

Grove Maniowoc National Crane Potain



Manitowoc 14000

Product Guide



Features

- 200 mton (220 ton) capacity
- 865 m-ton (6,267 ft-kips) Maximum Load Moment
- 89 m (292') Heavy-Lift Boom
- 98,4 m (323') Fixed Jib on Heavy-Lift Boom
- 113,8 m (373') Luffing Jib on Heavy-Lift Boom
- 253 kW (340 HP) engine



Features

EPIC®

Manitowoc's field-proven Electronically Processed Independent Controls (EPIC) system delivers high productivity and precise load control by instantly matching a crane's commands to the crane function. EPIC's microprocessor and sensors also maximize a Manitowoc crane's overall reliability and simplify servicing by pinpointing any problem in the crane's engine, power transmission or other operating systems. In addition, EPIC increases versatility by easily tailoring a Manitowoc crane's operation for specialized applications, with or without attachments. EPIC is a key reason no other crane can match the performance and reliability of Manitowoc.



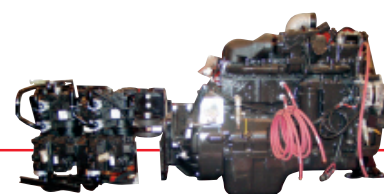
FACT™ Connectors

Manitowoc's patented Fast Aligning Connection Technology (FACT) automatically aligns crane components for fast, easy assembly.



Crawler Drive Shafts

These eliminate the need to disconnect hydraulic systems for shipment—simplifying crawler removal and assembly.



Hydraulics

Our closed-loop system provides a separate hydraulic circuit to power each crane function. The result is truly independent, variable-speed operation of the swing, load hoist, boom hoist and travel functions.

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Specifications

Upperworks



Engine

Cummins Model QSL 8.9 liter diesel, 6 cylinder, 253 kW (340 BHP) @ 1800 governed RPM.

Includes engine block heater (120 V), air heater starting aid (24 V), oil heater starting aid (120 V), high silencing muffler, radiator and fan.

Multiple hydraulic pump drive transmission provides independent power for all machine functions.

Two 12 volt maintenance-free, Group 8D batteries, 1375 CCA at -18°C (0° F), 24 volt starting and 70 amp alternator.

One 568 l (150 gal) capacity diesel fuel tank, mounted on right side of upperworks, with level indicator in operator's cab.



Controls

Modulating electronic-over-hydraulic controls provide infinite speed response directly proportional to control lever movement. Controls include Manitowoc's exclusive EPIC Electronically Processed Independent Control system providing microprocessor driven control logic, pump control, on-board diagnostics and service information.

Block-up limit control is standard for hoist and whip lines.

Rated Capacity Indicator system (RCI) is standard for main boom and upper boom point. "Function cut-out" or "warning only" operation is available via programmable configuration.

Travel and swing alarms are standard.



Hydraulic System

Six high-pressure piston pumps are driven through a multi-hydraulic pump transmission. These six pumps provide independent "closed loop" hydraulic power for front drum, rear drum, boom hoist system, swing system, and both left and right crawler operation.

System	kg/cm2 (psi)	lpm (gpm)
Front Drum	422 (6,000)	300 (80)
Rear Drum	422 (6,000)	300 (80)
Boom Hoist	422 (6,000)	227 (60)
Swing System	422 (6,000)	227 (60)
Left Crawler	422 (6,000)	227 (60)
Right Crawler	422 (6,000)	227 (60)

Hydraulic reservoir capacity is 300 l (79.25 gal) and is equipped with breather, sight and electrical level indicator, clean out access, and internal diffuser.

Each function is equipped with relief valves to protect the hydraulic circuit from overload or shock.

Replaceable, ten micron (absolute) full flow tank filter is furnished in the hydraulic circuit. All oil is filtered prior to return to the hydraulic reservoir.

Hydraulic system also includes pump transmission disconnect clutch & hydraulic oil cooler.



Drums

Two equal width winches are driven by independent variable displacement axial piston hydraulic motors through planetary reduction mounted on separate front and rear shafts with anti-friction bearings. Drums are grooved for 26 mm rope.

Powered hoisting/lowering operation is standard with automatic (spring applied, hydraulically released) multi-disc brakes, and drum rotation indicators.

Optional: Free-fall operation for front and/or rear drums(s).

Optional: Auxiliary (third) hydraulic powered drum mounted in boom butt. Includes third drum control system. Auxiliary drum is used as the luffing hoist when machine is equipped with a luffing jib.

Optional: Auxiliary drum preparation includes electric wiring, controls, hydraulic selector valve and plumbing.



Boom Hoist

Independent boom hoist consists of drum grooved for 22 mm diameter wire rope. Includes 22 mm diameter wire rope for 20 part line reeving.

Drum is powered by a variable displacement hydraulic motor coupled to an internal brake and planetary gearbox equipped with ratchet and pawl.



Mast and Gantry

Moving mast is 8,2 m (27') long and connects the boom hoist reeving to the steel boom suspension strap rigging. When used with optional self-erect package, the mast is utilized for crane assembly and disassembly. It is capable of lifting and positioning the crawler assemblies, stacking the counterweights and assembling the boom and jib.

Specifications

Gantry includes gantry raising cylinders capable of lifting the entire upperworks counterweight for removal and installation. Back hitch telescopes from storage to working position and is locked with power-actuated pins. Counterweight is suspended from gantry with straps.

Spring cushioned boom stop and automatic boom stop standard.



Counterweight

QTY.	ITEM	UNIT WEIGHT		TOTAL WEIGHT	
		kg	lb	kg	lb
1	Upperworks Tray	9 965	22,092	9 965	22,092
6	Upper Side Box	7 938	17,500	47 628	105,000
Series 1 Total		57 593		127,092	
1	Upperworks Center Box	2 680	5,908	2 680	5,908
2	Upper Side Box	7 938	17,500	15 876	35,000
2	Carbody Lower Box	12 020	26,500	24 040	53,000
Optional: Add to Series 1 for Series 2 Total		100 189		221,000	

Series 1 and Series 2 counterweight configurations. Includes connecting pins, brackets, and stops.



Swing System

High strength fabricated steel alloy rotating bed is mounted on 2,76 m (108-9/16") diameter turntable single-row ball bearing.

Independent swing powered by a fixed displacement hydraulic motor coupled to a planetary gearbox with internal brake.

Swing system maximum speed: 2.3 rpm.



Operator's Cab

Fully enclosed and insulated steel module is equipped with sliding door, large safety glass windows on all sides and roof. Signal horn, cab space heater, front and roof windshield wipers, air conditioning, dome light, sun visor and shade, fire extinguisher and air circulating fan are standard.

Optional: Tilt cab.

Optional: Nylon protective window covers.

Lowerworks



Carbody

Connects rotating bed to crawler assemblies. High strength fabricated steel assembly with FACT™ connection system for fast installation and removal of crawler assemblies.



Crawlers

Crawler assemblies are 8,3 m (27' 2") long with 1,22 m (48") wide cast steel crawler pads. Each crawler is identical and can be mounted on either side of the carbody. Each crawler is powered independently by a variable displacement hydraulic motor and includes two hydraulically powered pin actuators for fast installation and removal from carbody. Carbody mounted drive motors are connected to crawler final reduction via telescoping shafts. This permits crawlers to be removed without opening their hydraulic circuits. Crawlers provide ample tractive effort that allows counter rotation with full rated load. Maximum ground speed of 1,8 kph (1.1 mph).

Optional: Self-Erect system includes: carbody jacking cylinders with pads, controls, 27,2 mton (30 ton) assembly block, boom-butt installation support, gantry cylinders and crawler handling chain.

Attachments



No. 76 Heavy-Lift Main Boom

The liftcrane is equipped with a 20 m (65.6') No. 76 basic heavy-lift tubular chord boom consisting of a 5,5 m (18') butt, 5,5 m (18') insert, and 9 m (30') top with seven 76,2 cm (30") diameter roller bearing sheaves in 3 sheave packs. Includes rope guides, boom hoist wire rope, and boom angle indicator. The No. 76 boom utilizes steel suspension straps and Manitowoc's patented, exclusive FACT™ connection system. The FACT™ connection system consists of two hooks, two horizontal connection pins and alignment pads for each boom connection location.

Powered boom hinge system including cylinder, piping, operating controls and locking device standard.

Luffing jib preparation included as standard.

Specifications

- Optional: 3,0 m (10'), 6 m (19'), and 12 m (39') No. 76 boom inserts with steel boom suspension straps, and FACT™ connection system.

Note: Only one 3,0 m (10') insert is allowed in the boom configuration.



No. 134 Fixed Jib

- Optional: No. 134 basic tubular chord fixed jib 9,1 m (30') in length consisting of 4,6 m (15') jib butt and 4,6 m (15') jib top with 3,7 m (12') jib strut, pendants and backstay. Includes RCI hardware. For use with boom No. 76.
- Optional: No. 134 fixed jib inserts 3,0 m (10') and 6,1 m (20') with pendants.

Utilize fixed jib inserts in combination with the No. 134 basic fixed jib for total lengths up to 24,4 m (80').

Note: Jib lengths greater than 18,3 m (60') require the use of at least one 6,1 m (20') No. 134 fixed jib insert.



No. 135 Luffing Jib

- Optional: 21,3 m (70') basic No. 135 tubular chord luffing jib assembly with RCI hardware consisting of 8,2 m (27') butt, 6,1 m (20') insert, and 7,0 m (23') top with two 68,6 cm (27") straight roller bearing sheaves and pin connected jib sections, pendants, fixed strut, jib strut, backstay pendants, boom point wheel, 26 mm luffing jib hoist line. For use with No. 76 boom.
- Optional: 3,0 m (10'), 6,1 m (20'), and 12,2 m (40') No. 135 inserts with pendants. Utilize luffing jib inserts in combination with the No. 135 basic luffing jib for total lengths up to 57,8 m (170').

Note: Only one 3,0 m (10') insert is allowed in the luffing jib.

Optional Equipment

- Optional: Blocks and Hooks –
 - 13,6 mton (15 ton) swivel hook and weight ball.
 - 27,2 mton (30 ton) hook block with one 76,2 cm (30") sheave for 26 mm wire rope with swivel hook, hook latch and swivel lock (assembly block).
 - 54 mton (60 ton) hook block with two 76,2 cm (30") sheaves for 26 mm wire rope with swivel hook, hook latch and swivel lock.

91 mton (100 ton) hook block with three 76,2 cm (30") sheaves for 26 mm wire rope with swivel hook, hook latch, and swivel lock.

140,6 mton (155 ton) hook block with six 76,2 cm (30") sheaves for 26 mm wire rope with swivel hook, hook latch, and swivel lock.

200 mton (220 ton) hook block with seven 76,2 cm (30") sheaves for 26 mm wire rope with swivel hook, hook latch, and swivel lock.

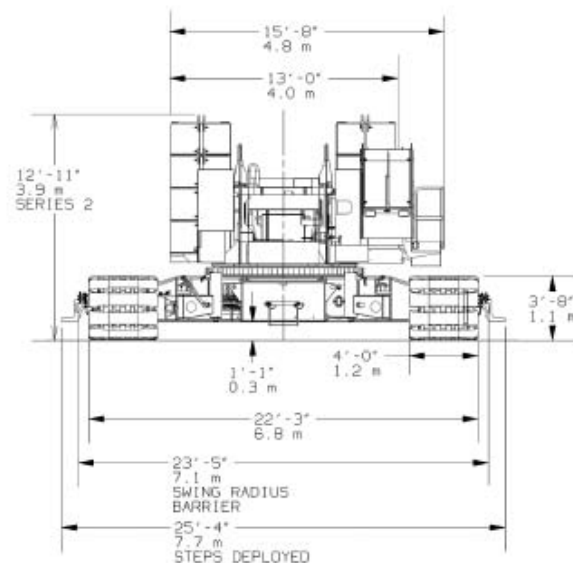
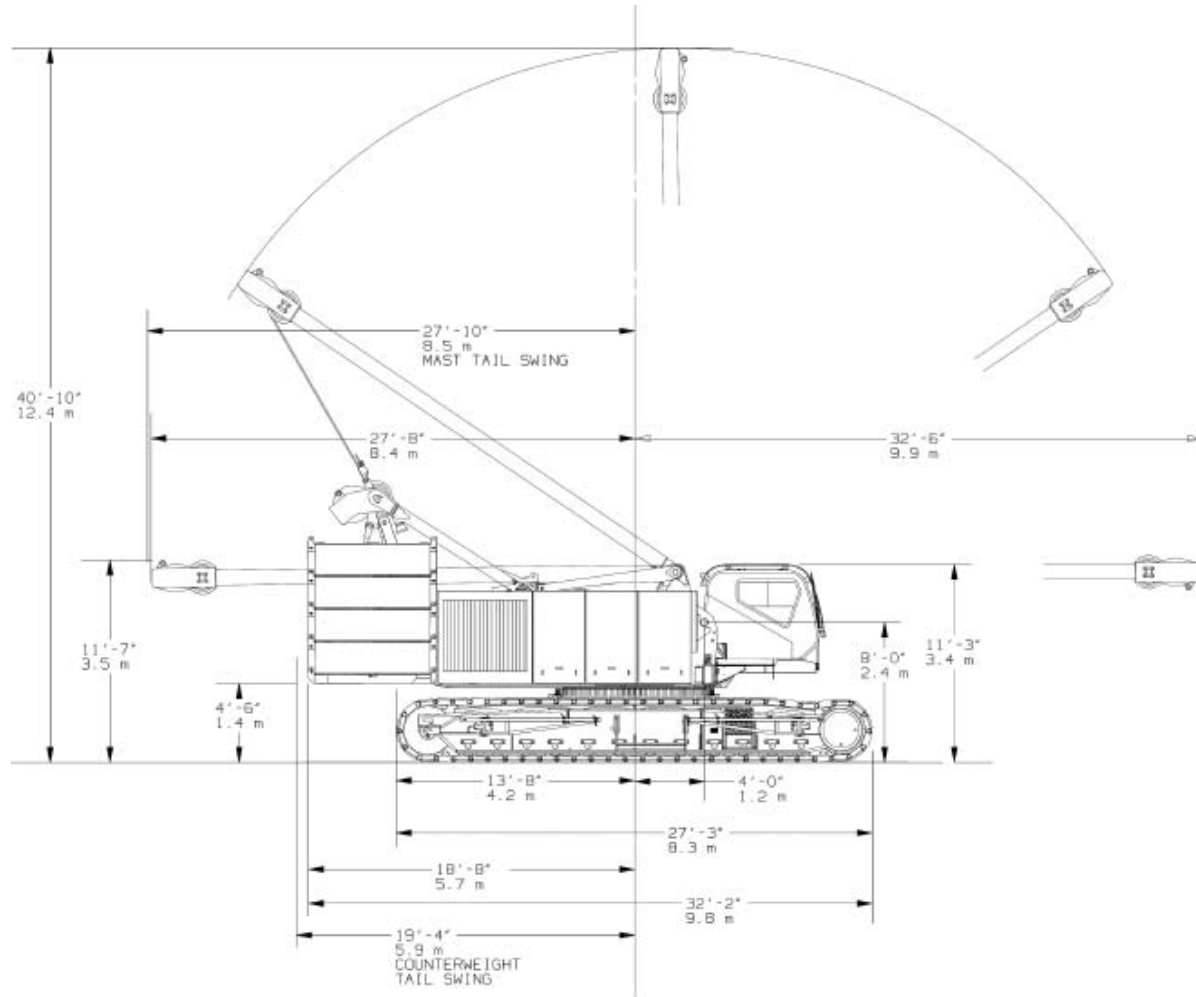
Hoist Reeving for Main Load Block - Single Lead Line 26 mm - No. 76 Main Boom

No. Parts of Line	Maximum Load	
	kg	(lb)
1	14 290	31,500
2	28 580	63,000
3	42 860	94,500
4	57 150	126,000
5	71 440	157,500
6	85 730	189,000
7	100 020	220,500
8	114 310	252,000
9	128 590	283,500
10	142 880	315,000
11	157 170	346,500
12	171 460	378,000
13	185 750	409,500
14	200 030	441,000

- Optional Hydraulic Test Kit: required to properly analyze the performance of the EPIC® control system.
- Optional Service Interval Kits: for the regularly scheduled maintenance of general crane operations.
- Optional Special Paint: in color(s) other than Manitowoc standard red and black.
- Optional Special Customer Decals: custom vinyl decal(s) of name and/or logo from artwork supplied by customer.
- Optional Export Packaging: basic crane, boom and jib sections.

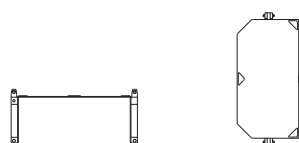
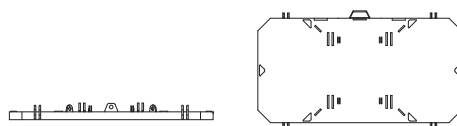
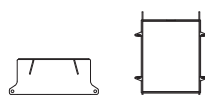
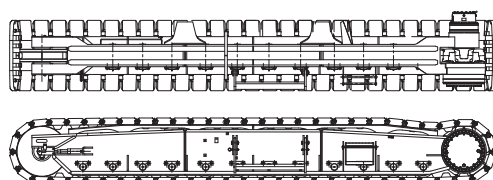
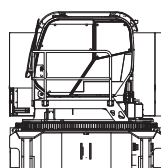
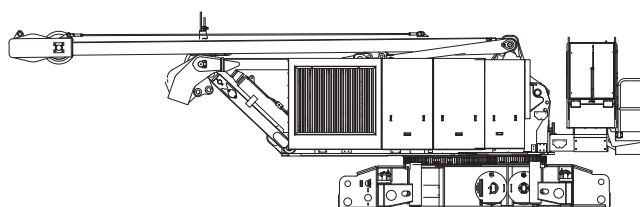


Outline dimensions



Model 14000

Outline dimensions



Basic Crane

Length	11,63 m	38' 2"
Width	3,00 m	9' 10"
Height (CE pkg)	3,20 m	10' 6"
Height (non-CE pkg)	3,43 m	11' 3"
Weight	39 689 kg	87,500 lb

Note: Weight includes carbody, upperworks, operator's cab, gantry, backhitch, mast, boom-hoist wire rope, maximum hoist and whip lines on drums, optional self-assembly jacks, full hydraulic fluid reservoir, and half tank of fuel.

Crawlers

x 2

Length	8,31 m	27' 3"
Width	1,55 m	5' 1"
Height	1,14 m	3' 9"
Weight	17 706 kg	39,000 lb

Upper Center Counterweight

x 1

Length	1,30 m	4' 3"
Width	1,04 m	3' 5"
Height	0,56 m	1' 10"
Weight	2 680 kg	5,900 lb

Counterweight Tray

x 1

Length	3,71 m	12' 2"
Width	2,36 m	7' 9"
Height	0,33 m	1' 1"
Weight	9 716 kg	21,400 lb

Upper Side Counterweight

Series 1

x 6

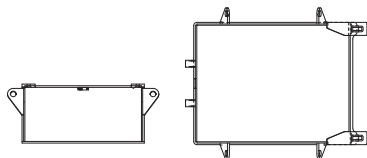
Series 2

x 8

Length	2,24 m	7' 4"
Width	1,07 m	3' 6"
Height	0,69 m	2' 3"
Weight	7 938 kg	17,500 lb

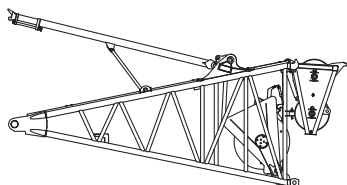
Option

Outline dimensions



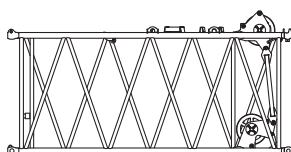
Lower Carbody Counterweight Series 2 x 2

Length	2,24 m	7' 4"
Width	1,85 m	6' 1"
Height	0,74 m	2' 5"
Weight	12 122 kg	26,700 lb



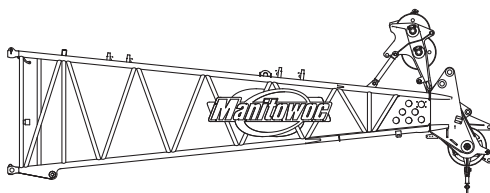
No. 76 Boom Butt 5,5 m (18.0') & Wire Rope Guide, Boom Stop x 1

Length	6,76 m	22' 2"
Width	2,44 m	8' 0"
Height	2,64 m	8' 8"
Weight	2 860 kg	6,300 lb



No. 76 Boom Insert 5,5 m (18.0') w/ Sheaves x 1

Length	5,69 m	18' 8"
Width	2,54 m	8' 4"
Height	2,59 m	8' 6"
Weight	1 634 kg	3,600 lb

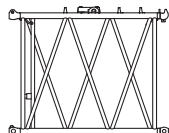


No. 76 Boom Top 9,0 m (29.5') & Wire Rope Guide, Straps x 1

Length	9,58 m	31' 5"
Width	2,51 m	8' 3"
Height	2,97 m	9' 9"
Weight	4 495 kg	9,900 lb

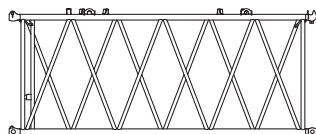


Outline dimensions



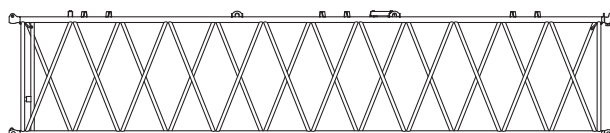
No. 76 Main Boom 3,0 m (9.8') Insert & Straps x 1

Length	3,17 m	10' 5"
Width	2,54 m	8' 4"
Height	2,59 m	8' 6"
Weight	772 kg	1,700 lb



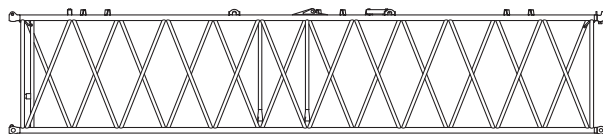
No. 76 Main Boom 6,0 m (19.7') Insert & Straps x 1

Length	6,17 m	20' 3"
Width	2,54 m	8' 4"
Height	2,59 m	8' 6"
Weight	1 126 kg	2,700 lb



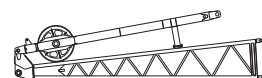
No. 76 Main Boom 12,0 m (39.4') Insert & Straps x 1, 2, 3, 4

Length	12,17 m	39' 11"
Width	2,54 m	8' 4"
Height	2,59 m	8' 6"
Weight	2 134 kg	4,700 lb



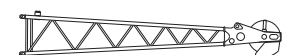
No. 76 Main Boom 12,0 m (39.4') w/ Backstay Insert & Straps x 1

Length	12,17 m	39' 11"
Width	2,54 m	8' 4"
Height	2,59 m	8' 6"
Weight	2 179 kg	4,800 lb



No. 134 Jib Butt 4,6 m (15') & Strut, Stop x 1

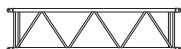
Length	4,67 m	15' 4"
Width	0,86 m	2' 10"
Height	1,29 m	4' 3"
Weight	635 kg	1,400 lb



No. 134 Jib Top 4,6 m (15') & Pendants x 1

Length	4,93 m	16' 2"
Width	0,79 m	2' 7"
Height	0,79 m	2' 7"
Weight	553 kg	1,220 lb

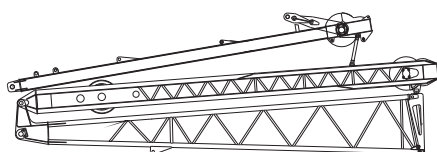
Outline dimensions



No. 134 Jib Insert 3,0 m (10') & Pendants x 1		
Length	3,12 m	10 3
Width	0,79 m	2 7
Height	0,79 m	2 7
Weight	218 kg	480 lb



No. 134 Jib Insert 6,1 m (20') & Pendants x 1, 2		
Length	6,17 m	20 3
Width	0,79 m	2 7
Height	0,79 m	2 7
Weight	340 kg	750 lb

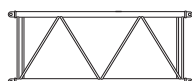


No. 135 Luffing Jib 8,2 m (27') Butt & Struts x 1		
Length	8,81 m	28 11
Width	1,57 m	5 2
Height	2,92 m	9 7
Weight	4 477 kg	9,870 lb

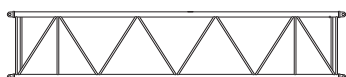


No. 135 Luffing Jib Top 7,0 m (23') & Roller, Pendants x 1		
Length	7,80 m	25' 7
Width	1,52 m	5 0
Height	2,02 m	6 8
Weight	1 984 kg	4,375 lb

Note: Includes wire rope guide.

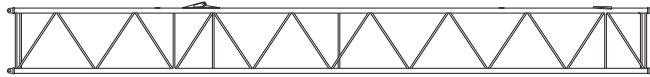


No. 135 Luffing Jib Insert 3,0 m (10') & Pendants x 1		
Length	3,15 m	10 4
Width	1,52 m	5' 0
Height	1,30 m	4' 3
Weight	381 kg	840 lb



No. 135 Luffing Jib Insert 6,1 m (20') & Pendants x 1, 2		
Length	6,20 m	20 4
Width	1,52 m	5 0
Height	1,30 m	4 3
Weight	612 kg	1,350 lb

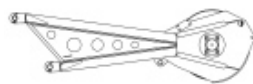
Outline dimensions



No. 135 Luffing Jib Insert 12,2 m (40') & Pendants

x 1, 2, 3

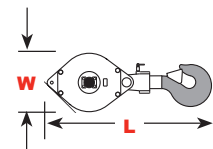
Length	12,29 m	40' 4"
Width	1,52 m	5' 0"
Height	1,30 m	4' 3"
Weight	1 050 kg	2,315 lb



No. 76 Upper Boom Point

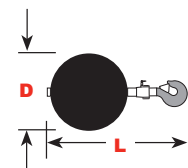
x 1

Length	2,64 m	8' 8"
Width	0,41 m	1' 4"
Height	0,81 m	2' 8"
Weight	420 kg	925 lb



Hook block for 26 mm (1'') wire rope

Capacity	200 mt	220 t	Length	2,27 m	7' 5"
Weight	2 472 kg	5,450 lb	Width	0,84 m	2' 9"
Capacity	150 mt	165 t	Length	2,11 m	6' 11"
Weight	2 730 kg	6,000 lb	Width	0,90 m	2' 11"
Capacity	91 mt	100 t	Length	1,98 m	6' 6"
Weight	1 770 kg	3,900 lb	Width	0,88 m	2' 11"
Capacity	27 mt	30 t	Length	1,50 m	4' 11"
Weight	1 724 kg	3,801 lb	Width	0,71 m	2' 4"



Weight Ball

Capacity/Swivel	14 mt	15 t	Diameter	0,53 m	1' 9"
Weight	594 kg	1,310 lb	Length	1,13 m	3' 9"

Transport data

Model 14000 Load Out Summary

Weight Each Item	No. 76 Boom 65 m (213') Series 2												
	Item	Quantity on Trailer Load #											
		kg (lb)	1	2	3	4	5	6	7	8	9	10	11
Upperworks Structure with Carbody, Gantry & Mast	39 689 (87,500)	1											
Crawler Assembly	17 690 (39,000)		1										
Crawler Assembly	17 690 (39,000)			1									
9,0 m (29'8") Boom Top	4 536 (10,000)				1								
5,5 m (18'6") Boom Butt	2 858 (6,300)											1	
Upper Side Counterweight	7 938 (17,500)				1	2	2	2			1		
12,0 m (39'5") Boom Insert	2 132 (4,700)					1	1	1		1			
5,5 m (18'6") Boom Insert	1 633 (3,600)								1				
6,0 m (19'8") Boom Insert	1 678 (3,700)								1				
3,0 m (10'0") Boom Insert	771 (1,700)										1		
Counterweight Tray	9 707 (21,400)								1				
Upper Center Counterweight	2,722 (6,000)									1			
Detachable Upper Boom Point	499 (1,100)				1								
9,2 m (30'0") #134 Jib and Strut	1,188 (2,620)		1										
3,0 m (10'0") #134 Jib Insert	140 (310)			1									
6,1 m (20'0") #134 Jib Insert	256 (565)			2									
Intermediate Frame	680 (1,500)									1			
Lower Carbody Counterweight	12 111 (26,700)										1	1	
Load Block - 91 mton (100 USt)	1 814 (4,000)												1
14 mton (15 USt) Weight Ball	2 604 (5,740)											1	
Rigging Block and Chain	600 (1,500)			1									
Miscellaneous	2 722 (6,000)												1
		39 689 (87,500)	18 878 (41,620)	19 023 (41,940)	12 972 (28,600)	18 008 (39,700)	8 008 (39,700)	8 008 (39,700)	13 018 (28,700)	5 533 (12,200)	20 820 (45,900)	17 572 (38,740)	6 668 (14,700)
		1	2	3	4	5	6	7	8	9	10	11	12
* Note: Does not include blocking, strapping etc.													

* Note: Does not include blocking, strapping etc.

Model 14000

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Performance data

Main and Standard Whip Drum - 140kN (31,500 lb)

Layer	Full Power Drum - Continuous Duty					
	Single Line Pull/Single Line Speed					
	m/min (ft/min)					
	1	2	3	4	5	6
Single Line Pull kg (lb)						
0 (0)	97 (318)	106 (347)	115 (377)	124 (406)	133 (435)	141 (464)
2 268 (5,000)	91 (299)	99 (324)	106 (349)	114 (374)	121 (399)	129 (423)
4 536 (10,000)	85 (279)	92 (301)	98 (322)	104 (340)	105 (344)	106 (347)
6 804 (15,000)	71 (232)	72 (236)	73 (240)	74 (243)	75 (247)	76 (250)
9 072 (20,000)	56 (184)	57 (188)	58 (191)	59 (195)	60 (198)	62 (202)
11 340 (25,000)	47 (155)	48 (158)	49 (162)	50 (166)	52 (169)	53 (173)
14 288 (31,500)	40 (131)	41 (134)	42 (138)	43 (142)	44 (145)	45 (149)

Luffing Hoist Drum / Auxiliary Drum - 89 kN (20,000 lb)

Layer	Full Power Drum - Continuous Duty							
	Single Line Pull/Single Line Speed							
	m/min (ft/min)							
	1	2	3	4	5	6	7	8
Single Line Pull kg (lb)								
0 (0)	85 (280)	92 (303)	99 (326)	106 (349)	113 (372)	120 (395)	127 (418)	134 (441)
2 268 (5,000)	79 (260)	85 (279)	91 (298)	97 (318)	103 (336)	108 (355)	114 (373)	119 (391)
4 536 (10,000)	73 (239)	78 (255)	79 (258)	80 (261)	81 (264)	82 (267)	82 (271)	83 (274)
6 804 (15,000)	55 (180)	56 (184)	57 (187)	58 (190)	59 (193)	60 (196)	61 (199)	62 (202)
9 072 (20,000)	44 (145)	45 (148)	46 (151)	47 (154)	48 (157)	49 (161)	50 (164)	51 (167)

Performance data

Wire Rope Lengths - Single Hoist Line Drum - 26 mm No. 76 Main Boom

Boom or Boom and Jib Length	Whip Line - Drum 1 or 3 (Front or Auxiliary Drum)				Hoist Line - Drum 2 (Rear Drum)		
	1 Part		2 Part				Total Parts of Line
m (ft)	m	(ft)	m	(ft)	m	(ft)	
20 (66)	58	(190)	82	(270)	335	(1100)	14
23 (76)	64	(210)	91	(300)	366	(1200)	13
29 (95)	76	(250)	110	(360)	373	(1225)	11
35 (115)	88	(290)	128	(420)	411	(1350)	10
41 (135)	101	(330)	146	(480)	434	(1425)	9
47 (154)	113	(370)	165	(540)	450	(1475)	8
53 (174)	125	(410)	183	(600)	450	(1475)	7
59 (194)	137	(450)	201	(660)	450	(1475)	6
65 (213)	149	(490)	219	(720)	450	(1475)	5
71 (233)	162	(530)	238	(780)	450	(1475)	4
77 (253)	174	(570)	256	(840)	450	(1475)	4
83 (272)	186	(610)	274	(900)	450	(1475)	3
89 (292)	198	(650)	293	(960)	450	(1475)	3
95 (312)	210	(690)	311	(1020)	—	—	—
98 (322)	216	(710)	—	—	—	—	—

NOTE: Hoist and whip line lengths given in table will allow hook to touch ground. When block travel below ground is required, add additional rope equal to parts of line times added travel distance. Hoisting distance or line pull may be limited when block travel below ground is required.

Maximum wire rope length allowed on Drum 3 (Auxiliary Drum) is 235 m (770 ft).

Hoist Reeving for Main Load Block - Single Lead Line 26 mm - No. 76 Main Boom

No. Parts of Line	Maximum Load	
	kg	(lb)
1	14 290	31,500
2	28 580	63,000
3	42 860	94,500
4	57 150	126,000
5	71 440	157,500
6	85 730	189,000
7	100 020	220,500
8	114 310	252,000
9	128 590	283,500
10	142 880	315,000
11	157 170	346,500
12	171 460	378,000
13	185 750	409,500
14	200 030	441,000

Performance data

Wire Rope Lengths Boom No. 76 - or - Fixed Jib No. 134 Boom No. 76

Boom or Boom and Jib Length	Whip Line - Drum 1 or 3 (Front or Auxiliary Drum)				Hoist Line - Drum 2 (Rear Drum)		
	1 Part		2 Part				Total Parts of Line
m (ft)	m	(ft)	m	(ft)	m	(ft)	
20 (66)	58	(190)	82	(270)	335	(1100)	14
23 (76)	64	(210)	91	(300)	366	(1200)	13
26 (85)	70	(230)	101	(330)	366	(1200)	12
29 (95)	76	(250)	110	(360)	373	(1225)	11
32 (105)	82	(270)	119	(390)	381	(1250)	10
35 (115)	88	(290)	128	(420)	411	(1350)	10
38 (125)	94	(310)	137	(450)	411	(1350)	9
41 (135)	101	(330)	146	(480)	434	(1425)	9
44 (144)	107	(350)	155	(510)	434	(1425)	8
47 (154)	113	(370)	165	(540)	450	(1475)	8
50 (164)	119	(390)	174	(570)	450	(1475)	7
53 (174)	125	(410)	183	(600)	450	(1475)	7
56 (184)	131	(430)	192	(630)	450	(1475)	6
59 (194)	137	(450)	201	(660)	450	(1475)	6
62 (203)	143	(470)	210	(690)	450	(1475)	5
65 (213)	149	(490)	219	(720)	450	(1475)	5
68 (223)	155	(510)	229	(750)	450	(1475)	5
71 (233)	162	(530)	238	(780)	450	(1475)	4
74 (243)	168	(550)	247	(810)	450	(1475)	4
77 (253)	174	(570)	256	(840)	450	(1475)	4
80 (263)	180	(590)	265	(870)	450	(1475)	3
83 (272)	186	(610)	274	(900)	450	(1475)	3
86 (282)	192	(630)	283	(930)	450	(1475)	3
89 (292)	198	(650)	293	(960)	450	(1475)	3
92 (302)	204	(670)	302	(990)	—	—	—
95 (312)	210	(690)	311	(1020)	—	—	—
98 (322)	216	(710)	—	—	—	—	—

NOTE: Hoist and whip line lengths given in table will allow hook to touch ground. When block travel below ground is required, add additional rope equal to parts of line times added travel distance. Hoisting distance or line pull may be limited when block travel below ground is required.

Maximum wire rope length allowed on Drum 3 (Auxiliary Drum) is 770 ft (235).

Performance data

Wire Rope Lengths Luffing Jib No. 135 on Boom No. 76

Boom or Boom and Jib Length	Luffing Jib Hoist Line		
	Hoist Line Drum 2		Maximum Required Parts of Line
	m	(ft)	
20 (66)	244	(800)	4
23 (76)	259	(850)	4
26 (85)	274	(900)	4
29 (95)	290	(950)	4
32 (105)	305	(1000)	4
35 (115)	320	(1050)	4
38 (125)	320	(1050)	3
41 (135)	335	(1100)	3
44 (144)	351	(1150)	3
47 (154)	351	(1150)	3
50 (164)	351	(1150)	3
53 (174)	366	(1200)	3
56 (184)	366	(1200)	3
59 (194)	366	(1200)	3

NOTE: Hoist line lengths given in table include all luffing jib lengths. Hoist line lengths given in table will allow hook to touch ground. When block travel below ground is required, add additional rope equal to parts of line times added travel distance. Hoisting distance or line pull may be limited when block travel below ground is required.

Wire Rope Specifications 5:1 Safety Factor Boom No. 76 - or - Fixed Jib No. 134 on Boom No. 76

Function	5:1 Safety Factor Rotation Resistant, 2 160 N/mm ² Wire rope with Pad Eye		5:1 Safety Factor Rotation Resistant, 2 160 N/mm ² . Wire rope
	Hoist Line	Whip Line	Auxiliary Line
Part Number	No. 719432	No. 719432	No. 719436
Size Wire Rope	26 mm —	26 mm —	— (1")
Minimum Breaking Strength	71 940 kN (158,600 lb)	71 940 kN (158,600 lb)	69 760 kN (153,800 lb)
Maximum Load Per Line	14 290 kg (31,500 lb)	14 290 kg (31,500 lb)	9 070 kN (20,000 lb)
Approximate Weight	3,56 kg/m (2.39 lb/ft)	3,56 kg/m (2.39 lb/ft)	3,36 kg/m (2.26 lb/ft)

Performance data

Drum Capacities - Wire Rope

	Maximum Length
	No Lagging
Front or Rear Grooved Drum 26 mm Wire Rope*	399 m (1,310 ft) 6 Layers
Auxiliary Drum (1") Wire Rope**	208 m (684 ft) 8 Layers
Boom Hoist Drum 22,23 mm (7/8") Wire Rope	323 m (1,060 ft) 6 Layers

*5,5 m (18 ft) is deducted from maximum spooling capacities for 3 dead wraps per drum on drums 1 and 2.

**6,1 m (20 ft) is deducted from maximum spooling capacity for 3 dead wraps on drum 3.

Maximum Length - Unassisted Raising

	No. 134 Fixed Jib on No. 76 Main Boom Series 2	
	Main Boom	Fixed Jib
Over End of Blocked Crawlers m (ft)	*89,0 (292)	— —
	86,0 (282)	— —
	83,0 (272)	— —
	80,0 (262)	12,2 (40)
	77,0 (253)	21,3 (70)
	74,0 (242)	24,4 (80)

NOTE: Load block(s), hook(s) and weight ball(s) on ground at start.

*Upper boom point cannot be used on 89,0 m (292 ft) boom or over side of crawlers on 80,0 m (262 ft) boom.

Maximum Length - Unassisted Raising

	No. 134 Fixed Jib on No. 76 Main Boom Series 2	
	Main Boom	Fixed Jib
Over Side of Crawlers m (ft)	*80,0 (262)	— —
	77,0 (253)	— —
	74,0 (243)	9,1 (30)
	71,0 (233)	18,3 (60)
	68,0 (223)	21,3 (70)
	65,0 (213)	24,4 (80)

NOTE: Load block(s), hook(s) and weight ball(s) on ground at start.

*Upper boom point cannot be used on 89,0 m (292 ft) boom or over side of crawlers on 80,0 m (262 ft) boom.



Performance data

Maximum Length - Unassisted Raising

Boom Length m (ft)	No. 135 Luffing Jib on No. 76 Main Boom Series 2			
	In-Line Method No. 135 Luffing Jib		Jack-Knife Method No. 135 Luffing Jib	
	Over End of Blocked Crawlers	Over Side Of Crawlers	Over End of Blocked Crawlers	Over Side Of Crawlers
20,0 (66)	21,3 - 51,8 (70 - 170)	21,3 - 51,8 (70 - 170)		
23,0 (76)	21,3 - 51,8 (70 - 170)	21,3 - 51,8 (70 - 170)		
26,0 (85)	21,3 - 51,8 (70 - 170)	21,3 - 51,8 (70 - 170)		
29,0 (95)	21,3 - 51,8 (70 - 170)	21,3 - 51,8 (70 - 170)		
32,0 (105)	21,3 - 51,8 (70 - 170)	21,3 - 51,8 (70 - 170)		
35,0 (115)	21,3 - 51,8 (70 - 170)	21,3 - 48,8 (70 - 160)	— —	51,8 (170)
38,0 (125)	21,3 - 51,8 (70 - 170)	21,3 - 39,6 (70 - 130)	— —	42,7 - 51,8 (140 - 170)
41,0 (134)	21,3 - 45,7 (70 - 150)	21,3 - 33,5 (70 - 110)	48,8 - 51,8 (160 - 170)	36,6 - 51,8 (120 - 170)
44,0 (144)	21,3 - 42,7 (70 - 140)	21,3 - 27,4 (70 - 90)	45,7 - 51,8 (150 - 170)	30,5 - 51,8 (100 - 170)
47,0 (154)	21,3 - 33,5 (70 - 110)	— —	36,6 - 51,8 (120 - 170)	21,3 - 51,8 (70 - 170)
50,0 (164)	21,3 - 27,4 (70 - 90)	— —	30,0 - 51,8 (100 - 170)	21,3 - 51,8 (70 - 170)
53,0 (174)			21,3 - 51,8 (70 - 170)	— —
56,0 (184)			21,3 - 51,8 (70 - 170)	— —
59,0# (194)			21,3 - 51,8 (70 - 170)	— —

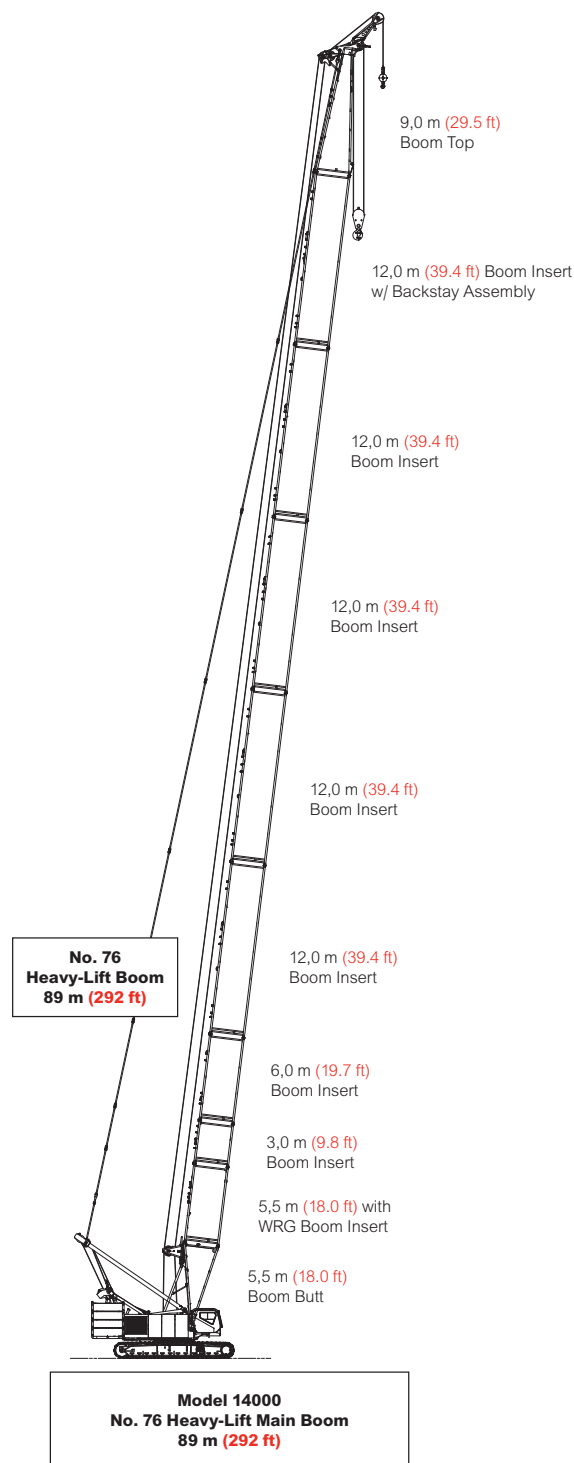
NOTE: Load block(s), hook(s) and weight ball(s) on ground until boom and luffing jib are erected. Boom lengths shown with a pound sign (#) require lower boom point and wire rope guide assembly No. 177364 to be removed.

Boom combinations

ANSI B30.5

No. 76 Main Boom with Heavy-Lift Top Combinations				
Boom Length m (ft)	Boom Inserts m (ft)			
	3,0 (9.8)	6,0 (9.7)	12,0 (39.4)	12,0* (39.4)
20 (65.6)	0	0	0	0
23 (75.5)	1	0	0	0
26 (85.3)	0	1	0	0
29 (95.1)	1	1	0	0
32 (105.0)	0	0	0	1
35 (114.8)	1	0	0	1
38 (124.7)	0	1	0	1
41 (134.5)	1	1	0	1
44 (144.4)	0	0	1	1
47 (154.2)	1	0	1	1
50 (164.0)	0	1	1	1
53 (173.9)	1	1	1	1
56 (183.7)	0	0	2	1
59 (193.6)	1	0	2	1
62 (203.4)	0	1	2	1
65 (213.3)	1	1	2	1
68 (223.1)	0	0	3	1
71 (233.0)	1	0	3	1
74 (242.8)	0	1	3	1
77 (252.6)	1	1	3	1
80 (262.5)	0	0	4	1
83 (272.3)	1	0	4	1
86 (282.2)	0	1	4	1
89 (292.0)	1	1	4	1

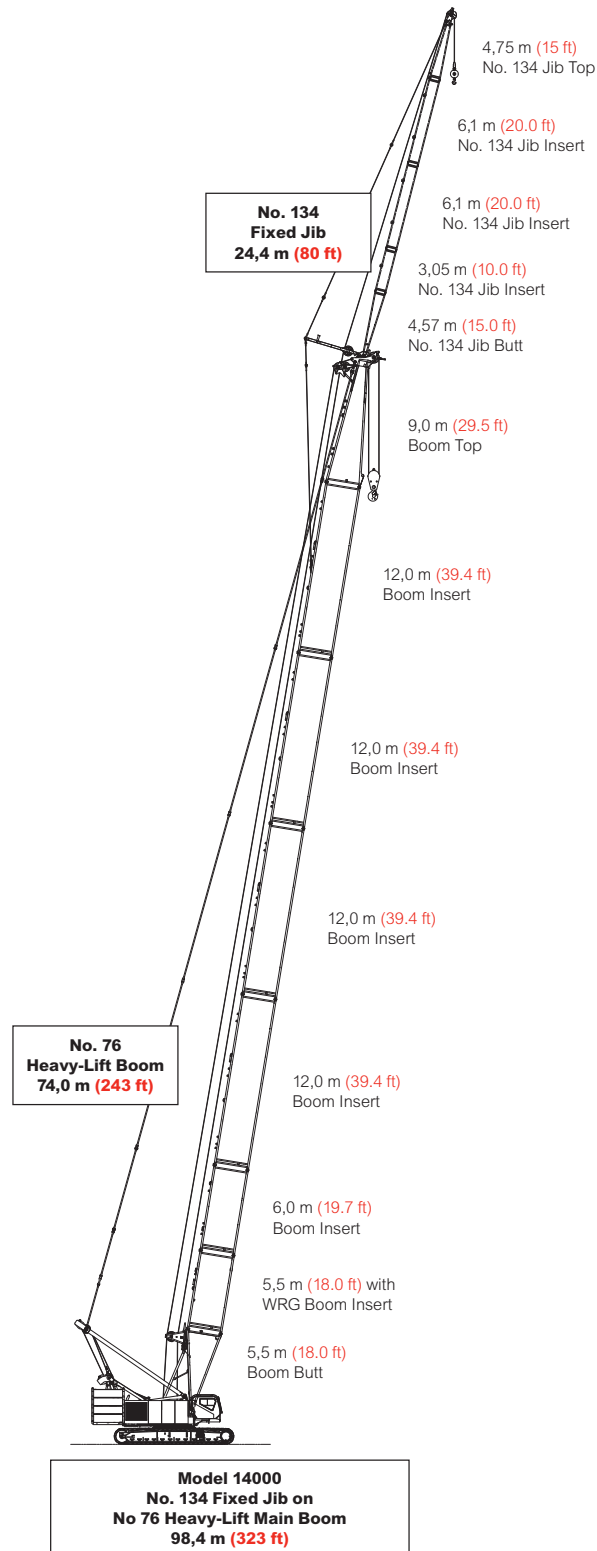
* with backstay assembly.



Boom combinations

ANSI B30.5

No. 134 Fixed Jib Combinations		
Fixed Jib Length m (ft)	Fixed Jib Inserts m (ft)	
	3,05 (10.0)	6,10 (20.0)
9,14 (30)	0	0
12,19 (40)	1	0
15,27 (50)	0	1
18,29 (60)	1	1
21,33 (70)	0	2
24,38 (80)	1	2



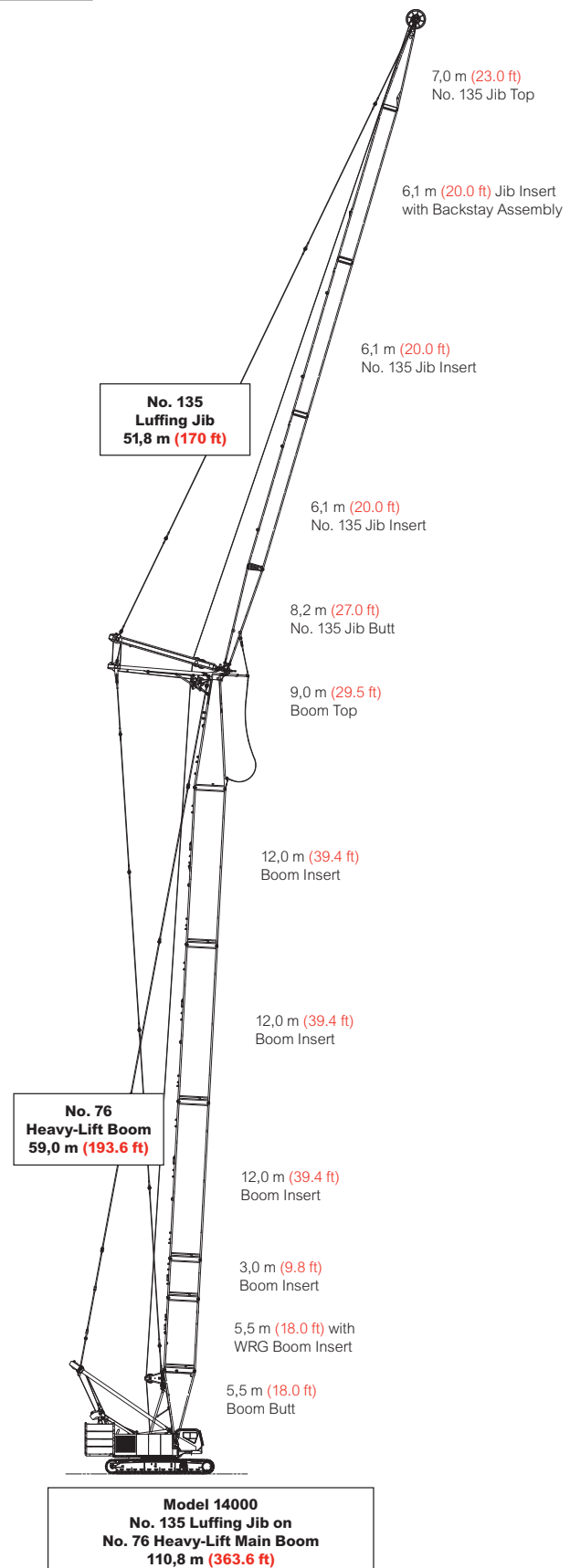
Model 14000

Boom combinations

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No. 135 Luffing Jib Combinations				
Luffing Jib Length m (ft)	Luffing Jib Inserts m (ft)			
	3,05 (10.0)	6,10 (20.0)	12,19 (40.0)	12,19 (40.0)
21,3 (70)	0	1	0	0
24,4 (80)	1	1	0	0
27,4 (90)	0	0	1	0
30,5 (100)	1	0	1	0
33,5 (110)	0	1	1	0
36,6 (120)	1	1	1	0
39,6 (130)	0	0	1	1
42,7 (140)	1	0	1	1
45,7 (150)	0	1	1	1
48,8 (160)	1	1	1	1
51,8 (170)	0	0	2	1

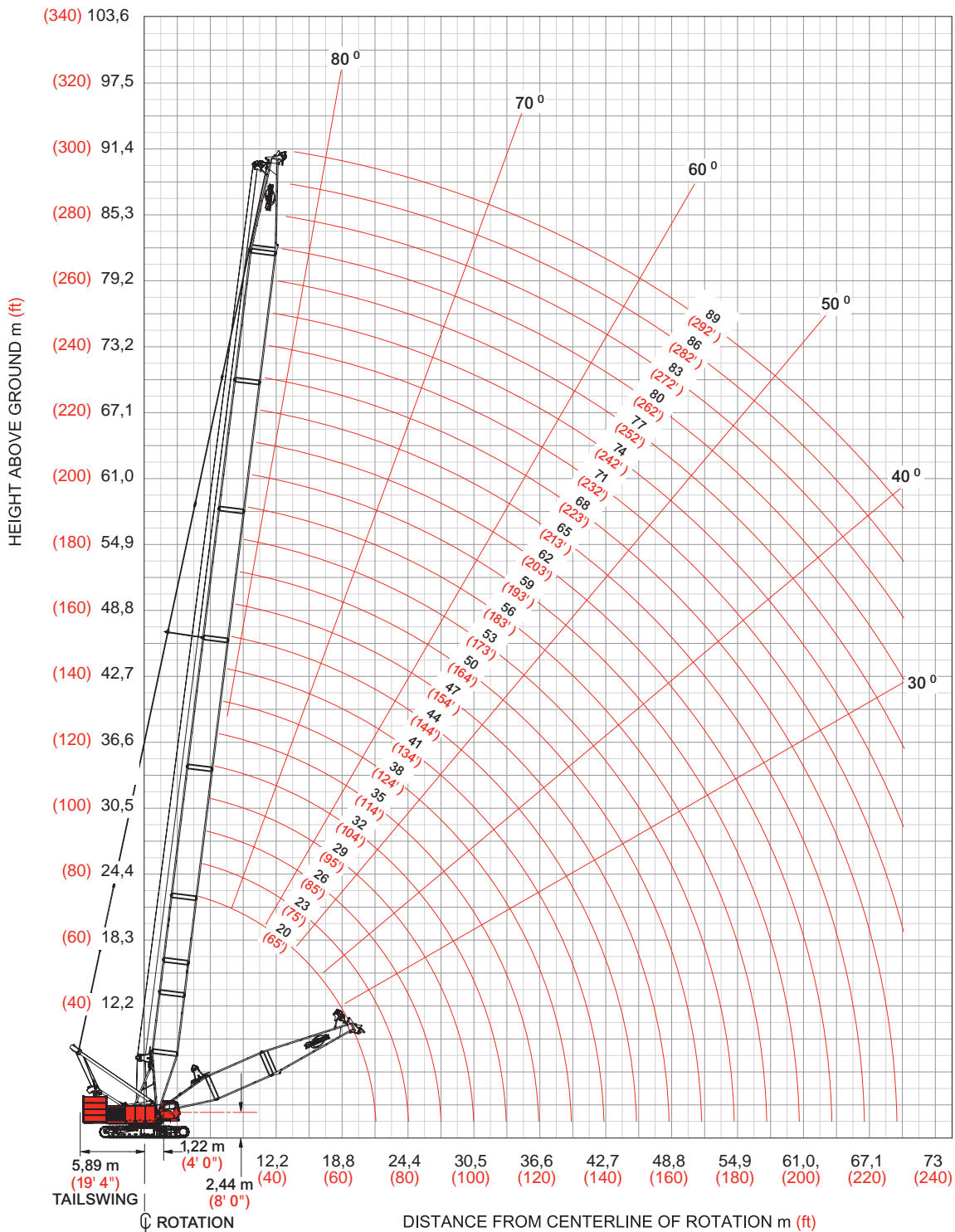
* with backstay lug.



Heavy-lift boom range diagrams

ANSI B30.5

**Liftcrane Boom Capacities - Model 14000 Series 2
No. 76 Heavy Lift Main Boom**



Model 14000

Heavy-lift boom load charts

ANSI B30.5

Liftcrane Boom Capacities - Model 14000 Series 2 No. 76 Heavy Lift Main Boom

76 200 kg (168,000 lb) Counterweight 24 040 kg (53,000 lb) Carbody Counterweight

360° Rating

kg (lb) x 1 000

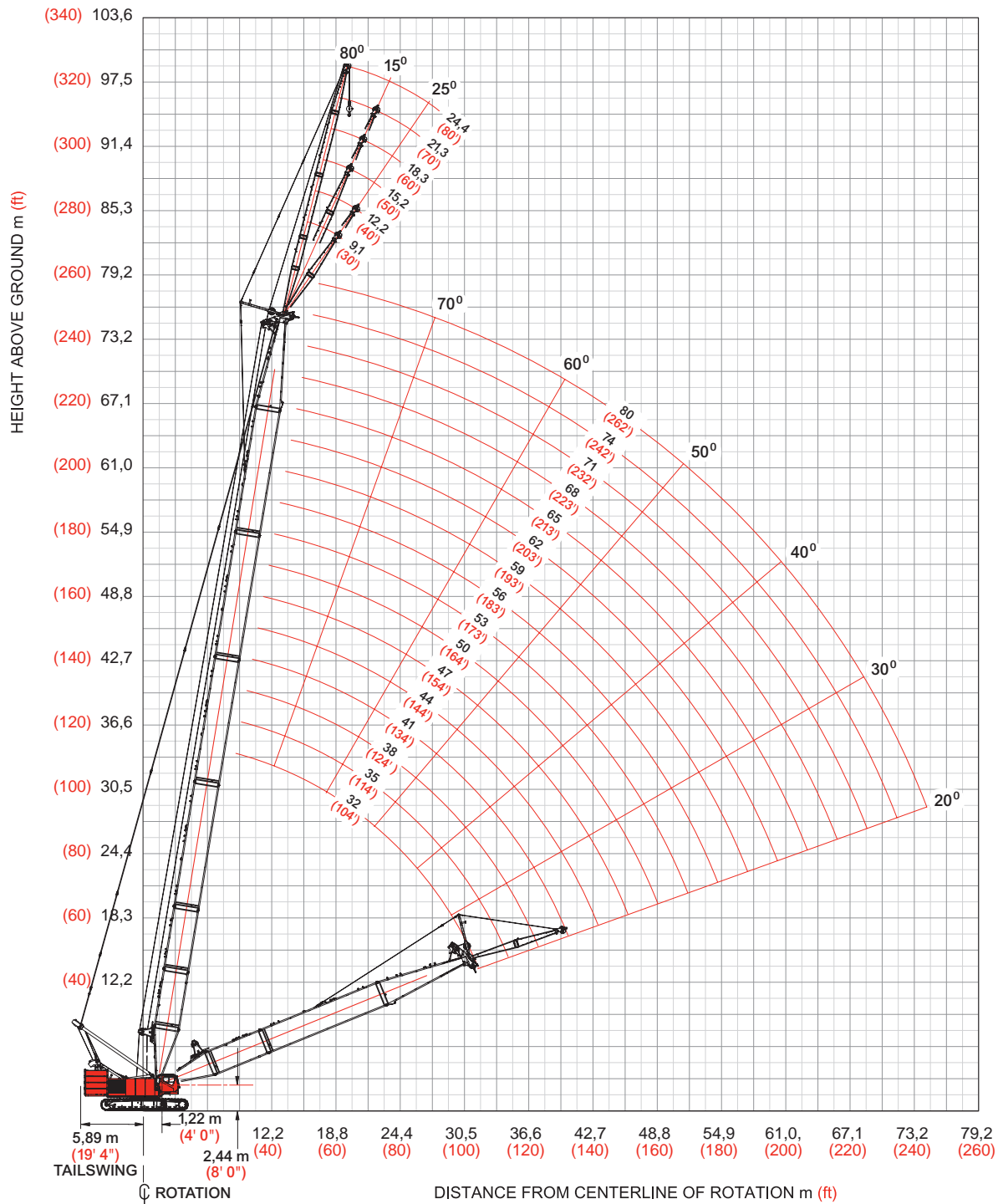
Boom m (ft)	20,0 (66)	26,0 (85)	32,0 (105)	38,0 (125)	44,0 (144)	50,0 (164)	56,0 (184)	62,0 (203)	68,0 (223)	74,0 (243)	80,0 (263)	86,0 (282)	89,0 (292)
Radius													
4,3 (14)	200,0 (441.0)												
8,0 (26)	109,3 (243.4)	109,0 (242.4)	108,7 (242.1)	108,5 (241.6)									
10,0 (32)	87,1 (198.0)	87,0 (197.5)	86,8 (196.9)	86,7 (196.5)	104,7 (195.7)	86,5 (195.0)	77,9 (173.4)	67,9 (150.4)					
12,0 (40)	67,0 (144.6)	67,1 (144.8)	67,1 (144.8)	67,1 (144.8)	86,4 (144.5)	66,9 (144.2)	66,8 (143.8)	65,4 (143.4)	58,8 (129.4)	50,2 (110.6)			
14,0 (46)	53,9 (118.8)	54,0 (119.0)	54,0 (118.9)	53,9 (118.8)	67,0 (118.4)	53,6 (118.0)	53,4 (117.6)	53,2 (117.2)	52,9 (116.5)	49,4 (109.0)	40,6 (9.5)	35,2 (77.6)	32,4 (71.5)
18,0 (60)	38,0 (82.2)	38,1 (82.4)	38,1 (82.3)	38,0 (82.2)	53,8 (81.7)	37,6 (81.3)	37,4 (80.7)	37,1 (80.2)	36,8 (79.4)	36,8 (79.5)	36,7 (78.9)	34,1 (75.0)	31,3 (69.0)
22,0 (70)		28,9 (66.6)	28,8 (66.5)	28,8 (66.4)	37,8 (65.8)	28,3 (65.4)	28,1 (64.8)	27,8 (64.3)	27,4 (63.4)	27,5 (63.5)	27,1 (62.8)	26,8 (62.1)	26,7 (61.8)
26,0 (85)			22,8 (50.6)	22,7 (50.4)	28,5 (49.9)	22,3 (49.5)	22,0 (48.8)	21,7 (48.2)	21,3 (47.4)	21,3 (47.4)	21,0 (46.7)	20,7 (46.0)	20,5 (45.6)
30,0 (100)			18,4 (39.8)	18,4 (39.7)	22,5 (39.2)	18,0 (38.8)	17,7 (38.1)	17,4 (37.5)	17,0 (36.6)	17,0 (36.6)	16,7 (35.9)	16,4 (35.2)	16,2 (34.8)
34,0 (110)				15,2 (34.3)	18,2 (33.8)	14,8 (33.4)	14,4 (32.7)	14,2 (32.2)	13,8 (31.3)	13,8 (31.2)	13,4 (30.5)	13,1 (29.8)	12,9 (29.4)
38,0 (120)					14,9 (29.4)	12,3 (29.0)	12,0 (28.3)	11,7 (27.7)	11,3 (26.8)	11,3 (26.8)	10,9 (26.0)	10,6 (25.3)	10,4 (24.9)
40,0 (130)					12,5 (25.7)	11,2 (25.3)	10,9 (24.6)	10,7 (24.1)	10,3 (23.2)	10,2 (23.1)	9,9 (22.3)	9,6 (21.6)	9,4 (21.2)
44,0 (140)					11,4 (22.5)	9,5 (22.2)	9,1 (21.5)	8,9 (20.9)	8,5 (20.0)	8,5 (20.0)	8,1 (19.2)	7,8 (18.5)	7,6 (18.1)
48,0 (155)						7,9 (18.2)	7,7 (17.6)	7,4 (17.0)	7,0 (16.1)	7,0 (16.1)	6,6 (15.3)	6,3 (14.6)	6,1 (14.2)
52,0 (170)							6,4 (14.4)	6,2 (13.8)	5,7 (12.9)	5,7 (12.9)	5,4 (12.1)	5,1 (11.4)	4,9 (11.0)
56,0 (180)								5,1 (12.0)	4,7 (11.1)	4,7 (11.1)	4,3 (10.3)	4,0 (9.6)	3,8 (9.2)
60,0 (195)								4,2 (9.6)	3,8 (8.7)	3,8 (8.7)	3,4 (7.9)	3,1 (7.2)	2,9 (6.8)
64,0 (210)									3,0 (6.7)	3,0 (6.7)	2,6 (5.9)	2,3 (5.2)	2,1 (4.8)
68,0 (220)										2,3 (5.5)	1,9 (4.7)		
70,0 (230)										2,0 (4.4)			



Fixed jib range diagram

ANSI B30.5

Liftcrane Boom Capacities
Fixed Jib Capacities - 134 Fixed Jib on No. 76 Main Boom



Model 14000

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Fixed jib load charts

ANSI B30.5

Liftcrane Boom Capacities

Fixed Jib Capacities - 134 Fixed Jib on No. 76 Main Boom

76 200 kg (168,000 lb) Counterweight

24 000 kg (53,000 lb) Carbody Counterweight

360° Rating

kg (lb) x 1 000

5° Offset						25° Offset				
Boom m (ft)	32,0 (105.0)	44,0 (144.4)	56,0 (183.7)	68,0 (223.1)	80,0 (262.5)	32,0 (105.0)	44,0 (144.4)	56,0 (183.7)	68,0 (223.1)	80,0 (262.5)
Radius										
Jib Length 9,1 m (30.0 ft)	9,1 (30)	28,5 (63.0)								
	12,0 (40)	28,5 (63.0)	28,5 (63.0)	— (63.0)						
	16,0 (50)	27,2 (60.6)	27,9 (62.1)	27,9 (62.0)	27,2 (60.5)	19,9 (45.1)	21,6 (48.6)			
	22,0 (70)	25,2 (56.1)	26,2 (58.2)	26,4 (58.7)	26,0 (57.7)	24,8 (55.5)	17,0 (38.3)	18,8 (42.1)	20,1 (45.0)	21,2 (47.3)
	28,0 (90)	21,0 (47.8)	20,4 (46.4)	19,7 (45.0)	19,0 (43.4)	18,5 (42.4)	15,0 (33.6)	16,8 (37.4)	28,2 (40.5)	19,2 (43.0)
	36,0 (120)	14,5 (31.3)	13,9 (30.0)	13,2 (28.5)	12,5 (26.8)	12,0 (25.7)		14,3 (30.8)	13,7 (29.5)	13,1 (28.1)
	48,0 (150)		8,4 (20.4)	7,7 (18.9)	7,0 (17.2)	6,5 (16.2)		8,0 (19.6)	7,3 (18.1)	6,9 (17.2)
	56,0 (180)			5,4 (12.7)	4,7 (11.0)	4,2 (9.9)			4,9 (11.6)	4,5 (10.7)
	64,0 (210)				29,0 (6.6)	2,5 (5.6)				2,7 (6.1)
	70,0 (235)				1,9 (4.3)					
	76,0 (255)									

5° Offset					25° Offset			
Boom m (ft)	32,0 (105.0)	44,0 (144.4)	56,0 (183.7)	68,0 (223.1)	32,0 (105.0)	44,0 (144.4)	56,0 (183.7)	68,0 (223.1)
Radius								
Jib Length 15,2 m (50.0 ft)	9,1 (30)							
	12,0 (40)	20,1 (44.2)	— (44.7)					
	16,0 (50)	18,8 (42.1)	19,3 (43.0)	19,3 (42.9)				
	22,0 (70)	17,2 (38.5)	18,0 (40.0)	18,2 (40.4)	18,0 (39.9)	12,3 (27.7)	13,3 (30.0)	14,2 (31.8)
	28,0 (90)	15,8 (35.1)	16,8 (37.4)	17,2 (38.3)	17,2 (38.1)	10,6 (23.8)	11,7 (26.2)	12,6 (28.2)
	36,0 (120)	13,4 (29.2)	14,4 (30.9)	13,6 (29.4)	12,9 (27.7)	9,1 (20.0)	10,1 (22.3)	11,0 (24.2)
	48,0 (150)	— (22.8)	8,8 (21.4)	8,1 (19.8)	7,3 (18.1)		8,6 (21.0)	8,0 (19.6)
	56,0 (180)		6,5 (15.1)	5,8 (13.5)	5,0 (11.8)		6,1 (14.3)	5,5 (12.9)
	64,0 (210)			4,1 (9.1)	3,3 (7.4)			3,6 (8.1)
	70,0 (235)				2,3 (5.1)			
	76,0 (255)							



Fixed jib load charts

ANSI B30.5

Liftcrane Boom Capacities

Fixed Jib Capacities - No. 134 Fixed Jib on No. 76 Main Boom

76 200 kg (168,000 lb) Counterweight

24 000 kg (53,000 lb) Carbody Counterweight

360° Rating

kg (lb) x 1 000

5° Offset					25° Offset			
Boom m (ft)	32,0 (105.0)	44,0 (144.4)	56,0 (183.7)	68,0 (223.1)	32,0 (105.0)	44,0 (144.4)	56,0 (183.7)	68,0 (223.1)
Radius								
9,1 (30)								
12,0 (40)	17,2 (38.0)							
16,0 (50)	16,1 (36.2)	16,5 (36.8)	16,5 (36.7)					
22,0 (70)	14,5 (32.5)	15,3 (34.1)	15,5 (34.5)	15,3 (34.1)	11,1 (25.0)	12,0 (27.0)	12,6 (28.3)	
28,0 (90)	13,2 (29.5)	14,1 (31.4)	14,6 (32.4)	14,6 (32.5)	9,4 (21.2)	10,4 (23.3)	11,1 (24.9)	11,8 (26.3)
36,0 (120)	11,7 (25.4)	12,8 (28.1)	13,4 (29.5)	13,1 (27.9)	7,9 (17.4)	8,9 (19.4)	9,6 (21.1)	10,3 (22.6)
48,0 (150)	8,6 (20.1)	9,0 (21.7)	8,2 (20.1)	7,4 (18.3)		7,4 (16.9)	8,1 (18.5)	8,3 (19.9)
56,0 (180)		6,7 (15.4)	5,9 (13.8)	5,1 (12.0)			6,4 (14.9)	5,8 (13.5)
64,0 (210)			4,2 (9.4)	3,4 (7.6)				3,9 (8.7)
70,0 (235)			3,1 (7.0)	2,4 (5.3)				
76,0 (255)								

5° Offset					25° Offset			
Boom m (ft)	32,0 (105.0)	44,0 (144.4)	56,0 (183.7)	68,0 (223.1)	32,0 (105.0)	44,0 (144.4)	56,0 (183.7)	68,0 (223.1)
Radius								
9,1 (30)								
12,0 (40)	— (23.4)							
16,0 (50)	10,2 (22.7)	10,1 (22.6)	9,9 (22.0)					
22,0 (70)	9,4 (21.1)	9,5 (21.3)	9,5 (21.2)	9,3 (20.7)	8,9 (19.8)			
28,0 (90)	8,8 (19.6)	8,9 (19.9)	9,0 (20.0)	8,9 (19.8)	7,5 (16.9)	8,2 (18.5)	8,6 (19.2)	8,7 (19.3)
36,0 (120)	8,1 (17.8)	8,2 (18.2)	8,4 (18.4)	8,3 (18.4)	6,1 (13.5)	6,8 (15.0)	7,4 (16.3)	7,9 (17.4)
48,0 (150)	6,8 (15.5)	7,4 (16.8)	7,5 (17.0)	7,5 (17.1)	4,9 (11.2)	5,5 (12.7)	6,1 (14.0)	6,6 (15.1)
56,0 (180)	— (13.3)	6,8 (15.4)	6,1 (14.2)	5,3 (12.4)		4,9 (11.1)	5,4 (12.3)	5,9 (13.3)
64,0 (210)		5,2 (11.5)	4,4 (9.8)	3,6 (8.0)			4,9 (10.9)	4,2 (9.4)
70,0 (235)			3,4 (7.5)	2,6 (5.7)				3,1 (6.3)
76,0 (255)			2,5 (5.6)					2,1 (4.2)

Model 14000

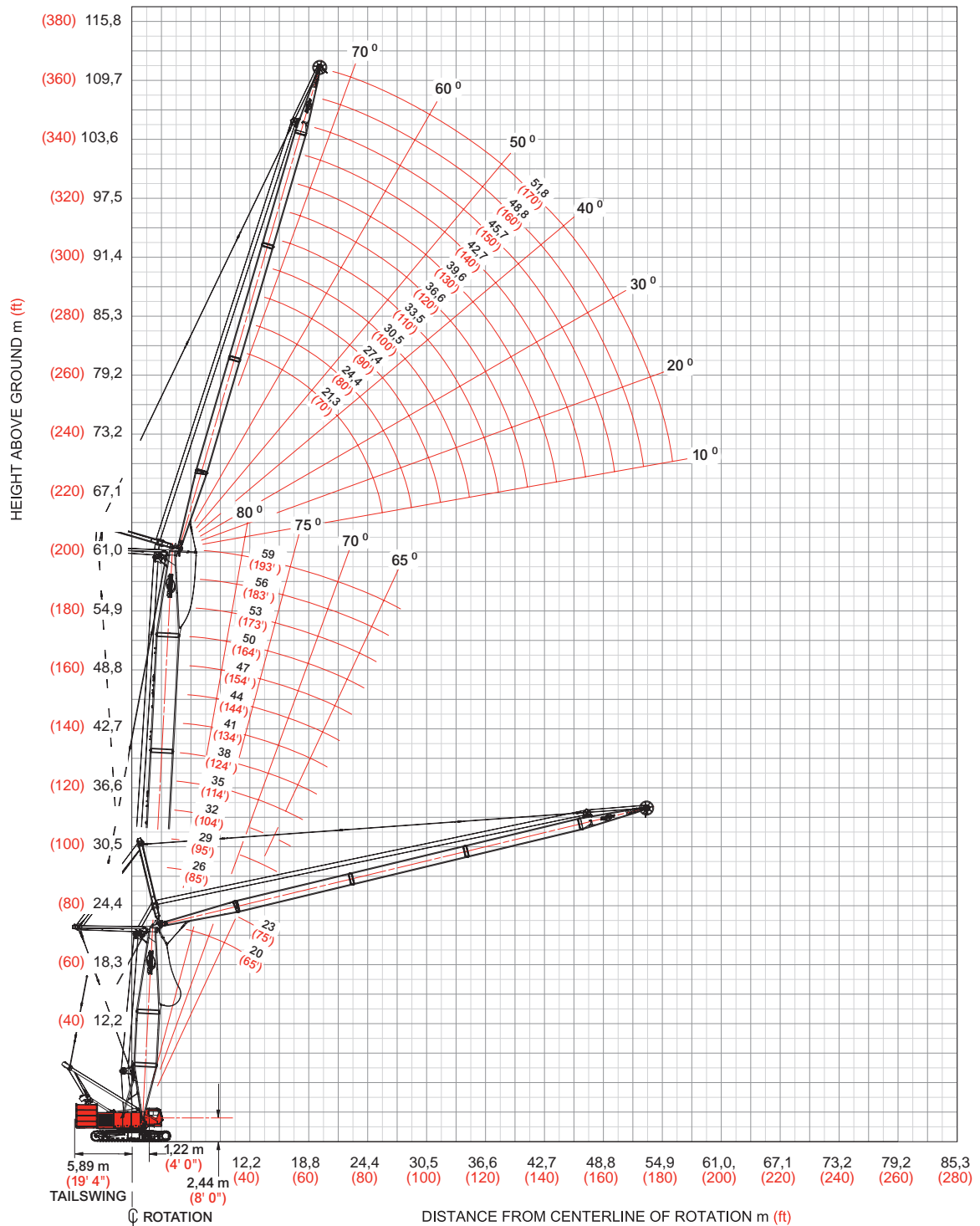
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Luffing jib range diagram

ANSI B30.5

Liftcrane Boom Capacities

Fixed Jib Capacities - 134 Fixed Jib on No. 76 Main Boom



Luffing jib load charts

ANSI B30.5

Liftcrane Luffing Jib Boom Capacities - Model 14000 Series 2 No. 59 Luffing Jib on No. 58 Heavy Lift Main Boom

76 200 kg (168,000 lb) Counterweight 24 000 kg (53,000 lb) Carbody Counterweight

360° Rating kg (lb) x 1 000

87° Boom Angle

Luffing Jib Length 21,3 m (70 ft)	Boom m (ft)	20,0 (65.6)	32,0 (105.0)	44,0 (144.4)	53,0 (173.9)	59,0 (193.6)
	Radius					
	8,5 (28)	53,7 (118.6)				
	10,0 (34)	51,7 (112.4)	48,6 (107.3)	43,0 (94.9)	— (85.0)	
	12,0 (40)	48,0 (105.3)	48,1 (105.6)	43,0 (94.9)	38,4 (84.8)	35,6 (78.5)
	16,0 (50)	42,4 (95.7)	42,7 (96.3)	37,6 (86.2)	34,9 (79.6)	31,6 (72.1)
	20,0 (65)	33,8 (75.5)	36,0 (80.4)	31,4 (69.8)	29,3 (65.2)	26,7 (59.5)
	24,0 (80)		25,6 (52.2)	26,4 (57.2)	24,9 (54.2)	22,8 (49.6)
	26,0 (85)				— (44.9)	— (46.8)
	28,0 (95)					
Luffing Jib Length 30,5 m (100 ft)	Boom m (ft)	20,0 (65.6)	32,0 (105.0)	44,0 (144.4)	53,0 (173.9)	59,0 (193.6)
	Radius					
	8,5 (28)					
	10,0 (34)					
	12,0 (40)	36,7 (80.6)	36,3 (80.0)			
	16,0 (50)	32,2 (72.8)	32,2 (72.8)	31,9 (71.6)	29,8 (65.9)	22,9 (51.1)
	20,0 (65)	28,5 (63.2)	28,6 (63.6)	28,6 (63.4)	27,2 (60.5)	21,8 (48.2)
	24,0 (80)	25,4 (55.6)	25,7 (56.3)	25,1 (54.7)	23,6 (51.4)	20,7 (45.6)
	26,0 (85)	23,9 (53.0)	24,5 (54.3)	23,4 (51.9)	22,0 (48.8)	19,6 (43.5)
	28,0 (95)	21,5 (45.4)	23,0 (48.3)	21,8 (46.8)	20,6 (44.1)	18,4 (39.5)
Luffing Jib Length 42,7 m (140 ft)	Boom m (ft)	20,0 (65.6)	32,0 (105.0)	44,0 (144.4)	53,0 (173.9)	59,0 (193.6)
	Radius					
	15,2 (50)	21,9 (48.5)	21,1 (46.7)			
	20,0 (65)	20,0 (44.4)	19,9 (44.2)	19,1 (42.2)	18,8 (40.2)	17,3 (38.2)
	24,0 (80)	17,8 (38.8)	17,9 (39.1)	17,9 (39.1)	17,5 (38.5)	16,8 (37.0)
	28,0 (95)	15,8 (34.0)	16,0 (34.5)	16,1 (34.7)	16,0 (34.6)	15,9 (34.3)
	34,0 (115)	13,3 (28.7)	13,6 (29.2)	13,8 (29.7)	13,9 (29.9)	13,8 (29.8)
	40,0 (130)	11,4 (25.4)	11,6 (26.0)	11,8 (26.4)	12,0 (26.7)	12,0 (26.8)
	44,0 (145)	9,7 (21.0)	10,6 (23.4)	10,8 (23.9)	10,9 (24.1)	10,8 (23.9)
	48,0 (160)					
Luffing Jib Length 51,8 m (170 ft)	Boom m (ft)	20,0 (65.6)	32,0 (105.0)	44,0 (144.4)	53,0 (173.9)	59,0 (193.6)
	Radius					
	15,2 (50)					
	20,0 (65)	15,6 (34.7)	15,6 (34.6)	15,3 (34.0)	14,1 (31.3)	13,6 (30.2)
	24,0 (80)	13,7 (30.0)	13,8 (30.1)	13,8 (30.1)	12,8 (28.0)	12,6 (27.7)
	28,0 (95)	12,0 (25.6)	12,2 (26.1)	12,2 (26.3)	11,5 (24.7)	11,4 (24.6)
	34,0 (115)	9,7 (20.8)	10,0 (21.3)	10,1 (21.6)	9,6 (20.5)	9,6 (20.6)
	40,0 (130)	7,9 (17.7)	8,1 (18.1)	8,3 (18.6)	7,9 (17.7)	8,0 (17.9)
	44,0 (145)	6,8 (15.0)	7,0 (15.4)	7,2 (15.8)	6,9 (15.2)	6,9 (15.3)
	48,0 (160)	5,8 (12.5)	6,0 (12.9)	6,2 (13.4)	6,0 (13.0)	6,1 (13.2)
Luffing Jib Length 52,0 m (175 ft)	Boom m (ft)	20,0 (65.6)	32,0 (105.0)	44,0 (144.4)	53,0 (173.9)	59,0 (193.6)
	Radius					
	52,0 (175)	4,8 (10.1)	5,0 (10.4)	5,2 (10.8)	5,0 (10.5)	5,1 (10.7)
	56,0 (185)				4,1 (9.1)	4,2 (9.3)

Luffing jib load charts

ANSI B30.5

Liftcrane Luffing Jib Boom Capacities - Model 14000 Series 2 No. 59 Luffing Jib on No. 58 Heavy Lift Main Boom

76 200 kg (168,000 lb) Counterweight 24 000 kg (53,000 lb) Carbody Counterweight

360° Rating

kg (lb) x 1 000

75° Boom Angle

	Boom m (ft)	20,0 (65.6)	32,0 (105.0)	44,0 (144.4)	53,0 (173.9)	59,0 (193.6)		Boom m (ft)	20,0 (65.6)	32,0 (105.0)	44,0 (144.4)	53,0 (173.9)	59,0 (193.6)
	Radius							Radius					
Luffing Jib Length 21,3 m (70 ft)	18,0 (55)	40,0 (96.5)					Luffing Jib Length 30,5 m (100 ft)	18,0 (55)					
	20,0 (65)	35,0 (78.2)						20,0 (65)					
	24,0 (80)	27,9 (60.4)	26,5 (57.5)					24,0 (80)	27,6 (59.7)	— (56.6)			
	28,0 (95)		21,9 (46.4)	20,5 (43.5)	19,3 (40.9)	18,5 —		28,0 (95)	22,8 (48.2)	21,5 (45.6)	20,1 (42.5)		
	32,0 (105)			17,3 (38.3)	16,3 (36.1)	15,6 (34.4)		32,0 (105)	19,2 (42.5)	18,2 (40.2)	17,0 (37.5)	15,8 (35.0)	15,1 (33.3)
	34,0 (115)				15,1 (32.1)	14,4 (30.6)		34,0 (115)	17,8 (37.8)	16,8 (35.8)	15,7 (33.3)	14,7 (31.2)	13,9 (29.6)
	38,0 (125)					12,4 (27.3)		38,0 (125)		14,6 (32.1)	13,6 (29.9)	12,7 (27.9)	12,0 (26.5)
	42,0 (135)							42,0 (135)			11,9 (27.0)	11,1 (25.2)	10,5 (23.9)
	44,0 (145)							44,0 (145)				10,4 (22.8)	9,8 (21.7)
	46,0 (155)							46,0 (155)					9,2 (19.6)

	Boom m (ft)	20,0 (65.6)	32,0 (105.0)	44,0 (144.4)	53,0 (173.9)	59,0 (193.6)		Boom m (ft)	20,0 (65.6)	32,0 (105.0)	44,0 (144.4)	53,0 (173.9)	59,0 (193.6)
	Radius							Radius					
Luffing Jib Length 42,7 m (140 ft)	28,0 (90)	17,8 (40.0)					Luffing Jib Length 51,8 m (170 ft)	28,0 (90)					
	34,0 (115)	15,1 (32.4)	16,3 (34.9)	15,2 (32.3)	— (30.0)			34,0 (115)	11,2 (24.0)	— (26.4)			
	38,0 (125)	13,5 (29.8)	14,2 (31.3)	13,1 (28.9)	12,2 (26.8)	11,5 (25.4)		38,0 (125)	9,8 (21.6)	10,9 (24.0)	— (26.1)		
	44,0 (145)	11,5 (25.4)	11,7 (25.7)	10,8 (23.7)	9,9 (21.9)	9,4 (20.6)		44,0 (145)	7,9 (17.5)	8,9 (19.6)	9,9 (21.7)	9,6 (21.2)	9,0 (19.9)
	46,0 (155)	11,0 (23.7)	11,0 (23.4)	10,1 (21.6)	9,3 (19.9)	8,8 (18.8)		46,0 (155)	7,4 (15.7)	8,3 (17.6)	9,3 (19.7)	9,0 (19.2)	8,4 (18.0)
	50,0 (165)		9,7 (21.4)	9,0 (19.7)	8,3 (18.2)	7,8 (17.1)		50,0 (165)	6,4 (14.1)	7,2 (15.8)	8,1 (17.8)	8,0 (17.5)	7,5 (16.4)
	54,0 (180)			8,0 (17.3)	7,4 (15.9)	6,9 (15.0)		54,0 (180)	5,4 (11.5)	6,2 (13.3)	7,1 (15.2)	7,1 (15.3)	6,6 (14.3)
	60,0 (195)					— (13.1)		60,0 (195)		4,7 (10.8)	5,5 (12.6)	5,9 (13.4)	5,6 (12.6)
	64,0 (210)							64,0 (210)			4,5 (10.1)	4,9 (10.8)	4,9 (11.0)
	68,0 (225)							68,0 (225)					4,3 (9.4)



Luffing jib load charts

ANSI B30.5

Liftcrane Luffing Jib Boom Capacities - Model 14000 Series 2 No. 59 Luffing Jib on No. 58 Heavy Lift Main Boom

76 200 kg (168,000 lb) Counterweight
24 000 kg (53,000 lb) Carbody Counterweight
360° Rating
kg (lb) x 1 000
65° Boom Angle

	Boom m (ft)	20,0 (65.6)	32,0 (105.0)	44,0 (144.4)	53,0 (173.9)	59,0 (193.6)		Boom m (ft)	20,0 (65.6)	32,0 (105.0)	44,0 (144.4)	53,0 (173.9)	59,0 (193.6)
	Radius							Radius					
Luffing Jib Length 21,3 m (70 ft)	26,0 (80)	23,8 (57.0)	—	—	—	—	Luffing Jib Length 30,5 m (100 ft)	26,0 (80)	—	—	—	—	—
	28,0 (95)	21,7 (46.0)	—	—	—	—		28,0 (95)	—	—	—	—	—
	32,0 (105)	—	16,7 (36.9)	—	—	—		32,0 (105)	18,1 (39.9)	—	—	—	—
	34,0 (115)	—	15,4 (32.8)	13,5 (28.7)	—	—		34,0 (115)	16,7 (35.5)	—	—	—	—
	38,0 (125)	—	—	11,7 (25.8)	—	—		38,0 (125)	14,4 (31.8)	13,0 (28.6)	—	—	—
	42,0 (135)	—	—	—	8,9 (20.2)	7,9 (18.1)		42,0 (135)	—	11,3 (25.8)	9,7 (22.2)	—	—
	44,0 (145)	—	—	—	8,3 (18.2)	7,4 (16.3)		44,0 (145)	—	10,6 (23.4)	9,1 (20.1)	7,8 (17.2)	—
	46,0 (155)	—	—	—	—	6,9 (14.7)		46,0 (155)	—	—	8,6 (18.3)	7,3 (15.6)	6,4 (13.7)
	52,0 (170)	—	—	—	—	—		52,0 (170)	—	—	—	6,0 (13.7)	5,3 (11.8)
	56,0 (185)	—	—	—	—	—		56,0 (185)	—	—	—	—	4,6 (10.2)

	Boom m (ft)	20,0 (65.6)	32,0 (105.0)	44,0 (144.4)	53,0 (173.9)		Boom m (ft)	20,0 (65.6)	32,0 (105.0)	44,0 (144.4)
	Radius						Radius			
Luffing Jib Length 42,7 m (140 ft)	38,0 (120)	14,1 (32.7)	—	—	—	Luffing Jib Length 51,8 m (170 ft)	38,0 (120)	—	—	—
	42,0 (135)	12,3 (28.0)	10,9 (24.8)	—	—		42,0 (135)	—	—	—
	44,0 (145)	11,5 (25.4)	10,2 (22.5)	—	—		44,0 (145)	65,9 (19.5)	—	—
	46,0 (155)	10,9 (23.2)	9,6 (20.4)	—	—		46,0 (155)	51,1 (17.6)	50,9 (19.7)	—
	52,0 (170)	—	8,0 (17.9)	6,7 (15.0)	5,5 (12.4)		52,0 (170)	41,1 (14.9)	40,9 (17.2)	39,4 (14.2)
	56,0 (185)	—	7,2 (15.7)	6,0 (13.1)	4,9 (10.7)		56,0 (185)	31,9 (12.5)	31,8 (15.1)	31,7 (12.3)
	60,0 (200)	—	—	5,3 (11.4)	4,3 (9.3)		60,0 (200)	25,6 (10.1)	25,5 (12.8)	35,3 (10.8)
	66,0 (215)	—	—	—	—		66,0 (215)	—	18,3 (10.3)	18,2 (9.4)
	68,0 (225)	—	—	—	—		68,0 (225)	—	—	18,2 (8.6)
	70,0 (235)	—	—	—	—		70,0 (235)	—	—	18,2 (7.8)

Manitowoc Crane Care

Crane Care is Manitowoc's comprehensive service and support program. It includes classroom and on-site training, prompt parts availability, expert field service, technical support and documentation — for every one of the more than 7,000 Manitowoc cranes currently in use throughout the world.

That's commitment you won't find anywhere else.

That's **Crane Care**.

Service Training

Manitowoc specialists work with you in our training center and in the field to make sure you know how to get maximum performance, reliability and life from your cranes.

Manitowoc Cranes Technical Training Center provides valuable multi-level training, which is available for all models and attachments, in the following format:

- **Basic** – Provides technicians with the basic skills required in our Level I and II classes covering hydraulic and electrical theory and schematics, pump, motor, control, and LMI operation and the use of meters and gauges.
- **Level 1** – This model-specific class covers theory and offers hands-on training and trouble shooting on all crane systems.
- **Level 2** – This model-specific class provides in-depth coverage of all crane systems and components, and advanced troubleshooting of simulated faults. (Requires Level 1.)
- **Level 3 / Master** – Covering all EPIC models and the 4100W, this class stresses high level system knowledge and trouble shooting of simulated faults. (Requires Level 2.)

Parts Availability

Genuine Manitowoc replacement parts are accessible through your distributor 24 hours a day, 7 days a week, 365 days a year.

Service Interval Kits

Provides all the parts required by Manitowoc's Preventative Maintenance Checklist.

Hydraulic Filter Kit

Consists of the following:

- Filter Element - Hydraulic in Tank (4)

Cummins Model QSL 8.9 Liter Diesel

– **Service Interval Kits**

200 Hour Kit

Consists of the following:

Engine

- Filter Oil (1)
- Filter Water (1)
- Filter Fuel (1)

1,000 Hour Kit

Consists of the following:

Engine

- Filter Air Cleaner - Primary (1)
- Filter Oil (1)
- Filter Water (14)
- Filter Fuel (1)

Hydraulic

- Filter Element - Hydraulic in Tank (4)
- Element - Hydraulic Tank Breather (1)

2,000 Hour Kit

Consists of the following:

Engine

- Filter, Air Cleaner - Primary (1)
- Filter, Air Cleaner - Safety (1)
- Filter, Oil (1)
- Filter, Water (1)
- Filter, Fuel (1)
- Ether, (Bottle) (1)
- Sensor, Coolant Level (10)
- Belt, Fan (1)
- Belt, Alternator (set of two) (1)
- Filter, Element (1)

Hydraulic

- Filter Element - No substitutions allowed
- Filter - Hydraulic In-Tank Suction (4)

Kit, Engine Coolant Additive (SCA) Test (1) Kit, Seal (for hydraulic in tank filter) (1) Seal, Radial (for air cleaner) (1)

Hydraulic Test Kit

Protect your investment by demanding Genuine Manitowoc Parts Service Kits. The Hydraulic Service Kit consist of the following:

- All hydraulic fittings to access all pressures and flows
- Hydraulic flow meters and pressure gauges to record hydraulic data.
- Electrical "Break out" harnesses to access voltages on all electrical circuits on all machines.
- Fluke® Digital volt ohm meter, as used in all Manitowoc service literature.

Manitowoc Crane Care

Hydraulic Test Kit with case

The above kit plus a custom heavy-duty carrying case.

U.S. Standard Tools Kit

All standard tools needed to properly maintain and service your crane. (Does not include torque wrench.)

Field Service

Factory-trained service experts are always ready to help maintain your crane's peak performance.

For a worldwide listing of dealer locations, please consult our website at:

www.manitowoc.com

Technical Support

Manitowoc's dealer network and factory personnel are available 24 hours a day, 7 days a week, 365 days a year to answer your technical questions and more, with the help of computerized programs that simplify crane selection, lift planning and ground-bearing calculations.

For a worldwide listing of dealer locations, please consult our website at:

www.manitowoc.com

Technical Documentation

Manitowoc has the industry's most extensive documentation, and the easiest to understand, available in major languages and formats that include print, disk and videotape.

Additional copies available through your Authorized Manitowoc Distributor.

- **Crane Operator's Manual**
- **Crane Parts Manual**
- **Crane Capacity Manual**
- **Crane Vendor Manual**
- **Service Manual (EPIC)**
- **Luffing Jib Operator's/Parts Manual**
- **Capacity Chart Manual - Attachments**

CD rom versions of the Operator's and Parts Manuals are shipped with each crane.

Also available are the following CDs:

- Crane Care Owner CD –
- Ground Bearing Pressure Estimator CD
- Crane Selection and Planning Software (CompuCRANE®)
- EPIC® Crane Library CD consisting of capacity charts, range diagrams, wire rope specifications, travel specifications, crane weights, counterweight arrangements, luffing jib raising procedures, operating range diagrams, drum and lagging charts, boom rigging drawings, jib rigging drawings, outline dimensions and wind condition charts.

Available from your Authorized Manitowoc Cranes Distributor, these VHS videos are available in NTSC, PAL and SECAM formats.

- Your Capacity Chart Video
- Respect the Limits Video
- Crane Safety Video
- Boom Inspection/Repair Video

Crane Care Package

Manitowoc has assembled all of the available literature, CD's and videos listed above plus several Manitowoc premiums into one complete Crane Care Package.



Notes



Notes



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U.S.A.

Maniowoc

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Constant improvement and engineering progress make it necessary that we reserve the right to make specification, equipment and price changes without notice. Illustrations shown may include optional equipment and accessories, and may not include all standard equipment.

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