



# TOWER CRANE CAPACITIES

# 4100W

# 4100W SERIES 1

# CRAWLER

123' TO 183' NO. 22A TOWER WITH NO. 23 BOOM  
26' 6" CRAWLERS — EXTENDED  
122,400 LB. COUNTERWEIGHT

**LIFTING CAPACITIES:** Capacities for various tower heights, boom lengths and operating radii are for freely suspended loads and do not exceed 75% of a static tipping load. CAPACITIES SHOWN BY SHADED AREAS ARE BASED ON STRUCTURAL COMPETENCE.

Capacities are shown in pounds. Weight of jib, (see chart A) all load blocks, hooks, weight ball, slings, hoist lines, etc., beneath boom and jib point sheaves, is considered part of the main boom load. Boom is not to be lowered beyond radii where combined weights are greater than rated capacity. Where no capacity is shown, operation is not intended or approved. See tower and boom raising capability chart.

**CAPACITY INDICATED BY "B" REPRESENTS A BOOM POSITION WHICH REQUIRES LOAD HANDLING DEVICES OF AT LEAST 2,000 POUNDS TO PREVENT BOOM FROM COMING BACK AGAINST BOOM STOP AS LOAD IS RELEASED.**

**OPERATING CONDITIONS:** Machine to operate in a level position on a firm surface, crawlers fully extended, roller path level within a tolerance of 1/2" in 10 feet and properly supported, and be rigged in accordance with and under conditions referred to in rigging drawing No. 50805 and load line specification chart No. 5347, and chart No. 5527 for recommended procedure for operating under various wind conditions. **BOOM LENGTHS MUST BE 13' SHORTER THAN TOWER HEIGHT, TO FOLD BOOM UNDER TOWER.**

Crane operator judgment must be used to allow for dynamic load effects of swinging, hoisting or lowering, travel, wind conditions, as well as adverse operating conditions and physical machine depreciation.

**OPERATING RADIUS:** Operating radius is the horizontal distance from the axis of rotation to the center of vertical hoist line or load block with the load freely suspended. Add 12" to boom point radius for radius of sheave when using single part of hoist line.

Boom angle is the angle between horizontal and centerline of boom butt and inserts and is an indication of operating radius. In all cases, operating radius shall govern capacity.

**BOOM POINT ELEVATION:** Boom point elevation, in feet, is the vertical distance from ground level to centerline of boom point shaft. Distances are given for 183' tower. Deduct 10' for each 10' reduction at tower height.

**MACHINE EQUIPMENT:** Machine equipped with 26' — 6" extendible crawlers, 48" treads, 17' retractable gantry, 12 part boom hoist reeving, four 1-3/8" tower pendants, two 1-1/2" boom pendants, two 7/8" intermediate suspension pendants on boom lengths of 130' and over. 1st cwt. 41,900 lbs., 2 cwt. 41,500 lbs., 3rd cwt. 39,000 lbs. Total counterweight 122,400 pounds.

LOAD LINE SPECIFICATIONS— SEE NOTE *	
FULL WIDTH FRONT OR FULL WIDTH REAR DRUM LOAD LINE: 1-1/8" — 6x31 Warrington-Seale, Extra Improved Plow Steel, Regular Lay, IWRC. Minimum Breaking Strength 65 Ton. Maximum Load — 32,500 lbs. per Line. (Approx. Weight Per Ft. in Lbs. 2.34)	
SPLIT REAR DRUM, RIGHT HAND LOAD LINE: 1-1/8" — 6x31 Warrington-Seale, Improved Plow Steel, Regular Lay, IWRC. Minimum Breaking Strength 56.5 Ton. Maximum Load — 28,300 lbs. Per Line. (Approx. Weight Per Ft. in Lbs. 2.34)	

MAXIMUM TOWER AND BOOM LENGTHS LIFTED UNASSISTED			
OVER FRONT OF BLOCKED CRAWLERS		OVER SIDE OF EXTENDED CRAWLERS OR FRONT OF UNBLOCKED CRAWLERS	
Tower	Boom	Tower	Boom
183'	170'	153'	140'

Load block, hook & weight ball on ground until tower is in vertical position and boom is in operating range. Jib to be attached with tower in vertical position and with boom in a position which will allow jib to be attached.

(A) DEDUCT FROM CAPACITIES WHEN JIB IS ATTACHED	
Jib Length	Jib No. 124
30'	2,000 Lb.
40'	2,400 Lb.
50'	2,800 Lb.
60'	3,200 Lb.

For jib capacities, consult jib chart.

Boom Lgth.: Feet	Oper. Rad.: Feet	Boom Ang.: Deg.	Boom Point: Elev.	Capacity:	Boom Lgth.: Feet	Oper. Rad.: Feet	Boom Ang.: Deg.	Boom Point: Elev.	Capacity:	Boom Lgth.: Feet	Oper. Rad.: Feet	Boom Ang.: Deg.	Boom Point: Elev.	Capacity:	Boom Lgth.: Feet	Oper. Rad.: Feet	Boom Ang.: Deg.	Boom Point: Elev.	Capacity:
1	35	73.6	295.0	61,300B	1	40	73.9	314.4	50,600B	1	120	34.0	267.8	23,100	1	50	73.3	342.7	36,700
	40	70.9	293.4	58,900B		45	71.6	312.8	48,700B		125	30.2	259.9	22,200		55	71.4	341.1	35,200
	45	68.1	291.5	56,000B		50	69.3	311.0	46,700		130	25.8	250.5	21,300		60	69.5	339.3	33,600
	50	65.3	289.4	54,300B		55	66.9	309.0	44,800		135	20.7	238.8	20,500		65	67.6	337.4	32,100
	55	62.4	286.9	52,200B		60	64.5	306.8	43,000		140	13.7	222.7	19,900		70	65.6	335.2	30,600
1	60	59.4	284.1	50,200	1	65	62.0	304.2	41,200	1	50	72.1	332.2	41,900	1	75	63.7	332.8	29,200
	65	56.3	281.0	48,300		70	59.5	301.4	39,400		55	70.1	330.5	39,500		80	61.6	330.2	27,800
	70	53.1	277.5	46,400		75	56.9	298.3	37,800		60	68.1	328.6	37,900		85	59.6	327.4	26,400
	75	49.8	273.5	44,700		80	54.2	294.9	36,100		65	66.0	326.5	36,300		90	57.5	324.4	25,100
	80	46.3	269.0	43,000		85	51.5	291.1	34,600		70	63.9	324.1	34,700		95	55.3	321.1	23,900
1	85	42.6	263.9	41,500	1	90	48.6	286.9	33,200	1	75	61.7	321.6	33,100	1	100	53.1	317.5	22,700
	90	38.6	258.0	39,500		95	45.6	282.3	31,800		80	59.6	318.8	31,600		105	50.9	313.5	21,500
	95	34.2	251.2	37,100		100	42.4	277.1	30,600		85	57.3	315.7	30,200		110	48.5	309.3	20,500
	100	29.2	243.2	34,900		105	39.0	271.3	29,300		90	55.0	312.3	28,900		115	46.1	304.7	19,400
	105	23.3	233.0	32,900		110	35.4	264.7	28,100		95	52.7	308.7	27,600		120	43.5	299.6	18,500
1	110	15.5	218.8	30,800	1	115	31.4	257.1	27,100	1	100	50.2	304.7	26,300	1	125	40.9	294.1	17,500
	40	72.5	303.9	54,700B		120	26.8	248.1	26,100		105	47.7	300.4	25,100		130	38.0	288.1	16,700
	45	70.0	302.2	52,600B		125	21.4	237.0	25,200		110	45.0	295.6	24,000		135	35.0	283.3	15,700
	50	67.5	300.3	50,600B		130	14.3	221.5	24,400		115	42.3	290.3	22,900		140	31.8	273.7	14,900
	55	64.8	298.1	48,700		135	73.0	323.3	45,000B		120	39.3	284.5	21,800		145	28.2	265.1	14,100
1	60	62.2	295.6	46,700	1	40	70.8	321.7	43,200	1	125	36.2	278.1	20,900	1	150	24.1	254.9	13,300
	65	59.4	292.8	44,800		50	68.6	319.8	41,400		130	32.9	270.8	20,000		155	19.3	242.4	12,600
	70	56.6	289.7	43,000		60	66.4	317.8	39,600		135	29.2	262.5	19,100		160	12.8	225.0	12,100
	75	53.7	286.2	41,300		65	64.2	315.5	37,900		140	25.0	252.7	18,300					
	80	50.7	282.3	39,800		70	61.9	312.9	36,300		145	19.9	240.6	17,600					
2	85	47.5	278.0	38,200	1	75	59.5	310.1	34,700	1	150	13.3	223.9	17,000					
	90	44.2	273.1	36,700		80	57.1	307.0	33,100										
	95	40.7	267.7	35,300		85	54.6	303.6	31,600										
	100	36.9	261.5	34,000		90	52.1	299.9	30,200										
	105	32.7	254.2	32,600		95	49.5	295.8	28,800										
0	110	28.0	245.7	30,800	100	46.7	291.4	27,500											
	115	22.3	235.0	29,200	105	43.8	286.4	26,300											
	120	14.8	220.2	27,400	110	40.8	280.9	25,200											
					115	37.5	274.8	24,100											

\* NOTE: Hoist line on full width rear drum or right rear drum is used only when two load lines are required over the boom point.

Capacities continued on reverse side.

Form No. 6193-A, 8-11-80/GA

# SEE CONDITIONS ON REVERSE SIDE

Boom Lgth.: Feet	Oper. Rad.: Feet	Boom Ang.: Deg.	Boom Point: Elev.	Capacity:
	55	72.5	351.6	32,200
	60	70.8	350.0	30,800
	65	69.0	348.1	29,800
	70	67.2	346.1	27,900
	75	65.3	343.9	26,600
1 7 0	80	63.4	341.5	25,200
	85	61.5	338.9	23,900
	90	59.6	336.1	22,700
	95	57.6	333.0	21,500
	100	55.6	329.7	20,400
		105	53.6	326.2
	110	51.4	322.4	18,300
	115	49.2	318.2	17,300
	120	47.0	313.7	16,300
	125	44.6	308.9	15,300
	130	42.2	303.6	14,300
	135	39.6	297.8	13,400
	140	36.9	291.5	12,600
	145	34.0	284.4	11,800
	150	30.8	276.5	11,000
	155	27.3	267.5	10,300
	160	23.4	257.0	9,700
	165	18.7	244.0	9,100
	170	12.5	226.1	8,600

REFERENCE ONLY!

Combined From Charts:  
 No. 6193-A 3-11-80  
 No. 5347 8-11-80

4100 tower / 4000 tower <sup>operated</sup>  
Ot

Crane mats

Fuel

3rd Party

ht - 65 ft across 85 tall  
25 ft off <sup>32 1/2 5,000/165</sup>

Operated Pads