



TOWER CRANE CAPACITIES

4000W CRAWLER

**123' TO 163' NO. 22 TOWER WITH NO. 23 BOOM
 24' CRAWLERS — EXTENDED
 104,400 LB. COUNTERWEIGHT**

LIFTING CAPACITIES: Capacities for various tower lengths, 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 2,000 POUNDS TO PREVENT BOOM FROM COMING BACK AGAINST BOOM STOP AS LOAD IS RELEASED.

OPERATING CONDITIONS: Machine to operate on a firm surface with crawlers fully extended and roller path level within a tolerance of 1/2" in 10' and properly supported, and be rigged in accordance with and under conditions referred to in rigging drawing No. 50602 and load line specification chart No. 5334 and chart No. 6662-A 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 163' tower. Deduct 10' for each 10' reduction at tower height.

MACHINE EQUIPMENT: Machine equipped with 24'-0" extendible crawlers, 48" treads, 15' retractable gantry, 10 part boom hoist reeving, four 1-1/4" tower pendants, two 1-3/8" boom pendants, two 7/8" intermediate suspension pendants as specified on rigging drawing. 1st cwt. 40,100 lbs., 2nd cwt. 35,800 lbs., 3rd cwt. 28,500 lbs. Total counterweight 104,400 pounds.

LOAD LINE SPECIFICATIONS	
LOAD LINE: 1-1/8" — 6 x 31 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	
Tower	Boom	Tower	Boom
163'	150'	143'	130'

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 Oper. Lgth.: Feet	Rad.: Feet	Boom Angle: Deg.	Boom Point: Elev.	Capacity:	Boom Oper. Lgth.: Feet	Rad.: Feet	Boom Angle: Deg.	Boom Point: Elev.	Capacity:	Boom Oper. Lgth.: Feet	Rad.: Feet	Boom Angle: Deg.	Boom Point: Elev.	Capacity:
110	40	70.7	273.4	47,500B	130	45	71.5	292.8	39,000	150	50	72.0	312.2	30,000
	45	67.9	271.5	45,800		50	69.1	291.0	37,500		55	70.0	310.5	28,600
	50	65.1	269.3	44,000		55	66.7	289.0	36,000		60	67.9	308.6	27,800
	55	62.2	266.8	42,200		60	64.3	286.7	34,600		65	65.9	306.4	26,900
	60	59.2	264.0	40,600		65	61.8	284.2	33,100		70	63.8	304.1	26,000
	65	56.1	260.9	39,100		70	59.3	281.4	31,800		75	61.6	301.5	25,300
	70	52.9	257.3	37,600		75	56.7	278.2	30,500		80	59.4	298.7	24,600
	75	49.6	253.3	36,300		80	54.0	274.8	29,200		85	57.2	295.6	23,600
	80	46.1	248.8	35,000		85	51.3	271.0	28,000		90	54.9	292.2	22,700
	85	42.3	243.6	33,300		90	48.4	266.7	26,800		95	52.5	288.5	21,900
100	90	38.3	237.7	31,100	95	45.4	262.1	25,700	100	50.0	284.5	21,100		
	95	33.9	230.9	29,100	100	42.2	256.8	24,600	105	47.5	280.2	20,300		
	100	28.9	222.7	27,400	105	38.8	251.0	23,600	110	44.9	275.4	19,500		
	105	22.9	212.4	25,800	110	35.1	244.3	22,700	115	42.1	270.1	18,800		
	110	14.8	197.7	23,400	115	31.1	236.7	21,800	120	39.1	264.2	18,200		
	120	14.2	199.0	21,400	120	26.5	227.6	21,000	125	36.0	257.7	17,500		
120	40	72.4	283.9	44,500	125	21.0	216.2	19,900	130	32.6	250.4	16,900		
	45	69.9	282.2	42,800	130	13.6	200.2	18,100	135	28.9	242.0	16,300		
	50	67.3	280.2	41,200	50	70.7	301.7	33,800	140	24.6	232.1	15,800		
	55	64.7	278.0	39,100	55	68.5	299.8	32,300	145	19.6	219.8	15,000		
	60	62.0	275.5	37,600	60	66.3	297.7	31,200	150	12.7	202.5	14,300		
	65	59.3	272.7	36,100	65	64.0	295.4	30,000						
110	70	56.4	269.6	34,700	70	61.7	292.8	28,900						
	75	53.5	266.1	33,400	75	59.4	290.0	27,900						
	80	50.5	262.1	32,100	80	57.0	286.9	26,900						
	85	47.3	257.8	30,600	85	54.5	283.5	25,800						
	90	44.0	252.9	28,900	90	51.9	279.8	24,700						
	95	40.4	247.4	27,400	95	49.3	275.7	23,700						
100	100	36.6	241.1	26,000	100	46.5	271.1	22,800						
	105	32.4	233.8	24,700	105	43.6	266.2	21,400						
	110	27.6	225.2	23,000	110	40.6	260.7	20,800						
	115	21.9	214.3	22,100	115	37.3	254.4	19,900						
	120	14.2	199.0	21,400	120	33.8	247.4	19,100						
	125	29.9	239.4	18,300	125	29.9	239.4	18,300						
130	25.5	229.9	17,500	130	25.5	229.9	17,500							
135	20.3	218.0	16,800	135	20.3	218.0	16,800							
140	13.1	201.4	16,100	140	13.1	201.4	16,100							

Combined From Charts:
 No. 5277-A 4-4-84
 No. 5334 4-6-82

TOWER CRANE JIB LIFTING CAPACITIES 4000W

163' TO 213' NO. 22 TOWER WITH
 150' NO. 23 BOOM AND
 NO. 124 JIB EXTENSION — 18' JIB STRUT
 24' CRAWLERS — EXTENDED

CAUTION OUTSIDE
 ASSIST REQUIRED 0 DEGREE JIB OFFSET ANGLE

(Chart supplements Tower Capacity Chart No. 5277-A or No. 5277-B. Capacities for various tower lengths, jib lengths and operating radii are for freely suspended loads and do not exceed 75% of a static tipping load. Capacities based on structural compliance are denoted by shaded areas.

Machine to operate on a firm surface with crawlers fully extended and roller path level within a tolerance of $\frac{1}{4}$ " in 10' and properly supported. 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. Refer to Tower Rigging No. 50602, Jib Assembly No. 43348, Chart No. 8682-A for recommended procedure for operating under various wind conditions and Chart No. 8485 for tower and boom raising procedure.

Operating radius is the horizontal distance from the axis of rotation to the center of vertical hoist line on load block. Boom

angle is the angle between horizontal and centerline of the boom built and these ends is an indication of operating radius. In all cases, operating radius shall govern capacity.

Weight of all load blocks, hooks, weight ball, stirrups, hoist lines, etc., beneath boom and jib point sheaves, is considered part of the jib load. Boom and jib are 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. Maximum capacity on 1" — 6 x 25 IFS, IWPC is 20,000 lbs.

All machines with towers over 163 ft. require outside assist in raising tower and boom. Jib to be attached with tower in vertical position and with boom in a position which will allow jib to be attached.

Jib Point Radius Feet	Boom Angle Degree	Capacity
60	72.5	20,000
65	70.9	20,000
70	70.5	20,000
75	67.5	20,000
80	65.7	20,000
85	64.0	20,000
90	62.2	20,000
95	60.4	20,000
100	58.5	19,400
105	58.7	18,900
110	54.7	18,300
115	52.7	17,800
120	50.7	17,400
125	48.5	16,900
130	46.5	16,300
135	44.2	15,400
140	41.9	14,600
145	39.4	13,800
150	36.9	13,100
155	34.1	12,400
160	31.1	11,800
165	27.9	11,200
170	24.2	10,600
175	19.9	10,100
180	14.4	9,500

Jib Point Radius Feet	Boom Angle Degree	Capacity
60	73.6	14,000
65	72.1	14,000
70	70.9	14,000
75	68.9	14,000
80	67.2	14,000
85	55.6	14,000
90	63.9	14,000
95	62.2	14,000
100	60.5	14,000
105	58.8	14,000
110	57.0	14,000
115	55.2	14,000
120	53.3	14,000
125	51.4	14,000
130	49.4	14,000
135	47.4	13,900
140	45.3	13,500
145	43.1	13,200
150	40.9	12,800
155	38.5	12,500
160	36.0	12,000
165	33.3	11,400
170	30.4	10,800
175	27.3	10,300
180	23.7	9,800
185	19.5	9,300
190	14.2	8,900

Jib Point Radius Feet	Boom Angle Degree	Capacity
65	72.9	10,000
70	71.4	10,000
75	69.9	10,000
80	68.3	10,000
85	66.8	10,000
90	65.2	10,000
95	63.6	10,000
100	62.0	10,000
105	60.4	10,000
110	58.7	10,000
115	57.0	10,000
120	55.3	10,000
125	53.6	10,000
130	51.7	10,000
135	49.9	10,000
140	48.0	10,000
145	46.0	10,000
150	44.0	10,000
155	41.9	10,000
160	39.7	10,000
165	37.4	10,000
170	34.9	10,000
175	32.3	10,000
180	29.5	9,900
185	26.5	9,500
190	23.0	9,000
195	18.9	8,600
200	13.7	7,500

Jib Point Radius Feet	Boom Angle Degree	Capacity
65	73.3	5,000
70	71.9	5,000
75	70.5	5,000
80	69.0	5,000
85	67.6	5,000
90	66.1	5,000
95	64.6	5,000
100	63.1	5,000
105	61.5	5,000
110	60.0	5,000
115	58.4	5,000
120	56.8	5,000
125	55.2	5,000
130	53.3	5,000
135	51.8	5,000
140	50.0	5,000
145	48.2	5,000
150	46.4	5,000
155	44.5	5,000
160	42.5	5,000
165	40.4	5,000
170	38.3	5,000
175	36.1	5,000
180	33.7	5,000
185	31.2	5,000
190	28.4	5,000
195	25.4	5,000
200	22.0	5,000
205	18.1	5,000
210	13.0	5,000