

# TOWER CRANE CAPACITIES

4600

SERIES-4

204' TO 224' NO. 27B TOWER  
BOOM NO. 22B WITH LIGHT TAPERED TOP  
123,000 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.

**CAPACITY INDICATED BY "B" REPRESENTS A BOOM POSITION WHICH REQUIRES LOAD HANDLING DEVICES OF AT LEAST 2,500 POUNDS TO PREVENT BOOM FROM COMING BACK AGAINST BOOM STOP AS LOAD IS RELEASED.**

**OPERATING CONDITIONS:** Machine to operate on a firm surface with 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. 65156 and No. 183226 or No. 66235 and No. 184667, load specification chart No. 6517-A and chart No. 7264-A for recommended procedure for operating under various wind conditions. **CAUTION: OUTSIDE ASSIST REQUIRED. SEE CHART NO. 6580 FOR TOWER AND BOOM RAISING PROCEDURE. BOOM LENGTHS MUST BE 14' 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. Add 1.2' 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

**CAUTION**  
**OUTSIDE ASSIST REQUIRED**

**CRAWLER**

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 224' tower. Deduct 10' for each 10' reduction of tower height.

**MACHINE EQUIPMENT:** Machine equipped with 30'5" crawlers, 60" treads, 33' retractable gantry, 12 part boom hoist reeving, four 1-1/2" tower pendants, four 1-3/8" boom pendants, and 123,000 lb. counterweight (120,000 lb. with counterweight assembly No. 49667).

HOIST REEVEING FOR MAIN LOAD BLOCK				
No. Parts of Line	1	2	3	4
Maximum Load — Lbs.	40,000	80,000	120,000	160,000

LOAD AND WHIP LINE SPECIFICATIONS	
LOAD LINE: 1-1/4" — 6x31 Warrington-Seale, Extra Improved Plow Steel, Regular Lay, IWRC. Minimum Breaking Strength 79.9 Ton. Approx. Weight Per Ft. in lbs. 2.89.	
WHIP LINE: 1-1/4" — 6x31 Warrington-Seale, Extra Improved Plow Steel, Regular Lay, IWRC. Minimum Breaking Strength 79.9 Ton. Maximum Load — 40,000 lbs. Per Line. Approx. Weight Per Ft. in lbs. 2.89.	

(A) DEDUCT FROM CAPACITIES WHEN JIB IS ATTACHED	
JIB LENGTH	JIB NO. 123
30'	2,800 Lb.
40'	3,600 Lb.
50'	4,400 Lb.
60'	5,200 Lb.
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.	

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:
100	35	73.4	329.2	121,800B	100	40	73.8	348.6	106,400B	100	45	74.0	368.0	94,200	100	125	37.8	325.4	39,600
	40	70.4	327.6	114,900B		45	71.3	347.0	97,600		50	71.9	366.5	89,600		130	34.6	318.5	38,000
	45	67.4	325.7	107,800B		50	68.7	345.2	97,000		55	69.7	364.7	83,700		135	31.1	310.8	36,500
	50	64.2	323.4	102,300B		55	66.2	343.1	91,000		60	67.5	362.8	83,400		140	27.1	301.8	35,200
	55	61.0	320.8	97,600		60	63.5	340.8	87,100		65	65.3	360.6	77,100		145	22.6	291.0	34,100
110	60	57.7	317.9	93,400	110	65	60.8	338.2	83,100	110	70	63.0	358.2	72,700	110	150	16.9	277.1	33,200
	65	54.2	314.5	89,600		70	58.1	335.2	77,900		75	60.7	355.5	68,600		55	72.4	385.9	79,000
	70	50.6	310.6	83,800		75	55.2	331.9	73,200		80	58.3	352.5	64,700		60	70.5	384.2	75,000
	75	46.8	306.2	78,600		80	52.2	328.2	68,800		85	55.9	349.3	61,100		65	68.6	382.3	70,500
	80	42.7	301.2	73,800		85	49.1	324.1	64,800		90	53.4	345.8	57,700		70	66.6	380.2	69,200
120	85	38.3	295.3	69,600	120	90	45.9	319.6	61,200	120	95	50.8	341.9	54,600	120	75	64.7	378.0	63,900
	90	33.4	288.4	65,900		95	42.5	314.4	57,900		100	48.1	337.6	51,800		80	70.5	384.2	75,000
	95	27.7	279.9	62,500		100	38.8	308.6	54,800		105	45.3	332.9	49,100		65	68.6	382.3	70,500
	100	20.8	268.9	60,100		105	34.8	301.9	52,100		110	42.3	327.7	46,700		70	66.6	380.2	69,200
						110	30.4	294.1	49,700		115	39.2	321.9	44,500		75	64.7	378.0	63,900
130	40	72.3	338.2	106,400B	130	115	25.3	284.6	47,700	130	120	35.8	315.3	42,500	130	105	52.0	359.5	46,600
	45	69.5	336.4	105,200B		120	18.9	272.3	46,100		125	32.2	307.9	40,700		110	49.7	355.4	44,300
	50	66.7	334.4	98,700		45	72.8	357.6	97,300		130	28.1	299.3	39,200		115	47.3	351.0	42,400
	55	63.8	332.1	94,100		50	70.5	355.9	90,000		135	23.4	289.0	37,800		120	44.8	346.2	40,400
	60	60.9	329.5	92,200		55	68.1	354.0	89,900		140	17.5	275.6	36,800		125	42.2	340.9	38,600
140	65	57.9	326.5	86,200	140	60	65.7	351.9	84,300	140	50	73.1	376.9	86,800	140	130	39.5	335.1	37,000
	70	54.7	323.2	80,700		65	63.3	349.5	80,000		55	71.1	375.3	82,800		135	36.6	328.7	35,500
	75	51.5	319.5	75,700		70	60.8	346.8	75,200		60	69.1	373.5	77,500		140	33.4	321.6	34,100
	80	48.1	315.2	71,100		75	58.2	343.9	70,800		65	67.0	371.5	75,900		145	30.0	313.5	32,900
	85	44.5	310.4	67,000		80	55.6	340.6	66,700		70	65.0	369.3	70,100		150	26.2	304.2	31,800
150	90	40.6	305.0	63,200	150	85	52.9	337.0	62,900	150	75	62.8	366.8	66,300	150	155	21.9	293.0	30,900
	95	36.4	298.7	59,900		90	50.0	333.0	59,400		80	60.7	364.1	62,700		160	16.4	278.5	30,100
	100	31.8	291.3	56,900		95	47.1	328.6	56,100		85	58.4	361.2	59,200					
	105	26.4	282.4	54,400		100	44.0	323.7	53,200		90	56.2	358.0	56,100					
	110	19.8	270.6	52,300		105	40.7	318.2	50,500		95	53.8	354.5	53,100					
160	115	37.2	312.0	48,000	160	110	33.4	305.0	45,900	160	100	51.4	350.7	50,400	160				
	120	29.2	296.8	43,900		120	29.2	296.8	43,900		105	49.0	346.5	47,800					
	125	24.3	286.8	42,300		125	24.3	286.8	42,300		110	46.4	342.0	45,500					
	130	18.2	274.0	41,000		130	18.2	274.0	41,000		115	43.7	337.0	43,400					
											120	40.8	331.5	41,400					

Capacities continued on reverse side.

# SEE CONDITIONS ON REVERSE SIDE

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:
170	55	73.4	396.3	75,300	200	65	73.0	424.6	59,900
	60	71.7	394.7	71,800		70	71.5	423.0	57,300
	65	69.9	393.0	68,300		75	70.0	421.3	54,900
	70	68.1	391.1	64,500		80	68.4	419.4	51,300
	75	66.2	389.0	63,400		85	66.9	417.3	50,400
	80	64.4	386.7	58,500		90	65.3	415.1	49,400
	85	62.5	384.2	55,600		95	63.7	412.7	45,900
	90	60.6	381.5	52,800		100	62.1	410.2	43,900
	95	58.6	378.5	50,200		105	60.5	407.4	42,000
	100	56.6	375.4	47,800		110	58.8	404.5	40,200
180	105	54.6	371.9	45,500	160	115	57.1	401.4	38,500
	110	52.5	368.2	43,300		120	55.4	398.1	36,900
	115	50.3	364.3	41,400		125	53.7	394.5	35,400
	120	48.1	359.9	39,500		130	51.9	390.7	33,900
	125	45.8	355.3	37,800		135	50.0	386.6	32,600
	130	43.4	350.2	36,100		140	48.1	382.3	31,300
	135	40.9	344.7	34,700		145	46.2	377.7	30,100
	140	38.3	338.6	33,300		150	44.2	372.7	29,000
	145	35.4	332.0	32,100		155	42.1	367.4	28,000
	150	32.4	324.5	30,900		160	39.9	361.6	27,000
190	155	29.1	316.1	29,900	185	165	37.6	355.4	26,100
	160	25.5	306.4	28,900		170	35.2	348.6	25,200
	165	21.2	294.9	28,200		175	32.6	341.1	24,500
	170	15.9	279.9	27,500		180	29.8	332.9	23,700
	60	72.7	405.3	68,700		185	26.8	323.6	23,100
	65	71.0	403.6	65,500		190	23.4	312.9	22,500
	70	69.3	401.8	60,600		195	19.5	300.2	22,000
	75	67.6	399.8	59,300		200	14.6	284.0	21,600
	80	65.9	397.7	58,400					
	85	64.1	395.4	53,900					
180	90	62.4	392.8	51,300	190	110	57.0	392.7	41,300
	95	60.5	390.1	48,800		115	55.2	389.4	39,400
	100	58.7	387.2	46,500		120	53.3	385.8	37,700
	105	56.8	384.0	44,400		125	51.4	381.9	36,200
	110	54.9	380.7	42,300		130	49.5	377.8	34,700
	115	52.9	377.0	40,400		135	47.4	373.3	33,300
	120	50.9	373.1	38,600		140	45.4	368.6	31,900
	125	48.8	368.9	37,000		145	43.2	363.5	30,700
	130	46.7	364.3	35,400		150	41.0	357.9	29,600
	135	44.4	359.4	34,000		155	38.6	351.9	28,500
190	140	42.1	354.1	32,600	185	160	36.1	345.4	27,500
	145	39.7	348.4	31,400		165	33.5	338.2	26,600
	150	37.1	342.1	30,200		170	30.6	330.2	25,800
	155	34.4	335.1	29,100		175	27.5	321.2	25,000
	160	31.5	327.4	28,200		180	24.1	310.8	24,400
	165	28.3	318.7	27,300		185	20.0	298.5	23,800
	170	24.7	308.7	26,500		190	15.0	282.7	23,300
	175	20.6	296.7	25,800					
	180	15.4	281.3	25,300					
	60	73.6	415.7	65,500					
190	65	72.1	414.2	62,600	185	60	73.6	415.7	65,500
	70	70.5	412.5	59,800		65	72.1	414.2	62,600
	75	68.9	410.6	55,600		70	70.5	412.5	59,800
	80	67.2	408.6	54,600		75	68.9	410.6	55,600
	85	65.6	406.4	53,800		80	67.2	408.6	54,600
	90	63.9	404.1	49,700		85	65.6	406.4	53,800
	95	62.2	401.5	47,400		90	63.9	404.1	49,700
	100	60.5	398.8	45,200		95	62.2	401.5	47,400
	105	58.8	395.9	43,200		100	60.5	398.8	45,200
	110	57.0	392.7	41,300		105	58.8	395.9	43,200
190	115	55.2	389.4	39,400	185	110	57.0	392.7	41,300
	120	53.3	385.8	37,700		115	55.2	389.4	39,400
	125	51.4	381.9	36,200		120	53.3	385.8	37,700
	130	49.5	377.8	34,700		125	51.4	381.9	36,200
	135	47.4	373.3	33,300		130	49.5	377.8	34,700
	140	45.4	368.6	31,900		135	47.4	373.3	33,300
	145	43.2	363.5	30,700		140	45.4	368.6	31,900
	150	41.0	357.9	29,600		145	43.2	363.5	30,700
	155	38.6	351.9	28,500		150	41.0	357.9	29,600
	160	36.1	345.4	27,500		155	38.6	351.9	28,500

Combined From Charts:  
No. 6901-F 5-22-85  
No. 6517-A 12-22-80