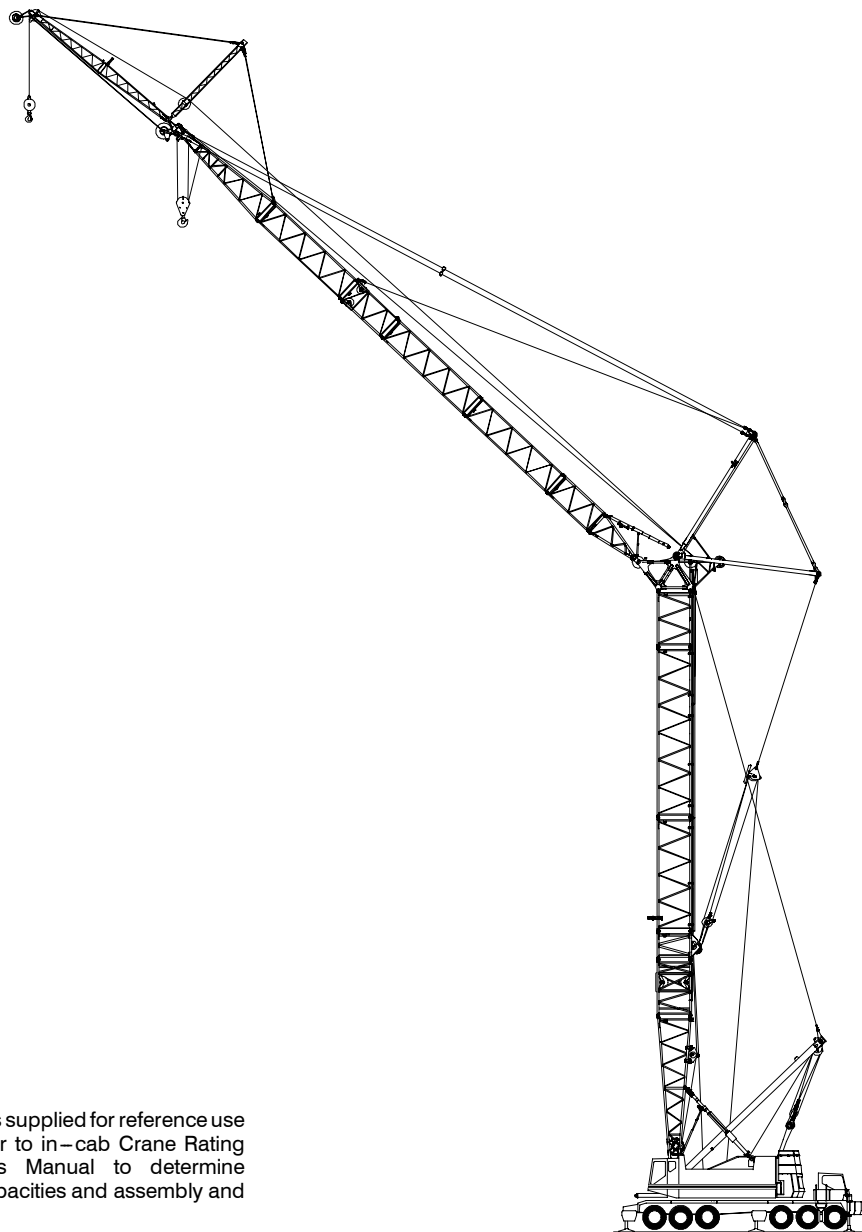


# Technical Data

Specifications & Luffing Attachment  
Capacities

# HC-278H II

**Truck Crane**  
300 Ton (272 metric ton)



CAUTION: This material is supplied for reference use only. Operator must refer to in-cab Crane Rating Manual and Operator's Manual to determine allowable crane lifting capacities and assembly and operating procedures.



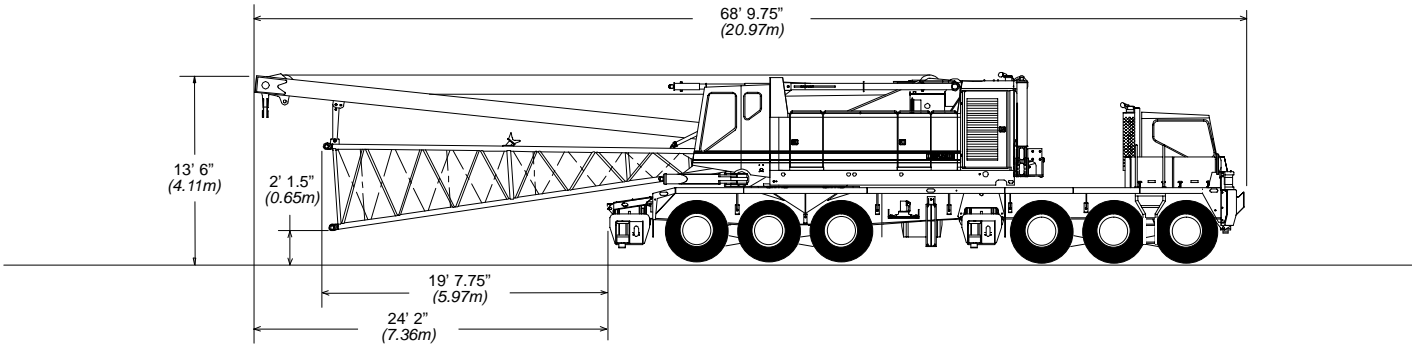
# Table Of Contents

	<b>Pages</b>
<b>Specifications</b>	<b>1-12</b>
<b>Luffing Attachment Capacities</b>	<b>1-28</b>

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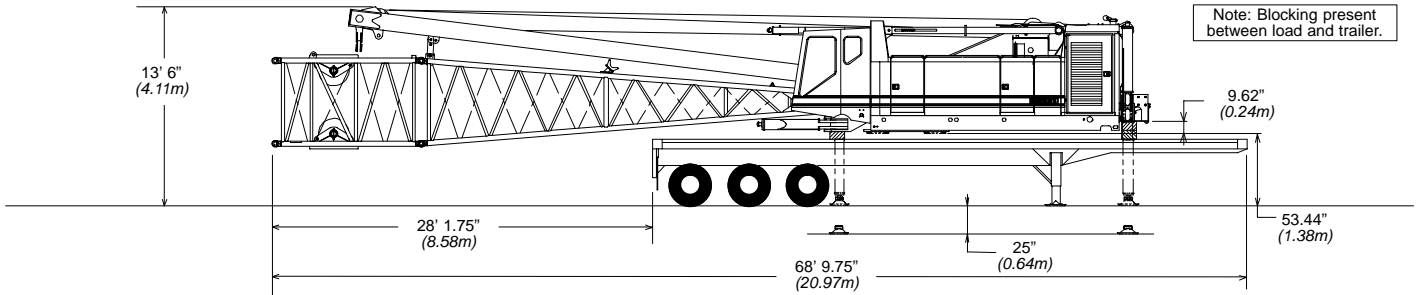
# HC-278H II Crane Transport Weights and Dimensions – approximate



**Transport Weights**

- without boom base – 168,824 lb (76 577kg)
- with boom base – 173,736 lb (78 805kg)
- with boom base and 10 ft self-assembly section – 177,011 lb (80 291kg)

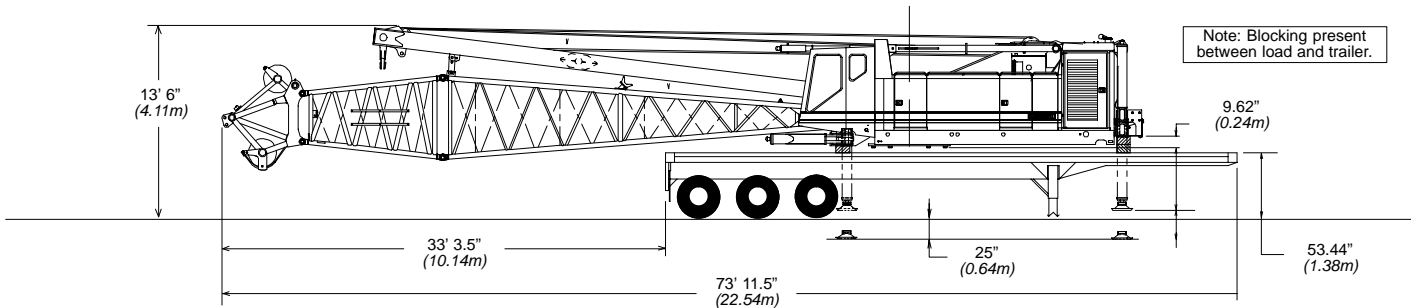
*Note: Carrier undecked with outrigger boxes and without jacks = 70,500 lb (31 978kg)*



Note: Blocking present between load and trailer.

**Transport Weights**

- without boom base – 76,976 lb (34 916kg)
- with boom base – 83,173 lb (37 727kg)
- with boom base and 10 ft self-assembly section – 84,757 lb (38 446kg)

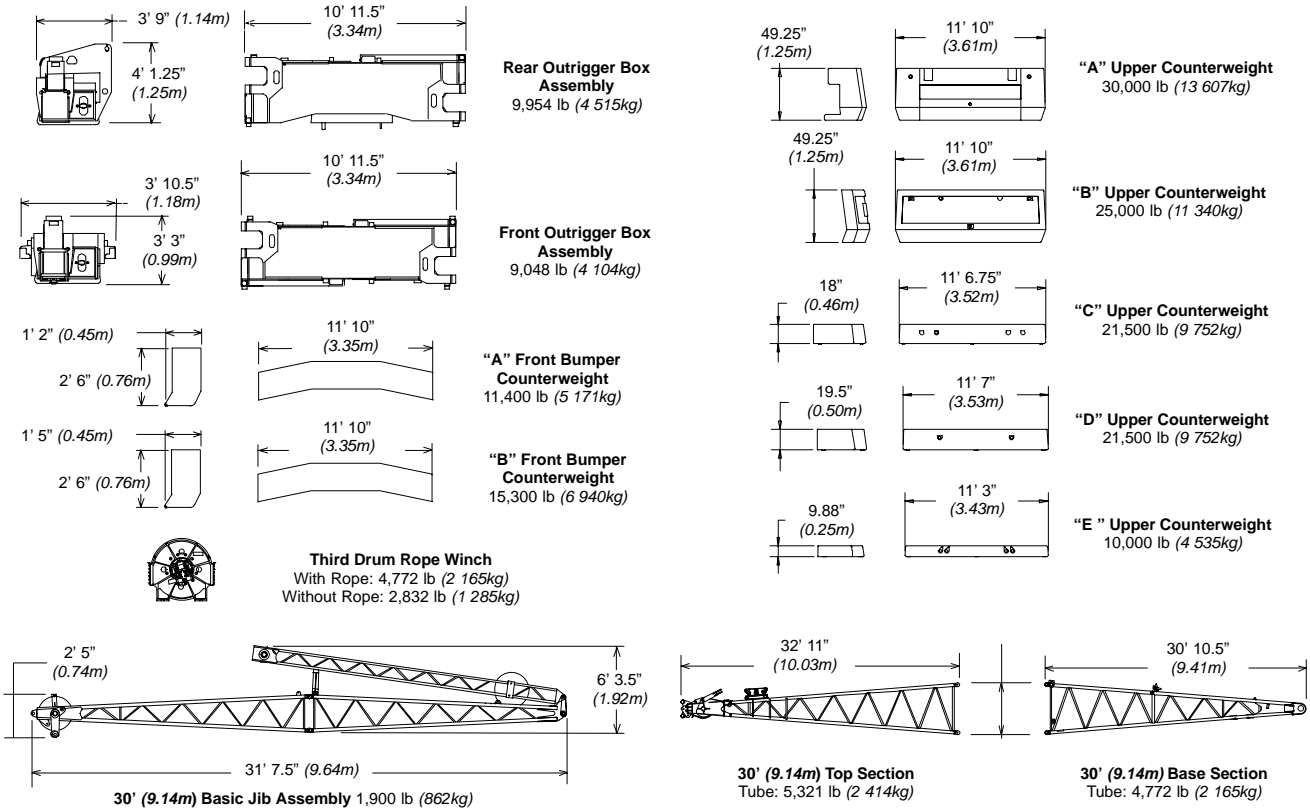


Note: Blocking present between load and trailer.

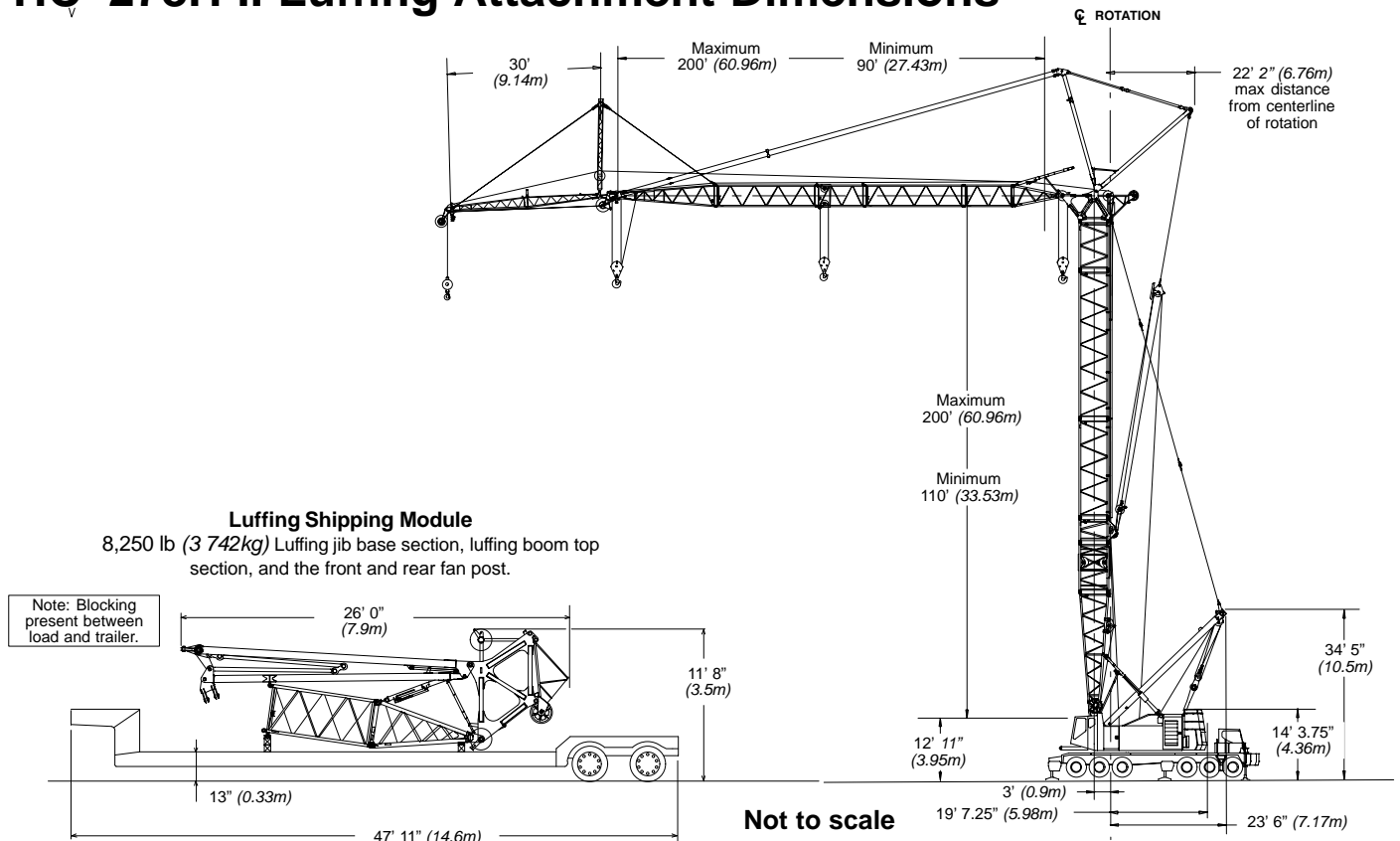
**Transport Weights**

- with hammerhead and transition section and head machinery – 86,996 lb (39 461kg)

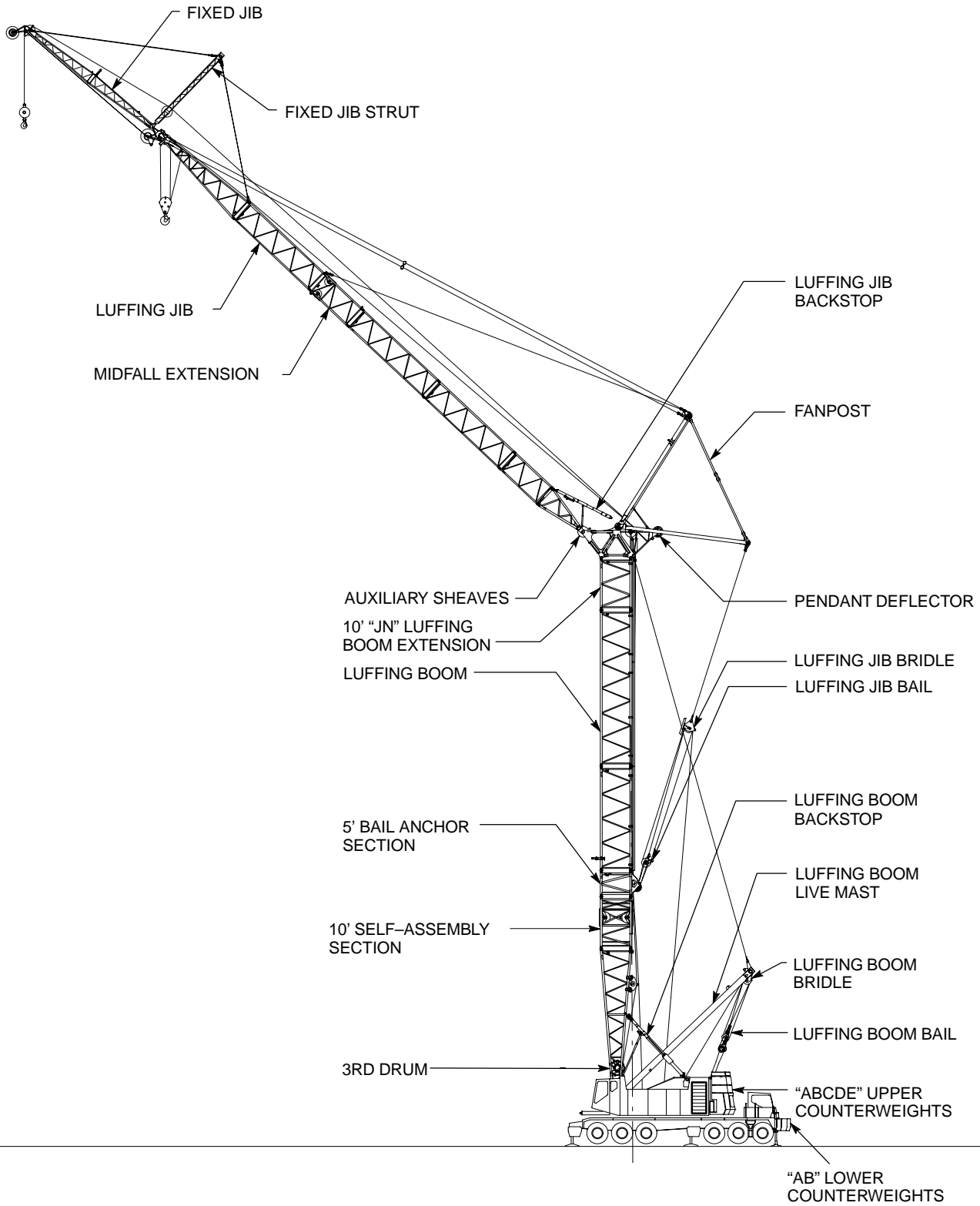
## HC-278H II Crane Transport Weights and Dimensions – approximate



## HC-278H II Luffing Attachment Dimensions



# HC-278H II Luffing Attachment Nomenclature



# HC-278H II Transportation Weights – approximate

**Base Crane:** 85 gal (321L) of carrier fuel, live mast, 30' boom base section, 10' self-assembly section, 12-part boom hoist reeving, rigid boom backstops, auxiliary lifting bail, 950' (290m) front hoist rope, 600' (182.88m) rear hoist rope, and 77 gal (291L) of upper fuel.

Item Description	Gross Weight		Transport Loads										
	lb	kg	#1	#2	#3	#4	#5	#6	#7	#8	#9		
Base Crane	76,976	34 916		1									<p><b>Notes and Load Summary</b></p> <p>Numbers in the load columns to the left represent quantities.</p> <p>Estimated transport assumes the load out consist of 330' (100.58m) of tube boom + 30' (9.14m) of jib with full counterweight.</p> <p>Loads were estimated for a 8' 6" (2.6m) wide, 48' (14.6m) long, and 13' 6" (4.1m) high using a drop deck trailer. This may vary depending on state laws, empty truck/trailer weights, and style of trailer.</p> <p>Estimated weights vary by +/- 2%.</p> <p><b>Estimated Total Load #1</b> 70,500 lb (31 978kg)</p> <p><b>Estimated Total Load #2</b> 76,976 lb (34 916kg)</p> <p><b>Estimated Total Load #3</b> 45,966 lb (20 850kg)</p> <p><b>Estimated Total Load #4</b> 37,320 lb (16 928kg)</p> <p><b>Estimated Total Load #5</b> 44,889 lb (23 361kg)</p> <p><b>Estimated Total Load #6</b> 44,736 lb (20 292kg).</p> <p><b>Estimated Total Load #7</b> 11,596 lb (5 260kg)</p> <p><b>Estimated Total Load #8</b> 4,583 lb (2 058kg)</p> <p><b>Estimated Total Load #9</b> 15,103 lb (6 851kg)</p>
Carrier	70,500	31 978	1										
Add Front Outrigger Assembly	10,560	4 790						1					
Add Rear Outrigger Assembly	10,560	4 790						1					
Add Main Outrigger Jacks And pontoons	5,060	2 295				1							
Add Front Outrigger Pontoon	80	36				1							
Add "A" Bumper Counterweight	11,400	5 171						1					
Add "B" Bumper Counterweight	15,300	6 940						1					
Add "A" Upper Counterweight	30,000	13 607				1							
Add "B" Upper Counterweight	25,200	11 430						1					
Add "C" Upper Counterweight	21,500	9 752			1								
Add "D" Upper Counterweight	21,500	9 752			1								
Add "E" Upper Counterweight	10,000	4 536								1			
Add Upper Catwalk – Left Side	154	70											
Remove 30' (6.10m) Boom Base Section	-4,912	-2 228											
Add 30' (9.14m) Boom Top Section	5,612	2 546							1				
Add 10' (3.05m) "JN" Boom Extension W/Pins, Pendants, & Toller	1,584	719			1								
Remove 10' (3.05m) "J" Boom Extension W/Lifting Sheaves, Pins, Pendants, & Roller	-3,275	-1 486											
Add 20' (6.10m) "JE" Boom Extension W/Pins, Pendants, & Roller	2,524	1 145						1	1				
Add 30' (9.14m) "JE" Boom Extension W/Pins, Pendants, & Roller	3,464	1 571							1				
Add 40' (12.19m) "JE" Boom Extension W/Pins, Pendants, & Roller	4,609	2 091					1						
Add 50' (15.24m) "JE" Boom Extension W/Pins, Pendants, & Roller	5,608	2 544							1				
Add 10' (3.05m) "HJ" Boom Extension W/Pins, Pendants, & Roller	1,382	627			1								
Add 20' (6.10m) "HJ" Boom Extension W/Pins, Pendants, & Roller	2,163	981								1			
Add 30' (9.14m) "HJ" Boom Extension W/Pins, Pendants, & Roller	2,940	1 334								1			
Add 40' (12.19m) "HJ" Boom Extension W/Pins, Pendants, & Roller	3,687	1 672									1		
Add 50' (15.24m) "HJ" Boom Extension W/Pins, Pendants, & Roller	4,538	2 058									1		
Add Auxiliary Tip Extension	980	445											
Add Third Drum Fleeting Sheave For Luffer To Boom Base Section	2,373	1 076											
Add Third Drum 3-Sheave Assembly To Boom Top Section W/O Rope	2,832	1 285											
Add 30' (9.14m) Tubular Jib	2,180	990				1							
Add 10' (3.05m) Tubular Jib Extension	259	118											
Add 20' (6.1m) Tubular Jib Extension	442	201											
Add Luffing Top Assembly	8,250	3 742											
Add Hammerhead Top Section With 10' Transition Section	5,520	2 504											
Add Auxiliary Hammerhead Tip Extension	976	443											
Add Jib Wire Rope 1" x 850' Type "RB"	1,700	771											
Add jib Wire Rope 1.125" x 850' Type "RB"	2,125	964											
Add Jib Wire Rope 1" x 1,210' Type "RB"	2,420	1 098											
Add Third Drum Wire Rope 1" x 970' Type "RB"	1,940	880											
Remove Front Drum Rope 1.12" x 1,084' Type "LB"	-2,537	-1 151											
Remove Rear Drum Rope 1" x 850' Type "RB"	-1,700	-770											
Remove Boom Hoist Rope 1" x 1,070' Type "W"	-1,010	-458											
Add 15-ton (13.6mt) Hook Ball – Non Swivel or Swivel	1,400	635											
Add 60-ton (54mt) 2-Sheave Hook Block	1,650	747											
Add 150-ton (136mt) 6-Sheave Hook Block	3,525	1 599											
Add 200-ton (181mt) 6-Sheave Hook Block	3,860	1 751						1					
Add 250-ton (227mt) 6-Sheave Hook Block	5,721	2 595											

# HC-278H II Crane Working Weights

Option	Description	Gross Weight lb (kg)	Maximum Ground Bearing Pressure psi (kg/cm <sup>2</sup> )
1	Base crane equipped with 60' (18.28m) of tube boom, live mast, "ABCDE" counterweight, 1,026' (312m) hoist rope, 250-ton (227mt) hook block, 143 gal (541L) of upper fuel, 85 gal (321L) of carrier fuel, front and rear outrigger boxes with pontoons and fifth outrigger pontoon, and 200 lb (90.7kg) operator.	297,982 (135 162)	152 (10.69)
2	Option #1 plus "A" and "B" bumper counterweights and 270' (82.3m) of boom extensions to obtain 330' (100.58m) of main boom.	356,773 (161 830)	167 (11.74)
3	Option #2 plus 100' (30.5m) of tubular jib, 15-ton (13.6mt) hook ball and jib rope – subtract 30' (9.14m) of boom extension to obtain maximum 300' + 100' (91.4 + 30.5m) of main boom + jib.	359,813 (163 208)	161 (11.32)
4	Option #1 plus, remove 30' (9.14m) and 250-ton (227mt) hook block. Add "AB" bumper counterweight, 10' (3.05m) self-assembly section, 5' (1.52m) bail anchor, 140' (42.67m) "JE" boom, 10' (3.05m) "JN" boom, 5' (1.52m) luffing boom cap, fan post, pendant deflector, luffing jib base (with backstops), 160' (48.77m) luffing jib extensions, luffing jib peak (with nose wheel), luffing jib bail, luffing jib bridle, 60' (18.29m) bridle guide rails, 660' (201m) of 1" (25mm) type "DB" wire rope, and 15-ton (13.6mt) hook ball.	368,252 (167 036)	179 (12.58)
5	Base crane equipped with 45' (13.72m) of hammerhead boom, live mast, "ABCD" upper counterweight, 1026' (313m) front hoist rope, 150-ton (136mt) hook block, 143 gal (531L) of upper fuel, 85 gal (321.76L) of carrier fuel, front and rear outrigger boxes with pontoons and fifth outrigger pontoon, and 200 lb (90.7kg) operator.	268,750 (121 903)	144 (10.12)

## Attachment Options

### ■ 60' – 330' (18.29–100.58m) Tubular Boom

**Basic Boom** – 60' (18.29m) two-piece design that utilizes a 30' (9.14m) base section and a 30' (9.14m) open throat top section with in-line connecting pins on 80" (2.03m) wide and 68" (1.73m) deep centers.

- 250-ton (227mt) maximum capacity
- Max boom tip height of 333' (101.5m)
- Boom feet on 66" (1.67m) centers
- 4.25" (10.80 cm) diameter chords
- Lugs on base section to attach carrying links
- Skywalk platform
- Deflector roller on top section
- Rigid sheave guards
- Six 21" (0.53m) root diameter steel sheaves mounted on sealed anti-friction bearings
- Oil filled mechanical boom angle indicator

**Boom Extensions** – The following table provides the lengths available and the suggested quantity to obtain maximum boom in 10' (3.05m) increments. Midpoint pendant connections are required at 140' (42.67m) for boom lengths 250' (72.6m) and longer.

Tube Boom Extensions	Suggested Quantity for Maximum Boom
JN type 10' (3.05m)	1
JE type 20' (6.10m)	1
JE type 30' (9.14m)	1
JE type 40' (12.19m)	1
JE type 50' (15.24m)	1
HJ type 10' (3.05m)	1
HJ type 20' (6.10m)	1
HJ type 30' (9.14m)	1
HJ type 40' (12.19m)	0
HJ type 50' (15.24m)	1

- Deflector roller on top of each section
- Two rollers on 40' (12.19m) and 50' (15.24m) extensions
- Appropriate length pendants
- The optional 10' (3.05m) extension with lifting sheaves is used for self assembly/disassembly instead of using live mast and auxiliary lifting bail.

### ■ 45' – 245' (13.72–74.68m) Hammer-Head Boom

**Basic Boom** – 45' (13.72m) three-piece design that utilizes a 30' (9.14m) base section, a 10' (3.05m) taper section, and a 5' (1.52m) hammer head top section. Taper section pins to standard base section with in-line connecting pins on 80" (2.03m) wide and 68" (1.73m) deep centers.

- 200-ton (181.4mt) maximum capacity
- Maximum boom tip height is 243' (74.07m)
- 4.25" (10.80m) tubular "JE" wall chords
- Lugs on base section to attach carrying links
- Skywalk platform
- Deflector roller on top section
- Rigid sheave guards
- Six 21" (0.53m) root diameter steel sheaves mounted on sealed anti-friction bearings
- Oil-filled mechanical boom angle indicator

**Hammer Head Boom Extensions** – The following table provides the lengths available and the suggested quantity to obtain maximum boom in 10' (3.05m) increments. Extensions are common with open throat extensions.

Hammer Head Boom Extensions "JE"	Suggested Quantity for Maximum Boom
10' (3.05m) with or without lifting sheaves	1
20' (6.10m)	1
30' (9.14m)	1
40' (12.19m)	0
50' (15.24m)	3

- Deflector roller on top of each section. Two rollers on 40' (12.19m) and 50' (15.24m) extensions.
- Appropriate length pendants
- 10' (3.05m) extension with lifting sheaves is available for self-assembly and disassembly.

### ■ 30' – 100' (9.14–30.48m) Tubular Jib

**Basic Tube Jib** – 30' (9.14m) two-piece design that utilizes a 15' (4.57m) base section and a 15' (4.57m) top section with in-line connecting pins on 32" (0.81m) wide and 24" (0.61m) deep centers. Designed to be used on the open throat top section only.

- 30-ton (27.2mt) maximum capacity
- Maximum tip height of tube boom + jib is 403.8' (123.1m)
- Jib offset angles at 5°, 15°, and 25°
- 2.25" (57mm) tubular chords
- One 18.5" (0.47m) root diameter steel sheave mounted on sealed anti-friction bearings

**Jib Extensions** – The following table provides the lengths available and the suggested quantity to obtain maximum jib in 10' (3.05m) increments.

Jib Extensions	Suggested Quantity for Maximum Boom
10' (3.05m)	1
20' (6.10m)	3

- Wood wear block on top of each section
- Appropriate length pendants

### ■ 90' – 200' (27.43–50.29m) Luffing Jib

**Basic Luffing Jib** – 90' (24.38m) five-piece design utilizes a 10' (3.05m) base section, 10' (3.05m) extension, 20' (6.01m) extension, 30' (9.14m) extension, and 20' (6.10m) top section and a 5' (1.52m) luffing boom top section with in-line connecting pins. Boom extensions are 50" (1.27m) wide and 60" (1.52m) deep at the centers.

- 52.0-ton (47.17mt) maximum capacity
- Maximum tip height is 432' (131.67m)
- Working boom lengths of 90' (27.43m) to 200' (60.96m)
- Top section includes mounting lugs for all attachment options
- Lugs on base section to attach fan-post transport links
- Two 24" (0.61m) diameter polyamide luffing jib head sheaves
- Two 25" (0.63m) diameter polyamide luffing boom auxiliary head sheaves
- Pin on nose wheel
- Ten-part luffing jib hoist
- 1.25" (31.75mm) diameter type "BC" pendants

**Luffing Jib Extensions** – The following table provides the lengths available and the suggested quantity to obtain the maximum luffing jib in 10' (3.05m) increments. Midpoint pendants are not required.

Luffing Jib Extensions	Suggested Quantity for Maximum Boom
* 10' (3.05m)	1
* 20' (6.10m)	1
* 30' (9.14m)	1
40' (12.19m)	2
* One of each included with the basic luffing kit	

**Midfall Extension** – The midfall (if equipped) consists of a 10' (3.05m) luffing jib extension equipped with load hoisting machinery and provides an auxiliary load hoist location for short radius light duty lifting.

- Midfall capacities and suspension adjustments are available for luffing jib lengths of 110–200' (33.5–61.0m).
- Midfall capacities range from 18,800 lb (8 528kg) to 9,400 lb (4 264kg).

## ■ Luffing Boom

- Base and extensions are common to open throat boom
- 10' (3.05m) self-assembly section required for bail anchor assembly
- Working angles of 90°, 85°, 80°, 75°, 70°, and 65°
- Working lengths of 110' (25.91m) to 220' (50.29m)
- 1.25" (31.75mm) diameter type "BC" pendants; same as open throat boom.

**Luffing Boom Extensions** – The following table provides the lengths available and the suggested quantity to obtain the maximum luffing boom in 10' (3.05m) increments. Midpoint pendants are not required.

Luffing Boom Extensions	Suggested Quantity for Maximum Boom
* 10' (3.05m)	2
20' (6.10m)	1
30' (9.14m)	1
40' (12.19m)	1
50' (15.24m)	1
* One 10' (3.05m) must be the self-assembly and one 10' (3.05m) section must be "JN" section.	

- Rear hoist drum becomes luffing jib hoist
- Optional third drum provides second working hoist line, if required.
- Designed for self-assembly
- Luffing jib hoist bridle and bail can remain reeved for crane transport
- Job site mobility with attachment
- Rolled out or rolled under erection methods
- Compact transport module

## ■ Auxiliary 5' (1.5m) Tip Extension

Designed to use in place of jib to provide clearance between working hoist lines. The horsehead style extension is equipped with a single 28.3" (0.72m) root diameter steel sheave mounted on sealed anti-friction bearings. Maximum capacity is 25-ton (22.68mt).

## ■ Auxiliary Hammer—Head Tip Extension

Designed to use in place of jib to provide clearance between working hoist lines. The extension is equipped with a single 20" (0.51m) root diameter steel sheave mounted on sealed anti-friction bearings. Maximum capacity is 17.5-ton (15.9mt).

## ■ Boom Hoist System

Designed to lift off maximum boom or maximum boom plus jib unassisted. Operates up to a maximum boom angle of 82°. Boom hoist limit system limits maximum boom angle operation.

- Hydraulic controlled retractable gantry frame
- 18-part reeving with 1" (2.54cm) type "W" wire rope
- Bridle assembly and 35' (10.67m) live mast
- Four 1.25" x 26' 4" (3.18cm x 8.03m) pendants
- Two 1" x 112' 10" (25.4cm x 34.39m) midpoint pendants
- Tubular spring-buffered boom backstops (rigid type)
- Sheaves contain sealed anti-friction bearings
- Boom speed from minimum to maximum operating radius for 150' (45.72m) of open throat boom is 84 seconds.

# Revolving Upper Structure

## ■ Frame

All welded steel frame with precision machined surfaces for mating parts.

## ■ Engine

Detroit Diesel Series 60 – 12.7 Liter with oil filter, oil cooler, air cleaner, fuel filter, water separator, tachometer and electrical shutdown.	
Number of cylinders	6
Bore and stroke – in (mm)	5.12 x 6.30 (130 x 160)
Piston displacement – cu in (cm <sup>3</sup> )	778 (12 751)
Hi-idle rpm	2,225
Max brake hp (kw)	430 (321) @ 2,100 rpm
Peak torque – ft/lb (joules)	1,450 (1 966) @ 1,200 rpm
Batteries	4–12 volt
Approximate fuel consumption	gal/hr (L/hr)
100% hp	19.90 (75.33)
75% hp	14.93 (56.52)
50% hp	9.95 (37.66)
25% hp	4.98 (18.85)

## ■ Hydraulic System Specifications

**Hydraulic Pumps** – The pump arrangement is designed to provide hydraulically powered functions allowing positive, precise control with independent or simultaneous operation of all crane functions.

- One variable displacement pump operating at 5,225 psi (36 025kPa) and 94 gal/min (355L/min) powers front hoist drum.
- One variable displacement pump operating at 5,100 psi (35 163kPa) and 94 gal/min (355.8L/min) powers the rear hoist drum.
- One variable displacement pump operating at 4,600 psi (31 71 kPa) and 73 gal/min (276L/min) powers the boom hoist drum.
- One variable displacement pump operating at 4,350 psi (29 993kPa) and 73 gal/min (276L/min) powers the swing system.
- One fixed displacement gear type pump operating at 1,250 psi (8 619kPa) and 8 gal/min (30.3L/min) powers the pilot control system.

**Pump Control ("Fine Inching") mode** – Special pump setting, selectable from operator's cab, that allows very slow movements of front and rear hoist for precision work.

**Hydraulic Reservoir** – 144 gal (545L), equipped with sight level gauge. Diffusers built in for deaeration.

**Filtration** – One 10 micron, full flow, line filter in the return line of the hydraulic reservoir.

**Counterbalance Valves** – All hoist motors are equipped with counterbalance valves to provide positive load lowering and prevent accidental load drop if the hydraulic pressure is suddenly lost.

## ■ Front Hoist Drums

Drum contains a pilot controlled, bi-directional, axial piston motor and a planetary gear reduction unit to provide positive control under all load conditions.

- Power up/down operation mode
- Spring applied, hydraulically released, multiple disc, controlled automatically
- Drum pawl controlled automatically
- Electronic drum rotation indicator
- Mounted on anti-friction bearings
- 20.88" (0.53m) root diameter
- 36" (0.91m) flange diameter
- 31.94" (0.81m) width
- Optional – 1.12" (28.4mm) grooved "Lebus" lagging

## ■ Rear Hoist Drums

Drum contains a pilot controlled, bi-directional, axial piston motor and a planetary gear reduction unit to provide positive control under all load conditions.

- Power up/down operation mode
- Spring applied, hydraulically released, multiple disc, controlled automatically
- Drum pawl controlled automatically
- Electronic drum rotation indicator
- Mounted on anti-friction bearings
- 30.88" (0.78m) root diameter
- 40.5" (1.03m) flange diameter
- 31.94" (0.81m) width
- Optional – 1" (25.4mm) grooved "Lebus" lagging

## ■ Optional Third Hoist Drum

The hydraulic winch is mounted in the boom base section and is used in conjunction with a fleeting sheave and three sheave assembly to run the wire rope over the boom top section.

- Power up/down operation mode
- Automatic brake mode (spring applied, hydraulically released)
- Smooth drum
- Mounted on anti-friction bearings
- 12.75" (0.32m) root diameter
- 22.75" (0.58m) flange diameter
- 17" (0.43m) width

## ■ Boom Hoist Drum

Contains a pilot controlled, bi-directional, axial piston motor and a planetary gear reduction unit to provide positive control under all load conditions.

- Spring applied, hydraulically released, disc type brake controlled automatically
- 1" (2.54cm) grooved lagging
- Drum pawl controlled automatically
- Mounted on anti-friction bearings
- 20.88" (0.53m) root diameter
- 31" (0.79m) flange diameter
- 30.75" (0.78m) width

## ■ Swing System

Contains a pilot controlled bi-directional axial piston motor and the planetary gear reduction unit to provide positive control under all load conditions.

- Spring applied, hydraulically released, 360° multi-plate brake
- Free swing mode when lever is in neutral position
- 360° positive house lock
- Audio/visual swing alarm
- Maximum swing speed is 2.4 rpm

## ■ Upper Counterweight

Consist of a five-piece design. The design allows division of 108,000 lb (48 988kg) of counterweight into modules for transportation. This design allows for operating with less than maximum counterweight.

- Refer to page 3 for counterweight component weights and dimensions.

## ■ Operator's Cab and Controls

Fully enclosed modular galvaneal steel compartment is independently mounted and insulated to protect against vibration and noise.

- All tinted/tempered safety glass
- Sliding entry door
- Swing up roof window with wiper
- Door and window locks
- Heater with circulating fan
- Engine instrumentation panel (tachometer, fuel gauge, voltmeter, engine oil pressure, engine water temperature, hydraulic oil temperature, hour meter, and service monitor system)
- Electronic drum rotation indicators
- Six way adjustable seat with seat belt
- Dry chemical fire extinguisher
- Hand and foot throttle
- Hand and foot operated boom hoist control
- Pilot operated single axis control levers
- Swing lever with swing brake and horn located on handle

## ■ Rated Capacity Limiter

**Standard Equipment:** PAT DS-350G/1334 modular system that includes two lineriders, angle sensor, computer, graphics display, and anti-two block equipment to provide the following information:

- Graphical representation of crane configuration
- Graphical step-by-step crane set-up
- Boom length & angle
- Jib length & angle
- Load on hook
- Rated load
- Load radius
- Tip height
- Anti-two block warning & function limiters operation mode
- Provides an audio/visual warning when the load on hook is within 90% of the rated load.
- Provides an audio/visual warning and limits functions when the load on hook is at 100% of the rated load.
- Operator settable alarms include maximum and minimum boom angle and maximum tip height. These alarms provide an audio/visual warning only.

*Note: Function limiters are activated for anti-two block and overload conditions.*

*These limiters are designed to prevent hoist up on front, rear, and third hoist drums, and boom hoist down.*

## ■ Additional Equipment – Standard

- 93" (2.36m) outside diameter turntable bearing
- Front and removable left catwalks
- 77 (usable) gal (291.5L) fuel tank
- Upper lifting links
- Two 70-watt headlights

# HC-278H II Load Hoist Performance

Available line speed and line pull. Line pulls are not based on wire rope strength. See Wire Rope chart below for maximum permissible single part of line working loads.

Front Drum – 1 1/8" (28mm) Rope												
Layer	Maximum Line Pull		No Load Line Speed		Full Load Line Speed		Pitch Diameter		Layer		Total	
	lb	kg	ft/min	m/min	ft/min	m/min	in	mm	ft	m	ft	m
1	50,103	22 727	275	84	137	41	21.13	537	143	44	143	44
2	48,281	21 900	305	93	151	46	23.38	594	158	48	301	92
3	41,305	18 736	334	102	166	50	25.63	651	173	53	474	144
4	37,971	17 224	363	111	180	54	27.88	708	188	57	662	202
5	35,135	15 937	393	120	195	59	30.13	765	204	62	866	264
6	32,693	14 830	422	129	209	64	32.38	822	219	67	1,084	330

Rear Drum – 1 1/8" (28mm) Rope												
Layer	Maximum Line Pull		No Load Line Speed		Full Load Line Speed		Pitch Diameter		Layer		Total	
	lb	kg	ft/min	m/min	ft/min	m/min	in	mm	ft	m	ft	m
1	34,143	15 487	461	140	200	60	31	787	236	72	236	72
2	32,074	14 549	491	149	213	64	33	838	251	77	486	148
3	30,241	13 717	520	158	226	68	35	889	266	81	752	229
4	28,606	12 976	550	167	239	72	37	940	281	86	1034	315

Boom Hoist Drum – 1 1/8" (28mm) Rope												
Layer	Maximum Line Pull		No Load Line Speed		Full Load Line Speed		Pitch Diameter		Layer		Total	
	lb	kg	ft/min	m/min	ft/min	m/min	in	mm	ft	m	ft	m
1	44,757	20 302	230	70	115	35	21	533	152	46	152	46
2	40,865	18 536	252	77	126	38	23	584	167	51	319	97
3	37,596	17 053	274	84	137	41	25	635	181	55	500	152
4	34,811	15 790	295	90	148	45	27	686	196	60	695	212

Third Drum Capacity – 1 1/8" (28mm) Rope												
Layer	Maximum Line Pull		No Load Line Speed		Full Load Line Speed		Pitch Diameter		Layer		Total	
	lb	kg	ft/min	m/min	ft/min	m/min	in	mm	ft	m	ft	m
1	22,980	10 424	408	124	207	63	19.7	500	150	46	150	46
2	20,862	9 463	449	136	228	69	21.7	551	165	50	315	96
3	19,102	8 664	491	149	249	75	23.7	602	180	55	495	152
4	17,615	7 990	532	161	270	82	25.7	652	195	60	690	210
5	16,343	7 413	574	174	291	88	27.7	703	211	64	901	275

Application	Size: Diameter		Type	Maximum Permissible Load		
	inch	mm		lb	kg	
Main hoist – 1,025 ft (312m)	1 1/8	28	LB	40,800	18 507	<b>Type N:</b> 6 X 25 (6 x 19 Class) – filler wire – extra improved plow steel – preformed I.W.R.C. – right lay – regular lay.
Auxiliary hoist – 1,084 ft (330m)	1 1/8	28	ZB	35,300	16 012	<b>Type RB:</b> 19 x 19 rotation resistant – extra extra improved plow steel – preformed right lay – regular lay – swaged
Auxiliary hoist (1 part) – 850 ft (259m)	1	25	P	16,800	7 620	<b>Type ZB:</b> 36 X 7 rotation resistant – extra improved plow steel – right regular lay
Auxiliary hoist (2 part) – 1,210 ft (369m)	1	25	N	29,500	13 381	<b>Type LB:</b> 6 x 25 (6 x 19 class) filler wire, preformed, independent wire rope center, right lay, regular lay
Auxiliary hoist (1 part) – 850 ft (259m)	1 1/8	28	RB	28,600	12 973	<b>Type P:</b> 19 x 7 rotation resistant, extra improved plow steel, preformed, wire strand core. Inner 7 strands: left lang lay. Outer 12 strands: right regular lay.
Boom hoist – 870 ft (265m)	1	25	W	29,500	13 381	<b>Type W:</b> 6 x 26 (6 x 19 class), extra improved plow steel, preformed, independent wire rope core, right lay, alternate lay
Third drum – 1,050 ft (320m)	1	25	RB	22,700	10 297	
Boom pendants	1 1/4	32	N	n/a	n/a	
Midpoints pendants	1	25	N	n/a	n/a	
Jib pendants	7/8	22	N	n/a	n/a	

## Carrier

### ■ Type

All welded steel frame with precision machined surfaces for mating parts.

- 11' 10" (3.61m) wide
- 288" (7.32m) wheel base.
- 12 x 6 drive.
- 100,000 psi (689.5mPa) alloy steel, triple box construction.

### ■ Axles

#### Front

- Tubular bogie mounted tridem axles, single wheels, 115" (2.92m) track
- Oil lubed wheel bearings with see through hubcaps
- 43,660 lb (19 804kg) maximum axle loading at 65 mph (105km/hr)

#### Rear

- Planetary type, bogie mounted tridem axles, dual wheels, 110.25" (2.80m)
- Oil lubed wheel bearings with see through hubcaps
- 9.14:1 ratio
- 85,840 lb (38 937kg) maximum axle loading at 65 mph (105km/hr)

### ■ Suspension

- Hendrickson bronze bushed equalizer beams with rubber bushed torque rods and shock absorbers on front axle

### ■ Wheels

Front – Disc type

Rear – Integral with planetary hubs

### ■ Tires

- Standard – Single –front, dual – rear
- 14R25 on/off highway type, tubeless tires

### ■ Brakes

#### Service

- Full air brakes on all wheel ends. Dual circuit with modulated emergency brakes.

#### Front

- 16.5" x 7" (0.42m x 0.18m) S–Cam brakes

#### Rear

- 16.5" x 7" (0.42m x 0.18m) S–Cam brakes

#### Parking/Emergency

- One spring set, air released chamber per rear axle end. Emergency brakes apply automatically when air pressure drops below 60 psi (413.7kPa) in both systems.

### ■ Steering

- Sheppard full integral, hydraulic power
- Steering mounted high on sides of frame to minimize exposure to hazards
- High speed, high power system to maximize maneuverability both on job and on the road

### ■ Transmissions

- Standard – Eaton RTO 14908LL with 10 forward speeds and 3 reverse speeds.
- Optional – Eaton RTO 14109B ATE CEEMAT. Nine forward speeds shifted automatically and 1 reverse speed.

#### Auxiliary

- Standard – Spicer P–1241–C; used with manual transmission; midship mounted with 4–speed gearing; 2.31:1 first gear ratio.
- Optional – Spicer P–1241–D; used with manual transmission; midship mounted with 4–speed gearing; 1.59:1 first gear ratio.

### ■ Electrical

Four, Group–31 batteries provide 12–volt operating system and 12–volt starting with 1,600 cold cranking amps available. Charging is provided by a 130 amp alternator.

#### Lights

- Two dual, sealed beam headlights
- Front, side, and rear directional signals with 4–way hazard system
- Stop and tail lights
- Rear and side clearance lights
- Side turn indicators
- Lighted license plate bracket

### ■ Outriggers

The outrigger system is designed with five hydraulically controlled outriggers that provide an optimal 360° working area and simultaneous operation of steering and outriggers.

- The front and rear outriggers are a double–box design that allows all four telescoping beams and jacks to extend/retract independently.
- Hydraulic controls are located at each outrigger location with the bumper outrigger operated at the front bumper. The controls are designed to allow both front and rear jacks to be operated from the driver's side of carrier if necessary.
- Vertical jack cylinders are equipped with holding valves.
- Quick–attach, self–aligning rear outrigger box with hydraulic pins
- Quick attach self–aligning front outrigger box with manual pins. Hydraulic pins are optional.
- Front left outrigger jack will tilt to allow front box to roll under carrier frame for removal.
- 34" (0.86m) diameter quick–release steel pontoons
- 24" (0.61m) diameter self–storing aluminum bumper pontoon

### Jack Reactions

- Maximum 180,000 lb (81 648kg) force and 198 psi (1 365kPa) ground bearing pressure on main outriggers
- Maximum 41,000 lb (18 598kg) force and 91 psi (627kPa) ground bearing pressure on front bumper outrigger

## ■ Carrier Engine Specifications

Detroit Diesel Series 60 – 12.7 Liter with oil filter, oil cooler, air cleaner, fuel filter, water separator, tachometer, and electrical shutdown.	
Number of cylinders	6
Bore and stroke – in (mm)	5.12" x 6.30" (130 x 160)
Piston displacement – cu. in (cm <sup>3</sup> )	778 (12 751)
Hi–idle rpm	2,225
Max brake hp (kw)	430 (321) @ 2,100 rpm
Peak torque – ft/lb (joules)	1,450 (1 966) @ 1,200 rpm
Batteries	4–12 volt
Approximate fuel consumption	gal/hr (L/hr)
100% hp	19.90 (75.33)
75% hp	14.93 (56.52)
50% hp	9.95 (37.66)
25% hp	4.98 (18.85)

### ■ Bumper Counterweight

- Standard – "A" counterweight – 11,400 lb (5 171kg)
- Optional – "B" counterweight – 15,300 lb (6 940kg)

### ■ Carrier Cab

Fully enclosed, one person, steel construction, lined with vinyl covered acoustical insulation with sound reduction insulation and isolated from engine compartment

#### Equipped with:

- Air ride seat with seat belt
- 2–speed, electric windshield wiper and washer
- Tilt/telescoping steering column
- Front and roof fresh air vents
- Safety plate glass on front
- Sliding, tinted, rear and right side windows
- Roll down door window
- Door and window locks
- Diagnostic connectors for engine
- Fire extinguisher
- 19,800 BTU heater/defroster
- Rubber floor mat
- Horn
- Dome light
- Accessory plug/lighter

**Cab Instrumentation** – Tilt-out (for service access), illuminated, instrument panel includes:

- Speedometer
- Hourmeter
- Voltmeter
- Light controls
- Stop and check engine warning lights
- Engine oil pressure gauge
- Engine temperature gauge
- Front and rear air pressure gauges with low air pressure warning buzzer/light
- Odometer
- Tachometer
- Fuel gauge
- Cruise control

- Engine fan override switch
- Heater and defroster controls
- Park brake switch and indicator light
- Engine diagnostic switch

## ■ Additional Equipment

### Standard:

- Towing shackles, front and rear
- Aluminum, full deck fenders and ladders
- Outrigger controls located on outrigger boxes
- Engine throttle-up control switch

- West Coast-type rear view mirrors with adjustable convex mirror
- 2-way reading bubble levels
- Back-up alarm
- Mud flaps
- Air dryer
- Lug wrench
- Tire inflation system
- Remote plug for block heater
- 85 gal (321.76L) fuel tank

### Optional:

- Spare tires and rims

## ■ Carrier Speeds

Main-Eaton RTO 14908LL			Auxiliary-Spicer P-1241-C							
			4th (0.81)		3rd (1.00)		2nd (1.24)		1st (2.37)	
Gear		Ratio	mph	km/h	mph	km/h	mph	km/h	mph	km/h
High	8th	.74	58.4	94.2	47.4	76.3	38.2	61.5	20.0	32.2
	7th	1.00	43.2	69.5	35.1	56.5	28.3	45.5	14.8	23.8
	6th	1.36	31.8	51.2	25.8	41.5	20.8	33.5	10.9	17.5
	5th	1.83	23.6	38.0	19.2	30.9	15.5	24.9	8.1	13.0
Low	4th	2.53	17.1	27.5	13.9	22.4	11.2	18.0	5.9	9.5
	3rd	3.40	12.7	20.4	10.3	16.6	8.3	13.4	4.4	7.1
	2nd	4.63	9.3	15.0	7.6	12.2	6.1	9.8	3.2	5.1
	1st	6.24	6.9	11.1	5.6	9.0	4.5	7.2	2.4	3.9
	L	9.42	4.6	7.4	3.7	6.0	3.0	4.8	1.6	2.6
Deep Reduction	LL	14.56	3.0	4.8	2.4	3.9	1.9	3.1	1.0	1.6
Hi Rev.	Rev.	2.89	15.0	24.1	12.1	19.5	9.8	15.8	5.1	8.2
Lo Rev.	Rev.	9.85	4.4	7.1	3.6	5.8	2.9	4.7	1.5	2.4
Deep Reduction	Rev.	15.22	2.8	4.5	2.3	3.7	1.9	3.1	1.0	1.6
Deep Reduction @ 600 rpm	LL	14.56	0.85	1.4	0.7	1.2	.55	0.9	0.3	0.5
Deep Reduction @ 600 rpm	Rev.	15.22	0.8	1.3	0.65	1.1	0.5	0.8	0.3	0.5

## ■ Axle Loads

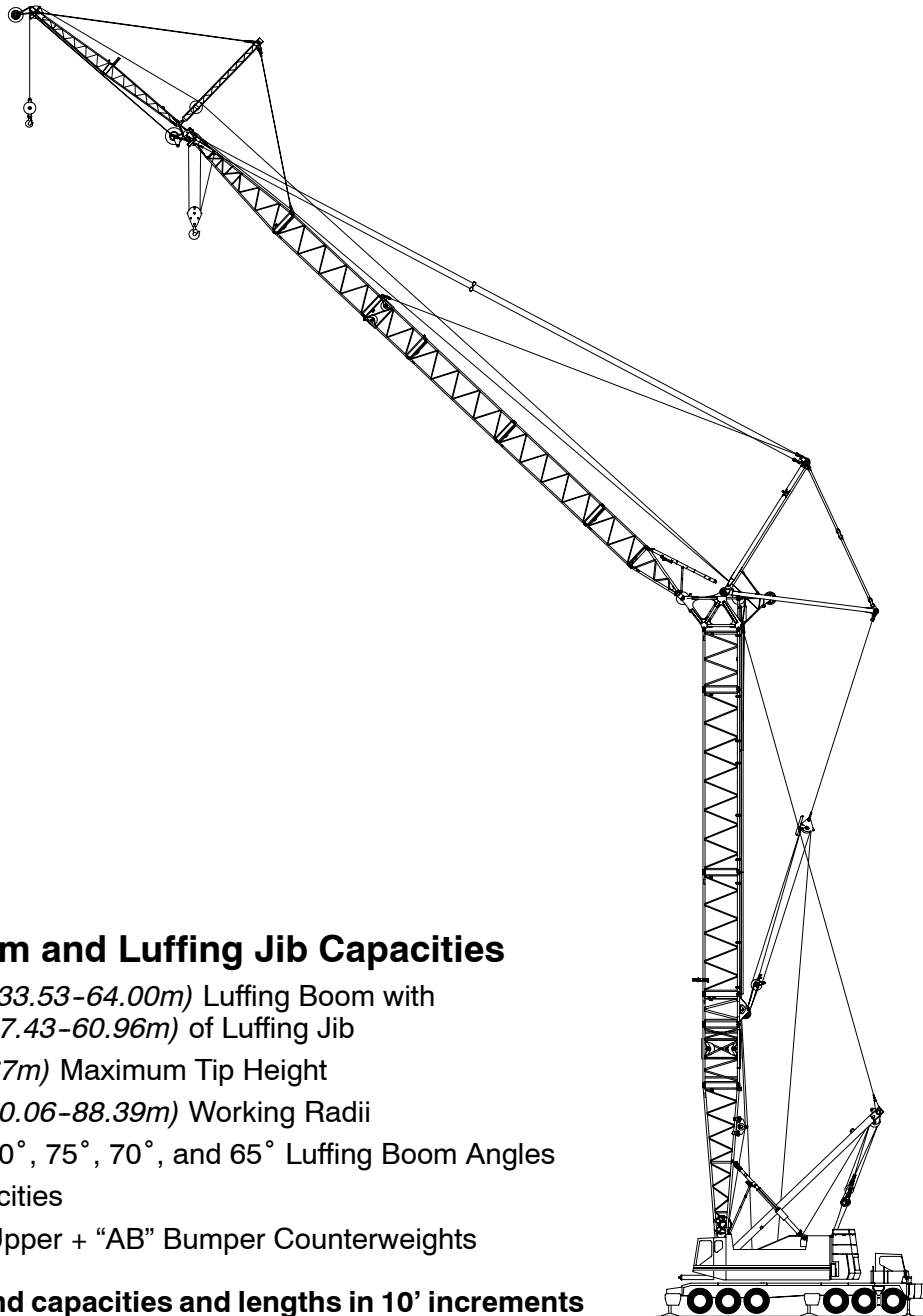
Standard HC-278H II revolving upper equipped with Detroit Diesel Series 60 diesel engine, rear load hoist drums, 30,000 (13 608kg) "A" counterweight, self undecking equipment mounted on 288" (7.32m) wheelbase, 12 x 6 drive carrier, 1' 10" (3.61m) wide, equipped with Detroit Diesel Series 60 engine, front center hydraulic jack, Bridgestone tires, and full fuel.	Gross Weight		Upper Facing Front				Upper Facing Rear			
	*	lb	kg	lb	kg	lb	kg	lb	kg	lb
U	93,330	42 335	-25,121	-11 395	118,451	53 729	44,565	20 214	48,765	22 119
C	70,500	31 979	30,020	13 617	40,480	18 362	30,020	13 617	40,480	18 362
T	163,830	74 314	4,899	2 222	158,931	72 090	74,585	33 831	89,245	40 481
Adjust axle weights for adding following components	Component Weights		Front Axle		Rear Axle		Front Axle		Rear Axle	
	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg
<b>Upperstructure –</b>										
Remove self undecking equipment from upper	-13,910	-6 310	-695	-315	-13,215	-5 994	-2,200	-998	-11,710	-5 312
Remove counterweight "A"	-30,000	-13 608	17,975	8 153	-47,975	-21 761	-24,225	-10 988	-5,775	-2 620
Add rear drum wire rope – 850' (259m) of 1" (25mm) Type "RB"	1,700	771	-142	-64	1,842	836	497	225	1,203	546
Add front drum wire rope – 1,170' (357m) of 1 1/8" (29mm) Type "LB"	2,738	1 242	165	75	2,572	1 167	405	184	2,333	1 058
Add boom hoist wire rope on drum – 1010' (308m) of 1" (25mm) Type "W"	1,869	848	-389	-176	2,258	1 024	779	353	1 090	494
Remove boom stops, support struts and lever arms	-1,983	899	109	49	-2,092	-948	-522	-237	-1,460	-662
<b>Carrier –</b>										
Add front outrigger box	10,560	4 790	6,490	2 944	4,070	1 846	6,490	2 944	4,070	1 846
Add rear outrigger box	10,560	4 790	-4,290	-1 946	14,850	6 736	-4,290	-1 946	14,850	6 736
Add front outrigger jacks	2,200	998	1,350	612	850	386	1,350	612	850	386
Add rear outrigger jacks	2,200	998	-890	-404	3,090	1 402	-890	-404	3,090	1 402
Add main outrigger pontoons	660	299	309	140	351	159	309	140	351	159
Add bumper outrigger pontoon	80	36	31	14	49	22	31	14	49	22
Add "A" bumper counterweight	11,400	5 171	15,570	7 063	-4,170	-1 892	15,570	7 063	-4,170	-1 892
Add "B" bumper counterweight	15,300	6 940	21,591	9 794	-6,291	-2 854	21,591	9 794	-6,291	-2 854
<b>Attachment –</b>										
30' (9.14m) (3rd drum ready) open throat tubular boom base section with 4 connecting pins –horizontal over rear of carrier.	4,912	2 228	-	-	-	-	-2,736	-1 241	7,648	3 469
Add 3rd drum with rope	4,772	2 165					-6,313	-2 864	1,541	699
35' (10.67m) boom live mast and bridle – mast horizontal over rear of carrier.	6,922	3 140	6,463	2 932	-459	-208	-6,561	-2 976	13,483	6 116
Boom hoist wire rope (from ball to boom live mast) – mast horizontal over rear of carrier	1,869	248	1,309	593	560	254	-920	-417	2,789	1 265
60' (18.29m) open throat tubular boom – horizontal over rear of carrier.	10,524	4 774	-	-	-	-	-14,229	-6 554	24,753	11 228
45' (13.72m) hammerhead tubular boom – horizontal over rear of carrier.	10,412	4 729	-	-	-	-	-10,577	-4 798	20,989	9 520
*U=Upper C=Carrier T=Total										

Axle	Maximum Highway Allowable Load
Front Tridem	65,460 lb (29 692kg)
Rear Tridem	128,760 lb (58 405kg)

# Lifting Capacities

Lattice Boom Truck Crane with Luffing Attachment

## **HC-278H II** 52.0-ton (47.17 metric ton) HYLAB Series



### **Luffing Boom and Luffing Jib Capacities**

- 110'-210' (33.53-64.00m) Luffing Boom with 90'-200' (27.43-60.96m) of Luffing Jib
- 432' (131.67m) Maximum Tip Height
- 33'-290' (10.06-88.39m) Working Radii
- 90°, 85°, 80°, 75°, 70°, and 65° Luffing Boom Angles
- 360° Capacities
- "ABCDE" Upper + "AB" Bumper Counterweights

**Note: Over end capacities and lengths in 10' increments are published in the Crane Rating Manual only.**



## WARNING

**READ AND UNDERSTAND THE OPERATOR'S AND SAFETY MANUAL AND THE FOLLOWING INSTRUCTIONS AND CHART VALUES BEFORE OPERATING THE CRANE. OPERATION WHICH DOES NOT FOLLOW THESE INSTRUCTIONS MAY RESULT IN AN ACCIDENT.**

## OPERATING INSTRUCTIONS

### GENERAL:

1. Rated lifting capacities in kips (1,000 lb) as shown on lift charts pertain to this crane as originally manufactured and normally equipped. Modifications to the crane or use of optional equipment other than that specified can result in a reduction of capacity.
2. Construction equipment can be dangerous if improperly operated or maintained. Operation and maintenance of this crane must be in compliance with the information in the Operator's, Parts, and Safety Manuals supplied with this crane. If these manuals are missing, order replacements through the distributor.
3. The operator and other personnel associated with this crane shall read and fully understand the latest applicable American National Standards Institute (ANSI) safety standards for cranes.
4. All capacities listed in this book are in compliance with ASME/ANSI B30.5c-1991, SAE J987-April 1994, and SAE J765-October 1990.
3. Do not suspend more than one load at a time.
4. The crane capacities marked with an asterisk (\*) are based on structural strength. The crane capacities in the non-asterisked areas are based on stability ratings.
5. For recommended reeving, parts of line, wire rope type, and wire rope inspection, see Wire Rope Capacity Chart, Operator's Manual, and Parts Manual. Rated lifting capacities are based on correct reeving. Deduction must be made for excessive reeving. Any reeving over minimum required is considered excessive and must be accounted for when making lifts. Use Working Range Diagram to estimate the extra feet of wire rope included in reeving. Then consult Wire Rope Capacity Chart to determine the weight per foot of wire rope type. Deduct this amount for each extra foot of wire rope before attempting to lift a load.

### SET UP:

1. For all operating conditions, the outrigger beams must be fully extended and all five (5) outrigger jacks must be extended so tires clear the ground and the crane is level.
2. During attachment liftoff and lowering, adequate blocking must be placed under the pontoons to adequately support the loading without settling, slipping, or collapsing.
3. Counterweights: All luffing attachment combinations require the Maximum Counterweight Combination ("ABCDE" + "AB").
4. Refer to the Operator's Manual for instructions pertaining to assembly, raising, and lowering of the attachment.
5. The fixed jib has only one length (30 ft) and only one offset with respect to the luffing jib (5°).
6. Prior to lifting from the midfall, the two (2) suspension pendants must be connected to the link position identified with the corresponding luffing jib length.
6. Load ratings are based on freely suspended loads and make no allowances for such factors as the effect of the wind on load, ground conditions, and operating speeds. The operator shall therefore reduce load ratings in order to take these conditions into account. Refer to the Wind Speed Restrictions for safe operation, travel, and storage of the attachment.
7. Rated lifting capacities do not account for the effects of wind on a suspended load or boom. Lifting capacities should be considered acceptable for wind speeds less than 25 mph and appropriately reduced for wind speeds greater than 25 mph. Extreme caution should be used when lifting heavy loads or loads with large wind sail area under high wind conditions (over 25 mph). See Wind Speed Restriction Chart in the Crane Rating Manual for appropriate capacity reductions.

### LUFFING ATTACHMENT OPERATION:

1. Capacities shown are in kips (1,000 lb) and are not more than 75% of the tipping loads with the crane standing level on a firm supporting surface. A deduction must be made from these capacities for weight of hook block, hook ball, sling, grapple, load weighing device, etc.
2. When lifting from the luffing jib with the fixed jib installed, reduce capacities by the values shown on the Capacity Deductions For Auxiliary Load Handling Equipment. See Operator's Manual for all limitations when raising or lowering the attachment.
8. The 35 ft luffing boom live mast must be used for all capacities shown in the Crane Rating Manual.
9. The 10' "JN" luffing boom extension must be pinned to the luffing boom cap for all luffing boom combinations.
10. "JE" boom extensions are required for all luffing boom lengths.
11. The 10' self-assembly section must be pinned between the luffing boom base section and the 5' bail anchor section for all luffing boom combinations.
12. The least stable rated condition is over the side.
13. Refer to the enclosed charts for allowable attachment liftoff lengths and allowable working lengths at the various luffing boom angles.
14. Do not operate at radii or boom lengths where the Crane Rating Manual lists no capacity. Do not use longer booms or jibs than those listed in the Crane Rating Manual. Any of the above can cause a tipping condition or boom and jib failure.
15. Do not travel with a load. Refer to the Operator's Manual for Jobsite Travel Without A Load.

## CAPACITY DEDUCTIONS FOR AUXILIARY LOAD HANDLING EQUIPMENT

Lifting From Luffing Jib With:	Weight (lb)
30' Fixed Jib Installed	2,700
15-Ton Hook ball On Fixed Jib (See Hook Ball For Actual Wt.)	1,325
15-Ton Hook Ball On Aux. Sheaves (See Hook Ball For Actual Wt.)	1,325
60-Ton Hook block On Aux. Sheaves (See Hook Block For Actual Wt.)	1,700
Midfall Extension Without Hook Ball	300
15-Ton Hook Ball On Midfall (See Hook Ball For Actual Wt.)	1,325

Lifting From Fixed Jib With:	Weight (lb)
15-Ton Hook Ball On Luffing Jib (See Hook Ball For Actual Wt.)	1,325
15-Ton Hook Ball On Aux. Sheaves (See Hook Ball For Actual Wt.)	1,325
60-Ton Hook Block On Aux. Sheaves (See Hook Block For Actual Wt.)	1,700
Midfall Extension Without Hook Ball	300
15-Ton Hook Ball On Midfall (See Hook Ball For Actual Wt.)	1,325

Lifting From Midfall With:	Weight (lb)
30' Fixed Jib Installed	2,700
15-Ton Hook Ball On Luffing Jib (See Hook Ball For Actual Wt.)	1,325
60-Ton Hook Block On Luffing Jib (See Hook Block For Actual Wt.)	1,700
15-Ton Hook Ball On Aux. Sheaves (See Hook Ball For Actual Wt.)	1,325
60-Ton Hook Block On Aux. Sheaves (See Hook Block For Actual Wt.)	1,700
15-Ton Hook Ball On Fixed Jib (See Hook Ball For Actual Wt.)	1,325

Lifting From Auxiliary Sheave With:	Weight (lb)
15-Ton Hook Ball On Fixed Jib (See Hook Ball For Actual Wt.)	1,325
15-Ton Hook Ball On Luffing Jib (See Hook Ball For Actual Wt.)	1,325
60-Ton Hook Block On Luffing Jib (See Hook Block For Actual Wt.)	1,700
15-Ton Hook Ball On Midfall (See Hook Ball For Actual Wt.)	1,325
Midfall Extension (Without Hook Ball)	300
Pendant Deflector (Without Luffing Jib)	800

90' Luffing Jib	20,300
100' Luffing Jib	21,400
110' Luffing Jib	22,600
120' Luffing Jib	23,900
130' Luffing Jib	25,100
140' Luffing Jib	26,400
150' Luffing Jib	27,800
160' Luffing Jib	29,200
170' Luffing Jib	30,600
180' Luffing Jib	32,000
190' Luffing Jib	33,500
200' Luffing Jib	35,000
90' Luffing Jib + 30' Fixed Jib	22,900
100' Luffing Jib + 30' Fixed Jib	24,200
110' Luffing Jib + 30' Fixed Jib	25,500
120' Luffing Jib + 30' Fixed Jib	26,800
130' Luffing Jib + 30' Fixed Jib	28,200
140' Luffing Jib + 30' Fixed Jib	29,600
150' Luffing Jib + 30' Fixed Jib	31,100
160' Luffing Jib + 30' Fixed Jib	32,600
170' Luffing Jib + 30' Fixed Jib	34,100
180' Luffing Jib + 30' Fixed Jib	35,700
190' Luffing Jib + 30' Fixed Jib	37,300
200' Luffing Jib + 30' Fixed Jib	38,900

## WIRE ROPE CAPACITY

Parts of Line	1"			
	Type DB	Type CC	Type LB	Type RB
1	29,500	30,700	32,500	22,700
2	59,000	61,400	65,000	45,400
3	88,500	92,100	97,500	68,100
4	118,000	122,800	130,000	90,800
5	147,500	153,500	162,500	113,500
6	177,000	184,200	195,000	136,200
7	206,500	214,900	227,500	158,900
8	236,000	245,600	260,000	181,600
9	265,500	276,300	292,500	204,300
10	295,000	307,000	325,000	227,000
11	324,500	337,700	357,500	249,700
12	354,000	368,400	390,000	272,400
<b>Weight (lb/ft)</b>	1.85	2.03	1.85	2.00

Parts of Line	1-1/8"				1.1"
	Type DB	Type ZB	Type LB	Type RB	Type SB
1	37,100	35,300	40,800	28,600	52,400
2	74,200	70,600	81,600	57,200	104,800
3	111,300	105,900	122,400	85,800	157,200
4	148,400	141,200	163,200	114,400	209,600
5	185,500	176,500	204,000	143,000	262,000
6	222,600	211,800	244,800	171,600	314,400
7	259,700	247,100	285,600	200,200	366,800
8	296,800	282,400	326,400	228,800	419,200
9	333,900	317,700	367,200	257,400	471,600
10	371,000	353,000	408,000	286,000	524,000
11	408,100	388,300	448,800	314,600	576,400
12	445,200	423,600	489,600	343,200	628,800
<b>Weight (lb/ft)</b>	2.34	2.58	2.34	2.50	2.57

LBCE Type	Description
<b>DB</b>	6 X 26 (6 X 19 Class), Warrington Seale, E.I.P.S., Preformed, Right Lay, Regular Lay, I.W.R.C.
<b>ZB</b>	36 X 7 Non-Rotating, E.I.P.S., Right Lay, Regular Lay, Compacted
<b>LB</b>	6 Strand, Compacted Strand, Seale or Warrington Seale, I.W.R.C., Preformed, Right Lay, Regular Lay
<b>RB</b>	19 X 19 Rotation Resistant Compacted Strand - High Strength - Preformed, Right Lay, Regular Lay
<b>CC</b>	36 X 7 Classification Non-Rotating, E.I.P.S., Right Lay, Regular Lay, Compacted Strand
<b>SB</b>	8 Strand, Preformed, Right Lay, Regular Lay

**Notes:**

- Capacities shown are in pounds and working loads must not exceed the ratings on the capacity charts.
- Study Operator's Manual for wire rope inspection procedures and single part of line application.

## ROLLED OUT LIFTOFF CAPABILITIES

Luffing Boom Length		Luffing Jib Length		Luffing Jib + Fixed Jib Length	
ft	m	ft	m	ft	m
110	33.5	90-200	27.4-61.0	90+30 - 200+30	27.4+9.1-61.0+9.1
120	36.6	90-200	27.4-61.0	90+30 - 200+30	27.4+9.1-61.0+9.1
130	39.6	90-200	27.4-61.0	90+30 - 200+30	27.4+9.1-61.0+9.1
140	42.7	90-200	27.4-61.0	90+30 - 200+30	27.4+9.1-61.0+9.1
150	45.7	90-200	27.4-61.0	90+30 - 200+30	27.4+9.1-61.0+9.1
160	48.8	90-200	27.4-61.0	90+30 - 200+30	27.4+9.1-61.0+9.1
170	51.8	90-200	27.4-61.0	90+30 - 200+30	27.4+9.1-61.0+9.1
*180	54.9	90-200	27.4-61.0	90+30 - 200+30	27.4+9.1-61.0+9.1
*190	57.9	90-200	27.4-61.0	90+30 - 200+30	27.4+9.1-61.0+9.1
*200	61.0	90-200	27.4-61.0	90+30 - 200+30	27.4+9.1-61.0+9.1
*210	64.0	90-180	27.4-54.9	90+30 - 150+30	27.4+9.1-45.7+9.1

## ROLLED UNDER LIFTOFF CAPABILITIES

Luffing Boom Length		Luffing Jib Length	
ft	m	ft	m
110	33.5	90-100	27.4-30.5
120	36.6	90-110	27.4-33.5
130	39.6	90-120	27.4-36.6
140	42.7	90-130	27.4-39.6
150	45.7	90-140	27.4-42.7
160	48.8	90-150	27.4-45.7
170	51.8	90-160	27.4-48.8
*180	54.9	90-170	27.4-51.8
*190	57.9	90-180	27.4-54.9
*200	61.0	90-190	27.4-57.9
*210	64.0	90-180	27.4-54.9

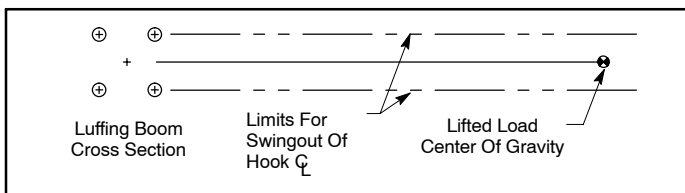
### WARNING

The luffing boom angle must be 75° when erecting or lowering the luffing jib. Crane damage can occur. See Operator's Manual for more information.

\* Erection must be done over the rear of the carrier. Counterweights "ABCDE" upper + "AB" bumper counterweights must be installed.

## WIND SPEED RESTRICTIONS

- Failure to follow these wind speed restrictions may result in structural failure of the luffing attachment, or loss of stability, which could cause property damage and/or bodily injury.
- It is the responsibility of the user to take into account the effects of the wind force on the hook load.** When hoisting any load in windy conditions, the load wind area and load controllability must be considered for safe crane operation. The suspended load's wind sail area can greatly increase the wind loading. Only the user is cognizant of the suspended load's wind sail area.
- Do not allow the load to swing outside imaginary lines drawn through each luffing boom chord during all crane functions.



- Wind speed is to be determined at the luffing boom cap (or higher). A wind speed indicator is supplied with the crane to measure the wind velocity. Do not rely on local weather forecasts for wind velocity. **Wind velocity increases with height and may be much higher at the luffing boom cap than on the ground.**
- The wind velocity limitations listed in the table are based on maximum allowable wind gusts (instantaneous wind velocity). When in doubt, use the next higher wind velocity range.
- Wind speed is to be determined at the luffing boom cap.

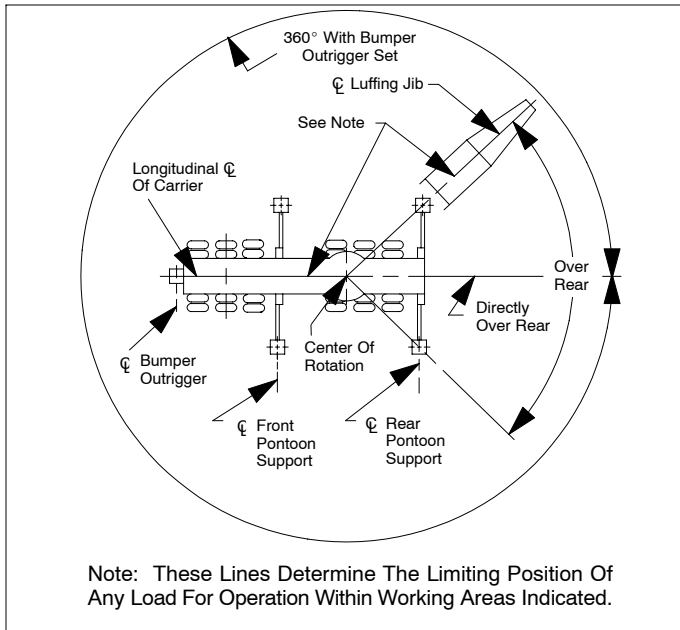
## WIND SPEED CHART

Luffing Boom Lengths:		110' to 160'
Luffing Jib Only Lengths:		90' to 140'
Luffing Jib + Fixed Jib Lengths:		90' + 30' or 110' + 30'
DESCRIPTION		Allowable Wind Speed in MPH
1. Normal Lifting Operation. (See Capacity Charts)		0-25
2. Reduced Operation. Capacities must be reduced by 50%.		26-40
3. No Operation. Store Attachment On Ground.		Over 40
4. Job Site Travel Charts. (See Operator's Manual)		0-15
Luffing Boom Lengths:		170' or 210'
Luffing Jib Only Lengths:		150' to 200'
Luffing Jib + Fixed Jib Lengths:		120' + 30' to 200' + 30'
DESCRIPTION		Allowable Wind Speed in MPH
1. Normal Lifting Operation. (See Capacity Charts)		0-25
2. No Operation. Store Attachment.*		26-40
3. No Operation. Store Attachment On Ground.		Over 40
4. Job Site Travel Charts. (See Operator's Manual)		0-15

\* - The attachment must be stored in one of the following positions:

- Lay the luffing boom and luffing jib on the ground.
- Tie off luffing boom tip to an immovable object. For details and information on the tie-off procedure, see the Operator's Manual.

## WORKING AREAS



## AUXILIARY SHEAVES NOTES

- Capacities are for an HC-278H II truck crane with "ABCDE" upper counterweight and "AB" bumper counterweight.
- Capacities are for working areas, as described on the Working Areas Chart found in the General Information section of the Crane Rating Manual and are based on the crane sitting level on a firm supporting surface.
- Capacities are limited to an LBCE 68" x 80" tubular boom with a luffing boom top.
- Four parts of line are required for maximum lift.
- Capacities are for luffing boom lengths between 110' and 210'.
- The least stable condition is over the side.
- All capacities are in kips (1,000 lbs.) and are not more than 75% of the tipping loads. Those capacities followed by an asterisk are governed by factors other than those which would cause a tipping condition.
- The appropriate deduction must be taken if any luffing jib or fixed jib components are installed. See the Capacity Deductions for Auxiliary Load Handling Equipment for more information.
- If the luffing jib is installed, the minimum luffing boom angle is 65°. The maximum boom angle is 80° when using the auxiliary sheaves.
- The luffing jib should be set to a 15° offset when using the auxiliary sheaves.
- See Operator's Manual for more information.

## MIDFALL NOTES

- Capacities are for an HC-278H II Truck Crane with "ABCDE" upper counterweight and "AB" bumper counterweight.
- Capacities are for working areas as described on the Working Areas Chart found in the General Information section of the Crane Rating Manual and are based on the crane sitting level on a firm supporting surface.
- Capacities are limited to an LBCE 68" x 80" luffing boom and 50" x 60" luffing jib with a midfall extension.
- The least stable condition is over the side.
- All capacities are in kips (1,000 lb) and are not more than 75% of the tipping loads. The capacities followed by an asterisk are governed by factors other than those that would cause a tipping condition.

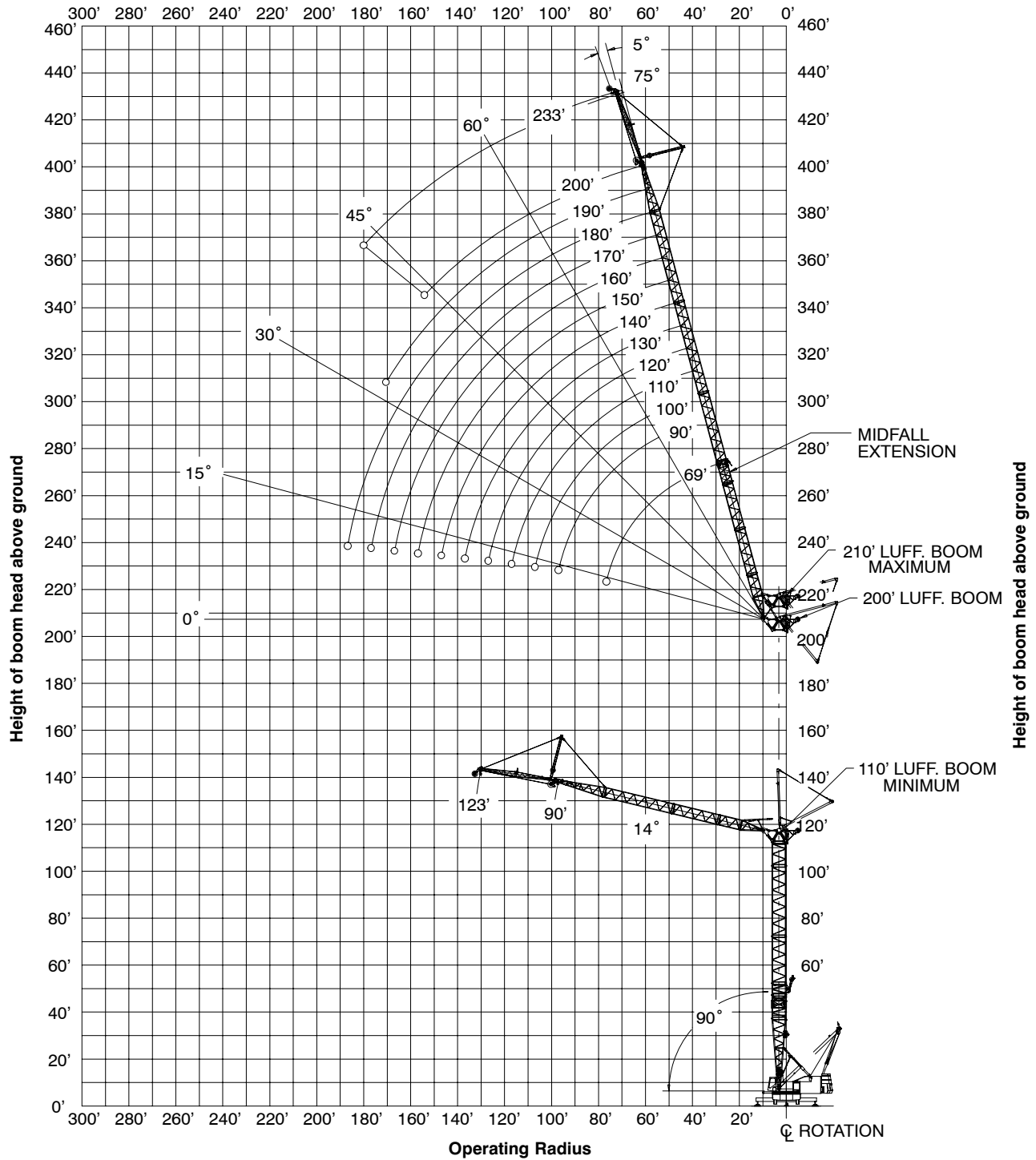
- The appropriate deduction must be taken if the fixed jib is installed, or if any hook blocks or hook balls are reeved over the luffing jib, fixed jib, or auxiliary sheaves. See the Capacity Deductions for Auxiliary Load Handling Equipment chart for more information.
- The two suspension pendants must be connected to the link in the position identified with the corresponding luffing jib length, prior to lifting a load from the midfall.
- The midfall extension can only be installed with the male pin connection located 60 ft from the luffing jib foot pin.
- Operation with more than one part of line is not permitted.
- See Operator's Manual for more information.

## CRANE ASSEMBLY COMPONENT WEIGHTS

Component	Weight	
	lb	kg
1. 30' Luffing Boom Base Section (W/O 3rd Drum Assy)	4,912	2 228
• 3rd Drum Assembly (W/O Rope)	2,857	1 296
• 3rd Fleeting Sheave Assembly	850	386
• 3rd Drum Rope (970' of 1" Type "RB")	1,940	880
2. Luffing Boom Ext. (W/O Guide Rails And Pendants)		
• 10' Luffing Boom Extension Assembly	1,243	564
• 10' Luffing Boom Ext. With Lifting Sheaves Assy	3,251	1 475
• 10' "JN" Luffing Boom Extension	1,273	577
• 20' Luffing Boom Extension "JE" Assembly	2,067	938
• 30' Luffing Boom Extension "JE" Assembly	2,892	1 312
• 40' Luffing Boom Extension "JE" Assembly	3,923	1 779
• 50' Luffing Boom Extension "JE" Assembly	4,807	2 180
3. Pendants		
• 1-1/4" Diameter X 10' Long, Type "N" (Each)	82	37
• 1-1/4" Diameter X 20' Long, Type "N" (Each)	109	49
• 1-1/4" Diameter X 30' Long, Type "N" (Each)	137	62
• 1-1/4" Diameter X 40' Long, Type "N" (Each)	164	74
• 1-1/4" Diameter X 50' Long, Type "N" (Each)	192	87
4. 5' Bail Anchor Extension	1,992	904
5. Luffing Jib Bail Assembly	1,122	509
6. Luffing Jib Bridle Assembly	788	357
7. Luffing Jib Bridle Guide Rails		
• 20' Rail (Each)	158	72
• Crossmember Support Assembly (Each)	68	31
• 20' Guide Rail Completely Assembled (Each)	520	236
8. 5' Luffing Boom Cap Assy (W/O Pendant Deflector)	3,674	1 667
9. Pendant Deflector Assembly	782	355
10. Fan Post Assembly	5,553	2 519
11. 10' Luffing Jib Base Assy (W/Luffing Jib Backstops)	1,823	827
12. Luffing Jib Extensions		
• 10' Luffing Jib Extension Assembly	602	273
• 10' Luffing Jib Midfall Extension Assembly	1,030	467
• 20' Luffing Jib Extension Assembly	1,022	464
• 30' Luffing Jib Extension Assembly	1,444	655
• 40' Luffing Jib Extension Assembly	1,864	846
13. 20' Luffing Jib Peak Assembly (With Nose Wheel)	3,786	1 717
14. 30' Fixed Jib Assembly (With Nose Wheel)	2,147	974
15. Upper Counterweights		
• "A"	30,000	13 680
• "B"	25,000	11 340
• "C"	21,500	9 752
• "D"	21,500	9 752
• "E"	10,000	4 536
• "AB"	55,000	25 020
• "ABC"	76,500	34 700
• "ABCD"	98,000	44 453
• "ABCDE"	108,000	48 989
16. Bumper Counterweights		
• "A"	11,400	5 171
• "B"	15,300	6 940
• "AB"	26,700	12 111

# WORKING RANGE DIAGRAMS

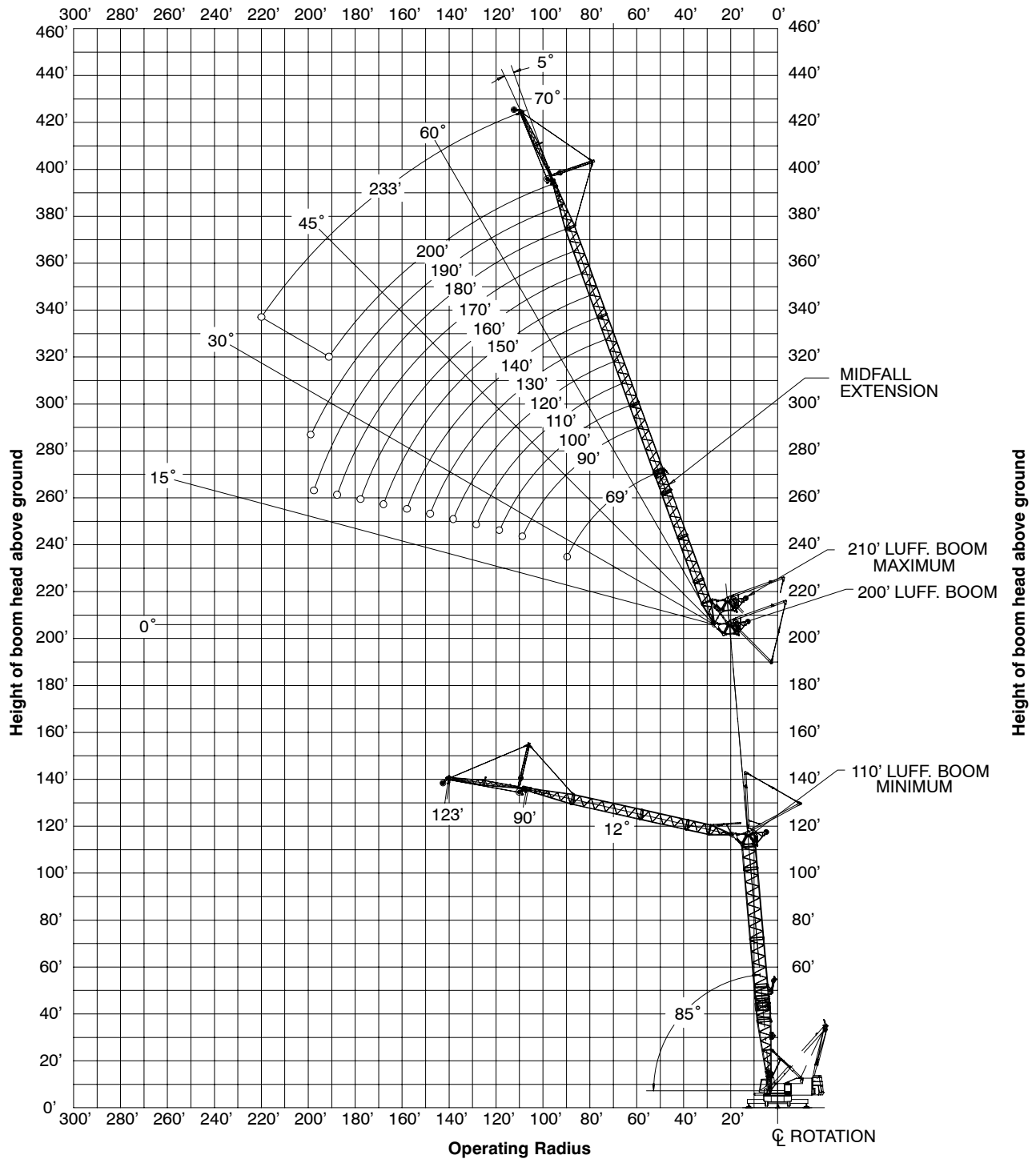
## 90° LUFFING BOOM ANGLE – 360° LUFFING JIB + FIXED JIB



**Notes:**

1. Boom and jib geometry shown are for unloaded condition and crane standing level on firm supporting surface. Boom deflection, subsequent radius, and boom angle change must be accounted for when applying load to hook.
2. Maximum and minimum luffing jib angles are equal to the values listed in the Capacity Chart for each boom length.
3. Refer to the Capacity Charts for allowable luffing boom, luffing jib, and fixed jib combinations.

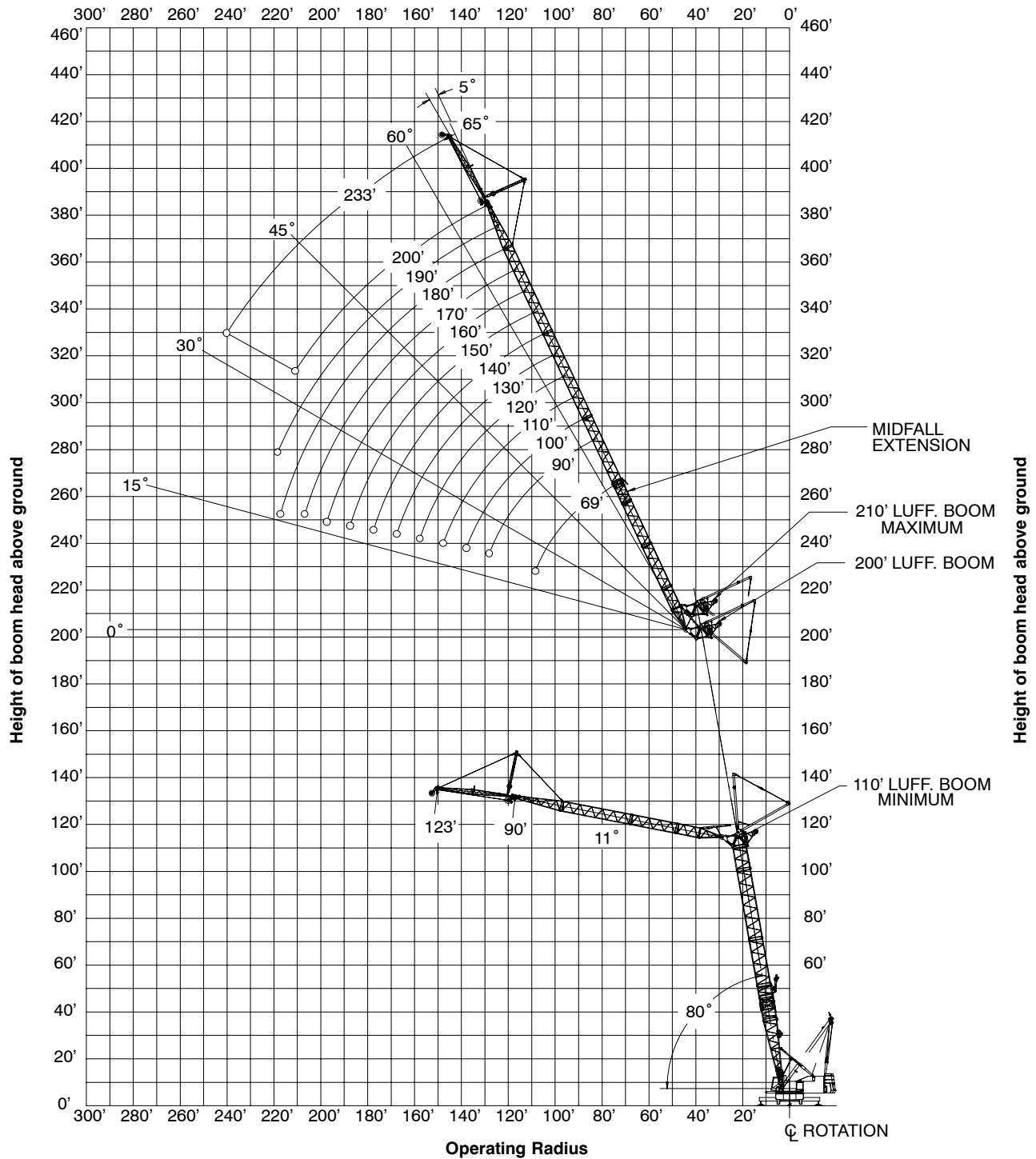
**85° LUFFING BOOM ANGLE – 360°  
LUFFING JIB + FIXED JIB**



**Notes:**

1. Boom and jib geometry shown are for unloaded condition and crane standing level on firm supporting surface. Boom deflection, subsequent radius, and boom angle change must be accounted for when applying load to hook.
2. Maximum and minimum luffing jib angles are equal to the values listed in the Capacity Chart for each boom length.
3. Refer to the Capacity Charts for allowable luffing boom, luffing jib, and fixed jib combinations.

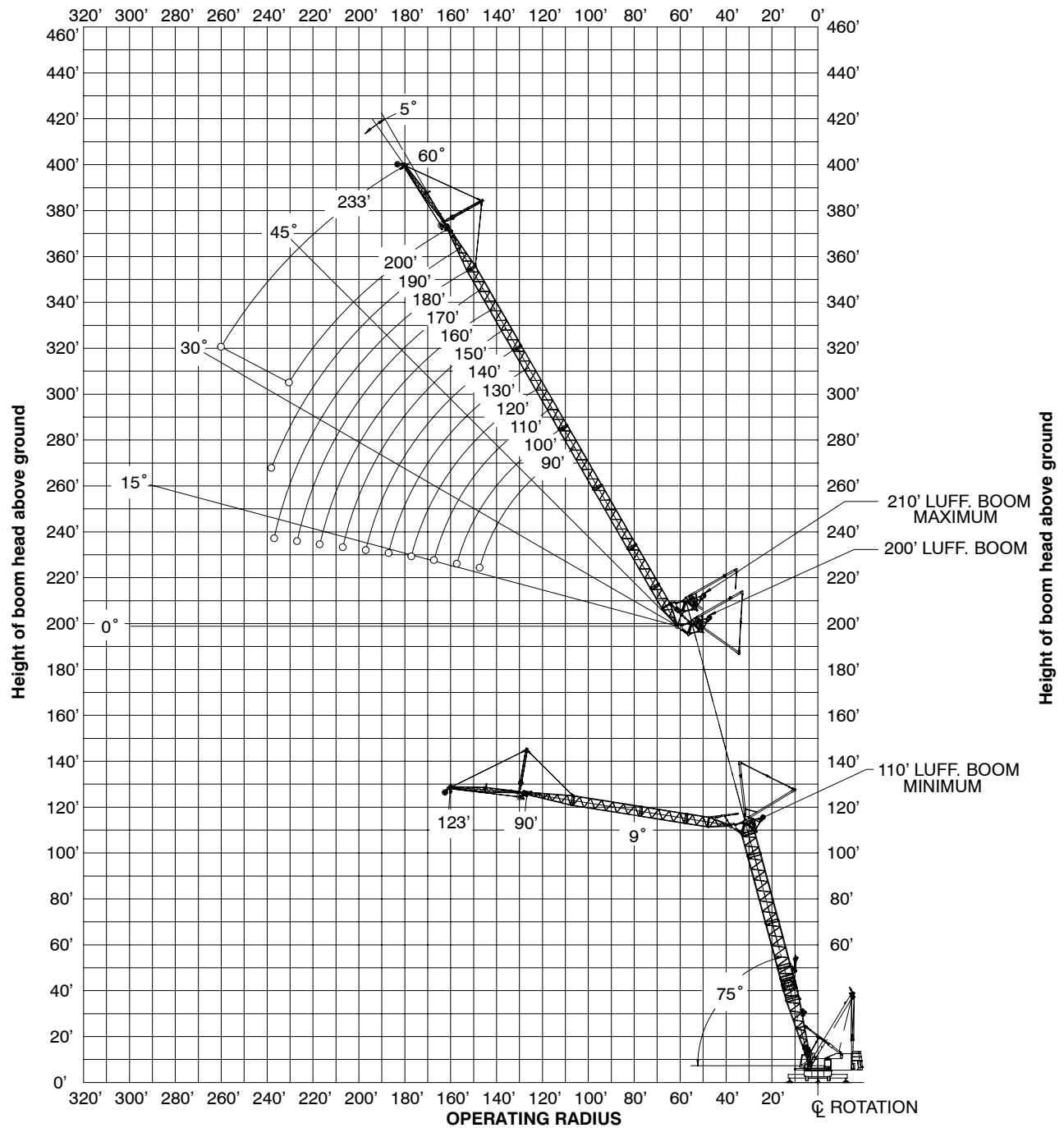
**80° LUFFING BOOM ANGLE – 360°  
LUFFING JIB + FIXED JIB**



**Notes:**

1. Boom and jib geometry shown are for unloaded condition and crane standing level on firm supporting surface. Boom deflection, subsequent radius, and boom angle change must be accounted for when applying load to hook.
2. Maximum and minimum luffing jib angles are equal to the values listed in the Capacity Chart for each boom length.
3. Refer to the Capacity Charts for allowable luffing boom, luffing jib, and fixed jib combinations.

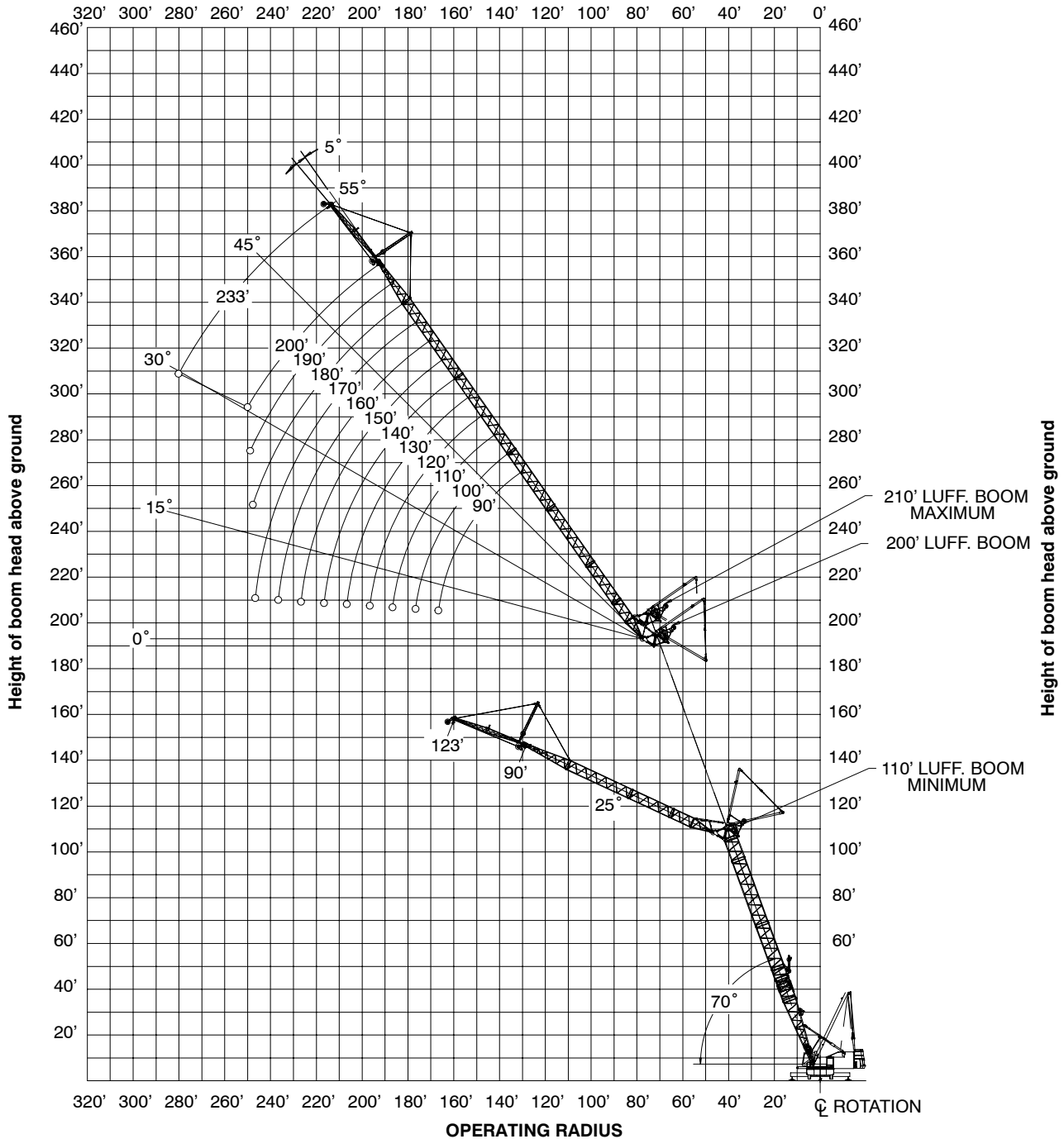
**75° LUFFING BOOM ANGLE – 360°  
LUFFING JIB + FIXED JIB**



**Notes:**

1. Boom and jib geometry shown are for unloaded condition and crane standing level on firm supporting surface. Boom deflection, subsequent radius, and boom angle change must be accounted for when applying load to hook.
2. Maximum and minimum luffing jib angles are equal to the values listed in the Capacity Chart for each boom length.
3. Refer to the Capacity Charts for allowable luffing boom, luffing jib, and fixed jib combinations.

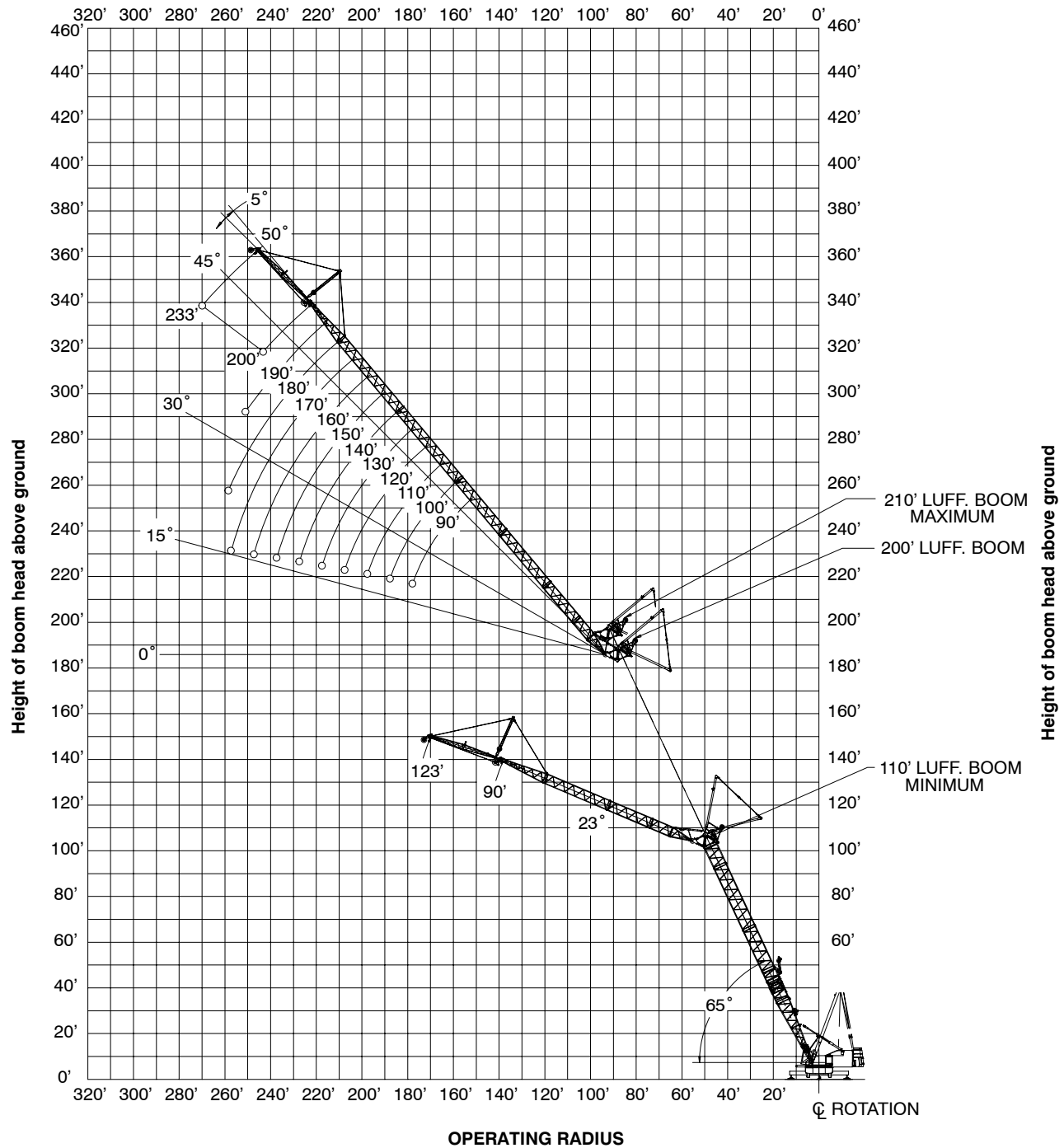
**70° LUFFING BOOM ANGLE – 360°  
LUFFING JIB + FIXED JIB**



**Notes:**

1. Boom and jib geometry shown are for unloaded condition and crane standing level on firm supporting surface. Boom deflection, subsequent radius, and boom angle change must be accounted for when applying load to hook.
2. Maximum and minimum luffing jib angles are equal to the values listed in the Capacity Chart for each boom length.
3. Refer to the Capacity Charts for allowable luffing boom, luffing jib, and fixed jib combinations.

**65° LUFFING BOOM ANGLE – 360°  
LUFFING JIB + FIXED JIB**



**Notes:**

1. Boom and jib geometry shown are for unloaded condition and crane standing level on firm supporting surface. Boom deflection, subsequent radius, and boom angle change must be accounted for when applying load to hook.
2. Maximum and minimum luffing jib angles are equal to the values listed in the Capacity Chart for each boom length.
3. Refer to the Capacity Charts for allowable luffing boom, luffing jib, and fixed jib combinations.

**HC-278H II 360 Degree Capacities - Luffing Boom + Luffing Jib**  
**68" x 80" Luffing Boom, 50" x 60" Luffing Jib, ABCDE + AB Counterweight**

Luffing Boom Length (ft)	Luffing Jib Length (ft)	Load Radius (ft)	Luffing Boom Angle																			
			90 Degrees			85 Degrees			80 Degrees			75 Degrees			70 Degrees			65 Degrees				
			Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)		
110	90	33	75.0	204.2	104.0	*																
110	90	35	73.5	203.6	100.6	*																
110	90	40	70.2	202.0	93.7	*																
110	90	50	63.3	197.7	80.4	*	70.0	200.9	92.8	*												
110	90	60	55.9	191.8	69.0	*	62.9	196.5	79.3	*												
110	90	66									65.0	196.1	77.8									
110	90	70	47.8	183.9	61.0	*	55.5	190.5	71.4	*	62.5	194.4	72.8									
110	90	80	38.4	173.2	55.8	*	47.4	182.6	63.2	*	55.1	188.3	61.3									
110	90	83												60.0	189.8	56.2						
110	90	90	26.6	157.5	54.2	*	38.0	171.7	55.1	*	46.9	180.2	52.8	54.5	185.2	50.5						
110	90	98															55.0	182.2	43.1			
110	90	100	0.0	117.3	31.0	*	25.9	155.7	48.1	*	37.4	169.2	46.1	46.2	176.9	44.2	53.7	181.0	42.2			
110	90	109					0.0	116.3	35.2	*												
110	90	110									25.1	152.7	41.1	36.6	165.6	39.4	45.3	172.5	37.6			
110	90	113																50.0	173.3	34.6		
110	90	118								0.0	114.5	37.2										
110	90	120											24.0	148.5	35.2	35.5	160.8	33.7	44.1	167.0	32.1	
110	90	128											0.0	111.9	32.3							
110	90	130														22.3	142.7	30.3	34.0	154.6	28.9	
110	90	137														0.0	108.5	28.2				
110	90	140																	19.9	135.0	26.2	
110	90	145																	0.0	104.3	24.8	
110	110	38	75.0	223.5	89.2	*																
110	110	40	73.9	223.0	86.8	*																
110	110	50	68.4	219.6	74.5	*																
110	110	57					70.0	219.7	77.0	*												
110	110	60	62.7	215.0	63.9	*	68.2	218.4	73.9	*												
110	110	70	56.6	209.2	55.0	*	62.4	213.8	65.7	*												
110	110	75									65.0	214.2	66.0									
110	110	80	50.1	201.7	48.3	*	56.4	207.9	58.7	*	62.1	211.7	60.7									
110	110	90	43.0	192.3	43.5	*	49.8	200.4	50.9	*	56.0	205.7	52.2									
110	110	93												60.0	207.2	48.0						
110	110	100	34.6	179.8	40.1	*	42.6	190.8	45.1	*	49.5	198.1	45.6	55.5	202.6	43.5						
110	110	110	24.0	162.0	39.5	*	34.2	178.2	40.7	*	42.2	188.4	40.7	48.9	194.9	38.8	55.0	198.6	37.1			
110	110	120	0.0	117.3	24.8	*	23.4	160.0	38.0	*	33.7	175.6	36.4	41.6	184.9	34.7	48.2	190.5	33.1			
110	110	126																	50.0	188.6	29.5	
110	110	129					0.0	116.3	28.1	*												
110	110	130									22.7	156.9	32.8	33.0	171.8	31.3	40.8	180.4	29.8	47.3	185.1	28.4
110	110	138									0.0	114.5	30.1									
110	110	140											21.6	152.5	28.4	32.0	166.8	27.0	39.7	174.6	25.7	
110	110	148											0.0	111.9	26.3							
110	110	150														20.2	146.4	24.6	30.7	160.4	23.4	
110	110	157														0.0	108.5	23.1				
110	110	160																	18.0	138.3	21.4	
110	110	165																	0.0	104.3	20.4	
110	130	43	75.0	242.9	74.9	*																
110	130	50	71.8	240.8	68.8	*																
110	130	60	67.1	237.1	60.7	*																
110	130	64					70.0	238.5	65.6	*												
110	130	70	62.3	232.4	51.2	*	66.9	235.9	61.0	*												
110	130	80	57.2	226.5	44.1	*	62.0	231.2	54.9	*												
110	130	83									65.0	232.3	56.9									
110	130	90	51.7	219.4	38.1	*	56.9	225.3	47.9	*	61.8	229.1	51.6									
110	130	100	45.9	210.6	34.2	*	51.5	218.1	41.4	*	56.6	223.1	45.0									
110	130	103												60.0	224.5	41.4						
110	130	110	39.4	199.8	31.3	*	45.6	209.2	36.0	*	51.2	215.8	40.2	56.2	220.0	38.3						
110	130	120	31.8	185.8	29.5	*	39.1	198.2	32.5	*	45.3	206.9	35.9	50.8	212.6	34.2						
110	130	121															55.0	215.0	32.0			
110	130	130	22.0	166.1	29.1	*	31.4	184.1	30.0	*	38.7	195.8	32.3	44.8	203.5	30.8	50.2	208.3	29.2			
110	130	139																	50.0	203.9	25.3	
110	130	140	0.0	117.3	19.9	*	21.5	164.0	28.6	*	30.9	181.4	29.3	38.1	192.2	27.9	44.2	199.1	26.5	49.4	203.0	25.1
110	130	149					0.0	116.3	22.7	*												
110	130	150									20.8	160.8	26.7	30.3	177.5	25.4	37.4	187.5	24.1	43.3	193.5	22.8
110	130	158									0.0	114.5	24.7									
110	130	160											19.9	156.1	23.3	29.4	172.3	22.1	36.4	181.5	20.9	
110	130	168											0.0	111.9	21.7							
110	130	170														18.5	149.8	20.3	28.2	165.7	19.2	
110	130	177														0.0	108.5	19.1				
110	130	180																	16.6	141.4	17.6	
110	130	185																	0.0	104.4	16.8	
110	150	48	75.0	262.2	61.7	*																
110	150	50	74.3	261.7	60.9	*																
110	150	60	70.3	258.5	56.2	*																
110	150	70	66.2	254.5	48.4	*	70.0	257.3	55.7	*												
110	150	80	62.0	249.7	40.0	*	66.0	253.4	50.6	*												
110	150	90	57.5	243.9	34.9	*	61.8	248.5	46.0	*												
110	150	92									65.0	250.5	49.5	*								
110	150	100	52.9	236.9	30.7	*	57.3	242.6	38.2	*	61.5	246.4	44.4									
110	150	110	47.9	228.6	27.4	*	52.7	235.6	33.3	*	57.1	240.5	39.6									
110	150	113												60.0	241.8	36.4						
110	150	120	42.6	218.7	24.8	*	47.7	227.3	29.4	*	52.4	233.4	35.4	56.7	237.3	33.6						
110	150	130	36.6	206.6	22.9	*	42.3	217.3	26.3	*	47.4	225.0	31.5	52.1	230.2	30.2						
110	150	133															55.0	231.4	27.8			
110	150	140	29.5	191.2	21.6	*	36.3	205.1	23.8	*	42.0	214.9	27.5	47.0	221.7	27.3	51.6	226.0	25.9			
110	150	150	20.5	169.8	21.4	*	29.2	189.5	22.0	*	35.9	202.5	24.3	41.6	211.4	24.9	46.5	217.3	23.5			
110	150	152																	50.0	219.2	21.8	
110	150	160	0.0	117.3	16.1	*	20.0	167.7	21.0	*	28.8	186.7	21.6	35.4	198.8	22.8	41.0	206.8	21.5	45.8	211.8	20.3
1																						

**HC-278H II 360 Degree Capacities - Luffing Boom + Luffing Jib**  
**68" x 80" Luffing Boom, 50" x 60" Luffing Jib, ABCDE + AB Counterweight**

Luffing Boom Length (ft)	Luffing Jib Length (ft)	Load Radius (ft)	Luffing Boom Angle																						
			90 Degrees			85 Degrees			80 Degrees			75 Degrees			70 Degrees			65 Degrees							
			Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)					
110	150	180											18.5	159.5	18.5	*	27.3	177.4	18.2		33.8	187.8	17.1		
110	150	188											0.0	111.9	17.8	*									
110	150	190																17.2	153.0	16.8		26.2	170.5	15.8	
110	150	197																0.0	108.5	15.9					
110	150	200																				15.4	144.2	14.6	
110	150	205																				0.0	104.4	13.9	
110	170	54	75.0	281.5	50.0	*																			
110	170	60	72.7	279.6	47.8	*																			
110	170	70	69.2	276.2	44.6	*																			
110	170	77					70.0	276.1	45.1	*															
110	170	80	65.5	272.0	37.6	*	69.0	275.0	44.3	*															
110	170	90	61.7	267.0	32.3	*	65.3	270.8	40.0	*															
110	170	100	57.8	261.2	28.1	*	61.6	265.8	36.7	*	65.0	268.6	39.6	*											
110	170	110	53.8	254.4	24.6	*	57.7	260.0	31.4	*	61.4	263.7	37.3	*											
110	170	120	49.5	246.5	21.9	*	53.6	253.1	27.3	*	57.4	257.8	34.8	*											
110	170	123																60.0	259.1	32.0					
110	170	130	44.9	237.2	19.6	*	49.3	245.1	24.0	*	53.3	250.9	30.3	*	57.1	254.7	29.6								
110	170	140	39.9	226.2	17.8	*	44.7	235.8	21.2	*	49.0	242.9	26.1	*	53.0	247.7	26.8								
110	170	144																55.0	247.7	24.2					
110	170	150	34.3	213.0	16.5	*	39.6	224.7	19.0	*	44.4	233.4	22.6	*	48.7	239.6	24.3	52.6	243.5	22.9					
110	170	160	27.7	196.3	15.7	*	34.0	211.4	17.3	*	39.3	222.3	19.8	*	44.0	230.0	22.2	48.2	235.3	20.9					
110	170	165																				50.0	234.5	18.8	
110	170	170	19.2	173.3	15.6	*	27.4	194.5	16.0	*	33.7	208.8	17.4	*	38.9	218.7	20.2	43.5	225.6	19.2		47.6	229.9	18.0	
110	170	180	0.0	117.3	12.9	*	18.8	171.1	15.2	*	27.0	191.7	15.5	*	33.2	205.0	17.2	38.4	214.0	17.6		42.9	220.0	16.5	
110	170	189					0.0	116.3	14.1	*															
110	170	190									18.2	167.6	14.1	*	26.4	187.5	15.0	32.6	200.0	16.2		37.6	208.1	15.2	
110	170	198									0.0	114.6	14.2	*											
110	170	200												17.4	162.7	13.3	*	25.6	182.1	14.7	*	31.7	193.7	14.0	
110	170	208												0.0	111.9	12.9	*								
110	170	210																16.2	155.9	12.7	*	24.6	175.0	13.0	
110	170	217																0.0	108.5	11.9	*				
110	170	220																				14.5	146.8	12.0	
110	170	225																				0.0	104.4	11.1	*
110	190	59	75.0	300.8	38.0	*																			
110	190	60	74.6	300.5	37.8	*																			
110	190	70	71.4	297.4	35.6	*																			
110	190	80	68.2	293.7	33.3	*																			
110	190	84					70.0	294.9	35.2	*															
110	190	90	64.9	289.4	30.1	*	68.1	292.6	34.0	*															
110	190	100	61.6	284.4	25.8	*	64.8	288.2	31.9	*															
110	190	109									65.0	286.7	31.9	*											
110	190	110	58.1	278.5	22.3	*	61.4	283.1	30.0	*	64.6	286.2	31.6	*											
110	190	120	54.4	271.9	19.5	*	57.9	277.3	25.6	*	61.2	281.0	29.8	*											
110	190	130	50.6	264.2	17.2	*	54.3	270.6	22.2	*	57.7	275.1	28.0	*											
110	190	133																60.0	276.4	28.2					
110	190	140	46.6	255.4	15.3	*	50.5	262.9	19.3	*	54.1	268.4	25.1	*	57.4	272.0	26.2								
110	190	150	42.3	245.2	13.7	*	46.4	254.0	17.0	*	50.2	260.6	21.5	*	53.8	265.2	23.7								
110	190	156																55.0	264.1	21.1					
110	190	160	37.6	233.3	12.5	*	42.1	243.7	15.0	*	46.2	251.7	18.4	*	50.0	257.4	21.6	53.4	261.0	20.3					
110	190	170	32.4	219.0	11.6	*	37.4	231.7	13.5	*	41.9	241.3	15.9	*	45.9	248.3	19.8	49.6	253.1	18.6					
110	190	178																				50.0	249.9	16.2	
110	190	180	26.2	201.1	11.0	*	32.1	217.3	12.2	*	37.1	229.2	13.8	*	41.5	237.9	16.6	45.5	243.9	17.0		49.0	247.7	15.9	
110	190	190	18.2	176.6	11.1	*	25.9	199.3	11.3	*	31.8	214.6	12.1	*	36.7	225.6	14.1	41.1	233.3	15.7		44.9	238.4	14.6	
110	190	200	0.0	117.3	9.0	*	17.8	174.3	10.7	*	25.5	196.3	10.8	*	31.4	210.8	12.1	36.2	220.8	14.4		40.4	227.6	13.4	
110	190	209					0.0	116.4	9.4	*															
110	190	210									17.2	170.7	9.9	*	25.0	192.1	10.5	30.8	205.7	12.2	*	35.5	214.7	12.4	
110	190	218									0.0	114.6	9.8	*											
110	190	220												16.4	165.6	9.3	*	24.2	186.5	10.3	*	30.0	199.2	11.4	
110	190	228												0.0	111.9	9.2	*								
110	190	230																15.3	158.7	8.9	*	23.2	179.2	10.3	*
110	190	237																0.0	108.5	8.4	*				
110	190	240																				13.7	149.3	8.6	*
110	190	245																				0.0	104.4	7.9	*
110	200	61	75.0	310.5	33.3	*																			
110	200	70	72.4	307.9	31.7	*																			
110	200	80	69.4	304.5	29.7	*																			
110	200	88					70.0	304.3	31.7	*															
110	200	90	66.3	300.4	27.8	*	69.2	303.3	31.2	*															
110	200	100	63.1	295.6	24.7	*	66.1	299.2	29.3	*															
110	200	110	59.8	290.2	21.3	*	63.0	294.5	27.5	*															
110	200	113									65.0	295.8	28.5	*											
110	200	120	56.5	284.0	18.4	*	59.7	289.0	24.9	*	62.8	292.4	27.3	*											
110	200	130	53.0	276.9	16.1	*	56.3	282.7	21.4	*	59.5	286.9	25.7	*											
110	200	138													60.0	285.1	25.8	*							
110	200	140	49.3	268.8	14.1	*	52.8	275.6	18.5	*	56.1	280.6	24.2	*	59.3	283.8	25.5	*							
110	200	150	45.4	259.6	12.6	*	49.1	267.5	16.1	*	52.6	273.4	21.0	*	55.9	277.4	23.5	*							

**HC-278H II 360 Degree Capacities - Luffing Boom + Luffing Jib**  
**68" x 80" Luffing Boom, 50" x 60" Luffing Jib, ABCDE + AB Counterweight**

Luffing Boom Length (ft)	Luffing Jib Length (ft)	Load Radius (ft)	Luffing Boom Angle																	
			90 Degrees			85 Degrees			80 Degrees			75 Degrees			70 Degrees			65 Degrees		
			Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)
110	200	247																		
110	200	250																		
110	200	255																		
130	90	33	75.0	224.2	<b>101.0</b>	*														
130	90	35	73.5	223.6	<b>97.9</b>	*														
130	90	40	70.2	222.0	<b>91.4</b>	*														
130	90	50	63.3	217.7	<b>78.8</b>	*														
130	90	52					70.0	220.8	<b>90.7</b>	*										
130	90	60	55.9	211.8	<b>71.4</b>	*	64.2	217.3	<b>79.4</b>	*										
130	90	70	47.8	203.9	<b>62.6</b>	*	56.9	211.6	<b>71.2</b>	*	65.0	215.8	<b>71.9</b>							
130	90	80	38.4	193.2	<b>56.7</b>	*	48.9	204.0	<b>63.7</b>	*	57.8	210.3	<b>60.5</b>							
130	90	88									60.0	209.2	<b>50.8</b>							
130	90	90	26.6	177.5	<b>51.0</b>	*	39.8	193.8	<b>54.8</b>	*	49.9	203.0	<b>52.1</b>	58.5	207.9	<b>49.3</b>				
130	90	100	0.0	137.3	<b>32.7</b>	*	28.4	179.0	<b>47.9</b>	*	40.9	193.1	<b>45.5</b>	50.6	200.8	<b>43.1</b>				
130	90	105												55.0	201.0	<b>38.5</b>				
130	90	110					7.7	148.3	<b>42.4</b>	*	29.9	179.1	<b>40.6</b>	41.8	191.2	<b>38.5</b>	51.2	197.4	<b>36.4</b>	
130	90	111					0.0	136.3	<b>36.8</b>	*										
130	90	120									12.0	153.0	<b>36.3</b>	31.1	177.7	<b>34.4</b>	42.4	188.0	<b>32.5</b>	
130	90	122									0.0	134.2	<b>35.4</b>							
130	90	130												14.7	154.0	<b>31.0</b>	31.9	174.8	<b>29.3</b>	
130	90	133												0.0	131.2	<b>30.0</b>				
130	90	140															16.2	152.4	<b>26.5</b>	
130	90	144												0.0	127.3	<b>25.5</b>				
130	90	150															16.8	148.5	<b>22.8</b>	
130	90	154															0.0	122.5	<b>21.9</b>	
130	110	38	75.0	243.5	<b>86.3</b>	*														
130	110	40	73.9	243.0	<b>84.1</b>	*														
130	110	50	68.4	239.6	<b>72.6</b>	*														
130	110	58					70.0	239.6	<b>75.2</b>	*										
130	110	60	62.7	235.0	<b>64.9</b>	*	69.1	239.0	<b>73.7</b>	*										
130	110	70	56.6	229.2	<b>56.8</b>	*	63.4	234.6	<b>65.6</b>	*										
130	110	78									65.0	233.9	<b>61.4</b>							
130	110	80	50.1	221.7	<b>49.5</b>	*	57.4	229.0	<b>59.2</b>	*	64.1	233.2	<b>59.9</b>							
130	110	90	43.0	212.3	<b>44.2</b>	*	51.0	221.8	<b>54.0</b>	*	58.2	227.7	<b>51.5</b>							
130	110	98												60.0	226.5	<b>43.6</b>				
130	110	100	34.6	199.8	<b>40.4</b>	*	44.0	212.6	<b>47.3</b>	*	51.8	220.7	<b>45.0</b>	58.7	225.3	<b>42.4</b>				
130	110	110	24.0	182.0	<b>35.8</b>	*	35.8	200.6	<b>42.0</b>	*	44.8	211.8	<b>40.2</b>	52.4	218.4	<b>37.9</b>				
130	110	117															55.0	217.4	<b>33.1</b>	
130	110	120	0.0	137.3	<b>26.1</b>	*	25.6	183.8	<b>37.9</b>	*	36.9	200.2	<b>35.9</b>	45.5	209.7	<b>33.9</b>	52.9	215.0	<b>31.9</b>	
130	110	130					6.9	149.5	<b>33.3</b>	*	27.0	184.1	<b>32.3</b>	37.7	198.4	<b>30.5</b>	46.0	206.4	<b>28.7</b>	
130	110	131					0.0	136.3	<b>29.5</b>	*										
130	110	135																		
130	110	140									10.9	155.0	<b>29.3</b>	28.1	183.0	<b>27.7</b>	38.2	195.3	<b>26.0</b>	
130	110	142									0.0	134.2	<b>28.7</b>							
130	110	150												13.3	156.4	<b>25.2</b>	28.8	180.2	<b>23.7</b>	
130	110	153												0.0	131.2	<b>24.5</b>				
130	110	160															14.7	155.1	<b>21.7</b>	
130	110	164												0.0	127.3	<b>21.0</b>				
130	110	170															15.2	151.3	<b>18.7</b>	
130	110	174															0.0	122.5	<b>18.0</b>	
130	130	43	75.0	262.9	<b>72.4</b>	*														
130	130	50	71.8	260.8	<b>66.7</b>	*														
130	130	60	67.1	257.1	<b>59.5</b>	*														
130	130	65					70.0	258.4	<b>63.8</b>	*										
130	130	70	62.3	252.4	<b>53.0</b>	*	67.8	256.6	<b>60.5</b>	*										
130	130	80	57.2	246.5	<b>45.4</b>	*	62.9	252.0	<b>54.5</b>	*										
130	130	87									65.0	252.0	<b>53.2</b>							
130	130	90	51.7	239.4	<b>39.0</b>	*	57.8	246.3	<b>49.6</b>	*	63.5	250.6	<b>50.8</b>							
130	130	100	45.9	230.6	<b>34.8</b>	*	52.5	239.3	<b>43.9</b>	*	58.4	245.0	<b>44.4</b>							
130	130	108												60.0	243.8	<b>38.2</b>				
130	130	110	39.4	219.8	<b>31.6</b>	*	46.7	230.8	<b>37.8</b>	*	53.1	238.2	<b>39.6</b>	58.9	242.6	<b>37.3</b>				
130	130	120	31.8	205.8	<b>29.1</b>	*	40.3	220.3	<b>33.7</b>	*	47.4	229.9	<b>35.4</b>	53.6	235.9	<b>33.3</b>				
130	130	128															55.0	233.8	<b>28.6</b>	
130	130	130	22.0	186.1	<b>25.7</b>	*	32.9	206.8	<b>30.6</b>	*	41.1	219.6	<b>31.9</b>	48.0	227.8	<b>30.0</b>	54.0	232.5	<b>28.1</b>	
130	130	140	0.0	137.3	<b>21.0</b>	*	23.5	188.1	<b>28.4</b>	*	33.8	206.5	<b>28.9</b>	41.7	217.7	<b>27.2</b>	48.3	224.4	<b>25.4</b>	
130	130	147																		
130	130	150					6.4	150.7	<b>24.4</b>	*	24.8	188.7	<b>26.3</b>	34.6	205.0	<b>24.7</b>	42.1	214.5	<b>23.2</b>	
130	130	151					0.0	136.3	<b>22.9</b>	*										
130	130	160									10.0	156.8	<b>24.1</b>	25.8	187.7	<b>22.6</b>	35.1	202.0	<b>21.2</b>	
130	130	162									0.0	134.2	<b>22.3</b>	*						
130	130	170												12.2	158.7	<b>20.8</b>	26.4	185.1	<b>19.4</b>	
130	130	173												0.0	131.3	<b>20.2</b>				
130	130	180															13.5	157.6	<b>17.9</b>	
130	130	184												0.0	127.3	<b>17.3</b>				
130	130	190															14.0	153.8	<b>15.4</b>	
130	130	194															0.0	122.5	<b>14.8</b>	
130	150	48	75.0	282.2	<b>58.9</b>	*														
130	150	50	74.3	281.7	<b>58.2</b>	*														
130	150	60	70.3	278.5	<b>54.0</b>	*														
130	150	70	66.2	274.5	<b>48.9</b>	*														
130	150	72					70.0	277.2	<b>53.5</b>	*										
130	150	80	62.0	269.7	<b>42.4</b>	*	66.8	274.1	<b>50.0</b>	*										
130	150	90	57.5	263.9	<b>35.9</b>	*	62.5	269.3	<b>45.5</b>	*										
130	150	95									65.0	270.2	<b>46.5</b>							
130	150	100	52.9	256.9	<b>31.4</b>	*	58.1	263.6	<b>41.7</b>	*	63.0	267.9	<b>43.7</b>							
130	150	110	47.9	248.6	<b>27.9</b>	*	53.5	256.8	<b>35.4</b>	*	58.7	262.3	<b>39.0</b>							
130	150	118												60.0	261.1	<b>33.4</b>				
130	150	120	42.6	238.7	<b>25.0</b>	*	48.6	248.8	<b>30.9</b>	*	54.1	255.7	<b>34.8</b>	59.1	259.9	<b>32.7</b>				
130	150	130	36.6	226.6	<b>22.9</b>	*	43.3	239.1	<b>27.4</b>	*	49.2	247.8	<b>31.3</b>	54.5	253.4	<b>29.4</b>				

**HC-278H II 360 Degree Capacities - Luffing Boom + Luffing Jib**  
**68" x 80" Luffing Boom, 50" x 60" Luffing Jib, ABCDE + AB Counterweight**

Luffing Boom Length (ft)	Luffing Jib Length (ft)	Load Radius (ft)	Luffing Boom Angle																	
			90 Degrees			85 Degrees			80 Degrees			75 Degrees			70 Degrees			65 Degrees		
			Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)
130	150	140	29.5	211.2	20.8	37.4	227.3	24.5	43.9	238.3	28.4	49.7	245.6	26.6	55.0	250.2	24.9			
130	150	150	20.5	189.8	18.6	30.5	212.5	22.3	38.1	226.8	25.8	44.5	236.3	24.2	50.0	242.2	22.5			
130	150	160	0.0	137.3	17.0	21.9	192.1	20.6	31.4	212.4	22.5	38.7	225.0	22.1	44.8	233.0	20.6	50.0	237.3	19.1
130	150	170				5.9	151.8	18.0	23.1	193.0	19.7	32.1	210.9	20.3	39.1	221.9	18.9	45.0	228.4	17.5
130	150	171				0.0	136.3	16.9												
130	150	180							9.3	158.5	17.7	24.0	192.1	18.7	32.6	208.0	17.4	39.3	217.3	16.1
130	150	182							0.0	134.3	16.4									
130	150	190										11.3	160.7	16.5	24.6	189.7	16.0	32.8	203.6	14.8
130	150	193							0.0	131.3	16.0									
130	150	200													12.5	159.9	14.8	24.8	185.4	13.7
130	150	204													0.0	127.3	14.4			
130	150	210																13.0	156.2	12.6
130	150	214																0.0	122.5	12.2
130	170	54	75.0	301.5	45.8															
130	170	60	72.7	299.6	43.7															
130	170	70	69.2	296.2	40.3															
130	170	79				70.0	296.0	43.1												
130	170	80	65.5	292.0	36.9	69.6	295.6	42.8												
130	170	90	61.7	287.0	33.3	66.0	291.5	38.9												
130	170	100	57.8	281.2	28.8	62.2	286.7	36.5												
130	170	104							65.0	288.3	38.1									
130	170	110	53.8	274.4	25.1	58.4	281.0	33.5	62.7	285.3	36.6									
130	170	120	49.5	266.5	22.1	54.3	274.3	28.9	58.8	279.7	34.3									
130	170	128										60.0	278.4	29.4						
130	170	130	44.9	257.2	19.7	50.0	266.5	25.2	54.8	273.1	30.8	59.2	277.2	28.7						
130	170	140	39.9	246.2	17.8	45.5	257.5	22.1	50.5	265.5	27.8	55.2	270.8	26.0						
130	170	150	34.3	233.0	16.3	40.5	246.7	19.6	46.0	256.6	24.5	51.0	263.3	23.6						
130	170	151													55.0	266.5	21.7			
130	170	160	27.7	216.3	14.9	35.0	233.8	17.6	41.1	246.1	21.1	46.5	254.5	21.5	51.2	259.9	20.0			
130	170	170	19.2	193.3	13.4	28.6	217.7	16.0	35.7	233.5	18.2	41.6	244.2	19.7	46.8	251.2	18.3			
130	170	173																50.0	252.7	16.4
130	170	180	0.0	137.3	12.7	20.5	195.9	14.6	29.5	217.8	15.8	36.3	231.8	18.2	42.0	240.9	16.8	46.9	246.6	15.4
130	170	190				5.6	152.8	13.3	21.6	196.9	13.9	30.1	216.5	15.8	36.6	228.7	15.4	42.1	236.4	14.2
130	170	191				0.0	136.3	12.3												
130	170	200							8.7	160.1	12.7	22.5	196.3	13.5	30.5	213.7	14.3	36.8	224.2	13.1
130	170	202							0.0	134.3	11.9									
130	170	210										10.7	162.7	11.8	23.1	193.9	13.2	30.7	209.3	12.1
130	170	213							0.0	131.3	11.5									
130	170	220													11.8	162.0	11.2	23.3	189.6	11.1
130	170	224													0.0	127.3	10.5			
130	170	230																12.2	158.4	10.3
130	170	234																0.0	122.5	9.8
130	190	59	75.0	320.8	35.0															
130	190	60	74.6	320.5	34.8															
130	190	70	71.4	317.4	32.6															
130	190	80	68.2	313.7	30.2															
130	190	86				70.0	314.8	33.9												
130	190	90	64.9	309.4	27.8	68.6	313.2	33.0												
130	190	100	61.6	304.4	25.4	65.4	309.0	31.0												
130	190	110	58.1	298.5	22.8	62.0	304.0	29.2												
130	190	112							65.0	306.4	30.7									
130	190	120	54.4	291.9	19.8	58.5	298.3	27.3	62.4	302.6	29.3									
130	190	130	50.6	284.2	17.3	54.9	291.7	23.5	58.9	297.0	27.6									
130	190	138										60.0	295.8	25.9						
130	190	140	46.6	275.4	15.3	51.1	284.2	20.3	55.4	290.5	26.0	59.3	294.6	25.4						
130	190	150	42.3	265.2	13.6	47.2	275.6	17.7	51.6	283.1	23.6	55.7	288.2	23.0						
130	190	160	37.6	253.3	12.3	42.9	265.6	15.5	47.6	274.6	20.1	52.0	280.9	20.9						
130	190	163													55.0	282.9	18.9			
130	190	170	32.4	239.0	11.3	38.3	253.9	13.7	43.4	264.8	17.1	48.0	272.5	19.2	52.2	277.4	17.7			
130	190	180	26.2	221.1	10.4	33.1	240.0	12.3	38.8	253.3	14.6	43.8	262.8	17.6	48.3	269.1	16.2			
130	190	186																50.0	268.0	14.0
130	190	190	18.2	196.6	9.5	27.1	222.7	11.1	33.7	239.7	12.5	39.3	251.5	15.4	44.1	259.5	14.9	48.4	264.5	13.6
130	190	200	0.0	137.3	9.0	19.4	199.4	10.1	27.8	222.9	10.9	34.2	238.1	12.9	39.6	248.4	13.7	44.2	255.0	12.4
130	190	210				5.3	153.7	9.5	20.5	200.6	9.6	28.4	221.7	10.9	34.6	235.1	12.6	39.7	243.8	11.4
130	190	211				0.0	136.3	8.7												
130	190	220							8.3	161.6	8.8	21.3	200.1	9.3	28.8	219.0	11.2	34.7	230.7	10.5
130	190	222							0.0	134.3	8.4									
130	190	230										10.1	164.5	8.1	21.8	197.8	9.3	29.0	214.6	9.7
130	190	233										0.0	131.3	8.0						
130	190	240													11.1	164.0	7.7	22.0	193.6	9.0
130	190	244													0.0	127.3	7.3			
130	190	250																11.5	160.5	7.5
130	190	254																0.0	122.5	6.7
130	200	61	75.0	330.5	30.7															
130	200	70	72.4	327.9	29.0															
130	200	80	69.4	324.5	27.1															
130	200	89				70.0	324.2	30.4												
130	200	90	66.3	320.4	25.1	69.8	323.9	30.3												
130	200	100	63.1	315.6	23.0	66.7	319.9	28.5												
130	200	110	59.8	310.2	21.0	63.5	315.3	26.8												
130	200	116							65.0	315.5	27.4									
130	200	120	56.5	304.0	18.7	60.3	309.9	25.2	63.9	313.8	26.9									
130	200	130	53.0	296.9	16.2	56.9	303.8	22.7	60.7	308.5	25.3									
130	200	140	49.3	288.8	14.2	53.4	296.8	19.5	57.3	302.5	23.8									
130	200	143										60.0	304.4	24.3						
130	200	150	45.4	279.6	12.5	49.8	288.9	16.8	53.8	295.7	22.4	57.6	300.1	22.7						
130																				





**HC-278H II 360 Degree Capacities - Luffing Boom + Luffing Jib**  
**68" x 80" Luffing Boom, 50" x 60" Luffing Jib, ABCDE + AB Counterweight**

Luffing Boom Length (ft)	Luffing Jib Length (ft)	Load Radius (ft)	Luffing Boom Angle																	
			90 Degrees			85 Degrees			80 Degrees			75 Degrees			70 Degrees			65 Degrees		
			Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)
150	200	110	59.8	330.2	18.3	64.1	336.0	25.2	65.0	335.2	26.3									
150	200	120	56.5	324.0	16.4	60.8	330.8	23.2												
150	200	130	53.0	316.9	14.6	57.5	324.9	21.1	61.8	330.2	24.7									
150	200	140	49.3	308.8	12.9	54.0	318.0	19.0	58.5	324.4	23.3									
150	200	148							60.0	323.7	22.3									
150	200	150	45.4	299.6	11.4	50.4	310.3	17.0	55.1	317.9	21.9	59.4	322.6	21.8						
150	200	160	41.2	289.0	10.0	46.6	301.5	15.0	51.5	310.4	20.6	56.0	316.3	19.9						
150	200	170	36.6	276.6	8.8	42.5	291.3	13.0	47.7	301.9	17.8	52.4	309.1	18.1						
150	200	175																		
150	200	180	31.5	261.8	7.7	38.1	279.5	11.4	43.7	292.1	14.9	48.7	300.9	16.6	55.0	309.9	15.6			
150	200	190	25.5	243.4	6.9	33.1	265.5	10.0	39.4	280.9	12.4	44.8	291.5	15.2	49.6	298.4	13.6			
150	200	200	17.7	218.2	6.2	27.5	248.4	8.8	34.6	267.6	10.4	40.6	280.7	13.7	45.7	289.3	12.5			
150	200	201																50.0	293.8	11.0
150	200	210	0.0	157.3	5.7	20.4	225.9	7.6	29.2	251.5	8.8	36.0	268.0	11.2	41.6	278.8	11.5	46.5	285.6	10.1
150	200	220				9.2	188.0	6.7	22.7	231.0	7.5	30.7	252.8	9.2	37.1	266.6	10.6	42.4	275.4	9.3
150	200	222				0.0	156.2	6.0												
150	200	230							13.4	200.3	6.6	24.6	233.7	7.6	32.0	252.1	9.7	38.0	263.6	8.5
150	200	236							0.0	154.0	5.7									
150	200	240										16.4	206.9	6.3	26.1	234.1	7.9	33.0	249.5	7.8
150	200	248										0.0	150.6	5.4						
150	200	250													18.6	209.8	6.3	27.3	232.3	7.1
150	200	260													3.7	159.1	5.0	20.2	209.6	6.6
150	200	270																8.7	170.8	4.9
150	200	272																0.0	140.6	4.4
170	90	33	75.0	264.2	89.2															
170	90	35	73.5	263.6	87.4															
170	90	40	70.2	262.0	83.3															
170	90	50	63.3	257.7	73.7															
170	90	55				70.0	260.7	80.4												
170	90	60	55.9	251.8	65.9	66.6	258.7	76.1												
170	90	70	47.8	243.9	56.1	59.5	253.6	68.3												
170	90	77							65.0	255.2	61.6									
170	90	80	38.4	233.2	47.9	51.8	246.8	61.7	62.8	253.7	58.6									
170	90	90	26.6	217.5	41.2	43.1	237.6	54.3	55.4	247.7	50.4									
170	90	98										60.0	247.8	41.6						
170	90	100	0.0	177.3	34.3	32.7	224.8	47.4	47.3	239.7	44.0	58.7	246.8	40.6						
170	90	110				17.8	203.6	40.8	37.8	228.8	39.4	50.9	239.7	36.4						
170	90	114				0.0	176.1	37.1												
170	90	119													55.0	238.6	30.2			
170	90	120							25.7	212.7	35.2	42.2	230.3	32.5	54.1	237.8	29.8			
170	90	129							0.0	173.6	31.9									
170	90	130										31.5	216.9	29.3	45.8	229.4	26.9			
170	90	139																50.0	227.6	22.5
170	90	140										15.5	193.9	26.5	36.1	217.9	24.3	48.8	226.4	22.2
170	90	143										0.0	169.9	25.6						
170	90	150													23.2	200.3	22.1	39.7	216.2	20.2
170	90	157													0.0	164.9	20.6			
170	90	160																28.3	201.3	18.4
170	90	170																7.4	170.3	16.8
170	90	171																0.0	158.7	16.7
170	110	38	75.0	283.5	76.6															
170	110	40	73.9	283.0	74.9															
170	110	50	68.4	279.6	66.8															
170	110	60	62.7	275.0	58.5															
170	110	62				70.0	279.5	68.7												
170	110	70	56.6	269.2	50.7	65.4	276.1	63.3												
170	110	80	50.1	261.7	43.7	59.6	270.9	57.1												
170	110	85							65.0	273.3	53.2									
170	110	90	43.0	252.3	38.1	53.3	264.3	52.2	62.3	271.0	49.7									
170	110	100	34.6	239.8	33.0	46.5	255.9	46.1	56.3	265.1	43.4									
170	110	108										60.0	265.1	36.4						
170	110	110	24.0	222.0	28.9	38.8	245.0	39.6	49.7	257.6	38.8	59.0	264.1	35.7						
170	110	120	0.0	177.3	26.7	29.5	230.3	33.7	42.5	248.0	34.7	52.7	257.3	31.9						
170	110	130				16.1	206.5	28.8	34.1	235.3	31.3	45.8	248.7	28.7	55.0	255.0	26.1			
170	110	134				0.0	176.1	27.0												
170	110	140							23.2	217.0	28.3	38.0	237.5	26.0	48.6	247.4	23.7			
170	110	149							0.0	173.6	24.8									
170	110	150										28.4	222.3	23.7	41.2	237.4	21.6			
170	110	152																50.0	243.0	19.2
170	110	160										14.0	196.5	21.7	32.5	224.0	19.7	43.9	235.0	17.8
170	110	163										0.0	169.9	21.0						
170	110	170													20.9	204.2	18.1	35.8	223.0	16.3
170	110	177													0.0	164.9	16.9			
170	110	180																25.5	206.1	15.0
170	110	190																6.7	171.5	13.7
170	110	191																0.0	158.7	13.6
170	130	43	75.0	302.9	60.2															
170	130	50	71.8	300.8	56.4															
170	130	60	67.1	297.1	50.5															
170	130	69				70.0	298.3	58.6												
170	130	70	62.3	292.4	44.6	69.4	297.8	57.9												
170	130	80	57.2	286.5	39.4	64.6	293.6	52.4												
170	130	90	51.7	279.4	34.5	59.6	288.3	47.5												
170	130	94																		
170	130	100	45.9	270.6	30.0	54.4	281.8	42.6	62.0	288.4	42.7									
170	130	110	39.4	259.8	26.2	48.8	273.8	37.3	56.9	282.5	38.2									
170	130	118										60.0	282.4	31.8						
170	130	120	31.8	245.8	22.9	42.6	264.1	32.2	51.4	275.2	34.1	59.1	281.4	31.2						
170	130	130	22.0	226.1	20.3	35.6	251.8	27.8	45.5	266.4	30.7	53.8	274.8	28.1						
170	130	140	0.0	177.3	19.1	27.1	235.4	23.9	39.0	255.4	27.8	48.2	266.7	25.4						



**HC-278H II 360 Degree Capacities - Luffing Boom + Luffing Jib**  
**68" x 80" Luffing Boom, 50" x 60" Luffing Jib, ABCDE + AB Counterweight**

Luffing Boom Length (ft)	Luffing Jib Length (ft)	Load Radius (ft)	Luffing Boom Angle																	
			90 Degrees			85 Degrees			80 Degrees			75 Degrees			70 Degrees			65 Degrees		
			Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)
170	190	176																		
170	190	180	26.2	261.1	7.0	35.0	285.0	10.7	42.1	300.9	16.0	48.2	311.4	16.1	55.0	320.5	14.7			
170	190	190	18.2	236.6	6.2	29.3	269.0	9.3	37.3	288.8	13.2	44.0	301.8	14.8	49.8	309.9	13.0			
170	190	200	0.0	177.3	6.3	22.4	248.4	8.0	32.0	274.4	11.0	39.4	290.6	13.6	45.7	300.8	11.9			
170	190	203																50.0	304.2	9.9
170	190	210				12.2	216.3	6.9	25.8	256.3	9.2	34.4	277.3	11.8	41.3	290.3	10.9	47.1	298.0	9.3
170	190	214				0.0	176.1	6.7												
170	190	220							17.6	231.2	7.8	28.7	261.0	9.6	36.5	277.9	10.0	42.9	288.0	8.5
170	190	229							0.0	173.7	6.0									
170	190	230										21.6	239.7	7.8	31.1	262.9	9.2	38.2	276.3	7.8
170	190	240										10.7	205.0	6.3	24.6	244.0	8.2	33.1	262.3	7.1
170	190	243										0.0	169.9	5.4						
170	190	250													15.9	216.9	6.4	27.0	245.0	6.5
170	190	257													0.0	164.9	4.9			
170	190	260																19.4	221.7	6.0
170	190	270																5.1	175.6	4.7
170	190	271																0.0	158.7	4.4
170	200	61	75.0	370.5	24.8															
170	200	70	72.4	367.9	23.3															
170	200	80	69.4	364.5	21.5															
170	200	90	66.3	360.4	19.6															
170	200	93				70.0	364.0	26.2												
170	200	100	63.1	355.6	17.7	67.8	361.2	24.9												
170	200	110	59.8	350.2	15.8	64.6	356.8	23.0												
170	200	120	56.5	344.0	14.0	61.4	351.7	21.0												
170	200	123							65.0	354.9	25.0									
170	200	130	53.0	336.9	12.3	58.1	345.9	19.0	62.9	351.7	24.1									
170	200	140	49.3	328.8	10.8	54.7	339.2	17.0	59.6	346.2	22.7									
170	200	150	45.4	319.6	9.4	51.1	331.6	15.1	56.3	339.9	21.4									
170	200	153										60.0	343.1	20.3						
170	200	160	41.2	309.0	8.2	47.3	323.0	13.3	52.7	332.8	19.8	57.8	339.0	19.0						
170	200	170	36.6	296.6	7.1	43.2	313.1	11.6	49.1	324.7	17.7	54.3	332.3	17.3						
170	200	180	31.5	281.8	6.1	38.9	301.6	10.1	45.1	315.4	15.7	50.7	324.6	15.8						
170	200	182													55.0	328.7	13.6			
170	200	190	25.5	263.4	5.4	34.1	288.1	8.7	40.9	304.7	12.9	46.9	315.8	14.5	52.1	322.8	12.6			
170	200	200	17.7	238.2	4.8	28.5	271.6	7.4	36.4	292.2	10.6	42.8	305.8	13.3	48.4	314.5	11.6			
170	200	209																50.0	311.9	9.0
170	200	210	0.0	177.3	4.9	21.8	250.3	6.4	31.2	277.2	8.8	38.4	294.1	11.8	44.5	305.0	10.6	49.7	311.3	9.0
170	200	220				11.9	217.3	5.5	25.1	258.5	7.3	33.5	280.3	9.5	40.2	294.0	9.7	45.9	302.2	8.2
170	200	224				0.0	176.1	5.3												
170	200	230							17.2	232.7	6.1	27.9	263.5	7.6	35.5	281.1	8.9	41.7	291.8	7.5
170	200	239							0.0	173.7	4.6									
170	200	240										21.0	241.5	6.2	30.3	265.7	8.2	37.2	279.7	6.8
170	200	250										10.4	206.0	4.9	24.0	246.2	6.5	32.2	265.2	6.2
170	200	253										0.0	169.9	4.1						
170	200	260													15.5	218.3	5.0	26.3	247.4	5.7
170	200	267													0.0	164.9	3.7			
170	200	270																18.9	223.4	5.1
170	200	280																5.0	176.0	3.5
170	200	281																0.0	158.7	3.3
190	90	33	75.0	284.2	78.3															
190	90	35	73.5	283.6	77.0															
190	90	40	70.2	282.0	74.0															
190	90	50	63.3	277.7	66.4															
190	90	57				70.0	280.6	71.5												
190	90	60	55.9	271.8	57.5	67.8	279.4	69.2												
190	90	70	47.8	263.9	49.5	60.8	274.5	62.4												
190	90	80	38.4	253.2	42.6	53.2	268.0	56.6	65.0	274.9	57.1									
190	90	90	26.6	237.5	37.4	44.7	259.3	51.5	58.1	269.7	49.4									
190	90	100	0.0	197.3	34.6	34.7	247.3	44.2	50.2	262.5	43.2									
190	90	104										60.0	267.1	38.0						
190	90	110				21.1	228.4	37.9	41.3	252.7	38.6	55.1	263.0	35.1						
190	90	116				0.0	196.0	34.7												
190	90	120							30.4	238.9	34.5	46.9	254.9	31.4						
190	90	126													55.0	257.4	26.6			
190	90	130							13.3	213.9	31.0	37.4	243.8	28.3	51.6	254.2	25.4			
190	90	132							0.0	193.3	30.2									
190	90	140										25.0	227.3	25.6	42.9	245.0	23.0			
190	90	147																50.0	245.8	19.2
190	90	148										0.0	189.2	23.5						
190	90	150													32.5	232.0	21.0	47.5	243.2	18.6
190	90	164													17.4	210.5	19.1	38.1	232.4	17.0
190	90	170													0.0	183.7	18.3			
190	90	179																26.1	216.5	15.6
190	90	179																0.0	176.8	14.3
190	110	38	75.0	303.5	66.0															
190	110	40	73.9	303.0	64.5															
190	110	50	68.4	299.6	57.8															
190	110	60	62.7	295.0	50.9															
190	110	64				70.0	299.4	61.4												
190	110	70	56.6	289.2	44.4	66.4	296.8	57.8												
190	110	80	50.1	281.7	38.9	60.6	291.9	52.5												
190	110	89							65.0	293.0	49.5									
190	110	90	43.0	272.3	33.8	54.4	285.5	47.9	64.4	292.5	48.7									
190	110	100	34.6	259.8	29.5	47.7	277.4	41.7	58.4	287.0	42.5									
190	110	110	24.0	242.0	25.9	40.2	267.1	36.2	52.1	280.1	38.1									
190	110	114										60.0	284.4	33.1						
190	110	120	0.0	197.3	24.3	31.3	253.2	31.1	45.1	271.3	34.0	56.0	280.4	30.7						
190	110	130													19.1	232.0	26.7	37.2	259.8	30.6
190	110	136													0.0	196.0	24.6			

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**HC-278H II 360 Degree Capacities - Luffing Boom + Luffing Jib**  
**68" x 80" Luffing Boom, 50" x 60" Luffing Jib, ABCDE + AB Counterweight**

Luffing Boom Length (ft)	Luffing Jib Length (ft)	Load Radius (ft)	Luffing Boom Angle																					
			90 Degrees			85 Degrees			80 Degrees			75 Degrees			70 Degrees			65 Degrees						
			Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)				
190	110	137																						
190	110	140								27.5	244.0	27.8		42.2	263.0	25.1		55.0	273.8	23.0				
190	110	150								12.0	216.1	25.3		33.7	250.2	22.8		46.4	263.3	20.3				
190	110	152								0.0	193.3	22.5	*											
190	110	160												22.6	231.5	20.8		38.7	252.4	18.6		50.0	261.1	16.3
190	110	168												0.0	189.2	19.3								
190	110	170																29.3	237.6	17.0		42.7	251.5	14.9
190	110	180																15.7	213.4	15.6		34.4	238.9	13.7
190	110	184																0.0	183.7	15.0				
190	110	190																				23.6	220.9	12.6
190	110	199																				0.0	176.8	11.6
190	130	43	75.0	322.9	52.3	*																		
190	130	50	71.8	320.8	49.0	*																		
190	130	60	67.1	317.1	44.0	*																		
190	130	70	62.3	312.4	39.3	*	70.0	318.2	52.5	*														
190	130	80	57.2	306.5	34.6	*	65.5	314.3	48.2	*														
190	130	90	51.7	299.4	30.3	*	60.5	309.2	43.6	*														
190	130	97								65.0	311.1	43.3												
190	130	100	45.9	290.6	26.5	*	55.3	302.9	38.6	*	63.7	309.8	41.8											
190	130	110	39.4	279.8	23.2	*	49.8	295.3	33.8	*	58.7	304.3	37.4											
190	130	120	31.8	265.8	20.3	*	43.7	285.9	29.3	*	53.3	297.6	33.4											
190	130	124												60.0	301.8	28.9								
190	130	130	22.0	246.1	18.0	*	36.9	274.1	25.3	*	47.6	289.4	30.1		56.6	297.7	27.0							
190	130	140	0.0	197.3	17.1	*	28.8	258.6	21.9	*	41.3	279.2	27.2		51.2	290.4	24.4							
190	130	149																55.0	290.2	19.9				
190	130	150					17.5	235.2	18.9	*	34.1	266.3	24.8		45.2	281.5	22.2		54.3	289.2	19.6			
190	130	156					0.0	196.0	17.5	*														
190	130	160								25.2	248.7	22.7		38.6	270.4	20.3		48.6	281.2	17.9				
190	130	170								11.0	218.2	19.3	*	30.9	256.0	18.6		42.5	271.4	16.4				
190	130	172								0.0	193.4	16.3	*											
190	130	173																				50.0	276.4	13.9
190	130	180												20.8	235.3	17.1		35.5	259.1	15.1		45.7	269.9	13.0
190	130	188												0.0	189.2	14.5	*							
190	130	190																26.9	242.6	13.9		39.2	258.9	12.0
190	130	200																14.4	216.1	12.8		31.5	244.8	11.0
190	130	204																0.0	183.7	12.3				
190	130	210																				21.7	224.9	10.1
190	130	219																				0.0	176.8	9.3
190	150	48	75.0	342.2	41.2	*																		
190	150	50	74.3	341.7	40.7	*																		
190	150	60	70.3	338.5	37.3	*																		
190	150	70	66.2	334.5	33.7	*																		
190	150	77					70.0	337.0	42.8	*														
190	150	80	62.0	329.7	30.1	*	68.9	336.0	41.9	*														
190	150	90	57.5	323.9	26.6	*	64.8	331.7	38.2	*														
190	150	100	52.9	316.9	23.4	*	60.5	326.5	34.4	*														
190	150	106								65.0	329.3	38.7												
190	150	110	47.9	308.6	20.5	*	56.0	320.3	30.6	*	63.2	327.2	36.8											
190	150	120	42.6	298.7	18.0	*	51.2	312.9	26.9	*	58.8	321.7	32.8											
190	150	130	36.6	286.6	15.8	*	46.1	304.1	23.5	*	54.3	315.1	29.5											
190	150	134												60.0	319.1	25.4								
190	150	140	29.5	271.2	13.9	*	40.6	293.5	20.4	*	49.4	307.2	26.7		57.1	315.1	23.8							
190	150	150	20.5	249.8	12.4	*	34.3	280.5	17.7	*	44.2	297.8	24.3		52.4	308.0	21.6							
190	150	160	0.0	197.3	11.9	*	26.7	263.5	15.3	*	38.4	286.4	22.2		47.4	299.6	19.7		55.0	306.5	17.2			
190	150	170					16.3	238.1	13.3	*	31.7	272.2	19.6	*	42.0	289.5	18.0		50.3	299.0	15.7			
190	150	176					0.0	196.0	12.4	*														
190	150	180								23.5	253.0	16.6	*	35.9	277.1	16.6		45.1	289.9	14.4				
190	150	186																				50.0	291.7	11.7
190	150	190								10.3	220.0	13.8	*	28.7	261.3	15.3		39.4	278.9	13.2		47.8	287.9	11.3
190	150	192								0.0	193.4	11.6	*											
190	150	200												19.3	238.8	14.1		32.9	265.2	12.2		42.4	277.9	10.3
190	150	208												0.0	189.2	10.2	*							
190	150	210																25.0	247.2	11.2		36.4	265.7	9.5
190	150	220																13.4	218.5	10.3		29.3	250.2	8.7
190	150	224																0.0	183.7	9.0	*			
190	150	230																				20.2	228.5	8.0
190	150	239																				0.0	176.8	7.3
190	170	54	75.0	361.5	32.4	*																		
190	170	60	72.7	359.6	30.8	*																		
190	170	70	69.2	356.2	28.1	*																		
190	170	80	65.5	352.0	25.4	*																		
190	170	84					70.0	355.8	33.9	*														
190	170	90	61.7	347.0	22.7	*	67.9	353.5	32.4	*														
190	170	100	57.8	341.2	20.2	*	64.2	349.1	29.7	*														
190	170	110	53.8	334.4	17.8	*	60.4	343.8	26.8	*														
190	170	114								65.0	347.4	32.8	*											
190	170	120	49.5	326.5	15.6	*	56.4	337.7	23.9	*	62.8	344.6	31.7	*										
190	170	130	44.9	317.2	13.6	*	52.3	330.5	21.2	*	59.0	339.0	28.9	*										
190	170	140	39.9	306.2	11.9	*	47.9	322.2	18.6	*	55.0	332.5	26.1	*										
190	170	144												60.0	336.4	22.3								
190	170	150	34.3	293.0	10.4	*	43.2	312.3	16.2	*	50.7	324.9	23.7	*	57.4	332.4	20.9							







**HC-278H II 360 Degree Capacities - Luffing Boom + Luffing Jib**  
**68" x 80" Luffing Boom, 50" x 60" Luffing Jib, ABCDE + AB Counterweight**

Luffing Boom Length (ft)	Luffing Jib Length (ft)	Load Radius (ft)	Luffing Boom Angle																	
			90 Degrees			85 Degrees			80 Degrees			75 Degrees			70 Degrees			65 Degrees		
			Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)
200	200	200	17.7	268.2	3.0	30.1	306.2	5.6	38.8	328.5	10.2	46.0	342.7	12.2	52.2	351.2	10.0			
200	200	210	0.0	207.3	3.2	23.7	286.5	4.7	11.7	314.9	8.6	41.9	332.3	11.2	48.5	342.9	9.1			
200	200	220				15.1	258.1	3.9	28.4	298.4	7.0	37.4	320.2	9.7	44.6	333.4	8.3			
200	200	222																50.0	339.1	6.3
200	200	227				0.0	206.0	3.7												
200	200	230							21.7	277.0	5.7	32.4	305.9	7.6	40.3	322.5	7.6	46.9	332.0	5.8
200	200	240							11.7	243.6	4.5	26.5	288.1	5.9	35.7	309.7	6.9	42.9	322.0	5.2
200	200	244							0.0	203.2	3.3									
200	200	250										19.1	264.4	4.5	30.4	294.3	6.3	38.5	310.3	4.7
200	200	260										5.9	219.3	3.1	24.2	274.9	4.8	33.6	296.6	4.2
200	200	261										0.0	198.9	2.5						
200	200	270													15.8	247.4	3.4	28.0	279.8	3.7
200	200	280															21.1	257.9	3.3	
200	200	290															10.6	222.8	2.2	
210	90	33	75.0	304.2	68.8															
210	90	35	73.5	303.6	67.7															
210	90	40	70.2	302.0	64.5															
210	90	50	63.3	297.7	57.1															
210	90	59				70.0	300.5	62.9												
210	90	60	55.9	291.8	49.9	69.0	300.0	62.1												
210	90	70	47.8	283.9	43.4	62.0	295.4	56.5												
210	90	80	38.4	273.2	38.1	54.5	289.2	51.4												
210	90	84							65.0	294.6	52.9									
210	90	90	26.6	257.5	33.5	46.3	281.0	46.8	60.6	291.4	48.3									
210	90	100	0.0	217.3	31.4	36.6	269.6	40.5	53.0	284.9	42.2									
210	90	109										60.0	286.4	34.3						
210	90	110				24.0	252.5	34.9	44.6	276.1	37.8	59.0	285.6	33.8						
210	90	118				0.0	216.0	31.5												
210	90	120							34.5	264.0	33.8	51.2	278.7	30.2						
210	90	130							20.8	245.0	30.4	42.5	269.3	27.2						
210	90	133													55.0	276.2	23.3			
210	90	136							0.0	213.0	27.9									
210	90	140										32.0	256.1	24.6	49.0	270.4	21.6			
210	90	150										16.3	233.8	22.4	39.9	260.2	19.7			
210	90	154										0.0	208.5	21.5						
210	90	156																50.0	263.9	16.1
210	90	160													28.5	245.5	18.0	46.2	259.8	15.5
210	90	170													8.3	215.5	16.4	36.5	248.5	14.2
210	90	171													0.0	202.5	16.2			
210	90	180															23.8	231.3	13.0	
210	90	188															0.0	195.0	12.0	
210	110	38	75.0	323.5	56.3															
210	110	40	73.9	323.0	55.1															
210	110	50	68.4	319.6	49.6															
210	110	60	62.7	315.0	44.0															
210	110	65				70.0	319.3	54.3												
210	110	70	56.6	309.2	38.9	67.4	317.5	52.1												
210	110	80	50.1	301.7	34.1	61.7	312.8	47.5												
210	110	90	43.0	292.3	29.9	55.6	306.7	43.0												
210	110	92							65.0	312.7	46.0									
210	110	100	34.6	279.8	26.2	49.0	298.9	37.8	60.5	308.8	41.5									
210	110	110	24.0	262.0	23.2	41.6	289.0	32.8	54.3	302.4	37.2									
210	110	119										60.0	303.8	29.9						
210	110	120	0.0	217.3	22.0	33.0	275.9	28.4	47.6	294.3	33.2	59.2	303.0	29.5						
210	110	130				21.7	256.6	24.6	40.1	283.9	29.9	52.9	296.2	26.5						
210	110	138				0.0	216.0	22.3												
210	110	140							31.2	269.9	27.1	46.0	287.7	24.0						
210	110	144													55.0	292.6	20.1			
210	110	150							18.8	248.5	24.7	38.3	276.6	21.8	51.1	288.1	19.0			
210	110	156							0.0	213.0	20.3									
210	110	160										28.8	261.5	20.0	44.1	278.9	17.3			
210	110	168																50.0	279.2	13.7
210	110	170										14.8	236.5	18.3	35.9	267.0	15.9	48.9	277.8	13.5
210	110	174										0.0	208.5	17.4						
210	110	180													25.8	250.3	14.6	41.5	267.9	12.3
210	110	190													7.5	216.8	13.3	32.9	254.7	11.3
210	110	191													0.0	202.5	13.2			
210	110	200															21.5	235.3	10.4	
210	110	208															0.0	195.0	9.6	
210	130	43	75.0	342.9	44.9															
210	130	50	71.8	340.8	42.1															
210	130	60	67.1	337.1	38.2															
210	130	70	62.3	332.4	34.1															
210	130	72				70.0	338.1	46.4												
210	130	80	57.2	326.5	30.1	66.3	335.0	43.1												
210	130	90	51.7	319.4	26.5	61.4	330.1	38.8												
210	130	100	45.9	310.6	23.2	56.3	324.0	34.5												
210	130	101							65.0	330.8	40.4									
210	130	110	39.4	299.8	20.4	50.8	316.6	30.3	60.4	326.1	36.6									
210	130	120	31.8	285.8	18.0	44.8	307.6	26.4	55.2	319.8	32.6									
210	130	129										60.0	321.1	26.2						
210	130	130	22.0	266.1	16.0	38.2	296.3	23.0	49.7	312.1	29.3	59.3	320.3	25.8						
210	130	140	0.0	217.3	15.3	30.3	281.6	19.9	43.6	302.7	26.6	54.0	313.7	23.3						
210	130	150				19.9	260.2	17.3	36.8	290.8	24.2	48.4	305.7	21.2						
210	130	156													55.0	309.0	17.3			
210	130	158				0.0	216.0	15.7												
210	130	160							28.6	275.2	21.9	42.2	295.8	19.4	52.5	305.7	16.6			
210	130	170							17.3	251.6	18.5	35.1	283.2	17.7	46.8	297.2	15.2			
210	130	176							0.0	213.1	14.6									
210	130	180										26.5	266.5	16.3	40.4	286.6	13.9			



HC-278H II 360 Degree Capacities - Luffing Boom + Luffing Jib																				
68" x 80" Luffing Boom, 50" x 60" Luffing Jib, ABCDE + AB Counterweight																				
Luffing Boom Length (ft)	Luffing Jib Length (ft)	Load Radius (ft)	Luffing Boom Angle																	
			90 Degrees			85 Degrees			80 Degrees			75 Degrees			70 Degrees			65 Degrees		
			Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)
210	180	200				16.9	268.3	6.3 *	31.1	306.0	10.5 *	40.7	326.0	12.4	48.6	337.5	10.2			
210	180	208				0.0	216.0	5.8 *												
210	180	210							24.2	286.9	8.8 *	35.6	313.3	11.4	44.2	327.9	9.3			
210	180	213																50.0	332.8	7.0
210	180	220							14.7	258.6	7.3 *	29.7	297.7	9.6 *	39.4	316.8	8.5	47.2	327.0	6.5
210	180	226							0.0	213.1	5.4 *									
210	180	230										22.4	277.2	7.5 *	34.1	303.4	7.8	42.7	316.9	5.9
210	180	240										11.5	244.5	5.7 *	27.9	286.7	7.1	37.7	305.1	5.3
210	180	244										0.0	208.6	4.3 *						
210	180	250													20.1	264.3	6.0 *	32.2	290.8	4.8
210	180	260													5.9	220.9	4.0 *	25.6	272.7	4.3
210	180	261													0.0	202.5	3.3 *			
210	180	270																16.8	246.9	3.8
210	180	278																0.0	195.0	2.4 *

HC-278H II 360 Degree Capacities - 200' Luffing Boom + 200' Luffing Jib + 30' Fixed Jib																				
68" x 80" Luffing Boom, 50" x 60" Luffing Jib, 24" x 32" Fixed Jib, ABCDE + AB Counterweight																				
Luffing Boom Length (ft)	Luffing Jib Length (ft)	Load Radius (ft)	Luffing Boom Angle																	
			90 Degrees			85 Degrees			80 Degrees			75 Degrees			70 Degrees			65 Degrees		
			Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)
200	200	72	75.0	431.9	12.8 *															
200	200	80	73.1	429.7	12.1 *															
200	200	90	70.5	426.3	11.1 *															
200	200	100	67.8	422.3	10.1 *															
200	200	109				70.0	424.3	14.8 *												
200	200	110	65.1	417.8	9.0 *	69.8	424.0	14.8 *												
200	200	120	62.4	412.8	7.9 *	67.1	419.9	13.7 *												
200	200	130	59.5	407.1	6.8 *	64.4	415.3	12.6 *												
200	200	140	56.6	400.7	5.8 *	61.6	410.0	11.4 *												
200	200	145							65.0	413.5	16.2 *									
200	200	150	53.6	393.5	4.9 *	58.8	404.2	10.1 *	63.7	411.0	15.7 *									
200	200	160	50.5	385.6	4.0 *	55.9	397.6	8.9 *	60.9	405.6	14.5 *									
200	200	170	47.2	376.6	3.2 *	52.8	390.2	7.8 *	58.0	399.6	13.2 *									
200	200	180	43.7	366.5	2.5 *	49.6	382.0	6.7 *	55.0	392.8	11.9 *	60.0	399.6	14.7 *						
200	200	190				46.3	372.8	5.6 *	51.9	385.2	10.6 *	57.1	393.3	11.7 *						
200	200	200				42.7	362.4	4.7 *	48.7	376.7	9.3 *	54.1	386.2	10.6 *						
200	200	210				38.9	350.6	3.8 *	45.3	367.2	8.1 *	51.0	378.4	9.6 *						
200	200	214													55.0	382.7	7.1			
200	200	220				34.8	336.9	3.1 *	41.7	356.4	6.9 *	47.7	369.6	8.7	53.0	377.8	6.6			
200	200	230							37.8	344.2	4.9 *	44.2	359.7	7.9	49.8	369.6	5.9			
200	200	240							33.5	329.9	3.1 *	40.6	348.5	6.5 *	46.5	360.5	5.2			
200	200	245																50.0	362.9	3.1
200	200	250										36.6	335.7	4.6 *	43.0	350.2	4.6	48.5	358.8	2.8
200	200	260										32.1	320.7	2.8 *	39.2	338.4	4.1	45.1	349.2	2.4
200	200	270													35.0	324.9	3.6			
200	200	280													30.4	308.9	2.5 *			

HC-278H II 360 Degree Capacities - Luffing Jib Mid-Fall											
68" x 80" Luffing Boom, 50" x 60" Luffing Jib, ABCDE + AB Counterweight											
Luffing Boom Length (ft)	Luffing Jib Length (ft)	Load Radius (ft)	Luffing Boom Angle								
			90 Degrees			85 Degrees			80 Degrees		
			Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)	Jib Angle (deg)	Tip Height (ft)	Capacity (kips)
200	110 - 200	29	75.0	272.7	18.8 *						
200	111 - 200	30	73.9	272.3	18.8 *						
200	112 - 200	35	69.4	270.5	18.8 *						
200	113 - 200	40	64.8	268.3	12.5 *						
200	114 - 200	50	55.0	262.2	12.5 *						
200	115 - 200	52				70.0	269.4	18.8 *			
200	116 - 200	60	43.8	253.2	12.5 *	62.4	265.6	18.8 *			
200	117 - 200	70	29.2	239.0	9.4 *	52.3	258.8	12.5 *			
200	118 - 200	74							65.0	264.2	18.8 *
200	119 - 200	78	0.0	208.6	9.4 *						
200	120 - 200	80				40.4	248.9	12.5 *	59.7	261.1	18.8 *
200	121 - 200	90				24.1	232.2	9.4 *	49.2	253.6	12.5 *
200	122 - 200	95				0.0	207.3	9.4 *			
200	123 - 200	97									
200	124 - 200	100							36.6	242.4	12.5 *
200	125 - 200	110							17.0	221.4	9.4 *
200	126 - 200	112							0.0	204.4	9.4 *

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