

LOAD CHART

MANTIS Model 200RS

100 Ton Crawler Crane

as originally manufactured and equipped by SpanDeck, Inc.

Limitations and General Conditions.

This MANTIS CRANE as manufactured by SpanDeck, Inc., meets the requirements of ANSI B30.5 (2000) , (When specifically equipped). Structure and stability have been tested in accordance with SAE J1063 and SAE J765 , respectively. Lifting capacities as determined by boom length, angle or radius, apply only to machines as originally equipped by manufacturer and in a properly maintained condition. Capacities given are maximum covered by the manufacturers warranty and are based on a freely suspended load with **NO** allowance for factors such as out-of-level operation, supporting surface conditions, hazardous surroundings, experience of personnel, etc. The operator shall establish practical working loads based on prevailing operating conditions, such as, but not limited to the above.

When making lifts where capacities may be within a zone limited by structural strength, the operator shall determine that the weight of the load is known within plus or minus (+/-) ten percent (10%) before making lift . **DO NOT** lift load or extend boom without considering counterweights, amount of track extension, and the appropriate **LOAD CHART**. Deductions from rated capacities must be made for the weight of the hook block, hook/ball, slings, spreader bar, or other suspended equipment.

Side pull on boom is extremely dangerous and must be avoided.

DO NOT exceed manufacturers maximum specified reeving.

DO NOT attempt to lift any load when wind speed exceeds 20 mph. Consult the manufacturer for special ratings.

Load radius is defined as the horizontal distance from the axis of rotation (with no load) to the center of the lifting device after load is applied.

Boom angle is the included angle between the Longitudinal axis of the boom base section and the Horizontal axis, after lifting load. The boom angle before lifting should be slightly greater than desired to account for boom deflection.

Boom angle/boom length relationships given are an approximation of the resulting load radius, which should be an accurate measurement.

Boom height dimensions are measured from ground to center of lower boom head sheave.

It is permissible to attempt to telescope boom with a load within the limits of rated capacities. However, boom angle system hydraulic pressure, and/or boom lubrication may affect operation.

Specifications subject to change without notice.

MANTIS 200RS

LOAD CHART

54'-0 STANDARD BOOM

**LOAD CHART SELECTION & LOAD
MOMENT INDICATOR SETTING
INFORMATION**

Each Load Chart in this document corresponds to a particular crane configuration. The Load Moment Indicator system must be set to match the configuration in use. If it is set improperly, the crane may function poorly or not at all

The chart below shows the Operating Modes and corresponding crane configurations available.

NOTE:

If you are certain that a load is within load chart limits but the crane will not lift it, check the selected reeving and crane configuration.

Operating Mode	Crane Configuration	Track Position	Counter-weight.	Load Chart Number
1	Main Boom	Fully Extended	30,000	1
2	Main Boom	Retracted	30,000	2
3	Main Boom	Fully Extended	15,000	3
4	Main Boom	Retracted	15,000	4
5	Main Boom	Fully Extended	NO CWT	5
6	Main Boom	Retracted	NO CWT	6

**LIFTING CAPACITY DEDUCTIONS FOR
LOAD HANDLING DEVICES**

MANTIS Model 200RS 100 Ton Crawler Crane

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Weight Reductions for Load Handling Devices	
Hookblocks	
100 Ton – Two part block	2300 lb.

NOTE:

All values shown apply to original equipment as supplied by SpanDeck, Inc. The above deductions should be taken into account when calculating the load to be lifted.

A properly calibrated and maintained Load Moment Indicating (LMI) system will indicate boom mounted and other suspended equipment.

CHART #1: MAIN BOOM LOAD CHART

MANTIS Model 200RS

100 Ton Crawler Crane

as originally manufactured and equipped by SpanDeck, Inc.

30,000 lb. COUNTERWEIGHT

TRACKS FULLY EXTENDED - 360 DEGREE RATING - LOADS= lb. x 1000

RADIUS	MAIN BOOM LENGTH (ft)							RADIUS
(ft)	26.1	30.7	35.4	40.1	44.7	49.4	54.1	(ft)
8	200.0	120.0	103.0	90.0	80.0	72.0		8
10	185.0	115.0	95.0	81.0	72.0	65.0	59.0	10
12	160.0	108.0	87.0	74.0	66.0	59.0	54.0	12
14	135.0	100.0	79.0	67.0	60.0	53.0	49.5	14
16	112.0	90.0	75.0	63.0	56.0	50.0	46.0	16
18	100.0	85.0	72.0	59.0	53.0	46.5	43.0	18
20	85.0	80.0	70.0	56.5	50.0	43.5	40.5	20
22	77.0	75.0	66.0	54.0	46.5	41.0	38.0	22
24		67.0	62.0	51.5	43.7	38.5	36.0	24
26		59.0	58.0	47.5	41.5	36.5	34.0	26
28			52.5	45.0	39.0	34.5	31.0	28
30			47.0	42.5	36.5	32.8	29.0	30
32				40.2	34.2	31.0	27.0	32
34				37.0	32.3	29.5	26.0	34
36				35.0	30.5	27.5	24.8	36
38					29.0	26.0	23.7	38
40					27.5	24.7	22.5	40
42						23.5	21.8	42
44						22.0	20.7	44
46							19.8	46
48							18.9	48
50							18.0	50

NOTE:
All capacities are based on structural strength; tipping should not be relied upon as a capacity limitation.

CHART #2: MAIN BOOM LOAD CHART

MANTIS Model 200RS

100 Ton Crawler Crane

as originally manufactured and equipped by SpanDeck, Inc.

30,000 lb. COUNTERWEIGHT

TRACKS FULLY RETRACTED - 360 DEGREE RATING - LOADS= lb. x 1000

RADIUS (ft)	MAIN BOOM LENGTH (ft)							RADIUS (ft)
	26.1	30.7	35.4	40.1	44.7	49.4	54.1	
8	200.0	120.0	103.0	90.0	80.0	72.0		8
10	165.9	115.0	95.0	81.0	72.0	65.0	59.0	10
12	117.1	108.0	87.0	74.0	66.0	59.0	54.0	12
14	89.9	90.3	79.0	67.0	60.0	53.0	49.5	14
16	72.6	73.0	73.2	63.0	56.0	50.0	46.0	16
18	60.5	60.9	61.2	59.0	53.0	46.5	43.0	18
20	51.7	52.1	52.3	52.5	50.0	43.5	40.5	20
22	45.2	45.3	45.5	45.7	45.8	41.0	38.0	22
24		39.9	40.2	40.3	40.5	38.5	36.0	24
26		35.6	35.8	36.0	36.1	36.2	34.0	26
28			32.3	32.4	32.5	32.6	31.0	28
30			29.2	29.4	29.5	29.6	29.0	30
32				26.8	26.9	27.0	27.0	32
34				24.9	25.0	25.1	25.2	34
36				23.2	23.3	23.4	23.5	36
38					21.1	21.2	21.2	38
40					20.7	20.8	20.9	40
42						19.7	19.8	42
44						18.9	19.0	44
46							18.0	46
48							17.3	48
50							16.1	50

NOTE:
 Capacities appearing above the bold line are based on structural strength; tipping should not be relied upon as a capacity limitation.
 Capacities appearing below the bold line are based on stability and do not exceed 75% of tipping.

CHART #3: MAIN BOOM LOAD CHART

MANTIS Model 200RS

100 Ton Crawler Crane

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15,000 lb. COUNTERWEIGHT

TRACKS FULLY EXTENDED - 360 DEGREE RATING - LOADS= lb. x 1000

RADIUS (ft)	MAIN BOOM LENGTH (ft)							RADIUS (ft)
	26.1	30.7	35.4	40.1	44.7	49.4	54.1	
8	200.0	120.0	103.0	90.0	80.0	72.0		8
10	185.0	115.0	95.0	81.0	72.0	65.0	59.0	10
12	160.0	108.0	87.0	74.0	66.0	59.0	54.0	12
14	135.0	100.0	79.0	67.0	60.0	53.0	49.5	14
16	111.1	90.0	75.0	63.0	56.0	50.0	46.0	16
18	87.8	85.0	71.0	59.0	53.0	46.5	43.0	18
20	72.2	72.7	70.0	56.5	50.0	43.5	40.5	20
22	61.5	61.6	61.8	54.0	46.5	41.0	38.0	22
24		53.1	53.4	51.5	43.7	38.5	36.0	24
26		46.6	46.9	47.1	41.5	36.5	34.0	26
28			41.7	41.8	39.0	34.5	31.0	28
30			37.4	37.6	36.5	32.8	29.0	30
32				34.0	34.1	31.0	27.0	32
34				31.0	31.1	29.5	26.0	34
36				28.4	28.5	27.5	24.8	36
38					26.2	26.0	23.7	38
40					24.3	24.4	22.5	40
42						22.6	21.8	42
44						21.1	20.7	44
46							19.8	46
48							18.5	48
50							17.4	50

NOTE:
 Capacities appearing above the bold line are based on structural strength; tipping should not be relied upon as a capacity limitation.
 Capacities appearing below the bold line are based on stability and do not exceed 75% of tipping.

CHART #4: MAIN BOOM LOAD CHART

MANTIS Model 200RS

100 Ton Crawler Crane

as originally manufactured and equipped by SpanDeck, Inc.

15,000 lb. COUNTERWEIGHT

TRACKS FULLY RETRACTED - 360 DEGREE RATING - LOADS= lb. x 1000

RADIUS	MAIN BOOM LENGTH (ft)							RADIUS
(ft)	26.1	30.7	35.4	40.1	44.7	49.4	54.1	(ft)
8	200.0	120.0	103.0	90.0	80.0	72.0		8
10	132.9	115.0	95.0	81.0	72.0	65.0	59.0	10
12	98.4	98.5	87.0	74.0	66.0	59.0	54.0	12
14	76.3	76.5	76.6	67.0	60.0	53.0	49.5	14
16	61.2	61.7	62.0	62.6	56.0	50.0	46.0	16
18	50.4	50.6	51.0	51.3	51.5	46.5	43.0	18
20	42.4	42.5	42.8	43.1	43.1	43.2	40.5	20
22	36.1	36.2	36.3	36.5	36.6	36.7	36.9	22
24		31.0	31.2	31.5	31.7	31.9	32.1	24
26		27.5	27.6	27.8	27.9	28.0	28.2	26
28			24.5	24.7	24.9	25.0	25.1	28
30			21.7	22.0	22.1	22.2	22.4	30
32				20.0	20.1	20.2	20.3	32
34				18.0	18.2	18.2	18.3	34
36				16.4	16.5	16.6	16.7	36
38					15.1	15.2	15.3	38
40					13.9	14.0	14.1	40
42						13.0	13.1	42
44						12.0	12.1	44
46							11.4	46
48							10.5	48
50							9.8	50

NOTE:
Capacities appearing above the bold line are based on structural strength; tipping should not be relied upon as a capacity limitation.
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CHART #5: MAIN BOOM LOAD CHART

MANTIS Model 200RS

100 Ton Crawler Crane

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NO COUNTERWEIGHT

TRACKS FULLY EXTENDED - 360 DEGREE RATING - LOADS= lb. x 1000

RADIUS	MAIN BOOM LENGTH (ft)							RADIUS
(ft)	26.1	30.7	35.4	40.1	44.7	49.4	54.1	(ft)
8	200.0	120.0	103.0	90.0	80.0	72.0		8
10	185.0	115.0	95.0	81.0	72.0	65.0	59.0	10
12	160.0	108.0	87.0	74.0	66.0	59.0	54.0	12
14	112.7	100.0	79.0	67.0	60.0	53.0	49.5	14
16	83.2	83.7	75.0	63.0	56.0	50.0	46.0	16
18	65.5	65.9	66.2	59.0	53.0	46.5	43.0	18
20	53.6	54.0	54.3	54.5	50.0	43.5	40.5	20
22	45.4	45.5	45.8	46.0	46.1	41.0	38.0	22
24		39.2	39.4	39.6	39.7	38.5	36.0	24
26		32.9	33.1	33.3	33.6	33.9	34.0	26
28			28.6	28.8	29.0	29.2	29.4	28
30			25.4	25.6	25.8	25.9	26.1	30
32				23.2	23.3	23.4	23.6	32
34				21.3	21.4	21.5	21.6	34
36				19.6	19.7	19.8	19.9	36
38					17.6	17.7	17.8	38
40					16.2	16.2	16.3	40
42						15.0	15.0	42
44						13.8	13.8	44
46							12.8	46
48							11.9	48
50							11.0	50

NOTE:
 Capacities appearing above the bold line are based on structural strength; tipping should not be relied upon as a capacity limitation.
 Capacities appearing below the bold line are based on stability and do not exceed 75% of tipping.

CHART #6: MAIN BOOM LOAD CHART

MANTIS Model 200RS

100 Ton Crawler Crane

as originally manufactured and equipped by SpanDeck, Inc.

NO COUNTERWEIGHT

TRACKS FULLY RETRACTED - 360 DEGREE RATING - LOADS= lb. x 1000

RADIUS (ft)	MAIN BOOM LENGTH (ft)							RADIUS (ft)
	26.1	30.7	35.4	40.1	44.7	49.4	54.1	
8	145.0	120.0	103.0	90.0	80.0	72.0		8
10	86.5	86.8	87.1	81.0	72.0	65.0	59.0	10
12	62.6	63.0	63.3	63.7	63.9	59.0	54.0	12
14	48.5	48.6	48.7	48.8	48.9	49.0	49.0	14
16	38.5	38.4	38.7	38.9	39.0	39.1	39.2	16
18	31.6	31.7	31.9	32.1	32.2	32.3	32.4	18
20	26.5	26.7	26.9	27.1	27.2	27.3	27.4	20
22	23.0	23.1	23.2	23.3	23.4	23.5	23.6	22
24		19.9	20.1	20.3	20.4	20.5	20.6	24
26		17.5	17.7	17.9	18.0	18.1	18.1	26
28			15.7	15.9	16.0	16.0	16.1	28
30			14.0	14.2	14.3	14.4	14.4	30
32				12.7	12.8	12.8	12.9	32
34				11.3	11.4	11.4	11.5	34
36				10.2	10.2	10.3	10.3	36
38					9.2	9.3	9.3	38
40					8.2	8.3	8.3	40
42						7.5	7.6	42
44						7.0	7.0	44
46							6.5	46
48							5.9	48
50							5.6	50

NOTE:
Capacities appearing above the bold line are based on structural strength; tipping should not be relied upon as a capacity limitation.
Capacities appearing below the bold line are based on stability and do not exceed 75% of tipping.

RANGE CHART

MANTIS MODEL 200RS

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