Manitowoc, Wisconsin 54220 U.S.A.

## **Liftcrane Boom Capacities**

Boom No. 78T With Heavy Lift Top 0 kg to 4 720 kg Crane Counterweight Without Front Bumper Counterweight Rating Over Side Sector On Rubber - 0.4 kms/hr Travel Meets ANSI B30.5 Requirements



**LIFTING CAPACITIES:** Lifting capacities for various boom lengths and operating radii are for freely suspended loads and do not exceed 75% of a static tipping load. Capacities based on structural competence are denoted by an asterisk (\*).

Upper boom point capacity for liftcrane service with single part whip line is 13 380 kg or 26 760 kg with two part whip line. When boom butt mounted auxiliary drum is used, capacity with single part whip line is 9 070 kg or 18 140 kg with two part whip line. In all cases, upper boom point capacities cannot exceed those listed for main boom capacity.

Weight of jib, all load blocks, hooks, weight ball, slings, hoist lines, etc., beneath boom and jib point sheaves, is considered part of 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.

**OPERATING CONDITIONS:** Machine to operate in a level position on a firm uniformly supporting surface. Refer to boom rigging **No. 192043**, Wire Rope Specification chart **No. 7973-A** and Operating Range Diagram chart **No. 7974-D**. Crane operator judgment must be used to allow for dynamic load effects of swinging, hoisting or lowering, travel, wind conditions, ground conditions, condition and inflation of tires (800 kPa minimum), as well as adverse operating conditions and physical machine depreciation.

Loads lifted may increase radius due to tire deflection. This increase must be compensated for by raising boom. <u>Refer to operators manual for operating guidelines.</u>

**MACHINE TRAVEL:** Machine to travel (0.4 kms/hr) on a firm, level and uniformly supporting surface and boom within

Deduct From Capacities When Jib Is Attached			
Jib Length	Jib No. 134		
9.1m	1 770 kg		
12.2m	2 130 kg		
15.2m	2 540 kg		
18.3m	2 990 kg		
21.3m	3 450 kg		
24.4m	3 950 kg		

boom angle range shown in capacity chart. Refer to Maximum Allowable Travel Specification chart **No. 7976-A**, Maximum Allowable Traveling Weight chart **No. 7972-A** and Weight Distribution chart **No. 7975-A**.

**OPERATING RADIUS:** Operating radius is horizontal distance from axis of rotation to center of vertical hoist line or load block. Boom angle is 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 is vertical distance from ground level to centerline of boom point shaft.

MACHINE EQUIPMENT: Machine equipped with Manitowoc 10 x 6 carrier, 7 036 mm wheel base, 2 972 mm front axle track, 2 540 mm rear axle track, 385/95 R 24 tires, 2 438 mm front outriggers, 1 778 mm rear outriggers, two 305 mm boom hoist cylinders, 7.9m mast, two boom support straps, crane counterweight as specified and without front bumper counterweight.

**Note:** Travel not allowed with 43 270 kg crane counterweight without boom attached.

Swing over side on rubber not allowed with 12 430 kg thru 43 270 kg crane counterweight.

Swing over side on rubber with 0 kg or 4 720 kg crane counterweight is allowed with or without boom attached.

360 degree swing on rubber with 0 kg or 4 720 kg crane counterweight is allowed without boom attached.

<b>Upper Boom Point Deduct</b>
Deduct 450 kg from capacities
when upper boom point is attached.

Auxiliary Drum Deduct				
Deduct 770 kg from capacities when				
boom butt is equipped with auxiliary drum.				

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Meets **ANSI B30.5** Requirements





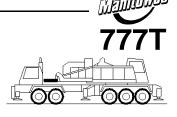
**Maximum Boom** 

Maximum Boom and Jib Lengths Lifted Unassisted On Outriggers						
Over R Outrig		Fully E	Side of xtended ggers	Partially Extended Fully Retra		Over Side of Fully Retracted Outriggers
Boom Length	Jib No. 134	Boom Length	Jib No. 134	Boom Length	Jib No. 134	Boom Length
4	3 270 kg Cı	rane Counte	rweight + 1	1 340 kg Fro	ont Bumper	Ctwt.
(a) 82.3m	_	67.1m	_			
(b) 79.2m	_	64.0m				
76.2m	—	61.0m	9.1m	N	ot	Not
73.2m	9.1m	57.9m	18.3m	Allo	wed	Allowed
70.1m	15.2m	54.9m	24.4m			
67.1m	24.4m					
		43 270	kg Crane Co	ounterweigh	t	
(c) 73.2m	_	67.1m	_			
70.1m	—	64.0m	_			
67.1m		61.0m	9.1m		ot	Not
64.0m	12.2m	57.9m	18.3m	Allo	wed	Allowed
61.0m	21.3m	54.9m	24.4m			
57.9m	24.4m					
		35 560	kg Crane Co	ounterweigh	t	
67.1m	_	61.0m		54.9m	7	
64.0m	_ /	57.9m	<b>\</b>	51.8m	71	N
61.0m	9.1m	54.9m	18.3m	48.8m	12.2m	Not Allowed
57.9m	18.3m	51.8m	21.3m	45.7m	21.3m	7 Inowed
54.9m	24.4m	48.8m	24.4m	42.7m	24.4m	
		27 850	kg Crane Co	ounterweigh	t	
61.0m	_	54.9m	_	48.8m	_	
57.9m		51.8m	9.1m	45.7m		Not
54.9m	12.2m	48.8m	15.2m	42.7m	15.2m	Not Allowed
51.8m	21.3m	45.7m	21.3m	39.6m	24.4m	THO Wed
48.8m	24.4m	42.7m	24.4m			
20 140 kg Crane Counterweight						
54.9m	_	48.8m	_	42.7m	_	
51.8m	_	45.7m	9.1m	39.6m	9.1m	<b>.</b>
48.8m	12.2m	42.7m	18.3m	36.6m	18.3m	Not Allowed
45.7m	21.3m	39.6m	24.4m	33.5m	24.4m	Anoweu
42.7m	24.4m					
Load block, hook and weight ball on ground at start. (a) Upper boom point and auxiliary drum cannot be used on 82.3m boom. (b) Upper boom point cannot be used on 79.2m boom over rear. (c) Upper boom point cannot be used on 73.2 boom over rear.						

Maximum Boom and Jib Lengths Lifted Unassisted On Rubber					
Over	Over Side				
Boom Length	Jib No. 134	Boom Length			
	Crane Cour g Front Bur				
	Not Allowed				
	Crane Cour	nterweight			
45.7m	_				
42.7m 39.6m	10.2	Not			
39.6m 36.6m	12.2m 21.3m	Allowed			
30.0m 33.5m	21.5m 24.4m				
00.011	Crane Cou	ntarwai aht			
39.6m	Crane Cour	ner weight			
36.6m	9.1m				
33.5m	15.2m	Not			
30.5m	24.4m	Allowed			
27 850 kg	Crane Cour	nterweight			
36.6m	_				
33.5m	_	<b>N</b> T 4			
30.5m	12.2m	Not Allowed			
20 140 kg Crane Counterweight					
30.5m	_				
		Not			
		Allowed			
Load block, hook and weight ball on ground at start.					

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Maximum Boom and Jib Lengths Lifted Unassisted On Outriggers						
Over Rear of Outriggers		Over Side of Fully Extended Outriggers		Over Side of Partially Extended Outriggers		Over Side of Fully Retracted Outriggers
Boom Length	Jib No. 134	Boom Length	Jib No. 134	Boom Length	Jib No. 134	Boom Length
		12 430	kg Crane C	ounterweigl	nt	
48.8m		42.7m	_	36.6m	_	21.3m
45.7m		39.6m	9.1m	33.5m		
42.7m	15.2m	36.6m	18.3m	30.5m	15.2m	
39.6m	24.4m	33.5m	24.4m		$\langle \lambda \rangle$	
		4 720 1	kg Crane Co	ounterweigh	t	<b>&gt;</b> //
42.7m	_	36.6m	_	30.5m		13m⁄
39.6m	_	33.5m				
36.6m	15.2m	30.5m	15.2m			
33.5m	21.3m					
30.5m	24.4m	4				
0 kg Crane Counterweight						
39.6m	_	30.5m		24.4m	<del></del>	
36.6m	_					Not
33.5m	12.2m					Allowed
30.5m	18.3m					
Load block, hook and weight ball on ground at start.						

Maximum Boom and Jib Lengths Lifted Unassisted On Rubber					
Over	Rear	Over Side			
Boom Length	Jib No. 134	Boom Length			
12 430 kg	Crane Cour	nterweight			
24.4m	_	Not Allowed			
4 720 kg	Crane Coun	terweight			
18.3m		13m			
0 kg Crane Counterweight					
13m	_	Not Allowed			
Load block, hook and weight ball on ground at start.					

Jib may remain attached as shown in raising table for raising over rear on rubber but must not be used to pick loads on rubber.

Refer to chart **No. 8094-AM** for straight over rear on rubber boom capacities, chart **No. 8063-AM** for fully extended outrigger boom capacities, chart **No. 8095-AM** for partially extended outrigger boom capacities and chart **No. 8096-AM** for fully retracted outrigger boom capacities.

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13.0m (42.5 Ft.)

Boom

Doom					
		Boom	4 720 kg Counterweight	0 kg Counterweight	
Oper. Rad. Feet	Boom Ang. Deg.		Boom Capacity Pounds	Boom Capacity Pounds	
4.0	80.2	15.3	32 600*	26 000	
4.5	77.8	15.1	28 200	20 700	
5.0	75.4	15.0	23 700	17 200	
5.5	73.1	14.8	20 200	14 500	
6.0	70.7	14.6	17 500	12 400	
7.0	65.7	14.1	13 400	9 200	
8.0	60.6	13.6	10 600	6 900	
9.0	55.1	12.8	8 400	5 200	
10.0	49.1	12.0	6 700	3 900	
11.0	42.5	10.9	5 400	2 800	
12.0	34.8	9.5	4 200	1 900	

18.3m (60 Ft.) Boom

			Boom	4 720 kg Counterweight
	Oper. Rad. Feet	Boom Ang. Deg.	Point Elev. Feet	Boom Capacity Pounds
	4.9	80.3	20.7	24 900
	5.0	79.9	20.6	23 900
4	5.5	78.3	20.5	20 400
	6.0	76.7	20.4	17 600
	7.0	73.4	20.1	13 500
	8.0	70.0	19.7	10 600
	9.0	66.6	19.3	8 500
	10.0	63.1	18.7	6 900
	11.0	59.4	18.1	5 500
1	12.0	55.6	17.4	4 500
	14.0	47.3	15.7	2 800
	16.0	37.6	13.4	1 500