MAXIM
1-877-MAX-LIFT

Manitowoc

model 10000

product guide

- 100 ton Lift Capacity
- 2,270 ft-kips Maximum Load Moment
- 200' Heavy-Lift Boom
- 250' Fixed Jib on Heavy-Lift Boom
- 265' Luffing Jib on Heavy-Lift Boom
- 316 HP engine
- 525 fpm line speed
- 44,000 lb Maximum Line Pull
- 22,000 lb Material Rehandling Clamshell capacity
- Fast, efficient self-assembly and disassembly
- Manitowoc Crane CARE comprehensive support

contents

Manitowoc Crane Group

Above. Beyond. Everywhere.™

model 10000

specifications

Upperworks

Engine

Mitsubishi 6D24-TLA2F, 6 cylinder, water-cooled diesel, direct fuel injection with turbocharger, 235 kW (316 HP) @ 2000 high-idle RPM. Maximum torque 933 lb·ft (1265 N·m) net at 1,400 rpm (SAE J 1349).

One diesel fuel tank, 105 gallons (400 liters) capacity.

Two 12 volt 136 AH capacity batteries, 24 volt system and 80 amp alternator.

All wiring harnesses and connectors are numbered for easier servicing. Machine is equipped with individual fused branch circuits.

Controls

Full-flow hydraulic control system for constant variable pressure to front and rear drums, boom hoist brakes and clutches. Controls respond instantly to the touch, delivering smooth function operation.

Relief valve pressures:
Load hoist, boom hoist and propel system.....4,480 psi (315 kg/cm2)
Swing system .....3,980 psi (280 kg/cm2)
Control system .....1,140 psi (80 kg/cm2)

Hydraulic System

All three variable displacement piston-type pumps are driven by a heavy-duty pump drive. One of these pumps is used in the right propel circuit and hook hoist circuit, and can accommodate an optional third circuit. Another is used in the left propel circuit, boom hoist circuit and hook hoist circuit. The third variable displacement pump is used in the swing circuit. In addition, two gear pumps are used in the control system and auxiliary equipment, and two gear pumps serve the clutch and brakes.

Maximum pressure rating ..... 4,640 psi (325 kg/cm2)

Load hoist, boom hoist and propel ... 2 Piston pumps
Swing ..... 1 Piston pump
Control system and auxiliary ..... 2 Gear pumps
Brake cooling system ..... 2 Gear pumps

Reservoir capacity: 100 US gallon (380 liter).

Cooling: Oil-to-air heat exchanger (plate-fin type).

Filtration: Full-flow and bypass type with replaceable paper element.

Drums

Front and rear drums for load hoist powered by hydraulic variable displacement piston-type motors, driven through planetary reducers. Powered hoisting/lowering and free-fall operation is standard. Drum turn indicators for front and rear drums are also standard.

Brake & Clutches (compatible): Forced-circulation oil-cooled wet-type multi-disc brakes, each using positive and negative actuation. An external ratchet is fitted for locking the drums.

Drums: (front and rear) 24.1" (613 mm) P.C.D. X 24.5" (622 mm) wide drums, grooved for 1" (25.4 mm) wire rope.

Wire rope capacity:
Front drum 771 ft (235 m) working length
Rear drum 525 ft (160 m) working length
Storage length (each drum) 830' (253 m)

Line speed: Single line on the first drum layer
Hoisting .....410 ft/min (125m/min)
Lowering .....410 ft/min (125m/min)

Optional third drum: same dimensions and specifications as front and rear drums. Wire rope working length is 623' (190m).

Swing System

Swing unit: Powered by a hydraulic piston-type motor driving spur gears through planetary reducers, the swing system provides 360° rotation.

Swing brake: A spring-set, hydraulically released multiple-disc brake is internally fitted in swing motor.

Swing lock: 2 Position lock for transportation.

Rotating bed turntable: Single-row ball bearing with an integral internally cut swing gear.

Swing speed 4.0 rpm

Boom Support System

Single drum powered by a hydraulic axial piston motor through a planetary reducer.

Brake: A spring-set, hydraulically released multiple-disc brake is internally fitted in the boom hoist motor and operated through a counter-balance valve. An external ratchet is fitted for locking the drums.

Drum: Single drum, grooved for 5/8" (16 mm) dia. wire rope.

specifications

Line speed: Single line on the first drum layer
Hoisting .....230 ft/min (70m/min)
Lowering .....230 ft/min (70m/min)

Boom Support System

This high folding type gantry is fitted with a sheave frame for boom hoist reeving. Hydraulic lift is standard. It provides full up, full down positions with linkage.

Counterweight

QTY.	ITEM	UNIT WEIGHT kg	UNIT WEIGHT lb	TOTAL WEIGHT kg	TOTAL WEIGHT lb
	Carbody				
2	Each	3 340	7,350	6 680	14,700
			Carbody Total	**6 680**	**14,700**
	Upperworks				
1	Counterweight A	12 100	26,670	12 100	26,670
1	Counterweight B	7 400	16,320	7 400	16,320
1	Counterweight C	9,300	20,510	9,300	20,510
			Upperworks Total	**28 800**	**63,500**
			Counterweight TOTAL	**35 480**	**78,200**

Operator's Cab

Totally enclosed, full vision cab fitted with tinted safety glass. A fully adjustable, highbacked seat with arm rests permits operators to set their ideal working position. Side mounted console for auxiliary controls and instruments. An air conditioner, a signal horn, cigarette lighter, windshield wiper and inspection lamp socket are standard features.

Controls

In front of operator are the foot pedals for front and rear drum brakes and foot acceleration pedal. At operator's right side are the travel (propel) control levers and the function lock lever. To the operator's right front are the boom hoist control lever, main (front) and auxiliary (rear) winch control levers and the free-fall select switches for the main and auxiliary winches and drum turn indicator (front /rear drum). To the operators left front are the swing control lever and third drum control lever (if the machine is so equipped). To the operator's left are the crawler extend/retract lever and the positive swing lock. The lefthand console contains toggle switches for travel (propel) speed, free-fall high/low select, gantry control, crane/clamshell select switch and the anti-two-block/boom overhoist switches. Directly in front of the console are the drum pawl lock for boom, front, rear and third drum (if so equipped) and the engine ignition key. The swing brake and signal horn are mounted on the swing control lever.

Gauges

Fuel gauge, engine water temperature gauge, hour meter and tachometer are located on the monitor display.

Warning display

All potential warnings, including battery charge, engine oil pressure, air cleaner, engine oil filter, control main pressure, and hydraulic oil temperature will appear on the monitor display when a fault occurs.

Safety device

Function lock lever, anti-two-block, boom over hoist limit switch, boom angle indicator, signal horn, boom hoist drum lock, front and rear drum lock, swing lock, swing alarm (buzzer and lamps), boom backstops and load moment indicator.

Lowerworks

Carbody

The durable carbody features steel welded construction with extendible axles.

Crawlers

Crawler assemblies can be hydraulically extended for wide-track operation or retracted for transportation. Crawler belt tension adjusted with hydraulic jack and maintained by shims between idler block and frame.

Crawler drive

The independent hydraulic propel drive is built into each crawler side frame. Each drive consists of a hydraulic motor driving a propel sprocket through a planetary gearbox. The hydraulic motor and gearbox are built into the crawler side frame within the shoe width. The track rollers are sealed for maintenance-free operation.

Crawler brakes

Spring set, hydraulically released, multiple disc-type parking brakes are built into each propel drive.

Steering mechanism

The hydraulic propel system provides both skid steering (driving one track only) and counter-rotating steering (driving each track in opposite direction) and differential track speed.

Crawler shoes

66 shoes per side, 36" (914 mm) wide each crawler.

Travel speed (High/Low) 1.18/0.75 mph (1.9/1.2 km/h)

Attachments

Boom

Welded lattice construction using tubular, high-tensile steel chords with pin connections between sections. Boom tip is open throat construction. Two idler sheaves and three point sheaves are standard.

Basic boom length 40' (12,2 m) consists of the boom butt section 19' 0" (5,8 m) and boom top section 21 ' 0" (6,39 m).

Optional boom inserts are available to provide extension capabilities. They also have welded lattice construction with tubular, high-tension steel chords and pin connections on each one of 10' (3,0 m), 20' (6,1 m), 40' (12,2 m) inserts.

Maximum total length of boom 200' (61,0 m).

Fixed Jib

The optional fixed jib employs welded lattice construction with tubular, high-tension steel chords with pin connections between sections.

Basic jib length 30' (9,14 m) consists of Jib butt section 15' (4,57 m) and jib top section 15' (4,57 m).

Optional jib boom inserts of 10' (3,0 m), 20' (6,1 m) are available for extension capabilities up to 60' (18,3 m).

Maximum total length of boom and jib 190' (57,9 m) + 60' (18,3 m) is 250' (76,2 m).

Luffing Jib

- Optional: Components to make up 16,7 m (55') basic luffing boom including 6,1 m (20') butt, 9,1 m (30') boom special insert (with idler sheave), 1,5 m (5') top, 5,7 m (19') luffing jib butt, boom strut assembly, jib strut assembly, jib stop assembly, strut backstops, backstay pendants with sheaves, mounting parts and LMI Hardware.

- Optional: 3,1 m (10'), 6,1 m (20'), and 9,1 m (30') luffing boom inserts. Utilize optional boom inserts to make up to 35,0 m (115') of luffing boom.

- Optional: 15,2 m (50') basic luffing jib assembly including 5,8 m (19') luffing jib butt, 3,0 m (10') luffing jib insert, 6,4 m (21') luffing jib top, 6,4 m (21') front strut assembly, 5,3 (17' 5") rear strut assembly, and luffing jib point roller assembly (single sheave) which is required during erection of the jib. The 6,4 m (21') luffing jib top utilizes the existing boom top from the base crane.

Maximum 45,7 m (150') jib length for 32,0 m (105') boom length and maximum 30,4 m (100') jib length for 35,0 m (115') boom length.

Note: Luffing jib top and inserts use liftcrane boom top and inserts. Also, the third drum and wire rope must be ordered with luffing jib attachment

Tools and Accessories

A set of tools and accessories are furnished.

Optional Equipment

- **Optional: Blocks and Hooks**

- 12 US ton ball hook, 722 lbs.

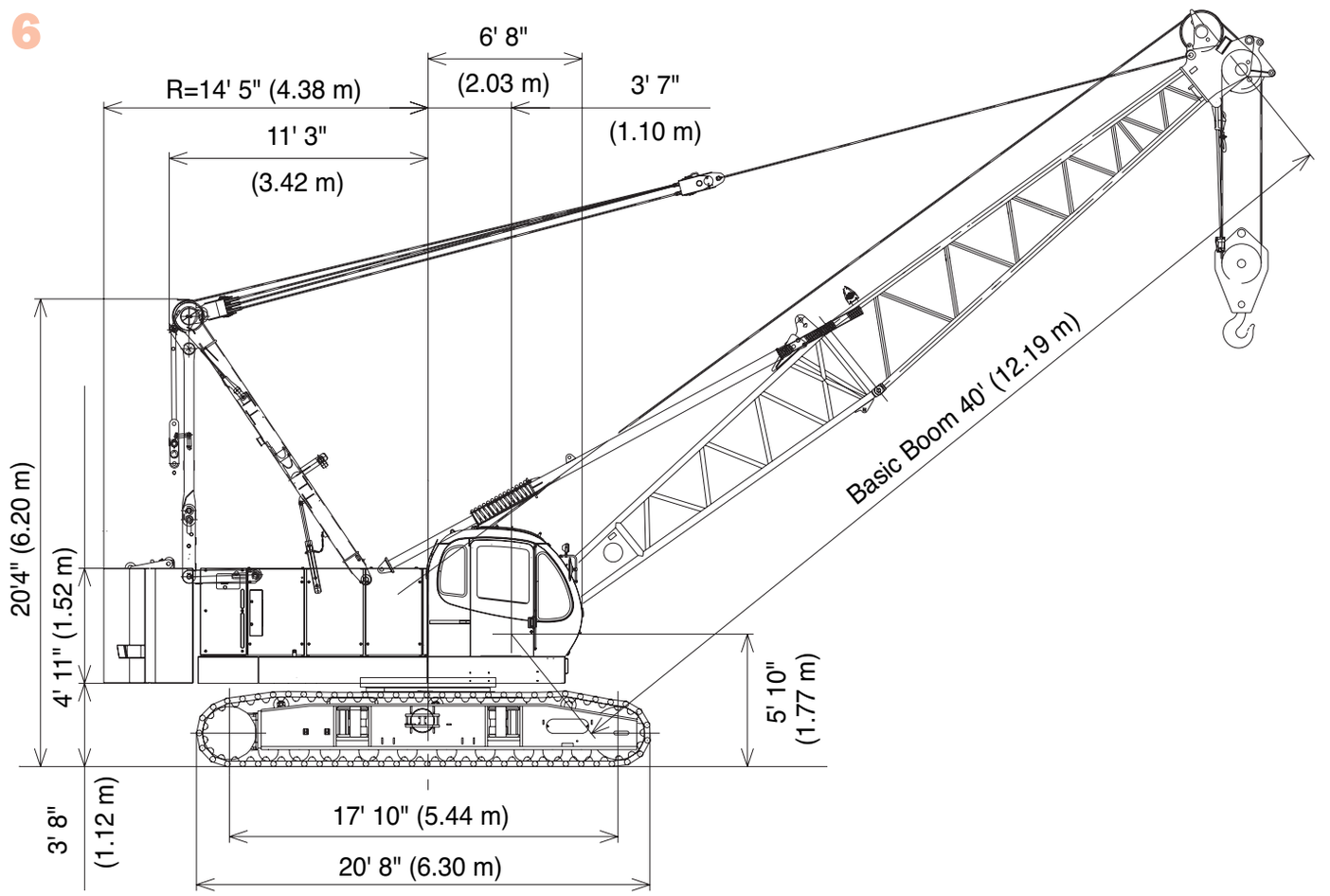
- 50 US ton hook block, 2311 lbs, three 24" Nom. OD roller bearing sheaves grooved for 1" dia. wire rope, and roller bearing swivel with hook latch.

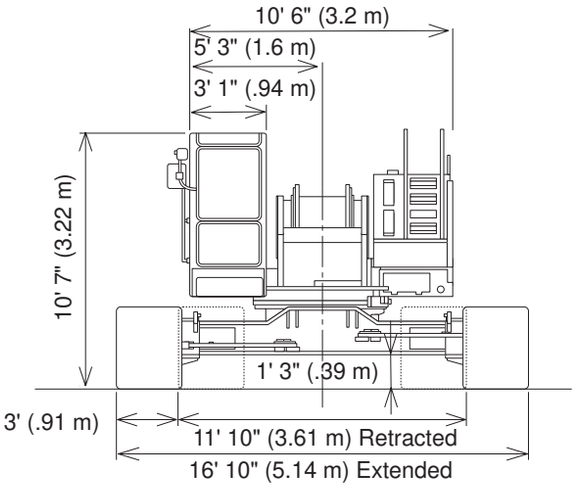
- 75 US ton hook block, 3820 lbs, four 24" Nom. OD roller bearing sheaves grooved for 1" dia. wire rope, roller bearing swivel with hook latch.

- 100 US ton hook block, 2946 lbs, four 24" Nom. OD roller bearing sheaves grooved for 1" dia. wire rope, roller bearing swivel with hook latch.

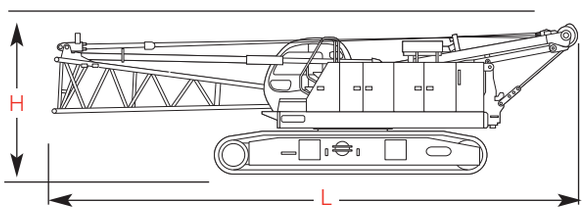
Travel kit
Detachable upper boom point
Custom color

outline dimensions



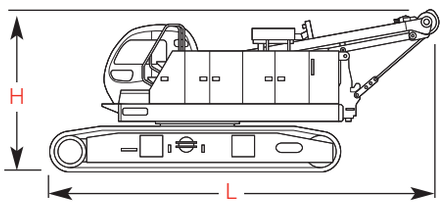


outline dimensions



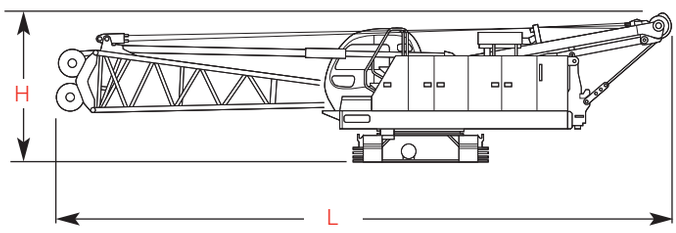
Upperworks		x 1
Length	12,19 m	40' 0"
Width	3,61 m	11' 10"
Height	3,32 m	10' 10"
Weight	45 750 kg	100,860 lb

Note: Weight includes base machine, crawler, gantry, maximum hoist and whip lines on drums, boom butt, full hydraulic fluid reservoir, and one third tank of fuel.



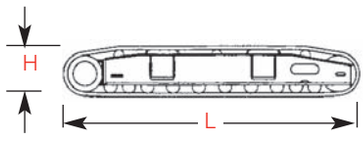
Upperworks		x 1
Length	8,44 m	27' 8"
Width	3,61 m	11' 10"
Height	3,32 m	10' 10"
Weight	43 500 kg	95,900 lb

Note: Weight includes base machine, crawler, gantry, maximum hoist and whip lines on drums, full hydraulic fluid reservoir, and one third tank of fuel.



Upperworks without Crawlers		x 1
Length	12,93 m	42' 5"
Width	3,50 m	11' 6"
Height	3,06 m	10' 0"
Weight	32,250 kg	71,100 lb

Note: Weight includes base machine, crawler, maximum hoist and whip lines on drums, full hydraulic fluid reservoir, and one third tank of fuel.

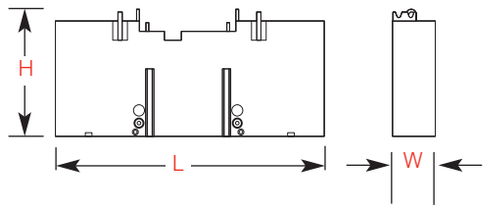


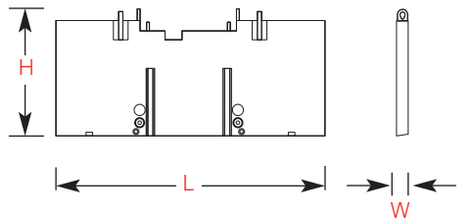
Crawlers		x 2
Length	6,30 m	20' 7"
Width	0,91 m	3' 0"
Height	0,98 m	3' 3"
Weight	7 950 kg	17,530 lb

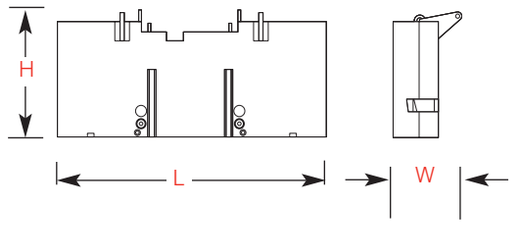
Optional 3rd Drum & Wire Rope		x 1
Weight	2 660 kg	5,865 lb

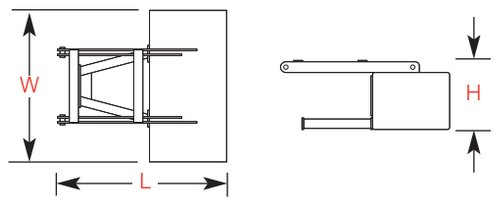
Option

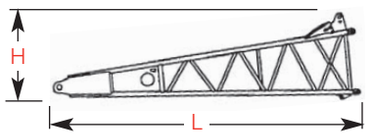
outline dimensions

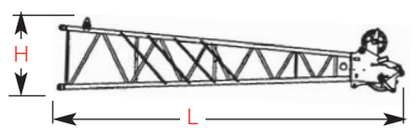


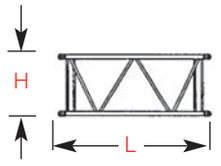












Upper Counterweight A		x 1
Length	3,20 m	10' 6"
Width	0,64 m	2' 1"
Height	1,71 m	5' 7"
Weight	12 070 kg	27,626 lb

Upper Counterweight B		x 1
Length	3,20 m	10' 6"
Width	0,52 m	1' 8"
Height	1,71 m	5' 7"
Weight	7 373 kg	16,254 lb

Upper Counterweight C		x 1
Length	3,20 m	10' 6"
Width	0,80 m	2' 7"
Height	1,71 m	5' 7"
Weight	9 347 kg	20,606 lb

Carbody Counterweight		x 2
Length	1,67 m	5' 6"
Width	1,17 m	3' 10"
Height	0,56 m	1' 10"
Weight	3 340 kg	7,363 lb

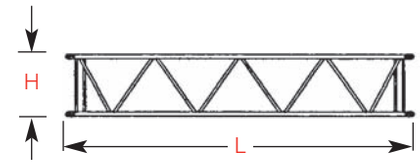
Boom Butt 19'		x 1
Length	5,17 m	19' 7"
Width	1,50 m	4' 11"
Height	1,69 m	5' 7"
Weight	1 140 kg	2,510 lb

Boom Top 21'		x 1
Length	6,91 m	22' 8"
Width	1,50 m	4' 11"
Height	1,48 m	4' 10"
Weight	1 170 kg	2,580 lb

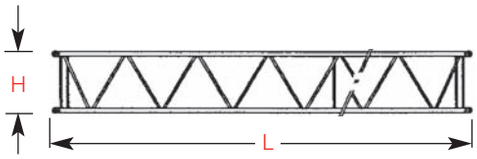
Boom Insert 3,0 m (10')		x 1, 2
Length	3,16 m	10' 5"
Width	1,50 m	4'11"
Height	1,29 m	4' 3"
Weight	310 kg	680 lb

Option

outline dimensions

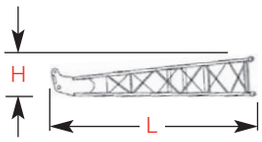


Boom Insert 6,10 (20')		x 1, 2
Length	6,21 m	20' 4"
Width	1,50 m	4' 11"
Height	1,29 m	4' 3"
Weight	520 kg	1,150 lb

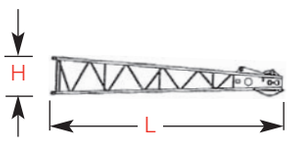


Boom Insert 12,2 m (40')		x 1, 2, 3
Length	12,31 m	40' 4"
Width	1,50 m	4' 11"
Height	1,29 m	4' 3"
Weight	960 kg	2,120 lb

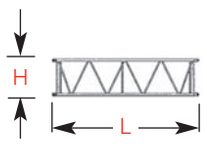
Note: Use one "A" type insert with lug required for any boom combinations that require a 12,2 m (40') insert.



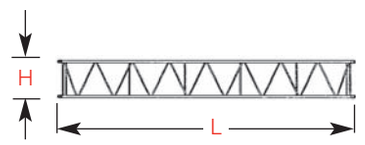
Fixed Jib Butt		x 1
Length	4,81 m	15' 9"
Width	0,79 m	2' 7"
Height	0,79 m	2' 7"
Weight	200 kg	440 lb



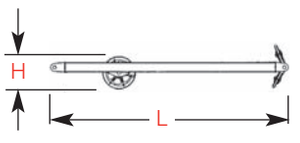
Fixed Jib Top		x 1
Length	4,96 m	16' 3"
Width	0,79 m	2' 7"
Height	0,79 m	2' 7"
Weight	280 kg	620 lb



Fixed Jib Insert 3,0 m (10')		x 1
Length	3,12 m	10' 3"
Width	0,79 m	2' 7"
Height	0,79 m	2' 7"
Weight	100 kg	220 lb



Fixed Jib Insert 6,1 m (20')		x 1
Length	6,16 m	20' 3"
Width	0,79 m	2' 7"
Height	0,79 m	2' 7"
Weight	180 kg	400 lb



Fixed Jib Strut		x 1
Length	3,62 m	11' 11"
Width	0,84 m	2' 9"
Height	0,62 m	2' 2"
Weight	250 kg	550 lb

Option

outline dimensions

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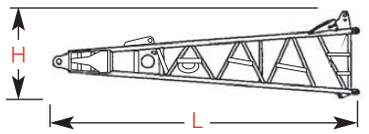
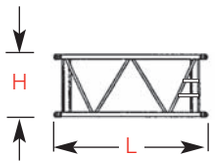
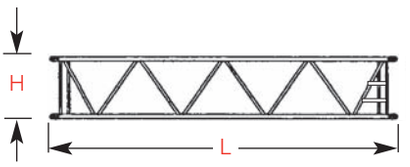


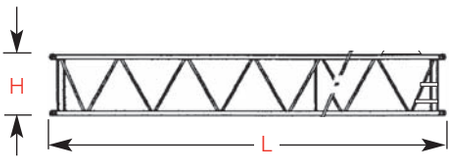
Luffing Boom Butt		x 1
Length	6,27 m	20' 7"
Width	1,67 m	5' 6"
Height	2,06 m	6' 9"
Weight	1 540 kg	3,400 lb



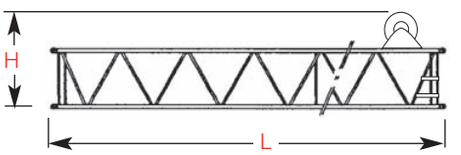
Luffing Boom Insert 3,0 m (10')		x 1, 2
Length	3,16 m	10' 5"
Width	1,67 m	5' 6"
Height	1,67 m	5' 6"
Weight	395 kg	870 lb



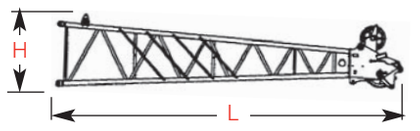
Luffing Boom Insert 6,10 m (20')		x 1, 2
Length	6,21 m	20' 5"
Width	1,67 m	5' 6"
Height	1,67 m	5' 6"
Weight	665 kg	1,470 lb



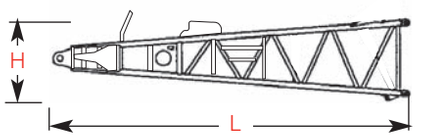
Luffing Boom Insert 9,14 m (30')		x 1, 2, 3
Length	9,26 m	30' 5"
Width	1,67 m	5' 6"
Height	1,67 m	5' 6"
Weight	935 kg	2,060 lb



Luffing Special Boom Insert 9,14 m (30')		x 1
Length	9,26 m	30' 5"
Width	1,67 m	5' 6"
Height	2,41 m	7' 11"
Weight	1160 kg	2,560 lb



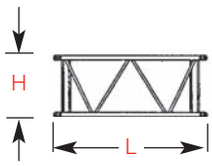
Luffing Jib Top		x 1
Length	6,91 m	22' 8"
Width	1,49 m	4' 11"
Height	1,48 m	4' 10"
Weight	1 170 kg	2,580 lb



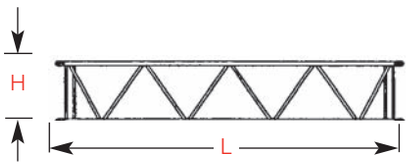
Luffing Jib Butt		x 1
Length	5,97 m	19' 7"
Width	1,49 m	4' 11"
Height	1,32 m	4' 4"
Weight	863 kg	1,900 lb

Option

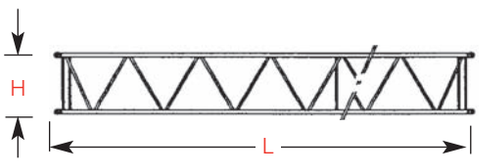
outline dimensions



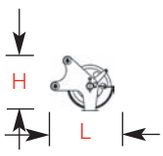
Luffing Jib Insert 3,0 m (10')		x 1, 2
Length	3,16 m	10' 5"
Width	1,49 m	4' 11"
Height	1,29 m	4' 3"
Weight	310 kg	685 lb



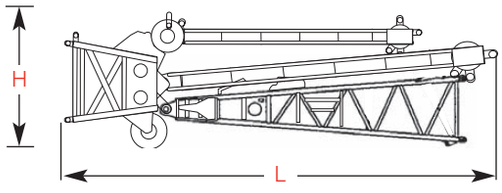
Luffing Jib Insert 6,10 m (20')		x 1, 2
Length	6,21 m	20' 5"
Width	1,49 m	4' 11"
Height	1,29 m	4' 3"
Weight	520 kg	1,150 lb



Luffing Jib Insert 12,2 m (40')		x 1, 2, 3
Length	12,31 m	40' 4"
Width	1,49 m	4' 11"
Height	1,29 m	4' 3"
Weight	960kg	2,120 lb



Luffing Jib Point Roller Assembly		x 1
Length	1,01 m	3' 4
Width	0,89 m	2' 11"
Height	0,91 m	3' 0"
Weight	380 kg	840 lb

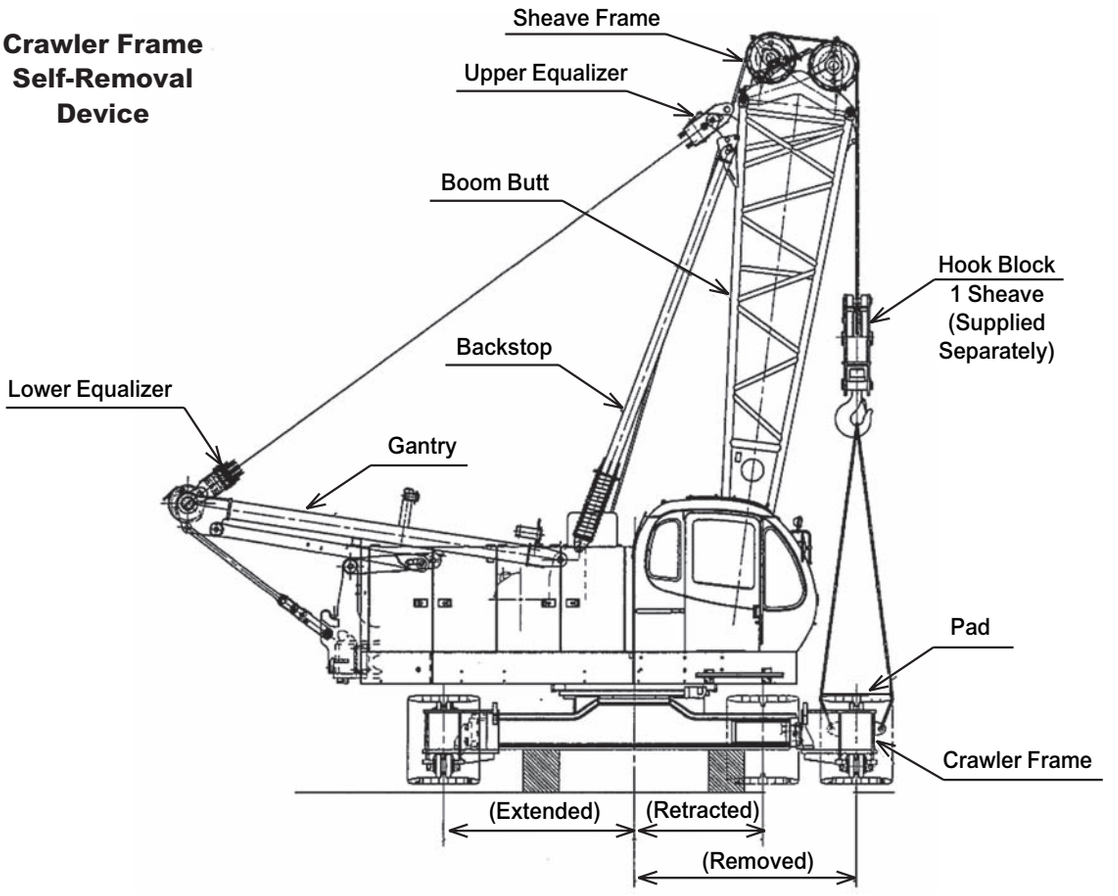


Luffing Boom Top Assembly (Shipping Style)		x 1
Length	8,19 m	26' 10"
Width	1,98 m	6' 6"
Height	2,65 m	8' 8"
Weight	3,500 kg	7,720 lb

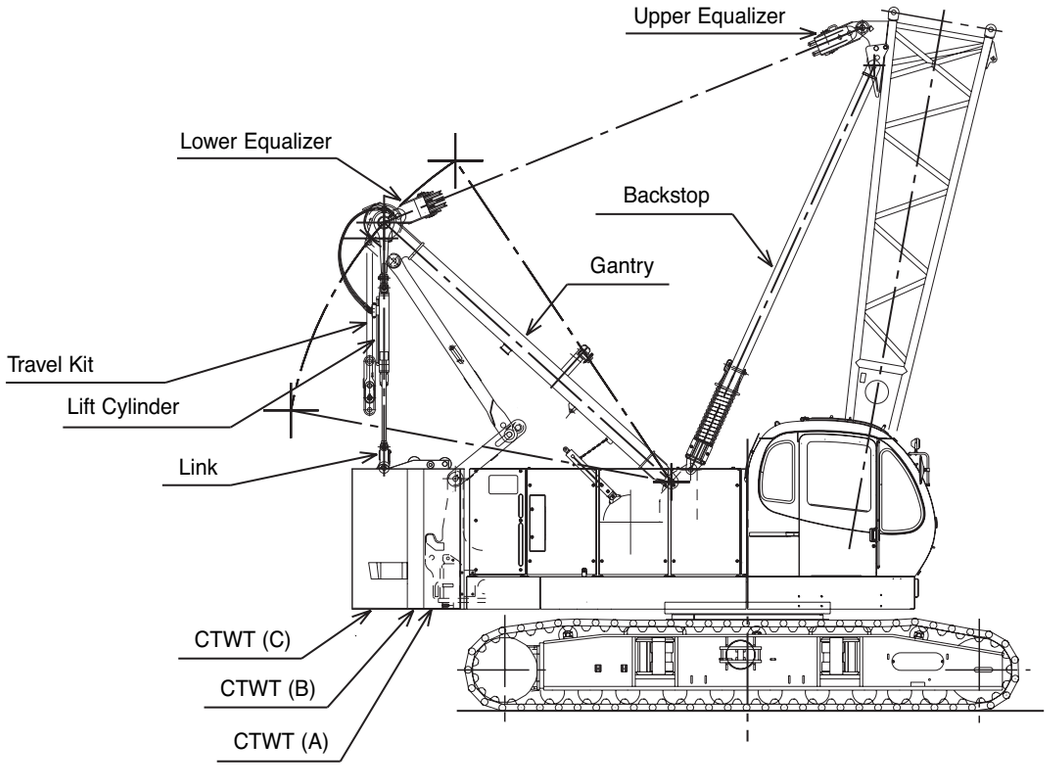
Option

self assembly

Crawler Frame Self-Removal Device



Counterweight Self-Handling Device



winch performance data

Line Pull

	Rated line pull	* Maximum line pull
Front Drum	25,100 lbs (11,400 kg)	44,100 lbs (20,000 kg)
Rear Drum	25,100 lbs (11,400 kg)	44,100 lbs (20,000 kg)
Optional 3rd Drum	25,100 lbs (11,400 kg)	44,100 lbs (20,000 kg)

* *Maximum line pull is not based on wire rope strength.*

Wire Rope Specifications

Use	Specs	Diameter inch (mm)	Working Length feet (m)	Breaking Strength lbs (kg)
Front Drum	IWRC C/O 6 X Fi (25)	1" (25.4)	771' (235)	103,400 (46,901)
Rear Drum	IWRC C/O 6 X Fi (25)	1" (25.4)	525' (160)	103,400 (46,901)
Boom Hoist Drum	IWRC O/O 6 X WS (31)	5/8" (15.8)	492' (150)	47,200 (21,410)
Opt. Third Drum	IWRC C/O 6 X Fi (25)	1" (25.4)	623' (190)	103,400 (46,901)

Model 10000 Front and Rear Winch

		Line speed (ft/min)				
	Layer	1	2	3	4	5
Line Pull	(lbs)					
	0	410	436	466	495	525
	5,000	406	434	463	492	522
	10,000	355	355	355	355	355
	15,000	237	237	237	237	237
	20,000	177	177	177	177	177
Rated Line pull	25,000	142	142	142	142	142
	30,000	118	118	119	126	133
	35,000	104	111	118	125	
	40,000	104	111			

		Line speed (m/min)				
	Layer	1	2	3	4	5
Line Pull	(kgf)					
	0	125	133	142	151	160
	2,268	124	132	141	150	159
	4,536	108	108	108	108	108
	6,804	72	72	72	72	72
	9,072	54	54	54	54	54
Rated Line pull	11,340	43	43	43	43	43
	13,608	36	36	36	38	41
	15,876	32	34	36	38	
	18,144	32	34			

boom combinations

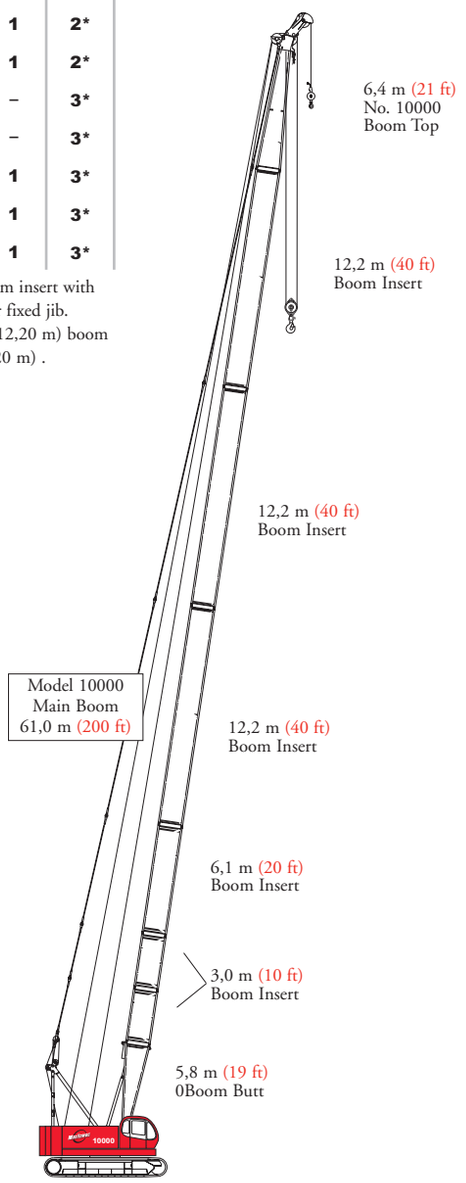
No. 10000 Heavy-Lift Boom Combinations

Boom Length m (ft)	Boom Inserts 3,1 m (10 ft)	6,1 m (20 ft)	12,2 m (40 ft)
12,2 (40)	–	–	–
15,2 (50)	1	–	–
18,3 (60)	–	1	–
21,3 (70)	1	1	–
24,4 (80)	–	–	1*
27,4 (90)	1	–	1*
30,5 (100)	–	1	1*
33,5 (110)	1	1	1*
36,6 (120)	–	–	2*
39,6 (130)	1	–	2*
42,7 (140)	–	1	2*
45,7 (150)	1	1	2*
48,8 (160)	–	–	3*
51,8 (170)	1	–	3*
54,9 (180)	–	1	3*
57,9 (190)	1	1	3*
61,0 (200)	2	1	3*

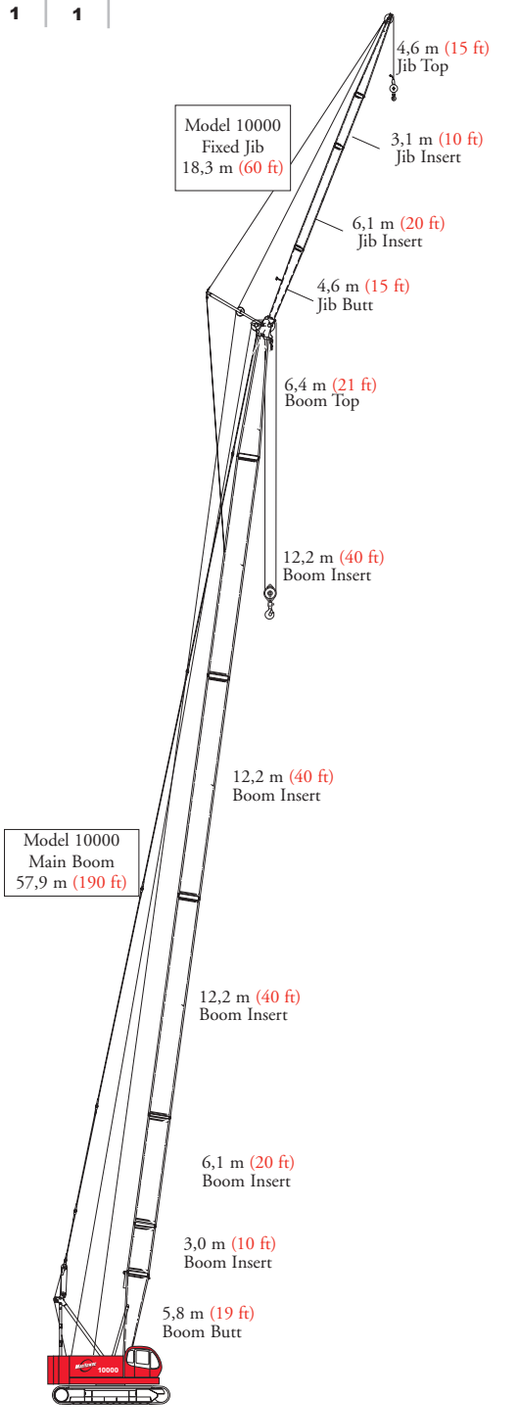
*Note: One 40 ft. (12,20 m) boom insert with lug 40A (12,20 m) is required for fixed jib. When no jib is installed a 40 ft (12,20 m) boom can be used instead of 40A (12,20 m) .

Fixed Jib Combinations

Jib Length m (ft)	Fixed Jib Inserts 3,1m (10 ft)	6,1m (20 ft)
9,1 (30)	–	–
12,2 (40)	1	-
15,2 (50)	-	1
18,3 (60)	1	1



Model 10000 Main Boom 61,0 m (200 ft)



Model 10000 Fixed Jib on Main Boom 76,2 m (250 ft)

boom combinations

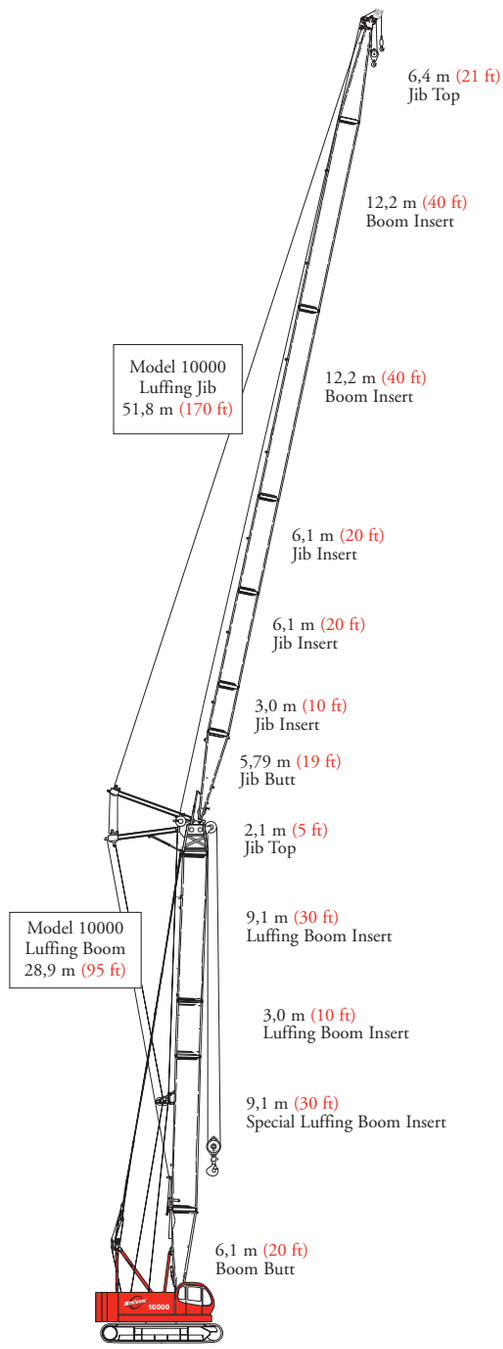
Luffing Jib Combinations

Luffing Jib Length m (ft)	Boom Inserts 3,0 m (10 ft)	6,1 m (20 ft)	12,2 m (40 ft)
15,2(50)	1	–	–
18,3 (60)	–	1	–
21,3 (70)	1	1	–
24,4 (80)	–	–	1
27,4 (90)	1	–	1
30,5 (100)	–	1	1
33,5 (110)	1	1	1
36,6 (120)	–	–	2
39,6 (130)	1	–	2
42,7 (140)	–	1	2
45,7 (150)	1	1	2
48,8 (160)	–	2	2
51,8 (170)	1	2	2

Luffing Boom Combinations

Luffing Boom Length m (ft)	Boom Inserts 3,0 m (10 ft)	6,1 m (20 ft)	9,1 m (30 ft)
16,7 (55)	–	–	1
19,8 (65)	1	–	1
22,8 (75)	–	1	1
25,9 (85)	1	1	1
28,9 (95)	1	–	2
32,0 (105)	–	1	2
35,0 (115)	1	1	2

*Note: One 9,14 m (30') special luffing boom insert is required for luffing boom.



Model 10000
Luffing Jib on
Luffing Boom
80,7 m (265 ft)

load chart notes

1. Rated loads included in the charts are the maximum allowable freely suspended loads at a given boom length, boom angle and load radius, and have been determined for the machine standing level on firm supporting surface under ideal operating conditions. The user must limit or de-rate rated loads to allow for adverse conditions (such as soft or uneven ground, out-of-level conditions, wind, side loads, pendulum action, jerking or sudden stopping of loads, inexperience of personnel, multiple machine lifts, and traveling with a load).

2. Capacities do not exceed 75% of minimum tipping loads. Capacities based on factors other than machine stability such as structural competence are shown by asterisk * in the charts located in the operator's crane cab.

3. The machine must be reeved and set-up as stated in the operation manual and all the instruction manuals, If these manuals are missing, obtain replacements. Boom backstops are required for all boom lengths. Gantry must be in the fully raised position for all operations. Crawlers must be fully extended and be locked in position. The crane must be leveled to within 1% on a firm supporting surface.

4. Do not attempt to lift where no radius or load is listed as crane may tip or collapse.

5. Attempting to lift more than rated loads may cause machine to tip or collapse. Do not tip machine to determine capacity.

6. Weight of hooks, hook blocks, slings and other lifting devices are a part of the total load. Their total weight must be subtracted from the rated load to obtain the weight that can be lifted.

7. When lifting over boom point with jib or upper boom point installed, rated loads for the boom must be deducted as shown below.

Jib length	Upper Boom Point	30'	40'	50'	60'
Deduct (lbs)	420	2,400	3,200	4,200	5,200

When lifting over luffing jib point with luffing jib roller assembly or pin connected boom point sheave (on the luffing boom top) attached, rated loads for the jib and sheave must be deducted as shown below.

	Luffing Jib Point Roller	Pin connedted Boom Point sheave
Deduct (lbs)	420	480

8. The total load that can be lifted by the fixed jib is limited by rated jib loads. The total load that can be lifted with the upper boom point is limited by rated auxiliary sheave loads.

9. Boom lengths for fixed jib mounting are 80 ft (24.4 m) to 190 ft (57.9 m)

10. The total load that can be lifted by the upper boom point is: the rated load for the boom (without upper boom point installed) minus 420 lbs; however, the upper boom point rated load should not exceed 24,000 lbs.

11. An upper boom point cannot be used on a 200 ft (60.96 m) boom length.

12. The boom should be erected over the front of the crawlers, not laterally. When erecting and lowering the boom with a length of 190 ft (54.9 m) with jib, blocking must be placed at the end of the crawlers. See operator's manual for details.

13. Least stable position is over the side.

14. Maximum hoist load for number of reeving parts of line for hoist rope.

Maximum Load for Main Boom

No. of Parts of Line	1	2	3	4	5
Maximum Loads (lbs)	25,000	50,000	75,000	100,000	125,000

No. of Parts of Line	6	7	8
Maximum Loads (lbs)	150,000	175,000	200,000

Maximum Load for Luffing Jib

No. of Parts of Line	1	2	4
Maximum Loads (lbs)	25,000	50,000	80,000

Maximum Load for Fixed Jib

No. of Parts of Line	1
Maximum Loads (lbs)	24,000

Maximum Load for Upper Boom Point

No. of Parts of Line	I
Maximum Loads (lbs)	24,000

Minimum Weight of Hook Block required for Lowering. (Luffing Jib Use)

No. of Parts of Line	1	2	4
Maximum Loads (lbs)	600	1,200	1,500

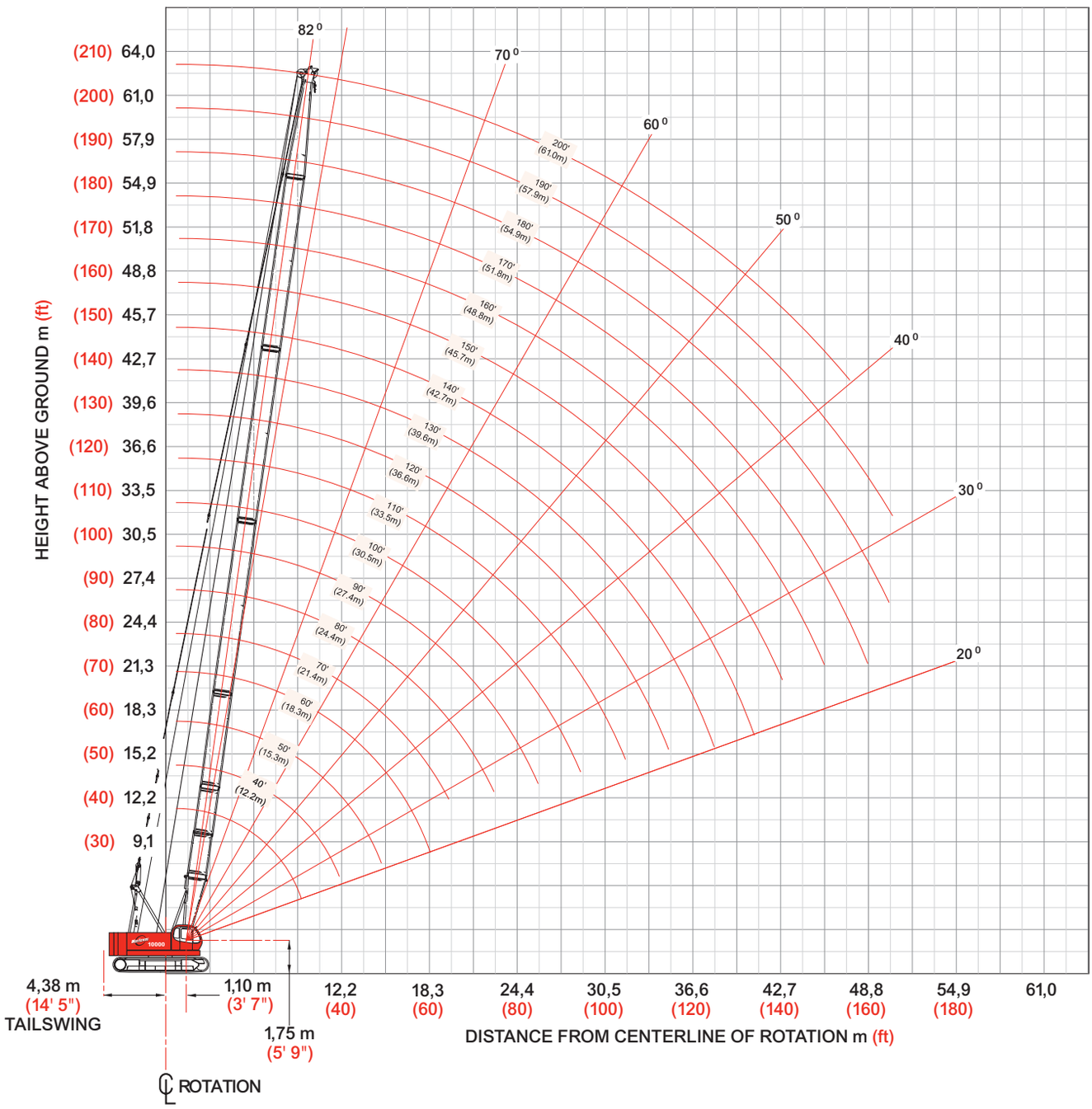
15. Lifting capacities listed apply only to the machine as originally manufactured for and supplied by Manitowoc Cranes, Inc. Modifications to this machine or use of equipment other than that specified can reduce operating capacity.

16. Designed and rated to comply with ANSI Code B30.5.

Operation of this equipment in excess of rated loads or disregard of instruction voids the warranty.

heavy-lift boom range diagram

No. 10000 Main Boom



heavy-lift load charts

Liftcrane Boom Capacities
Main Boom

63,500 lb Upper Counterweight, 14,700 lb Carbody Counterweight

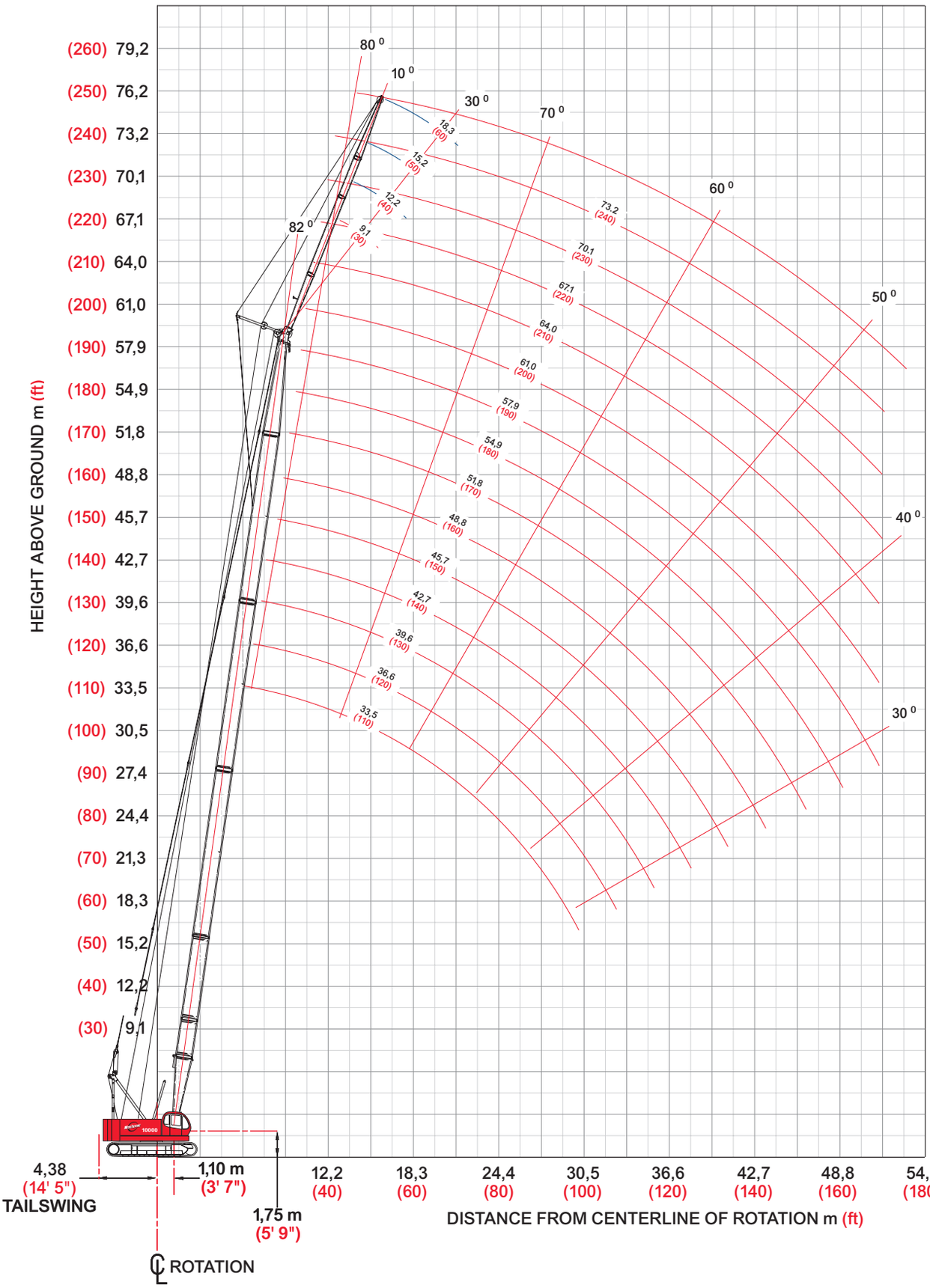
360° Rating **lb x 1 000**

Boom ft	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200
Radius																	
10	200.0																
12	185.4	185.1															
14	160.2	160.0	159.8														
16	141.0	140.8	140.6	140.4	138.6												
18	126.1	125.8	124.3	122.5	119.2	117.7											
20	111.1	111.3	109.1	107.5	104.7	103.1	100.7	100.3									
24	86.4	87.5	87.3	86.4	84.2	82.6	80.6	80.0	78.4	71.8	61.7						
28	69.0	70.1	69.8	69.8	69.4	69.2	67.4	66.7	65.2	65.0	59.9	51.8	44.0	38.8			
34	50.2	53.7	53.5	53.3	53.1	52.9	52.6	52.6	52.2	51.8	50.7	49.6	42.1	37.0	32.6	28.8	25.7
40	35.2	43.4	43.2	42.9	42.7	42.5	42.3	42.3	42.1	41.8	41.6	41.2	40.3	35.2	31.0	27.5	24.4
45		35.2	37.0	37.0	36.5	36.3	36.1	36.1	35.9	35.7	35.4	35.2	35.2	33.9	29.7	26.4	23.3
55			27.3	28.6	28.2	27.9	27.7	27.7	27.3	27.3	27.1	26.8	26.8	26.6	26.2	24.2	21.3
75					17.8	18.7	18.2	18.2	18.0	17.8	17.6	17.4	17.4	17.1	16.7	16.7	15.6
95							12.3	13.2	13.0	12.7	12.5	12.3	12.1	11.9	11.6	11.4	11.2
105								10.3	11.2	11.0	10.8	10.5	10.3	10.1	9.9	9.7	9.4
115									8.5	9.4	9.2	9.0	9.0	8.8	8.3	8.3	7.9
125										7.0	7.7	7.9	7.7	7.4	7.2	7.0	6.6
135											5.7	6.6	6.8	6.6	6.1	6.1	5.2
145													5.2	5.5	5.2	5.2	4.1
155														4.1	4.1	4.1	3.0
165															3.0	3.3	

Meets ANSI B30.5 Requirements - Capacities do not exceed 75% of static tipping load.
NOTICE: This capacity chart is for reference only and must not be used for lifting purposes.

fixed jib range diagram

Fixed Jib on Main Boom



fixed jib load charts

Liftcrane Jib Capacities
Fixed Jib on Main Boom

78,200 lb Counterweight (3 Upper Counterweights, 2 Carbody Counterweights, Crawler Extended)

360° Rating — **lb x 1 000**

10° Offset

Jib 30 ft	Boom ft	80	100	130	160	190
	Radius					
	30	24.0				
	40	24.0	24.0	24.0		
	50	24.0	24.0	24.0	24.0	19.4
	60	24.0	24.0	24.0	23.7	18.6
	80	17.3	16.8	16.1	15.5	14.8
	100	12.8	12.2	11.5	10.9	10.2
	120			8.5	7.9	7.2
	140			6.1	5.8	4.8
	150				4.7	3.9
	160				3.6	
	170					

30° Offset

Jib 30 ft	Boom ft	80	100	130	160	190
	Radius					
	30					
	40	21.0				
	50	19.5	20.6	21.0		
	60	17.5	18.6	20.1	21.0	18.2
	80	14.8	15.9	16.6	16.0	15.5
	100			11.8	11.2	10.6
	120				8.2	7.5
	140					5.2
	150					4.2
	160					
	170					

Jib 40 ft	Boom ft	80	100	130	160	190
	Radius					
	30					
	40	24.0	24.0			
	50	24.0	24.0	24.0	24.0	
	60	20.7	23.2	24.0	24.0	18.5
	80	15.6	17.0	16.3	15.7	15.1
	100	12.6	12.4	11.7	11.1	10.4
	120		9.4	8.7	8.0	7.3
	140			6.6	5.9	5.0
	150			5.3	5.0	4.1
	160				4.0	3.2
	170				3.1	

Jib 40 ft	Boom ft	80	100	130	160	190
	Radius					
	30					
	40					
	50	14.4	15.1			
	60	12.9	13.6	14.5	15.1	
	80	10.9	11.6	12.5	13.2	13.8
	100		10.3	11.1	11.6	11.0
	120			8.9	8.4	7.8
	140				6.2	5.5
	150					4.4
	160					
	170					

Meets ANSI B30.5 Requirements - Capacities do not exceed 75% of static tipping load.
NOTICE: This capacity chart is for reference only and must not be used for lifting purposes.

Liftcrane Jib Capacities
Fixed Jib on Main Boom

78,200 lb Counterweight (3 Upper Counterweights, 2 Carbody Counterweights, Crawler Extended)

360° Rating lb x 1 000

10° Offset

Jib 50 ft	Boom ft	80	100	130	160	190
	Radius					
	30					
	40	20.0	20.0			
	50	20.0	20.0	20.0		
	60	17.0	18.9	20.0	20.0	18.4
	80	12.8	14.4	16.5	15.9	15.3
	100	10.3	11.6	11.8	11.2	10.5
	120		9.5	8.8	8.2	7.5
	140			6.7	6.1	5.2
	150			5.8	5.2	4.2
	160			4.6	4.3	
	170				3.4	

30° Offset

Jib 50 ft	Boom ft	80	100	130	160	190
	Radius					
	30					
	40					
	50					
	60	10.4	10.9	11.4		
	80	8.7	9.2	9.8	10.3	10.7
	100	7.6	8.0	8.7	9.2	9.6
	120			7.6	8.3	8.1
	140				6.4	5.7
	150				5.5	4.7
	160					3.8
	170					

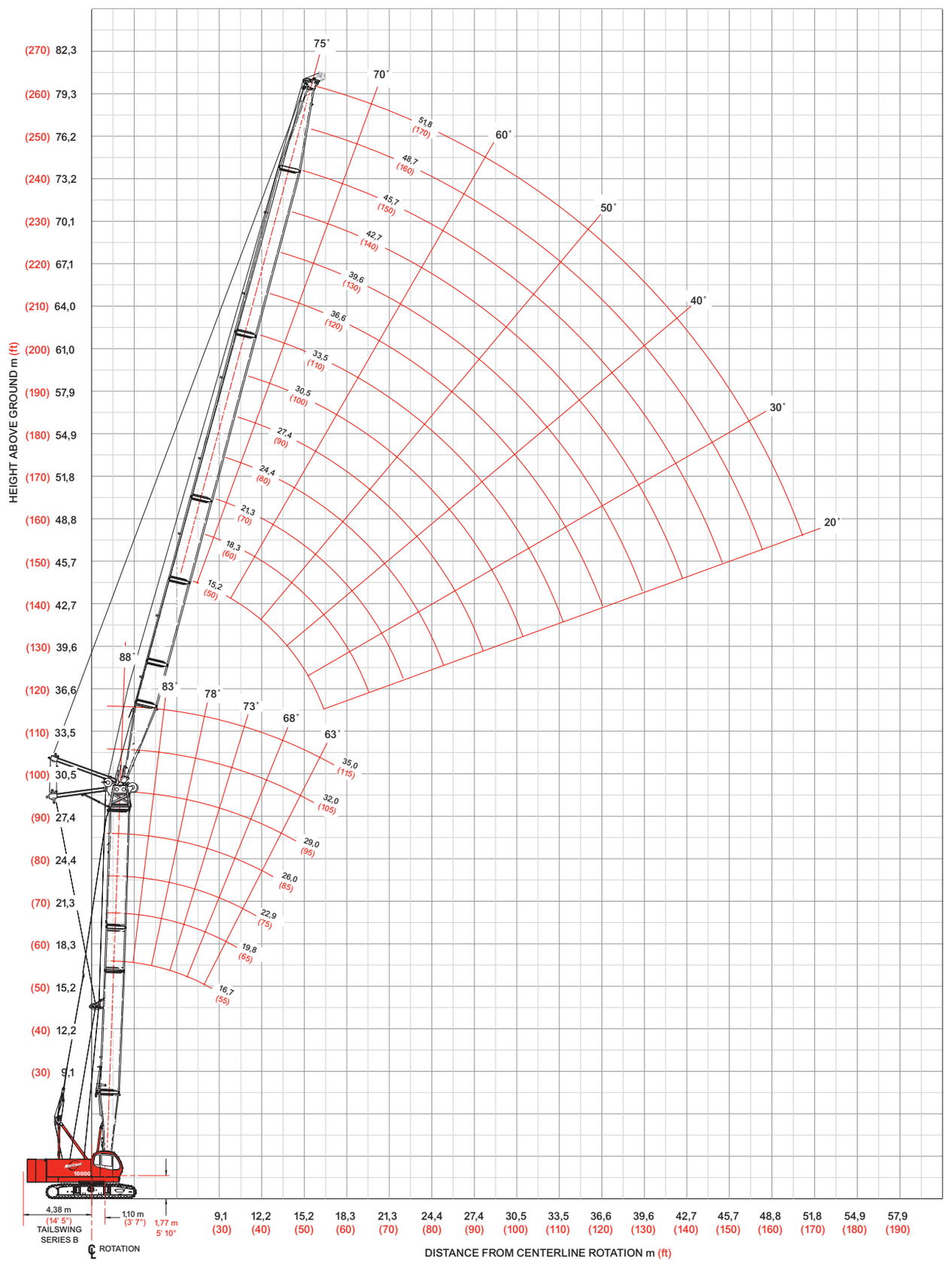
Jib 60 ft	Boom ft	80	100	130	160	190
	Radius					
	30					
	40	18.0				
	50	17.8	18.0	18.0		
	60	14.8	16.3	18.0	18.0	18.0
	80	11.1	12.3	14.1	15.6	15.4
	100	8.8	9.9	11.4	11.3	10.7
	120	7.3	8.2	8.9	8.3	7.5
	140		7.1	6.8	6.1	5.2
	150			6.0	5.3	4.3
	160			5.0	4.4	3.4
	170			4.0	3.6	

Jib 60 ft	Boom ft	80	100	130	160	190
	Radius					
	30					
	40					
	50					
	60	8.9				
	80	7.3	7.7	8.1	8.5	8.7
	100	6.2	6.6	7.1	7.5	7.8
	120		5.9	6.3	6.7	7.0
	140			5.8	6.2	5.9
	150				5.7	4.9
	160				4.9	4.0
	170					3.2

Meets ANSI B30.5 Requirements - Capacities do not exceed 75% of static tipping load.
NOTICE: This capacity chart is for reference only and must not be used for lifting purposes.

luffing jib range diagram

Luffing Jib on Luffing Boom



Manitowoc

Liftcrane Luffing Jib Capacities
Luffing Jib on Luffing Boom

63,500 lb Upper Counterweights **14,700 lb Carbody Counterweights**
Crawlers extended
360° Rating **lb x 1 000**

88° Boom Angle

Luffing Jib Length 50 ft

Boom ft	55	75	95	115
Radius				
22	80.0			
26	67.5	67.3	66.8	
30	58.6	58.3	57.9	57.5
35	49.8	49.5	49.0	48.7
40	43.6	43.4	42.9	42.5
45	38.8	38.5	38.1	37.7
60				
65				
80				
95				

Luffing Jib Length 90 ft

Boom (ft)	55	75	95	115
Radius				
22				
26				
30				
35	48.9	48.9	48.4	48.0
40	42.9	42.5	42.2	41.8
45	38.1	37.9	37.4	37.0
60	26.2	26.0	26.0	25.8
65	23.6	23.6	23.4	23.1
80	17.9	17.6	17.6	17.4
95			13.9	13.7

Luffing Jib Length 130 ft

Boom ft	55	75	95
Radius			
36			
40			
45	37.5	37.0	36.8
60	25.6	25.4	25.4
80	17.0	17.0	17.0
90	14.6	14.3	14.3
100	12.3	12.3	12.1
110	10.6	10.6	10.6
130	8.2	8.2	7.9
145			
160			

Luffing Jib Length 170 ft

Boom ft	55	75	95
Radius			
36			
40			
45			
60	24.5	24.5	24.7
80	16.1	16.1	16.3
90	13.4	13.4	13.7
100	11.5	11.2	11.5
110	9.7	9.7	9.9
130	7.3	7.1	7.3
145	5.7	5.7	
160			

luffing jib load charts

Liftcrane Luffing Jib Capacities
Luffing Jib on Lufing Boom

63,500 lb Upper Counterweights **14,700 lb Carbody Counterweights**
Crawlers extended
360° Rating **lb x 1 000**

73° Boom Angle

Luffing Jib Length 50 ft

Boom ft	55	75	95	115
Radius				
50	32.2			
60	25.1	24.3	22.9	
65	22.7	21.8	20.9	
70	20.7	19.8	19.0	17.6
80			15.9	15.0
95				
115				
125				
145				
155				

Luffing Jib Length 90 ft

Boom (ft)	55	75	95	115
Radius				
50				
60				
65				
70	19.8			
80	16.3	15.7		
95	13.0	12.1	11.5	10.6
115			8.6	7.9
125				6.8
145				
155				

Luffing Jib Length 130 ft

Boom ft	55	75	95
Radius			
50			
60			
65			
70			
80			
95	11.9	11.0	
115	8.8	8.2	7.3
135	6.8	6.2	5.3
145	6.0	5.3	4.6
155			4.0

Luffing Jib Length 170 ft

Boom ft	55	75	95
Radius			
50			
60			
65			
70			
80			
95			
115	7.7	6.8	
135	5.5	4.9	4.0
145	4.6	4.0	3.3
155	4.0	3.3	

Meets ANSI B30.5 Requirements - Capacities do not exceed 75% of static tipping load.
NOTICE: This capacity chart is for reference only and must not be used for lifting purposes.

luffing jib load charts

Liftcrane Luffing Jib Capacities
Luffing Jib on Luffing Boom

63,500 lb Upper Counterweights **14,700 lb Carbody Counterweights**
Crawlers extended
360° Rating **lb x 1 000**

63° Boom Angle

Luffing Jib Length 50 ft

Boom ft	55	75	95	115
Radius				
50				
60				
65	21.6			
75	18.1	16.5		
85		14.1	12.8	
95			11.0	9.9
115				
125				
145				
155				

Luffing Jib Length 90 ft

Boom (ft)	55	75	95	115
Radius				
50				
60				
65				
75				
85				
95	12.1			
115	9.0	8.2	7.1	
125		7.1	6.0	4.9
145				
155				

Luffing Jib Length 130 ft

Boom ft	55	75	95
Radius			
50			
60			
65			
75			
85			
95			
125	6.8		
135	6.0	4.9	3.7
145	5.1	4.2	3.1
155	4.4	3.5	
160		3.1	

Luffing Jib Length 170 ft

Boom ft	55
Radius	
50	
60	
65	
75	
85	
95	
125	
135	
145	3.7
155	3.1
160	

Meets ANSI B30.5 Requirements - Capacities do not exceed 75% of static tipping load.
NOTICE: This capacity chart is for reference only and must not be used for lifting purposes.

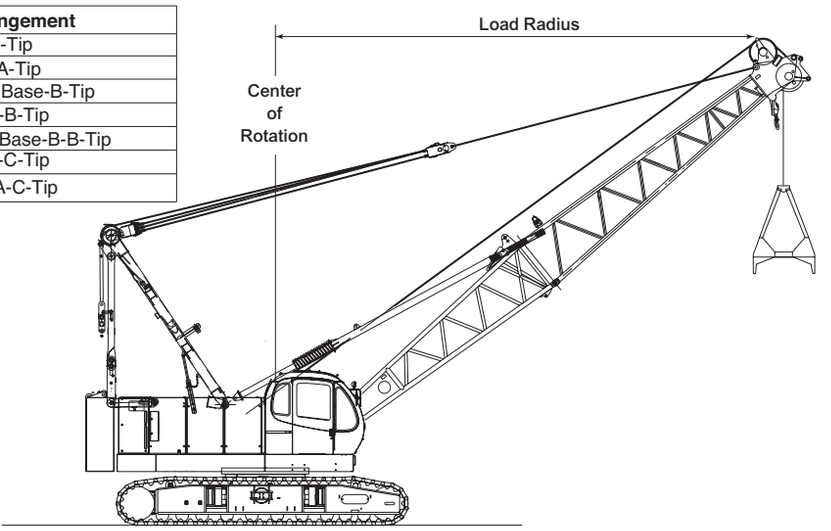
clamshell

Boom:
Welded lattice construction using tubular, high-tensile steel chords with pin connections between sections.
Basic boom length: 40 ft (12.2 m)
Max. boom length: 100 ft (30.5 m)
Limit on clamshell bucket weight: 4,600 lbs (2,100 kg)

Boom Component Chart

Boom length ft (m)	Boom arrangement
40 (12.2)	Base-Tip
50 (15.2)	Base-A-Tip
60 (18.3)	Base-A-A-Tip, Base-B-Tip
70 (21.3)	Base-A-B-Tip
80 (24.4)	Base-A-A-B-Tip, Base-B-B-Tip
90 (27.4)	Base-A-C-Tip
100 (30.5)	Base-A-A-C-Tip

Base = 20 ft (6.10 m)
Insert: A = 10 ft (3.05 m)
B = 20 ft (6.10 m)
C = 40 ft (12.2 m)
Tip = 20 ft (6.10 m)



1. Figures represent maximum allowable capacity, and assume level ground and ideal working conditions.
2. Capacities are calculated at 66% of the minimum tipping loads.
3. Capacities are maximum recommended by PCSA Standard #4. Allowances must be made by the user for such unfavorable conditions as a soft or uneven supporting surface, rapid cycle operations, or bucket suction.
4. The combined weight of the bucket and load must not exceed these capacities.
5. Boom length for clamshell operation should not exceed 100 ft (30.5 m).

Clamshell Capacities

26,670 lb Counterweight (One Upper Counterweight, Crawlers Extended)

lb x 1 000

Boom ft	40	50	60	70	80	90	100
Radius							
22	22.0						
26	22.0	22.0					
30	22.0	22.0	22.0				
34	21.4	21.4	21.4	21.4			
42		17.3	17.3	17.3	17.3	17.3	
50			14.6	14.6	14.6	14.6	14.6
58			12.5	12.5	12.5	12.5	12.5
66				11.0	11.0	11.0	11.0
74					9.8	9.7	9.4
82						8.3	8.1
88							7.2
94							6.6

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