

# MLC165-1

## 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
- 310 hp Tier 4 Final engine
- 325 hp Tier 3 engine

# MANITOWOC MLC165-1

The MLC165-1 provides a broad range of features that will undoubtedly be translated into jobsite benefits that increase productivity and save money.

## Features

### > Crawler Connection

Each crawler is FACT™ aligned and securely fastened to the carbody with hydraulic powered pins for fast, easy assembly. Hydraulic connections utilize screw style quick disconnect couplers.



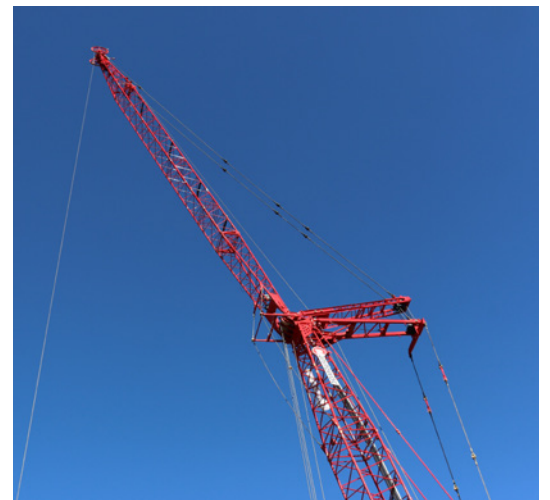
### > Counterweight

Single part number for upperworks counterweight can be stacked in any order, and raised into position using optional self-assembly counterweight raising cylinders. Counterweight tray is retained in position using hydraulic powered pins with incorporated locking system for quick and hassle-free installation.



### > Asset Utilization

The MLC165-1 is able to be equipped with attachments that are already in common in the field. The No. 134 fixed jib has been used on the 777, 888, 999, 14000 and MLC165. In addition the No. 135 luffing jib has been used on the 888, 999, 14000 and MLC165.



### > 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](http://www.cranestar.com) for more information.

## Job site benefits

### Increased productivity

The MLC165-1 delivers superior performance to finish the job quicker.

- 27,560 lb single line pull and 443 ft/min maximum line speed
- 2.5 rpm swing speed
- Travel, swing and counter-rotate with full rated capacity



### Rugged durability and ease of service

The MLC165-1 comes equipped with a numerous upgrades to spend less time performing maintenance.

- Individual function hour tracking to optimize service intervals
- Remote mounted filters for easy access inside enclosures
- Sealed intermediate rollers eliminating the need for greasing

### Easy and quick assembly

The MLC165-1 helps you spend less time on the truck and more time on the job.

- Raise full boom and luffing jib combinations without assist
- Self-erect mast cylinder eliminates need to reeve self assembly block
- Ability to completely self assemble machine without an assist crane



### Manitowoc Crane Care when you need it.

The assurance of the world's most advanced crane service and support to get you back to work fast.



### Manitowoc Finance helps you get right to work generating profits for your business.

Financial tools that help you capitalize on opportunity with solutions that fit your needs.

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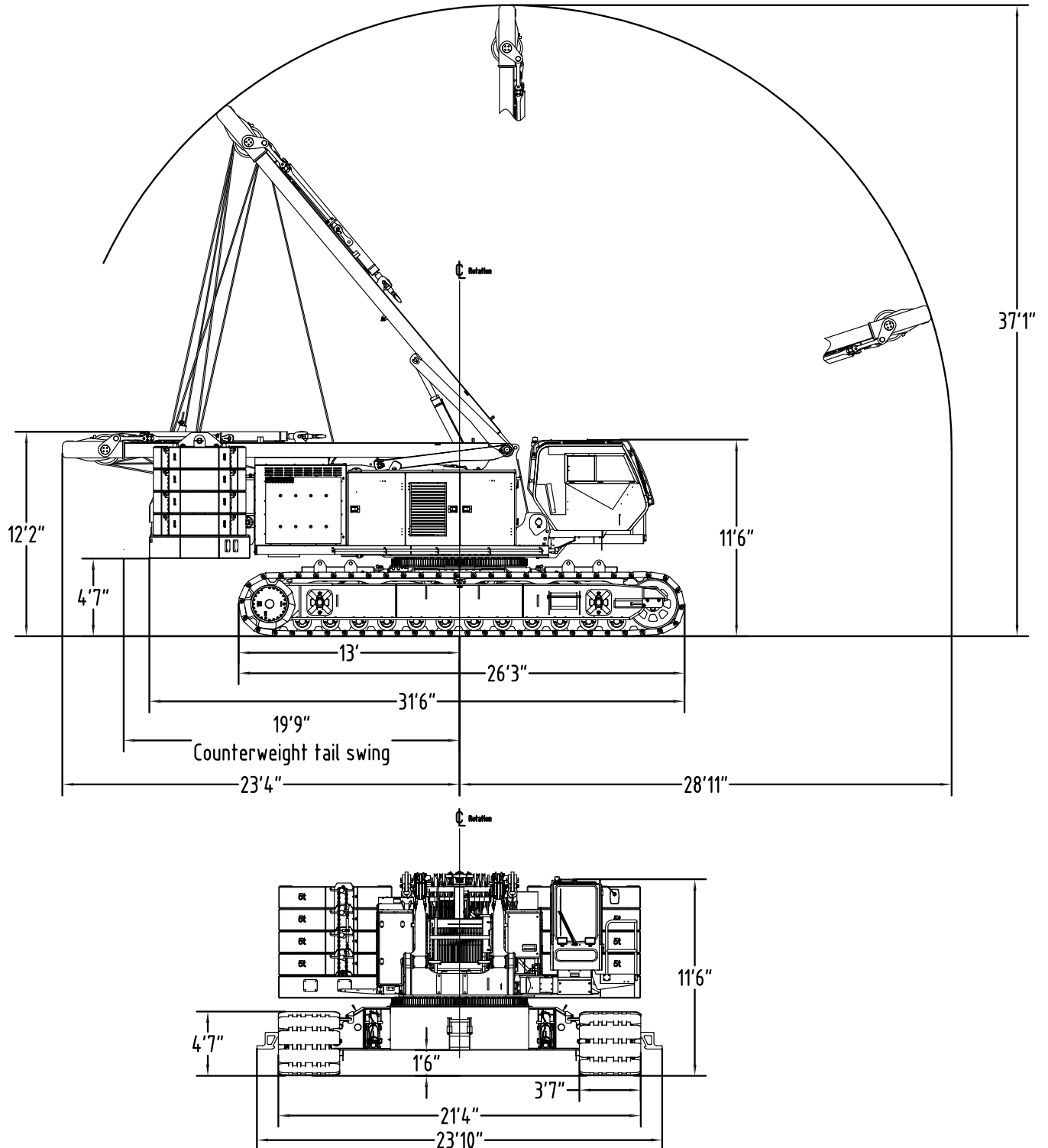
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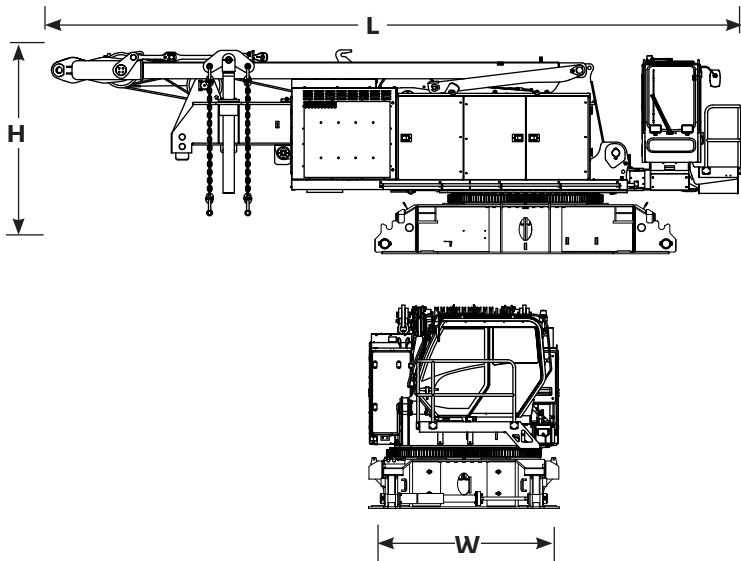
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# Outline dimensions

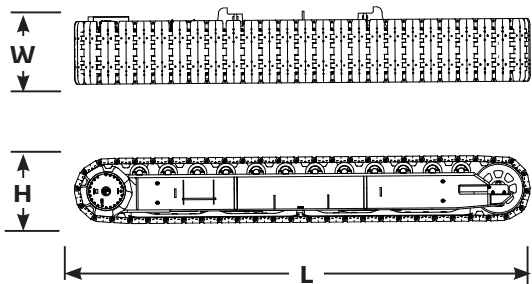


# Outline dimensions

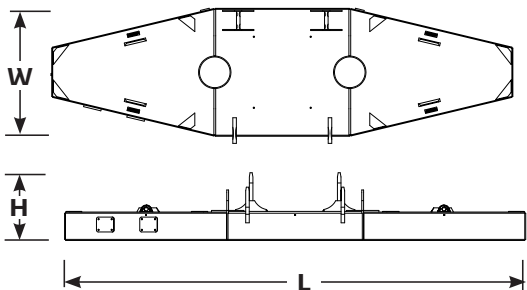


Basic crane	
Length	34' 7"
Width	9' 10"
Height	10' 6"
Weight	84,000 lb

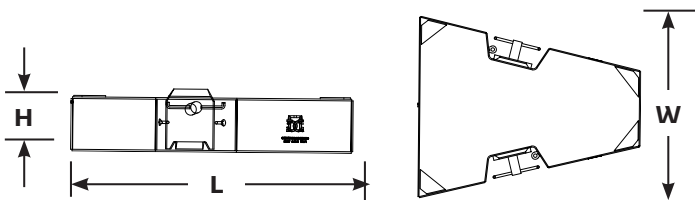
*Note: Weight includes carbody, upperworks, operator's cab, mast, boom-boist wire rope, maximum hoist and whip lines on drums, optional self-assembly jacks, full hydraulic fluid reservoir, and half tank of fuel.*



Crawlers	
Length	26' 3"
Width	4' 4"
Height	3' 9"
Weight	32,400 lb

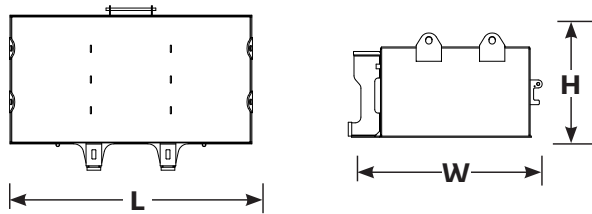


Counterweight tray	
Length	21' 3"
Width	6' 3"
Height	3' 1"
Weight	35,300 lb

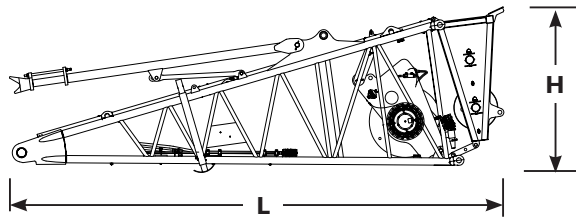


Upper side counterweight	
Series 1	x 6
Series 2	x 8
Length	6' 8"
Width	5' 5"
Height	1' 4"
Weight	11,025 lb

# Outline dimensions

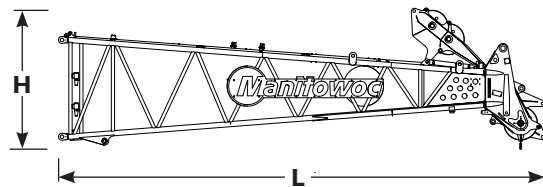


Lower carbody counterweight	
Series 2	x 2
Length	8' 2"
Width	5' 6"
Height	3' 0"
Weight	22,500 lb

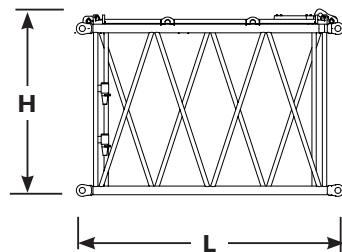


19.7' No. 74A boom butt, wire rope guide and boom stop	
Length	22' 6"
Width	6' 11"
Height	7' 5"
Weight	11,200 lb

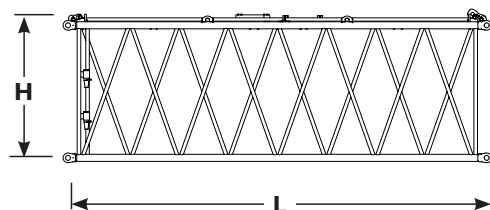
*Note: without aux drum –6,200 lb*



29.5' No. 74A boom top, wire rope guide and straps	
Length	31' 4"
Width	6' 8"
Height	8' 6"
Weight	7,600 lb

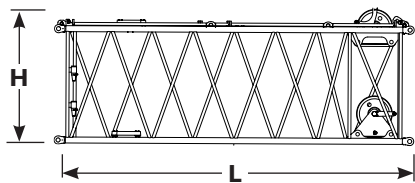


9.8' No. 74A boom insert and straps	
Length	10' 4"
Width	6' 8"
Height	7' 3"
Weight	1,250 lb



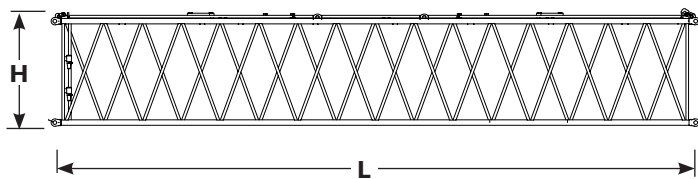
19.7' No. 74A boom insert and straps	
Length	20' 5"
Width	6' 8"
Height	7' 3"
Weight	1,800 lb

# Outline dimensions



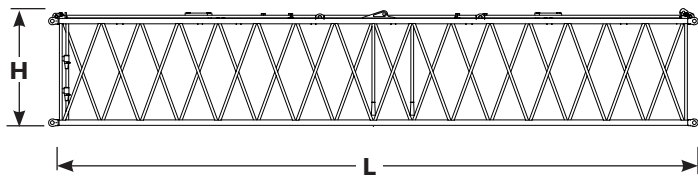
## 19.7' No. 74A boom insert with sheaves and straps

Length	20' 5"
Width	6' 8"
Height	7' 10"
Weight	2,800 lb



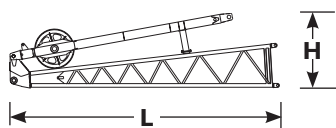
## 39.4' No. 74A boom insert and straps

Length	40' 0"
Width	6' 8"
Height	7' 3"
Weight	3,200 lb



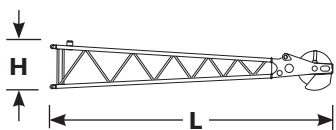
## 39.4' No. 74A boom insert with backstay lugs and straps

Length	40' 0"
Width	6' 8"
Height	7' 3"
Weight	3,300 lb



## 15' No. 134 jib butt, strut and stop

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

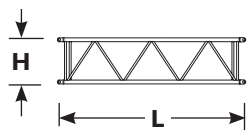


## 15' No. 134 jib top and pendants

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

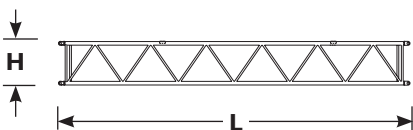


# Outline dimensions



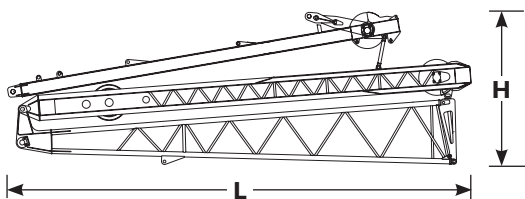
## 10' No. 134 jib insert and pendants

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



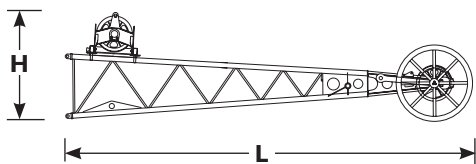
## 20' No. 134 jib insert and pendants

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



## 27' No. 135 luffing jib butt and struts

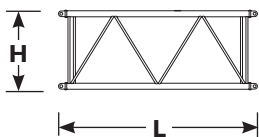
Length	28' 11"
Width	5' 2"
Height	9' 11"
Weight	9,870 lb



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

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

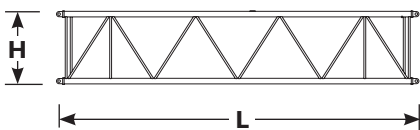
*Note: Includes wire rope guide.*



## 10' No. 135 luffing jib insert and pendants

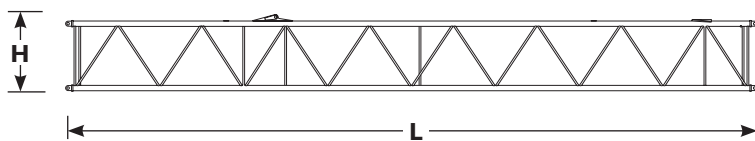
Length	10' 4"
Width	5' 0"
Height	4' 4"
Weight	840 lb

# Outline dimensions



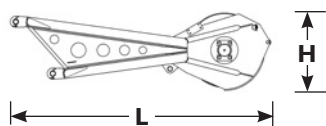
## 20' No. 135 luffing jib insert and pendants

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



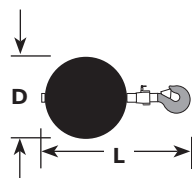
## 40' No. 135 luffing jib insert with backstays and pendants

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



## No. 74A A 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. 74A 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	84,000	1								
Crawler	32,400		1	1						
Counterweight Tray	35,300								1	1
Side Counterweight	11,025				1	1	3	3		
Carbody Counterweight	22,500				1	1				
19.7' No. 74A Boom Butt with aux drum	11,198					1				
29.5' No. 74A Boom Top	7,600				1					
9.8' No. 74A Boom Insert	1,250								1	
19.7' No. 74A Boom Insert	1,800		1							
19.7' No. 74A Boom Insert with Sheaves	2,800			1						1
39.4' No. 74A Boom Insert	3,200						1	1		
Miscellaneous	5,000					1				
Payload for each trailer (lb)		84,000	34,200	35,200	41,125	49,723	36,275	36,275	36,550	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

## Hoist reeving for main load block 26 mm wire rope No. 74A 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. 74A boom

- or -

### Fixed jib No. 134 on No. 74A 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. 74A 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.

## Maximum length Maximum boom and luffing jib raising

Boom length ft	No. 135 luffing jib on No. 74A 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	—

## Wire rope specifications 5:1 Safety Factor No. 74A boom - or - No. 134 fixed jib on No. 74A boom

	Rotation resistant Wire rope		Rotation resistant Wire rope
Function	Hoist line	Whip line	Auxiliary line
Size wire rope	26 mm	26 mm	26 mm
Maximum load per line	27,560 lb	27,560 lb	20,000 lb
Approximate weight	2.28 lb/ft	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	—

## Maximum length Maximum boom and fixed jib raising

	No. 134 fixed jib on No. 74A 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

## Maximum length Maximum boom and fixed jib raising

	No. 134 fixed jib on No. 74A 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

## Maximum length Maximum boom and fixed jib raising

	No. 134 fixed jib on No. 74A 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](http://www.cranelibrary.com).

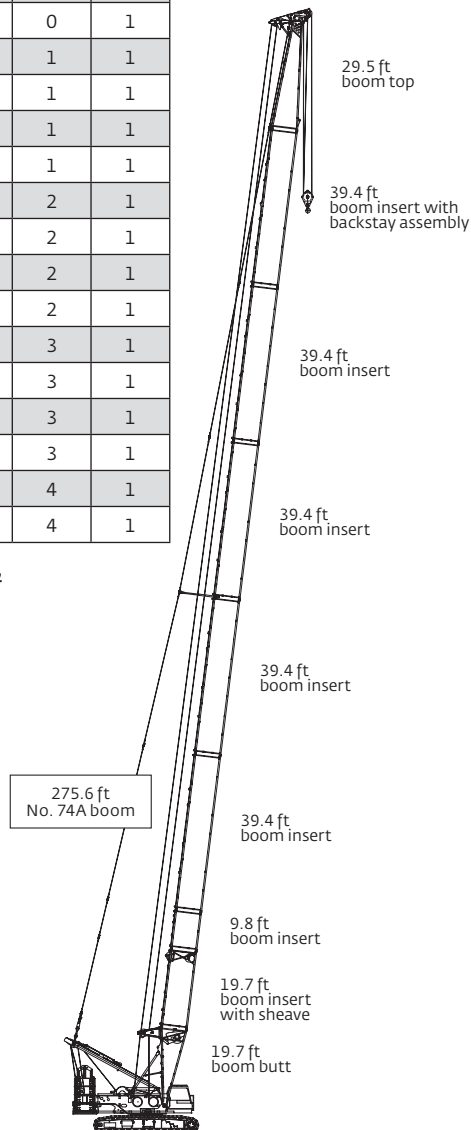


# Boom combinations

**No. 74A boom combinations**

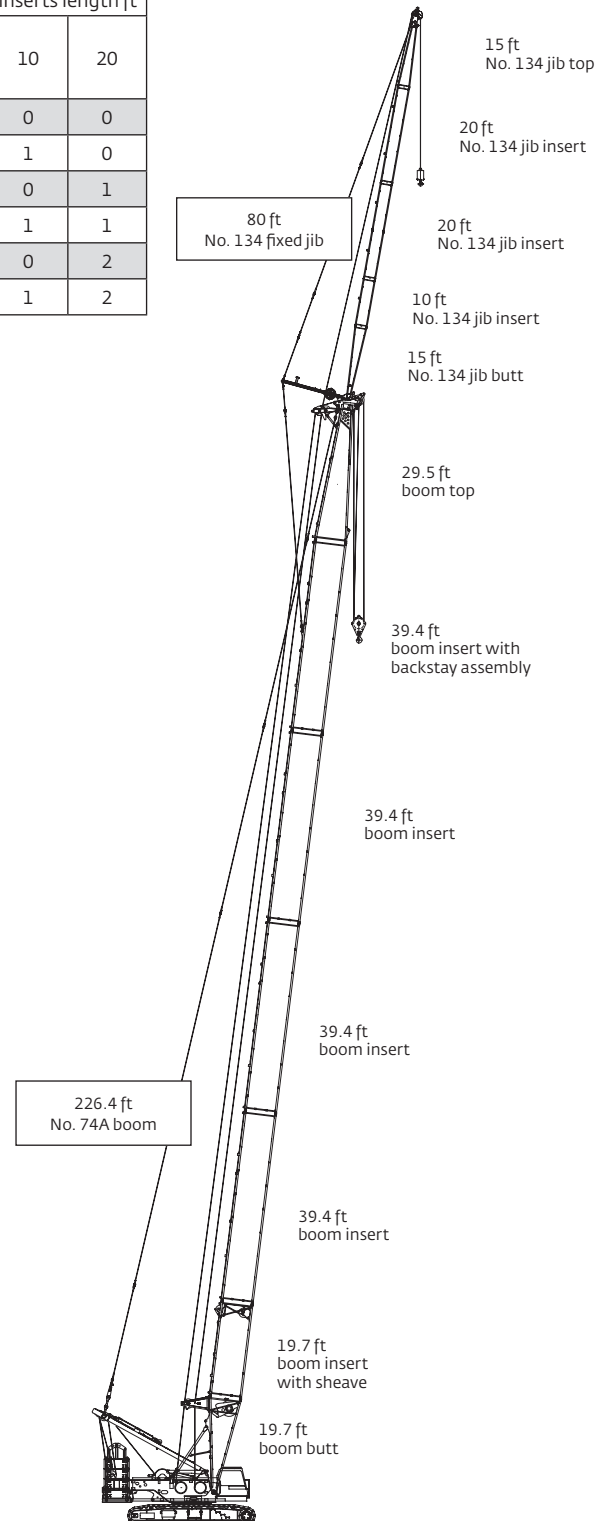
Boom length ft	Boom inserts length ft			
	9.8	19.7	39.4	39.4*
49.2	0	0	0	0
59.1	1	0	0	0
68.9	0	1	0	0
78.7	1	1	0	0
88.6	0	2	0	0
98.4	1	2	0	0
108.3	0	1	0	1
118.3	1	1	0	1
128.0	0	2	0	1
137.8	1	2	0	1
147.6	0	1	1	1
157.5	1	1	1	1
167.3	0	2	1	1
177.2	1	2	1	1
187.0	0	1	2	1
196.9	1	1	2	1
206.7	0	2	2	1
216.5	1	2	2	1
226.4	0	1	3	1
236.2	1	1	3	1
246.1	0	2	3	1
255.9	1	2	3	1
265.7	0	1	4	1
275.6	1	1	4	1

\* with fixed jib backstay assembly.



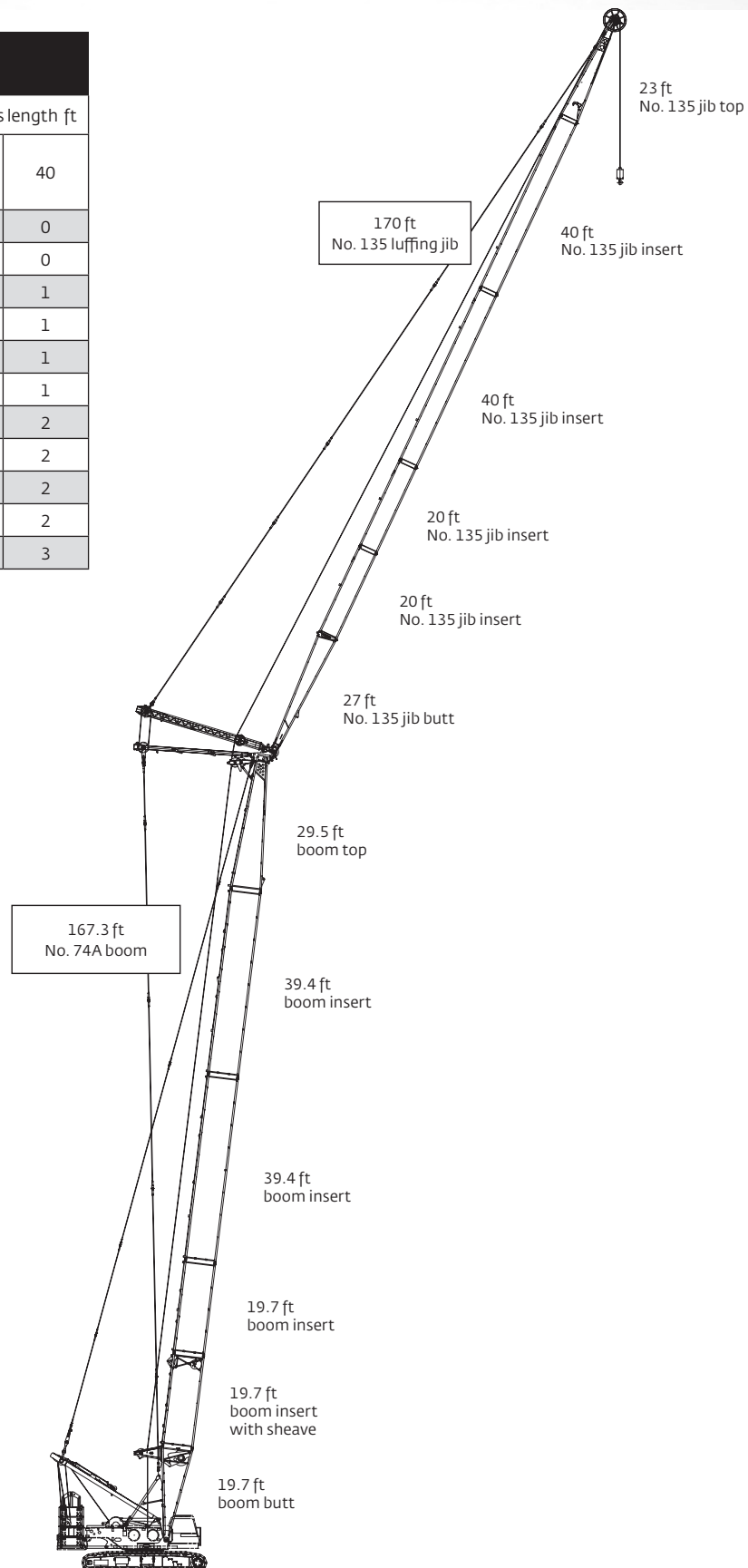
**No. 134 fixed jib combinations**

Fixed jib length ft	Fixed jib inserts length ft	
	10	20
30	0	0
40	1	0
50	0	1
60	1	1
70	0	2
80	1	2



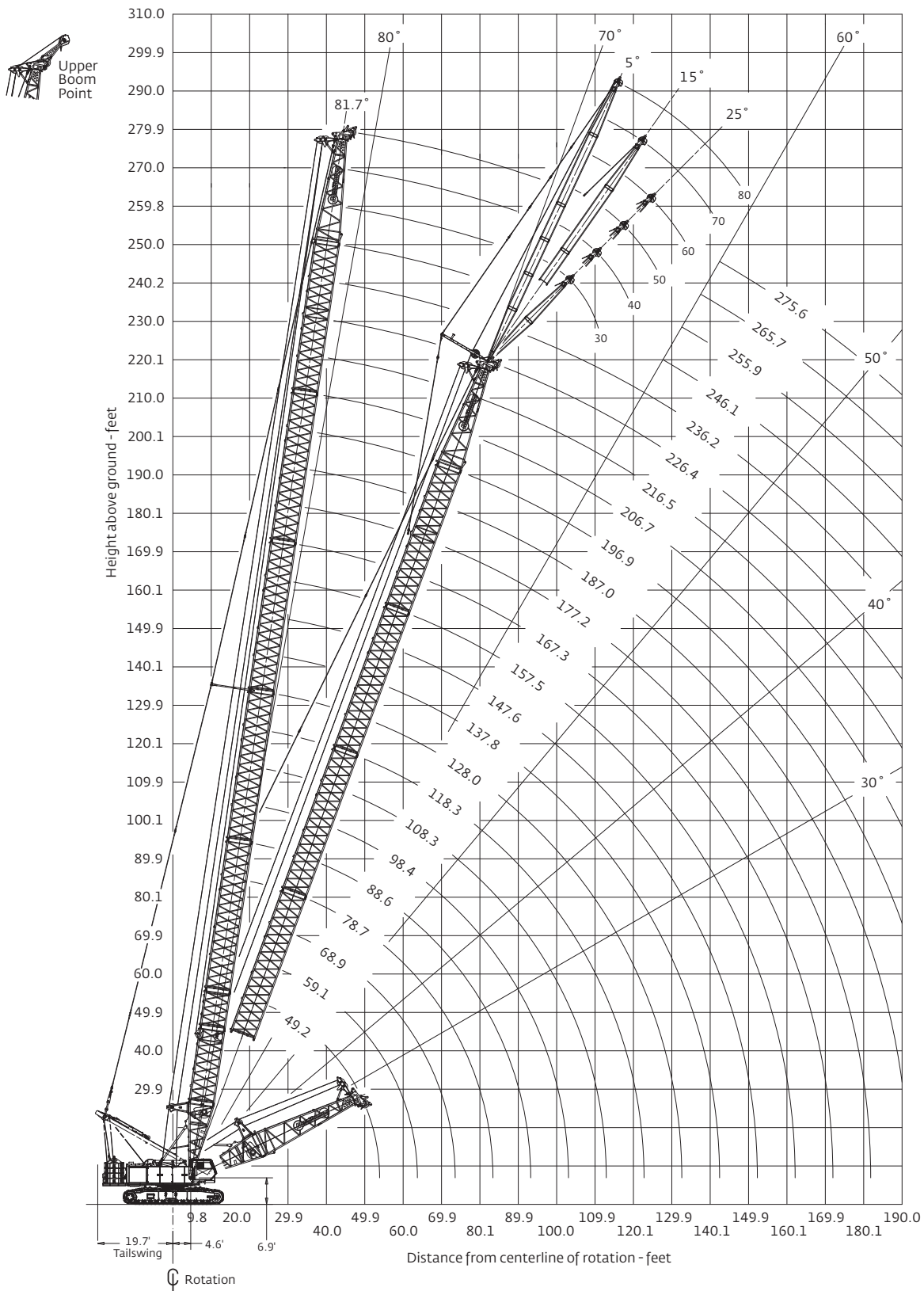
# Boom combinations

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	0	1
100	1	0	1
110	0	1	1
120	1	1	1
130	0	0	2
140	1	0	2
150	0	1	2
160	1	1	2
170	0	0	3



# Main boom range diagram

## No. 74A boom



# Main boom load chart

No. 74A boom													
123,500 lb upper counterweight, 45,000 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	337.6	334.8											
18	302.3	302.1											
20	273.5	273.3	272.3										
22	249.6	249.4	248.4	247.8									
26	211.9	211.9	211.0	210.4	209.5								
30	169.3	169.7	169.4	169.5	169.5	169.3	158.3						
34	140.5	140.8	140.5	140.5	140.5	140.2	140.4	134.1					
38	119.6	120.0	119.7	119.6	119.5	119.2	119.4	119.0	113.3				
42	103.8	104.2	103.9	103.8	103.7	103.3	103.5	103.0	102.6	88.7	79.2		
46	91.4	91.8	91.5	91.4	91.3	90.9	91.0	90.6	90.1	86.7	78.9	65.4	
50	81.3	81.8	81.5	81.5	81.3	80.9	81.0	80.5	80.1	79.6	78.6	65.0	54.8
60		63.5	63.5	63.4	63.2	62.8	62.9	62.4	61.9	61.3	60.4	59.8	54.1
70			51.3	51.3	51.1	50.7	50.7	50.2	49.7	49.1	48.1	47.5	46.9
80			42.3	42.5	42.4	41.9	42.0	41.4	40.9	40.3	39.3	38.7	38.0
90				35.9	35.8	35.3	35.4	34.9	34.3	33.7	32.7	32.0	31.4
100				30.6	30.6	30.2	30.3	29.7	29.2	28.5	27.5	26.9	26.2
110					26.4	26.0	26.2	25.6	25.0	24.4	23.4	22.7	22.0
120						22.6	22.8	22.2	21.7	21.0	20.0	19.3	18.6
130						19.7	19.9	19.3	18.8	18.2	17.1	16.4	15.8
140							17.5	16.9	16.4	15.8	14.7	14.0	13.4
150							15.4	14.8	14.3	13.7	12.7	12.0	11.3
160								13.0	12.5	11.9	10.9	10.2	9.5
170								11.4	10.9	10.3	9.3	8.6	7.8
180									9.5	8.9	7.9	7.2	6.2
190									8.2	7.6	6.6	5.7	4.7
200										6.5	5.4	4.4	3.4
210										5.5	4.2	3.2	
220											3.1		

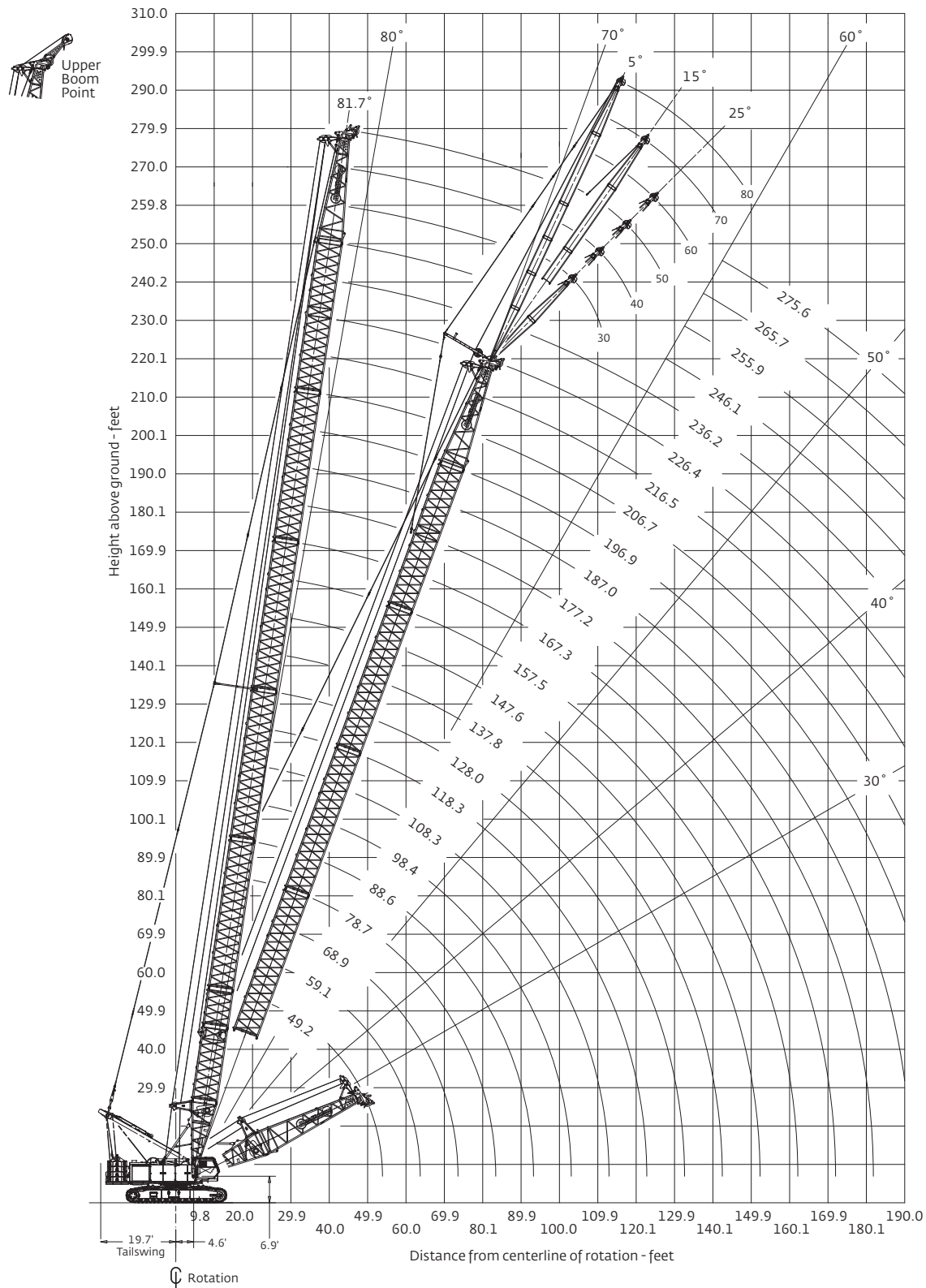
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# Fixed jib range diagram

## No. 134 fixed jib on No. 74A boom



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# Fixed jib load charts

## No. 134 fixed jib on No. 74A boom

123,500 lb upper counterweight, 45,000 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				
40	55.1	55.1			
50	55.1	55.1	55.1	55.1	
60	55.1	55.1	55.1	55.1	48.0
80	43.5	42.4	41.5	40.3	38.6
100	31.7	30.6	29.7	28.4	26.7
120		23.0	22.2	20.9	19.1
140		17.7	16.9	15.6	13.8
160			13.0	11.7	9.9
180			10.0	8.7	6.9
200				6.3	4.6
220				4.4	

25° offset

30.0 ft fixed jib length					
	Boom length ft				
	89	128	167	207	246
Radius ft					
40	46.4				
50	41.6	45.4			
60	37.9	41.9	44.8		
80	32.6	36.6	39.7	41.9	40.6
100		31.4	30.7	29.6	28.2
120		23.5	22.9	21.8	20.2
140			17.4	16.3	14.7
160				12.2	10.6
180				9.1	7.4
200					4.9
205					4.4

5° offset

50.0 ft fixed jib length				
	Boom length ft			
	89	128	167	207
Radius ft				
36	44.2			
40	43.8			
50	41.0	41.9	41.5	
60	39.1	40.3	40.3	39.0
80	35.2	37.5	38.0	37.2
100	31.2	31.3	30.4	29.1
120	25.0	23.7	22.8	21.4
140		18.4	17.5	16.1
160		14.5	13.6	12.2
180			10.5	9.2
200			8.1	6.8
220				4.8
230				4.0

25° offset

50.0 ft fixed jib length				
	Boom length ft			
	89	128	167	207
Radius ft				
55	29.6			
60	28.1	30.4		
70	25.6	28.0	29.8	
80	23.5	26.0	27.9	29.4
90	21.8	24.4	26.3	27.9
100	20.4	22.9	24.9	26.5
120		20.6	22.6	23.0
140		19.0	18.4	17.3
160			14.2	13.1
180				9.9
200				7.3

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# Fixed jib load charts

## No. 134 fixed jib on No. 74A boom

123,500 lb upper counterweight, 45,000 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			
50	35.1	35.9		
60	33.1	34.4	34.3	33.3
80	29.7	31.5	32.3	31.7
100	26.9	29.0	30.1	29.2
120	22.6	24.0	22.9	21.6
140	19.2	18.6	17.6	16.2
160		14.7	13.7	12.3
180		11.6	10.7	9.3
200			8.3	6.9
220				5.0
230				4.1

25° offset

60.0 ft fixed jib length				
	Boom length ft			
	89	128	167	207
Radius ft				
60	25.7			
70	23.2	25.2		
80	21.1	23.2	24.9	26.1
90	19.4	21.6	23.3	24.6
100	18.0	20.2	21.9	23.3
120	15.9	17.9	19.7	21.1
140		16.3	17.9	17.8
160			14.7	13.6
180			11.4	10.3
200				7.7
215				6.0

5° offset

80.0 ft fixed jib length				
	Boom length ft			
	89	128	167	207
Radius ft				
40	24.0			
50	22.9	22.7		
60	21.8	21.8	21.4	
80	19.8	20.0	19.9	19.4
100	18.2	18.4	18.5	18.2
120	16.8	17.1	17.2	17.1
140	15.2	16.0	16.1	16.1
160	13.7	15.0	14.0	12.6
180		12.1	11.0	9.6
200		9.7	8.6	7.2
220			6.7	5.2
240			5.0	

25° offset

80.0 ft fixed jib length				
	Boom length ft			
	89	128	167	207
Radius ft				
70	19.10			
80	17.20	18.70		
90	15.60	17.20	18.40	19.00
100	14.30	16.00	17.20	18.30
120	12.30	13.90	15.20	16.30
140	10.80	12.40	13.70	14.80
160		11.20	12.40	13.50
180		10.30	11.40	10.90
200			9.40	8.30
220				6.10
240				4.20

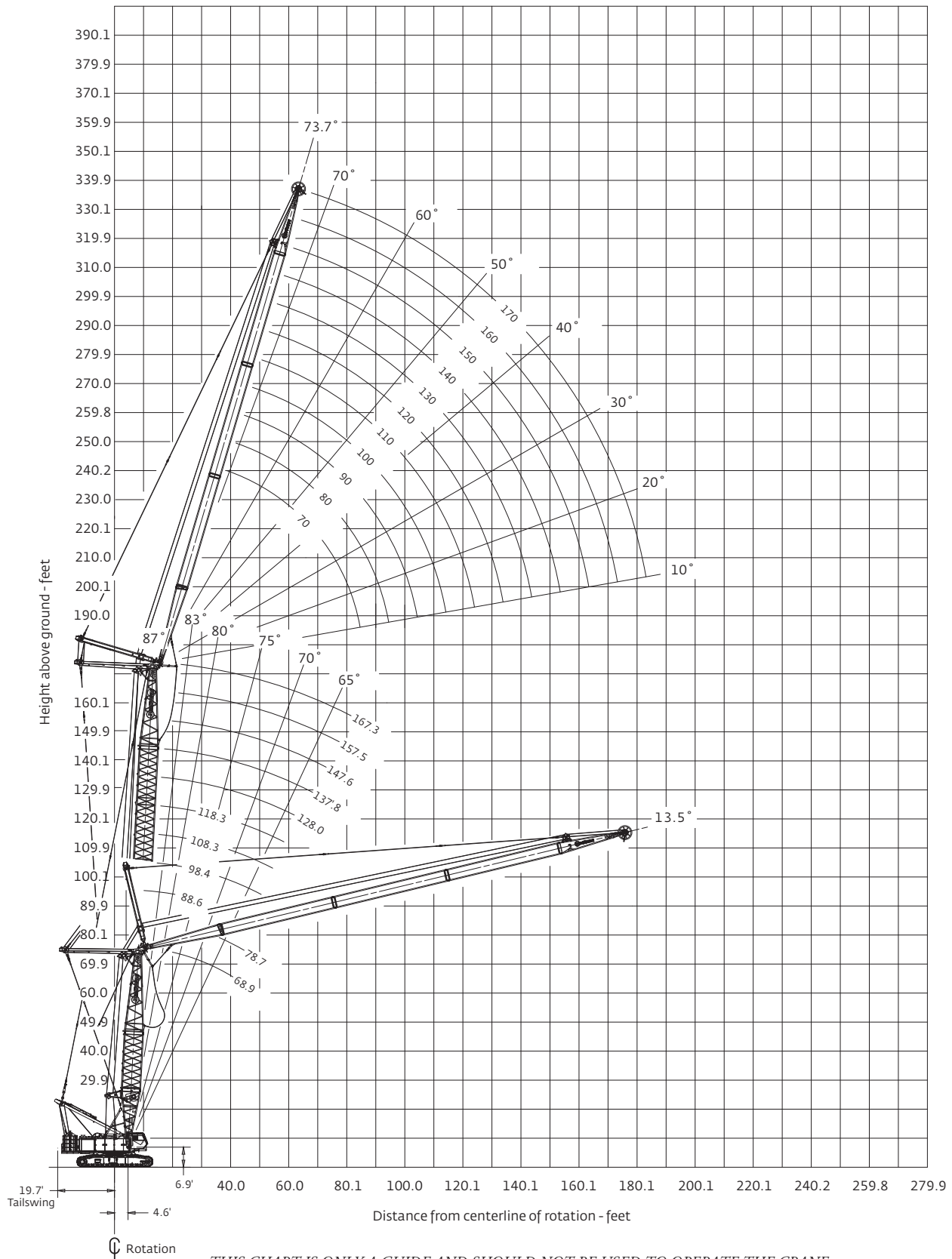
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# Luffing jib range diagram

No. 135 luffing jib on No. 74A boom



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# Luffing jib load charts

## No. 135 luffing jib on No. 74A boom

123,500 lb upper counterweight, 45,000 lb carbody counterweight

360° Rating

lb x 1000

87° boom angle

70 ft luffing jib length						
	Boom length ft					
	69	89	108	128	148	167
Radius ft						
30	110.3	106.1				
32	110.3	106.1	98.1	90.1		
36	110.3	106.1	98.1	90.0	81.7	74.3
40	102.5	102.5	97.9	89.6	81.4	71.7
50	85.9	81.8	78.9	75.1	70.5	63.2
60	71.3	68.6	66.8	64.0	60.6	54.9
70	58.7	58.6	58.3	56.3	53.5	47.6
80	44.6	49.4	49.3	49.1	46.9	41.8
85						40.0

100 ft luffing jib length						
	Boom length ft					
	69	89	108	128	148	167
Radius ft						
38	82.7	79.6				
40	81.2	79.5	74.5	69.3		
50	73.7	73.3	72.2	68.5	59.8	51.7
60	67.4	67.1	66.2	61.6	53.6	46.7
70	58.2	58.1	57.1	54.0	47.4	41.6
80	49.2	49.1	48.9	46.8	41.6	36.9
90	42.4	42.3	42.2	40.5	36.4	32.6
100	37.1	37.0	36.9	35.2	31.9	29.0
110	29.6	32.6	32.5	31.0	28.4	26.0
115						25.1

140 ft luffing jib length						
	Boom length ft					
	69	89	108	128	148	167
Radius ft						
50	47.8	46.4	44.8	42.9		
60	46.0	44.7	43.2	41.5	38.9	34.5
70	43.2	43.0	41.9	40.3	36.3	32.1
80	39.8	39.8	39.5	37.4	33.5	29.7
90	36.6	36.7	36.6	34.2	30.6	27.2
100	33.8	33.8	34.0	31.0	27.8	24.8
110	31.1	31.3	30.9	27.9	25.1	22.5
120	28.7	28.7	27.7	25.1	22.7	20.4
130	25.8	25.8	24.8	22.6	20.5	18.5
140	23.3	23.3	22.2	20.3	18.6	16.9
150		20.9	20.3	18.7	17.1	15.7
155						15.3

170 ft luffing jib length						
	Boom length ft					
	69	89	108	128	148	167
Radius ft						
55	38.0					
60	36.7	36.3	35.1	32.5	29.7	
70	33.6	33.4	33.1	31.2	28.4	25.6
80	30.6	30.6	30.5	29.5	26.9	24.3
90	27.9	27.9	27.9	27.8	25.3	22.9
100	25.3	25.4	25.5	25.5	23.6	21.4
110	22.9	23.1	23.2	23.2	21.9	19.9
120	20.6	20.8	21.0	21.2	20.3	18.4
130	18.7	18.9	19.1	19.2	18.7	17.1
140	16.8	17.1	17.2	17.4	17.2	15.8
150	15.2	15.4	15.5	15.8	15.8	14.5
160	13.2	13.5	13.7	13.9	14.1	13.4
170	11.6	11.8	11.9	12.1	12.3	11.8
180	10.2	10.3	10.4	10.6	10.7	10.3
185						9.6

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## Upperworks



### Engine

Cummins Model QSL9-325 Tier 3, 6 cylinder, 325 hp at 2100

governed RPM.

Cummins Model QSL9-310 Tier 4 Final, 6 cylinder, 310 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 3) or diesel particulate filter (Tier 4 Final), radiator and fan.

24 volt starting and 70 amp alternator.

One 163 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 18 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 16' 2" long and connects the boom hoist reeving to the steel boom strap 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 chain connecting the top of the cylinders and 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 22,500 lb

Series 1

Upper counterweight (6 pieces+tray)

101,450 lb

Series 2

Upper counterweight (8 pieces+tray)

123,500 lb

Carbody counterweight (2 pieces)

45,000 lb

Total counterweight

168,500 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.

- Additional optional: External RCI light.

## 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 1.9 mph.

## Attachments



### No. 74A boom

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

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.

Aux drum preparation included as standard.

- No. 74A boom length is increased using 9' 10", 19' 8", and 39' 4" boom inserts with steel suspension straps. 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'.

## Optional equipment

Mirrors for viewing drum operation and surroundings from operator's cab

- Camera system includes: drum cameras and monitor
- Handrails and ladder to allow easy access to machinery from top of enclosures.
- 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 –

- 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.
- 220 USt hook block with seven 30" sheaves for 26 mm wire rope with duplex swivel hook, hook latch, and swivel lock.

Hydraulic Test Kit: recommended to properly analyze the performance of the hydraulic system.

Service Interval Kits including the items necessary to perform general scheduled maintenance.

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.

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