

SANY

Load Charts

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 **WARNING**

Read and follow the safety precautions and instructions in this manual and on the machine decals. Failure to do so can cause serious injury, death or property damage. Keep this manual with the machine for reading and future reference.

1 General

1.1. Calculation of Rated Capacity

Rated capacity in the load charts are determined either by strength or by stability.

Rated capacity determined by stability is calculated according to EN13000 Mobile Cranes——

Determination of Stability and these rated capacity are always within the 75% of tipping load.

1.2. Use the Load Charts Properly

1) Ground conditions: rated capacity in the load charts is calculated in the conditions that the crane is on firm, level and evenly-supported ground with gradient smaller than 1%. If these condition are not met, the working capacity must be decreased based on the load chart.

2) Actual Lifting Capacity: the weight of hook blocks, lifting devices, and wire ropes reeving between the hooks and boom head must be deducted from the rate capacity to achieve the actual lifting capacity.

Table 3-1 Specification of Hooks

Model(T)	80	9
Deadweight (t)	1.05	0.35

Note: the wire rope winding between the hook (main hook, auxiliary hook) is calculated as 2.42 kg/m.

3) Wind Speed: Calculating rated capacity also takes allowable wind speed of each operating condition into consideration. The machine is allowed to operate when the speed of stable wind or gust (moment wind speed) is no more than 13.8m/s, which means the maximum allowable wind speed for is 9.8m/s~13.8m/s(equivalent to 60~120 N/m²dynamic pressure); when wind speed is higher than 13.8m/s, the boom system must be lowered down to 0°.

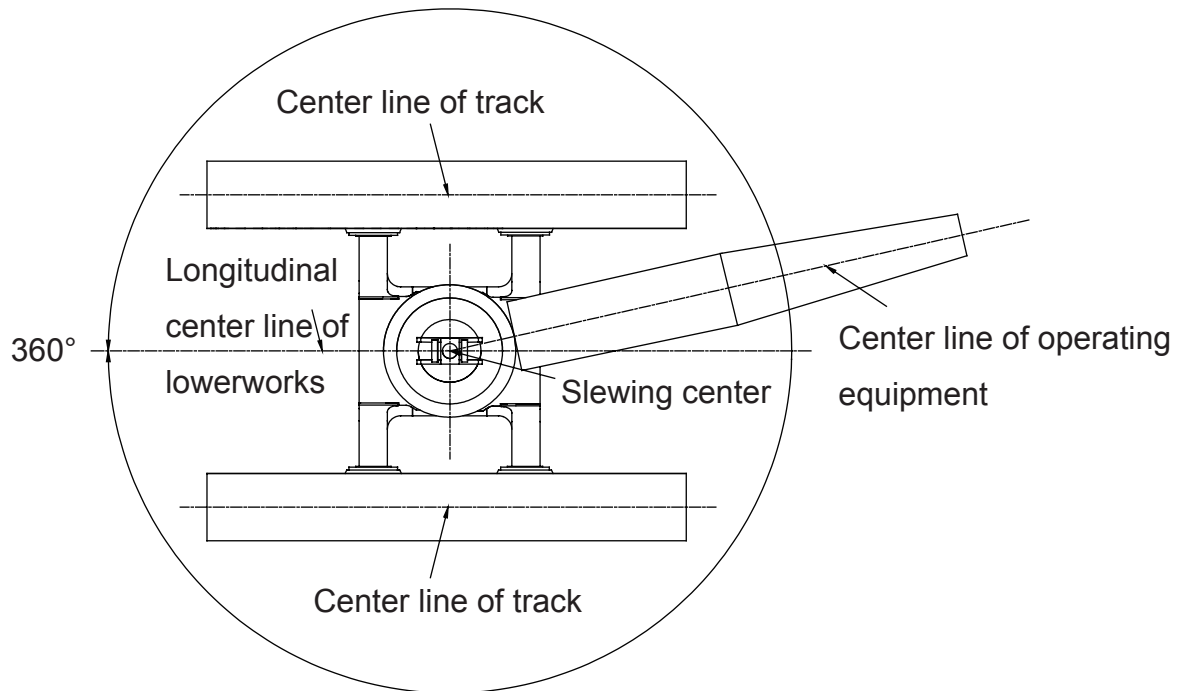
Table 3-2 Allowable Wind Speed

Boom/jib length (m)	Allowable wind speed (m/s)
12.2~34m	13.8
34~47	11.3
>47m	9.8

Refer to Safety Manual or contact SANY service technician to know more about wind speed effect on crane.

If the wind speed at operating site cannot fulfill the requirements listed above, the crane capacity must be reduced according to the actual situation before it is allowed to operate.
Please see The Impact of Wind Speed in Section II of Operating Manual for details.

4) Working scope: rated capacity listed in the load charts are all applicable for the whole 360° slewing range.



5) Capacity for crane in traveling: rated capacity listed in the load chart is the value at non-traveling state, which should be decreased accordingly when the crane is traveling. The extent varies with the operating conditions. For traveling steadily at low speed, 70% of the rated capacity is allowed in H operating condition when traveling in straight line; 50% of the rated capacity is allowed in FJ operating condition when traveling in straight line.

Notices requiring special care for traveling with load:

- a) It is suggested to move the load in an area as small as possible and lift the load close to the ground (with a maximum distance of 500mm above the ground);
- b) Only the low speed can be used if possible, and proper measures should be taken to prevent the load swinging.

For detailed requirements on traveling, please refer to the “Traveling Operation” in Chapter II of this manual.

Load Charts

SCC800TB Crawler Crane



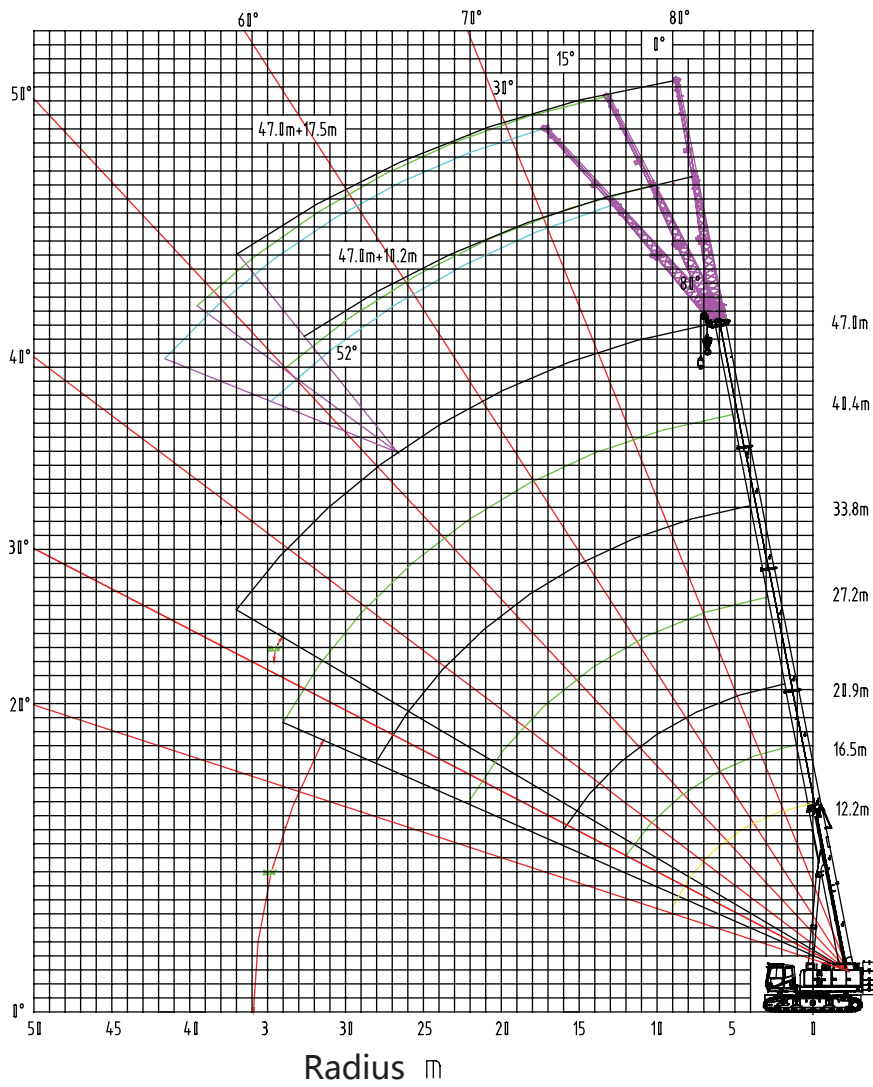
2 Operating Condition Codes

Operating Condition Codes

NO.	Operating Condition	Code
1	Main Boom	H
2	Main Boom + Fix Jib	FJ

3 Operating Range Curve

3.1 Operating condition



Curve of Boom Raising Height

Load Chart of Boom (Level Ground)

Unit: t

Boom length (m) Radius (m)	12.2	16.5	18.7	20.9	23.0	25.2	27.2	29.5	31.8	33.8	36.0	38.3	40.4	42.5	47.0	Boom length (m) Radius (m)
3.0	80.0	65.0														3.0
3.5	75.0	63.0														3.5
4.0	68.0	61.5	30.0	44.0												4.0
4.5	65.0	60.0	30.0	43.0	30.0	28.0		28.0								4.5
5.0	58.0	55.5	30.0	42.5	30.0	27.0	30.0	27.0		26.0						5.0
5.5	54.0	50.0	30.0	39.6	30.0	26.0	30.0	26.0		25.0						5.5
6.0	50.3	47.0	29.0	39.3	29.0	25.0	30.0	25.0	20.0	24.0	20.0		20.0			6.0
6.5	46.0	43.0	29.0	35.4	29.0	24.5	29.0	24.5	19.5	23.0	19.5		19.0			6.5
7.0	40.3	40.0	29.0	34.8	29.0	24.0	28.0	24.0	19.0	22.5	19.0		18.0			7.0
7.5	37.2	37.0	28.0	31.0	28.5	23.1	26.8	23.5	18.0	21.0	18.5		17.5			7.5
8.0	32.4	32.1	28.0	30.5	28.0	22.8	26.5	23.0	17.0	21.4	18.0		17.2			8.0
9.0	26.8	26.6	27.0	26.3	27.0	21.5	24.3	22.0	16.0	20.5	16.8		16.0		11.7	9.0
10.0		22.4	23.0	22.1	23.3	20.2	21.7	21.0	15.0	19.6	15.6	11.0	15.3	11.0	11.5	10.0
11.0		19.2	19.9	18.5	19.5	19.5	19.3	19.9	14.0	16.2	14.5	10.5	13.6	10.8	10.7	11.0
12.0		16.7	17.2	15.6	16.8	17.8	17.5	17.1	13.2	15.0	13.6	10.2	14.8	10.5	10.6	12.0
14.0			12.8	11.6	12.8	13.6	13.3	13.1	11.6	12.5	12.0	9.6	11.7	10.2	10.2	14.0
16.0				8.8	9.8	10.8	10.2	10.4	10.5	10.6	10.9	8.8	10.0	9.8	9.7	16.0
18.0					7.8	8.8	8.0	8.3	9.0	8.4	8.9	8.0	8.9	8.9	8.1	18.0
20.0						7.4	6.4	6.9	7.5	6.9	7.3	7.3	7.3	7.5	7.3	20.0
22.0							5.2	5.6	6.2	5.7	6.1	6.4	6.1	6.4	6.2	22.0
24.0								4.6	5.1	4.6	5.1	5.6	5.0	5.4	5.4	24.0
26.0									4.4	3.8	4.3	4.7	4.1	4.6	4.6	26.0
28.0										3.1	3.6	4.0	3.4	3.9	3.9	28.0
30.0											3.0	3.5	2.8	3.3	3.4	30.0
32.0												3.0	2.3	2.9	2.8	32.0

Load Chart of Boom (Level Ground)

Unit: t

Boom length (m) Radius (m)	12.2	16.5	18.7	20.9	23.0	25.2	27.2	29.5	31.8	33.8	36.0	38.3	40.4	42.5	47.0	Boom length (m) Radius (m)
34.0													1.8	2.3	2.4	34.0
36.0															1.8	36.0
Wire rope parts of line	11	10	10	8	8	6	6	6	5	5	5	4	4	3	3	Wire rope parts of line
Min. protection angle													20°	30°	30°	Min. protection angle
Section 2	0	50	0	100	50	0	100	50	0	100	50	0	100	50	100	Section 2
Section 3	0	0	25	0	25	50	25	50	75	50	75	100	75	100	100	Section 3
Section 4	0	0	25	0	25	50	25	50	75	50	75	100	75	100	100	Section 4
Section 5	0	0	25	0	25	50	25	50	75	50	75	100	75	100	100	Section 5

Load Chart of Boom (Out-of-Level)

Unit: t

Boom length (m) Radius (m)	12.2	16.5	18.7	20.9	23.0	25.2	27.2	29.5	31.8	33.8	36.0	38.3	40.4	42.5	47.0	Boom length (m) Radius (m)
3.0	62.5	54.2														3.0
3.5	60.8	52.5														3.5
4.0	55.8	50	25	35.8												4.0
4.5	52.5	48.3	25	35.5	25	23.3										4.5
5.0	48.3	44.9	25	33.3	24.5	22.3	25	22.5								5.0
5.5	45	42.1	24.9	31.7	24.1	21.2	24.7	21.9	14.8							5.5
6.0	42.3	39.6	24.2	29.7	22.9	20.6	23.5	20.8	14.1	18.6						6.0
6.5	35.8	35	23.4	28.3	21.9	19.6	22.4	20.2	13.6	17.9	13.2					6.5
7.0	33.3	33	22.7	27	21.2	18.7	21.7	19.5	13	17.4	12.8	10.1				7.0
7.5	29.2	31	22	25.7	20.2	18.1	20.7	18.9	12.6	16.8	12.3	9.8	11.6			7.5
8.0	26.8	26.5	21.3	24.5	19.6	17.3	20	18.3	12	16.3	11.9	9.4	11.4	8.9		8.0
9.0	22.2	21.9	19.9	21.8	18.1	15.9	18.8	17.1	11.3	15.3	11.2	8.8	10.8	8.5		9.0
10.0		18.5	18.7	18.3	16.9	14.9	17.4	16.1	10.5	14.3	10.5	8.3	10.4	8.1	7.7	10.0
11.0		15.9	17.3	15.8	15.6	13.7	16.2	15	9.8	13.7	10	7.9	9.8	7.7	7.3	11.0
12.0		13.8	15	13.5	14.6	12.9	14.5	14.4	9.3	12.8	9.4	7.4	9.4	7.3	7.1	12.0
14.0			11	10	10.6	11.3	11.4	12.3	8.2	11.6	8.5	6.8	8.6	6.6	6.5	14.0
16.0				7.6	8.2	9.5	8.6	9.9	7.3	9.7	7.6	6.1	7.7	6	6	16.0
18.0					6.5	7.6	6.8	8.3	6.6	8	6.9	5.6	7.2	5.5	5.5	18.0
20.0						6.3	5.5	6.9	5.9	6.7	6.3	5	6.6	5.1	5.2	20.0
22.0							4.5	5.9	5.4	5.7	5.8	4.7	6.1	4.5	4.8	22.0
24.0									4.3	4.8	5.3	4.2	5.2	4.5	4.5	24.0
26.0										4.1	4.7	3.9	4.4	3.8	4.1	26.0
28.0										3.5	4.1	3.5	3.8	3.2	3.2	28.0
30.0											3.5	2.9	3.3	2.8	2.8	30.0
32.0												2.5	2.8	2.3	2.4	32.0

Load Chart of Boom (Level Ground)																Unit: t
Boom length (m) \ Radius (m)	12.2	16.5	18.7	20.9	23.0	25.2	27.2	29.5	31.8	33.8	36.0	38.3	40.4	42.5	47.0	Boom length (m) \ Radius (m)
34.0													2.5	2	2	34.0
36.0														1.5	1.5	36.0
Wire rope parts of line	11	10	10	8	8	6	6	6	5	5	5	4	4	3	3	Wire rope parts of line
Min. protection angle													20°	30°	30°	Min. protection angle
Telescoping conditions(%)																Telescoping conditions(%)
Section 2	0	50	0	100	50	0	100	50	0	100	50	0	100	50	100	Section 2
Section 3	0	0	25	0	25	50	25	50	75	50	75	100	75	100	100	Section 3
Section 4	0	0	25	0	25	50	25	50	75	50	75	100	75	100	100	Section 4
Section 5	0	0	25	0	25	50	25	50	75	50	75	100	75	100	100	Section 5

Load Chart of Jib (Level Ground)						Unit: t
Boom angle	47+10.2m Jib			47+17.5m Jib		
	0°	15°	30°	0°	15°	30°
80°	5.5	3.8	3.3	3.3	2	1.5
78°	5.2	3.8	3.2	3	1.9	1.3
76°	4.9	3.7	2.9	2.7	1.8	1.3
74°	4.2	3.5	2.7	2.3	1.7	1.2
72°	3.6	3.3	2.6	2.1	1.6	1.2
70°	3.9	3.1	2.4	1.9	1.5	1.1
68°	3.5	2.9	2.3	1.8	1.4	1.1
66°	3.1	2.7	2.2	1.7	1.3	1
64°	2.7	2.5	2.1	1.6	1.2	1
62°	2.3	2.3	2	1.5	1.1	1
60°	2	2	1.8	1.4	1	0.9
58°	1.8	1.7	1.4	1.2	0.9	0.9
56°	1.6	1.4	1.2	1.1	0.9	0.8
54°	1.2	1.1	1	0.9		
52°	0.9					
Min. protective angle	52°					

Load Chart of Jib (Out-of-Level)						Unit: t
Boom angle	47+10.2m Jib			47+17.5m Jib		
	0°	15°	30°	0°	15°	30°
80°	4.2	2.8	2.4	2.4	1.4	1
78°	4	2.9	2.4	2.3	1.4	0.9
76°	3.8	2.9	2.3	2.1	1.4	0.9
74°	3.3	2.8	2.1	1.8	1.3	0.9
72°	2.8	2.6	2	1.6	1.3	0.9
70°	3	2.4	1.8	1.4	1.2	0.8
68°	2.7	2.3	1.8	1.3	1.1	0.8
66°	2.4	2.1	1.8	1.3	1	0.7
64°	2.1	1.9	1.7	1.3	0.9	0.7
62°	1.8	1.8	1.6	1.2	0.8	0.7
60°	1.5	1.6	1.4	1.1	0.8	0.6
58°	1.4	1.3	1.1	0.9	0.7	0.6
56°	1.3	1.1	0.9	0.8	0.7	0.5
54°	0.9	0.8	0.8	0.7		
52°	0.7					
Min. protective angle	52°					

Note:

1. There are two modes of load charts, one for level ground and the other for out-of-level gradient, which is set to be automatic switchover at delivery, but it can also be manually switched.
2. Level ground means the flat ground within 1 degree; and out-of-level ground means flat ground with a gradient less than 4 degree.
3. The ratings are calculated when the load is lifted steadily and slowly when it is not walking.
4. All ratings are suitable for swing of 360°.
5. The rated load capacity is less than 5t when using boom tip sheave block. If the jib is extended, the rated load of boom shall deduct by 2.3t.
6. The weight of hook, slings and other riggings shall be deducted from the ratings to get the actual capacity. The main hook is 1.05t and aux. hook is 0.35t.
7. The unit used in this load chart is metric unit, ton for weight and meter for length.