Manitowoc Cranes, Inc.

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.

Upper Boom Point Deduct
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

Over R	ear of	m and Jib Over S Fully E	Side of	Partially Extended Fully		Over Side of Fully Retracted		Maximum Boom and Jib Lengths Lifted Unassisted On Rubber		
Outrig	ggers	Outri	ggers	Outri	ggers	Outriggers		Over	Rear	Over Sid
Boom Length	Jib No. 134	Boom Length	Jib No. 134	Boom Length	Jib No. 134	Boom Length		Boom Length	Jib No. 134	Boom Length
	3 270 kg Cr		rweight + 1	1 340 kg Fro	ont Bumper	Ctwt.			Crane Cou	
(a) 82.3m	—	67.1m	—					≁ 11 340 k	g Front Bu	mper Ctwt
(b) 79.2m		64.0m								
76.2m		61.0m	9.1m	N	/	Not			NT-4	
73.2m	9.1m	57.9m	18.3m	Allo	wed	Allowed	r		Not Allowed	
70.1m	15.2m	54.9m	24.4m		$\langle \rangle$				Anoweu	
67.1m	24.4m						$\boldsymbol{\bigwedge}$			
43 270 kg Crane Counterweight 43 270 kg						43 270 kg	Crane Cou	nterweigh		
(c) 73.2m	—	67.1m	—					45.7m	_	
70.1m	—	64.0m	—			/		42.7m		
67.1m	—	61.0m	9.1m		ot	Not		39.6m	12.2m	Not
64.0m	12.2m	57.9m	18.3m	Allo	wed	Allowed		36.6m	21.3m	Allowed
61.0m	21.3m	54.9m	24.4m			\land				
57.9m	24.4m							33.5m	24.4m	
35 560 kg Crane Counterweight							-	Crane Cou	nterweigh	
67.1m		61.0m	$\langle - \rangle$	54.9m	9)			39.6m	—	
64.0m	_ /	57 .9m	+/	51.8m	+			36.6m	9.1m	Not
61.0m	9.1m	54.9m	/18.3m	48.8m	12.2m	Not Allowed		33.5m	15.2m	Allowed
57.9m	18.3m	51.8m	21.3m	45.7m	21.3m	Alloweu		30.5m	24.4m	
54.9m	24.4m	48.8m	24.4m	42.7m	24.4m					
27 850 kg Crane Counterweight 27 850 kg Crane Counterweight						nterweigh				
61.0m	—	54.9m	—	48.8m	—			36.6m	—	
57.9m		51.8m	9.1m	45.7m		Not		33.5m		
54.9m	12.2m	48.8m	15.2m	42.7m	15.2m	Allowed		30.5m	12.2m	Not Allowed
51.8m	21.3m	45.7m	21.3m	39.6m	24.4m	1110 // 04				Alloweu
48.8m	24.4m	42.7m	24.4m							
		20 140 1	kg Crane Co	ounterweigh	t			20 140 kg	Crane Cou	nterweigh
54.9m		48.8m		42.7m				30.5m		
51.8m		45.7m	9.1m	39.6m	9.1m	N T (50.511		
48.8m	12.2m	42.7m	18.3m	36.6m	18.3m	Not Allowed				Not
45.7m	21.3m	39.6m	24.4m	33.5m	24.4m	Alloweu				Allowed
42.7m	24.4m									
auxiliary d	rum cannot	be used on	82.3m boon		boom poin	point and t cannot be used 3.2 boom over			k, hook and ound at star	-

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Manitowoc Cranes, Inc.

Boom No. 78T With Heavy Lift Top

0 kg to 4 720 kg Crane Counterweight Without Front Bumper Counterweight

Manitowoc, Wisconsin 54220 U.S.A.

Liftcrane Boom Capacities

Rating Over Side Sector On Rubber - 0.4 kms/hr Travel

Meets ANSI B30.5 Requirements





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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18.3m (60 Ft.)



13.0m	(42.5 F	t.)
-		

Boom

	Boom	4 720 kg Counterweight	0 kg Counterweight
Boom Ang. Deg.	Point Elev. Feet	Boom Capacity Pounds	Boom Capacity Pounds
80.2	15.3	32 600*	26 000
77.8	15.1	28 200	20 700
75.4	15.0	23 700	17 200
73.1	14.8	20 200	14 500
70.7	14.6	17 500	12 400
65.7	14.1	13 400	9 200
60.6	13.6	10 600	6 900
55.1	12.8	8 400	5 200
49.1	12.0	6 700	3 900
42.5	10.9	5 400	2 800
34.8	9.5	4 200	1 900
	Ang. Deg. 80.2 77.8 75.4 73.1 70.7 65.7 60.6 55.1 49.1 42.5	Boom Point Ang. Elev. 002 15.3 77.8 15.1 75.4 15.0 73.1 14.8 70.7 14.6 65.7 14.1 60.6 13.6 55.1 12.8 49.1 12.0 42.5 10.9	Boom Counterweight Boom Point Boom Ang. Elev. Capacity Deg. Feet Pounds 80.2 15.3 32 600* 77.8 15.1 28 200 75.4 15.0 23 700 73.1 14.8 20 200 70.7 14.6 17 500 65.7 14.1 13 400 60.6 13.6 10 600 55.1 12.8 8 400 49.1 12.0 6 700 42.5 10.9 5 400

	Boo	m		
			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
	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

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