

SANY

Quality Changes the World



INTELLIGENT AND RELIABLE, ENERGY-SAVING AND EFFICIENT

CONSISTENTLY STRONG
REMARKABLY VERSATILE



ALL TERRAIN CRANE **SAC1200E**

Max. Lifting Capacity
120t

Max. Boom Length
66m

Max. Fixed Jib Combination
66m+7m+17m

Chassis / Superstructure Engine
Mercedes-Benz



Better World, Better SANY Crane

SANY CRANE is one of the core business units in SANY Group, specializing in the development and manufacturing of high-end wheeled cranes, crawler cranes and tower cranes.

HIGHLIGHTS 03

TECHNICAL SPECIFICATION 11

CRANE INTRODUCTION 17

WORKING CONDITIONS 19

Quality Changes the World

SANY ALL TERRAIN CRANE SAC1200E / 120T LIFTING CAPACITY

SAC1200E is a four-axle all-terrain crane with 120t rated lifting capacity, 7 section 66m boom, and features Benz dual engine power system, upgraded automatic installation and removal of counterweight function and variable outrigger span technology, wireless remote control of all motions, standard anti-electromagnetic interference module, and the brand-new iCab, with driving and operation comfort fully upgraded.



66M BOOM

Boom full extension 66m

WIRELESS REMOTE CONTROL

Wireless remote control available for all actions



SAC1200E



ALL NEW ICAB DESIGN

Ergonomic concept of safety and comfort

ANTI-ELECTROMAGNETIC INTERFERENCE

Standard anti-electromagnetic interference module, enabling well functioning under strong electric and magnetic conditions (excluding wireless operation)

HIGHLIGHTS



NEW GENERATION CAB CAPACIOUS, CONVENIENT AND COMFORTABLE



iCab

i-Cab - Driver's cab

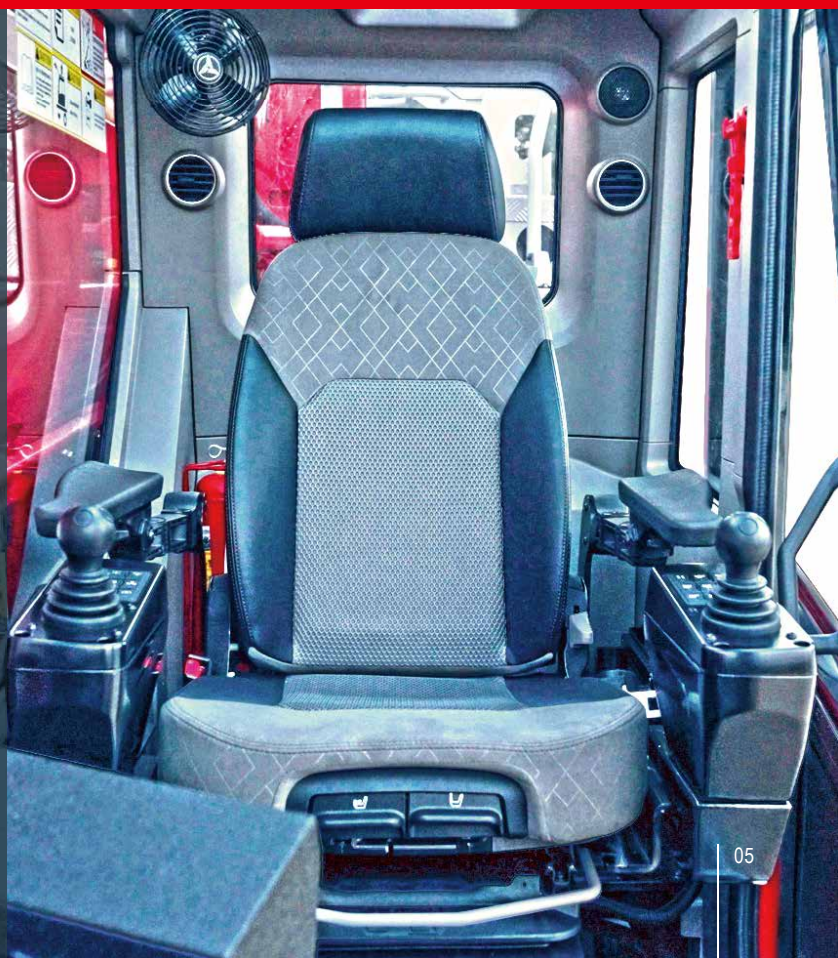
- + Multi-function driver's seat with air suspension
- + Double passenger seats foldable to make a berth
- + 10.1-inch touch screen integrated with reversing image and multi-media
- + Large-field-of-vision rearview mirror with electric heating
- + Adjustable high-brightness LED headlamps/fog lamps, providing clear vision at night
- + Fully-automatic HVAC



iCab

i-Cab - Operator's cab

- + 0~20° tiltable
- + 110° openable front window
- + Sliding door, sliding side step
- + 10.1-inch LMI display
- + Electronic control joysticks
- + Adjustable seat with maximum inclination of 140°
- + Legroom increased by 30%
- + HVAC



ANTI-ELECTROMAGNETIC INTERFERENCE

Standard anti-electromagnetic interference module, allowing the crane to work normally in strong electric field or strong magnetic field ($\leq 20\text{v/m}$ and $>500\text{m}$ away from interference source), including cluster construction of high-power equipment, and the vicinity of multiple interference sources including high-voltage lines, broadcasting base stations, power plants, aluminum plants, radar stations, military bases or mobile communication stations.



WIRELESS REMOTE CONTROL SYSTEM

Outrigger control - single-piece / single-side outrigger beam and jack telescoping in/out, and one-button leveling.

Crane operation - boom telescoping, luffing, slewing, hoisting.

Auxiliary action control - counterweight lifting/lowering, jib pushing/pulling, side step extension/retraction, cab tilting, etc.



INTELLIGENT OPERATION

LOAD MOMENT INDICATOR

load moment indicator plays an important role during the lifting process. With a high-precision load moment indicator, users know clearly the safety boundary in real time. Moreover, combined with RTK positioning technology, SANY has made a breakthrough in technical bottleneck, reducing lifting errors.

VARIABLE OUTRIGGER SPAN TECHNOLOGY

Allows the outriggers to extend at any length, providing customers with the ability to work safely in narrow spaces.



ONE-CLICK TELESCOPIC BOOM TECHNOLOGY

Using fuzzy control algorithm. This technology is hands-free, which means you do not have to control the joystick.

AUTOMATIC INSTALLATION AND REMOVAL OF COUNTERWEIGHT

Achieved automatic installation and removal of counterweight by controller. Compared with the traditional method, it can reduce staffing by one person.

COUNTERWEIGHT RECOGNITION FUNCTION

Through intelligent sensing and algorithms, the system automatically identifies and sets the counterweight configuration, reducing the need for manual intervention and effectively preventing safety risks caused by incorrect counterweight settings.

HIGHLIGHTS

Working Condition

T: Boom

Max. lifting capacity	120t
Max. boom length	66m
Max. radius	52m
Max. height	66m

TJ: Boom + Fixed jib*

Max. lifting capacity	7t
Jib length	17m
Max. radius	58m
Max. height	83m

TH: Boom + Hydraulically adjustable jib*

Max. lifting capacity	7t
Jib length	17m
Max. radius	58m
Max. height	83m

TEJ: Boom + Extension + Fixed jib*

Max. lifting capacity	6.1t
Jib length	24m
Max. radius	60m
Max. height	90m

TEH: Boom + Extension + Hydraulically adjustable jib*

Max. lifting capacity	6.1t
Jib length	24m
Max. radius	60m
Max. height	90m

TA: Boom + Auxiliary jib*

Max. lifting capacity	29.1t
Jib length	2.9m
Max. radius	54m
Max. height	69m

* Optional



Electrical System

Smart CAN-BUS communication system

International advanced CAN-BUS data communication network.

CAN-BUS networking applied for display, instrument panel, I/O module and main sensors, allowing for high-speed data transmission, and quick response less than 20ms.

Smart fault diagnosis system

The chassis adopts safety controller functioning smart monitoring, BCM power distribution management and integrated with fault diagnosis system, enabling accurate fault location, and convenient inspection and maintenance.

Automotive grade dash screen

Integrating functions including suspension control, steering control, outrigger control and data calibration.

Precise load moment indicator

SANY independently developed high-precision LMI.

Cabling

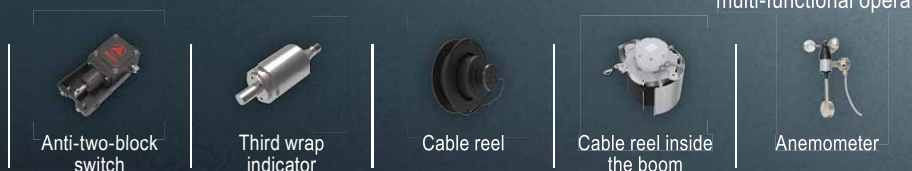
Centralized junction box and heavy-duty connector applied for cabling of superstructure, convenient for maintenance; IP rating up to IP67, ensuring high reliability.

Winch monitoring system

Winch cameras equipped for monitoring its working condition and identifying rope disorder in time.

Integrated bus button panel input

Various operating states displayed by button indicator lights, and one-button multi-functional operation realizable by various operation modes.



Power Train

Chassis engine

Mercedes-Benz OM471LA in-line six cylinder water-cooled diesel engine, complying with EU Stage III or EU Stage V emission standards.

Rated power: 360kW/1600rpm.

Max. torque: 2400Nm/1300rpm.

Fuel reservoir capacity: 430L.

Superstructure engine

Mercedes-Benz OM934LA off-road in-line four cylinder water-cooled diesel engine, complying with EU Stage III or EU Stage V emission standards.

Rated power: 150kW/1800rpm.

Max. torque: 850Nm/1200rpm.

Fuel reservoir capacity: 360L.

Transmission

ZF Traxon AT.

12 speeds forward and 2 speeds reverse.

Braking system

Braking system consists of Kessler disc brake, WABCO brake caliper, air chamber and ABS, more reliable and efficient. Hydraulic retarder allows for effective assist braking, reducing the wear of axle brake linings and prolonging service life.

Axles and suspension

Kessler axles with high bearing capacity and reliable quality. Hydro pneumatic suspension system with stroke of -100/+100mm.

Standard 8×6, with axles 2, 3, 4 driven.

Steering system

Dual-circuit power steering gear, with all axles steered.



HIGHLIGHTS

Hydraulic System

7 boom sections telescoping via single cylinder pinning mechanism, achieving variable length combinations for stronger performance or higher efficiency.

SINGLE CYLINDER PINNING MECHANISM

Superstructure

Open-type electronically controlled load-sensing system and closed-type slewing system, enabling combined operation of four actions at the same time.

Electro proportional compensated passive luffing-down system applied to control the luffing speed, making luffing more reliable and stable.

Closed-type slewing system, ensuring no pressure loss and no overflowing noise upon start/stop, and making the operation quieter and more energy-saving.

Electronically controlled load-sensing hydraulic system, electronic joystick and electronic throttle, ensuring easy operation and more accurate control and millisecond-level action response speed, with min. single-rope hoisting speed $\leq 1\text{m/min}$, and distribution difference in case of combined motions $\leq 8\%$.

Chassis

Dual circuit + emergency main steering system

Main steering system: Dual oil pump directly connected to the engine to supply oil independently to the steering gear, ensuring efficient and reliable steering.

Emergency steering system: An emergency pump installed on the transfer case, ensuring steering assistance throughout the traveling.

Electro-hydraulic assisted steering system

A Rexroth load-sensing piston pump installed to supply oil for assisted steering, which is directly connected to the engine and always in the standby mode, so that the assisted steering system can respond quickly once the assisted steering command is received.

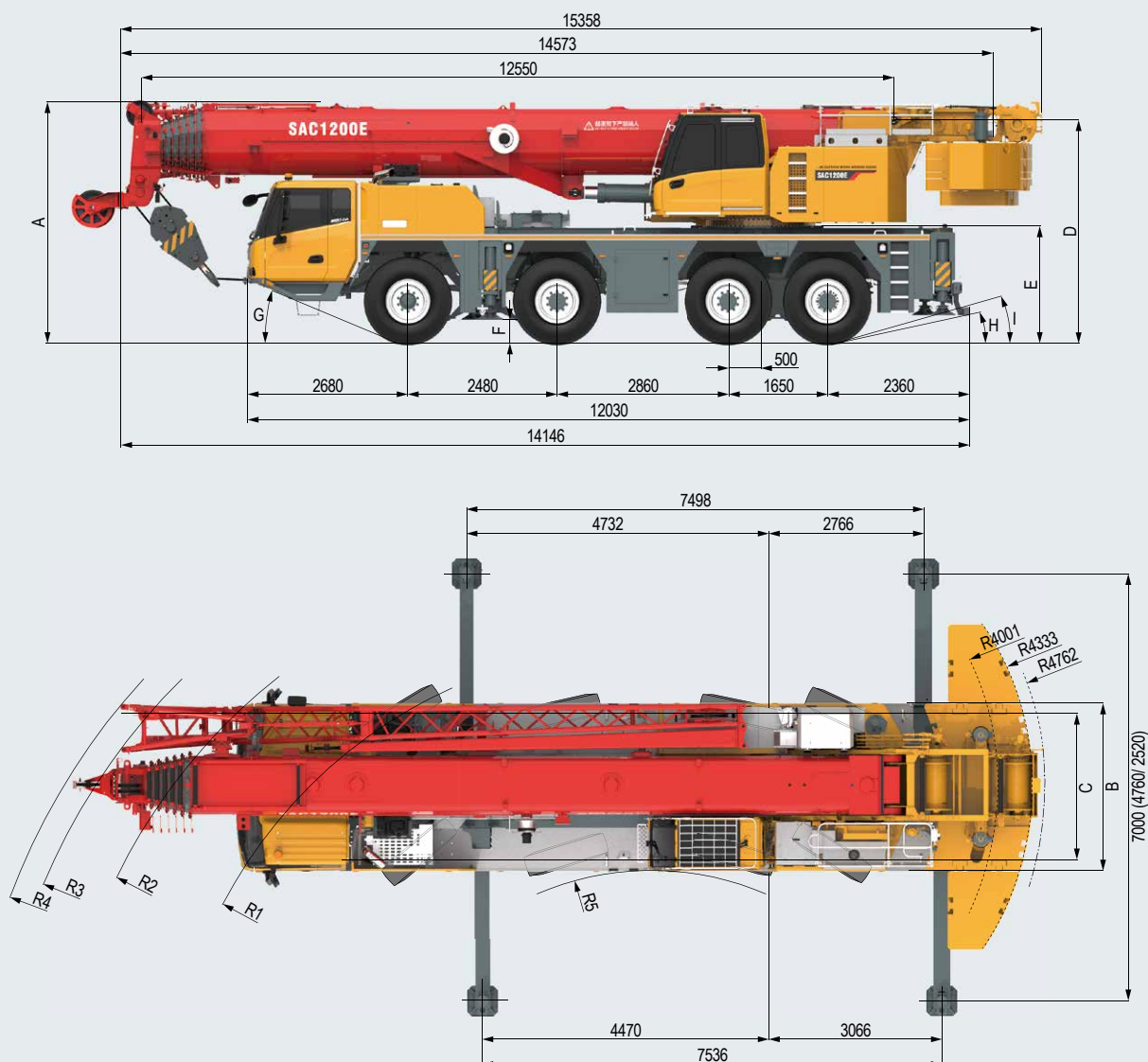
Suspension system

A Rexroth piston pump adopted as the power source of suspension system, and suspension modes electrically controlled to realize normal driving and driving with counterweight on board with suspension locked; suspension to be locked when the crane is operating.

Outrigger telescoping system

Full-electric control of outrigger, realizing optional telescoping and auto leveling.

Overall Dimensions



Tyre size	A	A*	B	C	D	E	F	G	H	I	R1	R2	R3	R4	R5
Unit	mm	mm	mm	mm	mm	mm	mm	°	°	°	mm	mm	mm	mm	mm
385/95R25 (14.00 R25)	3950	3850	2750	2337	3620	1876	300	21	10	18	7874	9504	10532	10994	4239
445/95R25 (16.00 R25)	4000	3900	2750	2277	3670	1926	350	22	12	19	7853	9509	10535	10998	4245
525/80R25 (20.5 R25)	4000	3900	2900	2367	3670	1926	350	22	12	19	7898	9509	10535	10998	4170

Remark: The stroke of suspension cylinder : -100mm~+100mm.

A column is calculated when suspension is at middle level. A* column is calculated when suspension is at lowest level.

TECHNICAL SPECIFICATION

Technical Specification

CATEGORY	ITEM		UNIT	VALUE
CAPACITY	Max. lifting capacity		t	120
WEIGHT	Gross weight		kg	48000
POWER (CHASSIS)	Engine model		-	OM471LA (EU Stage V)
	Max. engine power		kW/rpm	360/1600
	Max. engine torque		N·m/rpm	2400/1300
POWER (SUPERSTRUCTURE)	Engine model		-	OM934LA (EU Stage V)
	Max. engine power		kW/rpm	150/1800
	Max. engine torque		N·m/rpm	850/1200
DIMENSIONS	Overall length		mm	14573
	Overall width		mm	2750
	Overall height		mm	4000
TRAVEL	Max. travel speed		km/h	80
	Steering radius	Min.steering radius	m	7.87
		Min.steering radius of boom tip	m	7.87
	Wheel formula		-	8×6×8
	Min.ground clearance		mm	300
	Approach angle		°	21
	Departure angle		°	10
	Max. gradeability		-	60.0%
	Fuel consumption per 100km		L	70
MAIN PERFORMANCE	Working temperature range		°C	-20~+45
	Min.rated lifting radius		m	3
	Tail slewing radius		m	4.6/4.7
	Boom sections (Qty.)		-	7
	Boom shape		-	U shape
	Max.lifting moment	Basic boom	kN·m	3238
		Full-extension boom	kN·m	1674
		Full-extension boom + jib	kN·m	670
	Boom length	Basic boom	m	12.6
		Full-extension boom	m	66
		Full-extension boom + jib	m	90
	Max.lifting height	Basic boom	m	12.6
		Full-extension boom	m	66
		Full-extension boom + jib	m	90
	Outrigger span (Longitudinal×Transverse)		m	7.5×7.0
	Jib offset		°	0, 20, 40
AIR CONDITIONER	In operator's cab		-	Heating & cooling
	In driver's cab		-	Heating & cooling

Technical Specification



Axle Load

Axle Load	Total						
< 12t	48t	8×6	385/95R25 (Aluminum wheel rim)	-	-	-	-
< 12t	48t	8×6	445/95R25 (Aluminum wheel rim)	-	-	-	-
< 12t	48t	8×6	*525/80R25 alu rim	-	-	-	-
< 16.5t	66t	8×6	445/95R25	18t	1 sheave	-	-

Remark: * Only sell in the Australian region.



Speed and Gradeability

Tire size	Min. travel speed	Max. travel speed	Max. gradeability
385/95R25 (14.00 R25)	1.9km/h	80km/h	60.0%
445/95R25 (16.00 R25)	2.1km/h	80km/h	60.0%
525/80R25 (20.5 R25)	2.1km/h	80km/h	60.0%



Hook

Rated load	Number of sheaves	Rope rate	Hook weight / kg
100t ramshorn hook ○	7	15	1250
80t ramshorn hook ○	5	11	900
80t ○	5	11	900
50t ramshorn hook ●	3	7	700
50t ○	3	7	700
25t ramshorn hook ○	1	3	530
25t ○	1	3	530
10t ball hook ●	-	1	250

● Standard ○ Optional

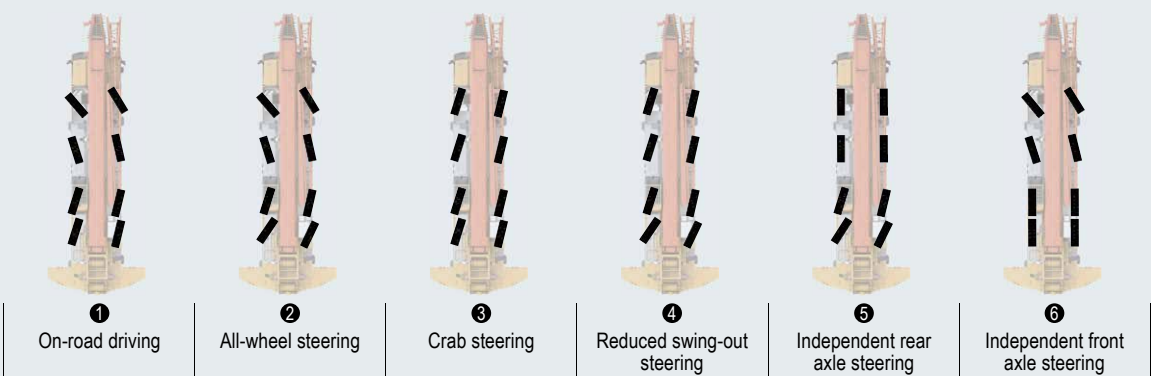


Operations

Item	Max.single rope lifting speed (empty load)	Rope diameter/length	Max. single line pull
Main winch	0~120m/min	Φ 19mm/260m	78.4kN
Auxiliary winch	0~120m/min	Φ 19mm/260m	78.4kN
Slewing speed	0~1.7r/min		
Luffing	Approx. 60s to reach 82°		
Telescoping	Approx. 620s from 12.6m to 66m		

TECHNICAL SPECIFICATION

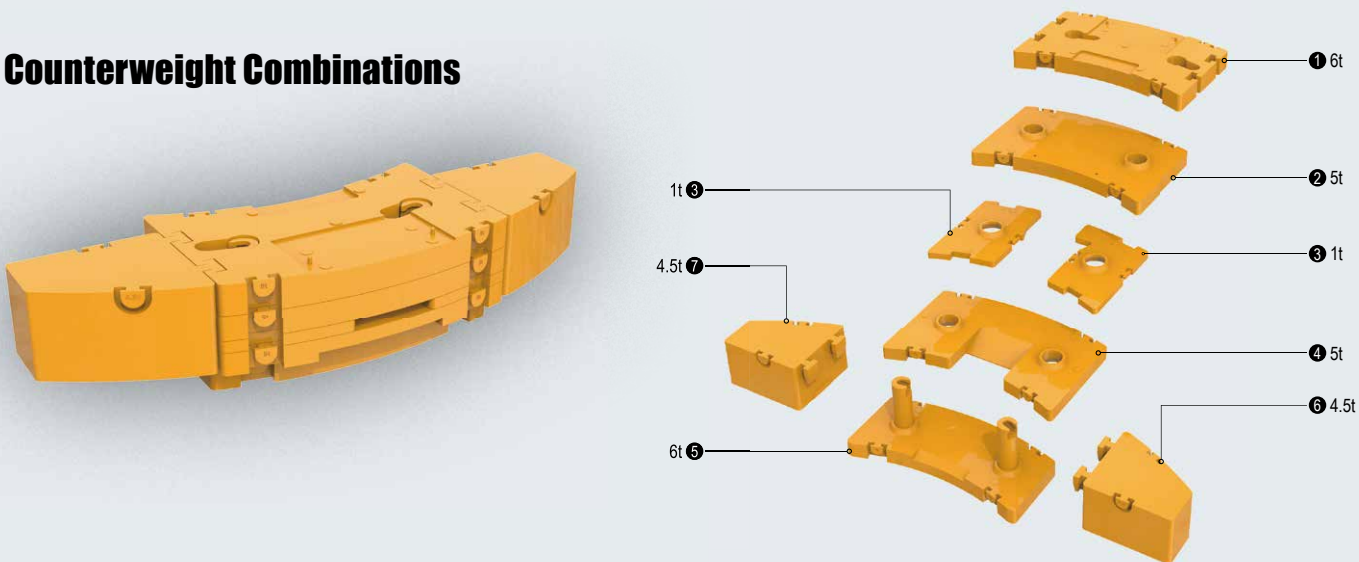
Six Steering Modes



Traveling with Counterweight and Hook Block on Board



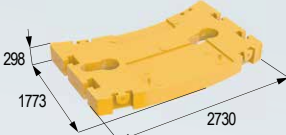
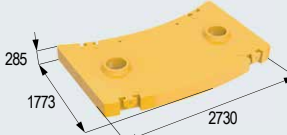
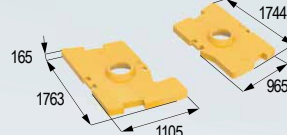
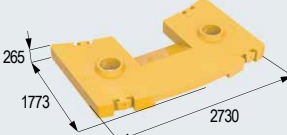
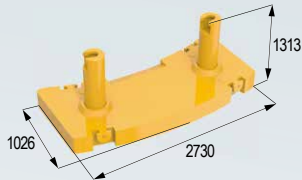
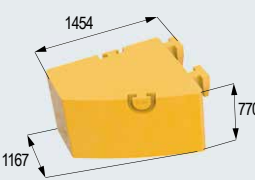
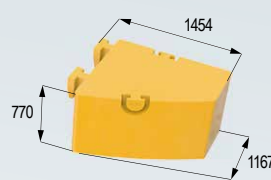
Counterweight Combinations



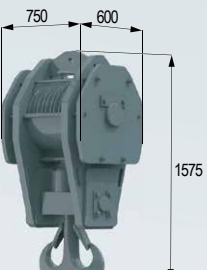
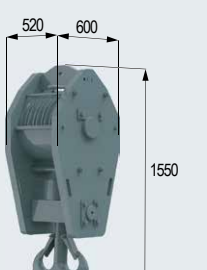
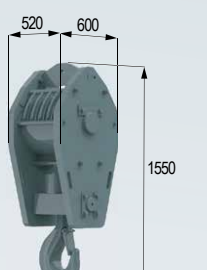
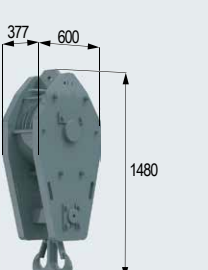
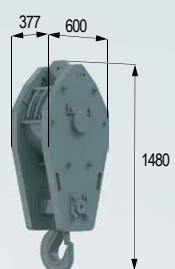
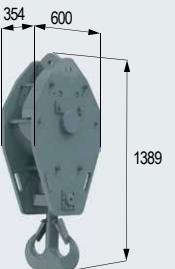
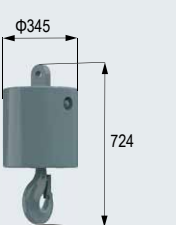
Total weight	① 6t	② 5t	③ 1t*2	④ 5t	⑤ 6t	⑥ 4.5t	⑦ 4.5t
6t	•						
11t	•	•					
13t	•	•	•				
18t	•	•	•	•			
24t	•	•	•	•	•		
33t	•	•	•	•	•	•	•

Transport Dimensions

COUNTERWEIGHT

			
6t	5t	1t*2	5t
			
6t	4.5t	4.5t	

HOOK

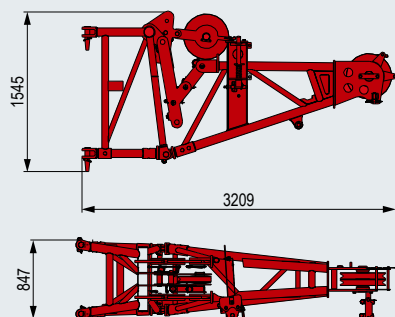
			
100t ramshorn hook	80t ramshorn hook	80t hook	50t ramshorn hook
			
50t hook	25t ramshorn hook	25t hook	10t ball hook

TECHNICAL SPECIFICATION

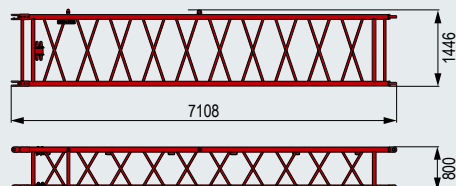
Jib Combinations

Lengths	①	②	③	④
	2.9m	7m	9.6m	7.4m
2.9m	•			
9.6m			•	
9.6m+7.4m			•	•
7m+9.6m		•	•	
7m+9.6m+7.4m		•	•	•

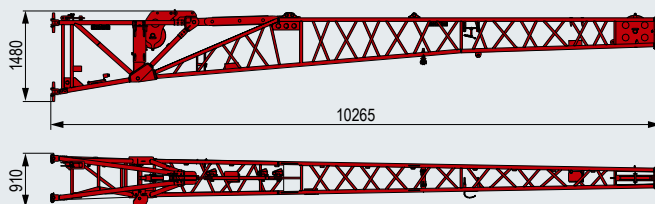
618KG



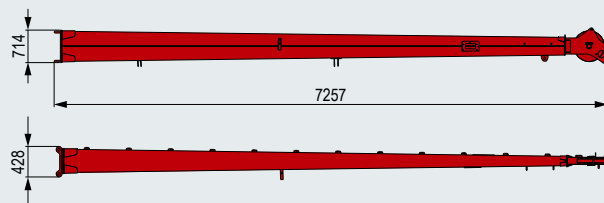
546KG



1380KG



377KG



Carrier

DRIVER'S CAB

- Three seats with a folding berth. Its soundproofing performance meets the standard of heavy-duty trucks. Air suspension seat features shock absorption, back adjustment, lumbar support and other ergonomic designs. Virtual LCD instrument and 12.1"console screen integrate auto control of air conditioning. Indoor temperature can be adjusted precisely and smoothly. LED headlights, electrically heated rear-view mirrors, multi-function steering wheel. The multi-media can be controlled by the buttons integrated in the steering wheel. HVAC.

CARRIER FRAME

- Manufactured by SANY, the torsion resistant box -type structure is welded by fine grain high-strength steel.

ENGINE

- Model: BENZ inline six-cylinder diesel with watercooler. Electronically controlled.
- Rated power: 360kW/1600rpm.
- Max. torque: 2400Nm/1300rpm.
- Emission standard: EU Stage V .
- Fuel reservoir capacity: 430L.

TRANSMISSION

- ZF AMT, 12 forward speeds and 2 reverse speeds, large speed ratio range, adaptable to slope climbing and high-speed traveling.

TRANSFER CASE

- High quality mechanical shift transfer case enjoys large output torque.

AXLE

- KESSLER high-strength axles are coupled with air disc brakes.

OUTRIGGER

- H-type layout, four point support, one stage outrigger beam. Hydraulically controlled telescoping out and down. Two positions of 50% and 100% are available. Working safety is further enhanced via ground pressure sensors and protectors.

SUSPENSION SYSTEM

- All axles adopt hydro-pneumatic suspension functioning good shock absorption, auto-levelling, shift of rigidity and resilience.
- The cylinder stroke ranges -100mm~+100mm.

STEERING

- All wheel steering. Cutting edge electro-hydraulic proportional steering mechanism ensures multiple steering modes, maximizing flexibility on various terrain conditions.

TIRES

- 8 tires sized 385/95R25 (14.00R25), high bearing capacity.

WHEEL FORMULA

- 8×6×8.

BRAKE

- Service brake: double circuit air brake functioning on all axles.
- Parking brake: performed by spring loaded accumulator on axle 2, 3, and 4.
- Assisting brake: engine brake, transmission hydraulic retarder brake.

ELECTRICAL SYSTEM

- 24V DC. Brand new intelligent control. With remote control of the whole machine, it satisfies prioritized safety, driving convenience, and easy operation.

HYDRAULIC SYSTEM

- The electro-hydraulic assist steering system is self made, functioning electro proportional load sensing, auto alignment and steering. The main steering hydraulic system is designed of maximized reliability with the equipment of dual circuit integrated steering gear, dual steering pumps and constant flow radial piston pump. Suspension reliability is also upgraded with the new suspension hydraulic system.

OPTIONAL EQUIPMENT AT EXTRA FEES

- Engine: BENZ six cylinder OM471LA.E3A (EU Stage III), water cooled diesel Rated 360kW at 1600rpm. Torque 2400Nm at 1300rpm. Fuel reservoir capacity: 430L.
- Tires: 9 tires (including 1 spare tire), sized 445/95 R 25 (16.00 R 25) or 525/80 R 25 (20.5 R 25).

CRANE INTRODUCTION

Superstructure

OPERATOR'S CAB

- Curved track sliding door, foldable front step and electric side step. The seat and armrest box can be adjusted in multi dimensions. HVAC system gives out airflow from various outlets once pressing the virtual key. Windshield wiper covers large area, ensuring clear vision in heavy rains. 10.1" frameless display of all new UI is equipped. Operation is made via touchscreen and buttons.

SLEWING PLATFORM

- Made by SANY with highly-durable fine grain structural steel, the box type slewing platform is torsion resistant. A single-roll ball bearing which can rotate by 360° and functions auto lubrication is mounted on carrier frame.

ENGINE

- Model: BENZ inline four-cylinder diesel with watercooler. Electronically controlled.
- Rated power: 150kW/1800rpm.
- Max. torque: 850Nm/1200rpm.
- Emission standard: EU Stage V.
- Fuel reservoir capacity: 360L.

HYDRAULICS

- Major motions of crane are controlled by electro proportional piston pump and high precision electro proportional hydraulic valve, which realizes simultaneous smooth actions. The constant power electric control also lifts engine efficiency while cutting fuel cost. The closed type slewing system functions noiselessly, effectively and smoothly.

CRANE CONTROL

- Electro proportional control. It supports combined movement of good inching mobility and smoothness.

HOIST

- Driven by electro proportional axial piston motor, hoisting features high efficiency and low energy consumption, fitted with planetary gear reducer and normally closed type brake. It's remarkably stable at low working speed. Lebus grooves and top brand wire ropes make it more reliable.

SLEWING

- Single-roll ball slewing bearing with external gears. Slewing is powered by close type hydraulics with built in planetary reducer gear and normally closed brake. The continuous 360° rotation is controlled electro proportionally. More functions include smooth and precise start/stop, stepless speed regulation, and free swing.

SAFETY EQUIPMENT

- Electro proportional luffing balance valve, large flow telescoping balance valve are equipped.
- Three-circle protector prevents wire rope from over-lowering.
- Height limit switch at boom head prevents wire rope from over-hoisting.
- Anemometer measures wind speed displayed in realtime.

LOAD MOMENT INDICATOR

- LMI alerts the operator audibly when actual load is close to payload and cuts off hazardous motions by itself before overload.

BOOM & TELESCOPING SYSTEM

- Seven section U shape 12.6m-66m boom. Single-cylinder pinning interlocked telescoping system, 46%, 92% and 100% telescoping modes are available.

COUNTERWEIGHT

- 33t in total. See details in counterweight chart. Self-mounting and dismounting available.

ELECTRICAL SYSTEM

- 24V DC, two 12V battery sets connected in series.

AUXILIARY BOOM NOSE

- Fitted at boom head, primarily used for single line operation.

OPTIONAL EQUIPMENT AT EXTRA FEES

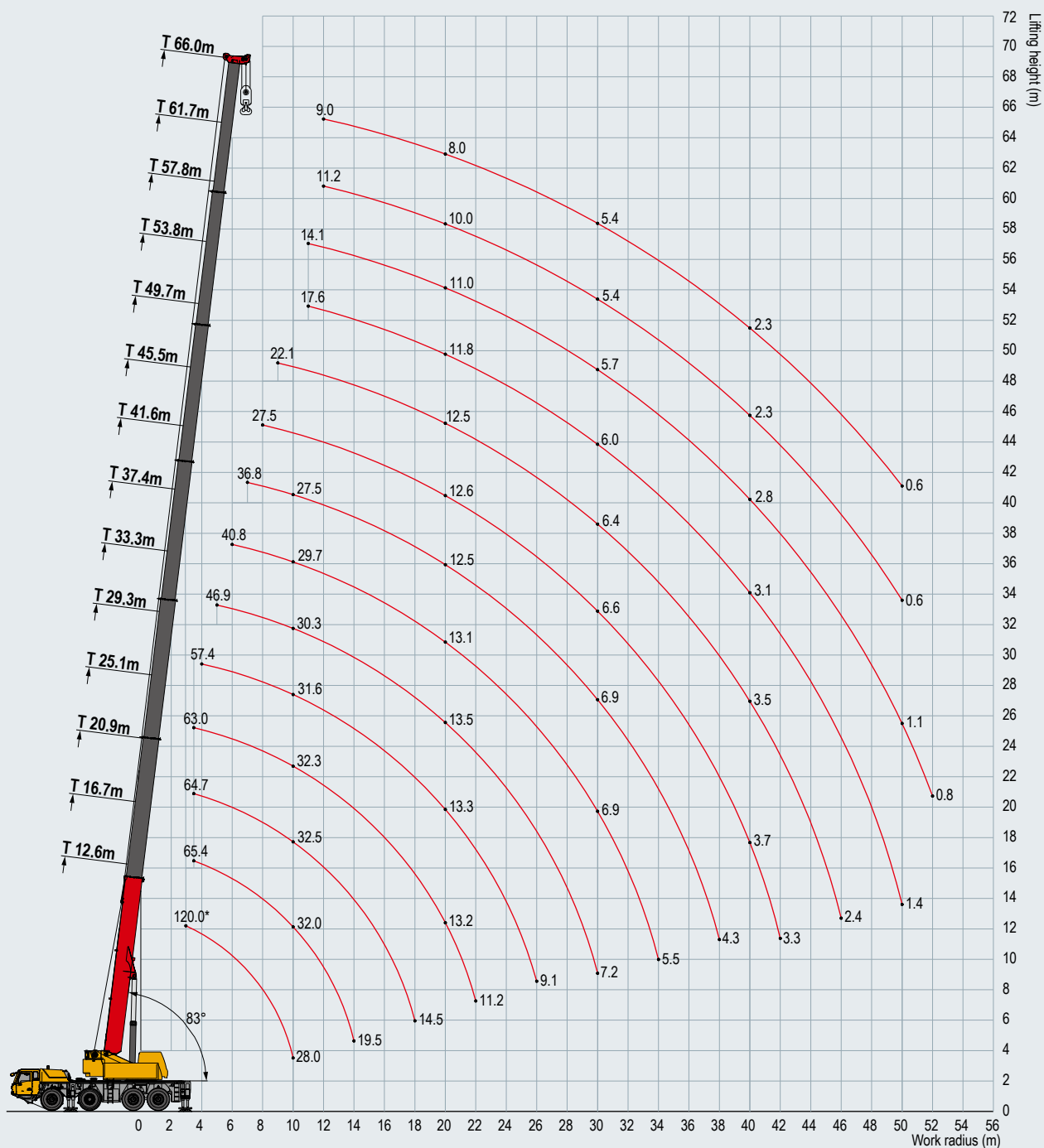
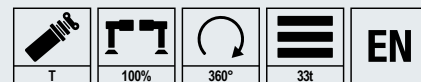
- Engine: BENZ four cylinder OM 934 LA.E3A (EU Stage III), water cooled diesel. Rated 150kW at 2200rpm. Torque 800Nm at 1200rpm. Fuel reservoir capacity: 360L.
- TA: Erection jib 2.9m.
- TJ: Single folding jib, 9.6m. Double swing-away jib 17m. Mechanical adjustment 0°, 20°, 40°.
- TH: Hydraulically adjustable swing-away jib, 9.6m. Double swing-away jib 17m. Hydraulic adjustment 0°, 20°, 40°.
- E: Boom extension section 7m.
- Auxiliary hoist: The auxiliary winch adopts electro-proportional variable motor for better inching mobility and operation smoothness. Stepless speed control.

T	Telescopic Boom
J	Fixed Jib
E	Boom Extension
N	Auxiliary Boom Nose
A	Auxiliary Jib
H	Hydraulically Adjustable Jib



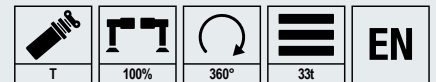
WORKING CONDITIONS

Operating Range - T



Load Chart - T

Unit: t



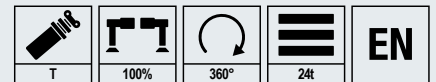
	12.6	12.6	16.7	20.9	25.1	29.3	33.3	37.4	41.6	45.5	49.7	53.8	57.8	61.7	66	
3	120.0*	70.0														3
3.5	76.0*	70.0	65.4	64.7	63.0											3.5
4	70.0	67.0	65.1	63.4	61.5	57.4										4
4.5	65.0	62.5	61.0	57.9	57.0	53.8										4.5
5	60.0	58.5	57.2	54.0	52.5	49.2	46.9									5
6	53.5	51.5	50.1	48.5	46.7	44.3	43.0	40.8								6
7	47.5	46.0	45.8	44.5	42.3	40.9	39.0	38.7	36.8							7
8	42.0	41.3	40.6	40.4	38.5	37.7	35.7	34.2	32.1	27.5						8
9	36.4	36.0	36.1	36.4	35.3	34.4	32.6	31.4	29.8	27.1	22.1					9
10	28.0	28.0	32.0	32.5	32.3	31.6	30.3	29.7	27.5	26.1	22.0					10
11			29.0	29.2	29.3	29.0	27.8	27.0	25.7	24.3	21.7	17.6	14.1			11
12			25.8	26.5	26.5	26.3	26.0	25.4	24.0	22.6	21.2	17.4	13.9	11.2	9.0	12
14			19.5	21.6	21.8	21.6	21.9	21.5	20.3	19.5	18.3	16.8	13.6	11.0	8.8	14
16				18.1	18.2	18.1	18.5	18.1	17.1	16.8	16.3	15.3	13.2	10.8	8.6	16
18				14.5	15.5	15.3	15.7	15.4	14.6	14.6	14.0	13.4	12.6	10.4	8.3	18
20					13.2	13.3	13.5	13.1	12.5	12.6	12.5	11.8	11.0	10.0	8.0	20
22					11.2	11.8	11.6	11.7	11.2	11.0	10.8	10.4	10.0	9.3	7.6	22
24						10.3	10.1	10.3	9.9	9.4	9.6	9.3	8.8	8.1	7.0	24
26						9.1	9.0	9.0	8.6	8.4	8.4	8.0	7.7	7.2	6.5	26
28							8.1	7.9	7.5	7.6	7.3	6.9	6.6	6.3	6.1	28
30							7.2	6.9	6.9	6.6	6.4	6.0	5.7	5.4	5.4	30
32								6.1	6.1	5.8	5.6	5.2	4.9	4.6	4.6	32
34								5.5	5.4	5.1	4.9	4.5	4.3	3.9	3.9	34
36									4.8	4.5	4.3	4.0	3.8	3.4	3.4	36
38									4.3	4.0	3.8	3.5	3.3	2.8	2.8	38
40										3.7	3.5	3.1	2.8	2.3	2.3	40
42										3.3	3.1	2.8	2.4	1.9	1.9	42
44											2.7	2.4	2.0	1.5	1.6	44
46											2.4	1.9	1.7	1.2	1.2	46
48												1.6	1.4	0.9	0.9	48
50												1.4	1.1	0.6	0.6	50
52													0.8			52
54																54
56																56
58																58
60																60
62																62

Remark: * load over rear, requiring additional equipment.

WORKING CONDITIONS

Load Chart - T

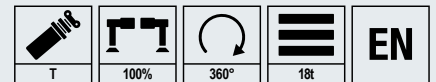
Unit: t



	12.6	16.7	20.9	25.1	29.3	33.3	37.4	41.6	45.5	49.7	53.8	57.8	61.7	66	
3	70.0														3
3.5	70.0	65.4	64.7	63.0											3.5
4	67.0	65.1	63.4	61.5	57.4										4
4.5	62.5	61.0	57.9	57.0	53.8										4.5
5	58.5	57.2	54.0	52.5	49.2	46.9									5
6	51.5	50.1	48.5	46.7	44.3	43.0	40.8								6
7	46.0	45.8	44.5	42.3	40.9	39.0	38.7	36.8							7
8	39.0	40.3	39.8	38.5	37.7	35.7	34.2	32.1	27.5						8
9	33.4	34.5	35.5	35.3	34.1	32.2	31.4	29.8	27.1	22.1					9
10	27.6	29.7	30.7	31.1	31.0	28.2	28.4	27.5	26.0	22.0					10
11		25.2	26.2	26.6	26.4	26.1	26.2	24.7	23.6	21.7	17.6	14.1			11
12		21.8	22.8	23.1	23.0	23.7	23.2	22.3	21.6	20.1	17.4	13.9	11.2	9.0	12
14		16.8	17.8	18.0	18.5	18.5	18.1	17.4	17.8	17.4	16.4	13.6	11.0	8.8	14
16			14.2	14.4	15.1	15.0	15.3	14.8	14.4	14.2	13.9	13.2	10.8	8.6	16
18			11.7	12.0	12.5	12.8	12.7	12.2	12.0	12.1	11.8	11.2	10.4	8.3	18
20				10.4	10.5	10.8	10.6	10.6	10.4	10.2	9.8	9.5	9.0	8.0	20
22				8.8	9.0	9.2	9.1	9.1	8.8	8.6	8.2	7.8	7.4	7.4	22
24					7.7	7.9	7.8	7.7	7.5	7.3	6.9	6.6	6.2	6.1	24
26					6.7	6.8	6.7	6.7	6.4	6.2	5.9	5.5	5.1	5.2	26
28						5.9	5.9	5.8	5.6	5.3	5.0	4.7	4.2	4.2	28
30						5.2	5.1	5.0	4.8	4.6	4.2	3.9	3.4	3.5	30
32							4.4	4.3	4.1	3.9	3.6	3.2	2.8	2.9	32
34							3.9	3.7	3.5	3.3	3.0	2.6	2.2	2.2	34
36								3.2	3.0	2.8	2.5	2.2	1.7	1.7	36
38								2.8	2.6	2.3	2.0	1.6	1.3	1.3	38
40									2.2	1.9	1.7	1.3	0.9	0.9	40
42									1.8	1.6	1.3	0.9		0.6	42
44										1.3	1.0	0.6			44
46										1.0	0.7				46
48															48
50															50
52															52
54															54
56															56
58															58
60															60
62															62

Load Chart - T

Unit: t

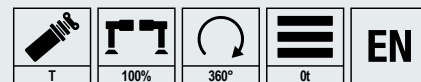


	12.6	16.7	20.9	25.1	29.3	33.3	37.4	41.6	45.5	49.7	53.8	57.8	61.7	66	
3	70.0														3
3.5	70.0	65.4	64.7	63.0											3.5
4	67.0	65.1	63.4	61.5	57.4										4
4.5	62.5	61.0	57.9	57.0	53.8										4.5
5	58.5	57.2	54.0	52.5	49.2	46.9									5
6	51.5	50.1	48.5	46.7	44.3	43.0	40.8								6
7	42.8	43.5	43.6	41.8	40.1	37.9	36.9	34.4							7
8	33.7	36.0	37.3	37.6	36.0	32.2	31.8	31.0	27.5						8
9	27.1	29.0	30.2	30.6	30.5	29.6	28.9	27.1	25.8	22.1					9
10	22.2	24.2	25.2	25.6	26.4	26.2	25.6	23.9	23.1	21.4					10
11		20.4	21.6	21.8	22.6	22.4	21.9	21.1	20.7	19.7	17.6	14.1			11
12		17.5	18.6	19.0	19.6	19.4	18.9	18.7	18.6	18.1	16.9	13.9	11.2	9.0	12
14		13.2	14.3	15.1	15.2	15.5	15.3	14.9	14.4	14.3	13.9	13.4	11.0	8.8	14
16			11.3	12.0	12.2	12.5	12.5	12.4	12.1	11.9	11.5	11.1	10.6	8.6	16
18			9.1	9.8	10.0	10.2	10.2	10.1	9.8	9.6	9.2	8.9	8.4	8.3	18
20				8.1	8.3	8.5	8.5	8.4	8.1	7.9	7.6	7.2	6.7	6.8	20
22				6.7	7.0	7.2	7.0	7.0	6.7	6.6	6.1	5.8	5.4	5.4	22
24					5.9	6.0	6.0	5.9	5.6	5.4	5.1	4.7	4.3	4.3	24
26					5.0	5.1	5.0	5.0	4.8	4.5	4.2	3.8	3.4	3.5	26
28						4.4	4.3	4.2	3.9	3.7	3.4	3.1	2.6	2.7	28
30						3.7	3.6	3.6	3.3	3.1	2.7	2.4	2.0	2.0	30
32							3.0	3.0	2.8	2.5	2.2	1.9	1.4	1.5	32
34							2.6	2.5	2.2	2.1	1.7	1.4	1.0	1.0	34
36								2.1	1.8	1.6	1.3	1.0	0.6	0.6	36
38								1.7	1.4	1.3	0.9	0.6			38
40									1.1	0.9	0.6				40
42									0.8	0.6					42
44															44
46															46
48															48
50															50
52															52
54															54
56															56
58															58
60															60
62															62

WORKING CONDITIONS

Load Chart - T

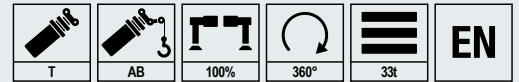
Unit: t



	12.6	16.7	20.9	25.1	29.3	33.3	37.4	41.6	45.5	49.7	53.8	57.8	61.7	66	
3	70.0														3
3.5	70.0	65.4	64.7	60.2											3.5
4	67.0	64.8	58.5	51.9	47.7										4
4.5	50.1	52.2	49.5	45.9	43.0										4.5
5	36.8	40.3	41.2	40.0	38.8	36.3									5
6	22.8	25.6	27.3	28.6	28.9	28.6	26.9								6
7	15.5	17.9	19.4	20.6	21.0	21.3	21.1	20.7							7
8	11.0	13.2	14.6	15.6	15.9	16.3	16.2	16.1	15.6						8
9	7.9	10.1	11.3	12.3	12.6	12.9	12.8	12.7	12.3	12.0					9
10	5.8	7.7	8.9	9.9	10.2	10.5	10.3	10.2	10.0	9.6					10
11		6.0	7.2	8.1	8.4	8.6	8.5	8.4	8.1	7.9	7.4	7.0			11
12		4.7	5.8	6.7	6.9	7.2	7.1	6.9	6.7	6.4	6.0	5.6	5.1	5.1	12
14		2.7	3.7	4.6	4.8	5.0	4.9	4.9	4.6	4.4	4.0	3.6	3.1	3.1	14
16			2.3	3.1	3.4	3.6	3.5	3.5	3.1	2.9	2.5	2.1	1.7	1.7	16
18			1.3	2.1	2.3	2.5	2.4	2.3	2.1	1.8	1.5	1.1	0.7	0.7	18
20				1.2	1.5	1.6	1.6	1.5	1.3	1.1	0.7				20
22				0.6	0.8	1.0	0.9	0.9	0.7						22
24															24
26															26
28															28
30															30
32															32
34															34
36															36
38															38
40															40
42															42
44															44
46															46
48															48
50															50
52															52
54															54
56															56
58															58
60															60
62															62

Load Chart - T (AB)

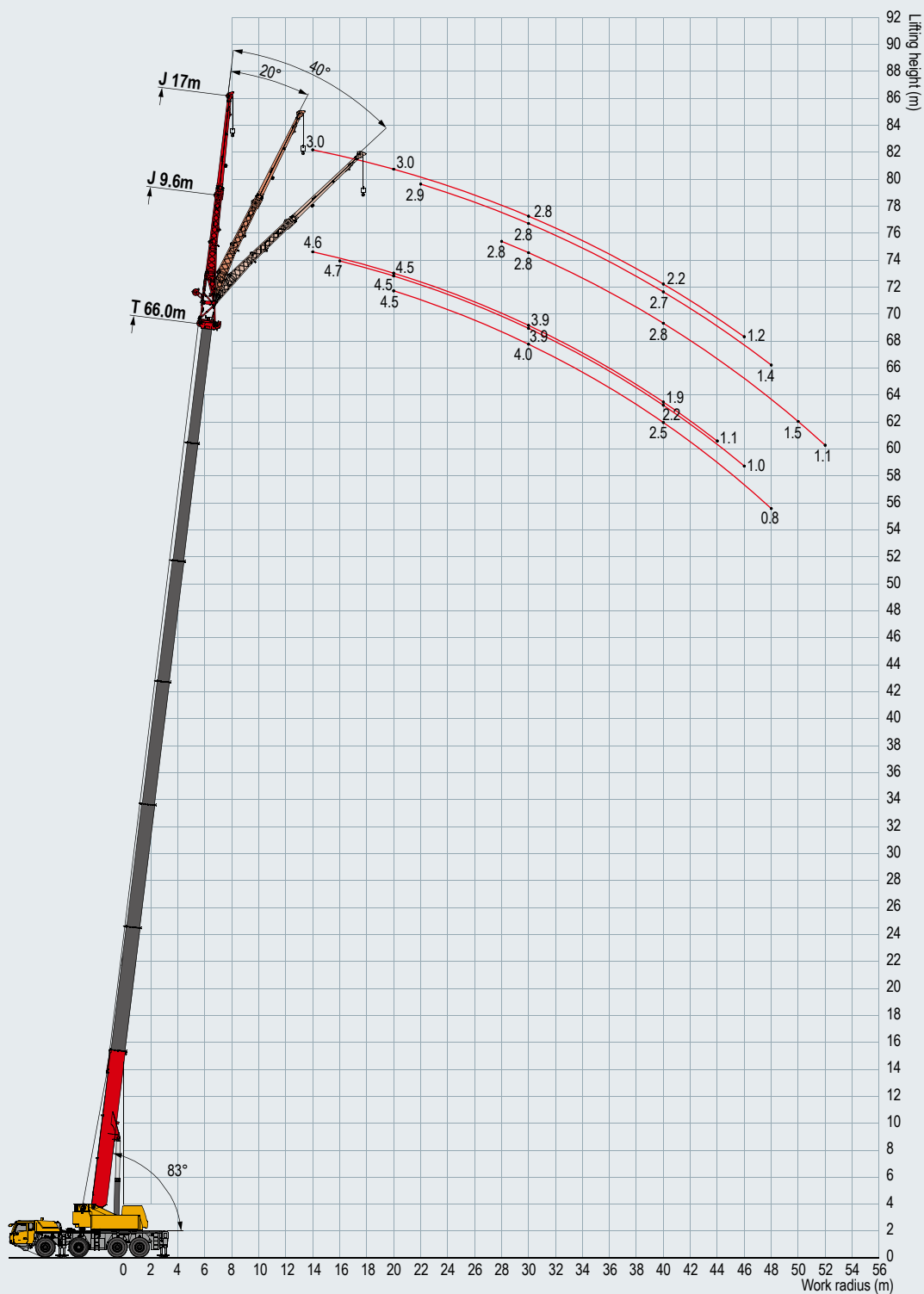
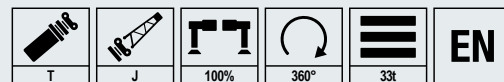
Unit: t



	12.6	16.7	20.9	25.1	29.3	33.3	37.4	41.6	45.5	49.7	53.8	57.8	61.7	66	
3	8.0														3
3.5	8.0	8.0	8.0	8.0											3.5
4	8.0	8.0	8.0	8.0	8.0										4
4.5	8.0	8.0	8.0	8.0	8.0										4.5
5	8.0	8.0	8.0	8.0	8.0	8.0									5
6	8.0	8.0	8.0	8.0	8.0	8.0	8.0								6
7	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0							7
8	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0						8
9	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0					9
10	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0				10
11		8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0			11
12		8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	7.0	12
14		8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	7.0	14
16			8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	7.0	16
18			8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	7.0	18
20				8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	7.0	20
22				8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	7.0	22
24					8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	7.0	24
26					8.0	8.0	8.0	8.0	8.0	8.0	7.8	7.4	7.0	6.5	26
28						7.7	7.5	7.5	7.3	7.1	6.7	6.4	6.0	6.1	28
30							6.8	6.6	6.7	6.4	6.2	5.9	5.5	5.1	30
32								6.0	5.8	5.7	5.4	5.1	4.7	4.4	32
34								5.2	5.2	5.0	4.8	4.4	4.1	3.7	34
36									4.6	4.4	4.2	3.8	3.5	3.1	36
38									4.1	3.9	3.6	3.3	3.0	2.6	38
40										3.4	3.2	2.8	2.5	2.1	40
42										2.9	2.7	2.4	2.1	1.7	42
44											2.4	2.0	1.7	1.3	44
46											2.0	1.7	1.4	1.0	46
48												1.4	1.1	0.7	48
50												1.1	0.8		50
52															52
54															54
56															56
58															58
60															60
62															62

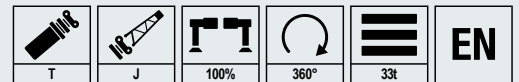
WORKING CONDITIONS

Operating Range - TJ/TH



Load Chart - TJ/TH

Unit: t

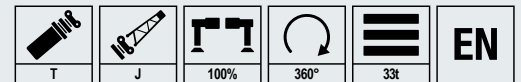


	12.6m+9.6m			37.1m+9.6m			41.3m+9.6m			45.5m+9.6m			49.7m+9.6m			
	0	20	40	0	20	40	0	20	40	0	20	40	0	20	40	
3	14.8															3
3.5	14.8															3.5
4	14.8															4
4.5	14.8	14.8														4.5
5	14.8	14.8														5
6	14.8	14.1														6
7	14.4	12.9	10.0	14.8												7
8	13.3	12.0	9.4	14.8			14.8									8
9	12.1	11.1	9.0	14.8	14.8		14.8			14.7						9
10	10.9	10.4	8.5	14.8	14.6		14.8	14.0		14.6						10
11	10.0	9.8	8.2	14.8	14.2		14.8	13.7		14.5	12.9		12.3			11
12	9.2	9.3	7.9	14.8	13.7	9.6	14.8	13.4		14.3	12.6		12.2			12
14	7.9	8.4	7.5	14.8	12.7	9.1	14.8	12.8	9.2	13.9	12.1	9.2	12.0	11.0		14
16	6.8	7.7	7.2	14.7	11.8	8.7	14.5	12.0	8.8	13.5	11.7	8.8	11.8	10.7	8.7	16
18	6.0	6.9		13.7	11.1	8.4	13.2	11.2	8.5	12.4	11.2	8.5	11.5	10.4	8.4	18
20				12.1	10.4	8.1	11.3	10.6	8.2	11.0	10.6	8.2	10.1	10.2	8.2	20
22				10.4	9.8	7.9	9.8	10.0	8.0	9.4	9.9	8.0	9.1	9.4	8.0	22
24				8.8	9.3	7.7	8.4	9.0	7.8	8.2	8.8	7.8	8.0	8.5	7.8	24
26				7.6	8.1	7.5	7.0	7.7	7.6	7.0	7.6	7.5	6.9	7.5	7.5	26
28				6.5	7.0	7.2	6.0	6.5	6.9	5.9	6.4	6.8	5.9	6.5	6.9	28
30				5.6	5.9	6.2	5.3	5.6	5.9	5.4	5.5	5.8	5.5	5.5	5.9	30
32				4.8	5.1	5.3	4.9	4.8	5.0	5.0	4.9	5.0	5.1	5.0	5.0	32
34				4.2	4.3	4.5	4.5	4.5	4.5	4.7	4.6	4.6	4.5	4.7	4.7	34
36				3.9	3.9		4.2	4.2	4.3	4.2	4.4	4.4	4.0	4.2	4.4	36
38				3.7	3.7		4.0	4.0	4.1	3.8	4.0	4.1	3.5	3.8	3.9	38
40				3.5	3.5		3.6	3.8		3.3	3.5	3.6	3.0	3.3	3.4	40
42				3.3	2.1		3.2	3.3		2.9	3.1	1.8	2.6	2.8	3.0	42
44				1.6			2.7	2.9		2.5	2.7		2.2	2.4	2.5	44
46							2.4	0.9		2.2	2.2		1.8	2.0		46
48							2.1			1.8	1.9		1.5	1.7		48
50										1.5			1.2	1.3		50
52										1.3			1.0	1.1		52
54													0.7			54
56																56
58																58
60																60
62																62
64																64
66																66

WORKING CONDITIONS

Load Chart - TJ/TH

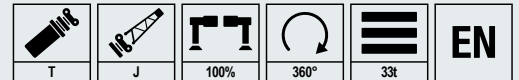
Unit: t



	53.8m+9.6m			57.8m+9.6m			61.7m+9.6m			66m+9.6m			
	0	20	40	0	20	40	0	20	40	0	20	40	
3													3
3.5													3.5
4													4
4.5													4.5
5													5
6													6
7													7
8													8
9													9
10													10
11				8.0									11
12	10.0			8.0			5.8						12
14	9.9	9.2		7.9	7.4		5.8			4.6			14
16	9.6	9.1		7.7	7.3		5.8	5.9		4.6	4.7		16
18	9.4	9.0	8.2	7.5	7.2	6.9	5.8	5.7		4.5	4.6		18
20	9.1	8.9	8.0	7.3	7.1	6.9	5.7	5.6	5.6	4.5	4.5	4.5	20
22	8.4	8.7	7.8	7.1	7.0	6.9	5.6	5.5	5.6	4.4	4.4	4.5	22
24	7.5	7.9	7.7	6.8	6.9	6.8	5.4	5.4	5.4	4.3	4.3	4.4	24
26	6.8	6.9	7.2	6.1	6.6	6.6	5.3	5.2	5.2	4.2	4.2	4.2	26
28	5.9	6.4	6.5	5.4	5.9	6.2	5.1	5.0	5.0	4.0	4.0	4.1	28
30	5.5	5.6	5.9	5.1	5.1	5.5	4.7	4.8	4.8	3.9	3.9	4.0	30
32	4.8	5.0	5.1	4.5	4.8	4.7	4.1	4.4	4.6	3.7	3.8	3.9	32
34	4.1	4.5	4.7	3.9	4.3	4.4	3.5	3.9	4.2	3.3	3.7	3.8	34
36	3.7	3.9	4.1	3.3	3.7	3.9	2.9	3.3	3.6	2.8	3.2	3.5	36
38	3.2	3.4	3.6	2.8	3.1	3.4	2.4	2.8	3.0	2.4	2.7	3.0	38
40	2.7	3.0	3.2	2.4	2.6	2.9	1.9	2.2	2.5	1.9	2.2	2.5	40
42	2.3	2.5	2.6	1.8	2.2	2.4	1.5	1.8	2.0	1.5	1.7	2.0	42
44	1.9	2.1	2.2	1.5	1.7	1.9	1.1	1.4	1.5	1.1	1.3	1.6	44
46	1.5	1.7	1.8	1.2	1.4	1.5	0.8	1.0	1.2		1.0	1.2	46
48	1.2	1.4	1.4	0.8	1.0	1.1		0.7	0.8			0.8	48
50	0.9	1.1			0.7	0.8							50
52	0.6	0.8											52
54													54
56													56
58													58
60													60
62													62
64													64
66													66

Load Chart - TJ/TH

Unit: t

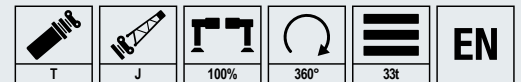


	12.6m+17m			37.1m+17m			41.3m+17m			45.5m+17m			49.7m+17m			
	0	20	40	0	20	40	0	20	40	0	20	40	0	20	40	
3																3
3.5	7.0															3.5
4	7.0															4
4.5	6.9															4.5
5	6.8															5
6	6.5															6
7	6.2															7
8	5.9			6.5												8
9	5.6	4.7		6.5			6.3									9
10	5.3	4.5		6.5			6.3			6.0						10
11	5.0	4.3		6.5			6.3			6.0			5.5			11
12	4.8	4.1		6.5			6.3			6.0			5.5			12
14	4.3	3.9	3.5	6.2	4.6		6.1	4.6		5.9			5.5			14
16	4.0	3.7	3.3	5.9	4.3		5.8	4.4		5.7	4.3		5.3	4.3		16
18	3.7	3.5	3.2	5.5	4.2	3.5	5.5	4.2		5.4	4.2		5.2	4.1		18
20	3.4	3.3	3.1	5.2	4.0	3.4	5.3	4.1	3.4	5.2	4.0	3.4	5.0	4.0		20
22	3.1	3.2	3.1	4.9	3.9	3.3	5.0	3.9	3.3	5.0	3.9	3.3	4.8	3.9	3.3	22
24	2.9	3.1	3.1	4.7	3.8	3.3	4.7	3.8	3.3	4.7	3.8	3.3	4.6	3.8	3.3	24
26	2.6	3.1		4.4	3.7	3.2	4.5	3.7	3.2	4.5	3.7	3.2	4.4	3.7	3.2	26
28				4.2	3.6	3.1	4.3	3.6	3.2	4.4	3.6	3.2	4.3	3.6	3.2	28
30				4.1	3.5	3.1	4.1	3.5	3.1	4.2	3.5	3.1	4.2	3.5	3.1	30
32				3.9	3.4	3.1	4.0	3.4	3.1	4.1	3.5	3.1	4.0	3.4	3.1	32
34				3.7	3.3	3.1	3.9	3.4	3.1	3.9	3.4	3.1	3.9	3.4	3.1	34
36				3.5	3.3	3.1	3.7	3.3	3.1	3.6	3.3	3.1	3.6	3.3	3.1	36
38				3.4	3.2	3.1	3.3	3.3	3.1	3.4	3.3	3.1	3.5	3.3	3.1	38
40				3.2	3.2	3.1	3.1	3.2	3.1	3.2	3.2	3.1	3.3	3.1	3.1	40
42				2.9	3.1	3.1	3.0	3.1	3.1	3.1	3.1	3.1	3.0	3.1	3.0	42
44				2.8	2.8		2.9	3.0	3.0	2.9	3.0	3.0	2.7	3.0	3.0	44
46				2.6	2.7		2.8	2.8	2.9	2.8	2.9	3.0	2.4	2.7	2.9	46
48				2.5	2.5		2.6	2.7		2.4	2.6	2.8	2.2	2.4	2.6	48
50				2.4			2.4	2.6		2.1	2.4		1.9	2.2	2.3	50
52							2.2	2.3		1.9	2.1		1.6	1.8	1.9	52
54							2.0			1.6	1.8		1.4	1.6		54
56										1.4	1.5		1.1	1.3		56
58										1.2			0.9	1.0		58
60																60
62																62
64																64
66																66

WORKING CONDITIONS

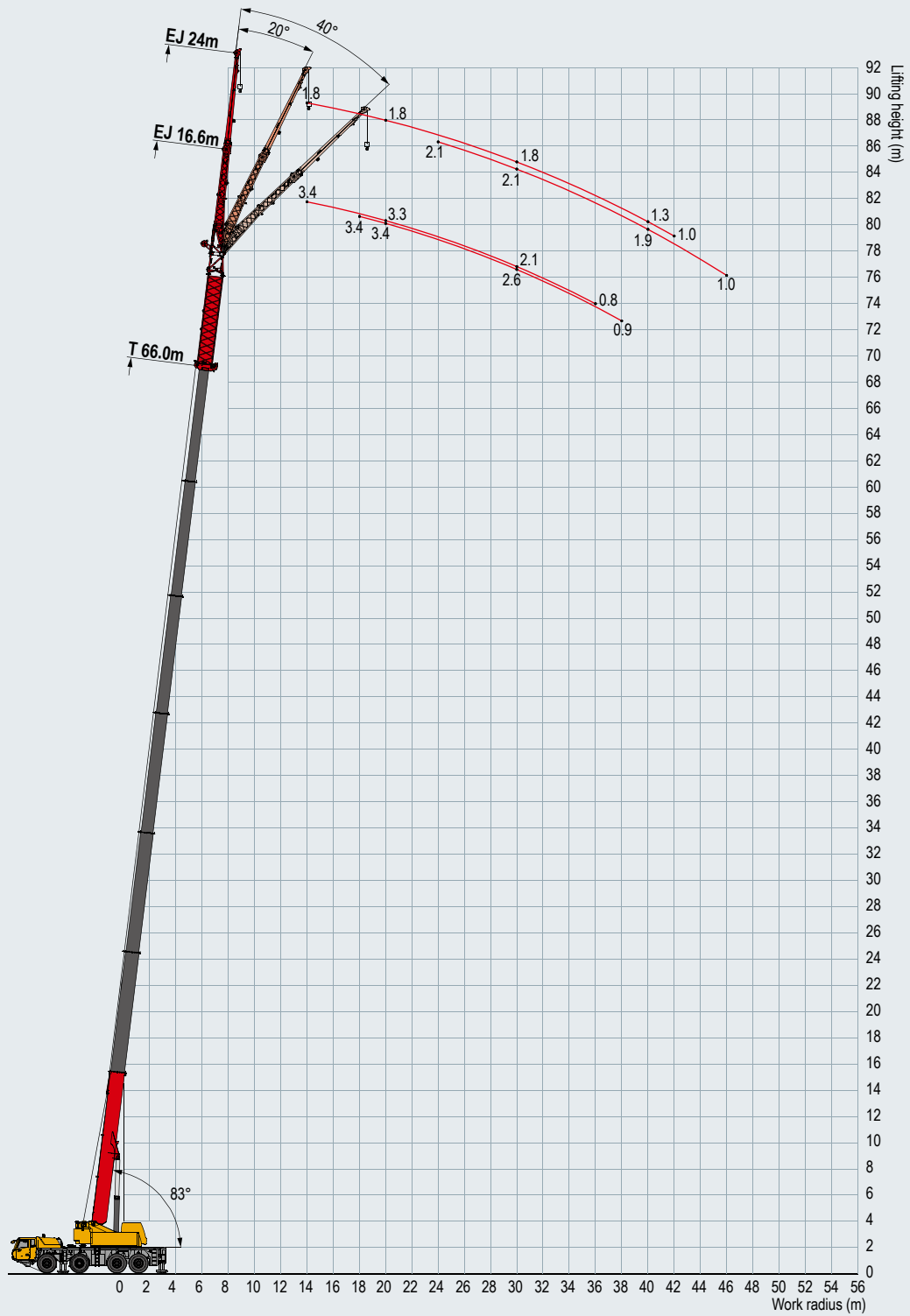
Load Chart - TJ/TH

Unit: t



	53.8m+17m			57.8m+17m			61.7m+17m			66m+17m			
	0	20	40	0	20	40	0	20	40	0	20	40	
3													3
3.5													3.5
4													4
4.5													4.5
5													5
6													6
7													7
8													8
9													9
10													10
11													11
12				4.3									12
14	4.9			4.3			3.7			3.0			14
16	4.9			4.3			3.7			3.0			16
18	4.7	4.0		4.2	3.8		3.6			3.0			18
20	4.6	3.9		4.2	3.8		3.5	3.3		3.0			20
22	4.5	3.8	3.3	4.1	3.7		3.5	3.3		3.0	2.9		22
24	4.4	3.7	3.2	4.1	3.6	3.2	3.4	3.3		2.9	2.8		24
26	4.3	3.6	3.2	4.0	3.5	3.1	3.4	3.3	3.1	2.9	2.8		26
28	4.2	3.6	3.2	3.9	3.5	3.1	3.3	3.3	3.0	2.8	2.8	2.8	28
30	4.0	3.5	3.1	3.9	3.4	3.1	3.2	3.3	3.0	2.8	2.8	2.8	30
32	3.9	3.4	3.1	3.8	3.3	3.1	3.2	3.2	3.0	2.7	2.8	2.8	32
34	3.8	3.4	3.1	3.6	3.3	3.0	3.2	3.2	3.0	2.7	2.8	2.8	34
36	3.5	3.3	3.1	3.5	3.2	3.0	3.1	3.1	3.0	2.7	2.8	2.8	36
38	3.4	3.2	3.0	3.1	3.2	3.0	2.7	3.1	3.0	2.5	2.8	2.8	38
40	3.1	3.1	3.0	2.8	3.1	3.0	2.3	2.8	3.0	2.2	2.7	2.8	40
42	2.7	3.0	3.0	2.5	2.9	3.0	2.0	2.5	2.9	1.8	2.4	2.7	42
44	2.4	2.8	3.0	2.1	2.5	2.8	1.7	2.2	2.6	1.5	2.0	2.5	44
46	2.1	2.5	2.7	1.8	2.2	2.5	1.3	1.8	2.2	1.2	1.7	2.1	46
48	1.8	2.2	2.4	1.4	1.9	2.2	1.0	1.5	1.8		1.4	1.8	48
50	1.5	1.9	2.0	1.2	1.5	1.8		1.2	1.5			1.5	50
52	1.3	1.6	1.7	0.9	1.3	1.4			1.1			1.1	52
54	1.0	1.2	1.4		1.0	1.2			0.8				54
56	0.8	1.0			0.7	0.9							56
58		0.8											58
60													60
62													62
64													64
66													66

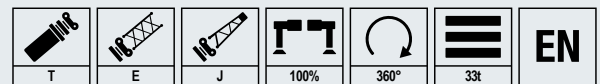
Operating Range - TEJ/TEH



WORKING CONDITIONS

Load Chart - TEJ/TEH

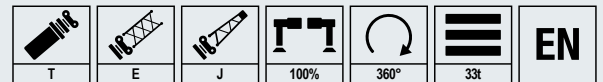
Unit: t



	12.6m+7m+9.6m			37.1m+7m+9.6m			41.3m+7m+9.6m			45.5m+7m+9.6m			49.7m+7m+9.6m			
	0	20	40	0	20	40	0	20	40	0	20	40	0	20	40	
3																3
3.5																3.5
4																4
4.5																4.5
5																5
6																6
7																7
8	10.0															8
9	9.4	8.8	8.3	12.6			11.6						7.4			9
10	8.8			12.3			11.4			10.2			7.4			10
11	8.3	7.8	7.5	11.9			11.1			10.1			7.4			11
12	7.9	7.4		11.5			10.8			9.9			7.4			12
14	7.1	6.7	6.5	10.7	9.2		10.3	9.0		9.5	8.5		7.4	7.4		14
16	6.3	6.1	5.9	10	8.7	7.7	9.7	8.5	7.6	9.1	8.1	7.4	7.4	7.1		16
18	5.7	5.5	5.4	9.3	8.1	7.3	8.7	8.0	7.2	8.2	7.7	7.0	7.3	6.9	6.5	18
20	5.2	5.0	5.0	8.1	7.7	7.0	7.4	7.6	6.9	7.1	7.3	6.7	6.7	6.6	6.2	20
22	4.7	4.6	4.7	6.9	7.2	6.6	6.2	6.9	6.6	5.9	6.6	6.4	5.8	6.1	6.0	22
24	4.4	4.3		5.9	6.5	6.3	5.3	5.9	6.2	5.0	5.6	6.0	4.9	5.6	5.7	24
26	4.1			4.9	5.4	5.8	4.6	5.0	5.4	4.5	4.7	5.2	4.4	4.7	5.2	26
28				4.2	4.5	4.8	4.4	4.2	4.5	4.2	4.2	4.3	4.1	4.1	4.3	28
30				4.0	4.0	4.1	4.1	4.0	4.0	3.9	4.0	3.9	3.7	3.9	3.9	30
32				3.7	3.7	3.8	3.7	3.8	3.8	3.4	3.7	3.8	3.2	3.5	3.7	32
34				3.4	3.5	3.5	3.2	3.5	3.6	3.0	3.2	3.4	2.7	3.0	3.2	34
36				3	3.2	3.3	2.8	3.0	3.2	2.6	2.8	3.0	2.3	2.6	2.8	36
38				2.6	2.8	2.9	2.5	2.7	2.8	2.2	2.4	2.6	2.0	2.2	2.4	38
40				2.3	2.5	2.6	2.2	2.3	2.5	1.9	2.1	2.2	1.6	1.9	2.0	40
42				2.0	2.2		1.9	2.0	2.1	1.6	1.8	1.9	1.3	1.6	1.7	42
44				1.8	1.9		1.6	1.8	1.8	1.3	1.5	1.6	1.0	1.2	1.4	44
46				1.5	1.6		1.3	1.5		1.0	1.2	1.3		1.0	1.1	46
48				1.3	1.3		1.1	1.2			1.0				0.8	48
50				1.0			0.9	1.0								50
52																52
54																54
56																56
58																58
60																60
62																62
64																64
66																66

Load Chart - TEJ/TEH

Unit: t

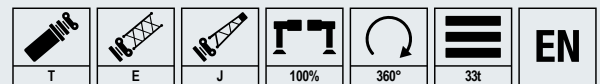


	53.8m+7m+9.6m			57.8m+7m+9.6m			61.7m+7m+9.6m			66m+7m+9.6m			
	0	20	40	0	20	40	0	20	40	0	20	40	
3													3
3.5													3.5
4													4
4.5													4.5
5													5
6													6
7													7
8													8
9													9
10	6.3												10
11	6.3			5.2									11
12	6.3			5.2			4.1						12
14	6.3			5.2			4.1			3.4			14
16	6.3	6.2		5.2	5.1		4.1			3.4			16
18	6.3	6.0	5.9	5.1	5.0		4.0	4.1		3.4	3.4		18
20	6.1	5.8	5.6	5.0	4.9	4.8	4.0	4.0	3.9	3.3	3.4		20
22	5.5	5.6	5.5	4.8	4.8	4.8	4.0	3.9	3.8	3.3	3.3		22
24	4.8	5.1	5.3	4.2	4.7	4.7	3.9	3.8	3.8	3.2	3.3		24
26	4.3	4.6	4.9	3.9	4.0	4.4	3.4	3.8	3.8	3.1	3.2		26
28	3.9	4.0	4.3	3.3	3.7	3.9	2.8	3.3	3.7	2.6	3.1		28
30	3.3	3.7	3.8	2.8	3.3	3.6	2.3	2.8	3.2	2.1	2.6		30
32	2.8	3.2	3.5	2.3	2.7	3.1	1.8	2.3	2.6	1.7	2.1		32
34	2.3	2.7	3.0	1.9	2.3	2.6	1.4	1.8	2.1	1.3	1.7		34
36	1.9	2.2	2.5	1.5	1.8	2.2	0.9	1.4	1.7	0.8	1.3		36
38	1.5	1.9	2.1	1.1	1.4	1.7		1.0	1.3		0.9		38
40	1.2	1.5	1.7		1.1	1.4			0.9				40
42	0.8	1.1	1.3			1.0							42
44		0.8	1.0										44
46													46
48													48
50													50
52													52
54													54
56													56
58													58
60													60
62													62
64													64
66													66

WORKING CONDITIONS

Load Chart - TEJ/TEH

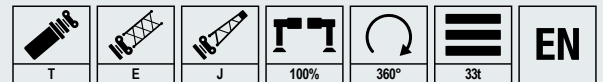
Unit: t



	12.6m+7m+17m			37.1m+7m+17m			41.3m+7m+17m			45.5m+7m+17m			49.7m+7m+17m			
	0	20	40	0	20	40	0	20	40	0	20	40	0	20	40	
3																3
3.5																3.5
4																4
4.5																4.5
5	6.1															5
6	6.0															6
7	5.8															7
8	5.7															8
9	5.5															9
10	5.3	4.5		5.3												10
11	5.1	4.3		5.3			5.1			4.8						11
12	5.0	4.2		5.3			5.1			4.8						12
14	4.6	4.0		5.3	4.5		5.1			4.8	4.2		4.4			14
16	4.3	3.8	3.4	5.3	4.3		5.1	4.3		4.8	4.1		4.4			16
18	4.1	3.6	3.3	5.3	4.2		5.1	4.1		4.8	4.0		4.4	4.0		18
20	3.8	3.5	3.2	5.1	4.0	3.4	5.0	4.0	3.4	4.7	3.9	3.3	4.4	3.9		20
22	3.6	3.4	3.1	4.9	3.9	3.3	4.8	3.9	3.3	4.5	3.8	3.3	4.3	3.8		22
24	3.3	3.2	3.1	4.6	3.8	3.3	4.6	3.8	3.3	4.4	3.7	3.2	4.2	3.7	3.2	24
26	3.1	3.1	3.1	4.5	3.7	3.2	4.5	3.7	3.2	4.2	3.6	3.2	4.1	3.6	3.2	26
28	2.9	2.9	3.0	4.3	3.6	3.2	4.3	3.6	3.2	4.0	3.5	3.1	4.0	3.6	3.2	28
30	2.8	2.6		4.1	3.5	3.2	4.1	3.5	3.2	3.8	3.5	3.1	3.8	3.5	3.1	30
32	2.6	2.6		4.0	3.5	3.1	4.0	3.5	3.1	3.5	3.4	3.1	3.6	3.4	3.1	32
34	2.4			3.8	3.4	3.1	3.6	3.4	3.1	3.0	3.3	3.1	3.3	3.3	3.1	34
36				3.5	3.3	3.1	3.2	3.3	3.1	2.8	3.1	3.1	2.9	3.2	3.1	36
38				3.1	3.2	3.1	2.8	3.2	3.1	2.6	2.7	3.0	2.8	3.0	3.0	38
40				2.7	3.1	3.0	2.6	2.8	3.0	2.5	2.5	2.7	2.6	2.6	2.9	40
42				2.4	2.8	3.0	2.5	2.5	2.8	2.4	2.4	2.4	2.4	2.5	2.6	42
44				2.3	2.4	2.7	2.4	2.4	2.4	2.1	2.3	2.3	2.1	2.4	2.4	44
46				2.2	2.2	2.3	2.3	2.3	2.3	1.8	2.1	2.3	1.8	2.2	2.3	46
48				2.0	2.1	2.1	2.1	2.2	2.2	1.6	1.9	2.0	1.6	1.9	2.2	48
50				1.9	2.0		1.9	2.1	2.1	1.4	1.6	1.8	1.4	1.7	1.9	50
52				1.8	1.9		1.6	1.9		1.1	1.4	1.5	1.1	1.4	1.6	52
54				1.6	1.8		1.4	1.6		0.9	1.2	1.3	0.9	1.2	1.4	54
56				1.4			1.2	1.4			0.9			1.0	1.1	56
58				1.2			1.0	1.2								58
60							0.8									60
62																62
64																64
66																66

Load Chart - TEJ/TEH

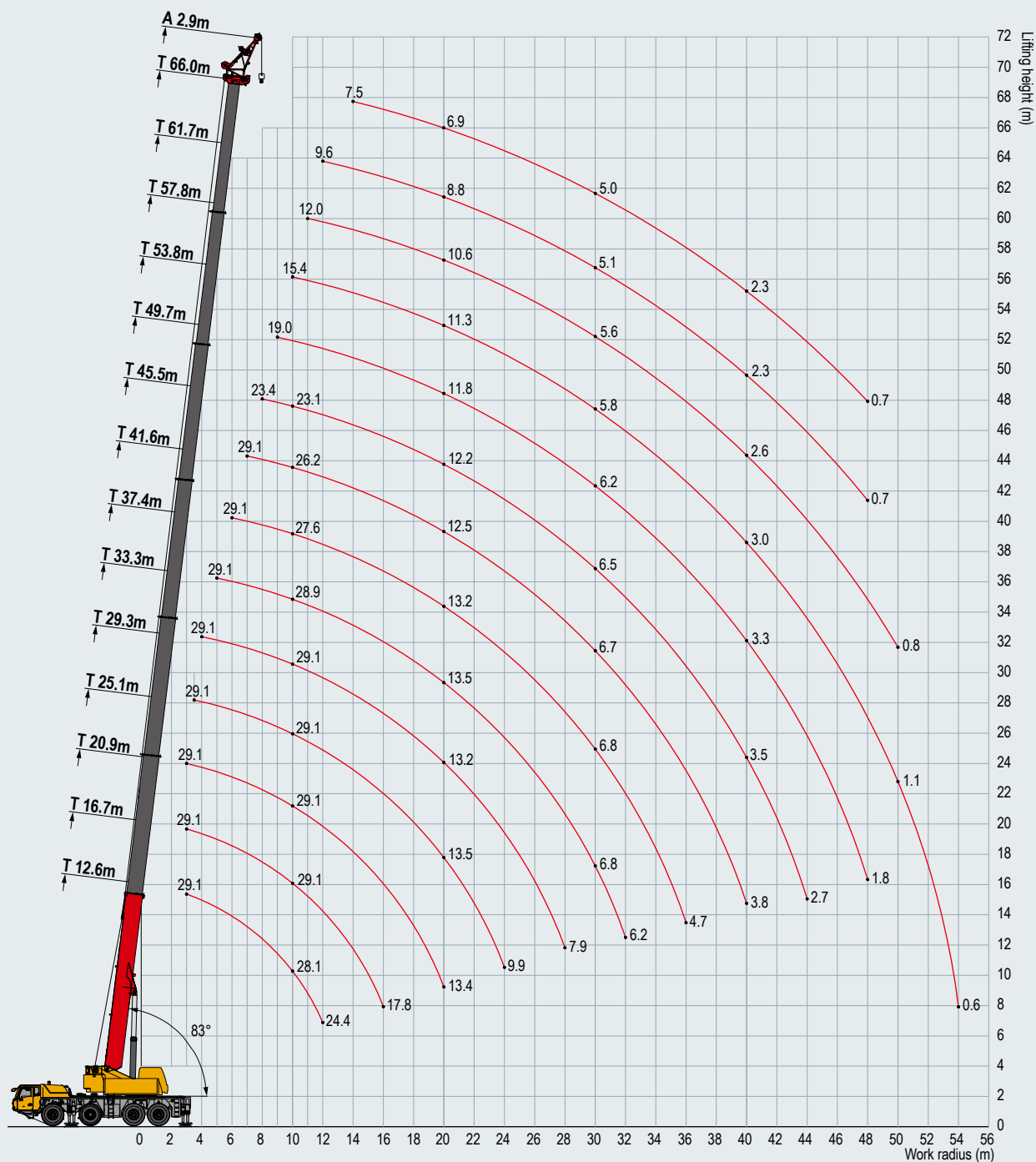
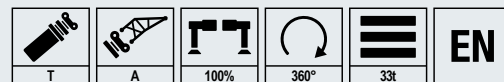
Unit: t



	53.8m+7m+17m			57.8m+7m+17m			61.7m+7m+17m			66m+7m+17m			
	0	20	40	0	20	40	0	20	40	0	20	40	
3													3
3.5													3.5
4													4
4.5													4.5
5													5
6													6
7													7
8													8
9													9
10													10
11	3.9												11
12	3.9			3.3									12
14	3.9			3.3			2.5			1.8			14
16	3.9			3.3			2.5			1.8			16
18	3.9			3.3			2.5			1.8			18
20	3.9	3.7		3.3	3.1		2.5			1.8			20
22	3.9	3.6		3.3	3.1		2.5	2.5		1.8			22
24	3.8	3.6	3.2	3.2	3.0		2.5	2.5		1.8	2.1		24
26	3.7	3.5	3.1	3.2	3.0	2.9	2.5	2.5		1.8	2.1		26
28	3.6	3.4	3.1	3.1	3.0	2.9	2.5	2.4	2.4	1.8	2.1		28
30	3.5	3.3	3.1	3.1	3.0	2.9	2.5	2.4	2.4	1.8	2.1		30
32	3.3	3.2	3.1	3.0	3.0	2.9	2.4	2.4	2.4	1.8	2.1		32
34	3.1	3.2	3.0	2.7	2.9	2.8	2.4	2.4	2.4	1.8	2.1		34
36	2.8	3.0	3.0	2.6	2.8	2.8	2.2	2.4	2.4	1.7	2.0		36
38	2.7	2.9	2.9	2.3	2.6	2.7	1.8	2.3	2.4	1.7	2.0		38
40	2.4	2.6	2.8	2.0	2.5	2.5	1.5	2.1	2.3	1.3	1.9		40
42	2.0	2.5	2.6	1.6	2.2	2.4	1.2	1.7	2.2	1.0	1.6		42
44	1.7	2.2	2.4	1.3	1.8	2.3	0.9	1.4	1.9		1.3		44
46	1.5	1.9	2.2	1.1	1.5	1.9		1.1	1.5		1.0		46
48	1.2	1.6	1.9		1.3	1.6		0.8	1.2				48
50	0.9	1.4	1.6		1.0	1.3			0.9				50
52		1.1	1.4			1.0							52
54		0.8	1.1										54
56			0.8										56
58													58
60													60
62													62
64													64
66													66

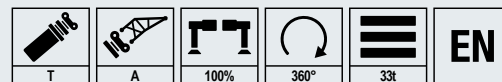
WORKING CONDITIONS

Operating Range - TA



Load Chart - TA

Unit: t



 m	12.6	16.7	20.9	25.1	29.3	33.3	37.4	41.6	45.5	49.7	53.8	57.8	61.7	66	 m
	2.9m														
3	29.1	29.1	29.1												3
3.5	29.1	29.1	29.1	29.1											3.5
4	29.1	29.1	29.1	29.1	29.1										4
4.5	29.1	29.1	29.1	29.1	29.1										4.5
5	29.1	29.1	29.1	29.1	29.1	29.1									5
6	29.1	29.1	29.1	29.1	29.1	29.1	29.1								6
7	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1							7
8	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29	23.4						8
9	29.1	29.1	29.1	29.1	29.1	29.1	29.1	27.9	23.3	19					9
10	28.1	29.1	29.1	29.1	29.1	28.9	27.6	26.2	23.1	18.9	15.4				10
11	27.3	28.9	29	28.7	28.2	27.2	25.6	24.3	22.7	18.8	15.3	12			11
12	24.4	26.2	26.3	26.8	26.4	25.4	23.9	22.6	21.3	18.5	15.1	11.9	9.6		12
14		21.4	21.8	22	21.9	21.5	20.3	19.5	18.9	17.7	14.7	11.7	9.5	7.5	14
16		17.8	18.4	18.5	18.3	17.4	17.4	17	16.1	15.2	14.2	11.4	9.3	7.4	16
18			15.6	15.7	15.5	15.2	15.5	14.4	14	13.5	12.6	11	9.1	7.2	18
20			13.4	13.5	13.2	13.5	13.2	12.5	12.2	11.8	11.3	10.6	8.8	6.9	20
22				11.5	11.3	11.7	11.3	11.1	10.8	10.6	9.9	9.3	8.4	6.6	22
24				9.9	10	10.1	9.7	9.8	9.4	9.2	8.7	8.4	7.8	6.3	24
26					9	8.8	8.8	8.4	8.1	8.1	7.9	7.5	6.9	5.9	26
28					7.9	7.7	7.8	7.4	7.2	7.2	6.8	6.5	6	5.6	28
30						6.8	6.8	6.7	6.5	6.2	5.8	5.6	5.1	5	30
32						6.2	6	6	5.7	5.4	5	4.7	4.4	4.3	32
34							5.3	5.3	4.9	4.7	4.3	4.1	3.8	3.7	34
36							4.7	4.6	4.3	4.1	3.8	3.6	3.3	3.2	36
38								4.1	3.9	3.7	3.4	3.1	2.7	2.7	38
40								3.8	3.5	3.3	3	2.6	2.3	2.3	40
42									3.1	2.8	2.5	2.2	1.8	1.8	42
44									2.7	2.5	2.2	1.8	1.4	1.4	44
46										2.1	1.7	1.5	1.1	1.1	46
48										1.8	1.4	1.1	0.7	0.7	48
50											1.1	0.8			50
52											0.9				52
54											0.6				54

Remark:

1. The working radius is the horizontal gravity center distance of the load from the slewing axis of the crane superstructure measured at the ground. The radius stated is valid under load conditions, i.e. including boom deflection.
2. Boom positions differing from those in the load capacity tables are not permissible.
3. The boom may only be manoeuvred into those areas specified in the load chart, even if empty load is suspended, otherwise there is a risk of the crane tilting.
4. 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.

WORKING CONDITIONS

Icon Description



Max. lifting capacity



Max. boom length



Max. lifting radius



Max. lifting height



Driver's cab



Carrier frame



Engine



Transmission



Transfer case



Axle



Outrigger



Slewing platform



Crane control



Hoist



Suspension system



Steering



Tires



Wheel formula



Brake



Electrical system



Hydraulic system



Slewing mechanism



Safety equipment



Load moment indicator



Counterweight



Boom & telescoping system



Auxiliary boom nose



Boom extension



Auxiliary jib



CW rearward positioned



Rear storage box

SANY GROUP CRANE BU

SANY Mobile Crane and Tower Crane Industrial Park

No.168 Jinzhou Avenue, Jinzhou Development Zone, Changsha City, Hunan Province, P.R. China Zip 410600

SANY Crawler Crane Industrial Park

No. 2188 Daishan Road, Wuxing District, Huzhou City, Zhejiang Province, P. R. China Zip 313028

Consulting sanycrane@sanygroup.com (Crane BU) / crd@sany.com.cn (IHQ)

After-sales Service 0086-400 609 8318 (Overseas)

 SANY GROUP: www.sanyglobal.com | SANY USED CRANE: sanyusedcranes.en.alibaba.com

SANY CRANE   YouTube [@sanycrane4878](https://www.youtube.com/@sanycrane4878) |  [Sany-crane](https://www.linkedin.com/company/sany-crane) |  [SANYCraneGlobal](https://www.facebook.com/SANYCraneGlobal)

Reminder:

Any change in the technical parameters and configuration due to product modification or upgrade may occur without prior notice.
The machine in the picture may include additional equipment. This brochure is for reference only, and goods in kind shall prevail.
Copyright at SANY. No part of this brochure may be copied or used for any purpose without written approval from SANY.

© Edited in March 2025

SANY

Quality Changes the World

