



Grove Maniwowoc National Crane Potain

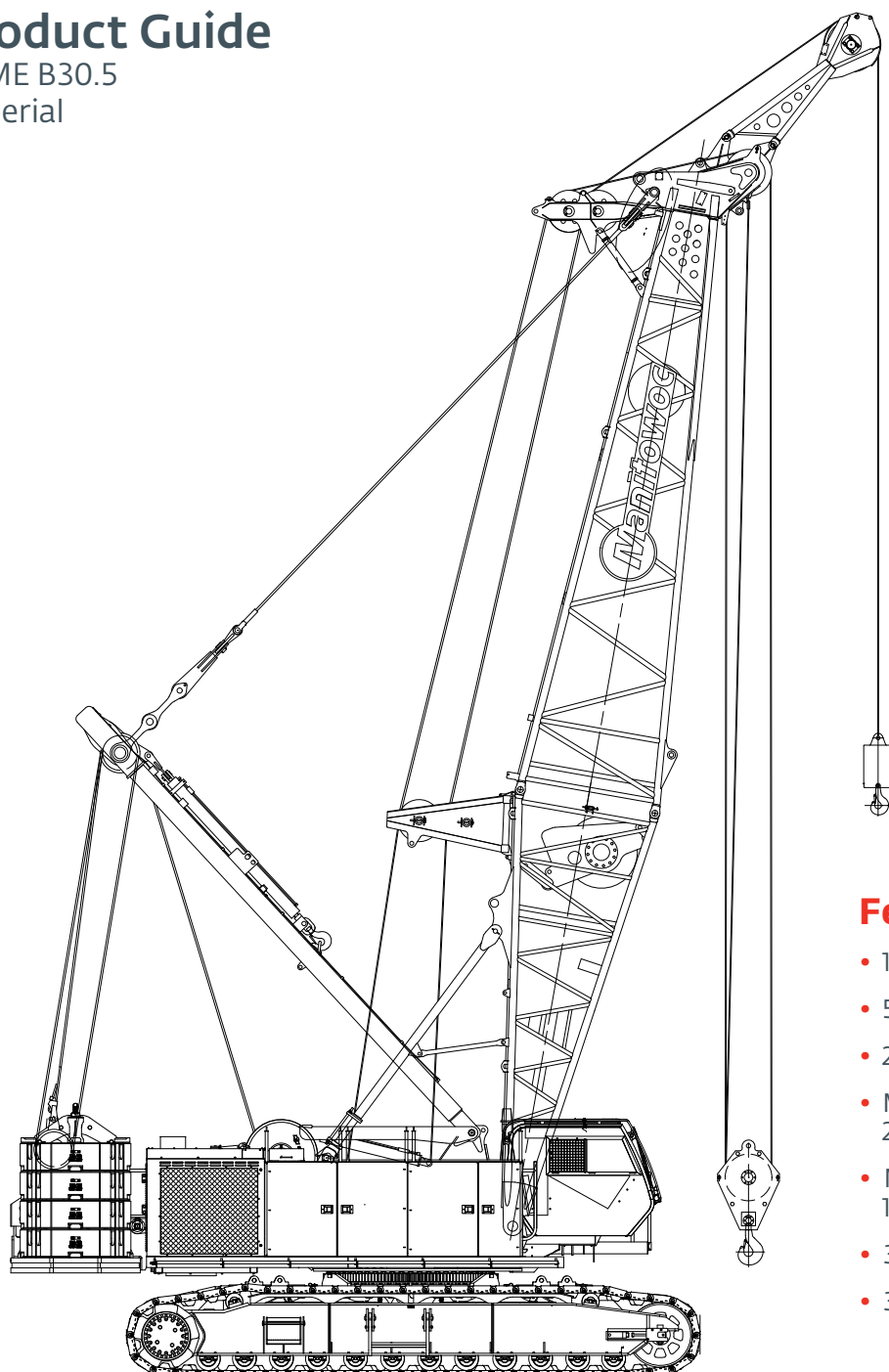


Manitowoc MLC165

Product Guide

ASME B30.5

Imperial



Features

- 182 USt capacity
- 5510 ft-kips maximum load moment
- 275 ft main boom
- Max boom + fixed jib combination:
226 ft + 80 ft
- Max boom + luffing jib combination:
167 ft + 170 ft
- 320 hp Tier IVi engine
- 300 hp Tier III engine





Contents

Specifications	4
Outline dimensions	7
Transport data	13
Performance data	14
Boom combinations	18
Main boom range / load charts	21
Fixed jib range / load charts	23
Luffing jib range / load charts	26
Manitowoc Crane Care	30



Specifications

Upperworks



Engine

Cummins Model QSL9-300 Tier III, 6 cylinder, 300 hp at 2100 governed RPM.

Cummins Model QSL9-320 Tier IVi, 6 cylinder, 320 hp at 2100 governed RPM.

Includes engine block heater (120 V), air heater starting aid (24 V), oil heater starting aid (120 V), high silencing muffler (Tier III) or diesel particulate filter (Tier IVi), radiator and fan.

24 volt starting and 70 amp alternator.

One 150 gallon capacity diesel fuel tank, mounted on right side of upperworks with sight and electrical level indicator.



Controls

Hydraulic pilot controls provide infinite speed response directly proportional to control lever movement. Controls include Manitowoc's CANBUS operating 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.

RCL/RCI (Rated Capacity Limiter/Rated Capacity Indicator) system 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

Three high-pressure pumps are driven by the engine. Two pumps provide hydraulic power enabling simultaneous multi-function capability. One pump provides independent "closed loop" hydraulic power for the swing system. An additional fourth pump is required for free fall.

Hydraulic reservoir capacity is 158 gallon 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 hydraulic oil cooler.



Drums

Two equal width winches are driven by independent variable displacement axial piston hydraulic motors through planetary reduction. 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.
- Optional: auxiliary (third) hydraulic powered drum mounted in boom butt. Includes third drum control system. Auxiliary drum may be 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 a single drum grooved for 22 mm diameter wire rope. Includes 22 mm diameter wire rope for 20 part line reeving.

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



Mast

Moving mast is 23' 7" long and connects the boom hoist reeving to the steel boom suspension pendant rigging. When used with optional self-erect package, the mast is utilized for crane assembly and disassembly. The mast is capable of lifting and positioning the crawler assemblies, stacking the counterweights and assembling the boom and jib, utilizing the self assembly cylinder.

Rotating bed includes counterweight raising cylinders capable of lifting the entire upperworks counterweight for removal and installation. The upperworks counterweight is attached to rotating bed with power-actuated pins.



Specifications



Counterweight

Counterweight raising cylinders are mounted in the rotating bed with links mounted to top of the cylinder and connected to the counterweight tray. The upper counterweight is secured to the rotating bed with hydraulically actuated pins.

Upper counterweight consists of a one-piece tray and eight upper counterweight boxes. Series 2 carbody counterweight boxes are attached to carbody (each side) and weigh 8 t each.

Series 1

Upper counterweight (6 pieces+tray)..... 99,430 lb

Series 2

Upper counterweight (8 pieces+tray).....121,475 lb

Carbody counterweight (2 pieces)..... 35,275 lb

Total counterweight..... 156,750 lb



Swing system

Independent single swing drive mounted in rotating bed is powered by a hydraulic piston type motor driving a spur gear through a planetary reduction. Internal brake and four position manual swing lock is provided.

Maximum swing speed: 2.5 rpm.



Operator's cab

Fully enclosed and galvanealed steel insulated 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

High strength fabricated steel assembly utilizing Manitowoc's FACT™ connection system incorporating two hydraulically powered pins for fast installation and removal of crawlers.



Crawlers

Crawler assemblies are 26' 3" long, high strength steel fabrications with 3' 7" wide cast steel crawler pads. Each crawler is powered independently by a variable displacement hydraulic motor driving a planetary reduction. Crawlers provide ample tractive effort that allows counter rotation with full rated load. Maximum ground speed of 1.1 mph.

Attachments



No. 74 boom

The liftcrane is equipped with a 49' 2" basic No. 74 tubular chord boom consisting of a 19' 8" butt and 29' 6" top with six 25.6" diameter roller bearing sheaves. No. 74 boom utilizes wire rope pendants.

Hydraulically powered boom hinge pin system consists of cylinder, piping, operating controls and locking device.

Spring cushioned boom stop and electronic automatic boom stop standard.

Luffing jib preparation included as standard.

- No. 74 boom length is increased using 9' 10", 19' 8", and 39' 4" boom inserts with wire rope suspension pendants. Max boom length is 275'.
- 15 USt swivel hook and weight ball standard.



No. 134 fixed jib

- 30' basic No. 134 tubular chord fixed jib consisting of 15' jib butt and 15' jib top with 12' 6" jib strut, wire rope, pendants and backstay. Includes RCL/RCI hardware.
- No. 134 fixed jib length is increased using 10' and 20' inserts with wire rope pendants. Max fixed jib length is 80'.



No. 135 luffing jib

- 70' basic No. 135 tubular chord luffing jib assembly consisting of 27' butt, 20' insert, and 23' top with two 27" straight roller bearing sheaves. Also included are RCL/RCI hardware, pin connected jib sections, pendants, fixed strut, jib strut, backstay pendants, boom point wheel and 26 mm luffing jib hoist line.
- No. 135 luffing jib is lengthened using 10', 20' and 40' inserts with wire rope pendants. Maximum luffing jib length is 170'.



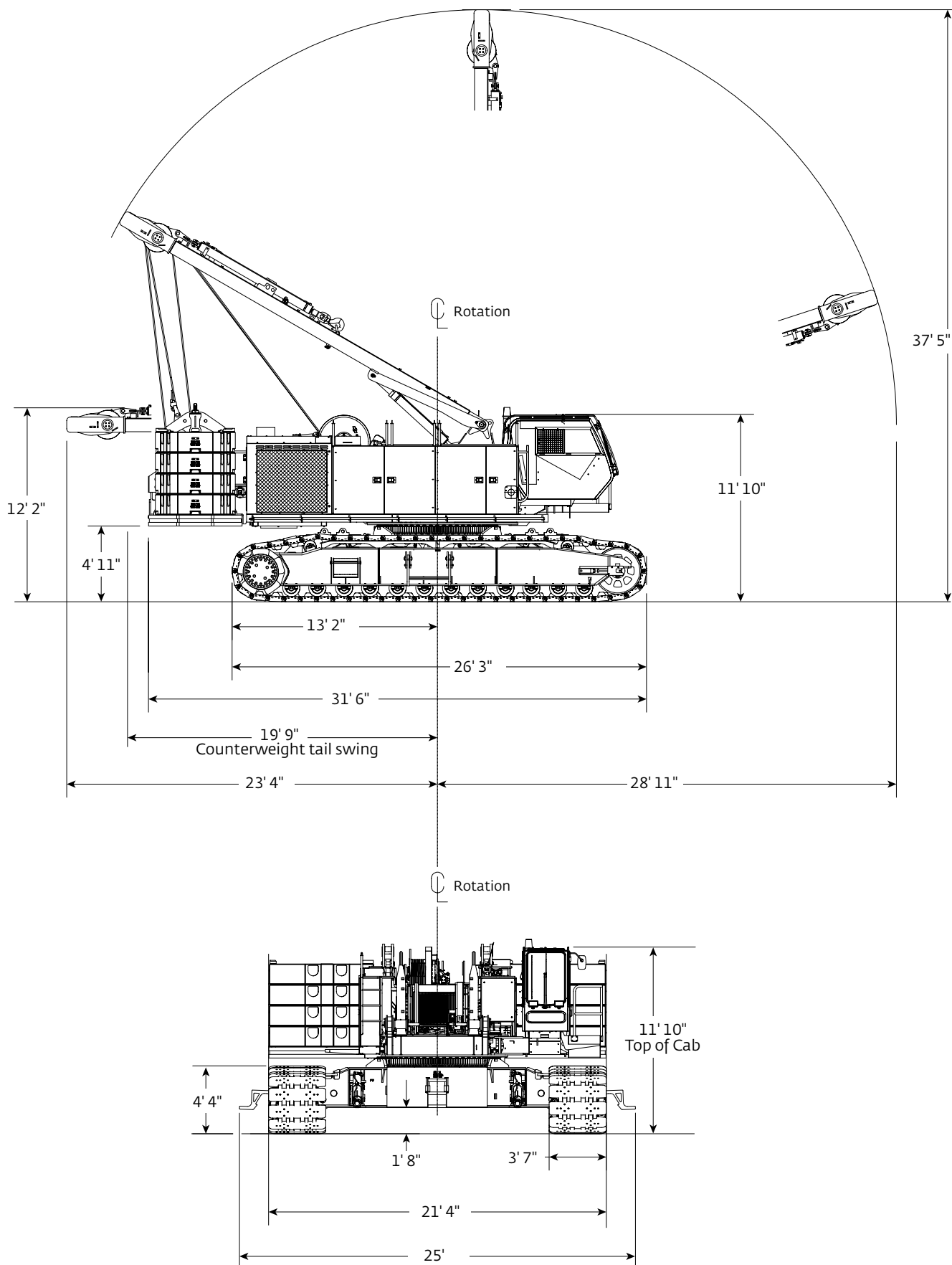
Specifications

Optional equipment

- ▶ Self-erect system includes: carbody jacking cylinders with pads, controls, self assembly cylinder, boom-butt installation support, counterweight cylinders and crawler handling chain.
- ▶ Detachable upper boom point with one 30" diameter tapered roller bearing sheave for No. 74 boom top (this is same upper boom point used on 555, 777, 999, 2250, 16000 and 18000).
- ▶ Blocks and hooks –
 - 30 USt hook block with one 30" sheave for 26 mm wire rope with swivel hook, hook latch and swivel lock.
 - 60 USt hook block with two 30" sheaves for 26 mm wire rope with swivel hook, hook latch and swivel lock.
 - 100 USt hook block with three 30" sheaves for 26 mm wire rope with swivel hook, hook latch, and swivel lock.
 - 165 USt hook block with five 30" sheaves for 26 mm wire rope with single barb swivel hook, hook latch, and swivel lock.
 - 165 USt hook block with five 30" sheaves for 26 mm wire rope with duplex swivel hook, hook latch, and swivel lock.
- ▶ Hydraulic Test Kit.
- ▶ Service Interval Kits.
- ▶ Special Paint Color (other than Manitowoc standard red and black.)
- ▶ Zinc rich primer (marine applications) for corrosion resistance.
- ▶ Special Customer Decals: custom vinyl decal(s) of name and/or logo from artwork supplied by customer.
- ▶ Export Packaging: basic crane, boom and jib sections.

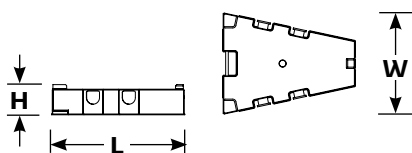
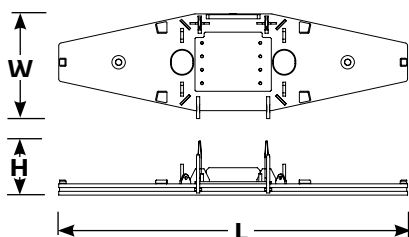
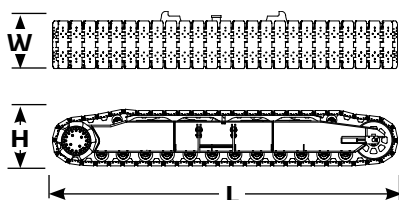
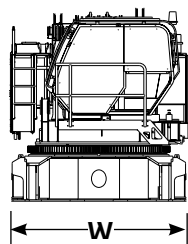
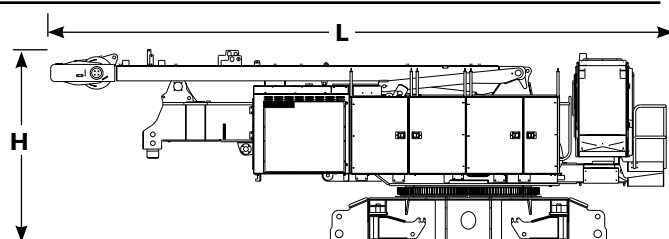


Outline dimensions





Outline dimensions



Basic crane

Length	34' 7"
Width	9' 10"
Height	10' 10"
Weight	79,270 lb

Note: Weight includes carbody, upperworks, operator's cab, 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

Length	26' 3"
Width	4' 4"
Height	6' 3"
Weight	34,550 lb

Counterweight tray

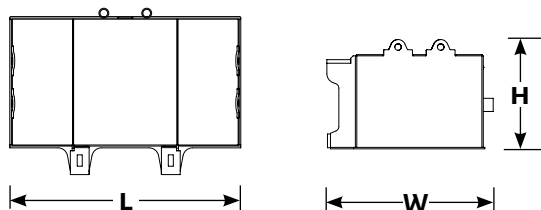
Length	21' 4"
Width	6' 5"
Height	1' 1"
Weight	32,500 lb

Upper side counterweight

Series 1	x 6
Series 2	x 8
Length	6' 8"
Width	5' 1"
Height	1' 7"
Weight	11,025 lb

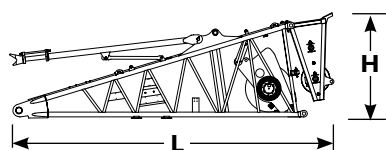


Outline dimensions



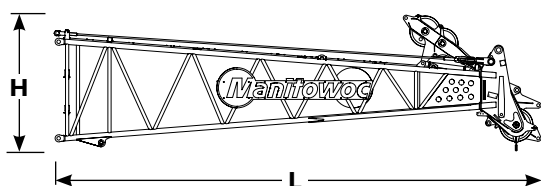
Lower carbody counterweight

Series 2	x 2
Length	6' 4"
Width	4' 4"
Height	3' 0"
Weight	17,640 lb



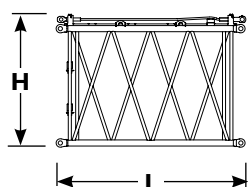
19.7' No. 74 boom butt and wire rope guide and boom stop

Length	22' 6"
Width	6' 11"
Height	7' 5"
Weight	9,210 lb



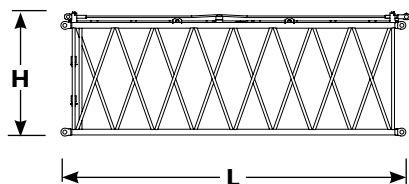
29.5' No. 74 boom top and wire rope guide and pendants

Length	31' 5"
Width	6' 8"
Height	8' 4"
Weight	8,446 lb



9.8' No. 74 boom insert and pendants

Length	10' 4"
Width	6' 8"
Height	7' 3"
Weight	1,284 lb

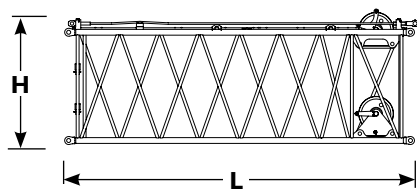


19.7' No. 74 boom insert and pendants

Length	20' 5"
Width	6' 8"
Height	7' 3"
Weight	2,038 lb

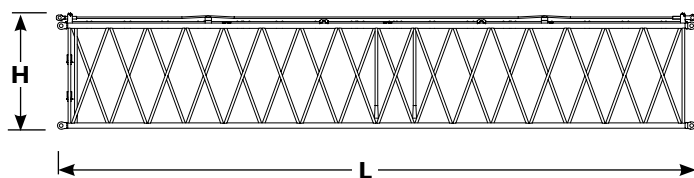


Outline dimensions



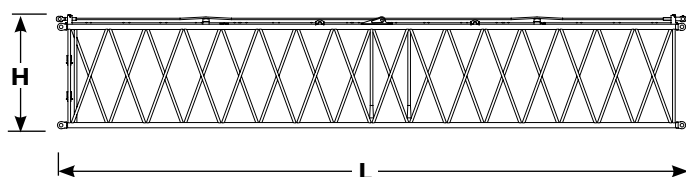
19.7' No. 74 boom insert with sheaves and pendants

Length	20' 5"
Width	6' 8"
Height	7' 10"
Weight	3,036 lb



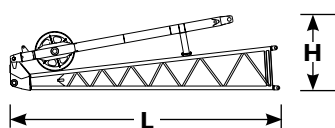
39.4' No. 74 boom insert and pendants

Length	40' 0"
Width	6' 8"
Height	7' 3"
Weight	3,720 lb



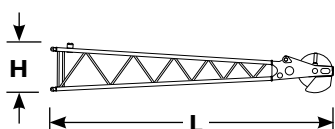
39.4' No. 74 boom insert with backstay and pendants

Length	40' 0"
Width	6' 8"
Height	7' 3"
Weight	3,774 lb



15' No. 134 jib butt, strut and stop

Length	15' 4"
Width	2' 10"
Height	4' 3"
Weight	1,400 lb

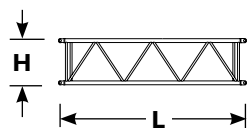


15' No. 134 jib top and pendants

Length	16' 3"
Width	2' 8"
Height	2' 8"
Weight	1,220 lb

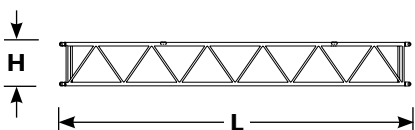


Outline dimensions



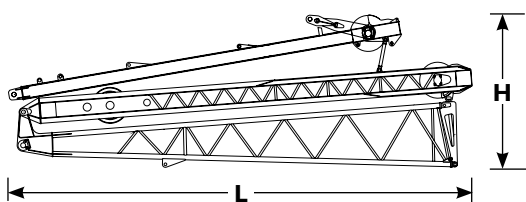
10' No. 134 jib insert and pendants

Length	10' 3"
Width	2' 8"
Height	2' 8"
Weight	482 lb



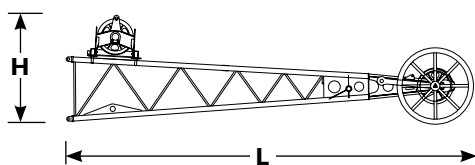
20' No. 134 jib insert and pendants

Length	20' 3"
Width	2' 8"
Height	2' 8"
Weight	750 lb



27' No. 135 luffing jib butt and struts

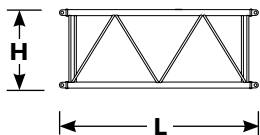
Length	28' 11"
Width	5' 2"
Height	9' 11"
Weight	9,870 lb



23' No. 135 luffing jib top, roller and pendants

Length	25' 7"
Width	5' 0"
Height	6' 8"
Weight	4,374 lb

Note: Includes wire rope guide.

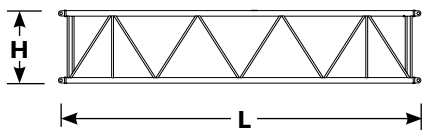


10' No. 135 luffing jib insert and pendants

Length	10' 4"
Width	5' 0"
Height	4' 4"
Weight	840 lb

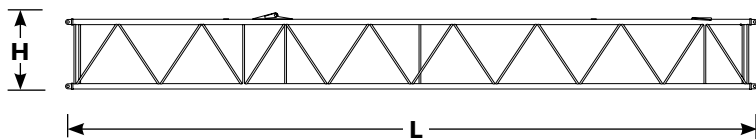


Outline dimensions



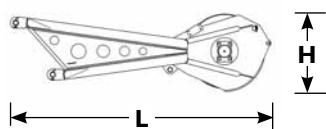
20' No. 135 luffing jib insert and pendants

Length	20' 4"
Width	5' 0"
Height	4' 4"
Weight	1,350 lb



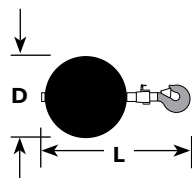
40' No. 135 luffing jib insert with backstays and pendants

Length	40' 4"
Width	5' 0"
Height	4' 4"
Weight	2,315 lb



No. 74 upper boom point

Length	8' 8"
Width	1' 5"
Height	2' 8"
Weight	926 lb



Weight ball

Capacity/Swivel	15 USt	Diameter	3' 9"
Weight	1,310 lb	Length	1' 9"



Transport data

Load summary										
Item	276 ft No. 74 boom + 80 ft No. 134 fixed jib Series 2 counterweight Quantity on trailer load # (Does not include blocking, strapping, etc.)									
	lb	1	2	3	4	5	6	7	8	9
Basic crane	79,267	1								
Crawlers	34,551								1	
Crawlers	34,551									1
29.5' No. 74 boom top, wire rope guide, pendants	8,446							1		
19.7' No. 74 boom butt, wire rope guide, boom stop	9,289								1	
Upper side counterweight	11,025		2	2	1	1		2		
39.4' No. 74 boom insert, pendants	3,719		1	1	1	1				
39.4' No. 74 boom insert with backstay, pendants	3,772						1			
19.7' No. 74 boom insert, pendants	3,036							1		
9.8' No. 74 boom insert, pendants	1,283									1
Counterweight tray	32,498						1			
No. 74 upper boom point	926		1							
15' No. 134 jib butt, strut, stop, 15' No. 134 jib top, pendants	2,619			1						
10' No. 134 jib insert, pendants	481				1					
20' No. 134 jib insert, pendants	750		2							
Lower carbody counterweight	17,637				1	1				
Weight ball	1,310							1		
Miscellaneous	6,202		1							
Payload for each trailer (lb)		79,267	34,396	28,389	32,862	32,381	36,270	34,842	43,760	35,834



Performance data

Main and whip drum - 27,560 lb

Single line pull lb	Single line pull/single line speed ft/min					
	Layer					
	1	2	3	4	5	6
0	315	338	364	390	417	443
27,560	220	236	256	272	292	312

Luffing hoist auxiliary drum - 20,000 lb

Single line pull lb	Single line pull/single line speed ft/min							
	Layer							
	1	2	3	4	5	6	7	8
20,000	135	144	157	167	180	190	203	213



Performance data

Hoist reeving for main load block 26 mm wire rope No. 74 boom	
No. Parts of Line	Maximum Load lb
1	27,560
2	55,120
3	82,680
4	110,240
5	137,800
6	165,360
7	192,920
8	220,480
9	248,040
10	275,600
11	303,160
12	330,720
13	358,280
14	363,762

Wire rope lengths No. 74 boom - or - Fixed jib No. 134 on No. 74 boom				
Boom or boom and jib length ft	Whip line (front or auxiliary drum)		Hoist line (rear drum)	
	1 part ft	2 part ft	ft	Total parts of line
49.2	148	213	820	14
59.1	180	246	902	13
68.9	197	279	968	12
78.7	213	295	1017	11
88.6	230	328	1050	10
98.4	246	361	1148	10
108.3	279	394	1148	9
118.3	295	427	1148	8
128.0	312	443	1214	8
137.8	328	476	1214	7
147.6	344	509	1214	6
157.5	377	541	1214	6
167.3	394	574	1230	6
177.2	410	591	1230	5
187.0	427	623	1230	5
196.9	443	656	1230	4
206.7	476	689	1230	4
216.5	492	722	1230	3
226.4	509	738	1230	3
236.2	525	771	1230	3
246.1	541	804	1230	3
255.9	574	837	1230	3
265.7	591	853	1230	3
275.6	607	886	1230	2
285.4	525	738	—	—
295.3	535	751	—	—
305.1	545	761	—	—

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 on auxiliary drum when used as Whip Line is 623'. When auxiliary drum is used as Luffing Jib Hoist, wire rope length required on drum is 689'. If auxiliary drum is used as Whip Line while equipped with 689' rope length, hoisting distance and line pull will be limited. Consult factory for further information.



Performance data

Wire rope lengths No. 135 luffing jib on No. 74 boom

Boom length* ft	Luffing jib hoist line	
	Hoist line ft	Maximum required parts of line
68.9	850	4
78.7	899	4
88.6	951	4
98.4	1001	4
108.3	1001	4
118.3	1050	4
128.0	1050	4
137.8	1099	4
147.6	1099	3
157.5	1099	3
167.3	1152	3

*Hoist line lengths given in table include all luffing jib lengths.

NOTE: 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 multiply by 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 No. 74 boom - or - No. 134 fixed jib on No. 74 boom

Function	Rotation resistant Wire rope	
	Hoist line	Whip line
Size wire rope	26 mm	26 mm
Maximum load per line	27,560 lb	27,560 lb
Approximate weight	2.28 lb/ft	2.28 lb/ft

Drum capacities - wire rope

	Maximum length	
	Operational	Storage
Front or rear grooved drum 26 mm wire rope	1227 ft 6 layers	1499 ft 7 layers
Auxiliary drum 26 mm wire rope	538 ft 7 layers	764 ft 9 layers
Boom hoist drum 22 mm wire rope	558 ft 7 layers	—



Performance data

Maximum length Maximum boom and luffing jib raising raising				
Boom length ft	No. 135 luffing jib on No. 74 boom Series 2 Series 2 counterweight			
	In-line method		Jack-knife method	
	Over end of blocked crawlers ft	Over side of crawlers ft	Over end of blocked crawlers ft	Over side of crawlers ft
68.9	70-170	70-170		
78.7	70-170	70-170		
88.6	70-160	70-160	170	170
98.4	70-150	70-140	160-170	150-170
108.3	70-130	70-120	140-170	130-170
118.3	70-110	70-90	120-170	100-170
128.0	70-90	70	100-170	80-170
137.8	70	—	80-170	70-170
147.6	—	—	70-170	70-130
157.5	—	—	70-170	—
167.3	—	—	70-170	—

For specific configurations refer to www.cranelibrary.com.

Maximum length Maximum boom and fixed jib raising		
	No. 134 fixed jib on No. 74 boom Series 2	
	Main boom ft	Fixed jib ft
Over front of blocked crawlers ft	275.6	—
	265.7	—
	255.9	—
	246.1	40
	236.2	60
	226.4	80

For specific configurations refer to www.cranelibrary.com.

Maximum length Maximum boom and fixed jib raising		
	No. 134 fixed jib on No. 74 boom Series 2	
	Main boom ft	Fixed jib ft
Over side of crawlers ft	255.9	—
	236.2	—
	226.4	40
	216.5	60
	206.7	80

For specific configurations refer to www.cranelibrary.com.

Maximum length Maximum boom and fixed jib raising		
	No. 134 fixed jib on No. 74 boom Series 2	
	Main boom ft	Fixed jib ft
Over rear of blocked crawlers ft	275.6	—
	255.9	—
	246.1	30
	236.2	50
	226.4	80

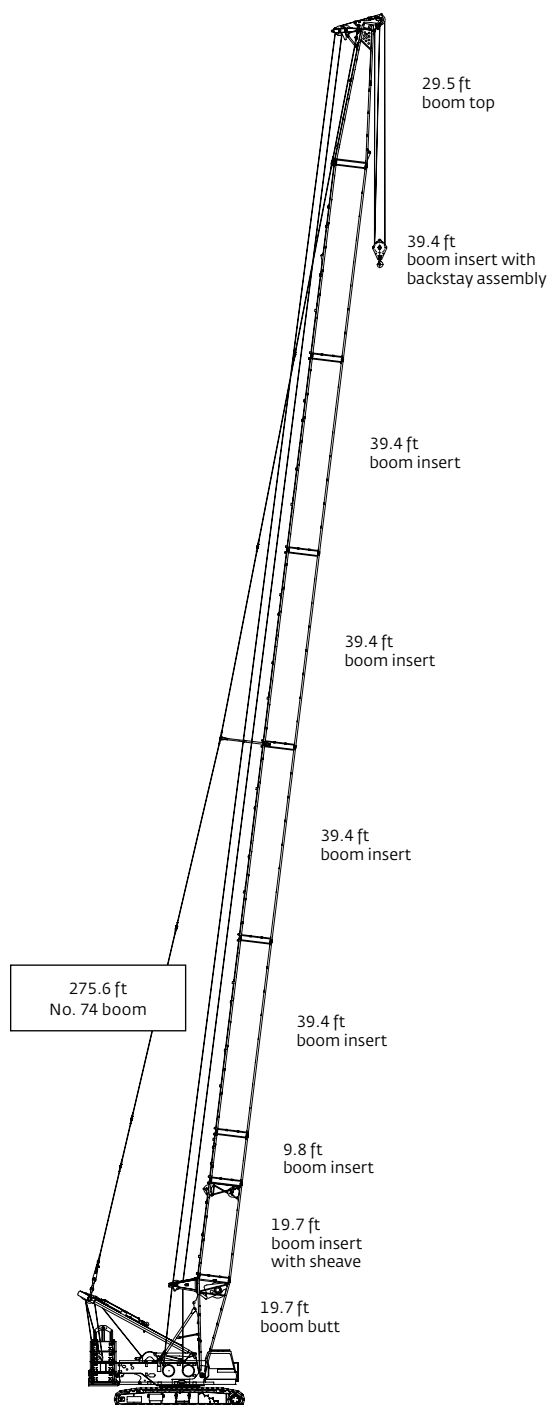
For specific configurations refer to www.cranelibrary.com.



Boom combinations

No. 74 boom combinations				
Boom length ft	Boom inserts length ft			
	9.8	19.7	39.4	39.4*
49.2	0	0	0	0
59.1	1	0	0	0
68.9	0	1	0	0
78.7	1	1	0	0
88.6	0	0	0	1
98.4	1	0	0	1
108.3	0	1	0	1
118.3	1	1	0	1
128.0	0	0	1	1
137.8	1	0	1	1
147.6	0	1	1	1
157.5	1	1	0	1
167.3	0	0	2	1
177.2	1	0	2	1
187.0	0	1	2	1
196.9	1	1	2	1
206.7	0	0	3	1
216.5	1	0	3	1
226.4	0	1	3	1
236.2	1	1	3	1
246.1	0	0	4	1
255.9	1	0	4	1
265.7	0	1	4	1
275.6	1	1	4	1

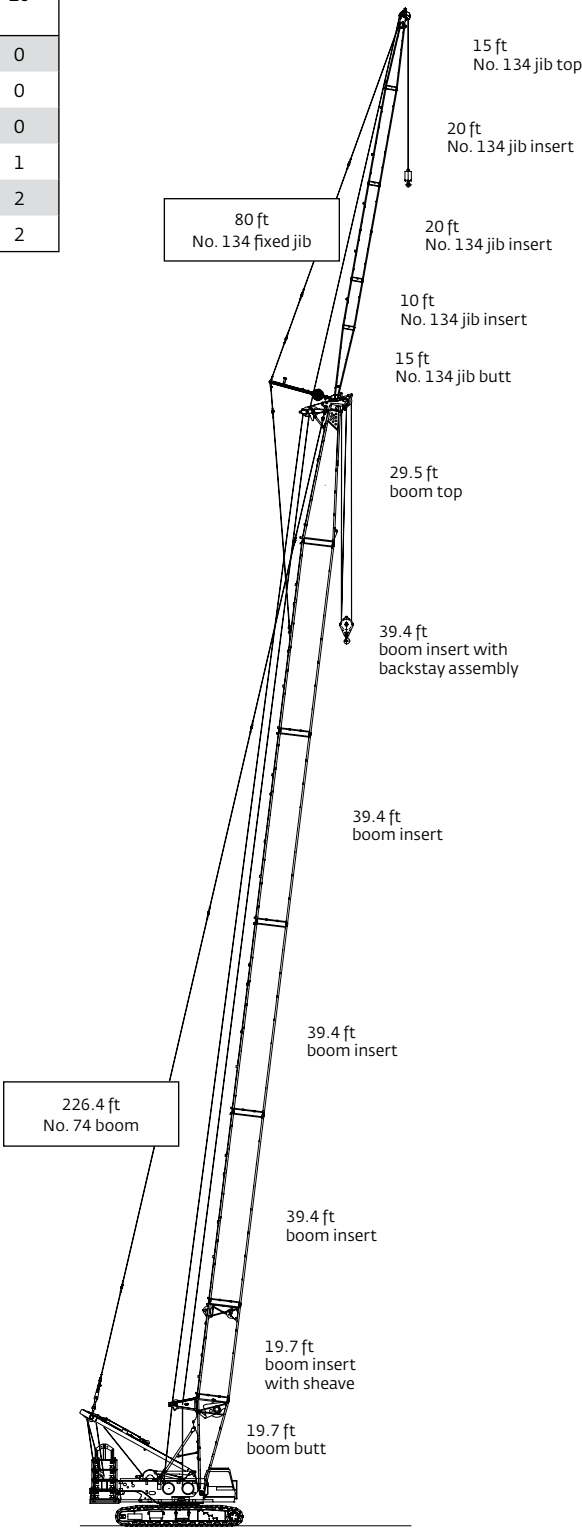
* with fixed jib backstay assembly.





Boom combinations

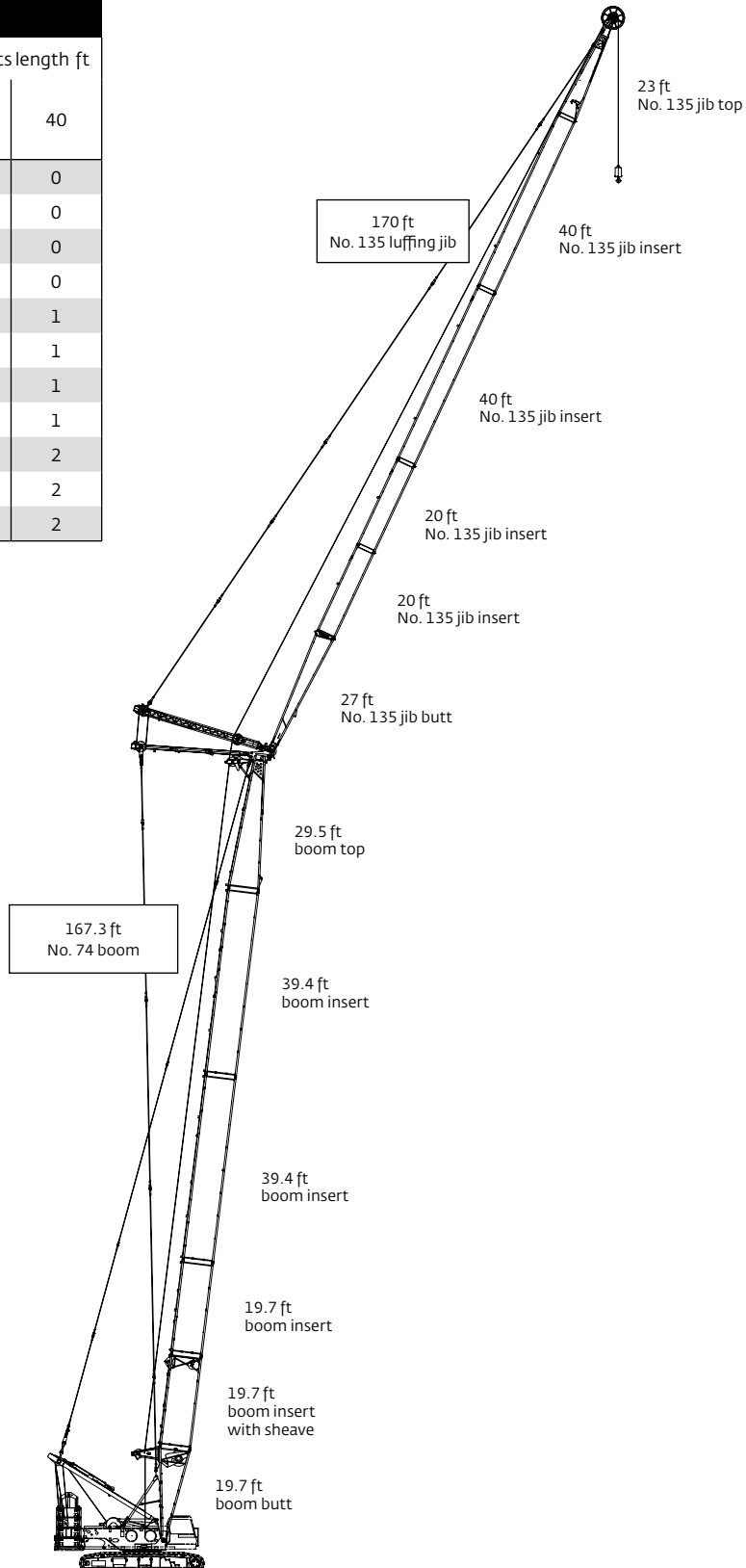
No. 134 fixed jib combinations		
Fixed jib length ft	Fixed jib inserts length ft	
	10	20
30	0	0
40	1	0
50	2	0
60	3	1
70	0	2
80	1	2





Boom combinations

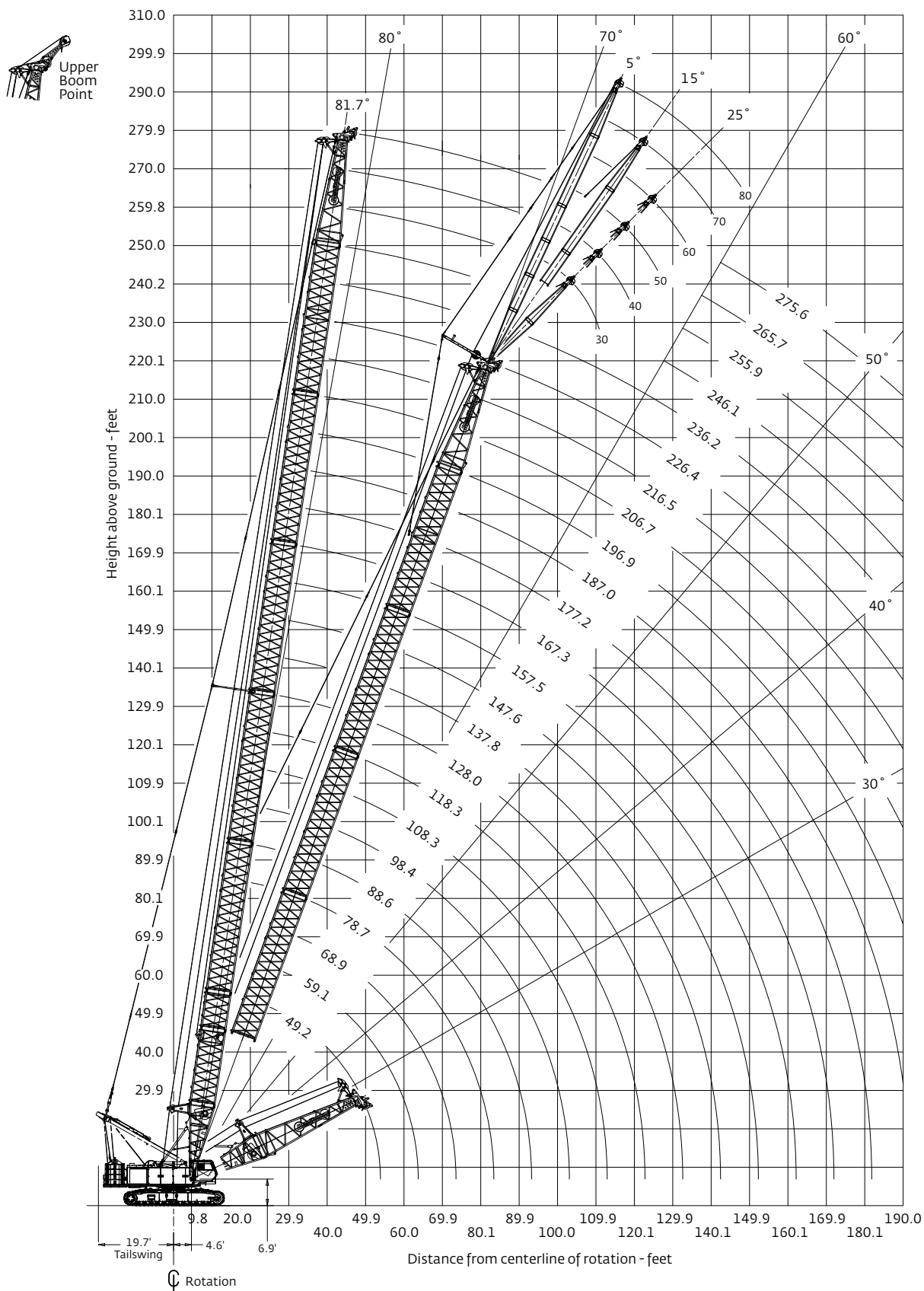
No. 135 luffing jib combinations			
Luffing jib length ft	Luffing jib inserts length ft		
	10	20	40
70	0	1	0
80	1	1	0
90	0	2	0
100	1	2	0
110	0	1	1
120	1	1	1
130	0	2	1
140	1	2	1
150	0	1	2
160	1	1	2
170	0	2	2





Main boom range diagram

No. 74 boom





Main boom load charts

No. 74 boom

121,500 lb upper counterweight, 35,300 lb carbody counterweight

360° Rating

lb x 1000

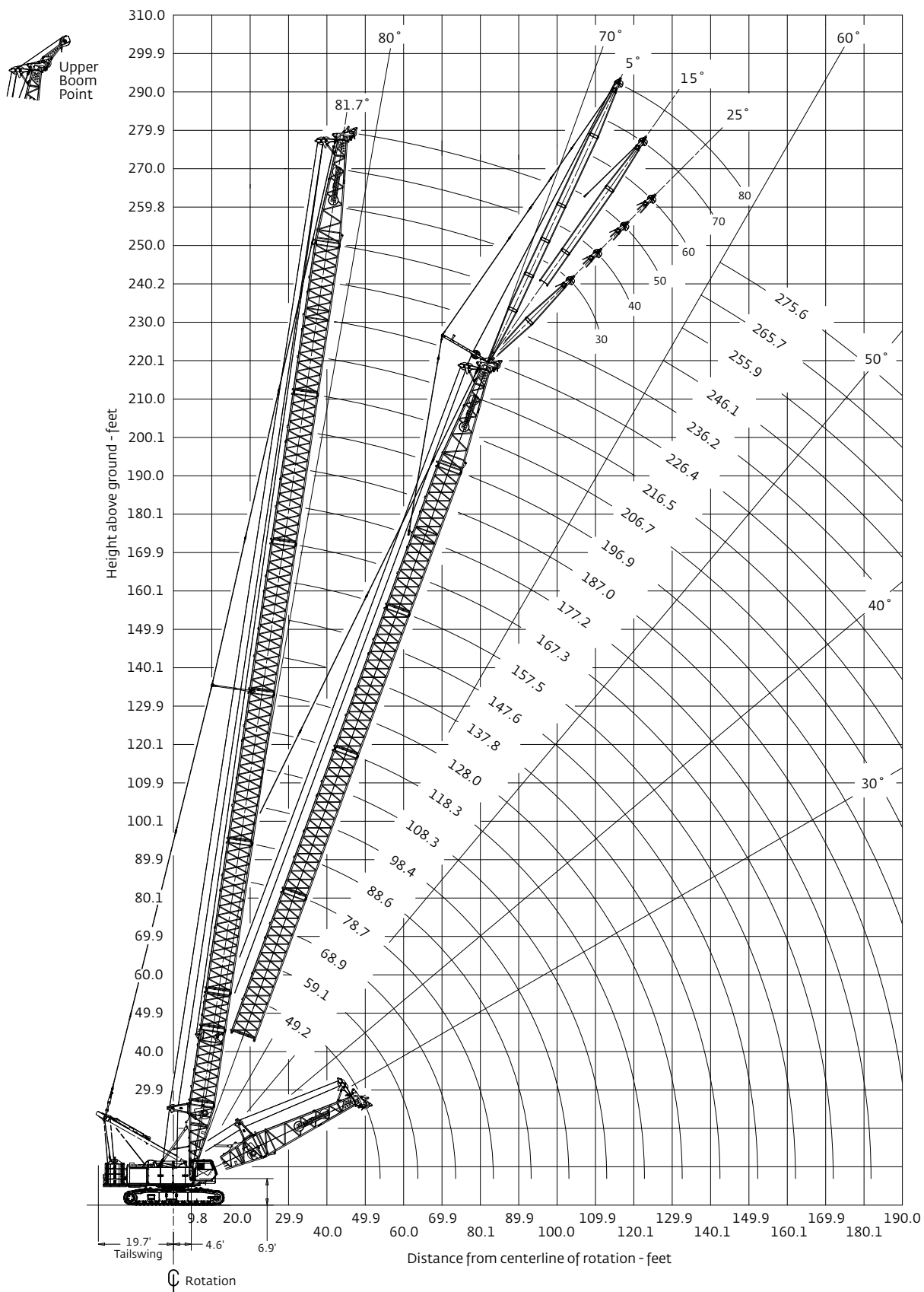
Radius ft	Boom length ft												
	49	59	79	98	118	138	157	177	197	217	236	256	276
14	363.8												
16	342.1	337.8											
18	305.1	305.0											
22	250.5	250.4	249.5	248.9									
26	212.0	212.0	211.1	210.6	207.1								
30	170.0	170.5	170.6	170.7	170.6	170.4	156.6						
34	141.0	141.5	141.5	141.5	141.4	141.1	141.2	132.4					
40	111.6	112.1	112.1	112.0	111.8	111.5	111.5	111.1	108.2	86.5			
46	91.7	92.2	92.2	92.1	91.9	91.5	91.5	91.1	90.6	83.3	73.6	65.9	
50	81.5	82.2	82.2	82.1	81.9	81.4	81.5	81.0	80.5	80.0	72.0	64.9	54.5
55		72.0	72.1	72.0	71.8	71.3	71.4	70.8	70.3	69.8	69.1	63.8	53.6
70			51.7	51.7	51.5	51.0	51.0	50.4	49.9	49.3	48.6	48.0	47.3
85				39.3	39.1	38.7	38.7	38.1	37.6	36.9	36.2	35.5	34.9
100				30.7	30.8	30.4	30.4	29.8	29.3	28.6	27.8	27.2	26.5
115					24.7	24.4	24.4	23.8	23.3	22.7	21.9	21.2	20.5
130						19.8	19.9	19.3	18.8	18.2	17.4	16.7	16.0
145							16.4	15.8	15.3	14.7	13.9	13.2	12.5
160								13.0	12.5	11.8	11.0	10.3	9.7
175								10.5	10.1	9.5	8.7	8.0	7.4
190									8.1	7.5	6.8	6.1	5.4
205										5.8	5.1	4.4	3.8
225											3.2		

For complete chart, refer to www.cranelibrary.com.



Fixed jib range diagram

No. 134 fixed jib on No. 74 boom





Fixed jib load charts

No. 134 fixed jib on No. 74 boom

121,500 lb upper counterweight, 35,300 lb carbody counterweight

360° Rating

lb x 1000

5° offset

30.0 ft fixed jib length					
	Boom length ft				
	89	128	167	207	246
Radius ft					
30	55.1				
45	55.1	55.1	55.1		
60	55.1	55.1	55.1	55.1	48.0
80	44.1	42.7	41.7	40.4	39.0
100	32.2	30.8	29.9	28.5	27.0
120		23.2	22.3	20.9	19.3
140		17.8	17.0	15.6	14.0
160			13.0	11.7	10.1
180			10.0	8.7	7.1
200				6.3	4.7
220				4.3	

25° offset

30.0 ft fixed jib length					
	Boom length ft				
	89	128	167	207	246
Radius ft					
40	46.4				
55	39.7	43.5	46.3		
70	34.9	39.0	42.1	44.4	46.3
90	30.7	34.6	36.3	35.2	33.9
110		27.3	26.5	25.4	24.1
130			20.0	18.8	17.4
150			15.3	14.1	12.7
170				10.5	9.1
190					6.3
210					4.0

5° offset

50.0 ft fixed jib length				
	Boom length ft			
	89	128	167	207
Radius ft				
35	44.5			
50	41.1	42.0	41.6	
65	38.1	39.7	39.8	38.7
85	34.5	36.9	37.7	37.0
105	29.7	29.4	28.3	27.0
125	23.9	22.4	21.4	20.0
145		17.5	16.4	15.0
165		13.7	12.7	11.4
185			9.9	8.5
205			7.5	6.2
225				4.3

25° offset

50.0 ft fixed jib length				
	Boom length ft			
	89	128	167	207
Radius ft				
55	29.6			
70	25.6	28.0	29.8	
85	22.6	25.2	27.1	28.6
105	19.8	22.3	24.3	25.9
125		20.2	22.1	21.4
145		18.0	17.3	16.2
165			13.4	12.2
185				9.2
200				7.2

For complete chart, refer to www.cranelibrary.com.



Fixed jib load charts

No. 134 fixed jib on No. 74 boom

121,500 lb upper counterweight, 35,300 lb carbody counterweight

360° Rating

lb x 1000

5° offset

60.0 ft fixed jib length				
	Boom length ft			
	89	128	167	207
Radius ft				
40	37.2			
55	34.0	35.1	34.9	
70	31.2	32.8	33.3	32.6
90	28.2	30.2	31.2	31.0
110	24.8	27.6	26.5	25.1
130	20.7	21.2	20.1	18.7
150		16.7	15.6	14.2
170		13.2	12.1	10.7
190			9.4	8.0
210			7.2	5.8
230				4.0

25° offset

60.0 ft fixed jib length				
	Boom length ft			
	89	128	167	207
Radius ft				
60	25.7			
75	22.1	24.2	25.7	
90	19.4	21.6	23.3	24.6
110	16.8	19.0	20.7	22.2
130		17.0	18.7	20.2
150		15.6	16.7	15.6
170			13.0	11.9
190				8.9
210				6.5
215				6.0

5° offset

80.0 ft fixed jib length				
	Boom length ft			
	89	128	167	207
Radius ft				
40	23.7			
55	22.0	21.9	21.5	
70	20.4	20.5	20.3	19.7
90	18.5	18.7	18.7	18.4
110	17.0	17.2	17.3	17.2
130	15.9	16.1	16.1	16.0
150	14.5	15.1	15.2	14.4
170		13.6	12.4	11.0
190		10.9	9.8	8.3
210			7.6	6.1
230			5.8	4.3

25° offset

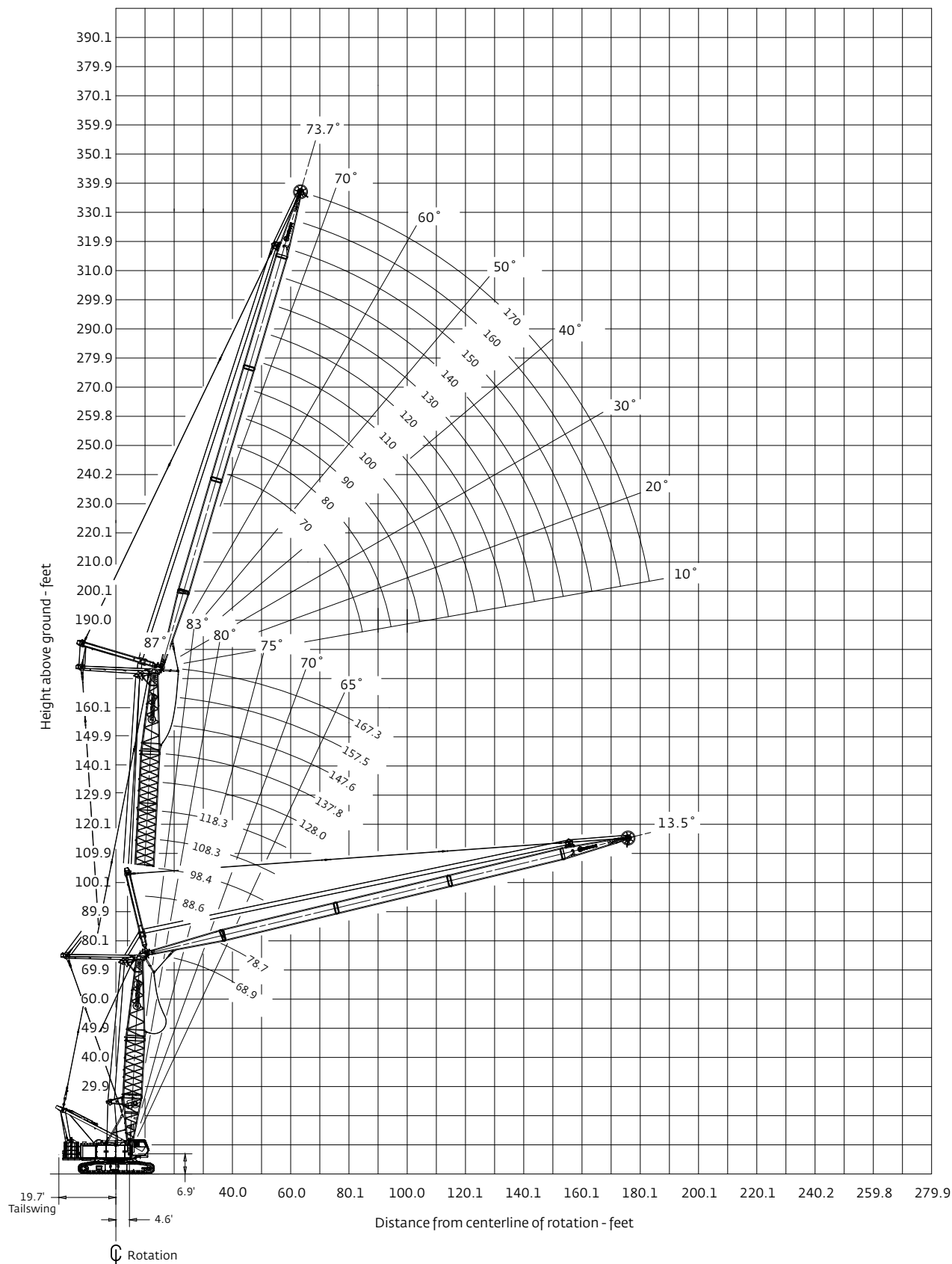
80.0 ft fixed jib length				
	Boom length ft			
	89	128	167	207
Radius ft				
70	19.1			
85	16.4	17.9	19.1	
100	14.3	15.9	17.2	18.3
120	12.3	13.9	15.2	16.3
140	10.8	12.4	13.7	14.8
160		11.2	12.4	13.5
180		10.3	11.4	10.9
200			9.4	8.2
220				6.0
240				4.2

For complete chart, refer to www.cranelibrary.com.



Luffing jib range diagram

No. 135 luffing jib on No. 74 boom





Luffing jib load charts

No. 135 luffing jib on No. 74 boom

121,500 lb upper counterweight, 35,300 lb carbody counterweight

360° Rating

lb x 1000

87° boom angle

70 ft luffing jib length						
	Boom length ft					
	68.9	88.6	108.3	137.8	167.3	
Radius ft						
30	110.2	105.8				
36	110.2	105.8	97.9	85.9	74.0	
40	102.5	102.7	97.9	85.7	72.7	
50	86.1	83.2	80.9	75.3	64.9	
60	71.2	69.5	68.1	64.1	57.0	
75	49.3	51.8	53.3	53.2	46.4	
95						
115						
135						
155						
175						

100 ft luffing jib length						
	Boom length ft					
	68.9	88.6	108.3	137.8	167.3	
Radius ft						
30						
36						
40	80.7	79.2	74.3	66.4		
50	73.2	72.8	72.0	65.6	52.4	
60	66.8	66.7	66.4	59.2	47.8	
75	53.2	53.1	52.9	49.3	40.5	
95	38.7	39.3	39.1	37.6	32.0	
115					25.4	
135						
155						
175						

140 ft luffing jib length						
	Boom length ft					
	68.9	88.6	108.3	137.8	167.3	
Radius ft						
30						
36						
40						
50	47.7	46.3	44.7			
60	45.9	44.6	43.2	40.6	34.6	
75	40.9	40.9	40.7	37.6	31.5	
95	34.5	34.7	34.8	31.9	26.8	
115	29.1	29.4	29.7	26.2	22.3	
135	21.6	22.4	22.7	21.4	18.5	
155					14.3	
175						

170 ft luffing jib length						
	Boom length ft					
	68.9	88.6	108.3	137.8	167.3	
Radius ft						
30						
36						
40						
50						
60	36.3	35.9	34.9	31.0		
75	31.7	31.6	31.4	29.2	25.0	
95	26.0	26.2	26.3	26.1	22.5	
115	21.1	21.4	21.6	21.9	19.7	
135	17.0	17.3	17.6	18.0	17.0	
155	13.7	13.9	14.2	14.6	14.1	
175	10.2	10.4	10.6	11.0	10.8	

For complete chart, refer to www.cranelibrary.com.



Luffing jib load charts

No. 135 luffing jib on No. 74 boom

121,500 lb upper counterweight, 35,300 lb carbody counterweight

360° Rating

lb x 1000

75° boom angle

70 ft luffing jib length					
	Boom length ft				
	68.9	88.6	108.3	137.8	167.3
Radius ft					
60	65.4				
70	53.8	52.3	50.5		
80	45.4	44.1	42.6	40.1	
95		35.3	34.2	32.2	30.1
110				26.4	24.8
125					
140					
150					
165					
175					
190					

100 ft luffing jib length					
	Boom length ft				
	68.9	88.6	108.3	137.8	167.3
Radius ft					
60					
70					
80	44.7	43.2			
95	35.8	34.7	33.4	31.2	
110	29.6	28.6	27.5	25.7	23.8
125		24	23.1	21.5	19.9
140				18.2	16.9
150					15.1
165					
175					
190					

140 ft luffing jib length					
	Boom length ft				
	68.9	88.6	108.3	137.8	167.3
Radius ft					
80					
95	34.9	33.7			
110	28.8	27.7	26.5	24.6	
125	24.2	23.2	22.2	20.5	18.9
140	20.6	19.8	18.9	17.4	15.9
150	18.6	17.9	17.1	15.7	14.3
165		15.4	14.7	13.5	12.3
175				12.2	11.1
190					9.4
205					
220					

170 ft luffing jib length					
	Boom length ft				
	68.9	88.6	108.3	137.8	167.3
Radius ft					
80					
95					
110	25.7	26.7			
125	22.2	22.6	21.5	19.8	
140	19.0	19.2	18.2	16.7	15.2
150	17.1	17.3	16.4	15.0	13.6
165	14.6	14.9	14.1	12.8	11.6
175	12.7	13.5	12.8	11.6	10.5
190	10.2	11.0	11.1	10.0	9.0
205				8.6	7.7
220					6.5

For complete chart, refer to www.cranelibrary.com.



Luffing jib load charts

No. 135 luffing jib on No. 74 boom

121,500 lb upper counterweight, 35,300 lb carbody counterweight

360° Rating

lb x 1000

65° boom angle

70 ft luffing jib length					
	Boom length ft				
	68.9	88.6	108.3	137.8	167.3
Radius ft					
80	42.2				
95	33.8	31.9	29.8		
110		26.2	24.5	21.6	
125				18	15.5
140					13
150					
165					
175					
190					
205					
220					

100 ft luffing jib length					
	Boom length ft				
	68.9	88.6	108.3	137.8	167.3
Radius ft					
80					
95					
110	27.2	25.4			
125	22.8	21.3	19.7		
140		18.1	16.7	14.3	11.9
150			15	12.8	10.7
165					9
175					8
190					
205					
220					

140 ft luffing jib length					
	Boom length ft				
	68.9	88.6	108.3	137.8	167.3
Radius ft					
80					
95					
110					
125	21.9				
140	18.6	17.2	15.7		
150	16.8	15.5	14.1	11.7	
165	14.5	13.3	12.1	9.9	7.9
175	13.1	12.1	10.9	8.9	7
190			9.3	7.6	5.8
205					4.8
220					

170 ft luffing jib length					
	Boom length ft				
	68.9	88.6	108.3	137.8	167.3
Radius ft					
80					
95					
110					
125					
140	18				
150	16.2	14.8			
165	13.9	12.7	11.4		
175	12.6	11.5	10.2	8.2	
190	10.9	9.9	8.8	6.9	5.1
205	9.4	8.5	7.5	5.8	4.1
220			6.4	4.8	

For complete chart, refer to www.cranelibrary.com.



Manitowoc Crane Care

Manitowoc Crane Care is the industry's most advanced service and support program, designed to keep your cranes up and running. Manitowoc's distributor network and customer support personnel are available to support you 24 hours a day, 7 days a week, 365 days a year. There are five key disciplines of Manitowoc Crane Care:

Parts

Genuine Manitowoc replacement parts are accessible through your distributor.

Service and technical support

Assistance with crane selection, lift planning and ground bearing calculations or field service and maintenance.

Technical publications

Operator, parts, service and capacity chart manuals are available in multiple formats in major languages.

Training

A variety of training courses are available online or through Manitowoc training centers.

EnCORE

Rebuild, repair, remanufacture or exchange your current crane through our local network, for a fraction of the cost of a new crane.

www.manitowoccranecare.com

CraneSTAR

CraneSTAR is an exclusive and innovative crane asset management system that helps improve your profitability and reduce costs by remotely monitoring critical crane data. Visit www.cranestar.com for more information.



Notes



Grove Manitoowoc National Crane Potain



Manitowoc Cranes

Regional headquarters

Americas

Manitowoc, Wisconsin, USA

Tel: +1 920 684 6621

Fax: +1 920 683 6277

Shady Grove, Pennsylvania, USA

Tel: +1 717 597 8121

Fax: +1 717 597 4062

Europe, Middle East, Africa

Ecully, France

Tel: +33 (0)4 72 18 20 20

Fax: +33 (0)4 72 18 20 00

China

Shanghai, China

Tel: +86 21 6457 0066

Fax: +86 21 6457 4955

Greater Asia-Pacific

Singapore

Tel: +65 6264 1188

Fax: +65 6862 4040

Regional offices

Americas

Brazil

Alphaville

Mexico

Monterrey

Chile

Santiago

Europe, Middle East, Africa

Czech Republic

Netvorice

France

Baudemont

Cergy

Decines

Germany

Langenfeld

Hungary

Budapest

Italy

Lainate

Netherlands

Breda

Poland

Warsaw

Portugal

Baltar

Russia

Moscow

South Africa

Johannesburg

U.A.E.

Dubai

U.K.

Buckingham

China

Beijing

Chengdu

Guangzhou

Xian

Greater Asia-Pacific

Australia

Brisbane

Melbourne

Sydney

India

Chennai

Delhi

Hyderabad

Pune

Korea

Seoul

Philippines

Makati City

Singapore

Factories

Brazil

Passo Fundo

China

TaiAn

Zhangjiagang

France

Charlieu

Moulins

Germany

Wilhelmshaven

India

Pune

Italy

Niella Tanaro

Portugal

Baltar

Fânzeres

Slovakia

Saris

USA

Manitowoc

Port Washington

Shady Grove

This document is non-contractual. 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.