.8	4.5	4.4	50
52											3.7	4.4	4.5	4.3	4.6	4.4	4.2	4.1	52
54												3.8	4.1	4.0	4.2	4.1	3.9	3.8	54
56												3.4	3.8	3.6	3.7	3.8	3.7	3.6	56
58													3.3	3.3	3.3	3.4	3.4	3.3	58
60													2.9	3.0	2.9	3.0	3.1	3.0	60
62														2.6	2.4	2.7	2.6	2.6	62
64														2.4	2.1	2.4	2.3	2.2	64
66															1.8	2.0	2.0	1.9	66
68															1.5	1.7	1.7	1.6	68
70																1.5	1.3	1.3	70
Rope rate	13	12	12	10	8	7	6	5	5	4	3	3	3	3	3	2	2	2	Rope rate

Remark:
1. The rating marked with * indicates load over rear with additional equipment.
2. The ratings above are given in the condition of counterweight moved rearward by 500mm.

Operating Range - Fixed Jib



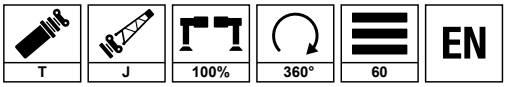
Load Chart - Fixed Jib



Unit: t

Radius (m)	74m+18m			78.4m+18m			Radius (m)
	0°	15°	30°	0°	15°	30°	
22	3.3						22
24	3.3	3.5		2.8			24
26	3.3	3.5	2.5	2.8	2.8		26
28	3.3	3.3	2.5	2.8	2.8	2.5	28
30	3.3	3.3	2.5	2.8	2.8	2.5	30
32	3.3	3.2	2.5	2.8	2.8	2.5	32
34	3.3	3.2	2.5	2.8	2.8	2.5	34
36	3.3	3.1	2.5	2.8	2.8	2.5	36
38	3.3	3.1	2.5	2.8	2.8	2.5	38
40	3.3	3.0	2.5	2.8	2.8	2.4	40
42	3.3	3.0	2.5	2.8	2.6	2.4	42
44	3.2	2.8	2.4	2.8	2.6	2.4	44
46	3.1	2.7	2.3	2.8	2.5	2.3	46
48	3.0	2.6	2.2	2.8	2.5	2.3	48
50	3.0	2.5	2.1	2.6	2.4	2.3	50
52	2.9	2.4	2.0	2.6	2.4	2.2	52
54	2.9	2.3	1.9	2.5	2.3	2.1	54
56	2.8	2.2	1.9	2.5	2.2	2.0	56
58	2.5	2.1	1.8	2.4	2.2	2.0	58
60	2.1	2.1	1.8	2.3	2.2	1.9	60
62	1.7	2.1	1.8	2.0	2.1	1.9	62
64	1.4	1.7	1.7	1.6	2.0	1.8	64
66	1.0	1.5	1.7	1.3	1.7	1.8	66
68	0.8	1.1	1.3	1.0	1.3	1.6	68
70	0.5	0.8	1.0	0.7	1.1	1.3	70
72		0.5	0.7	0.5	0.7	0.9	72
74						0.7	74
Telescoping status	2222221			2222222			Telescoping status
Rope rate	1	1	1	1	1	1	Rope rate

Load Chart - Fixed Jib



Unit: t

Radius (m)	74m+34m	78.4m+34m	Radius (m)
	0°	0°	
30	1.7		30
32	1.7	1.3	32
34	1.7	1.3	34
36	1.6	1.3	36
38	1.6	1.3	38
40	1.6	1.3	40
42	1.5	1.3	42
44	1.5	1.3	44
46	1.5	1.2	46
48	1.4	1.2	48
50	1.4	1.2	50
52	1.4	1.2	52
54	1.3	1.2	54
56	1.3	1.2	56
58	1.3	1.2	58
60	1.2	1.1	60
62	1.2		62
64	0.9		64
Telescoping status	2222221	2222222	Telescoping status
Rope rate	1	1	Rope rate

SANY GROUP CRANE BU

SANY Mobile Crane Industrial Park, No.168 Jinzhou Avenue, Jinzhou Development Zone, Changsha City, Hunan Province, P.R. China Zip 410600
Consulting sanycrane@sanygroup.com (Crane BU) / crd@sany.com.cn (IHQ)
After-sales Service 0086-400 6098 318

SANY CRANE

crane.sanyglobal.com