

PRODUCT  
SPECIFICATIONS



# SAC1100S1

SANY ALL TERRAIN CRANE  
110T LIFTING CAPACITY



Max. Lifting Capacity: 110t

Max. Boom Length: 56m

Max. Lifting Moment: 4014kN·m

## SANY ALL TERRAIN CRANE SAC1100S1 / 110T LIFTING CAPACITY

### Efficient Power System

- The crane shares a dual power engine, with the energy saving enhancement of more than 10%, and the maintenance cost decrease of more than 35%;
- The carrier power is transmitted mechanically to superstructure. The structure is simple, safe and reliable, with low fault rate;
- Single-engine power system is adopted for weight reduction of the superstructure power system and enhancement of the load-bearing components, increasing crane lifting performance by 20%.

### Excellent lifting performance

- 6-section telescoping boom with single cylinder pin. The total boom length is 56m, and jib length is 21.5m include 15.5m folding jib (standard) and 1\*6m extention jib;
- Maximum lifting height is 78.4m and maximum working radius is 58m, ensuring a wider working range;
- Maximum lifting torque of basic boom is 4014KN.m, featuring superior lifting and loading performance.

### Mobile and flexible carrier

- The crane is 14.6m long and 3m wide, with strong adaptability to construction site;
- 5-axle all-wheel steering and 8.5m minimum turning radius, ensuring flexible movement of the crane;
- With a powerful carrier, the maximum travel speed is 85km/h, and the maximum gradient can reach up to 45%;
- When travelling in the state of 60T, it can carry counterweight or parts to up 6.6t. Full counterweights could be carried 23.2t for short-distance movement.

### Safe control system

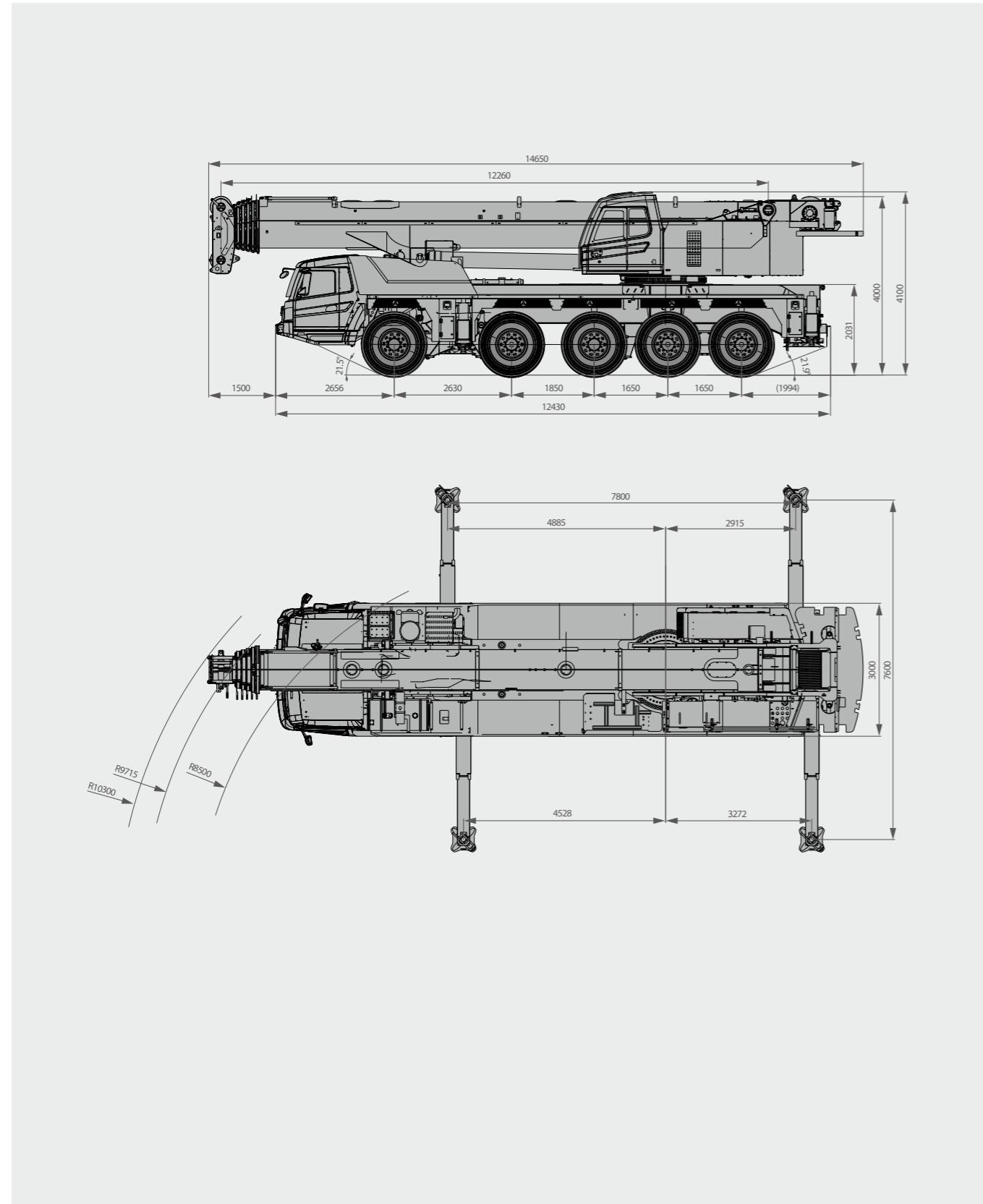
- Equipped with an anti-tipping warning system, advance warning is issued through sound and light notice to ensure the safety of crane;
- Equipped with a voice alarm system, voice notices are issued for various movement to prevent mis-operation and ensure safety of personnel and operation;
- High-accuracy, high-stability, high-intelligence load moment limiter system is adopted for full protection of lifting and loading operation;
- The abundant sensors give timely feedback of data information and realize real-time monitoring.

### Energy-saving hydraulic system

- The application of electrically controlled variable displacement pump, displacement and speed grade control technology increase working efficiency by 15%, while saving energy by 20%;
- With dual pump converging / diverging intelligent speed regulation technology, the dual pump supplies oil independently for compound movements, which ensures the stability and reliability of the movements with better micro-mobility. The various diverging distribution mode makes work freer and easier;
- The dual protection of winching, luffing, telescoping on the hydraulic circuit makes operation safer and more reliable.



## Overall Dimensions



## Technical Specification

Category	Item	Unit	Value
CAPACITY	Max. lifting capacity	t	110
WEIGHT	Gross weight	kg	53700
POWER	Engine model	-	BENZ OM460LA.E3B/3 (E3B)
DIMENSIONS	Max. engine power	kW/rpm	360/1800
	Max. engine torque	N·m/rpm	2200/(1200~1400)
TRAVEL	Overall length	mm	14650
	Overall width	mm	3000
	Overall height	mm	4100
	Max.travel speed	km/h	85
Steering radius	Min.steering radius	m	8.5
	Min.steering radius of boom tip	m	10.3
WHEEL FORMULA	Wheel formula	-	10×6
	Min.ground clearance	mm	340
	Approach angle	°	≥21.5
	Departure angle	°	≥21.9
	Max.gradeability	-	0.45
	Fuel consumption per 100km	L	55
MAIN PERFORMANCE	Working temperature range	°C	-20 ~ +40
	Min.rated lifting radius	m	3
	Tail slewing radius	m	4420
	Boom sections (Qty.)	-	6
	Boom shape	-	U shape
MAX.LIFTING MOMENT	Basic boom	kN·m	4014
	Full-extension boom	kN·m	1819
BOOM LENGTH	Basic boom	m	12.3
	Full-extension boom	m	56
	Max.combination of boom + jib	m	71.5 ( 77.5 )
MAX.LIFTING HEIGHT	Basic boom	m	13.3
	Full-extension boom	m	56.4
	Max.combination of boom + jib	m	78.4
	Outrigger span (Longitudinal×Transverse)	m	7.8×7.6
	Jib offset	°	0,15,30
AIRCONDITIONER	In operator's cab	-	Heating & cooling
	In driver's cab	-	Heating & cooling

## Technical Parameters



### Axle Load

Item	1	2	3	4	5	Gross weight
Axle load /t	≤12	≤12	≤12	≤12	≤12	≤60
Remarks	incl. 3.1t+3.5t CW, wire rope and hook block					



### Hook

Load/t	Number of sheaves	Rope rate	Hook weight /kg	Remark
100	5	11	1243	Optional
80	3	7	694	Standard
32	1	3	479	Optional
12.5	0	1	270	Standard

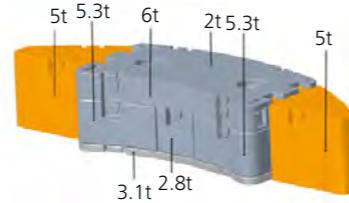
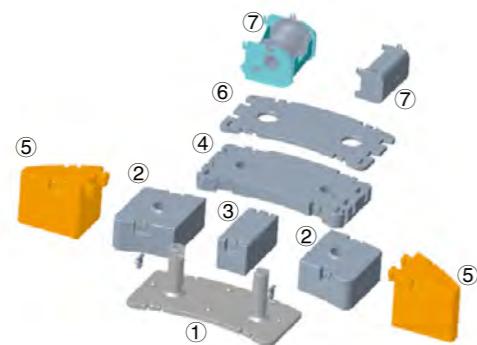


### Operation

Item	Max.single rope lifting speed (empty load)	Rope diameter/length	Max. single line pull
Main winch	130m/min	22mm/280m	105kN
Auxiliary winch	130m/min	22mm/190m	105kN
Slewing speed		2.5r/min	
Full luffing up/down time of boom		50s/100s	
Outrigger jack	Retraction	30s	
	Extension	35s	
Outrigger beam	Retraction	25s	
	Extension	30s	



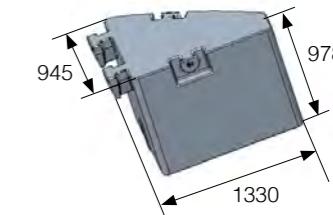
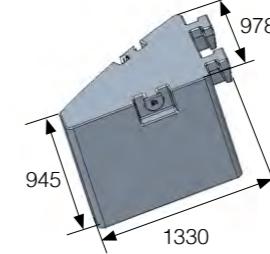
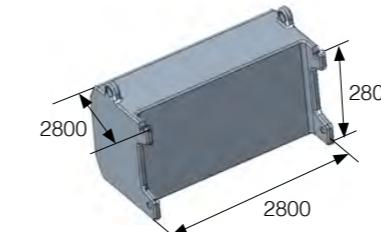
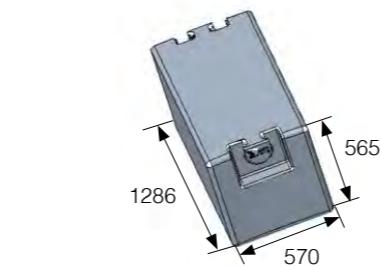
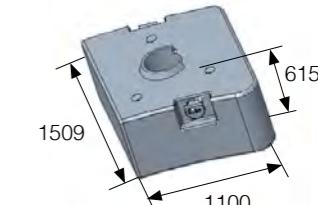
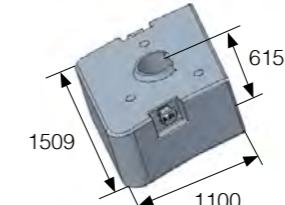
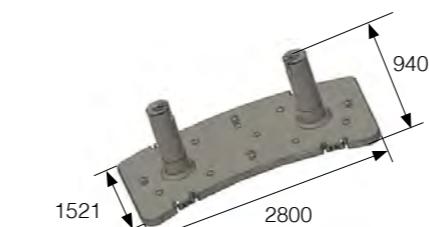
### Counterweight Combinations



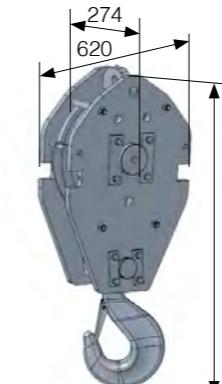
CW Units	Weight	Variable weights	Combinations
①	3.1t	3.5t	⑥ + ⑦
②	5.3t	6.6t	① + ⑥ + ⑦
③	2.8t	17.2t	① + ② × 2 + ⑥ + ⑦
④	6t	20t	① + ② × 2 + ③ + ⑥ + ⑦
⑤	5t	23.2t	① + ② × 2 + ④ + ⑥ + ⑦
⑥	2t	26t	① + ② × 2 + ③ + ④ + ⑥ + ⑦
⑦	1.5t	36t	① + ② × 2 + ③ + ④ + ⑤ × 2 + ⑥ + ⑦

## Transport Dimensions

Unit:mm



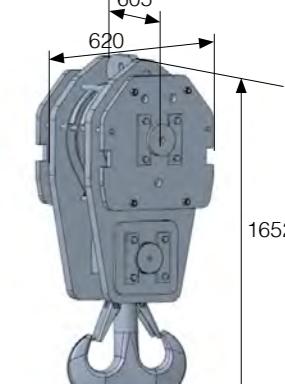
12.5t capacity hook block



32t capacity hook block

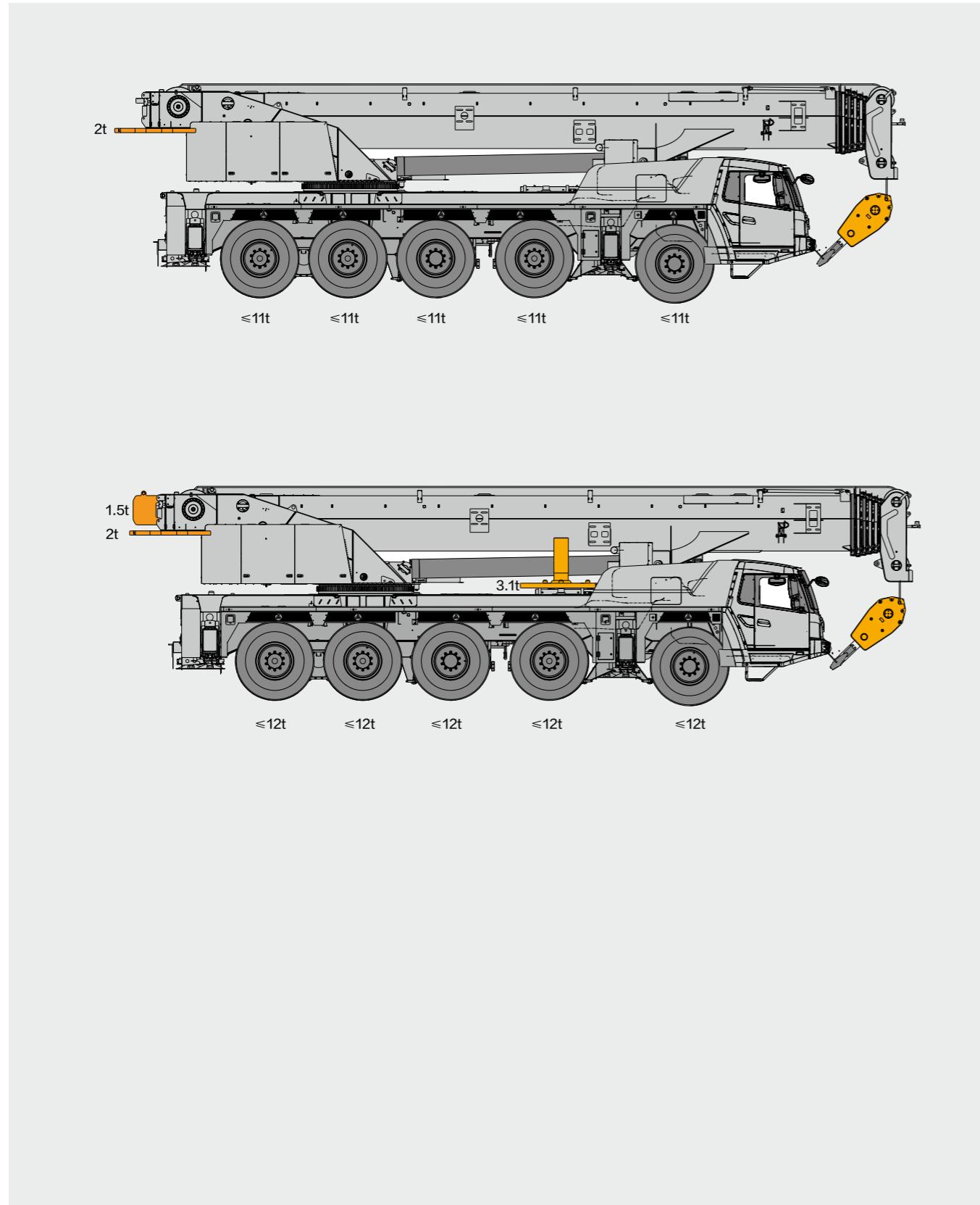


80t capacity hook block

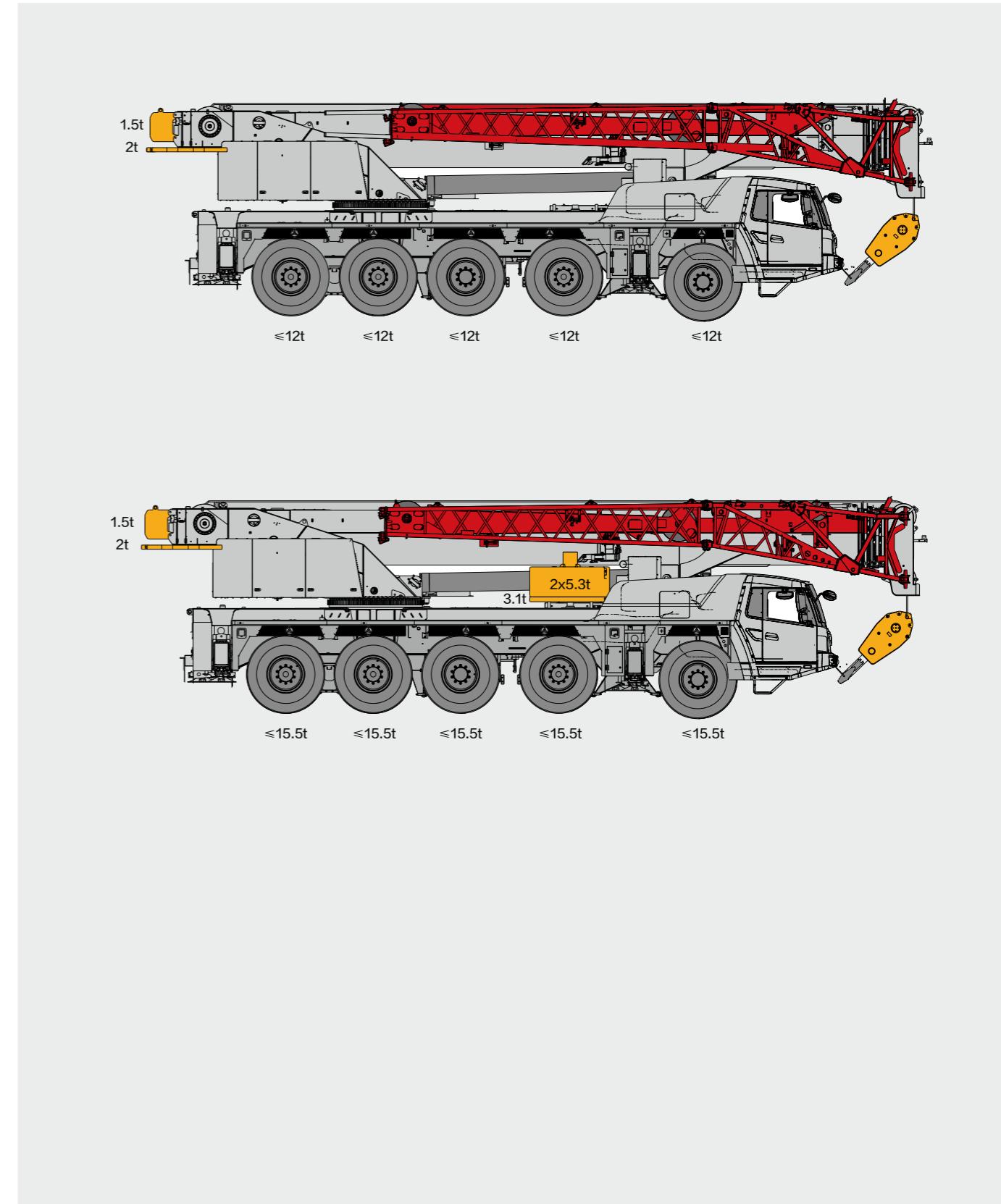


100t capacity hook block

## Transport with Counterweight



## Transport with Counterweight



# Crane Introduction

Superstructure

## Operator's cab

- With the corrosion-resistant streamlined integral composite shell, it is configured with large arc integral front window, load moment limiter display, air conditioner, and the cab can tilt up to 20° on the whole to effectively relieve the fatigue;
- The adjustable back seat makes operation more comfortable;
- With a 10.4-inch large-screen TFT display, the working condition is clear at a glance;
- The console and the working condition display system are combined for convenient and efficient operation. Easy operation is achieved through electric control handle.

## Boom system

- Boom: 12.3m-56m, 6 sections, made of high strength steel 960 sheets. The torque of Min. boom reaches 4014kN.m, and the torque of fully extended boom reaches 1819kN.m, with strong lifting capacity;
- The fully optimized U-shape large arc cross-section boom makes the boom carry weights more evenly, the boom of lighter weight improves safety significantly;
- The finite-element analysis is adopted for design of the boom to optimize the strength and rigidity of structural parts to the greatest extent in order to effectively improve the stress distribution and improve the safety;
- There are 4 kinds of jib length combinations, 9.5m, 15.4m, 15.5m, 21.5m, and the jib offset angle is 0°, 15°, 30°;
- Telescoping mechanism: With advanced single cylinder pin telescoping technology, the boom length can be telescoped automatically according to the working condition, and the combination form of multiple boom lengths can be chosen. By simply inputting the lifting weight, working radius, working height, you can complete the lifting and loading operation prompted, which is convenient and efficient.

## Lifting mechanism

- Standard hook: 12.5(ball hook), 80t dual hook; Optional: 32t, 100t dual hook.

## Luffing mechanism

- With single luffing cylinder, the luffing mechanism uses the design software of three-connected joints to optimize the design of pin-connected points;
- The Max. luffing angle is 81°.

## Swing mechanism

- Electric proportional pump control dual swing mechanism is adopted for stable movement, excellent speed control and low power consumption;
- Unique design of swing buffer makes braking more stable;
- High strength bolts are used to fix the carrier frame with outer ring and turntable with inner ring.

## Swing bearing

- Manufactured by Sany Sauter, the swing bearing features strong bearing capacity.

## Turntable structure

- The optimized turntable structure ensures enough rigidity and strength of the turntable.

## Superstructure hydraulic system

- The main / auxiliary winch adopts electric proportional variable displacement motor, and the maximum speed is 130m/min;
- The winching, luffing, telescoping are set with dual protection on the hydraulic circuit, safer and more reliable;
- Sany patented dual pump converging intelligent speed control technology increases working efficiencies significantly;
- With dual pump converging / diverging intelligent speed regulation technology, the dual pump supplies oil independently for compound movements, which ensures the stability and reliability of the movements with better micro-mobility. The various diverging distribution mode makes work freer and easier.

## Safety device

- With load moment limiter, electric proportional security key, height limiter, three-wrap protector, and combined modeling method of theoretical modeling and prototyping model correction, the modeling is closer to reality and the control is more accurate. The full-range protection of lifting and loading operation ensures accurate, smooth and comfortable operation. With abundant interface display, the display interface is customized, modified according to user needs.

## Counterweight

- With lifting-type counterweight structure and remote controllable technology, the completion of counterweight assembly work by one person can be realized to further save manpower and shorten the preparation time before operation;
- Counterweight combination: 2t, 3.5t, 6.6t, 17.2t, 20t, 23.2t, 26t, 36t.

## Optional

- Hook: 32t, 100t(dual hook);
- One 6m jib extension;
- Auxiliary winch;
- Outrigger pad.

# Crane Introduction

Carrier

## Driver's cab

- The whole frame is made of corrosion-resistant steel sheets. The design of instrument panel in the cab meets the principle of ergonomics, and the cab is equipped with full coverage softening interior, large arc integral front window, electronic analog meter, radio / player device, air conditioner etc.

## Crane frame

- The crane frame is optimized with rectangular cross section, replacing the original concave cross section: 1. The resistance to bending and twisting is improved greatly. 2. Under the condition of the same flexural modulus, the weight of rectangular cross-section crane frame is smaller than the weight of concave cross-section crane frame. 3. The crane frame stability is improved.

## Carrier engine

- Type: 6-cylinder inline;
- Benz E3B;
- Fuel tank capacity: 550L.

## Crane axle

- Axle 1, single tire, steering axle;
- Axle 2, single tire, steering drive axle;
- Axle 3, single tire, steering axle;
- Axle 4, single tire, steering drive axle;
- Axle 5, single tire, steering drive axle.

## Driving axle

- Steering drive axle: axle 2, axle 4 and axle 5.

## Axle suspension

- All crane axle suspension devices are hydro-pneumatic suspension system.

## Tire

- Super-level all-steel radial tire, featuring stronger bearing capacity and better wearing resistance. Tire model: 525/80R25;
- Max. gradeability is 45% when speed ratio of transfer case is 1.83, and 36% when speed ratio is 0.8.

## Braking system

- The braking system includes service brake, parking brake, emergency brake and auxiliary brake;
- The service brake adopts the dual-circuit braking system. All wheels use the air servo brake, and are all installed with the disc brake;
- The parking brake is driven by the spring brake chamber and acts on axle 2 to axle 5;
- The emergency brake is driven by cutoff of the spring stored energy and concurrently serves as emergency brake;
- The auxiliary brake is composed of engine brake, exhaust brake and hydraulic retarder brake, guaranteeing the safety and reliability of traveling.

## Steering system

- Six steering modes;
- Axle 1, and axle 2 adopts mechanical linkage hydraulic power steering, and the steering gear is dual-circuit servo power steering gear;
- Electro-hydraulic ratio control auxiliary steering is adopted for axle 3, axle 4 and axle 5;
- Emergency pump is equipped in case of engine failure. When engine power is cut off, the vehicle will still travel forward inertially, during which emergency pump is activated by transfer case and feed oil for emergency steering system to pull over.

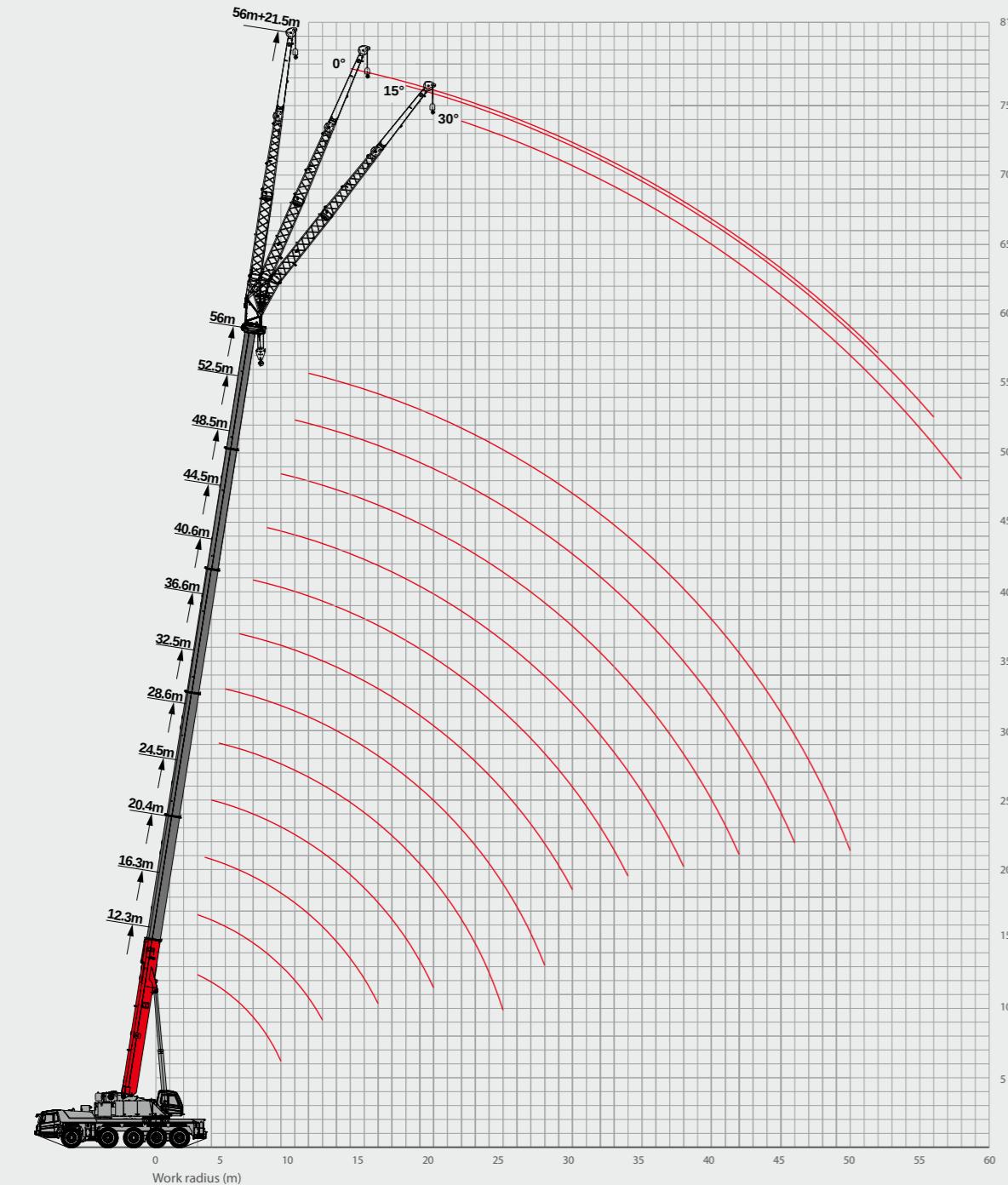
## Outrigger

- Made of high-strength steel sheet materials, front and rear telescoping outriggers are controlled through outrigger control panel with automatic leveling function and flexible operation;
- 4-point support, the transverse, longitudinal span is 7.8m×7.6m, with easy operation and strong stability.

## Electrical equipment

- 2\*12V maintenance-free battery with a mechanical power switch, the overall power can be cut off manually. CAN instrument, data integration between superstructure and chassis;
- Electrical control of motions incl. accelerator, outrigger makes crane maneuvering easier;
- Auto leveling of outrigger and suspension is realized via electrical system.

## Operating Range



## Load Chart-Telescopic Boom



Unit: t

Radius (m)	12.3	16.3	20.4	24.5	28.6	32.5	36.6	40.6	44.5	48.5	52.5	56	Radius (m)
3	110	96.0											3
3.5	90.1	90.1	90.1										3.5
4	83.1	84.8	84.8	84.8									4
4.5	78.2	78.2	78.2	78.2	74.9								4.5
5	72.1	73.6	73.6	73.6	71.4	54.7							5
6	63.9	63.9	63.9	63.9	63.9	51.3	35.2						6
7	56.6	57.8	57.8	57.8	57.8	48.1	32.2	28.5					7
8	51.2	51.5	51.5	51.5	51.6	45.1	29.7	26.3	22.9				8
9	45.3	45.6	45.6	45.5	45.7	41.5	27.4	24.5	21.4	19.0			9
10		40.8	40.8	40.7	41.0	38.9	25.3	22.7	20.1	18.1	14.7		10
11			36.3	36.3	36.2	36.5	36.5	23.7	21.3	19.0	16.9	14	12.6
12			31.8	31.7	32.3	32.8	22.5	19.9	17.8	16.2	13.4	12.1	12
13				28.3	28.2	29.4	29.1	21.1	18.6	17.0	15.4	12.8	11.5
14					25.2	25.2	26.6	26.0	20.4	17.5	15.9	14.4	12.3
16						21.7	21.7	21.9	21.5	18.2	15.6	14.4	13.1
18							18.7	18.5	18.1	16.5	13.9	12.8	11.9
20							16.1	15.9	15.5	14.9	12.6	11.7	10.7
22								13.7	13.3	13.2	11.2	10.6	9.9
24									12.1	11.7	11.6	10.1	9.8
26										10.3	10.2	9.3	9.0
28											9.1	9.0	8.5
30												8.0	7.8
32													6.9
34													6.4
36													5.9
38													5.4
40													4.7
42													4.2
44													4
46													3.6
48													3.3
50													2.9
Rope rate	12	11	10	8	7	5	5	4	3	3	2	2	Rope rate

# Load Chart-Telescopic Boom



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3	100	96.0											3
3.5	90.1	90.1	90.1										3.5
4	83.1	83.1	83.1	83.1									4
4.5	76.6	78.2	78.2	76.6	74.9								4.5
5	72.1	72.1	72.1	72.1	71.4	54.7							5
6	63.9	63.9	63.9	63.9	63.9	51.3	35.2						6
7	55.5	55.8	55.7	55.7	55.9	48.1	32.2	28.5					7
8	48.4	48.7	48.7	48.6	48.9	45.1	29.7	26.3	22.9				8
9	41.2	41.6	41.5	41.4	41.8	41.5	27.4	24.5	21.4	19.0			9
10		35.3	35.1	34.9	36.3	36.0	25.3	22.7	20.1	18.1	14.7		10
11			30.7	30.2	30.3	31.6	31.1	23.7	21.3	19.0	16.9	14	12.6
12				26.9	27.5	27.7	27.3	22.5	19.9	17.8	16.2	13.4	12.1
13					24.4	24.8	24.6	24.2	21.1	18.6	17.0	15.4	12.8
14						21.8	22.2	22.0	21.6	20.4	17.5	15.9	14.4
16							17.9	18.3	18.0	17.6	17.5	15.6	14.4
18								15.3	15.1	14.7	14.6	13.9	12.8
20									13.1	12.9	12.5	12.4	11.7
22										11.1	11.2	10.6	10.4
24											9.7	9.8	9.2
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5	72.1	72.1	72.1	72.1	71.4	54.7							5
6	62.6	63.9	63.9	63.9	63.9	51.3	35.2						6
7	54.6	54.9	54.9	54.8	55.1	48.1	32.2	28.5					7
8	47.3	47.7	47.7	47.5	48.0	45.1	29.7	26.3	22.9				8
9	38.9	39.3	39.2	39.1	39.7	40.3	27.4	24.5	21.4	19.0			9
10		33.6	33.1	33.2	34.5	34.1	25.3	22.7	20.1	18.1	14.7		10
11			28.9	28.9	29.5	29.9	29.4	23.7	21.3	19.0	16.9	14.0	11
12				25.3	25.9	26.3	26.1	25.7	22.5	19.9	17.8	16.2	12
13					22.9	23.4	23.2	22.7	21.1	18.6	17.0	15.4	13
14						20.5	20.9	20.7	20.3	20.1	17.5	15.9	14
16							16.7	17.2	16.9	16.5	16.4	15.6	14.4
18								14.4	14.2	13.9	13.7	13.5	12.8
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24											9.0	9.1	8.5
26												8.0	7.4
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5	72.1	72.1	72.1	72.1	71.4	54.7							5
6	61.4	62.6	62.6	62.6	62.6	51.3	35.2						6
7	53.5	53.7	53.8	53.7	53.9	48.1	32.2	28.5					7
8	44.1	44.5	44.5	44.3	44.7	45.1	29.7	26.3	22.9				8
9	36.2	37.0	36.5	36.6	38.0	37.5	27.4	24.5	21.4	19.0			9
10		31.2	30.9	32.0	32.2	31.7	25.3	22.7	20.1	18.1	14.7		10
11		26.9	27.5	28.0	27.7	27.3	23.7	21.3	19.0	16.9	14.0	12.6	11
12		23.4	24.0	24.6	24.3	23.8	22.5	19.9	17.8	16.2	13.4	12.1	12
13			21.2	21.7	21.5	21.0	20.9	18.6	17.0	15.4	12.8	11.5	13
14				18.9	19.5	19.2	18.7	18.6	17.5	15.9	14.4	12.3	14
16					15.4	15.9	15.6	15.6	15.1	14.9	14.4	13.1	16
18						13.3	13.0	13.1	12.5	12.7	12.7	11.9	18
20						11.3	11.1	11.2	10.6	11.1	11.0	10.7	20
22							9.4	9.5	8.9	9.5	9.4	9.3	22
24							8.2	8.3	7.6	8.2	8.1	8.3	24
26							7.1	6.6	7.1	7.0	7.2	6.9	26
28							5.7	5.6	6.2	6.1	6.2	5.9	28
30								4.8	5.5	5.3	5.4	5.2	30
32								4.7	4.6	4.8	4.4	4.4	32
34								4.2	4.0	4.3	3.8	3.8	34
36									3.4	3.6	3.3	3.3	36
38									2.9	3.1	2.8	2.8	38
40										2.7	2.2	2.4	40
42										2.3	1.9	1.9	42
44											1.5	1.5	44
46											1.2	1.2	46
48												0.9	48
50													50
Rope rate	12	11	10	8	7	5	5	4	3	3	2	2	Rope rate

## Load Chart-Telescopic Boom



Unit: t

Radius (m)	12.3	16.3	20.4	24.5	28.6	32.5	36.6	40.6	44.5	48.5	52.5	56	Radius (m)
3	100	96.0											3
3.5	88.3	90.1	90.1										3.5
4	83.1	83.1	83.1	83.1									4
4.5	76.6	76.7	76.7	76.6	74.9								4.5
5	72.1	72.1	72.1	72.1	71.4	54.7							5
6	61.4	61.4	61.4	61.4	61.4	51.3	35.2						6
7	52.4	52.8	52.7	52.6	53.0	48.1	32.2	28.5					7
8	41.3	41.7	41.7	41.5	42.3	42.8	29.7	26.3	22.9				8
9	33.9	34.7	34.2	34.5	35.7	35.2	27.4	24.5	21.4	19.0			9
10		29.2	29.9	30.4	30.1	29.7	25.3	22.7	20.1	18.1	14.7		10
11			25.1	25.7	26.3	26.0	25.5	23.7	21.3	19.0	16.9	14.0	11
12			21.9	22.5	23.0	22.7	22.3	22.1	19.9	17.8	16.2	13.4	12
13					19.8	20.4	20.1	19.6	19.5	18.6	17.0	15.4	13
14						17.7	18.2	17.9	17.4	17.1	15.9	14.4	14
16						14.3	14.8	14.5	14.7	14.0	14.0	13.1	16
18							12.3	12.1	12.2	11.6	12.2	12.1	11.7
20							10.4	10.2	10.3	9.6	10.2	10.1	10
22								8.6	8.7	8.1	8.6	8.5	22
24									7.4	7.5	6.8	7.5	24
26										6.4	5.8	6.4	26
28										5.0	4.9	5.5	28
30											4.1	4.8	30
32											4.1	3.9	32
34											3.5	3.3	34
36												2.8	36
38												2.4	38
40												2.1	40
42												1.8	42
44												1.0	44
46												0.7	46
48													48
50													50
Rope rate	12	11	10	8	7	5	5	4	3	3	2	2	Rope rate

## Load Chart-Telescopic Boom



Unit: t

Radius (m)	12.3	16.3	20.4	24.5	28.6	32.5	36.6	40.6	44.5	48.5	52.5	56	Radius (m)
3	100	95.7											3
3.5	88.3	88.3	88.3										3.5
4	81.4	81.4	81.4	81.4									4
4.5	75.1	75.1	75.1	75.1	74.9								4.5
5	67.9	67.9	67.9	67.9	67.9	54.7							5
6	53.4	53.9	53.8	53.6	54.2	51.3	35.2						6
7	39.5	40.4	39.8	41.2	41.6	41.1	32.2	28.5					7
8	30.8	31.8	32.5	33.1	32.8	32.3	29.7	26.3	22.9				8
9	25.0	25.9	26.6	27.1	26.9	26.4	26.2	24.5	21.4	19.0			9
10		21.6	22.3	22.8	22.5	22.7	21.9	21.7	20.1	18.1	14.7		10
11		18.2	18.8	19.4	19.1	19.3	18.5	19.0	18.6	16.9	14.0	12.6	11
12		15.5	16.2	16.7	16.5	16.6	15.8	16.6	16.5	16.0	13.4	12.1	12
13			14.0	14.5	14.2	14.4	13.6	14.4	14.2	14.1	12.8	11.5	13
14				12.1	12.8	12.5	12.7	11.7	12.6	12.5	12.8	12.3	14
16					9.3	9.9	9.5	9.8	8.9	9.7	9.5	9.8	9.4
18						7.8	7.5	7.6	6.8	7.6	7.5	7.7	7.2
20						6.2	5.9	6.1	5.2	6.1	5.9	6.1	5.7
22							4.7	4.9	4.0	4.9	4.6	4.9	4.5
24								3.8	3.9	3.1	3.8	3.7	3.9
26									3.0	2.3	3.0	2.9	3.1
28										1.8	1.7	2.4	2.2
30											1.1	1.8	1.7
32												1.3	1.2
34													0.9
36													
38													
40													
42													
44													
46													
48													
50													
Rope rate	12	11	10	8	7	5	5	4	3	3	2	2	Rope rate

## Load Chart-Telescopic Boom



Unit: t

Radius (m)	12.3	16.3	20.4	24.5	28.6	32.5	36.6	40.6	44.5	48.5	52.5	56	Radius (m)
3	100	95.7											3
3.5	88.3	88.3	88.3										3.5
4	81.4	81.4	81.4	81.4									4
4.5	73.6	73.6	73.6	73.6	73.6								4.5
5	66.5	66.5	66.5	66.5	66.5	54.7							5
6	48.2	49.4	48.6	48.8	49.7	50.2	35.2						6
7	35.5	36.6	37.3	38.1	37.7	37.2	32.2	28.5					7
8	27.7	28.7	29.4	30.0	29.7	29.2	29.0	26.3	22.9				8
9	22.1	23.3	23.9	24.5	24.2	24.4	23.6	23.4	21.4	19.0			9
10		18.7	19.6	20.3	20.0	20.2	19.1	20.1	19.2	18.1	14.7		10
11		15.3	16.1	16.9	16.5	16.7	15.7	16.7	16.6	15.9	14.0	12.6	11
12		12.7	13.5	14.2	13.9	14.0	13.1	14.0	13.9	14.2	13.4	12.1	12
13			11.4	12.1	11.8	12.0	11.0	12.0	11.8	12.1	11.6	11.5	13
14				9.8	10.4	10.1	10.3	9.3	10.3	10.1	10.4	10.0	14
16					7.4	7.9	7.6	7.8	6.9	7.8	7.6	7.4	16
18						6.1	5.8	6.0	5.1	5.9	5.8	6.0	5.6
20							4.8	4.5	4.6	3.8	4.5	4.4	4.6
22								3.4	3.5	2.7	3.5	3.4	3.2
24									2.6	2.7	1.9	2.7	2.3
26										2.0	1.2	1.8	2.0
28											0.7	1.4	1.2
30												0.9	0.7
32													32
34													34
36													36
38													38
40													40
42													42
44													44
46													46
48													48
50													50
Rope rate	12	11	10	9	7	6	5	4	3	3	3	2	Rope rate

# Load Chart-Telescopic Boom



Unit: t

Radius (m)	12.3	16.3	20.4	24.5	28.6	32.5	36.6	40.6	44.5	48.5	52.5	56	Radius (m)
3	100	95.7											3
3.5	88.3	88.3	88.3										3.5
4	81.4	81.4	81.4	81.4									4
4.5	73.6	73.6	73.6	73.6	73.6								4.5
5	66.5	66.5	66.5	66.5	66.5	54.7							5
6	45.9	47.0	46.3	46.4	48.4	47.8	35.2						6
7	33.7	34.7	35.5	36.2	35.9	35.3	32.2	28.5					7
8	26.2	27.1	27.8	28.5	28.2	28.4	27.5	26.3	22.9				8
9	20.0	21.3	22.2	23.0	22.6	23.0	21.7	21.6	21.4	19.0			9
10		16.9	17.8	18.6	18.2	18.5	17.3	18.4	18.3	17.5	14.7		10
11		13.7	14.6	15.3	15.0	15.2	14.1	15.1	15.0	15.3	14.0	12.6	11
12		11.4	12.2	12.8	12.4	12.7	11.6	12.7	12.6	12.8	12.3	12.1	12
13			10.2	10.9	10.6	10.8	9.8	10.8	10.6	10.9	10.4	10.4	13
14				8.7	9.3	9.1	9.2	8.3	9.2	9.1	9.3	8.8	14
16					6.5	7.0	6.7	6.9	5.9	6.9	6.7	6.9	16
18						5.3	5.0	5.2	4.3	5.1	5.0	5.2	18
20							4.1	3.8	3.9	3.1	3.9	3.8	20
22								2.8	2.9	2.1	2.9	2.8	22
24									2.0	2.2	1.3	2.0	1.9
26										1.4	1.3	1.5	26
28											0.9	0.7	1.0
30													28
32													30
34													32
36													34
38													36
40													38
42													40
44													42
46													44
48													46
50													48
Rope rate	12	11	10	8	7	5	5	4	3	3	2	2	Rope rate

# Load Chart-Telescopic Boom



Unit: t

Radius (m)	12.3	16.3	20.4	24.5	28.6	32.5	36.6	40.6	44.5	48.5	52.5	56	Radius (m)
3	100	90.1											3
3.5	81.4	81.4	81.4										3.5
4	75.1	75.1	75.1	75.1									4
4.5	69.3	69.3	69.3	69.3	69.3	69.3							4.5
5	63.9	63.9	63.9	63.9	64.5	54.7							5
6	55.7	56.0	55.9	55.9	56.1	51.3	35.2						6
7	49.1	49.3	49.4	49.2	49.5	48.1	32.2	28.5					7
8	41.6	41.9	41.9	41.8	42.3	42.9	29.7	26.3	22.9				8
9	34.6	35.4	34.9	35.0	36.3	35.8	27.4	24.5	21.4	19.0			9
10		30.1	30.7	31.3	31.0	30.6	25.3	22.7	20.1	18.1	14.7		10
11			26.1	26.7	27.2	27.0	26.6	23.7	21.3	19.0	16.9	14.0	11
12			22.9	23.5	24.0	23.8	23.4	22.5	19.9	17.8	16.2	13.4	12
13				20.9	21.3	21.1	20.7	20.6	18.6	17.0	15.4	12.8	13
14					18.8	19.2	19.0	18.6	18.5	17.5	15.9	14.4	14
16						15.4	15.8	15.5	15.6	15.0	14.9	14.4	16
18							13.3	13.1	13.2	12.5	12.7	11.9	10.5
20								11.3	11.1	11.2	10.7	11.2	10.7
22									9.6	9.7	9.1	9.6	9.5
24										8.3	8.4	8.3	8.4
26											7.3	7.2	7.4
28											6.0	5.9	6.3
30												5.2	5.4
32												5.1	4.8
34												4.4	4.3
36													3.8
38													3.4
40													3.1
42													2.8
44													2.1
46													1.8
48													1.5
50													1.2
Rope rate	12	11	10	8	7	5	5	4	3	3	2	2	Rope rate

# Load Chart-Telescopic Boom



Unit: t

Radius (m)	12.3	16.3	20.4	24.5	28.6	32.5	36.6	40.6	44.5	48.5	52.5	56	Radius (m)
3	88	88.3	79.8										3
3.5	79.8	79.8											3.5
4	73.6	73.6	73.6	73.6									4
4.5	67.7	67.9	67.9	67.8	67.9								4.5
5	62.6	62.6	62.6	62.6	62.6	54.7							5
6	53.7	53.9	53.9	53.8	54.1	51.3	35.2						6
7	41.6	42.5	41.9	42.1	43.5	43.0	32.2	28.5					7
8	33.3	34.2	34.8	35.4	35.1	34.7	29.7	26.3	22.9				8
9	27.5	28.3	28.9	29.5	29.2	28.8	27.4	24.5	21.4	19.0			9
10		24.0	24.6	25.1	24.9	24.4	24.3	22.7	20.1	18.1	14.7		10
11		20.7	21.2	21.8	21.6	21.7	21.0	20.8	19.0	16.9	14.0	12.6	11
12		18.1	18.6	19.1	18.8	19.0	18.3	18.1	17.8	16.2	13.4	12.1	12
13			16.5	16.9	16.7	16.9	16.2	16.7	16.4	15.4	12.8	11.5	13
14				14.7	15.1	14.9	15.0	14.4	15.0	14.9	14.4	12.3	11.2
16					12.0	12.4	12.2	12.3	11.7	12.3	12.1	11.3	10.3
18						10.3	10.0	10.2	9.6	10.1	10.0	10.2	9.9
20							8.6	8.4	8.5	7.9	8.5	8.4	8.6
22								7.1	7.2	6.7	7.2	7.1	7.3
24									6.1	6.3	5.7	6.2	6.0
26										5.4	4.7	5.3	5.2
28											4.2	4.1	4.6
30												3.4	4.0
32													3.4
34													2.9
36													2.4
38													2.0
40													1.8
42													1.4
44													0.7
46													
48													
50													
Rope rate	12	11	10	8	7	5	5	4	3	3	2	2	Rope rate

# Load Chart-Telescopic Boom



Unit: t

Radius (m)	12.3	16.3	20.4	24.5	28.6	32.5	36.6	40.6	44.5	48.5	52.5	56	Radius (m)
3	86.5	86.5											3
3.5	79.8	79.8	79.8										3.5
4	72.1	72.1	72.1	72.1									4
4.5	67.2	67.4	67.5	67.4	67.6								4.5
5	62.3	62.4	62.4	62.3	62.5	54.7							5
6	50.7	51.2	51.1	51.0	51.4	51.3	35.2						6
7	38.6	39.7	39.1	41.0	40.7	40.2	32.2	28.5					7
8	30.9	31.8	32.4	33.0	32.7	32.3	29.7	26.3	22.9				8
9	25.5	26.3	26.9	27.5	27.2	26.8	26.6	24.5	21.4	19.0			9
10		22.3	22.9	23.4	23.1	23.3	22.6	22.4	20.1	18.1	14.7		10
11			19.2	19.7	20.3	20.0	20.2	19.4	19.2	19.0	16.9	14.0	11
12			16.7	17.2	17.7	17.5	17.6	16.9	17.6	17.2	16.2	13.4	12
13				15.3	15.7	15.5	15.6	15.0	15.6	15.5	15.1	12.8	13
14					13.6	14.0	13.8	13.9	13.3	13.9	13.8	13.5	12.3
16						11.0	11.4	11.2	11.3	10.6	11.3	11.2	11.0
18							9.4	9.2	9.3	8.7	9.3	9.2	9.0
20								7.9	7.7	7.8	7.2	7.8	7.5
22									6.5	6.6	6.0	6.5	6.3
24										5.6	5.7	5.0	5.3
26											4.8	4.2	4.5
28											3.6	3.5	3.8
30												2.9	3.2
32													2.9
34													2.5
36													1.9
38													1.5
40													1.4
42													1.0
44													
46													
48													
50													
Rope rate	12	11	10	8	7	5	5	4	3	3	2	2	Rope rate

# Load Chart-Telescopic Boom



Unit: t

Radius (m)	12.3	16.3	20.4	24.5	28.6	32.5	36.6	40.6	44.5	48.5	52.5	56	Radius (m)
3	86.5	86.5											3
3.5	78.2	78.2	78.2										3.5
4	72.1	72.1	72.1	72.1									4
4.5	66.5	66.5	66.5	66.5	66.5								4.5
5	61.4	61.4	61.4	61.4	61.4	54.7							5
6	46.4	47.4	46.8	47.0	48.6	48.1	35.2						6
7	35.3	36.2	36.9	37.6	37.3	36.8	32.2	28.5					7
8	28.1	29.0	29.6	30.3	30.0	29.5	29.3	26.3	22.9				8
9	23.1	23.9	24.5	25.2	24.8	25.1	24.3	24.1	21.4	19.0			9
10		20.2	20.8	21.3	21.1	21.2	20.5	20.3	20.1	18.1	14.7		10
11			17.3	17.9	18.4	18.1	18.3	17.6	18.3	18.2	16.9	14.0	12.6
12				15.1	15.6	16.1	15.9	16.0	15.3	16.0	15.9	15.5	13.4
13					13.8	14.2	14.0	14.2	13.4	14.1	14.0	14.1	12.8
14						12.2	12.6	12.4	12.6	11.9	12.5	12.4	12.6
16							9.8	10.3	10.0	10.2	9.5	10.1	10.0
18								8.4	8.2	8.3	7.7	8.3	8.2
20									7.0	6.8	6.9	6.3	6.9
22										5.7	5.8	5.2	5.7
24											4.8	4.9	4.2
26												4.1	3.5
28													3.0
30													
32													
34													
36													
38													
40													
42													
44													
46													
48													
50													
Rope rate	12	11	10	8	7	5	5	4	3	3	2	2	Rope rate

# Load Chart-Telescopic Boom



Unit: t

Radius (m)	12.3	16.3	20.4	24.5	28.6	32.5	36.6	40.6	44.5	48.5	52.5	56	Radius (m)
3	86.5	86.5											3
3.5	78.2	78.2	78.2										3.5
4	72.1	72.1	72.1	72.1									4
4.5	66.2	66.4	66.4	66.5									4.5
5	60.1	60.2	60.1	60.1	60.2	54.7							5
6	42.8	43.8	43.1	45.3	45.0	44.4	35.2						6
7	32.4	33.4	34.1	34.7	34.5	34.0	32.2	28.5					7
8	25.8	26.6	27.4	27.9	27.7	27.9	27.0	26.3	22.9				8
9	21.1	21.9	22.5	23.2	22.9	23.1	22.2	22.0	21.4	19.0			9
10		18.5	19.1	19.6	19.3	19.5	18.8	19.5	19.1	18.1	14.7		10
11			15.8	16.4	16.8	16.6	16.8	16.1	16.7	16.6	16.2	14.0	11
12				13.7	14.2	14.5	14.6	14.0	14.6	14.5	14.7	13.4	12
13					12.5	13.0	12.8	12.9	12.2	12.9	12.8	13.0	13
14						11.1	11.5	11.3	11.4	10.8	11.4	11.3	14
16							8.8	9.3	9.0	9.1	8.5	9.1	9.2
18								7.6	7.4	7.5	6.8	7.5	7.2
20									6.3	6.1	6.1	6.0	6.2
22										5.1	5.2	4.5	5.1
24										4.2	4.2	3.6	4.1
26											3.5	2.8	3.5
28											2.2	2.1	2.8
30												1.6	2.3
32												1.7	1.6
34												1.3	1.2
36													0.8
38													0.7
40													40
42													42
44													44
46													46
48													48
50													50
Rope rate	12	11	10	8	7	5	5	4	3	3	2	2	Rope rate

# Load Chart-Telescopic Boom



Unit: t

Radius (m)	12.3	16.3	20.4	24.5	28.6	32.5	36.6	40.6	44.5	48.5	52.5	56	Radius (m)
3	83.1	83.1											3
3.5	75.1	76.7	76.7										3.5
4	68.9	69.2	69.1	69.1									4
4.5	52.5	53.9	53.0	53.3	55.4								4.5
5	41.8	42.9	43.8	44.7	44.3	43.7							5
6	29.0	30.0	30.8	31.5	31.2	31.4	30.4						6
7	21.6	22.5	23.2	23.9	23.6	23.9	22.9	23.9					7
8	16.8	17.7	18.3	18.9	18.6	18.9	18.0	18.8	18.7				8
9	13.5	14.3	15.0	15.5	15.3	15.5	14.6	15.5	15.4	15.6			9
10		11.9	12.5	13.0	12.7	12.9	12.2	12.9	12.8	13.0	12.6		10
11		9.8	10.5	11.0	10.8	10.9	10.1	10.9	10.8	11.0	10.7	10.7	11
12		8.2	8.8	9.5	9.2	9.4	8.4	9.4	9.2	9.5	9.0	9.1	12
13			7.5	8.1	7.8	8.0	7.1	8.0	7.8	8.1	7.6	7.6	13
14				6.4	7.0	6.7	6.8	6.0	6.8	6.7	6.9	6.5	14
16					4.7	5.2	4.9	5.0	4.2	5.0	4.9	5.2	4.7
18						3.9	3.6	3.8	2.9	3.8	3.5	3.8	3.4
20							2.9	2.6	2.8	2.0	2.7	2.5	2.8
22								1.9	2.0	1.2	1.9	1.7	2.0
24									1.2	1.3	1.3	1.1	1.3
26										0.8	0.7	0.8	0.8
28													28
30													30
32													32
34													34
36													36
38													38
40													40
42													42
44													44
46													46
48													48
50													50
Rope rate	12	11	10	8	7	5	5	4	3	3	2	2	Rope rate

# Load Chart-Telescopic Boom



Unit: t

Radius (m)	12.3	16.3	20.4	24.5	28.6	32.5	36.6	40.6	44.5	48.5	52.5	56	Radius (m)
3	83.1	83.1											3
3.5	76.0	76.2	76.1										3.5
4	60.7	62.3	61.2	61.5									4
4.5	45.5	46.9	47.0	48.9	48.4								4.5
5	36.1	37.2	38.1	39.0	38.6	39.0							5
6	24.8	25.8	26.6	27.3	27.0	27.3	26.2						6
7	18.2	19.3	20.0	20.6	20.3	20.5	19.6	20.5					7
8	13.7	14.9	15.7	16.3	16.0	16.2	15.3	16.2	16.1				8
9	10.5	11.6	12.4	13.1	12.8	13.1	12.0	13.1	12.9	13.2			9
10		9.3	10.1	10.7	10.4	10.6	9.7	10.6	10.5	10.7	10.2		10
11			7.5	8.2	8.8	8.5	8.8	7.8	8.8	8.5	8.8	8.4	11
12			6.0	6.8	7.4	7.1	7.2	6.4	7.2	7.1	7.4	7.0	12
13				5.6	6.2	5.9	6.1	5.2	6.1	5.9	6.1	5.7	13
14					4.6	5.2	5.0	5.1	4.3	5.1	5.0	5.2	4.7
16						3.2	3.7	3.4	3.6	2.7	3.5	3.4	3.2
18							2.6	2.3	2.5	1.7	2.4	2.3	2.2
20								1.8	1.5	1.6	0.8	1.5	1.4
22									0.8	0.9		0.9	0.7
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
Rope rate	12	11	10	8	7	5	5	4	3	3	2	2	Rope rate

## Load Chart-Telescopic Boom

Unit: t



Radius (m)	12.3	16.3	20.4	24.5	28.6	32.5	36.6	40.6	44.5	48.5	52.5	56	Radius (m)
3	83.1	83.1											3
3.5	75.1	75.1	75.1										3.5
4	56.4	58.0	56.9	57.2									4
4.5	42.3	43.6	44.6	45.6	45.2								4.5
5	33.3	34.6	35.5	36.3	36.0	36.3							5
6	22.8	23.8	24.7	25.4	25.1	25.2	24.2						6
7	16.2	17.4	18.3	19.0	18.7	19.0	17.9	19.0					7
8	12.0	13.1	13.9	14.7	14.3	14.7	13.5	14.6	14.5				8
9	9.1	10.2	11.0	11.7	11.3	11.6	10.6	11.6	11.5	11.7			9
10		8.1	8.8	9.4	9.2	9.4	8.4	9.3	9.2	9.4	9.0		10
11		6.4	7.1	7.7	7.5	7.6	6.8	7.6	7.5	7.7	7.3	7.3	11
12		5.1	5.8	6.4	6.2	6.3	5.4	6.3	6.2	6.4	5.9	5.9	12
13			4.7	5.3	5.1	5.2	4.3	5.2	5.1	5.3	4.8	4.8	13
14				3.9	4.4	4.1	4.3	3.5	4.3	4.1	4.3	4.0	14
16				2.5	3.0	2.8	2.9	2.1	2.9	2.7	2.9	2.6	16
18					2.0	1.8	1.9	1.1	1.9	1.7	1.9	1.5	18
20						1.3	0.9	1.0		1.0	0.9	1.1	0.7
22													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
Rope rate	12	11	10	8	7	5	5	4	3	3	2	2	Rope rate

## Load Chart-Fixed Jib

Unit: t



Radius (m)	52.5+9.5			52.5+15.5			52.5+21.5			Radius (m)	
	jib offset(°)										
	0°	15°	30°	0°	15°	30°	0°	15°	30°		
10	6.5									10	
11	6.5									11	
12	6.5	4.5								12	
14	6.2	4.5	3.4	4.9	3.5					14	
16	5.7	4.4	3.2	4.8	3.5					16	
18	5.5	4.3	3.1	4.6	3.5	2.5	3.2	2.5		18	
20	5.3	4.2	3	4.5	3.5	2.5	3	2.4		20	
22	5.2	4	2.9	4.4	3.5	2.5	2.8	2.3	1.5	22	
24	4.9	3.9	2.9	4.1	3.4	2.5	2.6	2.2	1.5	24	
26	4.5	3.7	2.8	3.8	3.3	2.4	2.4	2.1	1.5	26	
28	4.2	3.6	2.8	3.5	3.1	2.3	2.3	2.1	1.5	28	
30	3.5	3.5	2.7	3.4	2.9	2.3	2.2	2	1.5	30	
32	3.4	3.2	2.6	3.2	2.8	2.2	2.2	1.9	1.5	32	
34	3	3	2.6	3.1	2.6	2.1	2.1	1.8	1.5	34	
36	2.7	2.6	2.5	3	2.5	2	2	1.8	1.4	36	
38	2.5	2.5	2.4	2.9	2.4	1.9	1.9	1.7	1.4	38	
40	2.2	2.3	2.1	2.7	2.3	1.8	1.8	1.6	1.4	40	
42	1.9	2.1	1.8	2.4	2.2	1.8	1.6	1.5	1.4	42	
44		1.7	1.6	2.1	2	1.7	1.5	1.5	1.3	44	
46					1.9	1.8	1.6	1.4	1.4	46	
48						1.6	1.5	1.4	1.3	48	
50							1.2	1.1	1.1	50	
52									1.1	0.9	
54									0.9	0.9	
56										0.8	
Rope rate	1	1	1	1	1	1	1	1	1	Rope rate	

# Load Chart-Fixed Jib

Unit: t

Radius (m)	56+9.5			56+15.5			56+21.5			Radius (m)	
	jib offset(°)										
	0°	15°	30°	0°	15°	30°	0°	15°	30°		
10	6.5									10	
11	6.5									11	
12	6.5	4.5								12	
14	6.5	4.5	3.3	5			3.8			14	
16	6.2	4.5	3.1	4.7	3.5		3.8			16	
18	5.8	4.5	3.1	4.6	3.5	2.5	3.6	2.5		18	
20	5.6	4.3	3	4.5	3.5	2.5	3.2	2.5		20	
22	5.4	4.1	2.9	4.3	3.5	2.5	2.9	2.5	1.5	22	
24	5.2	4	2.8	4.1	3.4	2.5	2.7	2.3	1.5	24	
26	4.9	3.9	2.8	3.7	3.2	2.3	2.5	2.2	1.5	26	
28	4.5	3.7	2.7	3.5	3	2.2	2.4	2.1	1.5	28	
30	4.2	3.6	2.6	3.3	2.7	2.1	2.2	2.1	1.5	30	
32	3.6	3.4	2.6	3.2	2.6	2	2.1	2	1.5	32	
34	3.3	3.2	2.5	3	2.6	2	2	1.9	1.5	34	
36	3.1	3	2.5	3	2.4	1.9	2	1.8	1.5	36	
38	2.7	2.7	2.3	2.8	2.3	1.8	1.9	1.8	1.4	38	
40	2.5	2.4	2.1	2.6	2.2	1.7	1.8	1.7	1.4	40	
42	2.2	2.1	1.8	2.2	2.1	1.6	1.8	1.6	1.4	42	
44	1.9	1.8	1.6	2	2	1.5	1.6	1.5	1.4	44	
46		1.7	1.4	1.8	1.7	1.5	1.5	1.5	1.3	46	
48			1.5	1.5	1.4	1.4	1.4	1.3		48	
50				1.2	1.2	1.4	1.2	1.2		50	
52					1	1	1.1	1.1		52	
54							1	1		54	
56							0.9	0.9		56	
58								0.8		58	
Rope rate	1	1	1	1	1	1	1	1	Rope rate		



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