

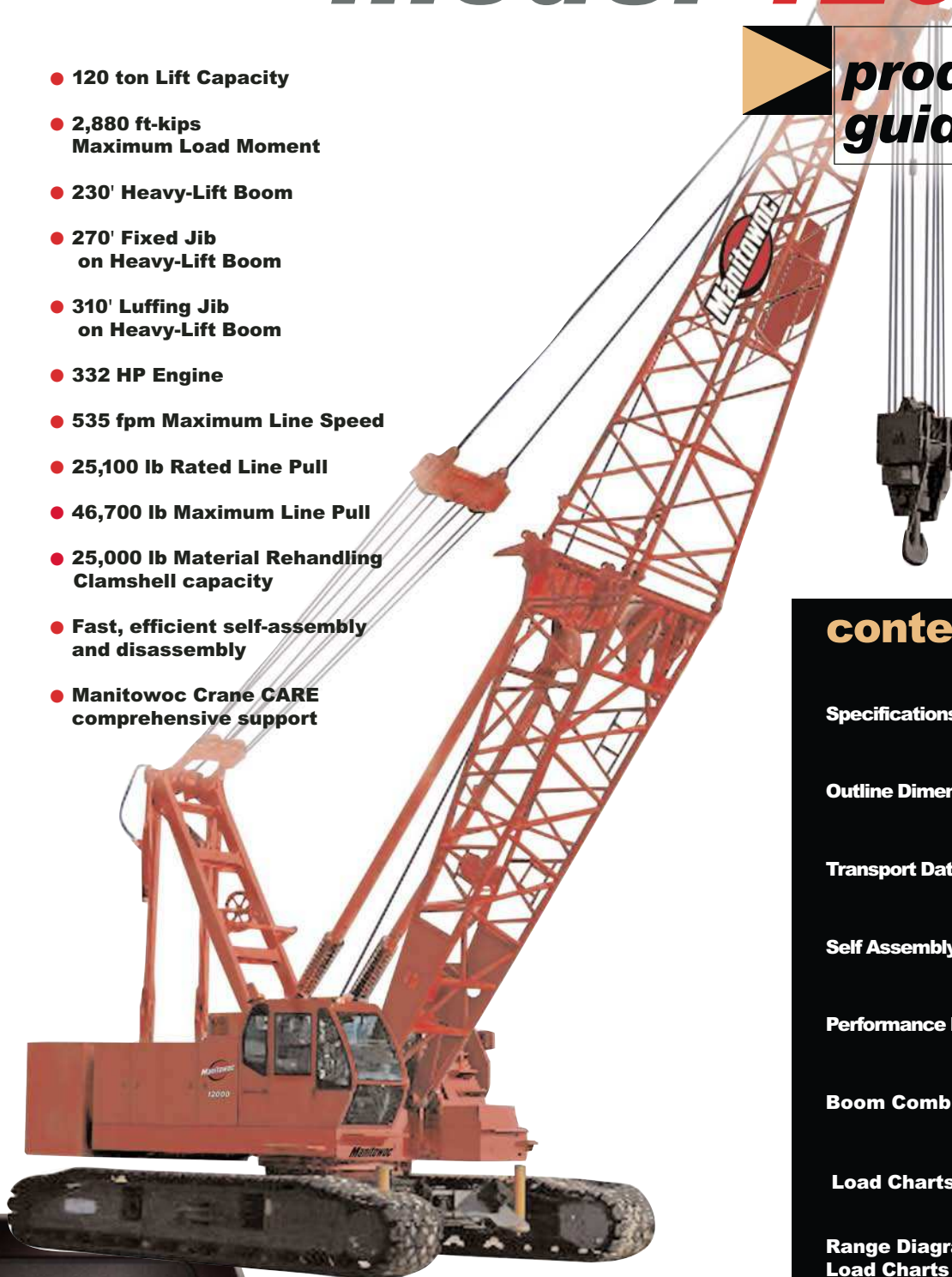


model 12000



product guide

- 120 ton Lift Capacity
- 2,880 ft-kips
Maximum Load Moment
- 230' Heavy-Lift Boom
- 270' Fixed Jib
on Heavy-Lift Boom
- 310' Luffing Jib
on Heavy-Lift Boom
- 332 HP Engine
- 535 fpm Maximum Line Speed
- 25,100 lb Rated Line Pull
- 46,700 lb Maximum Line Pull
- 25,000 lb Material Rehandling
Clamshell capacity
- Fast, efficient self-assembly
and disassembly
- Manitowoc Crane CARE
comprehensive support



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specifications

Upperworks



Engine

Mitsubishi 6D24-TLA2K, 6 cylinder, water-cooled diesel, direct fuel injection with turbocharger, 247 kW (332 HP) @ 2000 high-idle RPM. Maximum torque 931 lb·ft (1261 N·m) net at 1,400 rpm (SAE J 1349).

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

Two 12 volt 150 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 system4,480 psi (315 kg/cm²)
Swing system3,980 psi (280 kg/cm²)
Control system1,140 psi (80 kg/cm²)



Hydraulic System

All four 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 and hook hoist circuit. The third variable displacement pump is used in the boom hoist circuit. The fourth 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 brake cooling system.

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

Load hoist and propel2 Piston pumps
Boom hoist1 Piston pump
Swing 1 Piston pump
Control system and auxiliary2 Gear pumps
Brake cooling system.....2 Gear pumps

Reservoir capacity: 121 US gallon (460 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 1/16" (26.0 mm) wire rope.

Wire rope capacity:

Front drum 853 ft (260 m) working length
Rear drum 984 ft (300 m) working length

Line speed: Single line on the first drum layer

Hoisting394 ft/min (120m/min)
Lowering394 ft/min (120m/min)

▶ **Optional third drum:** same dimensions and specifications as front and rear drums (free-fall is optional). Wire rope capacity working length is 787' (240m).



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: 4 Position lock for transportation.

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

Swing speed 2.7 rpm



Boom Hoist

Single drum powered by a hydraulic variable displacement 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 drum.

Drum: Single drum, grooved for 13/16" (20 mm) diameter wire rope. Boom hoist reeving is 10-part line.

Wire rope capacity:

Drum 508 ft (155 m) working length

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specifications

Line speed: Single line on the first drum layer
Hoisting157 ft/min (48 m/min)
Lowering157 ft/min (48 m/min)

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Gantry

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



Counterweight

QTY.	ITEM	UNIT WEIGHT		TOTAL WEIGHT	
		kg	lb	kg	lb
1	Counterweight A	10 000	22,050	10 000	22,050
2	Counterweight B	7 000	15,435	14 000	30,870
1	Counterweight C	10 000	22,050	10 000	22,050
Counterweight TOTAL		34 000	74,970		



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, wind-shield wiper and inspection lamp socket are standard features.

Controls

In front of operator are the foot pedals for front, rear and third drum (option) brakes and foot throttle 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, front and rear winch control levers and the free-fall select switches for the front and rear winches and drum turn indicators (front/rear drum). To the operators left front are the swing control lever and third drum (option) control lever. To the operator's left are the crawler extend/retract lever and the positive swing lock. The left-hand console contains switches for the anti-two-block/boom overhoist. Directly in front of the console are the drum pawl lock for boom, front, rear and third drum (option) 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, safety latch on hook blocks, 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 and are designed with a quick disconnect feature for individual removal as a unit from axles. Crawler belt tension adjusted with hydraulic jack and maintained by shims between idler block and frame. Self-erect system includes two sheaves for crawler, counterweight, and boom handling, plus jacking cylinders with pads.

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

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

Travel speed (High/Low) 0.87/0.62 mph (1.4/1.0 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 four point sheaves are standard.

model 12000



specifications

Basic boom length 50' (15,24 m) consists of the boom butt section 25' 0" (7,62 m) and boom top section 25' 0" (7,62 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 230' (70,1 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 inserts of 10' (3,0 m) and 20' (6,1 m) are available for extension capabilities up to 70' (21,3 m).

Maximum total length of boom and jib 200' (61,0 m) + 70' (21,3 m) is 270' (82,3 m).



Luffing Jib

Optional: Components to make up 60' (18,3 m) basic luffing boom including 25' (7,62 m) butt, 30' (9,14 m) special luffing boom insert (with idler sheave), 5' (1,5 m) top, boom strut assembly, jib strut assembly, jib stop assembly, strut backstops, backstay pendants with sheaves, mounting parts and LMI hardware.

Optional: 10' (3,0 m) and 20' (6,1 m), and 40' (12,2 m) luffing boom inserts. Utilize optional boom inserts to make up to 150' (45,7 m) of luffing boom.

Optional: 60' (18,3 m) basic luffing jib assembly including 19' (5,8 m) luffing jib butt, 20' (6,1 m) luffing jib insert, 21' (6,4 m) luffing jib top, 21' (6,4 m) front strut assembly, 17' 5" (5,3 m) rear strut assembly, and luffing jib point roller assembly (single sheave) which is required during erection of the jib.

Maximum 170' (51,8 m) luffing jib length for 140' (42,7 m) luffing boom length and maximum 100' (30,4 m) luffing jib length for 150' (45,7 m) luffing boom length.

Note: Luffing boom utilizes the liftcrane boom inserts (except for the 30' special luffing boom insert). 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

Contact factory representative for hook and block options.

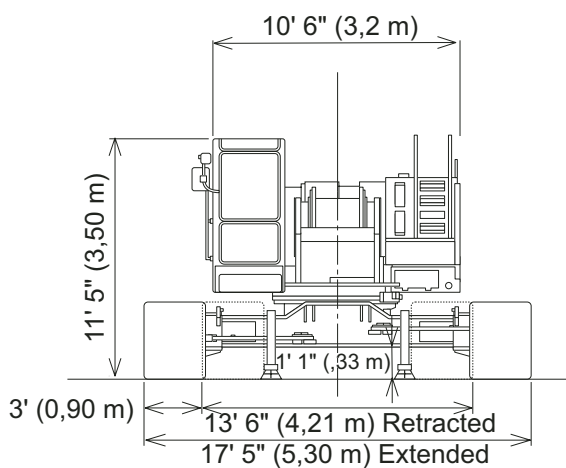
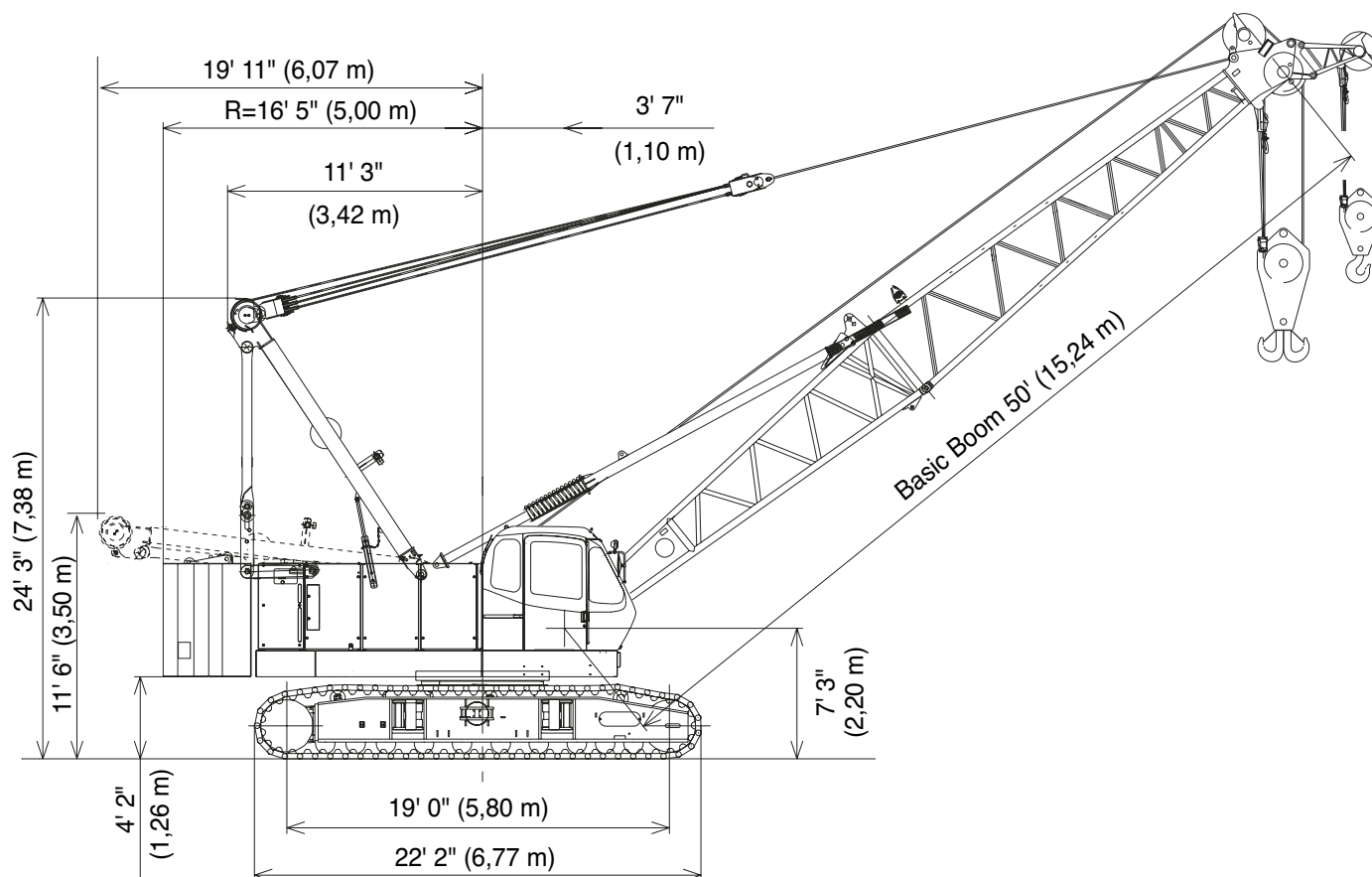
Travel kit
Detachable upper boom point
Custom color

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model 12000


outline dimensions

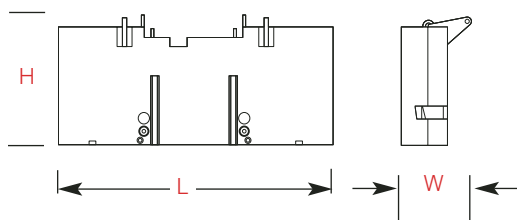
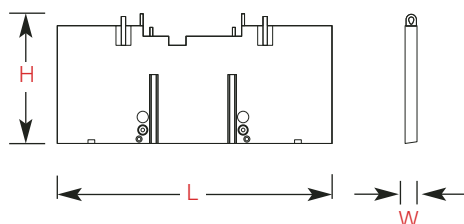
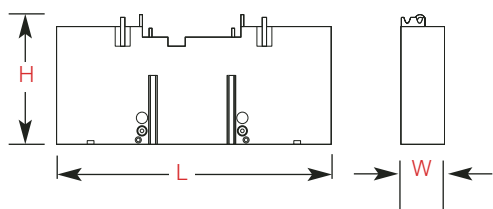
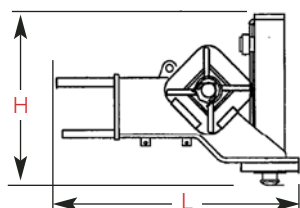
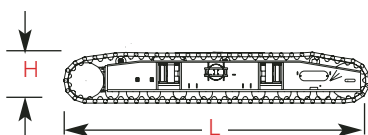
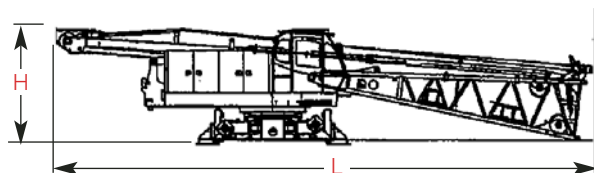
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model 12000
Manitowoc

outline dimensions

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Upperworks without Crawlers x 1

Length	15,12 m	49' 7"
Width	3,24 m	10' 8"
Height	3,15 m	10' 4"
Weight	42 661 kg	94,052 lb

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

Crawlers x 2

Length	6,77 m	22' 3"
Width	0,90 m	3' 0"
Height	1,15 m	3' 9"
Weight	11 830 kg	26,085 lb

Hydraulic Jack Translifter (if removed) x 4

Length	1,36 m	4' 5"
Width	0,32 m	1' 1"
Height	0,96 m	3' 2"
Weight	430 kg	950 lb

Upper Counterweight A x 1

Length	3,20 m	10' 5"
Width	0,58 m	1' 11"
Height	1,94 m	6' 4"
Weight	10 000 kg	22,050 lb

Upper Counterweight B x 2

Length	3,20 m	10' 5"
Width	0,49 m	1' 7"
Height	1,92 m	6' 3"
Weight	7 000 kg	15,435 lb

Upper Counterweight C x 1

Length	3,20 m	10' 5"
Width	0,69 m	2' 3"
Height	1,92 m	6' 3"
Weight	10 000 kg	22,050 lb

Optional 3rd Drum & Wire Rope x 1

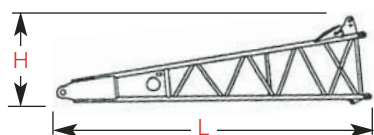
Weight	2 660 kg	5,865 lb
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Option

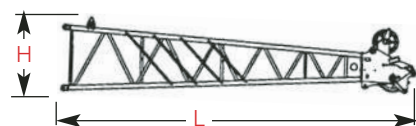
model 12000
Manitowoc

outline dimensions

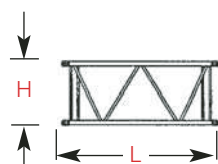
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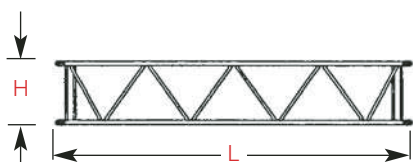
Boom Butt 7.6m (25') x 1		
Length	7,79 m	26' 3"
Width	1,68 m	5' 6"
Height	2,06m	6' 9"
Weight	2 110 kg	4,652 lb



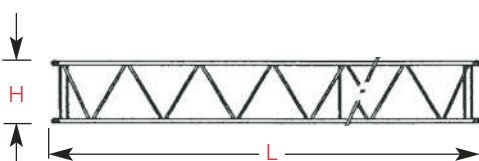
Boom Top 7.6m (25') x 1		
Length	8,32 m	27' 4"
Width	1,68 m	5' 6"
Height	1,69 m	5' 7"
Weight	1 525 kg	3,362 lb



Boom Insert 3,0 m (10') x 1, 2		
Length	3,17 m	10' 5"
Width	1,68 m	5' 6"
Height	1,69 m	5' 7"
Weight	380 kg	838 lb

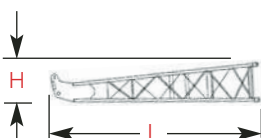


Boom Insert 6,1m (20') x 1, 2		
Length	6,22 m	20' 5"
Width	1,68 m	5' 6"
Height	1,69 m	5' 7"
Weight	655 kg	1,445 lb



Boom Insert 12,2 m (40') x 1, 2, 3		
Length	12,31 m	40' 5"
Width	1,68 m	5' 6"
Height	1,69 m	5' 7"
Weight	1 195 kg	2,635 lb

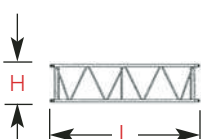
Note: Use one "A" type insert with lug required for any boom combinations that require a 12,2 m (40') insert.



Fixed Jib Butt x 1		
Length	4,81 m	15' 9"
Width	0,80 m	2' 8"
Height	0,80 m	2' 8"
Weight	200 kg	440 lb



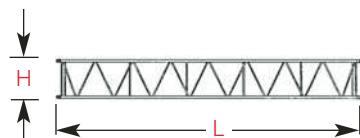
Fixed Jib Top x 1		
Length	4,91 m	16' 1"
Width	0,80 m	2' 8"
Height	0,80 m	2' 8"
Weight	280 kg	617 lb



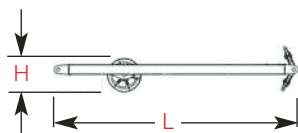
Fixed Jib Insert 3,0 m (10') x 1, 2		
Length	3,12 m	10' 3"
Width	0,80 m	2' 8"
Height	0,80 m	2' 8"
Weight	100 kg	220 lb

Option

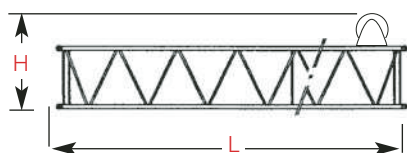
outline dimensions



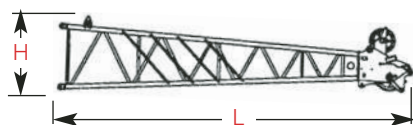
Fixed Jib Insert 6,1 m (20') x 1, 2		
Length	6,16 m	20' 3"
Width	0,80 m	2' 8"
Height	0,80 m	2' 8"
Weight	180 kg	395 lb



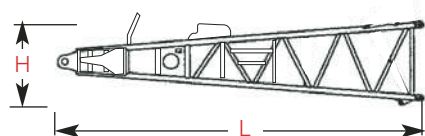
Fixed Jib Strut x 1		
Length	3,62 m	11' 11"
Height	0,62 m	2' 0"
Weight	250 kg	550 lb



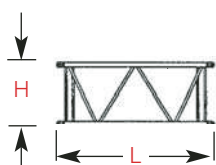
Special Luffing Boom Insert 9,1 m (30') x 1		
Length	9,27 m	30' 5"
Width	1,68 m	5' 6"
Height	2,41 m	7' 11"
Weight	1 160 kg	2,558 lb



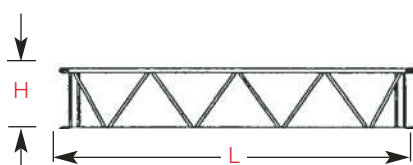
Luffing Jib Top x 1		
Length	6,91 m	22' 8"
Width	1,50 m	4' 11"
Height	1,48 m	4' 10"
Weight	1 170 kg	2,580 lb



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	1,903 lb



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	684 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	540 kg	1,147 lb

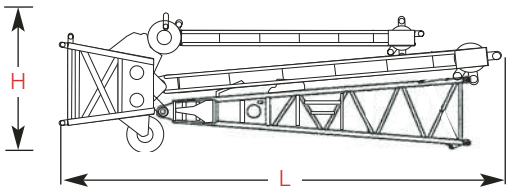
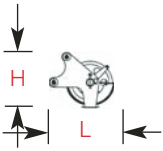
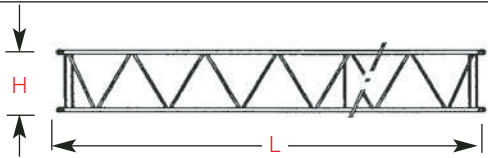
Option

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outline dimensions

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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	2,117 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	838 lb	

Luffing Boom Top Assembly (Shipping Style) x 1			
Length	8,19 m	26' 10"	
Height	2,65 m	8' 8"	
Weight	3,580 kg	7,895 lb	

Option

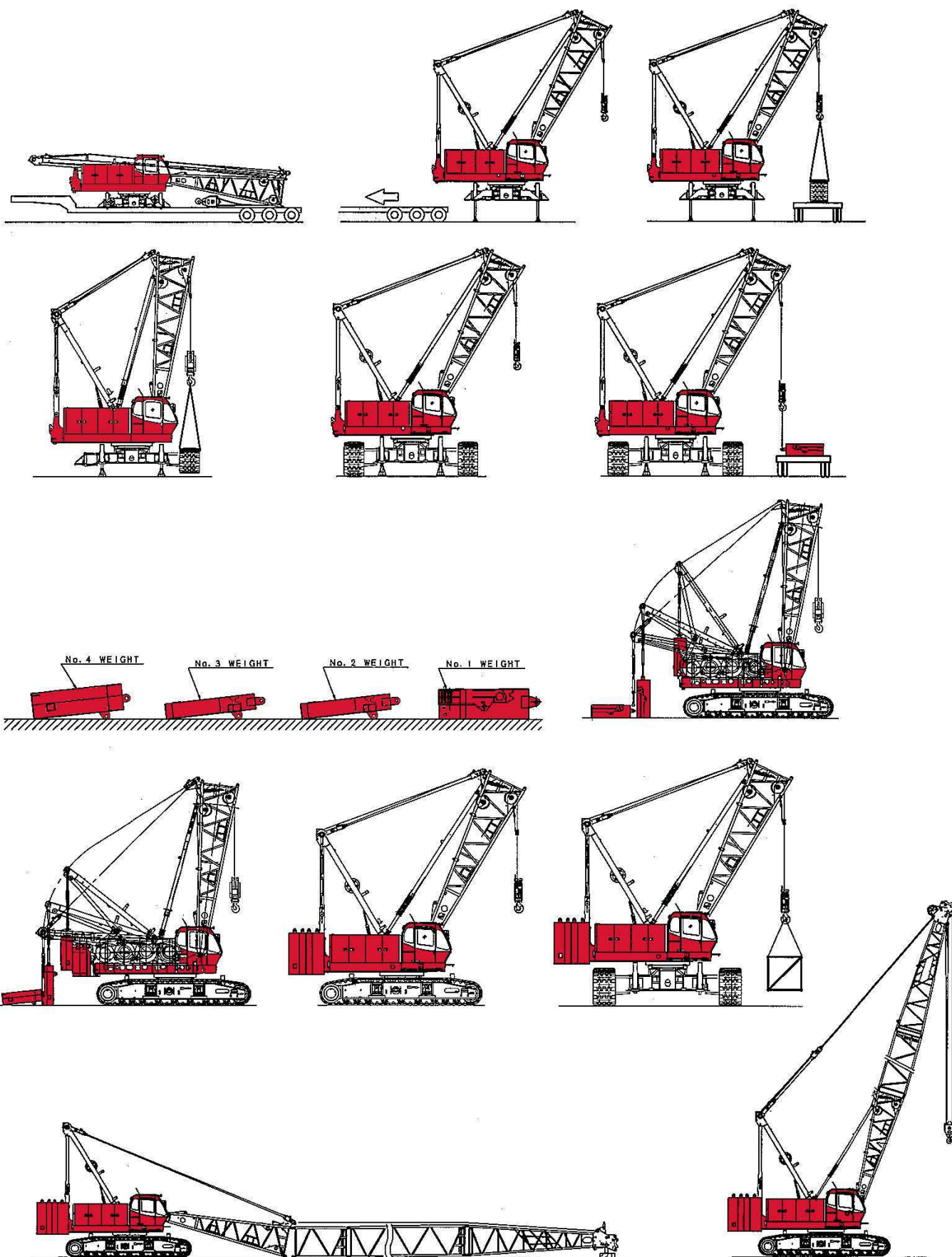
Trailer Load Out Summary

Model 12000
No. 12000 Luffing Jib 39,6 m (130') on No. 260 Boom 38,1 m (125')

	Weight each Item	Quantity on Trailer Load #					
Item	kg (lb)	1	2	3	4	5	6
No. 12000 Basic Crane with Crawlers Removed	42 661 (94,052)	1					
Crawler Frame	11 832 (26,085)		1				
Crawler Frame	12 832 (26,085)			1			
Counterweight A	10 000 (22,050)					1	
Counterweight B	7 000 (15,435)				1		
Counterweight B	7 000 (15,435)					1	
Counterweight C	10 000 (22,050)						1
12,2 m (40') No. 12000 Boom Insert, Pendants	1 209 (2,635)		1				
12,2 m (40') No. 12000 Boom Insert, Pendants	1 209 (2,635)			1			
12,2 m (40') No. 12000 Boom Insert, Pendants	1 209 (2,635)				1		
6,1 m (20') No. 12000 Boom Insert, Pendants	655 (1,445)					1	
6,1 m (20') No. 12000 Boom Insert, Pendants	655 (1,445)						1
3,0 m (10') No. 12000 Boom Insert, Pendants	380 (838)		1				
3,0 m (10') No. 12000 Boom Insert, Pendants	380 (838)					1	
Standard Boom Top 7,6 m (25')	1,525 (3,362)						1
Upper Boom Point	501 (1,105)			1			
4,6 m (15') No. 12000 Fixed Jib Top	280 (617)				1		
4,6 m (15') No. 12000 Fixed Jib Butt	134 (440)						1
6,1 m (20') No. 12000 Fixed Jib Insert	179 (395)						
6,1 m (20') No. 12000 Fixed Jib Insert	179 (395)						1
Approximate Total Shipping Weight kg (lb)		42 661 (94,052)	13 594 (29,558)	13 528 (29,825)	8 655 (19,082)	18 038 (39,768)	12 561 (27,692)

self assembly

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model 12000
Manitowoc

performance data

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Line Pull

	Rated line pull	* Maximum line pull
Front Drum	25,100 lbs (11 400 kg)	46,700 lbs (21 180 kg)
Rear Drum	25,100 lbs (11 400 kg)	46,700 lbs (21 180 kg)
Optional 3rd Drum	25,100 lbs (11 400 kg)	46,700 lbs (21,180 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 6 X Fi (29) C/O	1 1/16" (26.0)	853' (260)	120,000 (54 431)
Rear Drum	IWRC 6 X Fi (29) C/O	1 1/16" (26.0)	984' (300)	120,000 (54 431)
Boom Hoist Drum	IWRC 6 X WS (31) C/O	13/16" (20.0)	508' (155)	73,700 (33 430)

Model 12000 Front and Rear Winch Performance (Optional: Third Winch)

Line speed (ft/min)							
Layer	1	2	3	4	5	6	
Line Pull (lbs)							
0	394	422	450	479	505	535	
5,000	387	415	443	471	499	526	
10,000	353	353	353	353	353	353	
15,000	235	235	235	235	235	235	
20,000	117	117	117	117	117	117	
Rated Line pull	25,000	141	141	141	141	141	142
	30,000	118	118	119	121	122	123
	35,000	103	104	105	105		
	40,000	92	92				

Line speed (m/min)							
Layer	1	2	3	4	5	6	
Line Pull (kg)							
0	120	129	137	146	155	163	
2,268	118	126	135	143	152	160	
4,536	108	108	108	108	108	108	
6,804	72	72	72	72	72	72	
9,072	52	52	52	52	52	52	
Rated Line pull	11,340	43	43	43	43	43	43
	13,608	36	36	36	37	37	37
	15,876	31	32	32	32		
	18,144	28	28				

Note:
Line speeds and line pull based on single line.
Line pulls are not based on wire rope strength.

model 12000
Manitowoc

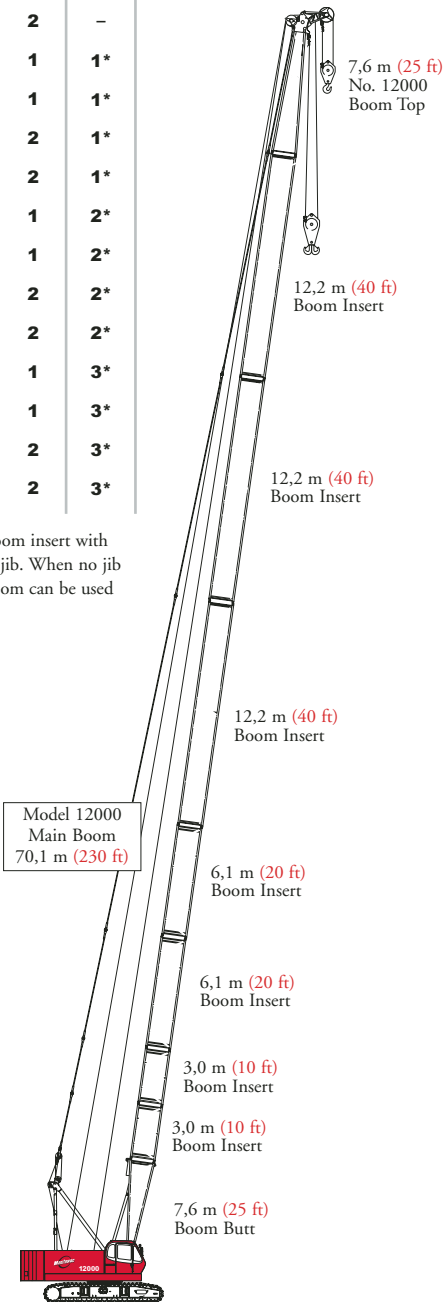
boom combinations

14

No. 12000 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)
15,2 (50)	-	-	-
18,3 (60)	1	-	-
21,3 (70)	2	1	-
24,4 (80)	1	1	-
27,4 (90)	2	1	-
30,5 (100)	1	2	-
33,5 (110)	2	2	-
36,6 (120)	1	1	1*
39,6 (130)	2	1	1*
42,7 (140)	1	2	1*
45,7 (150)	2	2	1*
48,8 (160)	1	1	2*
51,8 (170)	2	1	2*
54,9 (180)	1	2	2*
57,9 (190)	2	2	2*
61,0 (200)	1	1	3*
64,0 (210)	2	1	3*
67,0 (220)	1	2	3*
70,1 (230)	2	2	3*

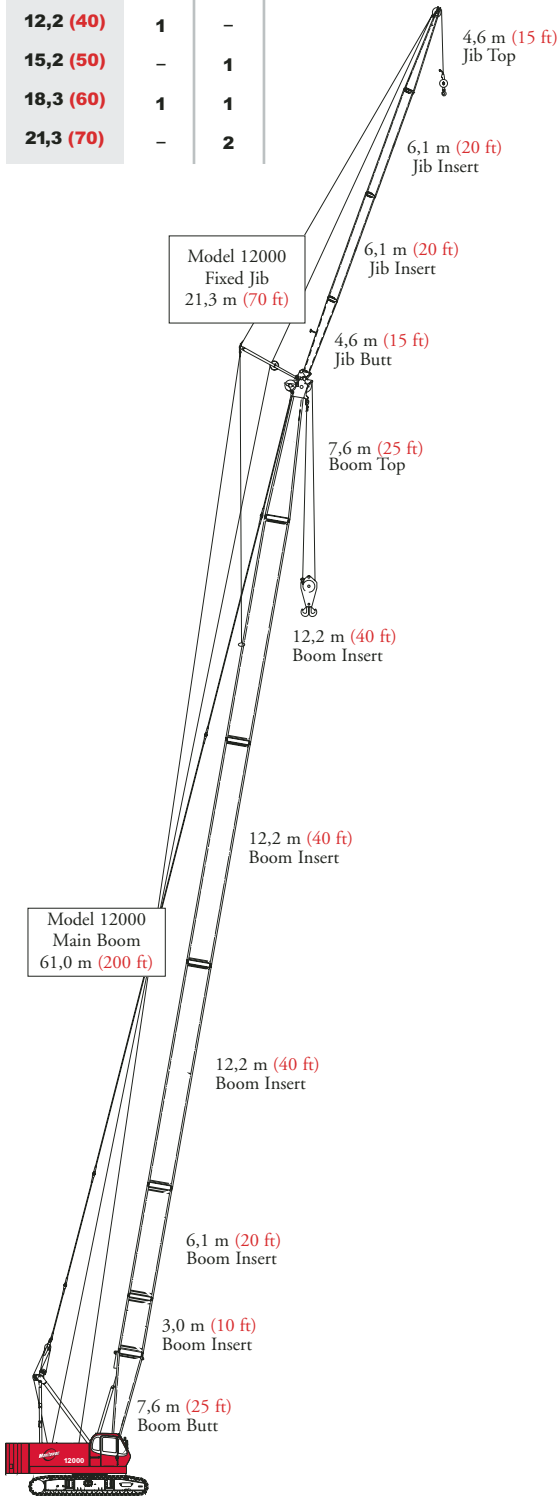
*Note: One 40 ft. (12,2 m) boom insert with lug (40A) is required for fixed jib. When no jib is installed a 40 ft (12,2 m) boom can be used instead of 40A.



Model 12000 Main Boom 70,1 m (230 ft)

No. 12000 Fixed Jib Combinations

Jib Length m (ft)	Fixed Jib Inserts	
	3,1 m (10 ft)	6,1 m (20 ft)
9,1 (30)	-	-
12,2 (40)	1	-
15,2 (50)	-	1
18,3 (60)	1	1
21,3 (70)	-	2



Model 12000 Fixed Jib on Main Boom 82,3 m (270 ft)

boom combinations

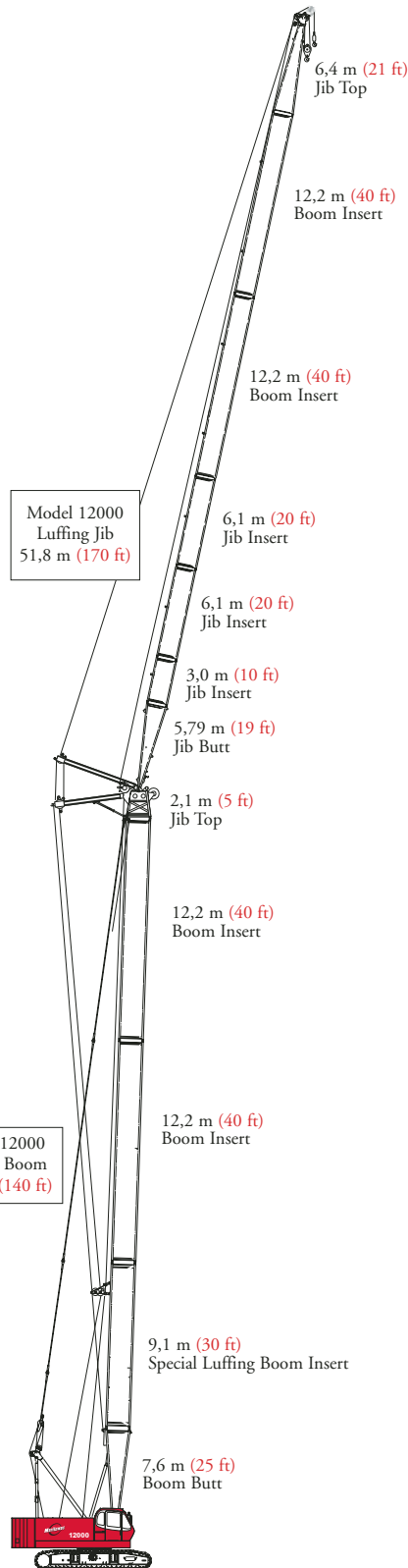
No. 12000 Luffing Jib Combinations

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

No. 12000 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)	12,2 m (40 ft)
18,3 (60)	–	–	1*	–
21,3 (70)	1	–	1*	–
24,3 (80)	2	–	1*	–
27,4 (90)	1	1	1*	–
30,5 (100)	2	1	1*	–
33,5 (110)	1	2	1*	–
36,6 (120)	2	2	1*	–
39,6 (130)	1	1	1*	1
42,7 (140)	2	1	1*	1
45,7 (150)	1	2	1*	1

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



Model 12000
Luffing Jib
51,8 m (170 ft)

Model 12000
Luffing Boom
42,7 m (140 ft)

Model 12000
Luffing Jib on
Luffing Boom
94,5 m (310 ft)

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model 12000
Manitowoc

load charts notes

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- 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).
- 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.
- 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.
- Do not attempt to lift where no radius or load is listed as crane may tip or collapse.
- Attempting to lift more than rated loads may cause machine to tip or collapse. Do not tip machine to determine capacity.
- 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.
- 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'	70'
Deduct (lbs)	700	2,400	3,200	4,200	5,200	6,200

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 connected Boom Point sheave
Deduct (lbs)	850	480

- 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 upper boom point loads.
- Boom lengths for fixed jib mounting are 90 ft (27.4 m) to 200 ft (61.0 m)
- The total load that can be lifted by the upper boom point is: the rated load for the luffing jib (without upper boom point installed) minus 850 lbs; however, the upper boom point rated load should not exceed 25,000 lbs.

- An upper boom point cannot be used on a 230 ft (70.1 m) boom length.
- The boom should be erected over the front of the crawlers, not laterally.
- Least stable position is over the side.
- 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	9	10
Maximum Loads (lbs)	150,000	175,000	200,000	225,000	240,000

Maximum Load for Luffing Jib

No. of Parts of Line	1	2	3	4
Maximum Loads (lbs)	25,000	50,000	75,000	80,000

Maximum Load for Fixed Jib

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

Maximum Load for Upper Boom Point (On Liftcrane Boom)

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

Maximum Load for Upper Boom Point (On Luffing Jib)

No. of Parts of Line	1
Maximum Loads (lbs)	25,000

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

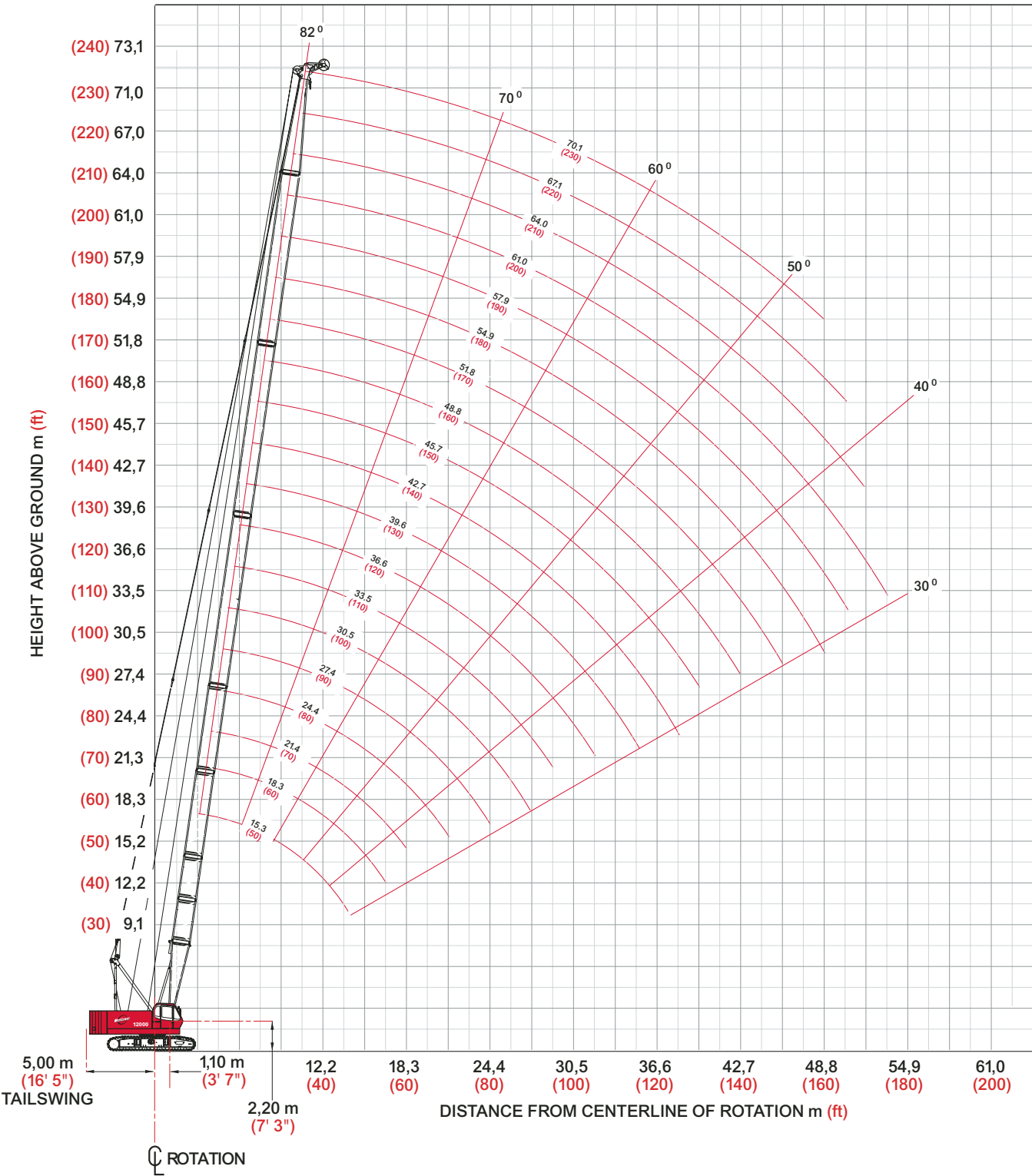
No. of Parts of Line	1	2	3	4
Maximum Loads (lbs)	900	1,200	1,500	1,800

- 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.
- 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. 12000 Main Boom



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model 12000
Manitowoc

heavy-lift load charts

Liftcrane Boom Capacities No. 12000 Main Boom

75,000 lb Upper Counterweight
360° Rating

lb x 1 000

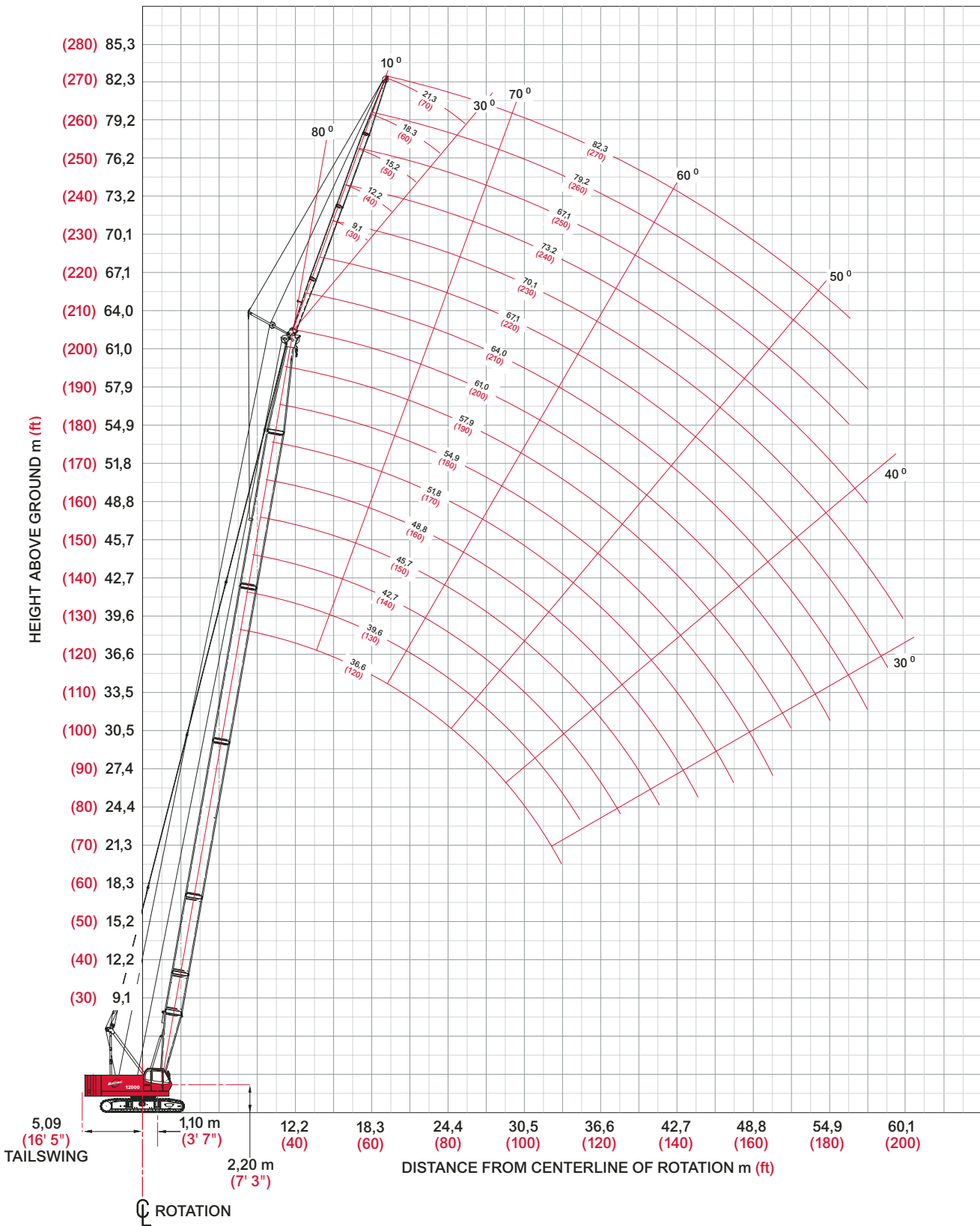
Boom ft	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230
Radius																			
12	240.0																		
14	206.0	204.0																	
16	177.0	177.0	177.0																
18	150.0	150.0	150.0	150.0	150.0														
20	135.0	135.0	135.0	135.0	135.0	135.0													
24	111.9	111.7	111.7	111.5	111.5	111.3	111.3	111.1	100.0										
28	89.5	89.2	89.0	88.8	88.8	88.6	88.4	88.4	88.1	87.9	87.7								
34	68.3	68.1	67.9	67.4	67.4	67.2	67.0	67.0	66.7	66.5	66.3	66.3	66.1	65.9	65.4				
40	55.1	54.6	54.4	54.2	54.0	53.7	53.5	53.5	53.3	53.1	52.6	52.9	52.4	52.2	52.0	50.0	50.0	46.7	42.7
45	47.1	46.7	46.5	46.2	46.0	45.8	45.6	45.6	45.4	45.1	44.7	44.9	44.5	44.3	44.0	44.0	43.8	43.4	40.1
55		36.1	35.9	35.4	35.4	35.0	34.8	34.8	34.6	34.3	33.9	33.9	33.7	33.2	33.0	33.0	32.8	32.6	32.1
75					23.5	23.1	22.9	22.7	22.4	22.2	21.8	21.8	21.6	21.1	20.9	20.9	20.7	20.2	20.0
95							16.5	16.3	16.0	15.6	15.4	15.4	14.9	14.7	14.3	14.3	14.1	13.8	13.4
105								14.1	13.8	13.4	13.2	13.2	12.7	12.3	12.1	12.1	11.9	11.4	11.2
115									12.1	11.6	11.2	11.2	11.0	10.5	10.1	10.3	9.9	9.7	9.2
125										10.3	9.9	9.7	9.4	9.0	8.8	8.8	8.3	7.9	7.4
135												8.5	8.1	7.7	7.2	7.2	6.8	6.6	6.1
145													7.0	6.6	6.1	6.1	5.7	5.2	4.8
155														5.7	5.2	5.0	4.6	4.4	3.9
165															4.4	4.1	3.7	3.5	
175																3.5			

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.

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fixed jib range diagram

No. 12000 Fixed Jib on Main Boom



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model 12000
Manitowoc

fixed jib load charts

Liftcrane Jib Capacities No. 12000 Fixed Jib on Main Boom

75,000 lb Counterweight (4 Upper Counterweights, Crawler Extended)

360° Rating

lb x 1 000

10° Offset

30° Offset

Jib 30 ft	Boom ft	90	120	160	180	200
	Radius					
	30	24.0				
	40	24.0	24.0			
	50	24.0	24.0	24.0	24.0	24.0
	60	24.0	24.0	24.0	24.0	24.0
	80	21.9	21.1	20.1	19.8	19.0
	100	16.1	15.3	14.2	13.6	13.1
	120		11.6	10.4	9.8	9.3
	140			7.8	7.1	6.5

Jib 30 ft	Boom ft	90	120	160	180	200
	Radius					
	30					
	40	21.0				
	50	21.0	21.0			
	60	21.0	21.0	21.0	21.0	21.0
	80	18.9	20.8	20.8	20.2	19.9
	100		15.6	14.7	14.1	13.7
	120			10.7	10.2	9.7
	140				7.4	7.0

Jib 50 ft	Boom ft	90	120	160	180	200
	Radius					
	30					
	40	20.0				
	50	20.0	20.0	20.0		
	60	20.0	20.0	20.0	20.0	20.0
	80	16.8	19.5	20.0	20.0	19.7
	100	13.6	15.7	14.7	14.1	13.6
	120	11.5	11.9	10.8	10.2	9.8
	140		9.3	8.2	7.5	7.1

Jib 50 ft	Boom ft	90	120	160	180	200
	Radius					
	30					
	40					
	50					
	60	11.4	11.4			
	80	11.2	11.2	11.4	11.4	11.4
	100	9.8	10.6	11.4	11.4	11.4
	120		9.6	10.4	10.8	10.6
	140			8.6	8.1	7.7

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 load charts

Liftcrane Jib Capacities No. 12000 Fixed Jib on Main Boom

75,000 lb Counterweight (4 Upper Counterweights, Crawler Extended)

360° Rating

lb x 1 000

21

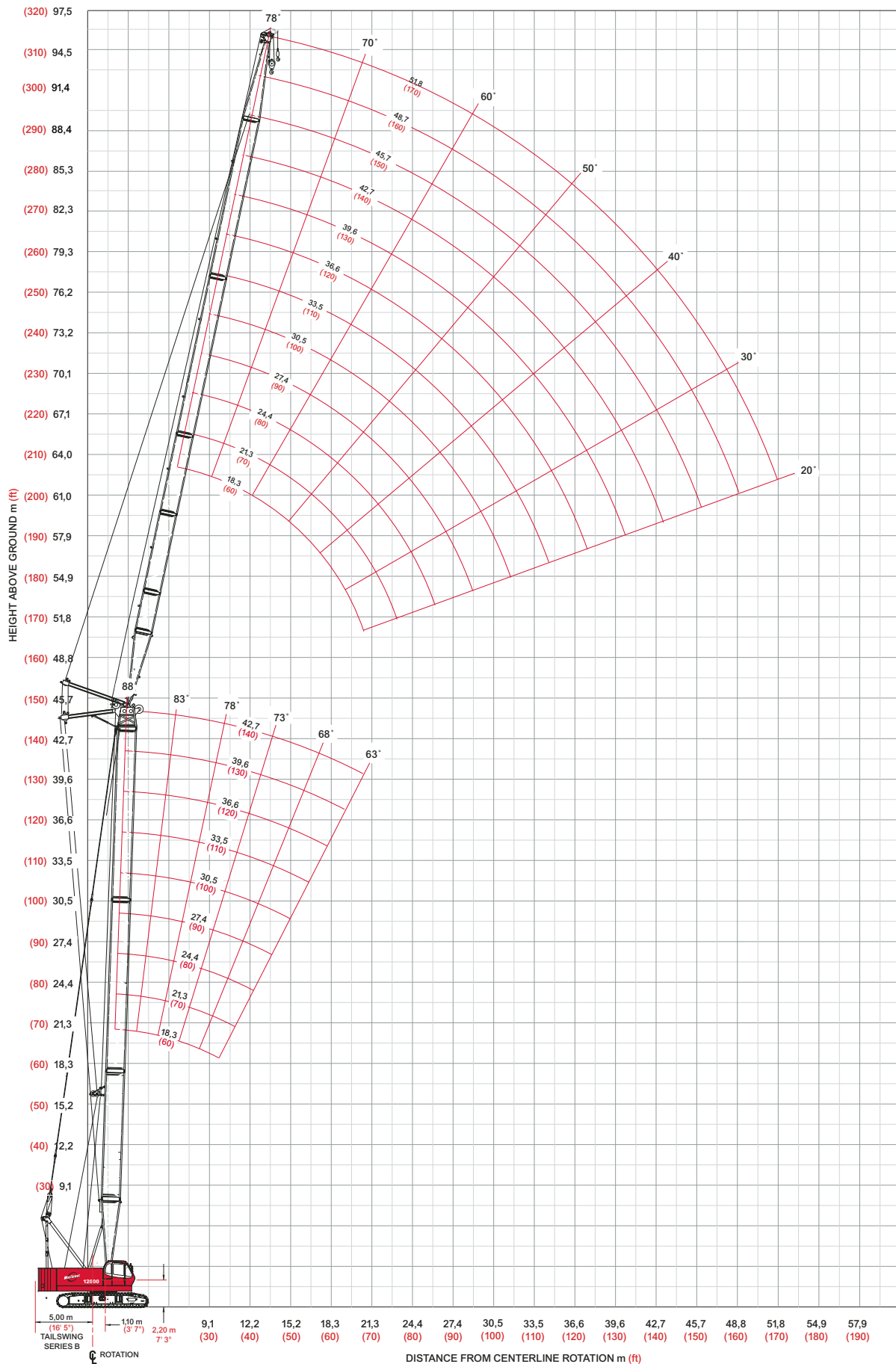
10° Offset							30° Offset							
Jib 70 ft	Boom ft	90	120	160	180	200	Jib 70 ft	Boom ft	90	120	160	180	200	
	Radius							Radius						
	45	15.7						45						
	60	14.8	15.1	15.4	15.6	15.7		60						
	75	13.9	14.4	14.8	15.0	15.1		75	8.1	8.1				
	90	11.5	13.3	14.3	14.4	14.6		90	7.6	8.1	8.1	8.1	8.1	
	110	9.4	10.9	12.7	12.3	11.9		110	6.5	7.0	7.6	7.8	8.0	
	130	7.9	9.2	9.7	9.1	8.6		130		6.3	6.9	7.1	7.3	
	145	7.1	8.2	7.9	7.2	6.8		145		5.9	6.4	6.6	6.8	
	170		6.8	5.6	4.7	4.1		170			5.9	5.5	4.9	
	180			4.8	3.9			180				4.5	3.9	
	190			4.0				190						
	200			3.3				200						

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

No. 12000 Luffing Jib on Luffing Boom

22



model 12000



luffing jib load charts

Liftcrane Luffing Jib Capacities No. 12000 Luffing Jib on Luffing Boom

75,000 lb Upper Counterweights (Crawlers Extended)

360° Rating

lb x 1 000

88° Boom Angle

23

Luffing Jib Length 60 ft	Boom ft	60	80	100	120	150
	Radius					
	26	80.0	80.0			
	30	69.3	69.3	69.3	69.3	42.5
	36	57.7	57.7	57.7	57.7	36.4
	45	46.2	46.2	46.2	46.2	29.1
	65		26.9	27.3	27.6	18.3
	80					
	100					
	120					

Luffing Jib Length 100 ft	Boom ft	60	80	100	120	150
	Radius					
	26					
	30					
	36	57.7				
	45	46.2	46.2	46.2	46.2	28.4
	65	28.0	28.4	28.9	29.1	19.0
	80	20.3	20.3	20.5	20.7	14.3
	100	13.7	13.7	13.7	13.9	9.7
	105					8.8

Luffing Jib Length 130 ft	Boom ft	60	80	100	120
	Radius				
	45	46.2	46.2	46.2	
	55	36.8	37.5	37.5	36.4
	75	22.7	22.9	23.1	23.4
	95	15.2	15.4	15.4	15.7
	115	10.6	10.6	10.6	10.8
	130	8.2	8.2	8.2	8.2
	150				
	165				

Luffing Jib Length 170 ft	Boom ft	60	80	100	120
	Radius				
	45				
	55	30.0	30.2		
	75	21.6	21.8	22.0	22.3
	95	14.1	14.3	14.3	14.6
	115	9.7	9.7	9.7	9.7
	130	7.3	7.3	7.3	6.2
	150	4.9	4.0		
	165	2.2			

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 load charts

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Liftcrane Luffing Jib Capacities No. 12000 Luffing Jib on Luffing Boom

75,000 lb Upper Counterweights (Crawlers Extended)

360° Rating

lb x 1 000

73° Boom Angle

Luffing Jib Length	60 ft	Boom ft				
		60	80	100	120	150
	Radius					
	55	35.9				
	65	29.1	27.6			
	75	24.0	23.1	22.3	20.3	
	85		19.6	18.7	17.9	15.4
	95				15.2	13.9
	105					11.9
	115					

Luffing Jib Length	100 ft	Boom ft				
		60	80	100	120	150
	Radius					
	55					
	65					
	75					
	85	19.6	17.9			
	95	16.8	15.9	15.0	13.0	
	105	14.6	13.7	13.0	12.1	9.3
	115	12.8	11.9	11.2	10.4	9.0

Luffing Jib Length	130 ft	Boom ft			
		60	80	100	120
	Radius				
	95	15.2			
	105	13.9	13.0	11.2	
	115	12.1	11.2	10.6	9.3
	125	10.6	9.9	9.3	8.2
	135	9.3	8.6	7.9	7.1
	145	8.2	7.7	6.8	6.2
	155			6.0	5.3

Luffing Jib Length	170 ft	Boom ft			
		60	80	100	120
	Radius				
	95				
	105				
	115	10.1			
	125	9.5	8.4	6.6	
	135	8.4	7.5	6.6	4.9
	145	7.1	6.4	5.5	4.6
	155	6.2	5.5	4.6	4.0

model 12000


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 No. 12000 Luffing Jib on Luffing Boom

75,000 lb Upper Counterweights (Crawlers Extended)

360° Rating

lb x 1 000

63° Boom Angle

25

Luffing Jib Length 60 ft	Boom ft	60	80	100	120	150
	Radius					
	75	22.5				
	80	21.2				
	85	19.4	17.6			
	95		15.7	13.7		
	105			12.3	10.4	
	115				9.7	6.4
	125					6.4
	135					

Luffing Jib Length 100 ft	Boom ft	60	80	100	120	150
	Radius					
	75					
	80					
	85					
	95					
	105	13.4				
	115	11.7	10.6			
	125	10.4	9.3	7.9		
	135		8.2	7.1	5.3	

Luffing Jib Length 130 ft	Boom ft	60	80	100	120
	Radius				
	120	9.7			
	125	9.7			
	130	9.0	7.1		
	140	7.9	6.8	4.6	
	150	7.1	6.0	4.6	
	160		5.1	4.0	
	170			3.3	
	175			3.1	

Luffing Jib Length 170 ft	Boom ft	60	80	100	120
	Radius				
	120				
	125				
	130				
	140				
	150	5.1			
	160	4.9			
	170	4.0			
	175	3.7			

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

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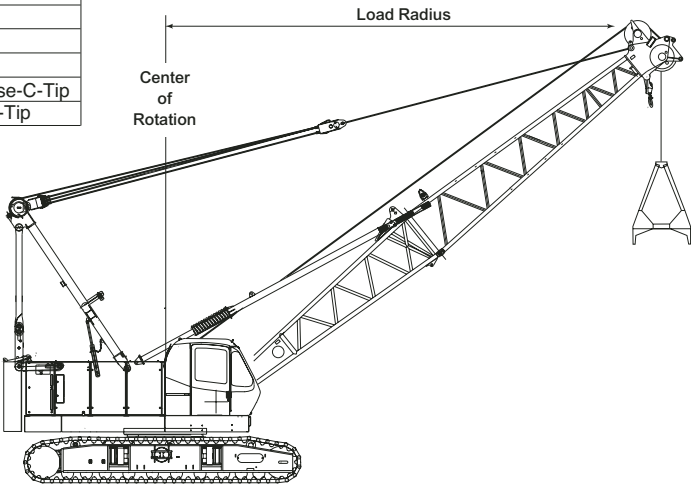
Boom:

Welded lattice construction using tubular, high-tensile steel chords with pin connections between sections.
Basic boom length: 50 ft (15.2 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
50 (15.2)	Base-Tip
60 (18.3)	Base-A-Tip
70 (21.3)	Base-A-A-Tip, Base-B-Tip
80 (24.4)	Base-A-B-Tip
90 (27.4)	Base-A-A-B-Tip, Base-B-B-Tip, Base-C-Tip
100 (30.5)	Base-A-B-B-Tip, Base-A-C-Tip

Base = 25 ft (7.6 m)
Insert: A = 10 ft (3.05 m)
 B = 20 ft (6.10 m)
 C = 40 ft (12.2 m)
Tip = 25 ft (7.2 m)

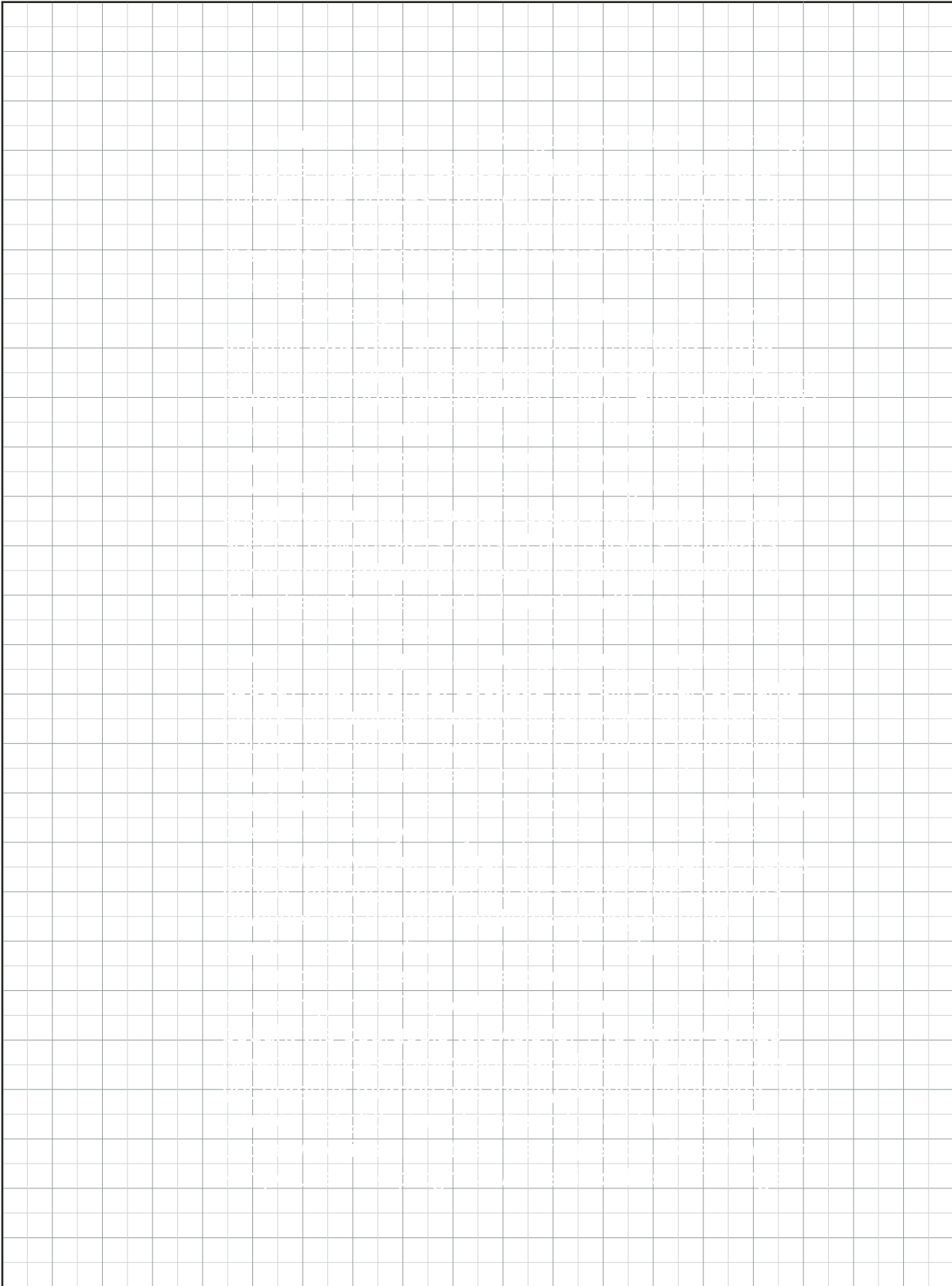


- 1. Figures represent maximum allowable capacity, and assume level ground and ideal working conditions.
- 2. Capacities are calculated at 66% of the minimum tipping loads.
- 3. Capacities are maximum recommended by PCSA Standard #4. Allowances must be made by the user for such unfavorable conditions 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

22,050 lb Counterweight (One Upper Counterweight, Crawlers Extended)
lb x 1 000

Boom ft	50	60	70	80	90	100
Radius						
22						
26	25.0					
30	25.0	25.0				
34	25.0	25.0	25.0			
45	23.1	22.9	22.7	22.5	21.6	
50		19.8	19.6	19.4	19.2	18.5
55		17.4	17.2	17.0	16.8	16.5
60			15.2	15.0	14.8	14.6
70				11.9	11.7	11.5
80					9.5	9.3
85						8.4
90						7.7



**Manitowoc Crane Group - Americas**

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