

# HC-278H II

## HYLAB Series

### Lattice Boom Truck Crane 300-ton (272 mt)

- 300 tons (272 mt) at a 10' (3.05 m) radius
- 60' to 330' (18.29 - 100.58 m) of tube boom
- 300' + 100' (91.4 + 30.5 m) boom plus jib combination
- 403.8' (123.1 m) maximum tip height and 340' (95.70 m) maximum 360° working radius
- Increased strength chart with two stage boom:
  - 1st stage: first 190' (57.91 m) JE boom (LS-278)
  - 2nd stage: 200' - 330' (60.96 - 100.58 m) HJ boom (original HC-278H)
- 42.5 ton (38.6 mt) capacity, 477' (145.39 m) maximum luffing boom working height and 263' (80.16 m) maximum 360° working radius - common to LS-278H luffer
- New five piece upper counterweight - total 108,200 lbs. (49 080 kg)
- 50,103 lbs. (22 727 kg) maximum line pull
- 550 fpm (168 mpm) maximum line speed

**Link-Belt**





# Unmatched Large Crane Transportability with Dependable Hydraulic Control and Proven Lattice

**The HC-278H II HYLAB** lift crane features unmatched load control, capacities, and transportability. This Hydraulic Lattice Boom (HYLAB) truck crane also features pilot operated hydraulic controls that have been setting industry standards for over 50 years. The basic HYLAB hydraulic system has been proven in over 2,000 cranes currently working worldwide assuring the user of unprecedented reliability.

**Transportability** The new HC-278H II hydraulic lattice boom truck crane provides a practical solution to customers that need to move a very large truck crane, quickly, legally and efficiently. This truck crane was designed by Link-Belt for fast unassisted stripdown and assembly.

Transporting this crane starts by removing major components including boom and counterweight ... all done by using the crane's standard live mast or optional 10' (3.05 m) boom extension with lifting sheaves.

Next, the standard lift-off system is put into action.

① The four self-contained hydraulic lift-off jacks are swung into the working position.

4:00 minutes



② The patented hydraulic actuated quick disconnect turntable bearing is released. The ingenious **adaptor with snap ring** allows for fast undecking or decking the upper-structure from the carrier in minutes ... not hours.

2:00 minutes



# Portability

## Crane Boom Technology



3 The lift-off jacks are fully extended, raising the upper up and clear of the carrier.

3:00 minutes



4 The carrier is driven away and a flatbed trailer is backed under the upper. The upper is lowered to the trailer and the lift-off jacks returned to the stored position.

5:00 minutes

**Carrier** A deep channel, triple box carrier design provides the optimum strength essential to maximize lift capacity while yielding lightweight axle loadings necessary to meet strict highway regulations. This 12x6 Link-Belt designed and built carrier also features twelve wheel air brakes, bogie beam axle suspension, full time hydraulic power steering, and standard aluminum fenders.

The new HC-278H II features a 430 horsepower (321 kW) **Detroit Diesel Series 60 engine**. This in-line 6-cylinder features Detroit Diesel Electronic Controls (DDEC) which incorporate multiple torque curves and variable speed idling for a low creep speed of .3 mph (0.5 km/h) and highway speeds of up to 58.5 mph (94.2 km/h), electronic throttle control for instantaneous response, and cruise control which reduces driver fatigue.



**Attachment** Link-Belt lattice tubular booms represent the latest advance in crane boom design. The HC-278H II provides the longest reach in the mobile crane business for increased job performance. The standard high strength, alloy steel lattice boom is available up to 330' (100.58 m) in length or 300' (91.44 m) + 100' (30.48 m) boom and jib combination. A "hammerhead" style attachment is also available for special applications allowing assembly / disassembly, transport and crane operation without unreeving load block.

To reach up and over buildings and obstructions, a 200' (60.96 m) maximum luffing boom plus 200' (60.96 m) luffing jib plus 30' (9.14 m) fixed jib is available.





# Pinpoint Hydraulic Control

## Close Loop Hydraulics For Dedicated, Responsive Performance

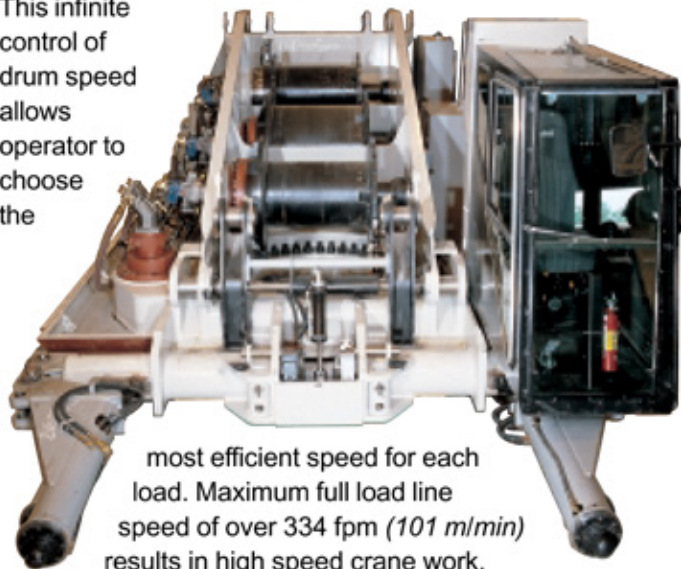


**Upperstructure** All welded, precision machined frame. All hydraulic lines and motors provide a 'clean' look with maximum service accessibility.

**Hydraulic Power System** A Detroit Diesel Series 60 diesel engine provides power to variable displacement independent piston pumps. These pumps provide power to individual hydraulic motors for fast, efficient operation of front and rear load hoist drums, boomhoist drum and swing drive. Fully independent hydraulic control allows drums to be run simultaneously at different speeds or in different directions. Large capacity hydraulic cooling keeps all hydraulics running in the green.

**Load Control** The variable displacement system provides infinite control of load speed in hoist and lowering modes. Load speed is directly proportional to lever movement.

This infinite control of drum speed allows operator to choose the



most efficient speed for each load. Maximum full load line speed of over 334 fpm (101 m/min) results in high speed crane work.

Multiple disc drum brakes are integral with drum drive units. Drum brakes and standard drum locking pawls automatically apply when control lever is in neutral position, keeping you in compliance with the latest codes.

**Fine Inching Control** For super precise control of load lowering/hoisting, hydraulic pump flow can be minimized by activating the 2-speed pump control switch located on the overhead console. This allows the operator to place loads with either the main or rear drums with extreme accuracy.

**Boomhoist** Independent hydraulic boomhoist is driven by a variable displacement, axial piston motor through a gear reduction system. This system features infinitely variable boomhoist speed, automatic boomhoist brake and a limiting device that restricts hoisting boom beyond recommended minimum radius.

**Swing** Variable speed and smooth swing is provided by the hydraulic swing system. A standard swing brake is applied by a convenient button on the swing lever. A hydraulically controlled positive, 360° swing lock is also provided for transport.

**Operator Control Station** Situated in an environmental, modular type cab, the operator comfortably sits in a cloth upholstered, fully adjustable seat for all-day comfort.

Single axis, armchair controllers provide positive, smooth control of all drum and swing functions. Standard drum



rotation indicators for front, rear and boomhoist drums are recessed in drum control lever handles. Also, a standard boomhoist foot control offers maximum productivity.

An overhead console contains switches for wiper, on/off drum controls, 2-speed drum control, and lights.

A complete complement of gauges monitor all aspects of the upper engine.

Mounted on the inside cab corner post, these gauges are easily viewed at a glance. Gauge panel also includes switches for house lock and hydraulic boomfoot pin and a swing brake indicator light.

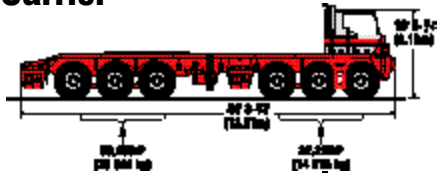
**Rated Capacity Limiter** - PAT DS-350G LMI (Rated Capacity Limiter) provides line riders, angle sensor, computer, graphic display and anti-two block equipment to provide the following information:

Boom length & angle, jib length & angle, load on hook, allowed load, load radius, tip height, anti-two block warning and function limiters, operation mode, machine configuration, provides an audio/visual warning when the load on hook is within 90% of the crane's rated load, provides an audio/visual warning and limits functions when the load on hook is at 100% of the crane's rated load. Provides simultaneous display of luffing boom and luffing jib angles.

**Note:** The DS-350G function limiters are activated for anti-two block and overload conditions. These limiters are designed to prevent hoist up on front and rear drums and boom down.

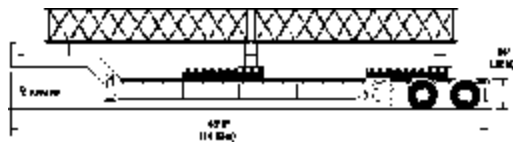
# Transport loads

## Carrier



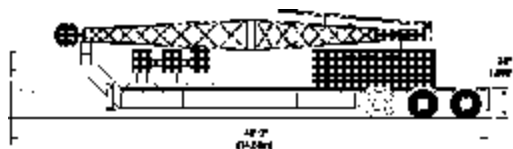
HC-278H II carrier 91,620 lbs (41 559 kg)  
 Outrigger boxes and beams in place  
 Outrigger jacks removed

## Load #2



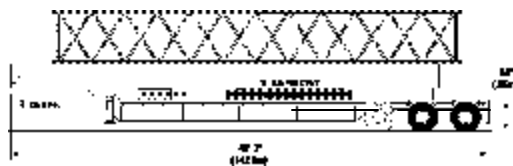
Upper cwtw "C"	21,500 lbs	(9 752 kg)
Upper cwtw "D"	21,500 lbs	(9 752 kg)
4 - 20' (6.10 m) jib extensions	1,770 lbs	(803 kg)
	<u>44,770 lbs</u>	<u>(20 307 kg)</u>

## Load #3



Upper cwtw "A"	30,000 lbs	(13 608 kg)
Outrigger jacks, floats and handling tree	6,400 lbs	(2 903 kg)
Basic 30' (9.14 m) jib	1,900 lbs	(862 kg)
Rigging box	4,000 lbs	(1 814 kg)
	<u>42,300 lbs</u>	<u>(19 187 kg)</u>

## Load #4



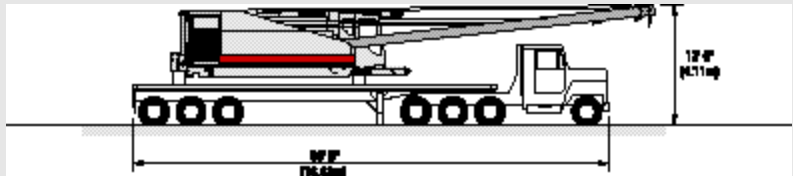
Upper cwtw "B"	15,300 lbs	(6 940 kg)
Upper cwtw "E"	10,000 lbs	(4 536 kg)
200-ton (181 mt) 6 sheave block	3,900 lbs	(1 769 kg)
50' (12.19 m) boom inserts	5,143 lbs	(2 333 kg)
	<u>34,343 lbs</u>	<u>(15 578 kg)</u>

## Load #1 (Alternate "A")



HC-278H II upper with base section, special 10' (3.05 m) extension with lifting sheaves and wire rope 85,024 lbs (38 566 kg)

## Load #1 (Alternate "B")



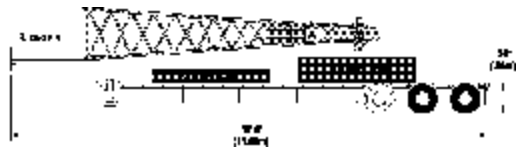
HC-278H II upper with live mast only 72,739 lbs (32 994 kg)

## Load #1 (Alternate "C")



HC-278H II upper with base section and live mast 77,511 lbs (35 158 kg)

## Load #5



Boom tip	5,175 lbs	(2 347 kg)
Bumper cwtw "A"	11,400 lbs	(5 171 kg)
Upper cwtw "B"	25,200 lbs	(11 431 kg)
	<u>41,775 lbs</u>	<u>(18 949 kg)</u>

## Loads #6 & 7



**Load 6:**  
 100' (30.48 m) boom 11 598 lbs (5 261 kg)

**Load 7:**  
 100' (30.48 m) boom 9,650 lbs (4 377 kg)





## Available attachments provide strength and versatility

### Conventional open throat boom

- 60' - 330' (18.29 - 100.58 m) conventional tube boom
- Using pin-connected sections and open throat top section, the HC-278H II provides the longest boom lengths in this machine class.
- Main chord members are made with 100,000 psi yield material with high strength lattice.
- Boom suspension is achieved through 18-part boom hoist reeving with dual pendant ropes.
- Standard equipment deflector rollers protect lattice sections from wire rope scuffing.

### Hammerhead boom

- 45' - 245' (13.72 - 74.68 m) three-piece design utilizes 30' (9.14 m) base section, 10' (3.05 m) taper section and a 5' (1.52 m) hammerhead top section.
- 200-ton (178.6 mt) maximum capacity

### Boom and jib — open throat

- 300' + 100' (91.4 + 30.5 m) tube boom + fixed jib
- Jib is common to other Link-Belt models.

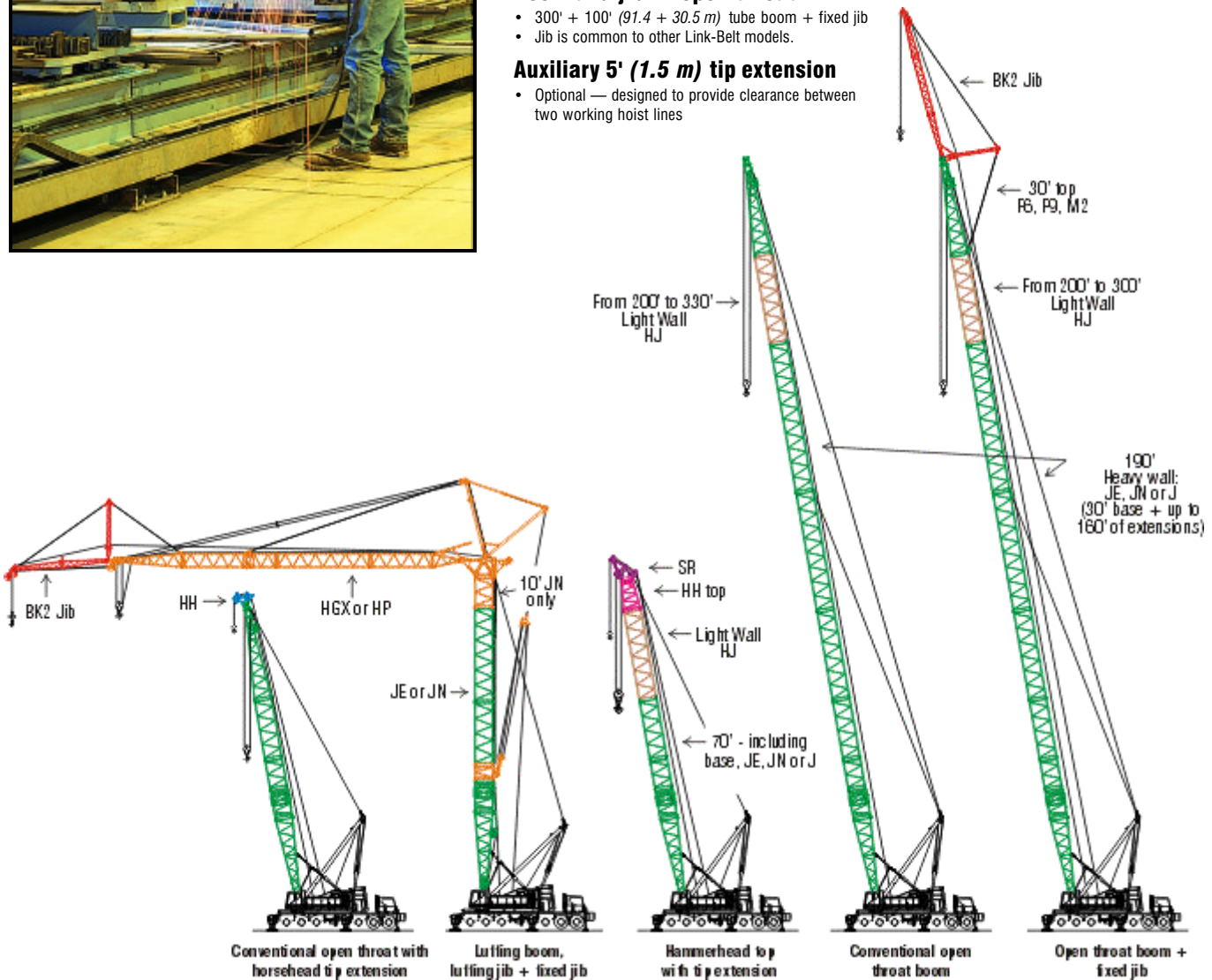
### Auxiliary 5' (1.5 m) tip extension

- Optional — designed to provide clearance between two working hoist lines

### Luffing boom attachment

- 200' + 200' + 30' (60.96 + 60.96 + 9.14 m) luffing boom + luffing jib + fixed jib
- Conventional boom on HC-278H II also serves as luffing boom
- Luffing attachment for the HC-278H II is the latest design with luffing jib reeving anchored off the luffing boom to keep reeving down low within operator's view — easy to assemble.
- Top section assembly of luffer transports as one piece and makes for fast, easy assembly to the luffing jib.
- This attachment flexibility and simplicity makes the LS-218H II — conventional or with luffing attachment — the first machine of choice to go out of the yard and to the job!

All boom sections are manufactured in Lexington, Kentucky for fast, easy service, parts and replacement.



Lexington, Kentucky  
[www.linkbelt.com](http://www.linkbelt.com)

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Litho in U.S.A. 3/02 #4272 (supersedes #4211)

# Lifting Capacities

Hydraulic Lattice Boom Truck Crane

## **HC-278H II**     300-ton (272 metric ton)

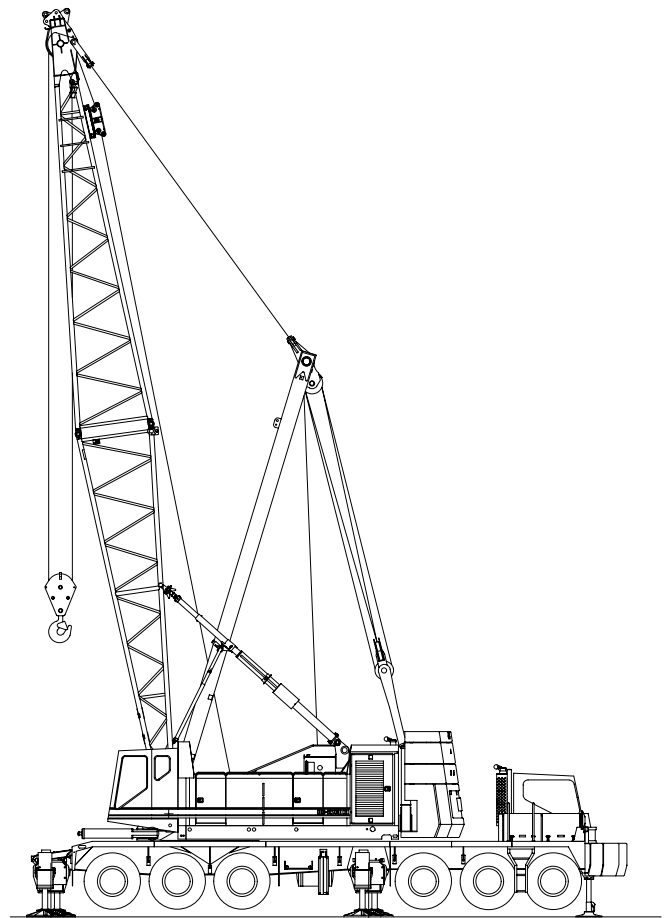
### **HYLAB Series**

#### **Tube Boom Capacities**

**60 – 330' (18.29 – 100.58 m)**

#### **Tube Boom Capacities**

- 60' – 330' (18.29 – 100.58 m) Open Throat Boom
- 80" (2.03 m) wide x 68" (1.73 m) Deep Boom
- On Fully Extended Outriggers
- 10' (3.05 m) Extension Lifting Capacities
- 360° Rotation and Over The Rear Capacities
- Counterweight options "ABCDE + AB", "ABCDE + A", "ABCDE + 0", "ABC + 0", "A + 0" and "0"



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



## WARNING

**ALWAYS READ AND UNDERSTAND THE OPERATOR'S AND SAFETY MANUALS AND THE FOLLOWING INSTRUCTIONS AND CHART VALUES BEFORE OPERATING ANY CRANE. OPERATION WHICH DOES NOT FOLLOW THESE INSTRUCTIONS MAY RESULT IN AN ACCIDENT. THIS DOCUMENT IS INTENDED FOR REFERENCE USE ONLY.**

## OPERATING INSTRUCTIONS

### GENERAL:

1. This load represents the 10.4' (3.17m) radius duty equivalent of the maximum available load moment.
2. 625,000 lbs. (283 000 kg) at 12' (3.66 m) radius was the maximum static overload test performed per SAE J987.
3. Rated lifting capacities as shown on lift chart pertain to this crane as originally manufactured and normally equipped by Link-Belt Construction Equipment Company (LBCE). Modifications to the crane or use of optional equipment other than that specified can result in a reduction of capacity.
4. 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 the manuals are missing, order replacements through the distributor.
5. The operator and other personnel associated with this crane shall fully acquaint themselves with the latest applicable American National Standards Institute (ANSI) safety standards for cranes.
6. All capacities listed in this book are in compliance with SAE J987—April 1994 (Crane Structures—Method Of Test) and SAE J765a — October 1990 (Crane Load Stability Test).

### LIFTING CRANE OPERATION:

1. Capacities shown are not more than 85% of the tipping loads on outriggers and 75% of the tipping loads on tires with crane standing level on firm supporting surface. A deduction must be made from these capacities for weight of hook block, hook ball, sling, grapple, load weighing devices, etc. When using main hook while jib is attached, reduce capacities by values shown on chart "Capacity Deductions For Lifting Off Main Boom Hook With Jib Installed." See Operator's Manual for all limitations when raising or lowering attachment.
2. When using main hook on Open Throat boom while jib is attached, reduce capacities by values shown on Capacity Deductions For Lifting Off Main Boom Hook With Jib Installed. When using main hook on Open Throat boom while tip extension is attached, reduce capacities by values shown on Capacity Deductions For Lifting Off Main Boom Hook With Tip Extension Installed. See Operator's Manual for all limitations when raising or lowering attachment.
3. The crane capacities in the shaded areas are based on structural strength. The crane capacities in the non-shaded areas are based on stability ratings.
4. 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.
5. When lifting loads with the Luffing Jib Bridle Guide Rails installed on the boom extensions, reduce capacities by the value shown on "Capacity Deductions For Lifting Loads With Luffing Jib Bridle Guide Rails Installed On Boom Extensions".
6. The maximum outrigger pontoon reaction seen under any condition listed in this crane rating manual is 285,000 lb (314 psi).

7. "On outrigger" capacities require that all four outrigger beams be fully extended, all five jacks be extended until all tires are clear of the ground and crane be properly leveled on a firm supporting surface.
8. The least stable rated condition is over the side.
9. For boom lengths exceeding 240' the midpoint suspension pendants are required.
10. Do not lift or suspend a load from the main boom and boom tip extension or jib at the same time.
11. Do not swing over side until all four outrigger beams are fully extended, all five jacks are extended until all tires are clear of the ground, and crane is properly leveled on a firm supporting surface.
12. On tire capacities are restricted to a maximum travel speed of .5 m.p.h. The boom must be centered straight over the rear with swing lock engaged and the load must be restrained from swinging.
13. Load ratings in this Crane Rating Manual are based on freely suspended loads and make no allowances for such factors as the effect of ground conditions and operating speeds. The operator shall therefore reduce load ratings in order to take these conditions into account.
14. 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 up to 20 m.p.h. and appropriately reduced for wind speeds greater than 20 m.p.h. Extreme caution should be used when lifting heavy loads or loads with large wind sail area under high wind conditions (over 20 m.p.h.). See Wind Restriction charts in this manual for appropriate capacity reductions.
15. The 35' live mast must be used for all capacities.
16. These capacities apply only to the crane as originally manufactured and normally equipped by Link-Belt Construction Equipment Company.
17. Do not operate at radii and boom lengths where the Crane Rating Manual lists no capacity. Do not use longer booms or jibs than those listed in this Crane Rating Manual. Any of the above can cause a tipping condition, or boom and jib failure.
18. Open throat booms should be erected and lowered over the end for maximum stability. Consult the proper liftoff chart in this manual before erecting or lowering open throat booms.
19. For boom lengths up to and including 220', "J", "JE", or "JN" (.375" Wall) boom extensions must be used. 220' of boom includes a 30' base section, 160' of extensions, and a 30' top section. Extensions added beyond the first 160' of extensions must be "H" or "HJ" (.259" Wall) boom extensions.

### DEFINITIONS:

1. Load Radius: Horizontal distance from a projection of the axis of rotation to the supporting surface, before loading, to the center of the vertical hoist line or tackle with load applied.
2. Boom Angle: The angle between the boom base section and horizontal with freely suspended load at the rated radius.
3. Working Area: Area measured in a circular arc about the centerline of rotation as shown on the Working Area Diagram.
4. Freely Suspended Load: Load hanging free with no direct external force applied except by the hoist line.
5. Side Load: Horizontal side force applied to the lifted load either on the ground or in the air.



## 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"					(28 mm)
	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	

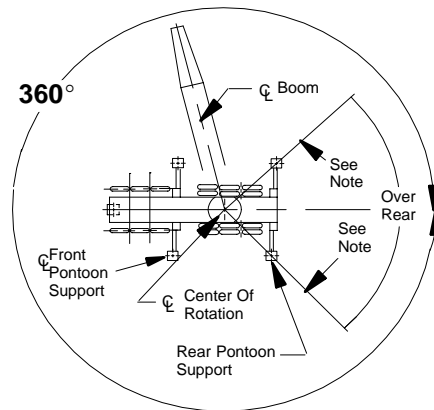
LBCE Type	Description
DB	6 x 26 (6 x 19 Class), Warrington Seale, Extra Improved Plow Steel, Preformed, Right Lay – Regular Lay, I.W.R.C.
ZB	36 x 7 Non-Rotating, Extra Improved Plow Steel, Right Lay – Regular Lay, Compacted
LB	6 Strand, Compacted Strand, Seale or Warrington Seale, I.W.R.C., Preformed, Right Lay – Regular Lay
RB	19 x 19 Rotation Resistant, High Strength, Preformed – Right Lay – Regular Lay. Swaged
CC	36 x 7 Classification Non-Rotating – Extra Extra Improved Plow Steel, Right Lay – Regular Lay, Compact Strand
SB	8 Strand, Preformed – Right Lay Regular Lay

**Notes:**

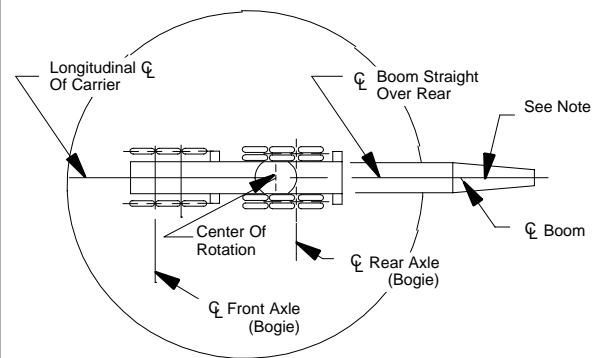
- Capacities shown are in pounds and working loads must not exceed the ratings on the capacity chart in the Crane Rating Manual.
- Study Operator's Manual for wire rope inspection procedures.

## WORKING AREAS

### Carrier On Outriggers



### Carrier On Tires



**Note:**

- These Lines Determine The Limiting Position Of Any Load For Operation Within Working Areas Indicated.

## ALLOWABLE COUNTERWEIGHTS

Counterweight Combinations (1) Upper + Bumper	Allowable open throat boom lengths	
	w/o Jib (ft)	With Jib (ft) (3)
0 + 0 on outriggers	60–190	<b>PROHIBITED</b>
A + 0 on outriggers (2)	60–220	
ABC + 0 on outriggers (2)	60–270	
ABCDE + 0 on outriggers (2)	60–300	60–260
ABCDE + A on outriggers (2)	60–320	<b>PROHIBITED</b>
ABCDE + AB on outriggers (2)	60–330	60–300

**Notes:**

- Counterweight combinations are for a crane equipped with a 250 ton open throat boom. Counterweight combinations must be used only as shown on this chart, otherwise crane may overturn or other damage may occur.
- "A" Upper Counterweight – 30,000 lbs.  
"ABC" Upper Counterweight – 76,700 lbs.  
"ABCDE" Upper Counterweight – 108,000 lbs.  
"A" Bumper Counterweight – 11,400 lbs.  
"AB" Bumper Counterweight – 26,700 lbs.
- Do not swing over the side until outrigger beams are fully extended and outrigger jacks set with upper counterweights, or crane may overturn.
- Maximum jib length is 100 ft.

## CRANE ASSEMBLY COMPONENT WEIGHTS

Component	Weight	
	lb	kg
<b>1. 30' Base Section Assembly</b>	4,912	2 228
– 3rd Drum Assembly	2,857	1 296
– 3rd Drum Fleeting Sheave Assembly	850	386
– 3rd Drum Rope (970' of 1" type "RB")	1,940	880
<b>2. 30' Top Section with 6 Sheave Machinery Assy.</b>	5,612	2 546
<b>3. Boom Extensions</b>		
– 10' "J" Boom Extension Assembly	1,150	521
– 10' "JN" Boom Extension Assembly	1,617	733
– 10' "JE" Boom Ext. w/ Lifting Sheaves Assembly	3,251	1 475
– 20' "J" Boom Extension Assembly	2,000	907
– 20' "JE" Boom Extension Assembly	2,514	1 140
– 30' "J" Boom Extension Assembly	2,800	1 270
– 30' "JE" Boom Extension Assembly	3,454	1 567
– 40' "JE" Boom Extension Assembly	4,567	2 072
– 50' "JE" Boom Extension Assembly	5,567	2 525
– 10' "H" or "HJ" Boom Extension Assembly	1,382	627
– 20' "H" or "HJ" Boom Extension Assembly	2,163	981
– 30' "H" or "HJ" Boom Extension Assembly	2,940	1 334
– 40' "H" or "HJ" Boom Extension Assembly	3,761	1 692
– 50' "H" or "HJ" Boom Extension Assembly	4,538	2 045
<b>4. Front Outrigger Assembly</b>	12,760	5 788
<b>5. Rear Outrigger Assembly</b>	12,760	5 788
<b>6. Upper Counterweights</b>		
– Counterweight "A"	30,000	13 608
– Counterweight "B"	25,000	11 340
– Counterweight "C"	21,500	9 752
– Counterweight "D"	21,500	9 752
– Counterweight "E"	10,000	4 536
– Counterweight "AB"	55,000	24 948
– Counterweight "ABC"	76,500	34 700
– Counterweight "ABCD"	98,000	44 453
– Counterweight "ABCDE"	108,000	48 989
<b>7. Bumper Counterweights</b>		
– Counterweight "A"	11,400	5 171
– Counterweight "B"	15,300	6 940
– Counterweight "AB"	26,700	12 111

## GENERAL WIND RESTRICTIONS GUIDE

When operating a Link-Belt lattice boom crane under high wind conditions (over 20 m.p.h.), the following chart may be used as a guide to reduce capacities for emergency one time lifts for any boom length up to 250 feet.

If the wind velocity exceeds	All crane capacities must be reduced
20 m.p.h.	20%
30 m.p.h.	40%
40 m.p.h.	70%
45 m.p.h.	Crane operation must be shut down and the boom lowered to the ground.

## HC-278H II WIND RESTRICTIONS

When operating a Link-Belt HC-278H II lattice boom crane under high wind conditions (over 20 m.p.h.), the following chart may be used as a guide to reduce capacities for emergency one time lifts for any boom length from 260 through 330 feet. For boom lengths up to and including 250 feet, use the Link-Belt General Wind Restrictions guide.

If the wind Velocity exceeds	All crane capacities must be reduced
20 m.p.h.	35%
30 m.p.h.	60%
40 m.p.h.	80%
45 m.p.h.	Crane operation must be shut down and the boom lowered to the ground.

### NOTES:

- The restrictions do not take into account the effect of wind acting on the load. Additional reductions in capacity are required for loads with large wind sail area.
- Operator judgment must be the final consideration as to when the wind conditions jeopardize good operating practices.

## LIFTOFF CAPABILITIES ON OUTRIGGERS

Counterweight (upper + bumper)	Max Boom		Maximum Boom + Jib	
	Over Side (ft)	Over Rear (ft)	Over Side (ft)	Over Rear (ft)
0+0	170	190	<b>PROHIBITED</b>	
A+0	210	220		
ABC+0	260	270		
ABCDE+0	290	300	250+100	260+100
ABCDE+A	290	320	<b>PROHIBITED</b>	
ABCDE+AB	300	330	260+100	300+100

### \*NOTES:

- 95% of available crane stability.
- Machine on firm and level surface.

## LIFTOFF CAPABILITIES ON TIRES OVER THE REAR

Counterweight (upper+bumper)	Boom (ft)	Boom + Jib (ft)
0+0	100	<b>PROHIBITED</b>
A+0	140	
ABC+0	170	
ABCDE+0	200	160+100
ABCDE+A	210	<b>PROHIBITED</b>
ABCDE+AB	230	200+100

### \* NOTES:

- 95% of available crane stability.
- Machine on firm and level surface.



**LIVE MAST LIFTING CAPACITIES**

Mast Radius	CAPACITY (No Counterweight)	
	On Tires	On Outriggers
12' – 17'	55,000 lbs.	76,500 lbs.
17' – 28'	30,000 lbs.	76,500 lbs.

 **CAUTION**

1. Refer to Operator's Manual.
2. Live mast backstops must be in position and operative.
3. Use rear drum only. Reeve hoist line to drum over mast cross member. Reeve hoist rope with three (3) parts of 1.00", 1-1/8" (28.5 mm) diameter wire rope.
4. 76,500 lbs. capacity is based on strength of material.
5. Refer to "Crane Assembly Component Weights" for weight of components when lifting from live mast.

**10' EXT. LIFTING CAPACITIES – 360°**

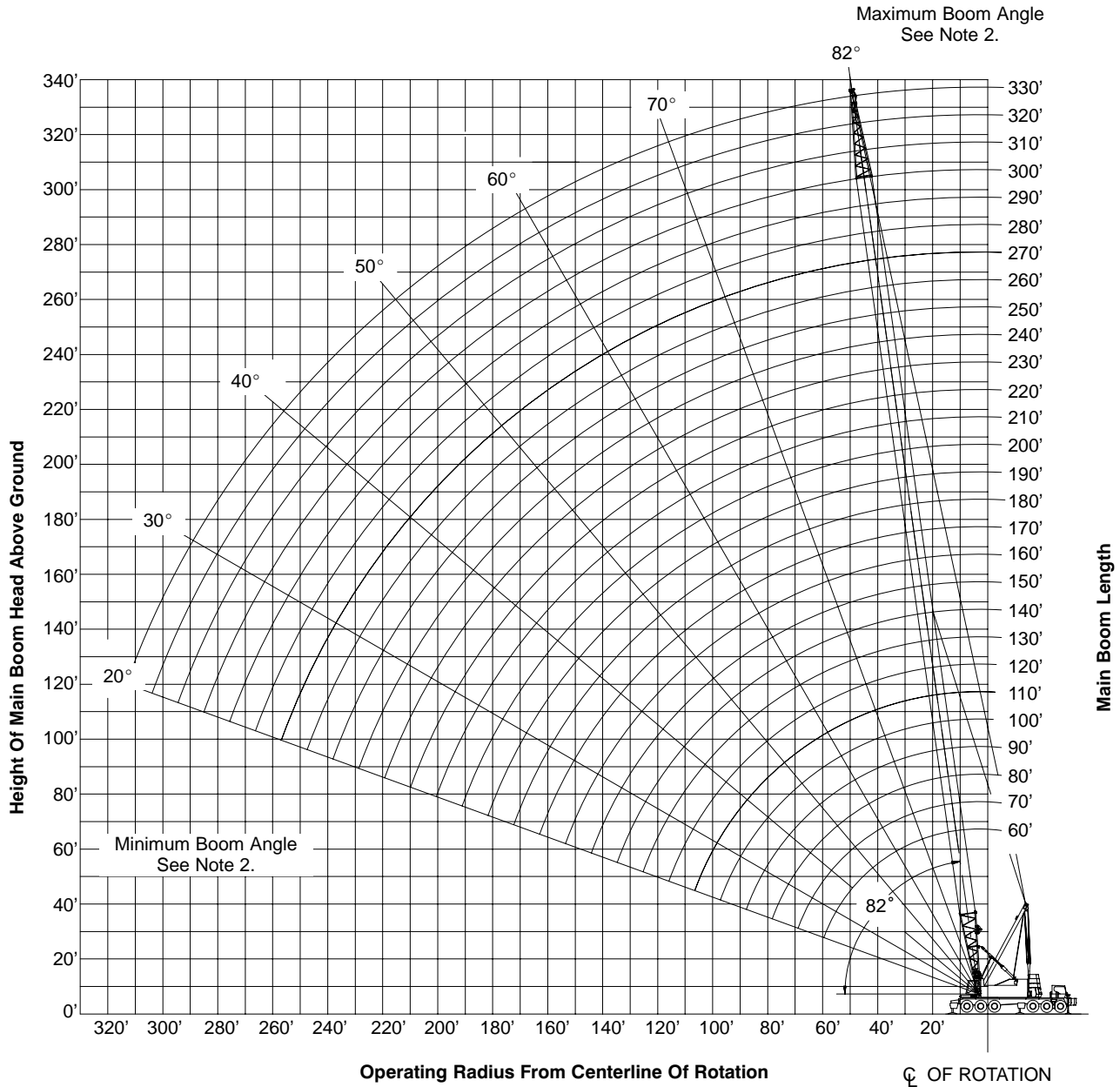
Load Radius (ft)	Boom Angle (deg)	On Tires Without Ctwrt (lb)	On Outriggers With/Without Ctwrt (lb)
10.31	82.0	55,000	76,500
11	80.9	55,000	76,500
12	79.3	55,000	76,500
13	77.6	55,000	76,500
14	75.9	55,000	76,500
15	74.3	55,000	76,500
16	72.6	52,400	76,500
17	70.9	49,600	76,500
18	69.1	47,000	76,500
19	67.4	44,700	76,500
20	65.6	42,500	76,500
21	63.8	40,500	76,500
22	61.9	38,600	76,500
23	60.1	36,200	76,500
24	58.1	34,000	76,500
25	56.2	32,000	76,500
26	54.1	30,100	76,500
27	52.1	28,500	76,500
28	49.9	27,000	76,500
29	47.7	25,600	76,500
30	45.4	24,300	76,500
31	42.9	23,100	76,500
32	40.3	21,900	76,500
33	37.6	20,900	76,500
34	34.7	19,900	75,000
35	31.5	19,000	70,800
36	27.9	18,100	66,900

 **CAUTION**

1. Refer to operator's manual.
2. Use front drum only. Reeve hoist line under mast cross member.
3. Reeve hoist rope with three (3) parts of 1.125" or 1.00" diameter wire rope. See operator's manual for correct procedure.
4. Do not swing upper when crane is on tires and upper equipped with "A", "AB", "ABC", "ABCD", OR "ABCDE" counterweights.
5. Refer to "Crane assembly component weights" for weights of components when lifting with the 10' extension.
6. 10' extension capacities are restricted to crane assembly/disassembly. Do not lift loads with 10' extension for any reason other than crane assembly/disassembly.

# WORKING RANGE DIAGRAM

## 60' TO 330' MAIN BOOM ON OUTRIGGERS



**Notes:**

1. Boom geometry shown is 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 boom angles are equal to the values listed in the capacity chart for each boom length.



### CAPACITY DEDUCTIONS FOR LIFTING OFF MAIN BOOM HOOK WITH JIB INSTALLED

When using main boom hook, while jib is attached, reduce boom capacities by the values in the following chart:

Jib Length (ft)	Capacity Deduction (lbs)
30'	2,600
40'	3,000
50'	3,400
60'	3,800
70'	4,200
80'	4,600
90'	5,000
100'	5,400

### CAPACITY DEDUCTIONS FOR LIFTING OFF MAIN BOOM HOOK WITH TIP EXTENSION INSTALLED

When using main boom hook, while tip extension is attached, reduce boom capacities by the value in the following chart:

Tip Extension	Capacity Deduction (lb)
	1,100

### CAPACITY DEDUCTIONS FOR LIFTING LOADS WITH LUFFING JIB BRIDLE GUIDE RAILS INSTALLED ON BOOM EXTENSIONS

When using main boom hook or the jib hook, while the luffing jib guide rails are installed, reduce boom capacities by the value in the following chart:

Guide Rails (60')	Capacity Deduction (lb)
	1,000

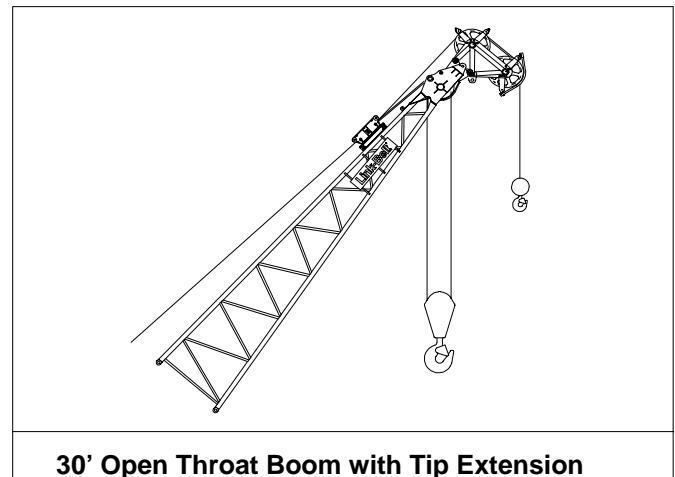
### MAXIMUM ALLOWABLE CAPACITIES FOR TIP EXTENSION

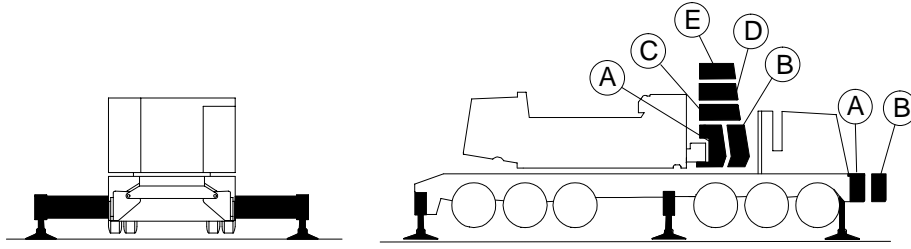
LIFTING CAPACITY TO BE THE SMALLEST OF THE FOLLOWING VALUES:

- 50,000 lb (Maximum).
- The standard crane lift capacity minus 1,100 lb for the boom length, tip extension load radius, and counterweight configuration in use on the crane.

#### NOTES:

- All notes are to be adhered to as listed on the standard lift crane capacity charts .
- Reduce the main boom lift capacities by 1,100 lb when the tip extension is installed.
- The maximum boom length on which the tip extension can be installed is 300'.
- Do not lift or suspend a load from the boom tip extension and main boom at the same time.





### Main Boom Capacities – On Outriggers – 60 Ft Open Throat Tube Boom

Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper								
		Over The Rear			360 Degree Rotation					
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCE+0	ABCDE+A	ABCDE+AB
10.4 *	—	600,000 *	600,000 *	600,000 *	—	—	—	—	—	—
12	81.5	500,000	500,000	500,000	380,700	398,100	417,500	429,200	412,800	390,400
13	80.6	438,200	441,800	441,800	351,700	379,600	398,300	409,400	393,900	372,400
14	79.6	418,800	422,400	422,400	326,600	362,200	380,700	391,400	376,400	356,000
15	78.6	401,200	404,800	404,800	304,800	338,000	364,600	374,800	360,600	340,900
16	77.6	384,800	388,400	388,400	285,600	316,900	349,700	359,600	345,800	326,900
17	76.7	368,200	368,200	368,200	268,700	298,100	335,800	345,400	332,200	314,100
18	75.7	347,700	347,700	347,700	253,500	281,400	323,400	332,400	319,800	302,300
19	74.7	329,400	329,400	329,400	240,100	266,400	308,500	320,900	308,500	291,600
20	73.7	312,900	312,900	312,900	227,800	252,800	292,900	310,200	298,200	282,000
25	68.7	250,300	250,300	250,300	152,400	201,300	233,500	250,300	250,300	243,000
30	63.4	208,600	208,600	208,600	107,200	149,600	193,500	208,600	208,600	207,500
35	58.0	178,800	178,800	178,800	81,800	115,000	164,700	178,800	178,800	178,800
40	52.1	156,200	156,200	156,200	65,700	92,800	135,700	156,200	156,200	156,200
50	38.7	122,800	122,800	122,800	46,100	66,100	97,600	118,200	121,400	122,800
60	18.7	90,300	90,300	90,300	34,600	50,400	75,400	90,300	90,300	90,300

\* – See note 1 under General Notes on page 2.

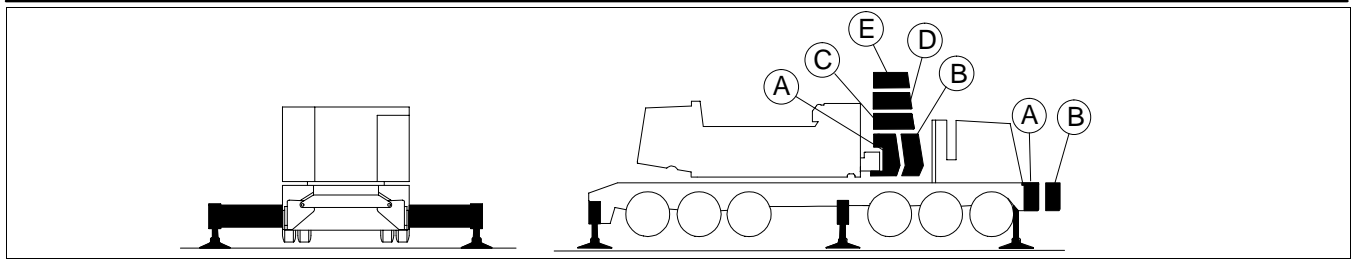
### Main Boom Capacities – On Outriggers – 70 Ft Open Throat Tube Boom

Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper								
		Over The Rear			360 Degree Rotation					
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCE+0	ABCDE+A	ABCDE+AB
12.91	82.0	438,700	442,300	442,300	353,400	380,100	398,800	409,800	394,200	372,700
13	81.9	436,900	440,500	440,500	351,000	378,500	397,100	408,100	392,600	371,100
14	81.1	417,600	421,200	421,200	325,900	361,400	379,600	390,300	375,300	354,900
15	80.3	400,100	403,700	403,700	304,300	337,300	363,600	373,700	359,500	339,800
16	79.4	383,800	387,400	387,400	285,100	316,300	348,700	358,600	344,800	325,900
17	78.6	368,200	368,200	368,200	268,300	297,500	335,000	344,500	331,300	313,300
18	77.8	347,700	347,700	347,700	253,100	281,000	322,600	331,600	319,000	301,500
19	76.9	329,400	329,400	329,400	239,700	266,000	308,000	320,100	307,700	290,800
20	76.1	312,900	312,900	312,900	227,500	252,400	292,400	309,400	297,500	281,200
25	71.8	250,300	250,300	250,300	153,200	201,000	233,100	250,300	250,300	242,400
30	67.5	208,600	208,600	208,600	107,800	150,200	193,200	208,600	208,600	207,200
35	63.0	178,800	178,800	178,800	82,200	115,400	164,500	178,800	178,800	178,800
40	58.3	154,700	154,700	154,700	66,000	93,100	136,000	154,700	154,700	154,700
50	48.0	118,600	118,600	118,600	46,300	66,300	97,800	118,400	118,600	118,600
60	35.7	93,800	93,800	93,800	34,900	50,600	75,600	91,800	93,800	93,800
70	17.3	75,500	75,500	75,500	27,300	40,400	61,000	74,500	75,500	75,500

### Main Boom Capacities – On Outriggers – 80 Ft Open Throat Tube Boom

Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper								
		Over The Rear			360 Degree Rotation					
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCE+0	ABCDE+A	ABCDE+AB
14.3	82.0	410,800	414,400	414,400	318,400	352,800	373,300	383,800	369,000	349,000
15	81.5	398,800	402,400	402,400	303,500	336,400	362,400	372,400	358,300	338,600
16	80.8	382,600	386,200	386,200	284,400	315,500	347,600	357,500	343,700	325,000
17	80.0	367,600	368,200	368,200	267,600	296,800	333,900	343,400	330,200	312,200
18	79.3	347,700	347,700	347,700	252,500	280,300	321,600	330,500	318,000	300,500
19	78.6	329,400	329,400	329,400	239,200	265,400	307,300	319,100	306,800	289,900
20	77.9	312,900	312,900	312,900	227,000	251,900	291,700	308,500	296,600	280,400
25	74.2	250,300	250,300	250,300	153,700	200,600	232,600	250,300	250,300	241,700
30	70.4	207,900	207,900	207,900	108,100	150,500	192,800	207,900	207,900	206,800
35	66.6	173,700	173,700	173,700	82,400	115,600	164,100	173,700	173,700	173,700
40	62.6	148,900	148,900	148,900	66,200	93,200	136,000	148,900	148,900	148,900
50	54.2	114,600	114,600	114,600	46,300	66,400	97,800	114,600	114,600	114,600
60	44.7	91,200	91,200	91,200	35,000	50,600	75,600	91,200	91,200	91,200
70	33.3	75,100	75,100	75,100	27,400	40,400	61,000	74,500	75,100	75,100
80	16.2	61,300	61,300	61,300	22,000	33,100	50,700	61,300	61,300	61,300

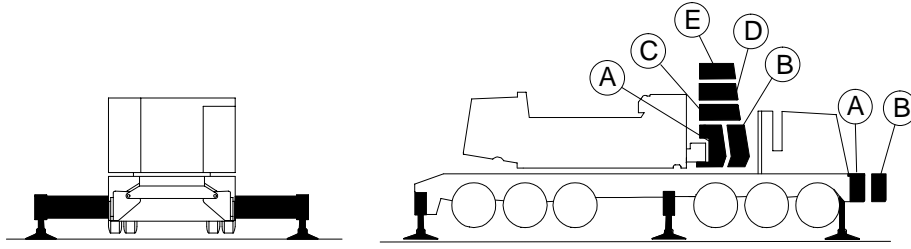




Main Boom Capacities – On Outriggers – 90 Ft Open Throat Tube Boom										
Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper								
		Over The Rear			360 Degree Rotation					
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCDE+0	ABCDE+A	ABCDE+AB
15.69	82.0	387,100	390,700	390,700	290,700	322,300	351,800	361,700	347,700	328,600
16	81.8	382,200	385,900	385,900	285,000	316,100	347,400	357,200	343,400	324,700
17	81.2	367,300	368,200	368,200	268,300	297,400	333,700	343,200	329,900	312,000
18	80.5	347,700	347,700	347,700	253,200	280,900	321,400	330,300	317,800	300,300
19	79.9	329,400	329,400	329,400	239,800	265,900	307,700	318,900	306,600	289,700
20	79.2	312,900	312,900	312,900	227,600	252,400	292,200	308,300	296,400	280,200
25	76.0	250,300	250,300	250,300	155,900	201,000	233,000	250,300	250,300	241,600
30	72.7	208,600	208,600	208,600	109,600	151,900	193,200	208,600	208,600	207,100
35	69.3	178,800	178,800	178,800	83,500	116,700	164,400	178,800	178,800	178,800
40	65.8	155,800	155,800	155,800	67,000	94,000	136,900	155,800	155,800	155,800
50	58.6	122,800	122,800	122,800	46,900	66,900	98,300	119,000	121,900	122,800
60	50.8	100,200	100,800	100,800	35,400	51,000	76,000	92,200	94,600	98,000
70	42.0	81,200	85,000	85,000	27,700	40,600	61,300	74,800	76,800	79,600
80	31.4	68,000	73,200	73,200	22,200	33,400	50,800	62,400	64,100	66,500
90	15.2	58,000	63,300	63,800	18,100	27,800	43,100	53,100	54,600	56,700

Main Boom Capacities – On Outriggers – 100 Ft Open Throat Tube Boom										
Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper								
		Over The Rear			360 Degree Rotation					
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCDE+0	ABCDE+A	ABCDE+AB
17.08	82.0	365,000	366,400	366,400	266,100	295,000	331,400	340,800	327,600	309,700
18	81.5	347,700	347,700	347,700	252,400	280,100	320,300	329,100	316,600	299,100
19	80.9	329,400	329,400	329,400	239,100	265,100	306,800	317,800	305,500	288,600
20	80.3	312,900	312,900	312,900	226,900	251,600	291,300	307,300	295,300	279,200
25	77.4	250,300	250,300	250,300	156,200	200,500	232,400	250,300	250,300	240,800
30	74.4	208,600	208,600	208,600	109,700	152,000	192,600	208,600	208,600	206,500
35	71.4	178,600	178,600	178,600	83,500	116,700	163,800	178,600	178,600	178,600
40	68.4	155,300	155,300	155,300	67,000	94,000	136,800	155,300	155,300	155,300
50	62.1	122,300	122,300	122,300	46,800	66,800	98,200	118,900	121,800	122,300
60	55.4	100,000	100,400	100,400	35,300	50,900	75,900	92,000	94,500	97,800
70	48.1	81,200	84,600	84,600	27,500	40,400	61,100	74,600	76,700	79,400
80	39.8	67,900	72,800	72,800	22,100	33,200	50,700	62,200	63,900	66,300
90	29.7	57,900	63,200	63,500	18,000	27,700	42,900	53,000	54,500	56,500
100	14.5	50,200	54,900	56,000	14,800	23,400	37,000	45,800	47,200	49,000

Main Boom Capacities – On Outriggers – 110 Ft Open Throat Tube Boom										
Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper								
		Over The Rear			360 Degree Rotation					
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCDE+0	ABCDE+A	ABCDE+AB
18.48	82.0	338,700	338,700	338,700	244,900	271,800	313,700	322,500	310,000	292,800
19	81.7	329,400	329,400	329,400	238,300	264,200	305,800	316,700	304,300	287,400
20	81.2	312,900	312,900	312,900	226,100	250,800	290,300	306,200	294,200	278,100
25	78.6	250,300	250,300	250,300	156,400	199,800	231,600	250,300	250,300	239,900
30	75.9	208,600	208,600	208,600	109,800	152,100	192,000	208,600	208,600	205,800
35	73.2	178,000	178,000	178,000	83,500	116,700	163,200	178,000	178,000	178,000
40	70.4	154,800	154,800	154,800	66,900	93,900	136,600	154,800	154,800	154,800
50	64.8	121,800	121,800	121,800	46,600	66,600	98,000	118,700	121,600	121,800
60	58.9	99,800	99,900	99,900	35,100	50,700	75,700	91,800	94,200	97,600
70	52.6	81,000	84,100	84,100	27,300	40,400	60,900	74,400	76,400	79,200
80	45.7	67,600	72,400	72,400	21,900	33,000	50,500	62,000	63,700	66,100
90	37.9	57,700	63,000	63,100	17,800	27,500	42,700	52,700	54,300	56,300
100	28.3	50,000	54,700	55,700	14,600	23,200	36,900	45,600	47,000	48,800
110	13.8	43,800	48,000	49,400	12,100	19,800	32,000	40,000	41,100	42,700



### Main Boom Capacities – On Outriggers – 120 Ft Open Throat Tube Boom

Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper								
		Over The Rear			360 Degree Rotation					
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCDE+0	ABCDE+A	ABCDE+AB
19.87	82.0	314,500	314,500	314,500	226,800	251,600	291,300	306,300	294,300	278,200
20	81.9	312,900	312,900	312,900	225,300	249,900	289,300	305,000	293,100	277,000
25	79.5	250,300	250,300	250,300	156,600	199,100	230,900	250,300	250,300	239,000
30	77.1	208,100	208,100	208,100	109,800	152,000	191,300	208,100	208,100	205,100
35	74.6	177,400	177,400	177,400	83,400	116,600	162,600	177,400	177,400	177,400
40	72.1	154,200	154,200	154,200	66,800	93,700	136,500	154,200	154,200	154,200
50	67.0	121,500	121,500	121,500	46,400	66,400	97,800	118,500	121,500	121,500
60	61.7	99,400	99,400	99,400	34,900	50,400	75,400	91,500	94,000	97,300
70	56.2	80,800	83,600	83,600	27,100	40,200	60,600	74,100	76,200	78,900
80	50.2	67,300	72,000	72,000	21,600	32,800	50,200	61,700	63,400	65,800
90	43.6	57,400	62,700	62,700	17,600	27,300	42,400	52,400	54,000	56,000
100	36.2	49,700	54,400	55,200	14,400	23,000	36,600	45,300	46,700	48,500
110	27.1	43,600	47,800	49,200	11,900	19,600	31,800	39,800	40,900	42,500
120	13.2	38,600	42,400	43,200	9,800	16,800	27,800	35,100	36,200	37,700

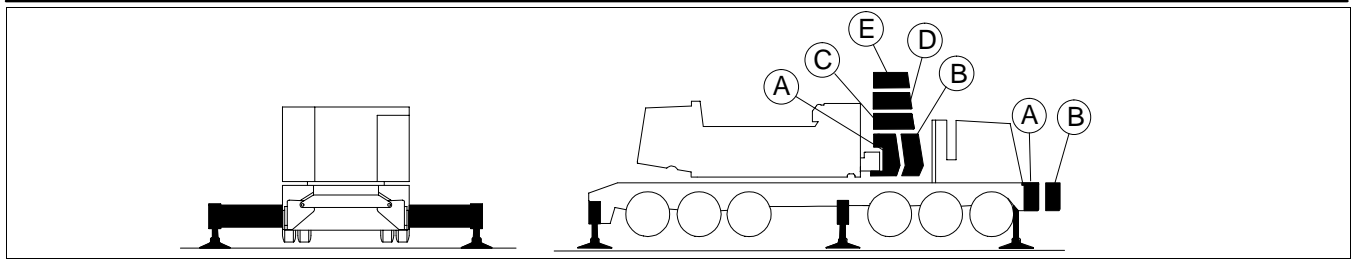
### Main Boom Capacities – On Outriggers – 130 Ft Open Throat Tube Boom

Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper								
		Over The Rear			360 Degree Rotation					
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCDE+0	ABCDE+A	ABCDE+AB
21.26	82.0	292,100	292,100	292,100	210,800	234,200	271,200	291,800	280,700	264,900
25	80.3	250,100	250,100	250,100	156,700	198,400	230,000	250,100	250,100	238,000
30	78.1	207,400	207,400	207,400	109,800	152,000	190,600	207,400	207,400	204,400
35	75.8	176,700	176,700	176,700	83,300	116,500	162,000	176,700	176,700	176,700
40	73.5	153,600	153,600	153,600	66,600	93,500	136,300	153,600	153,600	153,600
50	68.9	121,000	121,000	121,000	46,200	66,200	97,500	118,200	121,000	121,000
60	64.1	98,900	98,900	98,900	34,600	50,200	75,200	91,200	93,700	97,000
70	59.1	80,500	83,100	83,100	26,800	39,900	60,300	73,800	75,900	78,600
80	53.8	67,000	71,500	71,500	21,400	32,500	49,900	61,400	63,100	65,500
90	48.1	57,100	62,200	62,200	17,300	27,000	42,100	52,100	53,700	55,700
100	41.9	49,400	54,100	54,800	14,100	22,700	36,300	45,000	46,300	48,200
110	34.7	43,200	47,500	48,600	11,600	19,300	31,500	39,500	40,500	42,200
120	26.0	38,400	42,100	43,000	9,500	16,500	27,600	34,800	35,900	37,400
130	12.7	34,200	37,700	38,300	7,800	14,200	24,300	30,900	31,900	33,300

### Main Boom Capacities – On Outriggers – 140 Ft Open Throat Tube Boom

Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper								
		Over The Rear			360 Degree Rotation					
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCDE+0	ABCDE+A	ABCDE+AB
22.65	82.0	268,800	268,800	268,800	194,400	218,500	253,300	268,800	268,000	252,900
25	81.0	249,200	249,200	249,200	156,800	197,600	229,200	249,200	249,200	237,000
30	79.0	206,600	206,600	206,600	109,700	151,900	189,900	206,600	206,600	203,600
35	76.9	176,000	176,000	176,000	83,100	116,300	161,600	176,000	176,000	176,000
40	74.7	153,000	153,000	153,000	66,500	93,300	136,000	153,000	153,000	153,000
50	70.5	120,400	120,400	120,400	46,000	66,000	97,300	117,900	120,400	120,400
60	66.0	98,300	98,300	98,300	34,400	49,900	74,900	90,900	93,400	96,700
70	61.5	80,100	82,500	82,500	26,600	39,600	60,000	73,500	75,600	78,300
80	56.7	66,700	70,900	70,900	21,100	32,200	49,500	61,000	62,800	65,100
90	51.7	56,700	61,700	61,700	17,000	26,700	41,800	51,800	53,300	55,400
100	46.2	49,000	53,700	54,300	13,800	22,400	36,000	44,600	46,000	47,800
110	40.3	42,900	47,100	47,800	11,300	19,000	31,200	39,200	40,400	41,800
120	33.4	38,100	41,700	42,400	9,200	16,200	27,300	34,500	35,600	37,100
130	25.0	33,900	37,400	38,300	7,500	13,900	24,000	30,700	31,700	33,000
140	12.2	30,400	33,600	33,800	6,000	11,900	21,300	27,400	28,300	29,500

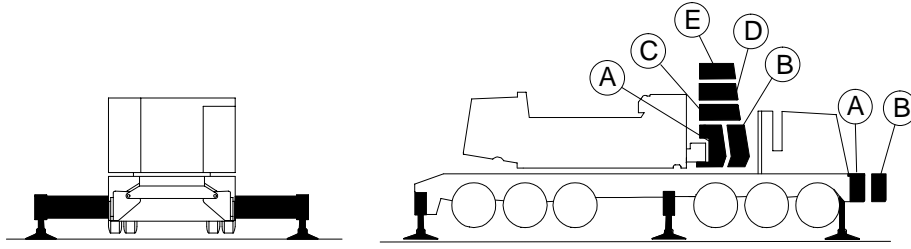




Main Boom Capacities – On Outriggers – 150 Ft Open Throat Tube Boom										
Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper								
		Over The Rear			360 Degree Rotation					
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCDE+0	ABCDE+A	ABCDE+AB
24.04	82.0	250,600	250,600	250,600	170,200	204,600	237,700	250,600	250,600	242,300
25	81.6	248,200	248,200	248,200	156,800	196,800	228,300	248,200	248,200	236,000
30	79.7	205,800	205,800	205,800	109,600	151,800	189,100	205,800	205,800	202,800
35	77.7	175,300	175,300	175,300	83,000	116,200	161,000	175,300	175,300	175,300
40	75.8	152,300	152,300	152,300	66,300	93,100	135,800	152,300	152,300	152,300
50	71.8	119,800	119,800	119,800	45,700	65,700	97,000	117,600	119,800	119,800
60	67.7	97,700	97,800	97,700	34,100	49,500	74,600	90,500	93,000	96,400
70	63.5	79,800	82,000	82,000	26,200	39,300	59,700	73,200	75,200	78,000
80	59.2	66,400	70,400	70,400	20,700	31,900	49,200	60,700	62,400	64,800
90	54.6	56,400	61,200	61,100	16,600	26,300	41,400	51,400	52,900	55,000
100	49.8	48,600	53,300	53,500	13,400	22,100	35,700	44,300	45,600	47,400
110	44.6	42,500	46,700	47,100	10,900	18,600	30,900	38,800	40,100	41,400
120	38.8	37,700	41,300	41,700	8,900	15,900	27,000	34,200	35,300	36,800
130	32.3	33,600	37,100	37,800	7,100	13,600	23,700	30,300	31,300	32,700
140	24.2	30,100	33,300	33,700	5,700	11,600	20,900	27,000	28,000	29,200
150	11.8	27,000	29,800	29,800	4,400	9,900	18,600	24,200	25,100	26,200

Main Boom Capacities – On Outriggers – 160 Ft Open Throat Tube Boom										
Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper								
		Over The Rear			360 Degree Rotation					
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCDE+0	ABCDE+A	ABCDE+AB
25.43	82.0	230,800	230,800	230,800	151,300	192,500	223,400	230,800	230,800	230,800
30	80.3	205,000	205,000	205,000	109,500	151,700	188,400	205,000	205,000	202,000
35	78.5	174,500	174,500	174,500	82,800	116,000	160,300	174,500	174,500	174,500
40	76.7	151,600	151,600	151,600	66,000	92,900	135,500	151,600	151,600	151,600
50	73.0	119,200	119,200	119,200	45,400	65,400	96,700	117,300	119,200	119,200
60	69.2	97,200	97,200	97,200	33,800	49,200	74,200	90,200	92,700	96,000
70	65.3	79,500	81,400	81,400	25,900	39,000	59,300	72,800	74,900	77,600
80	61.3	66,000	69,900	69,900	20,400	31,500	48,800	60,300	62,100	64,400
90	57.1	56,000	60,500	60,500	16,300	26,000	41,000	51,000	52,600	54,600
100	52.8	48,200	52,600	52,600	13,100	21,700	35,300	43,900	45,200	47,000
110	48.1	42,100	46,300	46,300	10,600	18,300	30,500	38,500	39,700	41,000
120	43.1	37,400	40,900	41,000	8,500	15,500	26,600	33,800	34,900	36,400
130	37.6	33,200	36,700	37,300	6,800	13,200	23,300	30,000	31,000	32,300
140	31.2	29,700	32,900	33,200	5,300	11,200	20,600	26,700	27,600	28,900
150	23.4	26,700	29,700	29,700	4,100	9,600	18,200	23,900	24,800	25,900
160	11.4	24,100	26,400	26,400	3,000	8,100	16,200	21,500	22,300	23,300

Main Boom Capacities – On Outriggers – 170 Ft Open Throat Tube Boom										
Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper								
		Over The Rear			360 Degree Rotation					
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCDE+0	ABCDE+A	ABCDE+AB
26.83	82.0	212,000	212,000	212,000	135,600	181,200	210,500	212,000	212,000	212,000
30	80.9	204,100	204,100	204,100	109,400	151,600	187,600	204,100	204,100	201,500
35	79.2	173,800	173,800	173,800	82,600	115,800	159,600	173,800	173,800	173,800
40	77.5	151,000	151,000	151,000	65,800	92,600	135,200	151,000	151,000	150,900
50	74.0	118,600	118,600	118,600	45,100	65,100	96,300	117,000	118,600	118,600
60	70.5	96,600	96,600	96,600	33,500	48,900	73,900	89,800	92,300	95,700
70	66.9	79,100	80,800	80,800	25,600	38,700	59,000	72,500	74,500	77,300
80	63.1	65,600	69,300	69,300	20,000	31,200	48,400	59,900	61,700	64,100
90	59.3	55,600	59,600	59,600	15,900	25,600	40,600	50,700	52,200	54,200
100	55.3	47,800	51,800	51,800	12,700	21,300	34,900	43,500	44,800	46,600
110	51.1	41,700	45,500	45,500	10,200	17,900	30,100	38,100	39,300	40,600
120	46.6	37,000	40,200	40,200	8,100	15,100	26,200	33,400	34,500	36,000
130	41.7	32,800	36,300	36,600	6,400	12,800	23,000	29,600	30,600	31,900
140	36.4	29,300	32,500	32,700	4,900	10,900	20,200	26,300	27,200	28,500
150	30.3	26,300	29,200	29,200	3,700	9,200	17,900	23,500	24,400	25,500
160	22.7	23,700	26,200	26,200	2,600	7,700	15,800	21,100	21,900	23,000
170	11.1	21,400	23,300	23,300	-	6,500	14,000	19,000	19,700	20,700



### Main Boom Capacities – On Outriggers – 180 Ft Open Throat Tube Boom

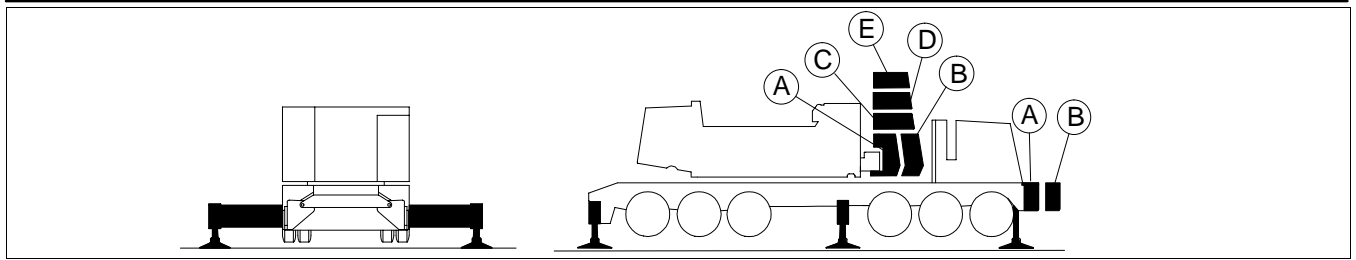
Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper								
		Over The Rear			360 Degree Rotation					
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCDE+0	ABCDE+A	ABCDE+AB
28.22	82.0	188,800	188,800	188,800	122,500	169,400	188,800	188,800	188,800	188,800
30	81.4	188,800	188,800	188,800	109,300	151,400	186,800	188,800	188,800	188,800
35	79.8	173,000	173,000	173,000	82,400	115,600	158,800	173,000	173,000	173,000
40	78.2	150,300	150,300	150,300	65,600	92,400	134,900	150,300	150,300	150,300
50	74.9	117,900	117,900	117,900	44,800	64,800	96,000	116,700	117,900	117,900
60	71.6	95,900	95,900	95,900	33,100	48,500	73,500	89,500	92,000	95,300
70	68.2	78,700	80,600	80,600	25,200	38,300	58,600	72,100	74,200	76,900
80	64.7	65,200	68,500	68,500	19,700	30,800	48,100	59,600	61,300	63,700
90	61.2	55,200	58,700	58,700	15,500	25,300	40,200	50,300	51,800	53,800
100	57.5	47,400	51,000	51,000	12,300	20,900	34,600	43,100	44,400	46,200
110	53.6	41,300	44,700	44,700	9,800	17,500	29,700	37,700	38,900	40,200
120	49.5	36,600	40,400	40,500	7,700	14,700	25,800	33,100	34,200	35,600
130	45.2	32,400	35,900	35,900	6,000	12,400	22,600	29,200	30,200	31,500
140	40.5	28,900	32,100	32,100	4,600	10,500	19,800	25,900	26,800	28,100
150	35.3	25,900	28,700	28,700	3,300	8,800	17,500	23,100	24,000	25,100
160	29.4	23,300	25,700	25,700	2,200	7,300	15,400	20,700	21,500	22,600
170	22.1	21,000	23,000	23,000	-	6,100	13,700	18,600	19,300	20,400
180	10.8	19,000	20,500	20,500	-	5,000	12,100	16,700	17,400	18,400

### Main Boom Capacities – On Outriggers – 190 Ft Open Throat Tube Boom

Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper								
		Over The Rear			360 Degree Rotation					
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCDE+0	ABCDE+A	ABCDE+AB
29.61	82.0	168,700	168,700	168,700	111,900	155,000	168,700	168,700	168,700	168,700
30	81.9	168,700	168,700	168,700	109,200	151,300	168,700	168,700	168,700	168,700
35	80.4	168,700	168,700	168,700	82,100	115,300	158,100	168,700	168,700	168,700
40	78.8	149,500	149,500	149,500	65,300	92,100	134,700	149,600	149,600	149,600
50	75.7	117,300	117,300	117,300	44,500	64,500	95,700	116,300	117,300	117,300
60	72.6	95,300	95,300	95,300	32,800	48,200	73,200	89,100	91,600	94,900
70	69.4	78,400	80,000	80,000	24,900	38,000	58,200	71,700	73,800	76,500
80	66.1	64,800	67,600	67,600	19,300	30,500	47,700	59,200	60,900	63,300
90	62.8	54,800	57,800	57,800	15,200	24,900	40,200	49,800	51,400	53,400
100	59.4	47,000	50,100	50,100	12,000	20,600	34,200	42,700	44,000	45,800
110	55.8	40,900	43,900	43,900	9,400	17,100	29,300	37,300	38,500	40,200
120	52.1	36,200	39,800	39,800	7,300	14,300	25,400	32,700	33,800	35,200
130	48.1	32,000	35,300	35,300	5,600	12,000	22,200	28,800	29,800	31,100
140	43.9	28,500	31,400	31,400	4,100	10,100	19,400	25,500	26,400	27,700
150	39.4	25,500	28,100	28,100	2,900	8,400	17,100	22,700	23,600	24,700
160	34.4	22,900	25,200	25,200	-	6,900	15,000	20,300	21,100	22,200
170	28.6	20,600	22,600	22,600	-	5,700	13,200	18,200	18,900	20,000
180	21.5	18,600	20,200	20,200	-	4,600	11,700	16,300	17,000	18,000
190	10.5	16,800	17,900	17,900	-	3,600	10,300	14,700	15,300	16,200

### Main Boom Capacities – On Outriggers – 200 Ft Open Throat Tube Boom

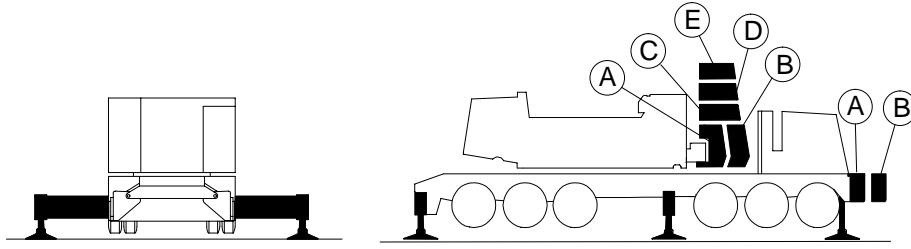
Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper								
		Over The Rear			360 Degree Rotation					
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCDE+0	ABCDE+A	ABCDE+AB
31	82.0	149,200	149,200	149,200	<b>PROHIBITED</b>	142,200	149,200	149,200	149,200	149,200
35	80.8	149,200	149,200	149,200		115,100	149,200	149,200	149,200	149,200
40	79.4	148,800	148,800	148,800		91,800	134,400	148,800	148,800	148,800
50	76.5	116,700	116,700	116,600		64,200	95,300	116,000	116,700	116,600
60	73.5	94,700	94,700	94,700		47,800	72,800	88,700	91,200	94,500
70	70.5	78,000	79,400	79,400		37,600	57,800	71,300	73,400	76,200
80	67.4	64,400	66,700	66,700		30,100	47,300	58,800	60,500	62,900
90	64.3	54,400	57,000	57,000		24,500	39,800	49,400	51,000	53,000
100	61.0	46,600	49,300	49,300		20,200	33,800	42,200	43,600	45,400
110	57.7	40,400	43,100	43,100		16,700	28,900	36,900	38,100	39,800
120	54.3	35,800	39,100	39,100		13,900	25,000	32,200	33,300	34,800
130	50.6	31,600	34,600	34,600		11,600	21,700	28,400	29,400	30,700
140	46.8	28,100	30,800	30,800		9,600	19,000	25,100	26,000	27,300
150	42.8	25,100	27,500	27,500		8,000	16,600	22,300	23,200	24,300
160	38.4	22,500	24,600	24,600		6,500	14,600	19,900	20,700	21,800
170	33.5	20,200	22,000	22,000	5,300	12,800	17,800	18,500	19,500	
180	27.9	18,200	19,700	19,700	4,100	11,300	15,900	16,600	17,600	
190	20.9	16,400	17,600	17,600	3,200	9,900	14,300	14,900	15,800	
200	10.2	14,800	15,600	15,600	2,300	8,600	12,800	13,400	14,300	



Main Boom Capacities – On Outriggers – 210 Ft Open Throat Tube Boom										
Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper								
		Over The Rear			360 Degree Rotation					
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCDE+0	ABCDE+A	ABCDE+AB
32.39	82.0	135,000	135,000	135,000	<b>PROHIBITED</b>	131,200	135,000	135,000	135,000	135,000
35	81.3	135,000	135,000	135,000		114,900	135,000	135,000	135,000	135,000
40	79.9	135,000	135,000	135,000		91,500	134,000	135,000	135,000	135,000
50	77.1	116,000	116,000	116,000		63,800	95,000	115,600	116,000	116,000
60	74.3	94,000	94,000	94,000		47,500	72,500	88,300	90,800	94,000
70	71.4	77,600	78,500	78,500		37,300	57,400	70,900	73,000	75,800
80	68.5	64,000	65,800	65,800		29,700	46,900	58,400	60,100	62,500
90	65.6	54,000	56,200	56,200		24,100	39,500	49,000	50,500	52,600
100	62.5	46,200	48,500	48,500		19,800	33,400	41,800	43,200	45,000
110	59.4	40,000	42,400	42,400		16,300	28,500	36,500	37,700	39,400
120	56.2	35,400	38,400	38,300		13,500	24,600	31,800	32,900	34,400
130	52.8	31,200	33,900	33,900		11,200	21,300	28,000	29,000	30,300
140	49.3	27,700	30,100	30,100		9,200	18,600	24,700	25,600	26,900
150	45.6	24,700	26,800	26,800		7,500	16,200	21,900	22,700	23,900
160	41.7	22,100	24,000	24,000		6,100	14,200	19,500	20,300	21,300
170	37.4	19,800	21,400	21,400		4,800	12,400	17,300	18,100	19,100
180	32.6	17,800	19,200	19,200		3,700	10,800	15,500	16,200	17,100
190	27.2	16,000	17,200	17,200		2,700	9,500	13,800	14,500	15,400
200	20.4	14,400	15,300	15,300		-	8,200	12,400	13,000	13,800
210	10.0	13,000	13,500	13,500		-	7,100	11,000	11,600	12,500

Main Boom Capacities – On Outriggers – 220 Ft Open Throat Tube Boom										
Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper								
		Over The Rear			360 Degree Rotation					
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCDE+0	ABCDE+A	ABCDE+AB
33.79	82.0	123,800	123,800	123,800	<b>PROHIBITED</b>	121,500	123,800	123,800	123,800	123,800
35	81.7	120,700	120,700	120,700		114,700	120,700	120,700	120,700	120,700
40	80.4	119,200	119,200	119,200		91,200	119,200	119,200	119,200	119,200
50	77.7	115,300	115,300	115,300		63,500	94,600	115,300	115,300	115,300
60	75.0	93,000	93,000	93,100		47,100	72,100	87,900	90,400	93,000
70	72.3	77,200	77,600	77,600		36,900	57,100	70,600	72,600	75,400
80	69.6	63,600	65,000	65,000		29,300	46,400	58,000	59,700	62,100
90	66.8	53,500	55,400	55,400		23,700	39,100	48,600	50,100	52,200
100	63.9	45,700	47,800	47,800		19,400	33,000	41,400	42,700	44,500
110	60.9	40,000	41,600	41,600		15,900	28,100	36,100	37,300	38,900
120	57.9	35,000	37,600	37,600		13,100	24,200	31,400	32,500	34,000
130	54.8	30,800	33,200	33,200		10,800	20,900	27,500	28,500	29,900
140	51.5	27,300	29,400	29,400		8,800	18,100	24,200	25,200	26,400
150	48.1	24,200	26,200	26,200		7,100	15,800	21,400	22,300	23,500
160	44.5	21,600	23,300	23,300		5,700	13,700	19,000	19,800	20,900
170	40.7	19,300	20,800	20,800		4,400	12,000	16,900	17,700	18,900
180	36.5	17,300	18,600	18,600		3,300	10,400	15,100	15,800	16,700
190	31.9	15,600	16,600	16,600		2,300	9,000	13,400	14,100	15,000
200	26.5	14,000	14,800	14,800		-	7,800	11,900	12,600	13,400
210	19.9	12,600	13,100	13,100		-	6,700	10,600	11,200	12,000
220	9.7	11,300	11,500	11,500		-	5,700	9,400	10,000	10,800



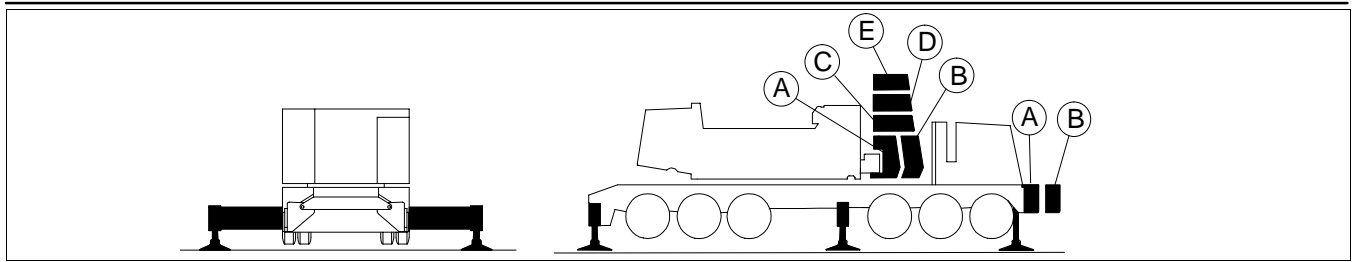


### Main Boom Capacities – On Outriggers – 230 Ft Open Throat Tube Boom

Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper									
		Over The Rear			360 Degree Rotation						
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCDE+0	ABCDE+A	ABCDE+AB	
35.18	82.0	107,800	107,800	107,800	<b>PROHIBITED</b>		107,800	107,800	107,800	107,800	
40	80.8	106,500	106,500	106,500			106,500	106,500	106,500	106,500	
50	78.3	106,500	106,500	106,500				94,400	106,500	106,500	106,500
60	75.7	92,300	92,300	92,300				71,900	87,700	90,100	92,300
70	73.1	76,900	76,900	76,900				56,800	70,300	72,300	75,100
80	70.5	63,300	64,300	64,300				46,200	57,700	59,400	61,800
90	67.8	53,200	54,700	54,700				38,800	48,300	49,800	51,900
100	65.1	45,400	47,200	47,200				32,700	41,100	42,400	44,200
110	62.3	39,700	41,000	41,000				27,800	35,800	37,000	38,700
120	59.5	34,700	37,100	37,100				23,900	31,100	32,200	33,700
130	56.5	30,500	32,700	32,700				20,600	27,200	28,200	29,600
140	53.5	27,000	28,900	28,900				17,800	23,900	24,900	26,100
150	50.3	23,900	25,700	25,700				15,500	21,100	22,000	23,200
160	47.0	21,300	22,900	22,900				13,400	18,700	19,500	20,600
170	43.5	19,000	20,400	20,400				11,700	16,600	17,400	18,400
180	39.8	17,000	18,200	18,200				10,100	14,700	15,400	16,400
190	35.7	15,200	16,200	16,200				8,700	13,100	13,800	14,700
200	31.2	13,700	14,400	14,400				7,500	11,600	12,300	13,100
210	25.9	12,200	12,800	12,800				6,400	10,300	10,900	11,700
220	19.5	11,000	11,300	11,300				5,400	9,100	9,700	10,400
230	9.5	9,800	9,800	9,800				4,500	8,000	8,600	9,300

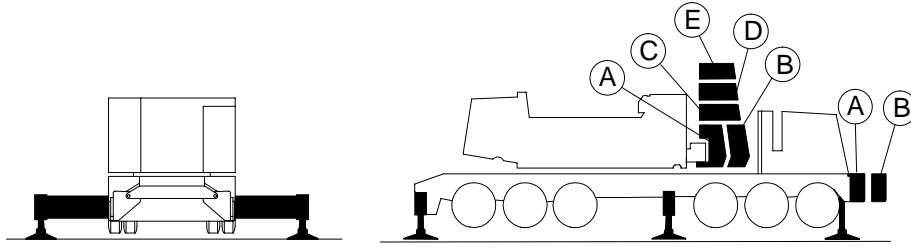
### Main Boom Capacities – On Outriggers – 240 Ft Open Throat Tube Boom

Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper									
		Over The Rear			360 Degree Rotation						
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCDE+0	ABCDE+A	ABCDE+AB	
36.57	82.0	98,500	98,500	98,500	<b>PROHIBITED</b>		98,500	98,500	98,500	98,500	
40	81.2	97,200	97,200	97,200				97,200	97,200	97,200	97,200
50	78.7	96,000	96,000	96,000				94,200	96,000	96,000	96,000
60	76.3	91,600	91,600	91,600				71,600	87,400	89,900	91,600
70	73.8	76,200	76,200	76,200				56,500	70,000	72,100	74,800
80	71.3	63,000	63,700	63,700				45,900	57,400	59,100	61,500
90	68.8	52,900	54,100	54,100				38,500	48,000	49,500	51,600
100	66.2	45,100	46,600	46,600				32,400	40,800	42,100	43,900
110	63.6	39,400	40,400	40,400				27,500	35,500	36,700	38,400
120	60.9	34,400	36,500	36,500				23,600	30,800	31,900	33,400
130	58.1	30,200	32,100	32,100				20,300	26,900	27,900	29,300
140	55.2	26,600	28,400	28,400				17,500	23,600	24,600	25,800
150	52.3	23,600	25,200	25,200				15,200	20,800	21,700	22,900
160	49.2	21,000	22,400	22,400				13,100	18,400	19,200	20,300
170	46.0	18,700	19,900	19,900				11,300	16,300	17,000	18,100
180	42.5	16,700	17,700	17,700				9,800	14,400	15,100	16,100
190	38.9	14,900	15,800	15,800				8,400	12,800	13,400	14,300
200	34.9	13,300	14,000	14,000				7,100	11,300	11,900	12,800
210	30.5	11,900	12,400	12,400				6,000	10,000	10,600	11,400
220	25.4	10,600	10,900	10,900				5,000	8,800	9,400	10,100
230	19.1	9,500	9,500	9,500				4,100	7,700	8,300	9,000
240	9.3	8,200	8,200	8,200				3,300	6,700	7,300	8,000



Main Boom Capacities – On Outriggers – 250 Ft Open Throat Tube Boom										
Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper								
		Over The Rear			360 Degree Rotation					
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCDE+0	ABCDE+A	ABCDE+AB
37.96	82.0	89,300	89,300	89,300	<b>PROHIBITED</b>		89,300	89,300	89,300	89,300
40	81.5	89,300	89,300	89,300		89,300	89,300	89,300	89,300	89,300
50	79.2	88,200	88,200	88,200		88,200	88,200	88,200	88,200	88,200
60	76.9	87,100	87,100	87,100		87,100	87,100	87,100	87,100	87,100
70	74.5	75,500	75,500	75,500		75,500	75,500	75,500	75,500	75,500
80	72.1	62,700	63,000	63,000		63,000	63,000	63,000	63,000	63,000
90	69.7	52,600	53,400	53,400		53,400	53,400	53,400	53,400	53,400
100	67.2	44,800	45,900	45,900		45,900	45,900	45,900	45,900	45,900
110	64.7	39,100	39,800	39,800		39,800	39,800	39,800	39,800	39,800
120	62.1	34,000	35,900	35,900		35,900	35,900	35,900	35,900	35,900
130	59.5	29,800	31,500	31,500		31,500	31,500	31,500	31,500	31,500
140	56.8	26,300	27,800	27,800		27,800	27,800	27,800	27,800	27,800
150	54.0	23,200	24,400	24,400		24,400	24,400	24,400	24,400	24,400
160	51.1	20,600	21,800	21,800		21,800	21,800	21,800	21,800	21,800
170	48.1	18,300	19,300	19,300		19,300	19,300	19,300	19,300	19,300
180	45.0	16,300	17,100	17,100		17,100	17,100	17,100	17,100	17,100
190	41.6	14,500	15,200	15,200		15,200	15,200	15,200	15,200	15,200
200	38.1	12,900	13,400	13,400		13,400	13,400	13,400	13,400	13,400
210	34.2	11,500	11,800	11,800		11,800	11,800	11,800	11,800	11,800
220	29.8	10,200	10,400	10,400		10,400	10,400	10,400	10,400	10,400
230	24.9	9,000	9,000	9,000		9,000	9,000	9,000	9,000	9,000
240	18.7	7,800	7,800	7,800		7,800	7,800	7,800	7,800	7,800
250	9.1	6,500	6,500	6,500		6,500	6,500	6,500	6,500	6,500

Main Boom Capacities – On Outriggers – 260 Ft Open Throat Tube Boom										
Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper								
		Over The Rear			360 Degree Rotation					
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCDE+0	ABCDE+A	ABCDE+AB
39.35	82.0	81,600	81,600	81,600	<b>PROHIBITED</b>		81,600	81,600	81,600	81,600
40	81.9	81,600	81,600	81,600		81,600	81,600	81,600	81,600	81,600
50	79.6	77,600	77,600	77,600		77,600	77,600	77,600	77,600	77,600
60	77.4	76,600	76,600	76,600		76,600	76,600	76,600	76,600	76,600
70	75.1	70,800	70,800	70,800		70,800	70,800	70,800	70,800	70,800
80	72.8	62,400	62,400	62,400		62,400	62,400	62,400	62,400	62,400
90	70.5	52,300	52,800	52,800		52,800	52,800	52,800	52,800	52,800
100	68.1	44,400	45,300	45,300		45,300	45,300	45,300	45,300	45,300
110	65.7	38,800	40,200	40,200		40,200	40,200	40,200	40,200	40,200
120	63.3	33,700	35,400	35,400		35,400	35,400	35,400	35,400	35,400
130	60.8	29,500	31,000	31,000		31,000	31,000	31,000	31,000	31,000
140	58.2	25,900	27,300	27,300		27,300	27,300	27,300	27,300	27,300
150	55.6	22,900	24,100	24,100		24,100	24,100	24,100	24,100	24,100
160	52.9	20,300	21,300	21,300		21,300	21,300	21,300	21,300	21,300
170	50.1	18,000	18,800	18,800		18,800	18,800	18,800	18,800	18,800
180	47.1	16,000	16,600	16,600		16,600	16,600	16,600	16,600	16,600
190	44.1	14,200	14,700	14,700		14,700	14,700	14,700	14,700	14,700
200	40.8	12,600	13,000	13,000		13,000	13,000	13,000	13,000	13,000
210	37.3	11,200	11,400	11,400		11,400	11,400	11,400	11,400	11,400
220	33.5	9,900	9,900	10,000		10,000	10,000	10,000	10,000	10,000
230	29.3	8,600	8,600	8,600		8,600	8,600	8,600	8,600	8,600
240	24.4	7,400	7,400	7,400		7,400	7,400	7,400	7,400	7,400
250	18.3	6,300	6,300	6,300		6,300	6,300	6,300	6,300	6,300
260	9.0	5,100	5,100	5,100		5,100	5,100	5,100	5,100	5,100

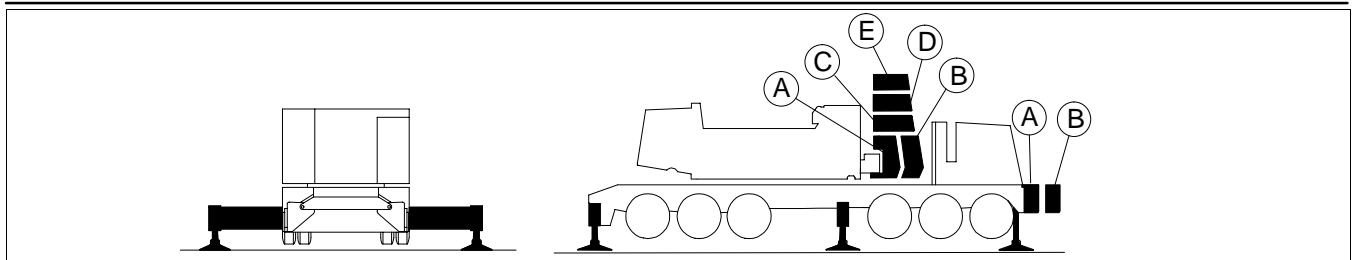


### Main Boom Capacities – On Outriggers – 270 Ft Open Throat Tube Boom

Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper								
		Over The Rear			360 Degree Rotation					
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCDE+0	ABCDE+A	ABCDE+AB
40.74	82.0	71,700	71,700	71,700	<b>PROHIBITED</b>		71,700	71,700	71,700	71,700
50	80.0	70,800	70,800	70,800			70,800	70,800	70,800	70,800
60	77.8	69,900	69,900	69,900			69,900	69,900	69,900	69,900
70	75.7	64,600	64,600	64,600			55,700	64,600	64,600	64,600
80	73.5	59,800	59,800	59,800			45,000	56,500	58,200	59,800
90	71.2	52,000	52,200	52,200			37,600	47,000	48,600	50,600
100	69.0	44,100	44,700	44,700			31,500	39,800	41,100	42,900
110	66.7	38,500	40,000	40,000			26,600	34,600	35,800	37,400
120	64.4	33,400	34,800	34,800			22,600	29,800	30,900	32,400
130	62.0	29,200	30,500	30,400			19,300	25,900	26,900	28,300
140	59.5	25,600	26,700	26,700			16,500	22,600	23,500	24,800
150	57.1	22,600	23,500	23,600			14,100	19,800	20,700	21,800
160	54.5	20,000	20,800	20,800			12,100	17,400	18,200	19,200
170	51.8	17,700	18,300	18,300			10,300	15,200	16,000	17,000
180	49.1	15,600	16,200	16,200			8,700	13,400	14,100	15,000
190	46.2	13,800	14,200	14,200			7,300	11,700	12,400	13,300
200	43.2	12,300	12,500	12,500			6,100	10,200	10,800	11,700
210	40.0	10,800	10,900	10,900			4,900	8,900	9,500	10,300
220	36.6	9,500	9,500	9,500			3,900	7,700	8,200	9,000
230	32.8	8,200	8,200	8,200			3,000	6,600	7,100	7,900
240	28.7	7,000	7,000	7,000			2,200	5,600	6,100	6,800
250	23.9	5,900	5,900	5,900			-	4,700	5,200	5,900
260	18.0	4,800	4,800	4,800			-	3,900	4,400	4,800
270	8.8	3,800	3,800	3,800			-	3,100	3,600	3,800

### Main Boom Capacities – On Outriggers – 280 Ft Open Throat Tube Boom

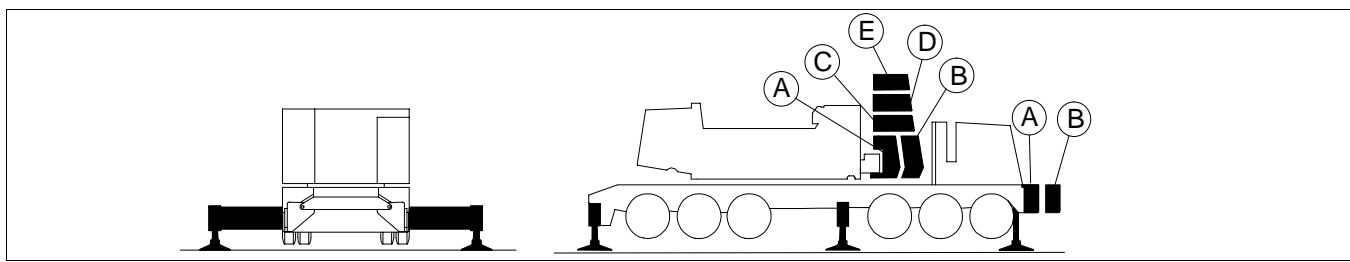
Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper								
		Over The Rear			360 Degree Rotation					
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCDE+0	ABCDE+A	ABCDE+AB
42.14	82.0	65,600	65,600	65,600	<b>PROHIBITED</b>		65,600	65,600	65,600	65,600
50	80.4	64,800	64,800	64,800			64,800	64,800	64,800	64,800
60	78.3	64,000	64,000	64,000			64,000	64,000	64,000	64,000
70	76.2	59,200	59,200	59,200			59,200	59,200	59,200	59,200
80	74.1	54,800	54,800	54,800			54,800	54,800	54,800	54,800
90	71.9	50,000	50,000	50,000			46,700	48,200	50,000	50,000
100	69.8	43,800	44,100	44,100			40,100	40,800	42,600	42,600
110	67.6	38,200	39,500	39,500			34,200	35,500	37,100	37,100
120	65.3	33,100	34,300	34,300			29,500	30,600	32,100	32,100
130	63.1	28,900	29,900	29,900			25,600	26,600	28,000	28,000
140	60.7	25,300	26,200	26,200			22,300	23,200	24,500	24,500
150	58.4	22,200	23,000	23,000			19,500	20,300	21,500	21,500
160	55.9	19,600	20,300	20,300			17,000	17,800	18,900	18,900
170	53.4	17,300	17,800	17,800			14,900	15,600	16,700	16,700
180	50.8	15,300	15,700	15,700			13,000	13,700	14,700	14,700
190	48.1	13,500	13,800	13,800			11,300	12,000	12,900	12,900
200	45.3	11,900	12,000	12,000			9,900	10,500	11,300	11,300
210	42.4	10,500	10,500	10,500			8,500	9,100	9,900	9,900
220	39.2	9,100	9,000	9,100			7,300	7,900	8,700	8,700
230	35.9	7,800	7,800	7,800			6,200	6,800	7,500	7,500
240	32.2	6,600	6,600	6,600			5,300	5,800	6,500	6,500
250	28.2	5,500	5,500	5,500			4,300	4,800	5,500	5,500
260	23.5	4,400	4,400	4,400			3,500	4,000	4,400	4,400
270	17.6	3,500	3,500	3,500			2,800	3,200	3,500	3,500
280	8.6	2,500	2,500	2,500			2,100	2,500	2,500	2,500



Main Boom Capacities – On Outriggers – 290 Ft Open Throat Tube Boom										
Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper								
		Over The Rear			360 Degree Rotation					
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCDE+0	ABCDE+A	ABCDE+AB
43.53	82.0	61,000	61,000	61,000	<b>PROHIBITED</b>	<b>PROHIBITED</b>	<b>PROHIBITED</b>	61,000	61,000	61,000
50	80.7	60,200	60,200	60,200				60,200	60,200	60,200
60	78.7	59,500	59,500	59,500				59,500	59,500	59,500
70	76.7	55,000	55,000	55,000				55,000	55,000	55,000
80	74.6	50,200	50,200	50,200				50,200	50,200	50,200
90	72.6	46,400	46,400	46,400				46,400	46,400	46,400
100	70.5	42,400	42,400	42,400				39,700	40,400	42,300
110	68.4	36,500	36,500	36,500				33,900	35,100	36,500
120	66.2	32,800	33,700	33,700				29,200	30,300	31,800
130	64.1	28,500	29,400	29,400				25,300	26,300	27,600
140	61.8	25,000	25,700	25,700				22,000	22,900	24,100
150	59.6	21,900	22,500	22,500				19,100	20,000	21,100
160	57.3	19,300	19,800	19,800				16,700	17,500	18,600
170	54.9	17,000	17,300	17,300				14,500	15,300	16,300
180	52.4	15,000	15,200	15,200				12,700	13,400	14,300
190	49.9	13,200	13,300	13,300				11,000	11,700	12,600
200	47.3	11,500	11,500	11,600				9,500	10,100	11,000
210	44.5	10,000	10,000	10,000				8,200	8,800	9,600
220	41.6	8,600	8,600	8,600				7,000	7,600	8,300
230	38.5	7,300	7,300	7,300				5,900	6,400	7,200
240	35.2	6,100	6,100	6,100				4,900	5,400	6,100
250	31.7	5,000	5,000	5,000				4,000	4,500	5,000
260	27.7	4,000	4,000	4,000				3,200	3,600	4,000
270	23.1	3,100	3,100	3,100				2,400	2,900	3,100
280	17.3	2,200	2,200	2,200				-	2,200	2,200

Main Boom Capacities – On Outriggers – 300 Ft Open Throat Tube Boom										
Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper								
		Over The Rear			360 Degree Rotation					
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCDE+0	ABCDE+A	ABCDE+AB
44.92	82.0	55,900	55,900	55,900	<b>PROHIBITED</b>	<b>PROHIBITED</b>	<b>PROHIBITED</b>	55,900	55,900	55,900
50	81.0	55,500	55,500	55,500				55,500	55,500	55,500
60	79.1	54,800	54,800	54,800				54,800	54,800	54,800
70	77.1	50,400	50,400	50,400				50,400	50,400	50,400
80	75.2	46,300	46,300	46,300				46,300	46,300	46,300
90	73.2	42,500	42,500	42,500				42,500	42,500	42,500
100	71.2	36,100	36,100	36,100				36,100	36,100	36,100
110	69.1	33,400	33,400	33,400				33,400	33,400	33,400
120	67.1	30,900	30,900	30,900				28,900	30,000	30,900
130	65.0	28,200	28,400	28,400				24,900	25,900	27,300
140	62.9	24,600	25,200	25,200				21,600	22,500	23,800
150	60.7	21,600	22,000	22,000				18,800	19,600	20,800
160	58.5	18,900	19,200	19,200				16,300	17,100	18,200
170	56.2	16,600	16,800	16,800				14,200	15,000	16,000
180	53.9	14,600	14,700	14,700				12,300	13,000	14,000
190	51.5	12,800	12,800	12,800				10,700	11,300	12,200
200	49.0	11,100	11,100	11,100				9,200	9,800	10,600
210	46.4	9,500	9,500	9,500				7,800	8,400	9,200
220	43.7	8,100	8,100	8,100				6,600	7,200	8,000
230	40.9	6,800	6,800	6,800				5,500	6,100	6,800
240	37.9	5,700	5,700	5,700				4,500	5,100	5,700
250	34.6	4,600	4,600	4,600				3,600	4,100	4,600
260	31.1	3,600	3,600	3,600				2,800	3,300	3,600
270	27.2	2,700	2,700	2,700				2,000	2,500	2,700



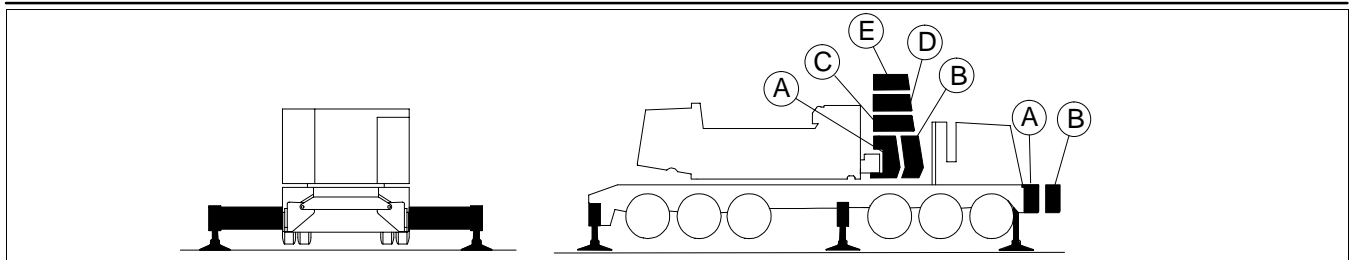


### Main Boom Capacities – On Outriggers – 310 Ft Open Throat Tube Boom

Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper									
		Over The Rear			360 Degree Rotation						
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCDE+0	ABCDE+A	ABCDE+AB	
46.31	82.0	<b>PROHIBITED</b>	51,500	51,500	<b>PROHIBITED</b>					51,500	51,500
50	81.3		51,200	51,200		51,200	51,200				
60	79.4		50,600	50,600		50,600	50,600				
70	77.5		46,400	46,400		46,400	46,400				
80	75.6		42,700	42,700		42,700	42,700				
90	73.7		36,300	36,300		36,300	36,300				
100	71.8		33,300	33,300		33,300	33,300				
110	69.8		30,800	30,800		30,800	30,800				
120	67.9		28,300	28,300		28,300	28,300				
130	65.8		26,200	26,200		26,200	26,200				
140	63.8		23,900	23,900		23,900	23,900				
150	61.7		21,500	21,500		21,500	21,500				
160	59.6		18,700	18,700		18,700	18,700				
170	57.4		16,300	16,300		16,300	16,300				
180	55.2		14,200	14,200		14,200	14,200				
190	52.9		12,300	12,300		12,300	12,300				
200	50.6		10,600	10,600		10,600	10,600				
210	48.1		9,000	9,000		9,000	9,000				
220	45.6		7,600	7,600		7,600	7,600				
230	43.0		6,400	6,400		6,400	6,400				
240	40.2		5,200	5,200		5,200	5,200				
250	37.2		4,100	4,100		4,100	4,100				
260	34.1		3,100	3,100		3,100	3,100				
270	30.6		2,200	2,200		2,200	2,200				

### Main Boom Capacities – On Outriggers – 320 Ft Open Throat Tube Boom

Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper									
		Over The Rear			360 Degree Rotation						
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCDE+0	ABCDE+A	ABCDE+AB	
47.7	82.0	<b>PROHIBITED</b>	47,300	47,300	<b>PROHIBITED</b>					47,300	47,300
50	81.6		47,300	47,300		47,300	47,300				
60	79.8		46,400	46,400		46,400	46,400				
70	77.9		42,900	42,900		42,900	42,900				
80	76.1		36,200	36,200		36,200	36,200				
90	74.3		33,500	33,500		33,500	33,500				
100	72.4		30,500	30,500		30,500	30,500				
110	70.5		28,200	28,200		28,200	28,200				
120	68.6		25,900	25,900		25,900	25,900				
130	66.6		24,000	24,000		24,000	24,000				
140	64.7		21,900	21,900		21,900	21,900				
150	62.7		20,200	20,200		20,200	20,200				
160	60.7		18,200	18,200		18,200	18,200				
170	58.6		15,800	15,800		15,800	15,800				
180	56.5		13,700	13,700		13,700	13,700				
190	54.3		11,800	11,800		11,800	11,800				
200	52.0		10,100	10,100		10,100	10,100				
210	49.7		8,500	8,500		8,500	8,500				
220	47.3		7,100	7,100		7,100	7,100				
230	44.9		5,900	5,900		5,900	5,900				
240	42.3		4,700	4,700		4,700	4,700				
250	39.5		3,600	3,600		3,600	3,600				
260	36.6		2,700	2,700		2,700	2,700				



**Main Boom Capacities – On Outriggers – 330 Ft Open Throat Tube Boom**

Load Radius (ft)	Boom Angle (deg)	Counterweight Combinations – Upper + Bumper								
		Over The Rear			360 Degree Rotation					
		ABCDE+0	ABCDE+A	ABCDE+AB	0+0	A+0	ABC+0	ABCDE+0	ABCDE+A	ABCDE+AB
49.09	82.0			43,700						43,700
50	81.8			43,700						43,700
60	80.1			39,100						39,100
70	78.3			36,200						36,200
80	76.5			33,400						33,400
90	74.7			30,700						30,700
100	72.9			28,200						28,200
110	71.1			25,900						25,900
120	69.3			23,800						23,800
130	67.4			21,900						21,900
140	65.5			20,200						20,200
150	63.6	<b>PROHIBITED</b>		18,600	<b>PROHIBITED</b>					18,600
160	61.6			17,200						17,200
170	59.6			15,300						14,900
180	57.6			13,200						12,900
190	55.5			11,300						11,100
200	53.4			9,600						9,600
210	51.2			8,000						8,000
220	48.9			6,700						6,700
230	46.6			5,400						5,400
240	44.1			4,200						4,200
250	41.6		3,200					3,200		
260	38.9		2,200					2,200		



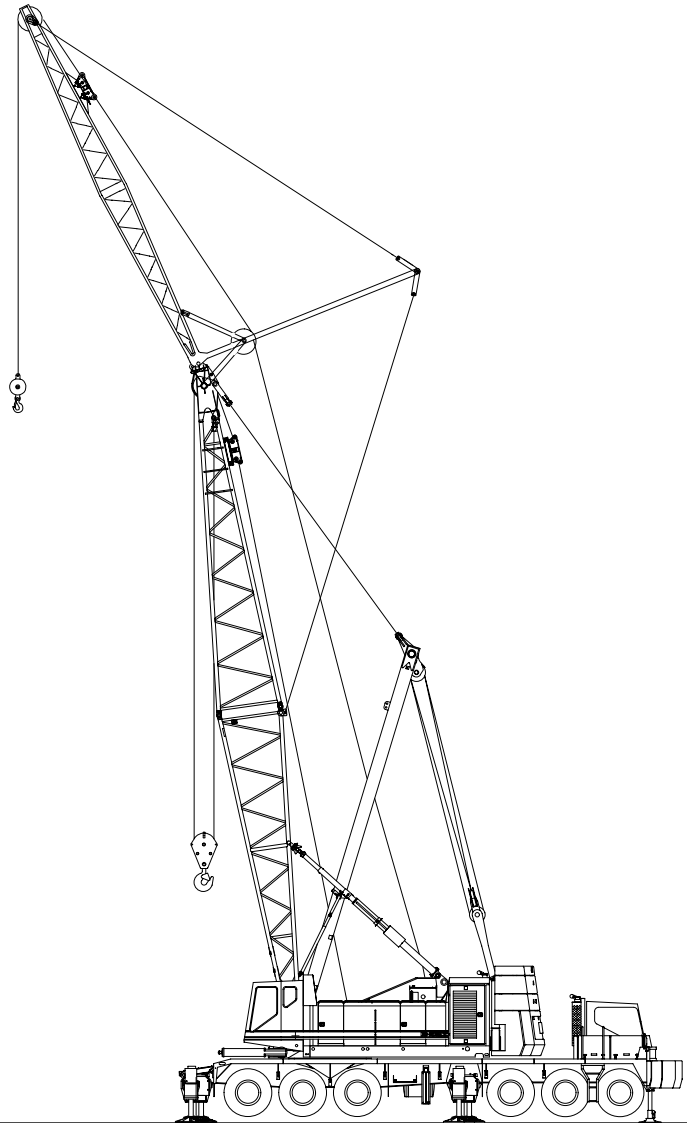
# Jib Capacities

Hydraulic Lattice Boom Truck Crane

## **HC-278H II**     300-ton (272.16 metric ton) **HYLAB Series**

### **Tube Boom + Jib**

- 80' – 300' (24.38 – 91.44 m)  
Open Throat Boom
- 30' – 100' (9.14 – 30.48 m) Jib
- On Fully Extended Outriggers
- 360° Rotation
- "ABCDE" + "AB" Counterweight

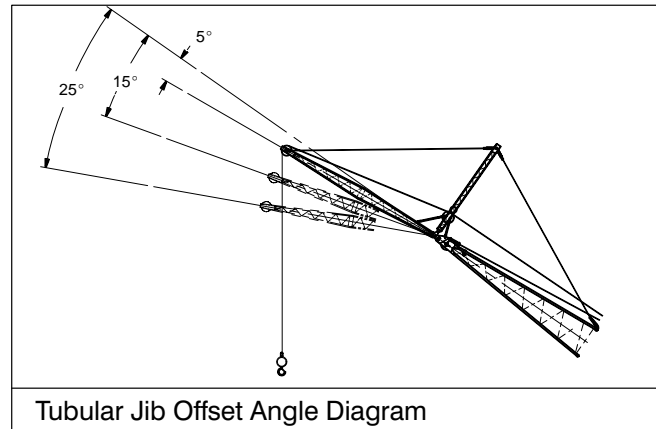
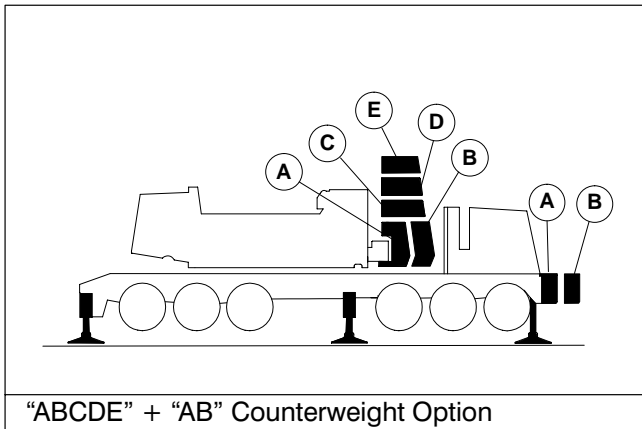


**CAUTION: This material is supplied for reference use only. Operator must refer to in-cab Crane Rating Manual to determine allowable machine lifting capacities and operating procedures.**



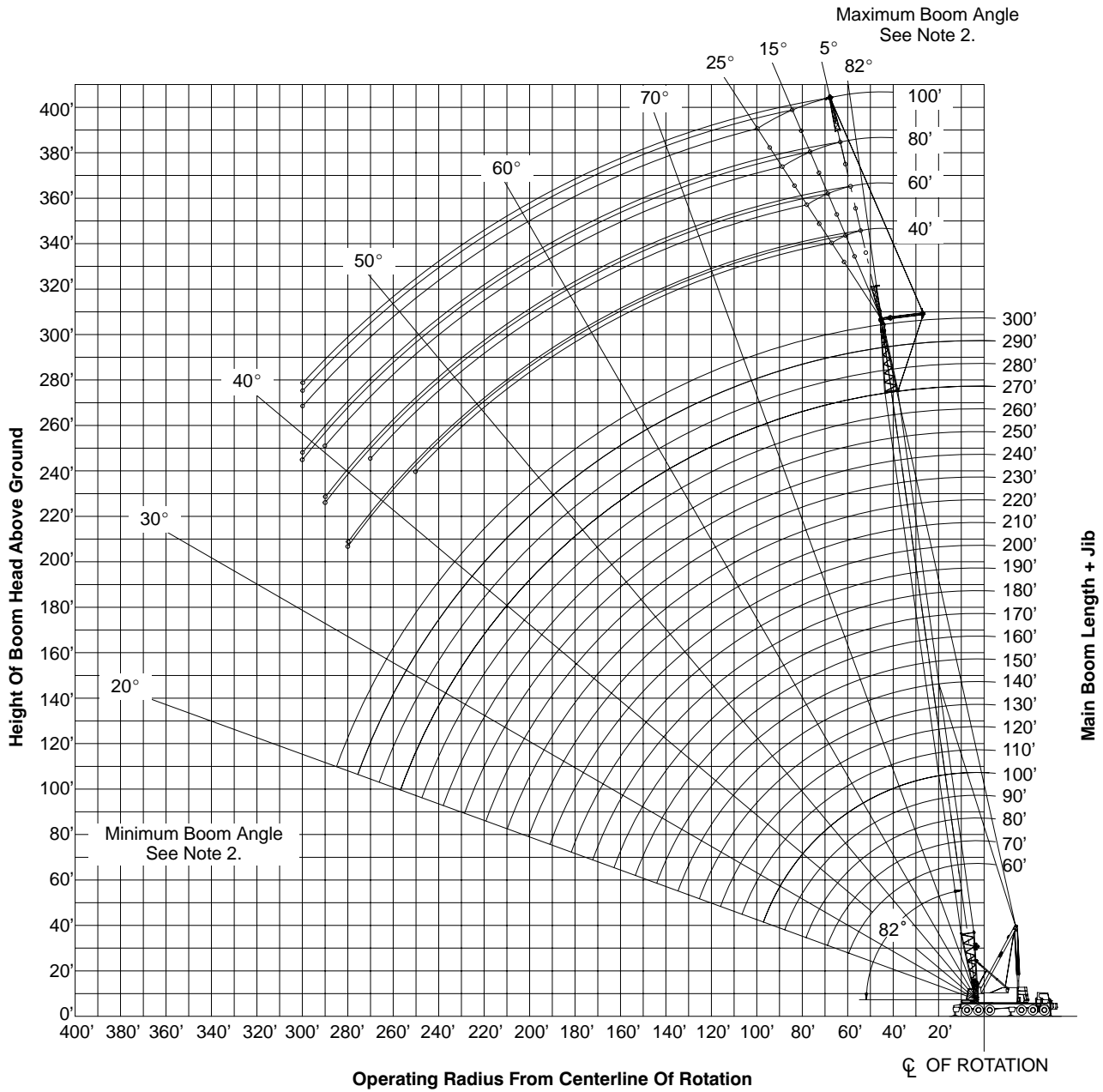
## TUBULAR JIB NOTES FOR OPEN THROAT BOOM

1. Capacities are for an HC 278H II truck crane with ABCDE+AB (134,900 lb) counterweight.
2. Capacities are for truck crane working areas for 360°, described on the Working Area Chart found in the Specifications Section of the Crane Rating Manual and are based on crane standing level on firm supporting surface and front bumper outrigger properly extended (crane on 5 jacks).
3. Capacities are limited to an LBCE 68" x 80" tubular boom with an open throat and LBCE 30 ton 24" x 32" cross-section jib with a 17'10" high jib mast properly assembled.
4. Two parts of 1.00" or 1-1/8" Diameter Type "N" or Type "RB" wire rope are required for maximum lift.
5. Capacities are for 30' – 100' jib lengths .
6. A jib cannot be used on open throat boom lengths longer than 300'.
7. The least stable rated condition is over the side.
8. All capacities are in pounds and are not more than 85% of the tipping loads. Those capacities followed by an asterisk (\*) are governed by factors other than those that would cause a tipping condition.
9. A deduction must be made from the jib capacities for the weight of the following: Main boom hook block or hook ball, jib hook block or hook ball, slings, grapple, load weighing devices, etc.
10. For jibs on booms 60' thru 260' use either ABCDE+0 or ABCDE+AB counterweight as capacities are included for both counterweight combinations. Crane must be on outriggers with front bumper outrigger properly extended.
11. For jibs on booms 270' thru 300' use ABCDE+AB counterweight. Crane must be on outriggers with front bumper outrigger properly extended.



# WORKING RANGE DIAGRAM

60' TO 300' MAIN BOOM + 100' MAX. JIB



**Notes:**

1. Boom geometry shown is 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 boom angles are equal to the values listed in the capacity chart for each boom length.

**HC-278H II - w/ 68" x 80" Tube Boom, w/ 24" x 32" Tube Jib, w/ ABCDE + AB Ctwrt - 360 Degree Rotation**

Refer to the Tubular Jib Notes for Open Throat Boom in the Crane Rating Manual before operating the machine.

Boom Length (ft)	Jib Length (ft)	Jib Load Radius (ft)	Jib Angle to Boom								
			5 Degrees			15 Degrees			25 Degrees		
			Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)	Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)	Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)
80	30	21.4	82.0	118.1	60,000						
80	30	25.0	80.1	117.5	60,000						
80	30	30.0	77.5	116.4	60,000	80.1	115.7	58,000			
80	30	35.0	74.9	115.0	60,000	77.4	114.3	57,000	79.8	112.9	47,800
80	30	40.0	72.2	113.4	59,000	74.7	112.7	56,100	77.1	111.3	44,500
80	30	50.0	66.7	109.4	56,900	69.2	108.7	50,800	71.5	107.2	39,200
80	30	60.0	60.9	104.2	53,400	63.4	103.4	44,000	65.6	101.9	37,000
80	30	70.0	54.8	97.6	45,500	57.2	96.7	38,900	59.3	95.1	36,100
80	30	80.0	48.2	89.2	39,600	50.5	88.3	37,000	52.5	86.5	33,100
80	30	90.0	40.7	78.6	37,100	42.9	77.5	35,800			
80	30	100.0	31.8	64.2	35,300						
80	50	25.9	82.0	137.6	43,800						
80	50	30.0	80.2	136.8	42,900						
80	50	35.0	78.0	135.7	41,900	81.6	134.7	39,500			
80	50	40.0	75.7	134.4	41,000	79.4	133.4	38,700			
80	50	50.0	71.2	131.0	39,300	74.8	130.0	34,800	78.2	128.0	28,400
80	50	60.0	66.4	126.8	37,900	70.0	125.7	33,100	73.4	123.6	25,200
80	50	70.0	61.5	121.5	34,100	65.1	120.4	29,000	68.3	118.2	22,700
80	50	80.0	56.4	115.0	31,100	59.9	113.8	25,900	63.0	111.5	20,800
80	50	90.0	50.9	107.1	27,400	54.3	105.8	23,400	57.3	103.3	19,200
80	50	100.0	44.8	97.4	24,500	48.2	96.0	21,400	51.0	93.2	17,900
80	50	110.0	38.0	85.3	22,100	41.2	83.7	19,900			
80	50	120.0	29.9	69.4	20,200						
80	70	30.4	82.0	157.1	29,400						
80	70	35.0	80.2	156.2	28,800						
80	70	40.0	78.3	155.0	28,300						
80	70	50.0	74.4	152.2	27,300	78.8	151.0	26,000			
80	70	60.0	70.4	148.6	26,300	74.8	147.3	24,900	79.0	144.8	18,800
80	70	70.0	66.3	144.1	25,500	70.6	142.8	21,800	74.8	140.3	16,900
80	70	80.0	62.0	138.8	24,600	66.3	137.4	19,400	70.4	134.8	15,300
80	70	90.0	57.5	132.4	21,700	61.8	131.0	17,500	65.8	128.2	14,100
80	70	100.0	52.8	124.8	19,400	57.0	123.3	16,000	60.9	120.3	13,000
80	70	110.0	47.7	115.8	17,500	51.9	114.2	14,700	55.6	110.9	12,200
80	70	120.0	42.2	104.9	16,000	46.3	103.1	13,600	49.7	99.5	11,500
80	70	130.0	35.9	91.6	14,700	39.8	89.5	12,800			
80	70	140.0	28.3	74.1	13,700						
80	90	34.9	82.0	176.6	18,700						
80	90	35.0	82.0	176.6	18,700						
80	90	40.0	80.3	175.6	18,100						
80	90	50.0	76.8	173.1	16,900	81.9	171.7	15,400			
80	90	60.0	73.3	169.9	15,900	78.4	168.5	14,500			
80	90	70.0	69.8	166.1	14,900	74.8	164.6	13,600	79.7	161.8	12,600
80	90	80.0	66.1	161.5	14,000	71.1	160.0	12,900	75.9	157.1	11,900
80	90	90.0	62.3	156.1	13,100	67.3	154.5	12,100	72.0	151.5	11,100
80	90	100.0	58.4	149.8	12,400	63.3	148.2	11,500	67.9	145.0	10,200
80	90	110.0	54.3	142.4	11,600	59.2	140.7	10,900	63.7	137.4	9,500
80	90	120.0	49.9	133.9	11,000	54.7	132.1	10,300	59.1	128.5	8,800
80	90	130.0	45.2	123.8	10,400	49.9	121.9	9,900	54.2	118.0	8,300
80	90	140.0	40.0	111.9	9,900	44.7	109.8	9,400	48.7	105.3	7,800
80	90	150.0	34.1	97.4	9,500	38.6	94.8	8,800			
80	90	160.0	27.0	78.5	9,100						
80	100	37.1	82.0	186.3	13,800						
80	100	40.0	81.1	185.8	13,500						
80	100	50.0	77.9	183.4	12,500						
80	100	60.0	74.6	180.4	11,500	79.9	179.0	10,300			
80	100	70.0	71.2	176.8	10,600	76.5	175.4	9,500	81.7	172.4	8,600
80	100	80.0	67.8	172.5	9,800	73.1	171.0	8,800	78.2	168.0	8,000
80	100	90.0	64.3	167.5	9,100	69.5	166.0	8,200	74.6	162.8	7,400
80	100	100.0	60.6	161.7	8,400	65.9	160.1	7,600	70.8	156.8	6,900
80	100	110.0	56.9	154.9	7,800	62.0	153.2	7,100	66.9	149.8	6,500

HC-278H II - w/ 68" x 80" Tube Boom, w/ 24" x 32" Tube Jib, w/ ABCDE + AB Ctwt - 360 Degree Rotation											
Refer to the Tubular Jib Notes for Open Throat Boom in the Crane Rating Manual before operating the machine.											
Boom Length (ft)	Jib Length (ft)	Jib Load Radius (ft)	Jib Angle to Boom								
			5 Degrees			15 Degrees			25 Degrees		
			Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)	Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)	Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)
80	100	120.0	52.9	147.2	7,200	58.0	145.4	6,600	62.7	141.8	6,100
80	100	130.0	48.6	138.2	6,700	53.7	136.2	6,200	58.3	132.4	5,700
80	100	140.0	44.1	127.7	6,200	49.1	125.6	5,800	53.5	121.3	5,400
80	100	150.0	39.1	115.2	5,800	44.0	112.9	5,500	48.2	108.1	5,200
80	100	160.0	33.4	100.1	5,500	38.1	97.4	5,200			
80	100	170.0	26.5	80.6	5,200						
120	30	27.0	82.0	157.7	60,000						
120	30	30.0	80.8	157.2	60,000						
120	30	35.0	78.9	156.3	60,000	80.8	155.5	56,900			
120	30	40.0	77.0	155.1	59,500	78.9	154.3	56,200	80.6	152.8	48,700
120	30	50.0	73.1	152.2	57,800	74.9	151.5	54,900	76.7	149.9	43,900
120	30	60.0	69.1	148.6	56,400	70.9	147.8	53,200	72.6	146.3	40,000
120	30	70.0	65.0	144.2	55,100	66.8	143.4	47,500	68.4	141.7	36,800
120	30	80.0	60.7	138.8	52,900	62.5	138.0	42,900	64.1	136.3	36,800
120	30	90.0	56.2	132.4	46,900	58.0	131.6	39,300	59.5	129.8	36,100
120	30	100.0	51.5	124.9	42,100	53.2	123.9	36,900	54.7	122.0	33,900
120	30	110.0	46.4	115.9	38,300	48.1	114.8	36,900	49.5	112.8	32,100
120	30	120.0	40.9	105.0	37,000	42.5	103.9	35,500			
120	30	130.0	34.6	91.7	34,500	36.1	90.3	33,500			
120	30	140.0	27.0	74.2	31,000						
120	50	31.5	82.0	177.2	42,500						
120	50	35.0	80.8	176.6	42,000						
120	50	40.0	79.1	175.6	41,300	81.9	174.5	38,600			
120	50	50.0	75.7	173.1	39,900	78.5	172.0	37,500	81.1	169.7	30,800
120	50	60.0	72.2	169.9	38,700	74.9	168.8	34,200	77.5	166.5	27,800
120	50	70.0	68.6	166.1	35,100	71.4	164.9	33,400	73.9	162.6	25,400
120	50	80.0	65.0	161.5	34,300	67.7	160.3	30,900	70.1	157.9	23,500
120	50	90.0	61.2	156.1	33,500	63.9	154.8	28,100	66.3	152.3	21,800
120	50	100.0	57.3	149.8	31,800	59.9	148.5	25,800	62.2	145.9	20,400
120	50	110.0	53.1	142.5	28,700	55.7	141.1	23,900	58.0	138.3	19,300
120	50	120.0	48.8	133.9	26,200	51.3	132.4	22,300	53.5	129.5	18,300
120	50	130.0	44.0	123.9	24,100	46.5	122.3	20,900	48.6	119.1	17,500
120	50	140.0	38.9	112.0	22,300	41.3	110.2	19,800			
120	50	150.0	33.0	97.4	20,800	35.3	95.3	18,900			
120	50	160.0	25.9	78.6	19,600						
120	70	36.0	82.0	196.7	28,700						
120	70	40.0	80.8	196.0	28,300						
120	70	50.0	77.7	193.7	27,500	81.2	192.4	26,000			
120	70	60.0	74.6	190.9	26,800	78.1	189.5	25,300	81.5	186.7	20,100
120	70	70.0	71.5	187.5	26,100	75.0	186.1	24,700	78.2	183.2	18,300
120	70	80.0	68.3	183.5	25,400	71.7	182.0	22,400	74.9	179.1	16,900
120	70	90.0	65.0	178.8	24,800	68.4	177.3	20,400	71.6	174.3	15,600
120	70	100.0	61.6	173.4	24,200	65.0	171.8	18,700	68.1	168.7	14,600
120	70	110.0	58.1	167.1	21,900	61.4	165.5	17,300	64.5	162.2	13,700
120	70	120.0	54.4	160.0	20,000	57.7	158.3	16,100	60.7	154.8	12,900
120	70	130.0	50.5	151.8	18,400	53.8	150.0	15,100	56.7	146.3	12,300
120	70	140.0	46.4	142.3	17,100	49.7	140.4	14,200	52.4	136.5	11,700
120	70	150.0	42.0	131.4	15,900	45.2	129.3	13,400	47.8	125.0	11,200
120	70	160.0	37.2	118.5	14,900	40.2	116.1	12,800			
120	70	170.0	31.6	102.8	14,100						
120	90	40.5	82.0	216.2	18,400						
120	90	50.0	79.4	214.3	17,500						
120	90	60.0	76.6	211.8	16,600	80.7	210.1	14,900			
120	90	70.0	73.8	208.7	15,800	77.9	207.1	14,200	81.8	203.7	12,800
120	90	80.0	70.9	205.1	15,000	75.0	203.4	13,500	78.8	200.0	12,300
120	90	90.0	68.0	200.9	14,200	72.0	199.2	12,900	75.8	195.8	11,700
120	90	100.0	65.0	196.1	13,500	69.0	194.4	12,300	72.7	190.8	11,200
120	90	110.0	61.9	190.7	12,900	65.9	188.8	11,800	69.6	185.2	10,500
120	90	120.0	58.7	184.5	12,300	62.7	182.6	11,300	66.3	178.8	9,800
120	90	130.0	55.4	177.4	11,700	59.3	175.5	10,800	62.9	171.5	9,300



**HC-278H II - w/ 68" x 80" Tube Boom, w/ 24" x 32" Tube Jib, w/ ABCDE + AB Ctwrt - 360 Degree Rotation**

Refer to the Tubular Jib Notes for Open Throat Boom in the Crane Rating Manual before operating the machine.

Boom Length (ft)	Jib Length (ft)	Jib Load Radius (ft)	Jib Angle to Boom								
			5 Degrees			15 Degrees			25 Degrees		
			Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)	Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)	Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)
120	90	140.0	52.0	169.5	11,200	55.8	167.4	10,400	59.3	163.3	8,800
120	90	150.0	48.3	160.5	10,700	52.2	158.3	10,000	55.5	153.9	8,300
120	90	160.0	44.5	150.3	10,300	48.2	147.9	9,600	51.5	143.2	8,000
120	90	170.0	40.3	138.5	9,900	44.0	135.9	9,300	47.0	130.7	7,700
120	90	180.0	35.7	124.6	9,500	39.3	121.7	8,800			
120	90	190.0	30.4	107.9	9,200						
120	100	42.7	82.0	226.0	13,600						
120	100	50.0	80.1	224.5	13,000						
120	100	60.0	77.4	222.1	12,200	81.8	220.4	10,600			
120	100	70.0	74.7	219.2	11,400	79.1	217.5	10,000			
120	100	80.0	72.0	215.8	10,700	76.4	214.0	9,400	80.5	210.4	8,200
120	100	90.0	69.2	211.8	10,000	73.6	210.0	8,800	77.7	206.4	7,800
120	100	100.0	66.4	207.3	9,400	70.7	205.4	8,300	74.7	201.7	7,300
120	100	110.0	63.5	202.1	8,800	67.8	200.2	7,800	71.8	196.4	6,900
120	100	120.0	60.5	196.3	8,300	64.7	194.3	7,300	68.7	190.4	6,600
120	100	130.0	57.4	189.7	7,800	61.6	187.7	6,900	65.5	183.6	6,200
120	100	140.0	54.2	182.4	7,300	58.4	180.2	6,600	62.2	176.0	5,900
120	100	150.0	50.9	174.1	6,900	55.0	171.8	6,200	58.7	167.3	5,700
120	100	160.0	47.4	164.7	6,500	51.4	162.3	5,900	55.0	157.6	5,400
120	100	170.0	43.6	154.1	6,100	47.6	151.5	5,600	51.0	146.4	5,200
120	100	180.0	39.5	141.9	5,800	43.4	139.1	5,400	46.7	133.4	5,000
120	100	190.0	35.0	127.6	5,500	38.8	124.5	5,200			
120	100	200.0	29.9	110.4	5,200						
160	30	32.5	82.0	197.4	59,200						
160	30	35.0	81.3	197.0	58,900						
160	30	40.0	79.7	196.1	58,200	81.2	195.3	55,000			
160	30	50.0	76.7	193.8	56,900	78.2	193.0	53,900	79.6	191.5	47,100
160	30	60.0	73.6	191.0	55,700	75.1	190.2	53,000	76.4	188.6	43,400
160	30	70.0	70.4	187.6	54,700	71.9	186.8	52,300	73.2	185.2	40,300
160	30	80.0	67.2	183.6	53,700	68.7	182.8	49,700	70.0	181.1	37,700
160	30	90.0	63.9	178.9	52,800	65.4	178.0	45,700	66.6	176.3	36,800
160	30	100.0	60.5	173.5	47,900	62.0	172.6	42,300	63.2	170.8	36,800
160	30	110.0	57.0	167.2	41,800	58.4	166.3	39,400	59.6	164.4	36,100
160	30	120.0	53.4	160.1	36,800	54.7	159.1	37,000	55.9	157.2	34,300
160	30	130.0	49.5	151.9	33,000	50.9	150.8	33,200	52.0	148.8	32,800
160	30	140.0	45.4	142.4	29,500	46.7	141.3	29,600	47.8	139.2	29,800
160	30	150.0	41.0	131.5	26,500	42.3	130.3	26,600			
160	30	160.0	36.1	118.6	23,900	37.4	117.3	24,000			
160	30	170.0	30.6	103.0	21,700						
160	50	37.0	82.0	216.8	40,700						
160	50	40.0	81.2	216.3	40,400						
160	50	50.0	78.4	214.3	39,400	80.7	213.1	34,600			
160	50	60.0	75.6	211.8	38,500	77.9	210.6	33,900	80.0	208.2	29,700
160	50	70.0	72.8	208.8	37,600	75.1	207.5	33,300	77.1	205.1	27,500
160	50	80.0	70.0	205.2	34,400	72.2	203.9	32,700	74.2	201.4	25,500
160	50	90.0	67.0	201.0	33,800	69.2	199.7	32,200	71.2	197.2	23,900
160	50	100.0	64.0	196.2	33,200	66.2	194.9	29,700	68.2	192.3	22,500
160	50	110.0	61.0	190.7	32,600	63.1	189.4	27,600	65.0	186.7	21,300
160	50	120.0	57.8	184.5	32,100	59.9	183.1	25,800	61.8	180.4	20,200
160	50	130.0	54.5	177.5	29,600	56.6	176.1	24,200	58.4	173.2	19,300
160	50	140.0	51.0	169.6	27,400	53.1	168.1	22,800	54.9	165.0	18,500
160	50	150.0	47.4	160.6	25,400	49.4	159.0	21,700	51.1	155.7	17,800
160	50	160.0	43.5	150.3	23,800	45.5	148.6	20,600	47.1	145.1	17,200
160	50	170.0	39.4	138.5	22,400	41.3	136.7	19,700			
160	50	180.0	34.8	124.7	20,400	36.6	122.6	19,000			
160	50	190.0	29.5	108.1	18,600						
160	70	41.5	82.0	236.3	27,700						
160	70	50.0	79.9	234.8	27,200						
160	70	60.0	77.3	232.5	26,600	80.2	230.9	25,100			
160	70	70.0	74.8	229.7	26,000	77.7	228.1	24,600	80.4	225.1	19,400

<b>HC-278H II - w/ 68" x 80" Tube Boom, w/ 24" x 32" Tube Jib, w/ ABCDE + AB Ctwrt - 360 Degree Rotation</b> Refer to the Tubular Jib Notes for Open Throat Boom in the Crane Rating Manual before operating the machine.											
Boom Length (ft)	Jib Length (ft)	Jib Load Radius (ft)	Jib Angle to Boom								
			5 Degrees			15 Degrees			25 Degrees		
			Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)	Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)	Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)
160	70	80.0	72.2	226.4	25,500	75.1	224.9	24,200	77.7	221.7	18,000
160	70	90.0	69.5	222.7	25,000	72.4	221.1	22,800	75.1	217.9	16,800
160	70	100.0	66.9	218.4	24,500	69.7	216.7	21,100	72.3	213.5	15,800
160	70	110.0	64.1	213.5	24,100	66.9	211.8	19,600	69.5	208.5	14,900
160	70	120.0	61.3	208.0	23,700	64.1	206.3	18,300	66.6	202.8	14,100
160	70	130.0	58.4	201.8	22,000	61.2	200.1	17,100	63.6	196.5	13,400
160	70	140.0	55.4	194.9	20,400	58.1	193.1	16,200	60.5	189.4	12,800
160	70	150.0	52.3	187.2	19,000	55.0	185.3	15,300	57.3	181.4	12,300
160	70	160.0	49.0	178.6	17,800	51.7	176.5	14,500	54.0	172.5	11,800
160	70	170.0	45.6	168.8	16,800	48.2	166.7	13,800	50.4	162.4	11,400
160	70	180.0	41.9	157.8	15,800	44.5	155.5	13,200	46.5	150.9	11,000
160	70	190.0	37.9	145.2	15,000	40.4	142.7	12,700			
160	70	200.0	33.6	130.5	14,300	36.0	127.7	12,300			
160	70	210.0	28.6	112.9	13,600						
160	90	46.0	82.0	255.8	17,800						
160	90	50.0	81.1	255.1	17,700						
160	90	60.0	78.8	253.0	17,000						
160	90	70.0	76.4	250.5	16,300	79.9	248.6	14,500			
160	90	80.0	74.0	247.5	15,600	77.5	245.7	13,900	80.7	242.0	12,400
160	90	90.0	71.6	244.1	14,900	75.0	242.2	13,300	78.3	238.5	12,000
160	90	100.0	69.2	240.2	14,300	72.6	238.2	12,800	75.8	234.4	11,600
160	90	110.0	66.7	235.7	13,700	70.1	233.8	12,300	73.2	229.9	11,200
160	90	120.0	64.2	230.8	13,200	67.5	228.8	11,900	70.6	224.8	10,600
160	90	130.0	61.6	225.3	12,700	64.9	223.2	11,400	68.0	219.2	10,000
160	90	140.0	58.9	219.1	12,200	62.2	217.0	11,000	65.2	212.8	9,500
160	90	150.0	56.2	212.3	11,700	59.4	210.2	10,700	62.4	205.8	9,100
160	90	160.0	53.3	204.8	11,300	56.6	202.5	10,300	59.4	198.0	8,700
160	90	170.0	50.4	196.4	10,800	53.6	194.1	10,000	56.4	189.3	8,400
160	90	180.0	47.3	187.1	10,500	50.4	184.6	9,700	53.1	179.6	8,100
160	90	190.0	44.0	176.7	10,100	47.1	174.1	9,400	49.7	168.7	7,800
160	90	200.0	40.5	165.0	9,800	43.5	162.1	9,100	46.0	156.4	7,600
160	90	210.0	36.7	151.6	9,500	39.7	148.5	8,800			
160	90	220.0	32.5	136.1	9,200	35.4	132.6	8,500			
160	90	230.0	27.7	117.5	9,000						
160	100	48.3	82.0	265.6	13,300						
160	100	50.0	81.6	265.3	13,200						
160	100	60.0	79.4	263.2	12,500						
160	100	70.0	77.1	260.8	11,900	80.8	258.9	10,200			
160	100	80.0	74.9	258.0	11,200	78.5	256.0	9,700			
160	100	90.0	72.6	254.7	10,700	76.2	252.7	9,200	79.7	248.7	8,000
160	100	100.0	70.2	250.9	10,100	73.9	248.9	8,700	77.3	244.9	7,600
160	100	110.0	67.9	246.7	9,600	71.5	244.7	8,300	74.9	240.5	7,200
160	100	120.0	65.4	242.0	9,100	69.0	239.9	7,900	72.4	235.7	6,900
160	100	130.0	63.0	236.8	8,600	66.5	234.6	7,500	69.9	230.3	6,600
160	100	140.0	60.4	230.9	8,100	64.0	228.7	7,100	67.2	224.3	6,300
160	100	150.0	57.8	224.5	7,700	61.4	222.2	6,800	64.6	217.7	6,000
160	100	160.0	55.2	217.4	7,300	58.7	215.0	6,500	61.8	210.3	5,800
160	100	170.0	52.4	209.5	7,000	55.8	207.1	6,200	58.9	202.2	5,600
160	100	180.0	49.5	200.9	6,600	52.9	198.3	5,900	55.9	193.2	5,400
160	100	190.0	46.5	191.2	6,300	49.8	188.5	5,700	52.7	183.1	5,200
160	100	200.0	43.2	180.5	6,000	46.6	177.6	5,500	49.4	171.8	5,100
160	100	210.0	39.8	168.4	5,700	43.1	165.3	5,300	45.8	159.1	4,900
160	100	220.0	36.1	154.7	5,500	39.3	151.3	5,100			
160	100	230.0	32.0	138.8	5,300	35.1	135.0	5,000			
160	100	240.0	27.3	119.8	5,100						
200	30	38.1	82.0	237.0	55,400						
200	30	40.0	81.5	236.7	55,100						
200	30	50.0	79.0	234.8	54,100	80.3	234.0	51,500	81.4	232.4	49,500
200	30	60.0	76.5	232.6	53,200	77.7	231.7	50,700	78.9	230.1	46,000

**HC-278H II - w/ 68" x 80" Tube Boom, w/ 24" x 32" Tube Jib, w/ ABCDE + AB Ctwt - 360 Degree Rotation**

Refer to the Tubular Jib Notes for Open Throat Boom in the Crane Rating Manual before operating the machine.

Boom Length (ft)	Jib Length (ft)	Jib Load Radius (ft)	Jib Angle to Boom								
			5 Degrees			15 Degrees			25 Degrees		
			Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)	Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)	Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)
200	30	70.0	73.9	229.8	52,300	75.1	229.0	50,000	76.3	227.3	43,100
200	30	80.0	71.3	226.5	51,500	72.5	225.7	49,400	73.6	224.0	40,500
200	30	90.0	68.7	222.8	50,700	69.9	221.9	48,800	71.0	220.2	38,300
200	30	100.0	66.0	218.5	46,200	67.2	217.6	46,800	68.3	215.9	36,300
200	30	110.0	63.3	213.6	40,100	64.4	212.7	40,500	65.5	210.9	36,300
200	30	120.0	60.5	208.1	35,500	61.6	207.2	35,900	62.6	205.4	32,000
200	30	130.0	57.6	201.9	31,300	58.7	201.0	31,600	59.7	199.1	28,400
200	30	140.0	54.6	195.0	27,800	55.7	194.1	28,100	56.6	192.1	25,300
200	30	150.0	51.4	187.3	24,800	52.6	186.3	25,000	53.5	184.3	22,600
200	30	160.0	48.2	178.7	22,200	49.3	177.6	22,400	50.2	175.5	20,300
200	30	170.0	44.7	169.0	20,000	45.8	167.8	20,100	46.7	165.6	
200	30	180.0	41.1	158.0	18,000	42.1	156.7	18,100			
200	30	190.0	37.1	145.4	16,200	38.1	144.0	16,300			
200	30	200.0	32.7	130.7	14,600						
200	30	210.0	27.7	113.1	13,200						
200	50	42.6	82.0	256.5	38,500						
200	50	50.0	80.3	255.2	37,900						
200	50	60.0	78.0	253.1	34,800	79.9	251.8	32,900	81.7	249.3	31,200
200	50	70.0	75.6	250.5	34,800	77.5	249.3	32,400	79.3	246.8	29,000
200	50	80.0	73.3	247.6	33,600	75.1	246.3	31,900	76.9	243.8	27,200
200	50	90.0	70.9	244.1	33,100	72.7	242.8	31,500	74.4	240.3	25,600
200	50	100.0	68.4	240.2	32,600	70.3	238.9	31,000	72.0	236.3	24,200
200	50	110.0	65.9	235.8	32,100	67.8	234.5	30,600	69.4	231.8	23,000
200	50	120.0	63.4	230.9	31,600	65.2	229.5	28,900	66.8	226.8	21,900
200	50	130.0	60.8	225.4	31,200	62.6	223.9	27,200	64.2	221.1	20,900
200	50	140.0	58.1	219.2	28,600	59.9	217.8	25,700	61.5	214.9	20,000
200	50	150.0	55.4	212.4	25,500	57.2	210.9	24,400	58.7	207.9	19,300
200	50	160.0	52.5	204.9	22,900	54.3	203.3	23,200	55.8	200.2	18,600
200	50	170.0	49.6	196.5	20,700	51.3	194.9	21,000	52.7	191.6	18,000
200	50	180.0	46.5	187.2	18,700	48.2	185.5	18,900	49.5	182.1	17,400
200	50	190.0	43.2	176.8	16,900	44.9	175.0	17,100	46.2	171.3	17,000
200	50	200.0	39.7	165.1	15,300	41.3	163.1	15,500			
200	50	210.0	35.9	151.7	13,900	37.5	149.6	14,000			
200	50	220.0	31.7	136.2	12,600						
200	50	230.0	26.9	117.7	11,400						
200	70	47.1	82.0	275.9	26,600						
200	70	50.0	81.4	275.5	26,400						
200	70	60.0	79.2	273.5	26,000	81.7	271.9	24,500			
200	70	70.0	77.1	271.2	25,500	79.5	269.5	24,100	81.9	266.3	20,200
200	70	80.0	74.9	268.4	25,000	77.3	266.8	23,700	79.7	263.5	18,900
200	70	90.0	72.7	265.3	24,600	75.1	263.6	23,400	77.4	260.3	17,700
200	70	100.0	70.4	261.7	24,200	72.9	260.0	23,000	75.1	256.6	16,800
200	70	110.0	68.2	257.7	23,800	70.6	256.0	21,500	72.8	252.5	15,900
200	70	120.0	65.9	253.2	23,500	68.3	251.4	20,200	70.5	247.9	15,100
200	70	130.0	63.5	248.2	23,200	65.9	246.4	19,000	68.0	242.8	14,400
200	70	140.0	61.1	242.6	22,800	63.5	240.8	17,900	65.6	237.1	13,800
200	70	150.0	58.6	236.5	22,100	61.0	234.6	17,000	63.1	230.9	13,200
200	70	160.0	56.1	229.8	20,700	58.4	227.9	16,200	60.5	224.0	12,700
200	70	170.0	53.5	222.4	19,500	55.8	220.4	15,400	57.8	216.4	12,300
200	70	180.0	50.8	214.3	18,400	53.0	212.2	14,700	55.0	208.0	11,900
200	70	190.0	47.9	205.3	17,400	50.2	203.1	14,100	52.0	198.7	11,500
200	70	200.0	45.0	195.3	15,800	47.2	193.0	13,600	49.0	188.4	11,200
200	70	210.0	41.8	184.3	14,400	44.0	181.8	13,100	45.7	176.9	10,900
200	70	220.0	38.5	171.9	13,100	40.6	169.2	12,700			
200	70	230.0	34.8	157.8	11,900	36.9	154.9	12,100			
200	70	240.0	30.8	141.5	10,900						
200	70	250.0	26.2	122.1	9,900						
200	90	51.6	82.0	295.4	17,200						
200	90	60.0	80.3	293.9	17,000						
200	90	70.0	78.3	291.7	16,400	81.3	289.8	14,500			
200	90	80.0	76.3	289.2	15,800	79.3	287.2	14,000			

**HC-278H II - w/ 68" x 80" Tube Boom, w/ 24" x 32" Tube Jib, w/ ABCDE + AB Ctwrt - 360 Degree Rotation**

Refer to the Tubular Jib Notes for Open Throat Boom in the Crane Rating Manual before operating the machine.

Boom Length (ft)	Jib Length (ft)	Jib Load Radius (ft)	Jib Angle to Boom								
			5 Degrees			15 Degrees			25 Degrees		
			Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)	Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)	Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)
200	90	90.0	74.2	286.3	15,300	77.2	284.3	13,600	80.0	280.3	12,100
200	90	100.0	72.2	283.0	14,700	75.1	281.0	13,100	77.9	277.0	11,700
200	90	110.0	70.1	279.2	14,200	73.0	277.2	12,700	75.7	273.2	11,400
200	90	120.0	68.0	275.1	13,700	70.9	273.0	12,300	73.6	268.9	11,000
200	90	130.0	65.8	270.5	13,300	68.7	268.4	11,900	71.4	264.2	10,700
200	90	140.0	63.6	265.5	12,800	66.5	263.3	11,500	69.1	259.0	10,200
200	90	150.0	61.4	259.9	12,400	64.2	257.7	11,200	66.8	253.3	9,700
200	90	160.0	59.1	253.8	12,000	61.9	251.6	10,800	64.4	247.1	9,300
200	90	170.0	56.7	247.2	11,600	59.5	244.8	10,500	62.0	240.2	9,000
200	90	180.0	54.3	239.9	11,200	57.1	237.5	10,200	59.5	232.7	8,600
200	90	190.0	51.8	231.9	10,900	54.5	229.5	10,000	56.9	224.5	8,300
200	90	200.0	49.2	223.2	10,600	51.9	220.7	9,700	54.2	215.5	8,100
200	90	210.0	46.5	213.7	10,200	49.2	211.0	9,500	51.4	205.6	7,800
200	90	220.0	43.6	203.1	10,000	46.3	200.3	9,300	48.4	194.6	7,600
200	90	230.0	40.6	191.5	9,700	43.2	188.4	9,000	45.3	182.3	7,400
200	90	240.0	37.4	178.4	9,400	39.9	175.2	8,800			
200	90	250.0	33.9	163.6	9,200	36.4	160.1	8,500			
200	90	260.0	30.0	146.6	9,000						
200	90	270.0	25.6	126.3	8,500						
200	100	53.8	82.0	305.2	13,000						
200	100	60.0	80.8	304.1	12,700						
200	100	70.0	78.9	302.0	12,100						
200	100	80.0	76.9	299.5	11,600	80.1	297.4	9,900			
200	100	90.0	75.0	296.7	11,000	78.1	294.6	9,400	81.2	290.4	8,100
200	100	100.0	73.0	293.5	10,500	76.1	291.4	9,000	79.1	287.1	7,700
200	100	110.0	70.9	289.9	10,100	74.1	287.8	8,600	77.1	283.4	7,400
200	100	120.0	68.9	286.0	9,600	72.0	283.7	8,200	75.0	279.3	7,100
200	100	130.0	66.8	281.5	9,200	69.9	279.3	7,900	72.8	274.8	6,800
200	100	140.0	64.7	276.7	8,800	67.8	274.4	7,500	70.7	269.9	6,600
200	100	150.0	62.6	271.4	8,400	65.7	269.0	7,200	68.5	264.4	6,300
200	100	160.0	60.4	265.6	8,000	63.4	263.2	6,900	66.2	258.4	6,100
200	100	170.0	58.1	259.2	7,600	61.2	256.8	6,700	63.9	251.9	5,900
200	100	180.0	55.8	252.3	7,300	58.8	249.8	6,400	61.5	244.8	5,700
200	100	190.0	53.5	244.8	7,000	56.4	242.2	6,200	59.1	237.0	5,500
200	100	200.0	51.0	236.5	6,700	54.0	233.9	5,900	56.5	228.5	5,300
200	100	210.0	48.5	227.6	6,400	51.4	224.8	5,700	53.9	219.1	5,200
200	100	220.0	45.8	217.7	6,200	48.7	214.8	5,500	51.1	208.9	5,000
200	100	230.0	43.0	206.9	5,900	45.9	203.8	5,300	48.2	197.6	4,900
200	100	240.0	40.0	194.9	5,700	42.8	191.6	5,200	45.1	185.0	4,800
200	100	250.0	36.9	181.6	5,500	39.6	178.0	5,100			
200	100	260.0	33.4	166.5	5,300	36.1	162.6	4,900			
200	100	270.0	29.6	149.1	5,100						
200	100	280.0	25.3	128.4	5,000						
240	30	43.7	82.0	276.6	50,100						
240	30	50.0	80.6	275.5	49,500	81.7	274.7	47,600			
240	30	60.0	78.5	273.6	48,600	79.6	272.8	46,400	80.5	271.1	42,600
240	30	70.0	76.3	271.3	47,400	77.4	270.4	45,100	78.4	268.8	41,400
240	30	80.0	74.2	268.5	46,200	75.2	267.7	43,900	76.2	266.0	40,200
240	30	90.0	72.0	265.4	45,000	73.0	264.5	42,800	73.9	262.8	39,200
240	30	100.0	69.7	261.8	43,900	70.7	260.9	41,700	71.7	259.2	38,200
240	30	110.0	67.5	257.8	38,500	68.5	256.9	39,100	69.4	255.2	35,300
240	30	120.0	65.1	253.3	34,000	66.2	252.4	34,500	67.0	250.6	34,600
240	30	130.0	62.8	248.3	29,800	63.8	247.4	30,300	64.7	245.5	30,700
240	30	140.0	60.4	242.7	26,300	61.4	241.8	26,700	62.2	239.9	27,100
240	30	150.0	57.9	236.6	23,300	58.9	235.7	23,600	59.7	233.8	24,000
240	30	160.0	55.4	229.9	20,700	56.4	228.9	21,000	57.2	227.0	21,300
240	30	170.0	52.8	222.5	18,400	53.7	221.5	18,700	54.5	219.5	18,900
240	30	180.0	50.1	214.4	16,400	51.0	213.3	16,600	51.8	211.2	16,900
240	30	190.0	47.2	205.4	14,600	48.2	204.3	14,800	48.9	202.1	15,000
240	30	200.0	44.3	195.5	13,100	45.2	194.3	13,200	45.9	192.0	13,400
240	30	210.0	41.1	184.4	11,600	42.0	183.2	11,700			
240	30	220.0	37.8	172.0	10,300	38.6	170.7	10,400			

HC-278H II - w/ 68" x 80" Tube Boom, w/ 24" x 32" Tube Jib, w/ ABCDE + AB Ctwrt - 360 Degree Rotation											
Refer to the Tubular Jib Notes for Open Throat Boom in the Crane Rating Manual before operating the machine.											
Boom Length (ft)	Jib Length (ft)	Jib Load Radius (ft)	Jib Angle to Boom								
			5 Degrees			15 Degrees			25 Degrees		
			Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)	Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)	Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)
240	30	230.0	34.1	158.0	9,200						
240	30	240.0	30.1	141.7	8,100						
240	30	250.0	25.5	122.3	7,100						
240	50	48.2	82.0	296.1	33,500						
240	50	50.0	81.6	295.8	33,400						
240	50	60.0	79.6	294.0	32,800	81.3	292.7	31,200			
240	50	70.0	77.6	291.8	32,200	79.3	290.5	30,700	80.8	288.0	28,200
240	50	80.0	75.6	289.3	31,700	77.2	288.0	30,200	78.8	285.4	27,700
240	50	90.0	73.6	286.4	31,200	75.2	285.0	29,800	76.7	282.4	26,900
240	50	100.0	71.5	283.0	30,800	73.1	281.7	29,400	74.6	279.1	25,600
240	50	110.0	69.4	279.3	30,300	71.0	278.0	29,000	72.5	275.3	24,400
240	50	120.0	67.3	275.2	29,900	68.9	273.8	28,600	70.3	271.1	23,300
240	50	130.0	65.1	270.6	29,500	66.7	269.2	28,300	68.1	266.4	22,300
240	50	140.0	62.9	265.5	27,000	64.5	264.1	27,700	65.9	261.3	21,400
240	50	150.0	60.7	260.0	24,000	62.2	258.5	24,600	63.6	255.6	20,600
240	50	160.0	58.4	253.9	21,400	59.9	252.4	21,900	61.3	249.4	19,900
240	50	170.0	56.0	247.3	19,100	57.6	245.7	19,600	58.9	242.7	19,200
240	50	180.0	53.6	240.0	17,100	55.1	238.4	17,500	56.4	235.3	17,900
240	50	190.0	51.1	232.0	15,300	52.6	230.4	15,700	53.8	227.1	16,100
240	50	200.0	48.5	223.3	13,700	50.0	221.6	14,000	51.2	218.2	14,400
240	50	210.0	45.8	213.8	12,300	47.3	212.0	12,600	48.4	208.4	12,800
240	50	220.0	43.0	203.2	11,000	44.4	201.4	11,200	45.5	197.6	11,500
240	50	230.0	39.9	191.6	9,800	41.3	189.6	10,000			
240	50	240.0	36.7	178.5	8,700	38.1	176.4	8,900			
240	50	250.0	33.2	163.8	7,800						
240	50	260.0	29.4	146.8	6,900						
240	70	52.7	82.0	315.6	25,100						
240	70	60.0	80.6	314.3	24,800						
240	70	70.0	78.8	312.3	24,400	80.9	310.6	23,200			
240	70	80.0	76.9	309.9	24,000	79.0	308.2	22,800	81.0	304.8	19,200
240	70	90.0	75.0	307.2	23,600	77.1	305.5	22,500	79.1	302.1	18,500
240	70	100.0	73.1	304.1	23,300	75.2	302.4	22,200	77.2	298.9	17,500
240	70	110.0	71.1	300.7	22,900	73.2	298.9	21,900	75.2	295.4	16,700
240	70	120.0	69.1	296.8	22,600	71.2	295.0	21,600	73.2	291.5	15,900
240	70	130.0	67.2	292.6	22,300	69.2	290.8	20,600	71.1	287.2	15,200
240	70	140.0	65.1	287.9	22,000	67.2	286.1	19,500	69.1	282.4	14,600
240	70	150.0	63.1	282.8	21,700	65.1	280.9	18,600	67.0	277.2	14,000
240	70	160.0	61.0	277.3	21,500	63.0	275.3	17,700	64.8	271.5	13,500
240	70	170.0	58.8	271.2	19,700	60.9	269.2	16,900	62.6	265.3	13,000
240	70	180.0	56.6	264.6	17,700	58.6	262.6	16,100	60.4	258.6	12,600
240	70	190.0	54.4	257.4	15,900	56.4	255.4	15,500	58.1	251.3	12,200
240	70	200.0	52.0	249.6	14,300	54.0	247.5	14,800	55.7	243.3	11,900
240	70	210.0	49.6	241.2	12,800	51.6	239.0	13,300	53.2	234.5	11,600
240	70	220.0	47.1	231.9	11,500	49.1	229.6	11,900	50.6	225.0	11,300
240	70	230.0	44.5	221.8	10,300	46.4	219.4	10,700	47.9	214.6	11,000
240	70	240.0	41.8	210.7	9,200	43.7	208.2	9,600	45.1	203.1	9,900
240	70	250.0	38.9	198.5	8,300	40.7	195.8	8,500			
240	70	260.0	35.8	184.8	7,400	37.6	181.9	7,600			
240	70	270.0	32.4	169.4	6,500						
240	70	280.0	28.7	151.6	5,700						
240	90	57.2	82.0	335.0	16,300						
240	90	60.0	81.5	334.6	16,300						
240	90	70.0	79.7	332.7	16,200						
240	90	80.0	78.0	330.5	15,800	80.6	328.4	14,000			
240	90	90.0	76.2	327.9	15,300	78.8	325.8	13,600	81.3	321.7	12,100
240	90	100.0	74.4	325.0	14,900	77.0	322.9	13,200	79.4	318.8	11,700
240	90	110.0	72.6	321.8	14,400	75.2	319.7	12,800	77.6	315.5	11,400
240	90	120.0	70.8	318.2	14,000	73.3	316.1	12,400	75.7	311.9	11,100
240	90	130.0	68.9	314.3	13,600	71.5	312.1	12,100	73.8	307.8	10,800
240	90	140.0	67.0	310.0	13,200	69.6	307.8	11,700	71.9	303.4	10,600
240	90	150.0	65.1	305.2	12,800	67.6	303.0	11,400	69.9	298.6	10,300



<b>HC-278H II - w/ 68" x 80" Tube Boom, w/ 24" x 32" Tube Jib, w/ ABCDE + AB Ctwt - 360 Degree Rotation</b> Refer to the Tubular Jib Notes for Open Throat Boom in the Crane Rating Manual before operating the machine.											
Boom Length (ft)	Jib Length (ft)	Jib Load Radius (ft)	Jib Angle to Boom								
			5 Degrees			15 Degrees			25 Degrees		
			Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)	Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)	Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)
240	90	160.0	63.2	300.1	12,400	65.7	297.8	11,100	68.0	293.3	9,900
240	90	170.0	61.2	294.5	12,100	63.7	292.2	10,800	65.9	287.6	9,500
240	90	180.0	59.2	288.5	11,700	61.7	286.1	10,600	63.9	281.4	9,200
240	90	190.0	57.1	281.9	11,400	59.6	279.5	10,300	61.8	274.7	8,800
240	90	200.0	55.0	274.9	11,100	57.5	272.4	10,100	59.6	267.4	8,600
240	90	210.0	52.8	267.2	10,800	55.3	264.7	9,800	57.3	259.5	8,300
240	90	220.0	50.6	258.9	10,500	53.0	256.3	9,600	55.0	251.0	8,100
240	90	230.0	48.3	249.9	10,200	50.7	247.2	9,400	52.6	241.7	7,900
240	90	240.0	45.9	240.2	9,700	48.2	237.3	9,200	50.1	231.6	7,700
240	90	250.0	43.4	229.6	8,700	45.7	226.6	9,100	47.5	220.6	7,500
240	90	260.0	40.7	217.9	7,800	43.0	214.8	8,100			
240	90	270.0	37.9	205.1	6,900	40.1	201.8	7,200			
240	90	280.0	34.9	190.9	6,200	37.1	187.2	6,400			
240	90	290.0	31.6	174.8	5,400						
240	90	300.0	28.0	156.4	4,800						
240	100	59.4	82.0	344.8	12,700						
240	100	60.0	81.9	344.7	12,600						
240	100	70.0	80.2	342.8	12,200						
240	100	80.0	78.5	340.7	11,700	81.3	338.5	9,900			
240	100	90.0	76.8	338.2	11,200	79.6	336.0	9,500			
240	100	100.0	75.0	335.5	10,800	77.8	333.2	9,200	80.5	328.7	7,800
240	100	110.0	73.3	332.3	10,400	76.1	330.1	8,800	78.7	325.6	7,500
240	100	120.0	71.5	328.9	10,000	74.3	326.6	8,500	76.9	322.0	7,200
240	100	130.0	69.7	325.1	9,600	72.5	322.7	8,100	75.0	318.1	7,000
240	100	140.0	67.9	320.9	9,200	70.6	318.5	7,800	73.2	313.9	6,700
240	100	150.0	66.0	316.3	8,800	68.8	313.9	7,500	71.3	309.2	6,500
240	100	160.0	64.2	311.4	8,500	66.9	309.0	7,300	69.4	304.1	6,300
240	100	170.0	62.3	306.0	8,100	65.0	303.5	7,000	67.4	298.6	6,100
240	100	180.0	60.3	300.2	7,800	63.0	297.7	6,700	65.4	292.7	5,900
240	100	190.0	58.4	293.9	7,500	61.0	291.4	6,500	63.4	286.2	5,700
240	100	200.0	56.3	287.2	7,200	59.0	284.5	6,300	61.3	279.3	5,500
240	100	210.0	54.3	279.8	7,000	56.9	277.1	6,100	59.2	271.7	5,400
240	100	220.0	52.1	272.0	6,700	54.7	269.2	5,900	57.0	263.6	5,200
240	100	230.0	49.9	263.4	6,500	52.5	260.6	5,700	54.7	254.8	5,100
240	100	240.0	47.7	254.2	6,200	50.2	251.2	5,500	52.4	245.2	5,000
240	100	250.0	45.3	244.2	6,000	47.8	241.1	5,400	49.9	234.8	4,900
240	100	260.0	42.8	233.3	5,800	45.3	230.1	5,200	47.3	223.5	4,800
240	100	270.0	40.2	221.5	5,600	42.7	218.0	5,100			
240	100	280.0	37.5	208.4	5,400	39.9	204.7	5,000			
240	100	290.0	34.5	193.8	5,300	36.8	189.8	4,900			
240	100	300.0	31.3	177.5	4,900						
240	100	310.0	27.7	158.7	4,300						
280	30	49.2	82.0	316.2	36,800						
280	30	50.0	81.9	316.1	36,700						
280	30	60.0	80.0	314.4	33,600	80.9	313.6	32,200	81.8	311.9	29,900
280	30	70.0	78.1	312.4	33,000	79.0	311.5	31,500	79.9	309.9	29,200
280	30	80.0	76.2	310.0	32,400	77.1	309.2	30,900	78.0	307.5	28,600
280	30	90.0	74.3	307.3	31,800	75.2	306.4	30,300	76.1	304.7	28,000
280	30	100.0	72.4	304.2	31,200	73.3	303.4	29,700	74.1	301.6	27,500
280	30	110.0	70.5	300.8	30,600	71.4	299.9	29,100	72.2	298.2	27,000
280	30	120.0	68.5	296.9	30,000	69.4	296.0	28,600	70.2	294.3	26,500
280	30	130.0	66.5	292.7	28,500	67.4	291.8	28,000	68.2	290.0	26,000
280	30	140.0	64.5	288.0	24,900	65.4	287.1	25,400	66.1	285.3	25,500
280	30	150.0	62.4	282.9	21,900	63.3	282.0	22,400	64.1	280.2	22,800
280	30	160.0	60.3	277.4	19,300	61.2	276.4	19,700	61.9	274.5	20,100
280	30	170.0	58.2	271.3	17,000	59.0	270.3	17,400	59.8	268.4	17,700
280	30	180.0	56.0	264.7	15,000	56.8	263.7	15,300	57.5	261.7	15,600
280	30	190.0	53.7	257.6	13,200	54.6	256.5	13,500	55.3	254.5	13,800
280	30	200.0	51.4	249.8	11,600	52.2	248.7	11,900	52.9	246.6	12,100
280	30	210.0	49.0	241.3	10,200	49.8	240.2	10,400	50.5	238.0	10,600
280	30	220.0	46.5	232.1	8,900	47.3	230.9	9,100	47.9	228.7	9,300
280	30	230.0	43.9	222.0	7,700	44.7	220.8	7,900	45.3	218.4	8,000

<b>HC-278H II - w/ 68" x 80" Tube Boom, w/ 24" x 32" Tube Jib, w/ ABCDE + AB Ctwrt - 360 Degree Rotation</b> Refer to the Tubular Jib Notes for Open Throat Boom in the Crane Rating Manual before operating the machine.											
Boom Length (ft)	Jib Length (ft)	Jib Load Radius (ft)	Jib Angle to Boom								
			5 Degrees			15 Degrees			25 Degrees		
			Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)	Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)	Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)
280	30	240.0	41.2	210.9	6,600	41.9	209.6	6,800			
280	30	250.0	38.3	198.6	5,600	39.0	197.3	5,800			
280	30	260.0	35.2	185.0	4,700	35.9	183.5	4,900			
280	30	270.0	31.8	169.6	3,900						
280	30	280.0	28.1	151.9	3,100						
280	50	53.7	82.0	335.7	29,000						
280	50	60.0	80.9	334.7	28,600						
280	50	70.0	79.1	332.8	28,100	80.6	331.4	25,900	81.9	328.8	22,700
280	50	80.0	77.4	330.5	27,600	78.8	329.2	25,400	80.2	326.6	22,100
280	50	90.0	75.6	328.0	27,100	77.0	326.7	24,900	78.4	324.0	21,700
280	50	100.0	73.8	325.1	26,700	75.2	323.8	24,500	76.5	321.1	21,300
280	50	110.0	72.0	321.9	26,200	73.4	320.5	24,000	74.7	317.8	21,000
280	50	120.0	70.2	318.3	25,700	71.6	317.0	23,600	72.8	314.2	20,600
280	50	130.0	68.3	314.4	25,200	69.7	313.0	23,200	71.0	310.2	20,300
280	50	140.0	66.4	310.1	24,800	67.8	308.6	22,800	69.1	305.8	20,000
280	50	150.0	64.5	305.3	22,600	65.9	303.9	22,400	67.1	301.1	19,700
280	50	160.0	62.6	300.2	20,000	64.0	298.7	20,700	65.2	295.8	19,500
280	50	170.0	60.6	294.6	17,700	62.0	293.1	18,300	63.2	290.2	18,900
280	50	180.0	58.6	288.6	15,600	59.9	287.1	16,200	61.1	284.0	16,700
280	50	190.0	56.5	282.0	13,800	57.9	280.5	14,400	59.0	277.4	14,800
280	50	200.0	54.4	275.0	12,200	55.7	273.4	12,700	56.9	270.2	13,100
280	50	210.0	52.3	267.3	10,800	53.6	265.7	11,200	54.7	262.4	11,600
280	50	220.0	50.0	259.0	9,500	51.3	257.3	9,900	52.4	253.9	10,200
280	50	230.0	47.7	250.1	8,300	49.0	248.3	8,700	50.0	244.8	9,000
280	50	240.0	45.3	240.3	7,200	46.6	238.5	7,600	47.5	234.8	7,800
280	50	250.0	42.8	229.7	6,200	44.0	227.8	6,500			
280	50	260.0	40.1	218.1	5,300	41.3	216.0	5,600			
280	50	270.0	37.3	205.3	4,500	38.5	203.1	4,700			
280	50	280.0	34.3	191.0	3,700	35.5	188.7	3,900			
280	50	290.0	31.1	175.0	2,900						
280	50	300.0	27.4	156.6	2,200						
280	70	58.2	82.0	355.2	23,200						
280	70	60.0	81.7	354.9	23,100						
280	70	70.0	80.1	353.1	22,700						
280	70	80.0	78.4	351.0	22,400	80.3	349.3	19,800			
280	70	90.0	76.7	348.6	22,000	78.6	346.9	19,500	80.4	343.4	16,100
280	70	100.0	75.0	345.9	21,700	76.9	344.2	19,200	78.7	340.6	15,800
280	70	110.0	73.3	342.9	21,400	75.2	341.1	18,900	77.0	337.6	15,600
280	70	120.0	71.6	339.6	21,100	73.5	337.7	18,600	75.2	334.2	15,400
280	70	130.0	69.9	335.9	20,800	71.7	334.0	18,400	73.5	330.4	15,200
280	70	140.0	68.1	331.8	20,400	70.0	330.0	18,100	71.7	326.3	15,100
280	70	150.0	66.4	327.4	20,100	68.2	325.6	17,900	69.9	321.8	14,700
280	70	160.0	64.6	322.7	19,800	66.4	320.7	17,700	68.0	317.0	14,200
280	70	170.0	62.7	317.5	18,200	64.5	315.5	17,400	66.2	311.7	13,800
280	70	180.0	60.9	311.9	16,200	62.7	309.9	17,000	64.3	306.0	13,300
280	70	190.0	59.0	305.9	14,400	60.8	303.8	15,100	62.3	299.8	12,900
280	70	200.0	57.0	299.4	12,800	58.8	297.3	13,500	60.3	293.2	12,500
280	70	210.0	55.0	292.4	11,300	56.8	290.3	12,000	58.3	286.1	12,200
280	70	220.0	53.0	284.8	10,000	54.7	282.7	10,600	56.2	278.4	11,100
280	70	230.0	50.9	276.7	8,800	52.6	274.5	9,400	54.1	270.0	9,800
280	70	240.0	48.7	268.0	7,700	50.5	265.7	8,200	51.9	261.1	8,700
280	70	250.0	46.5	258.5	6,700	48.2	256.1	7,200	49.6	251.4	7,600
280	70	260.0	44.2	248.3	5,800	45.8	245.8	6,200	47.2	240.8	6,600
280	70	270.0	41.7	237.2	5,000	43.4	234.6	5,400			
280	70	280.0	39.2	225.0	4,200	40.8	222.3	4,500			
280	70	290.0	36.5	211.7	3,400	38.0	208.7	3,800			
280	70	300.0	33.6	196.9	2,700	35.1	193.7	3,000			
280	70	310.0	30.4	180.2	2,000						
280	90	62.7	82.0	374.7	15,400						
280	90	70.0	80.9	373.4	15,300						
280	90	80.0	79.3	371.4	15,100	81.6	369.3	13,800			

**HC-278H II - w/ 68" x 80" Tube Boom, w/ 24" x 32" Tube Jib, w/ ABCDE + AB Ctwrt - 360 Degree Rotation**

Refer to the Tubular Jib Notes for Open Throat Boom in the Crane Rating Manual before operating the machine.

Boom Length (ft)	Jib Length (ft)	Jib Load Radius (ft)	Jib Angle to Boom								
			5 Degrees			15 Degrees			25 Degrees		
			Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)	Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)	Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)
280	90	90.0	77.7	369.2	15,000	80.0	367.0	13,400			
280	90	100.0	76.1	366.6	14,600	78.4	364.5	13,000	80.6	360.2	11,500
280	90	110.0	74.5	363.8	14,300	76.8	361.6	12,700	79.0	357.3	11,300
280	90	120.0	72.9	360.6	13,900	75.2	358.5	12,400	77.3	354.1	11,000
280	90	130.0	71.3	357.2	13,600	73.6	355.0	12,100	75.7	350.6	10,800
280	90	140.0	69.6	353.4	13,200	71.9	351.2	11,800	74.0	346.7	10,500
280	90	150.0	68.0	349.3	12,900	70.2	347.0	11,500	72.3	342.5	10,300
280	90	160.0	66.3	344.8	12,600	68.5	342.5	11,200	70.6	338.0	10,100
280	90	170.0	64.6	340.0	12,200	66.8	337.6	11,000	68.8	333.0	9,900
280	90	180.0	62.8	334.8	12,000	65.1	332.4	10,700	67.1	327.7	9,600
280	90	190.0	61.1	329.2	11,700	63.3	326.8	10,500	65.3	322.0	9,300
280	90	200.0	59.3	323.1	11,400	61.5	320.7	10,300	63.4	315.8	9,000
280	90	210.0	57.4	316.7	11,100	59.6	314.2	10,000	61.6	309.2	8,700
280	90	220.0	55.6	309.8	10,500	57.7	307.2	9,800	59.6	302.1	8,500
280	90	230.0	53.7	302.3	9,300	55.8	299.7	9,600	57.7	294.5	8,300
280	90	240.0	51.7	294.4	8,200	53.8	291.7	8,800	55.6	286.3	8,100
280	90	250.0	49.7	285.8	7,200	51.8	283.0	7,800	53.6	277.5	7,900
280	90	260.0	47.6	276.6	6,200	49.7	273.7	6,800	51.4	268.0	7,300
280	90	270.0	45.4	266.7	5,400	47.5	263.7	5,900	49.2	257.8	6,400
280	90	280.0	43.1	256.0	4,600	45.2	252.9	5,100	46.8	246.7	5,500
280	90	290.0	40.8	244.4	3,900	42.8	241.1	4,300			
280	90	300.0	38.3	231.8	3,100	40.3	228.3	3,600			
280	90	310.0	35.7	217.9	2,500	37.6	214.2	2,900			
280	100	65.0	82.0	384.4	12,200						
280	100	70.0	81.2	383.5	12,000						
280	100	80.0	79.7	381.6	11,600						
280	100	90.0	78.2	379.4	11,200	80.7	377.1	9,500			
280	100	100.0	76.6	377.0	10,800	79.1	374.6	9,200	81.5	370.0	7,800
280	100	110.0	75.1	374.2	10,400	77.6	371.9	8,900	79.9	367.2	7,500
280	100	120.0	73.5	371.1	10,100	76.0	368.8	8,600	78.3	364.1	7,300
280	100	130.0	71.9	367.8	9,700	74.4	365.4	8,300	76.7	360.7	7,000
280	100	140.0	70.3	364.1	9,400	72.8	361.7	8,000	75.1	356.9	6,800
280	100	150.0	68.7	360.1	9,100	71.2	357.7	7,700	73.4	352.8	6,600
280	100	160.0	67.1	355.8	8,800	69.5	353.3	7,500	71.8	348.4	6,400
280	100	170.0	65.4	351.1	8,500	67.9	348.6	7,200	70.1	343.6	6,200
280	100	180.0	63.7	346.1	8,200	66.2	343.5	7,000	68.4	338.5	6,000
280	100	190.0	62.0	340.6	7,900	64.4	338.1	6,800	66.6	332.9	5,900
280	100	200.0	60.3	334.8	7,600	62.7	332.2	6,600	64.8	327.0	5,700
280	100	210.0	58.5	328.6	7,400	60.9	325.9	6,300	63.0	320.6	5,500
280	100	220.0	56.7	322.0	7,100	59.1	319.2	6,200	61.2	313.8	5,400
280	100	230.0	54.9	314.8	6,900	57.2	312.0	6,000	59.3	306.5	5,300
280	100	240.0	53.0	307.2	6,700	55.3	304.3	5,800	57.4	298.6	5,200
280	100	250.0	51.1	299.0	6,400	53.4	296.1	5,600	55.4	290.2	5,000
280	100	260.0	49.1	290.2	6,200	51.4	287.2	5,500	53.3	281.1	4,900
280	100	270.0	47.0	280.8	5,600	49.3	277.7	5,400	51.2	271.4	4,800
280	100	280.0	44.9	270.7	4,800	47.1	267.4	5,200	49.0	260.9	4,800
280	100	290.0	42.7	259.8	4,100	44.9	256.4	4,600	46.6	249.5	4,700
280	100	300.0	40.3	248.0	3,300	42.5	244.4	3,800			
280	100	310.0	37.9	235.1	2,600	40.0	231.3	3,100			
280	100	320.0	35.3	220.9	2,000	37.4	216.9	2,400			
300	30	52.0	82.0	336.0	29,800						
300	30	60.0	80.6	334.7	29,300	81.5	333.9	28,200			
300	30	70.0	78.8	332.8	28,800	79.7	332.0	27,600	80.5	330.3	25,700
300	30	80.0	77.1	330.6	28,200	77.9	329.8	27,000	78.7	328.1	25,100
300	30	90.0	75.3	328.1	27,600	76.2	327.2	26,400	76.9	325.5	24,600
300	30	100.0	73.5	325.2	27,000	74.4	324.3	25,800	75.1	322.6	24,000
300	30	110.0	71.7	322.0	26,500	72.5	321.1	25,300	73.3	319.4	23,500
300	30	120.0	69.9	318.4	25,900	70.7	317.5	24,700	71.5	315.8	23,000
300	30	130.0	68.0	314.4	25,200	68.8	313.6	24,200	69.6	311.8	22,500
300	30	140.0	66.1	310.1	23,700	67.0	309.2	23,300	67.7	307.4	22,100
300	30	150.0	64.2	305.4	21,200	65.0	304.5	21,700	65.8	302.7	21,600
300	30	160.0	62.3	300.3	18,600	63.1	299.3	19,000	63.8	297.5	19,400

**HC-278H II - w/ 68" x 80" Tube Boom, w/ 24" x 32" Tube Jib, w/ ABCDE + AB Ctwt - 360 Degree Rotation**

Refer to the Tubular Jib Notes for Open Throat Boom in the Crane Rating Manual before operating the machine.

Boom Length (ft)	Jib Length (ft)	Jib Load Radius (ft)	Jib Angle to Boom								
			5 Degrees			15 Degrees			25 Degrees		
			Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)	Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)	Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)
300	30	170.0	60.3	294.7	16,300	61.1	293.7	16,700	61.8	291.8	17,100
300	30	180.0	58.3	288.6	14,300	59.1	287.7	14,600	59.8	285.7	15,000
300	30	190.0	56.2	282.1	12,500	57.0	281.1	12,800	57.7	279.1	13,100
300	30	200.0	54.1	275.0	10,900	54.9	274.0	11,200	55.6	272.0	11,400
300	30	210.0	52.0	267.4	9,400	52.7	266.3	9,700	53.4	264.2	10,000
300	30	220.0	49.7	259.1	8,100	50.5	258.0	8,400	51.1	255.9	8,600
300	30	230.0	47.4	250.1	7,000	48.2	249.0	7,200	48.8	246.8	7,400
300	30	240.0	45.0	240.4	5,900	45.7	239.2	6,100	46.3	236.9	6,300
300	30	250.0	42.5	229.8	4,900	43.2	228.6	5,100			
300	30	260.0	39.8	218.2	3,900	40.6	216.9	4,100			
300	30	270.0	37.0	205.4	3,000	37.7	204.0	3,200			
300	30	280.0	34.0	191.1	2,200						
300	50	56.5	82.0	355.5	25,500						
300	50	60.0	81.4	354.9	25,300						
300	50	70.0	79.8	353.1	24,900	81.1	351.8	23,000			
300	50	80.0	78.1	351.1	24,400	79.5	349.7	22,600	80.7	347.1	19,800
300	50	90.0	76.4	348.7	23,900	77.8	347.3	22,100	79.0	344.7	19,400
300	50	100.0	74.8	346.0	23,400	76.1	344.6	21,600	77.3	341.9	19,000
300	50	110.0	73.1	343.0	22,900	74.4	341.6	21,200	75.6	338.9	18,700
300	50	120.0	71.3	339.6	22,400	72.7	338.2	20,700	73.9	335.5	18,300
300	50	130.0	69.6	335.9	21,900	70.9	334.5	20,300	72.1	331.8	18,000
300	50	140.0	67.9	331.9	21,500	69.2	330.5	19,900	70.4	327.7	17,700
300	50	150.0	66.1	327.5	20,600	67.4	326.1	19,500	68.5	323.2	17,300
300	50	160.0	64.3	322.7	19,300	65.6	321.3	19,100	66.7	318.4	17,000
300	50	170.0	62.4	317.5	17,000	63.7	316.1	17,700	64.9	313.1	16,700
300	50	180.0	60.6	311.9	14,900	61.9	310.4	15,600	63.0	307.4	16,100
300	50	190.0	58.7	305.9	13,100	59.9	304.4	13,700	61.0	301.3	14,200
300	50	200.0	56.7	299.4	11,500	58.0	297.9	12,000	59.1	294.7	12,500
300	50	210.0	54.8	292.4	10,100	56.0	290.8	10,600	57.1	287.6	11,000
300	50	220.0	52.7	284.9	8,800	54.0	283.2	9,200	55.0	280.0	9,600
300	50	230.0	50.6	276.8	7,600	51.8	275.1	8,000	52.9	271.7	8,300
300	50	240.0	48.5	268.0	6,500	49.7	266.3	6,900	50.6	262.8	7,200
300	50	250.0	46.2	258.6	5,500	47.4	256.8	5,800	48.4	253.1	6,100
300	50	260.0	43.9	248.4	4,500	45.1	246.5	4,900	46.0	242.7	5,100
300	50	270.0	41.5	237.3	3,600	42.6	235.3	3,900			
300	50	280.0	38.9	225.1	2,800	40.0	223.0	3,100			
300	50	290.0	36.2	211.8	2,000	37.3	209.5	2,300			
300	70	61.0	82.0	375.0	20,900						
300	70	70.0	80.6	373.4	20,600						
300	70	80.0	79.0	371.5	20,200	80.8	369.7	18,000			
300	70	90.0	77.4	369.2	19,900	79.2	367.4	17,700	80.9	363.9	14,700
300	70	100.0	75.9	366.7	19,500	77.7	364.9	17,400	79.3	361.3	14,500
300	70	110.0	74.3	363.8	19,200	76.0	362.0	17,100	77.7	358.5	14,200
300	70	120.0	72.6	360.7	18,800	74.4	358.9	16,800	76.1	355.3	14,000
300	70	130.0	71.0	357.2	18,400	72.8	355.4	16,500	74.4	351.7	13,800
300	70	140.0	69.4	353.4	18,100	71.1	351.6	16,200	72.7	347.9	13,600
300	70	150.0	67.7	349.3	17,800	69.5	347.4	15,900	71.0	343.7	13,400
300	70	160.0	66.0	344.8	17,400	67.8	342.9	15,600	69.3	339.2	13,300
300	70	170.0	64.3	340.0	16,900	66.0	338.1	15,400	67.6	334.2	13,100
300	70	180.0	62.6	334.8	15,500	64.3	332.8	15,100	65.8	328.9	12,900
300	70	190.0	60.8	329.2	13,700	62.5	327.2	14,500	64.0	323.2	12,700
300	70	200.0	59.0	323.2	12,100	60.7	321.2	12,800	62.2	317.1	12,600
300	70	210.0	57.2	316.7	10,600	58.9	314.7	11,300	60.3	310.5	11,900
300	70	220.0	55.3	309.8	9,300	57.0	307.7	9,900	58.4	303.5	10,500
300	70	230.0	53.4	302.4	8,100	55.0	300.2	8,700	56.5	295.9	9,200
300	70	240.0	51.4	294.4	7,000	53.1	292.2	7,500	54.4	287.7	8,000
300	70	250.0	49.4	285.9	6,000	51.0	283.6	6,500	52.4	279.0	6,900
300	70	260.0	47.3	276.7	5,000	48.9	274.3	5,500	50.2	269.5	5,900
300	70	270.0	45.1	266.8	4,100	46.7	264.3	4,600	48.0	259.3	5,000
300	70	280.0	42.9	256.1	3,300	44.5	253.5	3,700	45.7	248.3	4,100
300	70	290.0	40.5	244.5	2,500	42.1	241.8	2,900			
300	70	300.0				39.6	229.0	2,100			

**HC-278H II - w/ 68" x 80" Tube Boom, w/ 24" x 32" Tube Jib, w/ ABCDE + AB Ctwrt - 360 Degree Rotation**

Refer to the Tubular Jib Notes for Open Throat Boom in the Crane Rating Manual before operating the machine.

Boom Length (ft)	Jib Length (ft)	Jib Load Radius (ft)	Jib Angle to Boom								
			5 Degrees			15 Degrees			25 Degrees		
			Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)	Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)	Boom Angle (deg)	Jib Pt Height (ft)	Jib Capacity ABCDE + AB (lbs)
300	90	65.5	82.0	394.5	14,800						
300	90	70.0	81.3	393.7	14,700						
300	90	80.0	79.8	391.8	14,600						
300	90	90.0	78.4	389.7	14,500	80.6	387.6	13,200			
300	90	100.0	76.9	387.3	14,400	79.0	385.1	12,900	81.1	380.8	10,700
300	90	110.0	75.3	384.6	14,100	77.5	382.4	12,500	79.6	378.1	10,500
300	90	120.0	73.8	381.6	13,700	76.0	379.4	12,200	78.0	375.0	10,400
300	90	130.0	72.3	378.4	13,400	74.4	376.1	12,000	76.5	371.7	10,300
300	90	140.0	70.7	374.8	13,100	72.9	372.5	11,700	74.9	368.1	10,200
300	90	150.0	69.2	370.9	12,800	71.3	368.6	11,400	73.3	364.1	10,100
300	90	160.0	67.6	366.7	12,500	69.7	364.4	11,200	71.7	359.8	10,000
300	90	170.0	66.0	362.2	12,200	68.1	359.9	10,900	70.0	355.2	9,900
300	90	180.0	64.3	357.3	11,900	66.5	355.0	10,700	68.4	350.3	9,700
300	90	190.0	62.7	352.1	11,600	64.8	349.7	10,500	66.7	344.9	9,500
300	90	200.0	61.0	346.5	11,400	63.1	344.0	10,200	65.0	339.2	9,200
300	90	210.0	59.3	340.5	11,100	61.4	338.0	10,000	63.2	333.0	8,900
300	90	220.0	57.6	334.0	9,700	59.6	331.5	9,800	61.5	326.5	8,700
300	90	230.0	55.8	327.2	8,500	57.9	324.6	9,300	59.7	319.4	8,500
300	90	240.0	54.0	319.9	7,400	56.0	317.2	8,200	57.8	311.9	8,200
300	90	250.0	52.1	312.0	6,400	54.2	309.3	7,100	55.9	303.9	7,700
300	90	260.0	50.2	303.6	5,500	52.2	300.8	6,100	53.9	295.3	6,700
300	90	270.0	48.3	294.7	4,600	50.3	291.8	5,200	51.9	286.0	5,700
300	90	280.0	46.2	285.0	3,700	48.2	282.1	4,300	49.8	276.1	4,800
300	90	290.0	44.1	274.7	2,900	46.1	271.6	3,500	47.6	265.4	3,900
300	90	300.0	42.0	263.6	2,200	43.9	260.3	2,700	45.4	253.8	3,100
300	100	67.8	82.0	404.2	12,000						
300	100	70.0	81.7	403.8	11,900						
300	100	80.0	80.2	402.0	11,500						
300	100	90.0	78.8	399.9	11,100	81.2	397.6	9,500			
300	100	100.0	77.3	397.6	10,800	79.7	395.2	9,100			
300	100	110.0	75.8	395.0	10,400	78.2	392.6	8,800	80.5	387.9	7,500
300	100	120.0	74.4	392.1	10,100	76.7	389.7	8,600	78.9	384.9	7,300
300	100	130.0	72.9	388.9	9,800	75.2	386.5	8,300	77.4	381.7	7,000
300	100	140.0	71.3	385.4	9,400	73.7	383.0	8,000	75.9	378.2	6,800
300	100	150.0	69.8	381.7	9,100	72.2	379.2	7,800	74.3	374.3	6,600
300	100	160.0	68.3	377.6	8,800	70.6	375.1	7,500	72.8	370.2	6,400
300	100	170.0	66.7	373.2	8,600	69.1	370.7	7,300	71.2	365.7	6,200
300	100	180.0	65.2	368.5	8,300	67.5	365.9	7,100	69.6	360.8	6,100
300	100	190.0	63.6	363.4	8,000	65.9	360.8	6,800	67.9	355.7	5,900
300	100	200.0	61.9	358.0	7,800	64.2	355.3	6,600	66.3	350.1	5,700
300	100	210.0	60.3	352.2	7,500	62.6	349.5	6,400	64.6	344.2	5,600
300	100	220.0	58.6	346.0	7,300	60.9	343.2	6,300	62.9	337.8	5,500
300	100	230.0	56.9	339.3	7,000	59.1	336.6	6,100	61.1	331.1	5,300
300	100	240.0	55.2	332.3	6,800	57.4	329.5	5,900	59.3	323.8	5,200
300	100	250.0	53.4	324.8	6,600	55.6	321.9	5,800	57.5	316.1	5,100
300	100	260.0	51.5	316.7	5,700	53.7	313.7	5,600	55.6	307.8	5,000
300	100	270.0	49.7	308.1	4,800	51.8	305.1	5,500	53.7	299.0	4,900
300	100	280.0	47.7	299.0	3,900	49.9	295.8	4,600	51.7	289.5	4,800
300	100	290.0	45.7	289.1	3,100	47.9	285.9	3,700	49.6	279.3	4,300
300	100	300.0	43.7	278.6	2,400	45.8	275.2	3,000	47.5	268.4	3,500

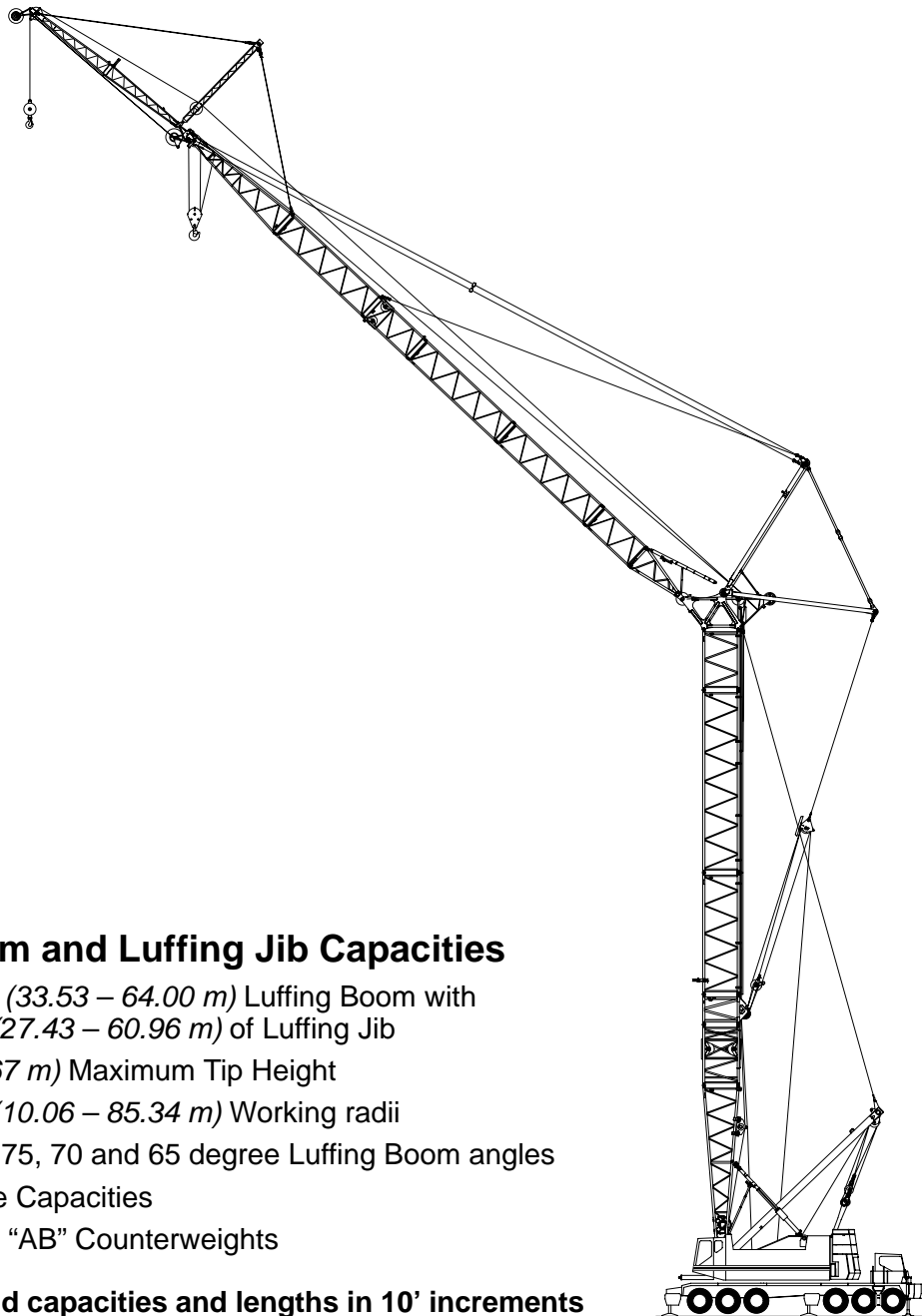




# Lifting Capacities

Lattice Boom Truck Crane with Luffing Attachment

## **HC-278H II** 52.2-ton (47.36 metric ton) HYLAB Series



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

- 110' – 210' (33.53 – 64.00 m) Luffing Boom with 90' – 200' (27.43 – 60.96 m) of Luffing Jib
- 432' (131.67 m) Maximum Tip Height
- 33' – 280' (10.06 – 85.34 m) Working radii
- 90, 85, 80, 75, 70 and 65 degree Luffing Boom angles
- 360 Degree Capacities
- "ABCDE" + "AB" Counterweights

**Note: Overend 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 pounds) 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.

### 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 degrees).
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.

### LUFFING ATTACHMENT OPERATION:

1. Capacities shown are in kips (1,000 pounds) 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.

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.
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 Restriction charts in this manual for appropriate capacity reductions.
8. The 35 ft luffing boom live mast must be used for all capacities shown in this 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 this Crane Rating Manual lists no capacity. Do not use longer booms or jibs than those listed in this 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 weight)	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 weight)	1,325

Lifting From Fixed Jib With:	Weight (lb)
15 Ton Hook Ball on Luffing Jib (see hook ball for actual weight)	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 weight)	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 weight)	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 weight)	1,325

Lifting From Auxiliary Sheave With:	Weight (lb)
15 Ton Hook Ball on Fixed Jib (see hook ball for actual weight)	1,325
15 Ton Hook Ball on Luffing Jib (see hook ball for actual weight)	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 weight)	1,325
Midfall Extension Without Hook Ball	300
Pendant Deflector (w/o 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

\* Use of swivel end with one part of line is not recommended.

**Notes:**

1. Capacities shown are in pounds and working loads must not exceed the ratings on the capacity charts.

2. Study Operator's Manual for wire rope inspection procedures.

## 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

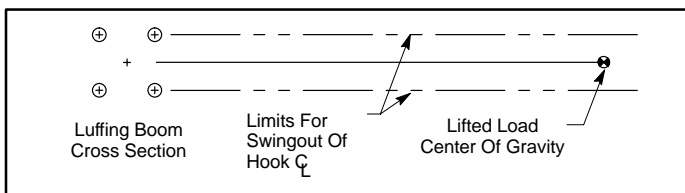
### ⚠ WARNING

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" (108,200) Upper + "AB" Lower 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 would 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 RESTRICTIONS

- Failure to follow these wind speed restrictions may result in structural failure of the luffing jib and/or luffing boom, which would cause property damage and/or bodily injury.
- The effects of the wind force on the hook load are the responsibility of the user and are not taken into account. When hoisting any load in windy conditions, the load wind area and load controllability must be considered for safe crane operation.
- Wind speed is to be determined at the luffing boom cap.

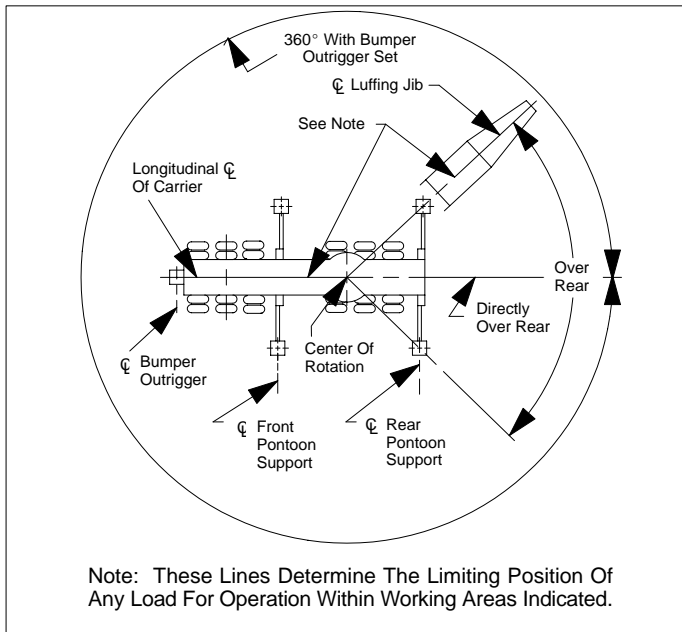
## WIND SPEED CHART

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 a 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 feet and 210 feet.
- 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 degrees. The maximum boom angle is 80 degrees when using the auxiliary sheaves.
- The luffing jib should be set to a 15 degree 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" lower counterweight.
- Capacities are for working areas as described on the Working Areas Chart found in the General Information section of this 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.

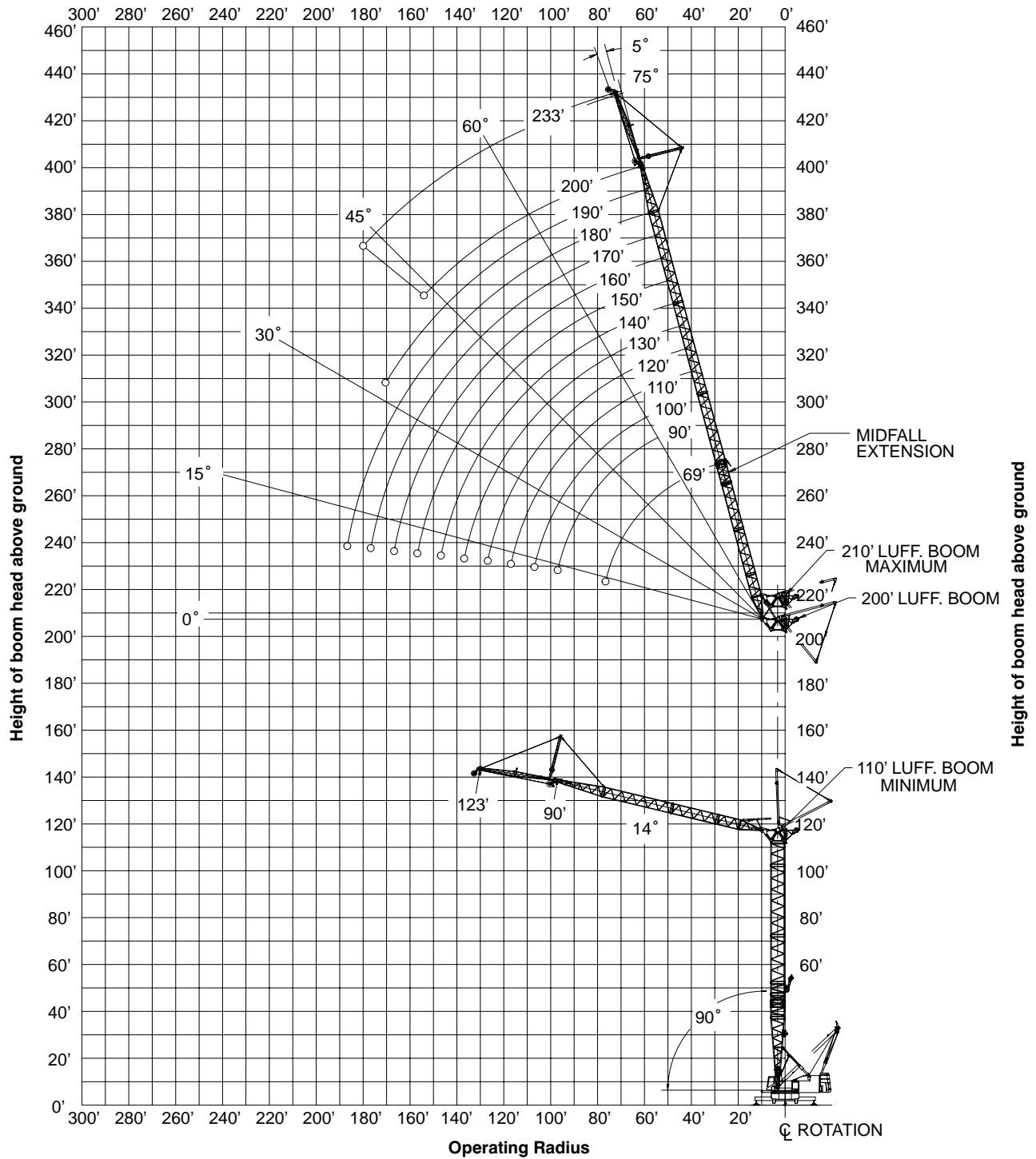
- The two suspension pendants must be connected to the link in the position identified with the corresponding luffing jib length, prior to lifting a load from the midfall.
- The midfall extension can only be installed with the male pin connection located 60 feet from the luffing jib foot pin.
- Operation 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 (w/Nose Wheel)	3,786	1 717
14. 30' Fixed Jib Assembly (w/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"	55,200	25 039
• "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

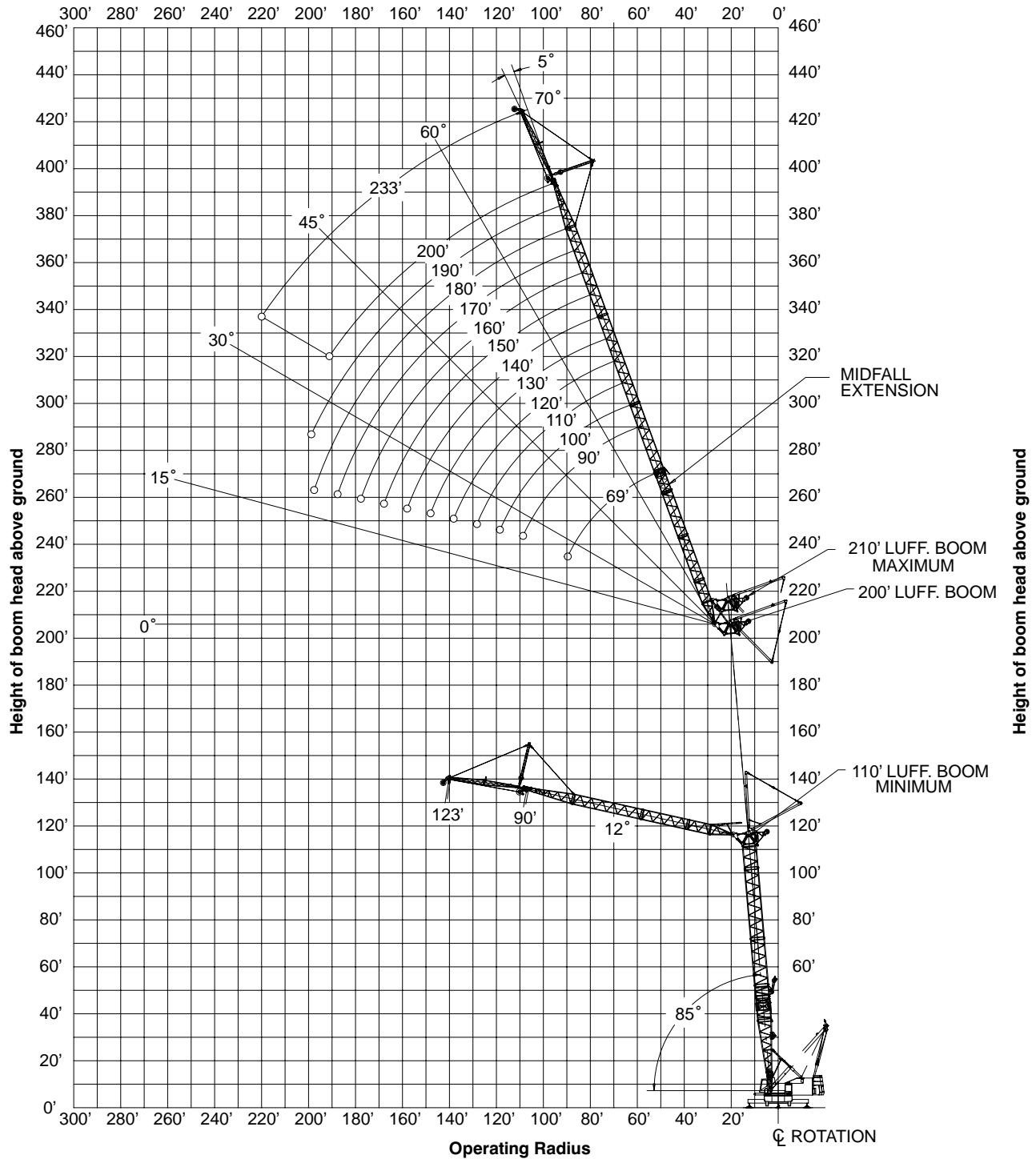
## 90° LUFFING BOOM ANGLE – 360° LUFFING JIB + FIXED JIB



**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**

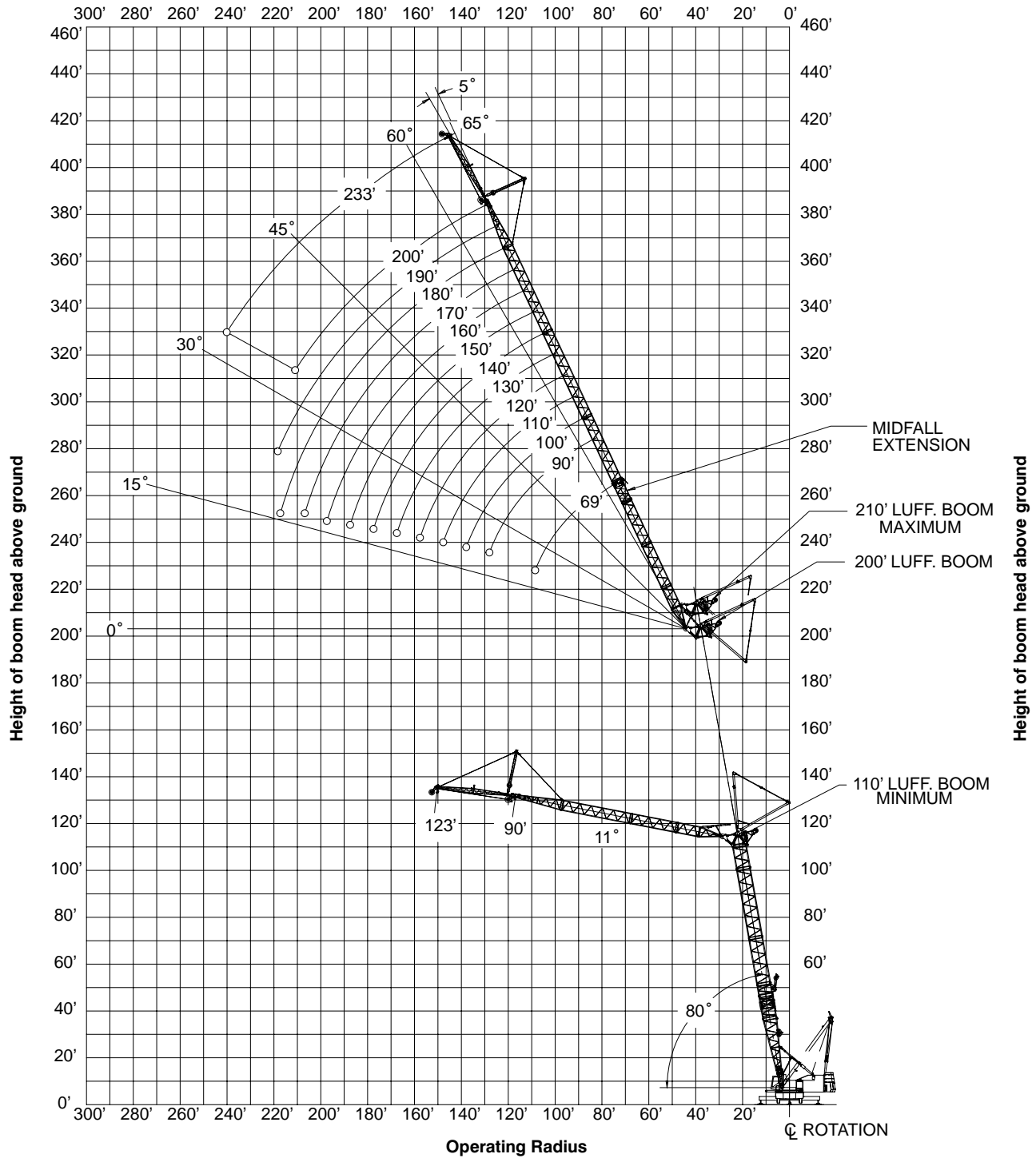


**Notes:**

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.



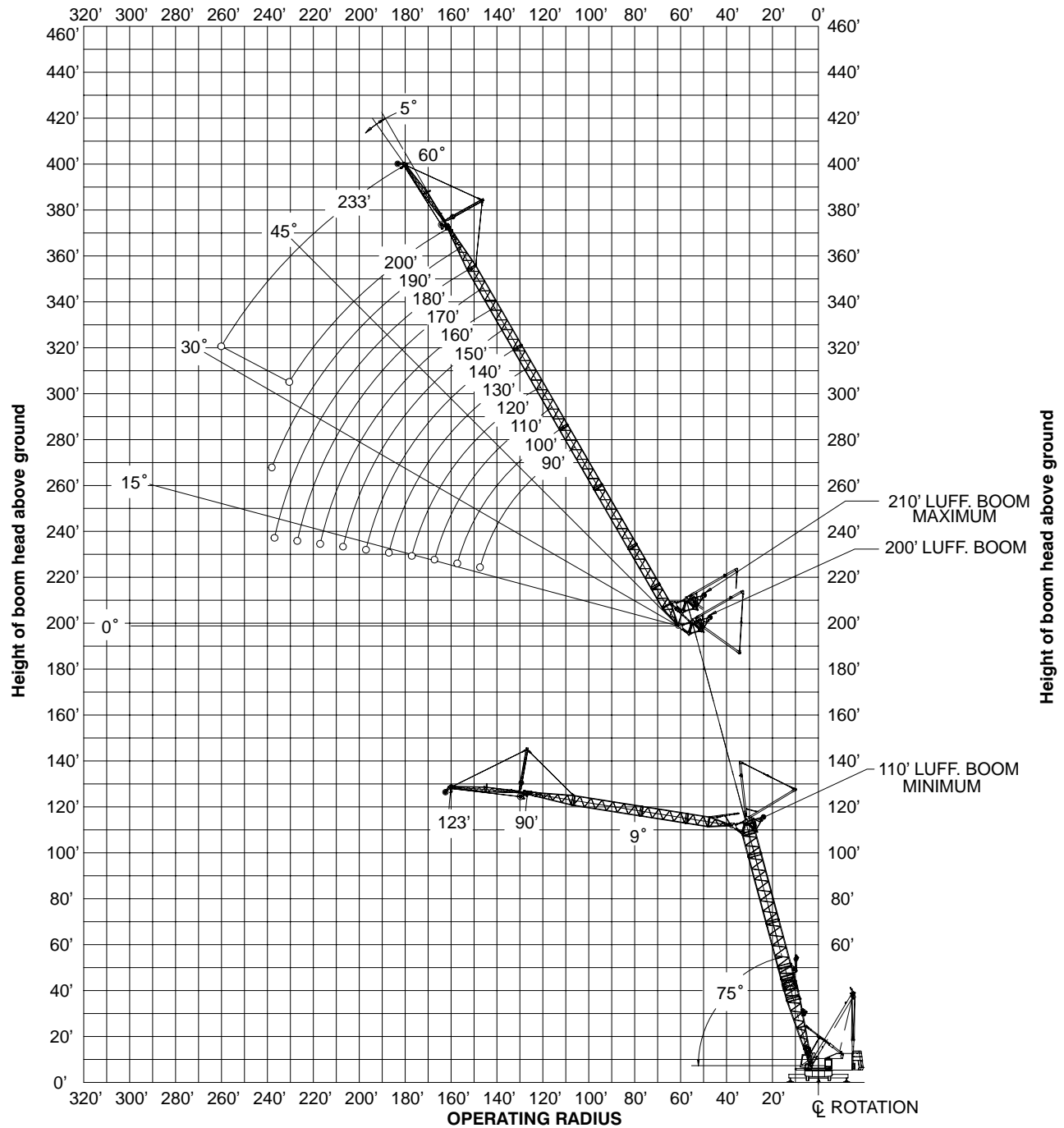
**80° LUFFING BOOM ANGLE – 360°  
LUFFING JIB + FIXED JIB**



**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.

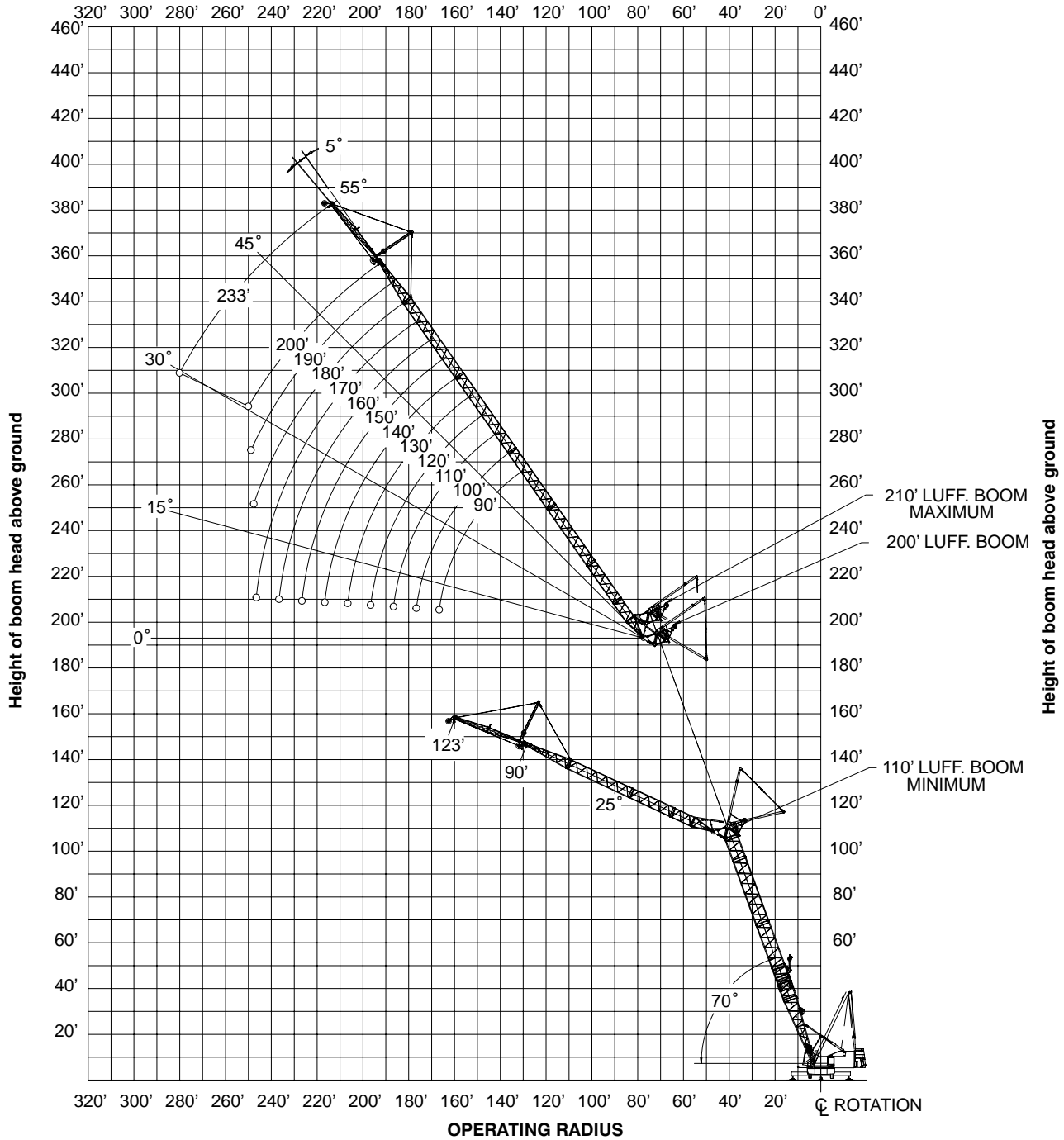
**75° LUFFING BOOM ANGLE – 360°  
LUFFING JIB + FIXED JIB**



**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.

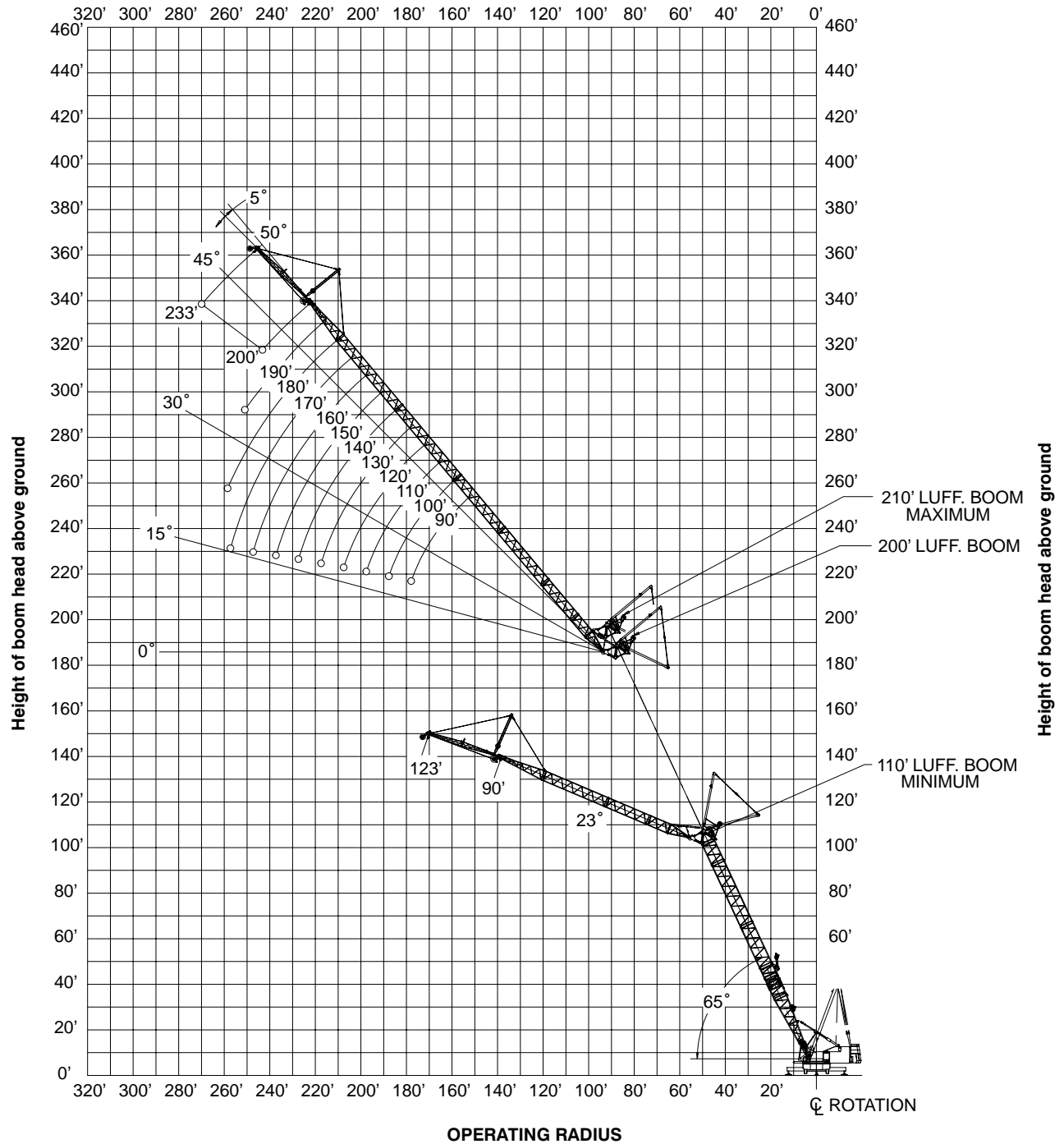
**70° LUFFING BOOM ANGLE – 360°  
LUFFING JIB + FIXED JIB**



**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
110	150	169					0.0	116.3	18.5	*												
110	150	170									19.4											

**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)				
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				
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				
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	*						
110	200	160	41.2	249.0	11.3	*	45.2	258.2	14.1	*	48.9	265.2	17.9	*	52.3	270.2	21.4	*						
110	200	162																55.0	272.3	19.7				
110	200	170	36.6	236.6																				

**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																	13.3	150.4	7.1	
110	200	255																	0.0	104.4	6.5	
130	90	33	75.0	224.2	101.0	*																
130	90	35	73.5	223.6	97.9	*																
130	90	40	70.2	222.0	91.4	*																
130	90	50	63.3	217.7	78.8	*																
130	90	52					70.0	220.8	90.7	*												
130	90	60	55.9	211.8	71.4	*	64.2	217.3	79.4	*												
130	90	70	47.8	203.9	62.6	*	56.9	211.6	71.2	*	65.0	215.8	71.9									
130	90	80	38.4	193.2	56.7	*	48.9	204.0	63.7	*	57.8	210.3	60.5									
130	90	88												60.0	209.2	50.8						
130	90	90	26.6	177.5	51.0	*	39.8	193.8	54.8	*	49.9	203.0	52.1	58.5	207.9	49.3						
130	90	100	0.0	137.3	32.7	*	28.4	179.0	47.9	*	40.9	193.1	45.5	50.6	200.8	43.1						
130	90	105												55.0	201.0	38.5						
130	90	110					7.7	148.3	42.4	*	29.9	179.1	40.6	41.8	191.2	38.5	51.2	197.4	36.4			
130	90	111					0.0	136.3	36.8	*												
130	90	120									12.0	153.0	36.3	31.1	177.7	34.4	42.4	188.0	32.5			
130	90	122									0.0	134.2	35.4							50.0	191.4	30.1
130	90	130												14.7	154.0	31.0	31.9	174.8	29.3	42.7	183.5	27.6
130	90	133												0.0	131.2	30.0						
130	90	140															16.2	152.4	26.5	32.2	170.4	25.0
130	90	144															0.0	127.3	25.5			
130	90	150																		16.8	148.5	22.8
130	90	154																		0.0	122.5	21.9
130	110	38	75.0	243.5	86.3	*																
130	110	40	73.9	243.0	84.1	*																
130	110	50	68.4	239.6	72.6	*																
130	110	58					70.0	239.6	75.2	*												
130	110	60	62.7	235.0	64.9	*	69.1	239.0	73.7	*												
130	110	70	56.6	229.2	56.8	*	63.4	234.6	65.6	*												
130	110	78									65.0	233.9	61.4									
130	110	80	50.1	221.7	49.5	*	57.4	229.0	59.2	*	64.1	233.2	59.9									
130	110	90	43.0	212.3	44.2	*	51.0	221.8	54.0	*	58.2	227.7	51.5									
130	110	98												60.0	226.5	43.6						
130	110	100	34.6	199.8	40.4	*	44.0	212.6	47.3	*	51.8	220.7	45.0	58.7	225.3	42.4						
130	110	110	24.0	182.0	35.8	*	35.8	200.6	42.0	*	44.8	211.8	40.2	52.4	218.4	37.9						
130	110	117															55.0	217.4	33.1			
130	110	120	0.0	137.3	26.1	*	25.6	183.8	37.9	*	36.9	200.2	35.9	45.5	209.7	33.9	52.9	215.0	31.9			
130	110	130					6.9	149.5	33.3	*	27.0	184.1	32.3	37.7	198.4	30.5	46.0	206.4	28.7			
130	110	131					0.0	136.3	29.5	*												
130	110	135																		50.0	206.7	25.8
130	110	140									10.9	155.0	29.3	28.1	183.0	27.7	38.2	195.3	26.0	46.2	201.8	24.4
130	110	142									0.0	134.2	28.7									
130	110	150												13.3	156.4	25.2	28.8	180.2	23.7	38.4	190.8	22.2
130	110	153												0.0	131.2	24.5						
130	110	160															14.7	155.1	21.7	29.1	175.9	20.3
130	110	164															0.0	127.3	21.0			
130	110	170																		15.2	151.3	18.7
130	110	174																		0.0	122.5	18.0
130	130	43	75.0	262.9	72.4	*																
130	130	50	71.8	260.8	66.7	*																
130	130	60	67.1	257.1	59.5	*																
130	130	65					70.0	258.4	63.8	*												
130	130	70	62.3	252.4	53.0	*	67.8	256.6	60.5	*												
130	130	80	57.2	246.5	45.4	*	62.9	252.0	54.5	*												
130	130	87									65.0	252.0	53.2									
130	130	90	51.7	239.4	39.0	*	57.8	246.3	49.6	*	63.5	250.6	50.8									
130	130	100	45.9	230.6	34.8	*	52.5	239.3	43.9	*	58.4	245.0	44.4									
130	130	108												60.0	243.8	38.2						
130	130	110	39.4	219.8	31.6	*	46.7	230.8	37.8	*	53.1	238.2	39.6	58.9	242.6	37.3						
130	130	120	31.8	205.8	29.1	*	40.3	220.3	33.7	*	47.4	229.9	35.4	53.6	235.9	33.3						
130	130	128															55.0	233.8	28.6			
130	130	130	22.0	186.1	25.7	*	32.9	206.8	30.6	*	41.1	219.6	31.9	48.0	227.8	30.0	54.0	232.5	28.1			
130	130	140	0.0	137.3	21.0	*	23.5	188.1	28.4	*	33.8	206.5	28.9	41.7	217.7	27.2	48.3	224.4	25.4			
130	130	147																		50.0	222.0	22.1
130	130	150					6.4	150.7	24.4	*	24.8	188.7	26.3	34.6	205.0	24.7	42.1	214.5	23.2	48.5	219.8	21.6
130	130	151					0.0	136.3	22.9	*												
130	130	160									10.0	156.8	24.1	25.8	187.7	22.6	35.1	202.0	21.2	42.3	209.9	19.7
130	130	162									0.0	134.2	22.3	*								
130	130	170												12.2	158.7	20.8	26.4	185.1	19.4	35.3	197.5	18.1
130	130	173												0.0	131.3	20.2						
130	130	180															13.5	157.6	17.9	26.7	180.8	16.7
130	130	184															0.0	127.3	17.3			
130	130	190																		14.0	153.8	15.4
130	130	194																		0.0	122.5	14.8
130	150	48	75.0	282.2	58.9	*																
130	150	50	74.3	281.7	58.2	*																
130	150	60	70.3	278.5	54.0	*																
130	150	70	66.2	274.5	48.9	*																
130	150	72					70.0	277.2	53.5	*												
130	150	80	62.0	269.7	42.4	*	66.8	274.1	50.0	*												
130	150	90	57.5	263.9	35.9	*	62.5	269.3	45.5	*												
130	150	95												65.0	270.2	46.5						
130	150	100	52.9	256.9	31.4	*	58.1	263.6	41.7	*	63.0	267.9	43.7									
130	150	110	47.9	248.6	27.9	*	53.5	256.8	35.4	*	58.7	262.3	39.0									
130	150	118												60.0	261.1	33.4						



**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)
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)			
170	130	142																					
170	130	150				14.8	209.2	20.6	*	31.3	241.2	25.4		41.9	256.7	23.1	55.0	271.4	22.6				
170	130	154				0.0	176.1	19.4	*								50.5	265.1	20.9				
170	130	160								21.4	220.9	23.2		34.8	244.1	21.2	44.5	256.0	19.1				
170	130	164																50.0	258.3	16.4			
170	130	169								0.0	173.6	18.0	*										
170	130	170												26.1	227.1	19.4	37.8	244.5	17.5	46.6	253.2	15.6	
170	130	180												12.9	198.9	17.8	29.9	229.6	16.1	40.2	242.7	14.3	
170	130	183												0.0	169.9	16.6	*						
170	130	190															19.2	207.7	14.8	32.8	229.1	13.2	
170	130	197															0.0	164.9	13.9				
170	130	200																		23.5	210.5	12.2	
170	130	210																		6.2	172.6	11.2	
170	130	211																		0.0	158.7	11.1	
170	150	48	75.0	322.2	47.2	*																	
170	150	50	74.3	321.7	46.6	*																	
170	150	60	70.3	318.5	42.5	*																	
170	150	70	66.2	314.5	38.5	*																	
170	150	76					70.0	317.0	48.0	*													
170	150	80	62.0	309.7	34.4	*	68.2	315.4	46.6	*													
170	150	90	57.5	303.9	30.5	*	64.0	310.9	42.5	*													
170	150	100	52.9	296.9	26.8	*	59.7	305.6	38.3	*													
170	150	102									65.0	309.6	40.8										
170	150	110	47.9	288.6	23.5	*	55.2	299.2	34.0	*	61.7	305.7	37.6										
170	150	120	42.6	278.7	20.6	*	50.4	291.6	29.9	*	57.3	299.8	33.5										
170	150	128												60.0	299.8	27.9							
170	150	130	36.6	266.6	18.1	*	45.2	282.5	26.1	*	52.6	292.8	30.1	59.2	298.8	27.4							
170	150	140	29.5	251.2	15.9	*	39.5	271.5	22.6	*	47.6	284.4	27.3	54.7	292.3	24.8							
170	150	150	20.5	229.8	14.2	*	33.1	257.9	19.6	*	42.2	274.4	24.8	49.9	284.5	22.5							
170	150	153															55.0	287.7	19.6				
170	150	160	0.0	177.3	13.5	*	25.2	240.0	16.9	*	36.2	262.2	22.7	44.6	275.3	20.6	51.8	282.8	18.4				
170	150	170					13.7	211.7	14.7	*	29.1	246.5	20.3	38.9	264.1	18.8	46.8	274.2	16.9				
170	150	174					0.0	176.1	13.9	*													
170	150	177																		50.0	273.6	14.0	
170	150	180								19.9	224.6	17.0	*	32.4	250.1	17.3	41.3	263.8	15.5	48.6	271.2	13.7	
170	150	189								0.0	173.7	13.0	*										
170	150	190												24.3	231.6	16.0	35.1	251.1	14.2	43.3	261.5	12.5	
170	150	200												12.0	201.1	14.0	*	27.8	234.7	13.1	37.3	249.7	11.5
170	150	203												0.0	169.9	11.9	*						
170	150	210															17.9	211.0	12.1	30.5	234.8	10.6	
170	150	217															0.0	164.9	11.0	*			
170	150	220																		21.8	214.5	9.8	
170	150	230																		5.7	173.7	9.0	
170	150	231																		0.0	158.7	8.9	
170	170	54	75.0	341.5	36.8	*																	
170	170	60	72.7	339.6	35.1	*																	
170	170	70	69.2	336.2	32.1	*																	
170	170	80	65.5	332.0	29.1	*																	
170	170	82					70.0	335.8	37.9	*													
170	170	90	61.7	327.0	26.1	*	67.3	332.9	36.0	*													
170	170	100	57.8	321.2	23.3	*	63.6	328.3	33.0	*													
170	170	110	53.8	314.4	20.6	*	59.7	322.9	29.8	*													
170	170	111									65.0	327.7	34.7	*									
170	170	120	49.5	306.5	18.1	*	55.7	316.6	26.7	*	61.5	323.0	32.8	*									
170	170	130	44.9	297.2	15.9	*	51.6	309.2	23.6	*	57.6	317.2	29.6										
170	170	138												60.0	317.1	24.6							
170	170	140	39.9	286.2	13.9	*	47.1	300.6	20.8	*	53.5	310.3	26.7	59.3	316.1	24.1							
170	170	150	34.3	273.0	12.3	*	42.3	290.5	18.2	*	49.2	302.3	24.3	55.3	309.7	21.9							
170	170	160	27.7	256.3	10.8	*	37.0	278.5	15.8	*	44.6	292.9	22.2	51.1	302.2	19.9							
170	170	165															55.0	304.1	17.0				
170	170	170	19.2	233.3	9.7	*	31.0	263.7	13.7	*	39.6	281.9	19.9	46.6	293.5	18.2	52.8	300.3	16.2				
170	170	180	0.0	177.3	9.4	*	23.7	244.3	11.9	*	33.9	268.5	16.6	*	41.8	283.2	16.7	48.5	292.1	14.8			
170	170	190					12.9	214.1	10.3	*	27.3	251.6	13.9	*	36.5	270.9	15.4	43.8	282.5	13.6	50.0	288.9	11.9
170	170	194					0.0	176.1	9.8	*													
170	170	200									18.6	228.0	11.8	*	30.3	255.7	14.2	38.7	271.1	12.5	45.5	279.8	10.9
170	170	209									0.0	173.7	9.1	*									
170	170	210												22.8	235.7	11.8	*	32.9	257.2	11.5	40.5	269.1	10.0
170	170	220												11.3	203.1	9.7	*	26.0	239.5	10.6	35.0	256.2	9.2
170	170	223												0.0	169.9	8.3	*						
170	170	230															16.8	214.0	9.8	*	28.6	240.1	8.4
170	170	237															0.0	164.9	7.6	*			
170	170	240																		20.5	218.2	7.7	
170	170	250																		5.4	174.7	7.1	
170	170	251																		0.0	158.7	6.9	*
170	190	59	75.0	360.8	28.4	*																	
170	190	60	74.6	360.5	28.2	*																	
170	190	70	71.4	357.4	26.1	*																	
170	190	80	68.2	353.7	24.0	*																	
170	190	89					70.0	354.6	29.8	*													
170	190	90	64.9	349.4	21.7	*	69.8	354.4	29.6	*													
170	190	100	61.6	344.4	19.5	*	66.5	350.4	27.5	*													
170	190	110	58.1	338.5	17.4	*	63.2	345.7	25.3	*													
170	190	119									65.0	345.8	28.0	*									
170	190	120	54.4	331.9	15.4	*	59.8	340.															









**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	90	134							0.0	203.2	29.4									
200	90	140										28.7	242.0	25.1		46.0	257.8	22.4		
200	90	150										8.8	212.5	22.8		36.4	246.4	20.3		
200	90	151										0.0	198.9	22.5					50.0	
200	90	160														23.6	229.1	18.6	42.3	
200	90	168													0.0	193.1	17.3			
200	90	170																	31.7	
200	90	180																	15.9	
200	90	183																	0.0	
200	110	38	75.0	313.5	61.0	*														
200	110	40	73.9	313.0	59.7	*														
200	110	50	68.4	309.6	53.6	*														
200	110	60	62.7	305.0	47.4	*														
200	110	64					70.0	309.3	57.8	*										
200	110	70	56.6	299.2	41.4	*	66.9	307.2	54.9	*										
200	110	80	50.1	291.7	36.5	*	61.1	302.3	50.0	*										
200	110	90	43.0	282.3	31.8	*	55.0	296.1	45.7	*										
200	110	91									65.0	302.8	47.8							
200	110	100	34.6	269.8	27.8	*	48.4	288.2	39.9	*	59.5	297.9	42.0							
200	110	110	24.0	252.0	24.6	*	40.9	278.1	34.5	*	53.2	291.3	37.6							
200	110	116												60.0	294.1	31.5				
200	110	120	0.0	207.3	23.1	*	32.2	264.6	29.7	*	46.4	282.8	33.6	57.6	291.7	30.1				
200	110	130					20.4	244.3	25.6	*	38.7	271.9	30.3	51.2	284.5	27.1				
200	110	137					0.0	206.0	23.4	*										
200	110	140									29.4	257.1	27.5	44.1	275.4	24.5				
200	110	141																		
200	110	150									15.8	233.0	25.0	36.0	263.5	22.3	48.8	275.8	19.7	
200	110	154									0.0	203.2	21.4	*						
200	110	160												25.9	246.9	20.4	41.4	265.8	18.0	
200	110	164																	50.0	
200	110	170												7.9	214.0	18.7	32.8	252.6	16.5	
200	110	171												0.0	198.9	18.5				
200	110	180															21.3	233.0	15.1	
200	110	188															0.0	193.1	14.1	
200	110	190																	28.6	
200	110	200																	14.3	
200	110	203																	0.0	
200	130	43	75.0	332.9	48.5	*														
200	130	50	71.8	330.8	45.5	*														
200	130	60	67.1	327.1	40.9	*														
200	130	70	62.3	322.4	36.6	*														
200	130	71					70.0	328.1	49.5	*										
200	130	80	57.2	316.5	32.3	*	65.9	324.6	45.9	*										
200	130	90	51.7	309.4	28.4	*	61.0	319.6	41.0	*										
200	130	99									65.0	321.0	41.8							
200	130	100	45.9	300.6	24.8	*	55.8	313.5	36.5	*	64.5	320.5	41.3							
200	130	110	39.4	289.8	21.8	*	50.3	306.0	32.0	*	59.6	315.2	37.0							
200	130	120	31.8	275.8	19.1	*	44.3	296.7	27.9	*	54.3	308.7	33.0							
200	130	126												60.0	311.4	27.5				
200	130	130	22.0	256.1	17.0	*	37.5	285.2	24.1	*	48.7	300.8	29.7	58.0	309.0	26.4				
200	130	140	0.0	207.3	16.2	*	29.5	270.1	20.9	*	42.5	291.0	26.9	52.6	302.1	23.9				
200	130	150					18.8	247.8	18.1	*	35.5	278.6	24.5	46.8	293.6	21.7				
200	130	152															55.0	299.6	18.6	
200	130	157					0.0	206.0	16.6	*										
200	130	160									27.0	262.1	22.4	40.4	283.1	19.8	50.6	293.5	17.3	
200	130	170									14.5	235.7	18.9	33.1	269.8	18.2	44.7	284.4	15.8	
200	130	174									0.0	203.2	15.5	*						
200	130	177																		
200	130	180												23.8	251.3	16.7	38.0	273.1	14.5	
200	130	190												7.3	215.3	15.3	*	30.1	258.2	13.3
200	130	191												0.0	198.9	13.5	*			
200	130	200															19.6	236.6	12.3	
200	130	208															0.0	193.1	11.5	
200	130	210																	26.3	
200	130	220																	13.2	
200	130	223																	0.0	
200	150	48	75.0	352.2	38.5	*														
200	150	50	74.3	351.7	38.0	*														
200	150	60	70.3	348.5	34.7	*														
200	150	70	66.2	344.5	31.4	*														
200	150	78					70.0	346.9	40.0	*										
200	150	80	62.0	339.7	28.0	*	69.3	346.3	39.5	*										
200	150	90	57.5	333.9	24.8	*	65.1	342.1	36.1	*										
200	150	100	52.9	326.9	21.8	*	60.8	337.0	32.5	*										
200	150	108									65.0	339.1	37.5							
200	150	110	47.9	318.6	19.1	*	56.4	330.9	28.9	*	64.0	337.9	36.4							
200	150	120	42.6	308.7	16.8	*	51.6	323.6	25.5	*	59.6	332.6	32.4							
200	150	130	36.6	296.6	14.7	*	46.6	314.9	22.3	*	55.1	326.1	29.1							
200	150	136																		
200	150	140	29.5	281.2	12.9	*	41.1	304.5	19.4	*	50.3	318.5	26.3	58.2	326.4	23.2				
200	150	150	20.5	259.8	11.5	*	34.9	291.7	16.8	*	45.1	309.4	23.9	53.6	319.6	21.1				
200	150	160	0.0	207.3	11.2	*	27.5	275.2	14.5	*	39.4	298.4	21.9	48.7	311.6	19.2				
200	150	164																		
200	150	170					17.5	251.0	12.6	*	33.0	284.7	18.9	43.4	301.9	17.6	55.0	315.9	16.0	
200	150	177					0.0	206.0	11.6	*										
200	150	180									25.1	266.7	16.1	37.5	290.2	16.1	46.9	302.6	13.8	
200	150	190									13.5	238.1	13.5	30.7	275.5	14.9	41.4	292.3	12.7	
200	150	194									0.0	203.2	10.9	*						
200	150	200												22.1	255.3	13.7	35.3	279.7	11.7	
200	150	210												6.8	216.5	10.7	*	28.0	263.4	10.7



**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	34.0	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 *



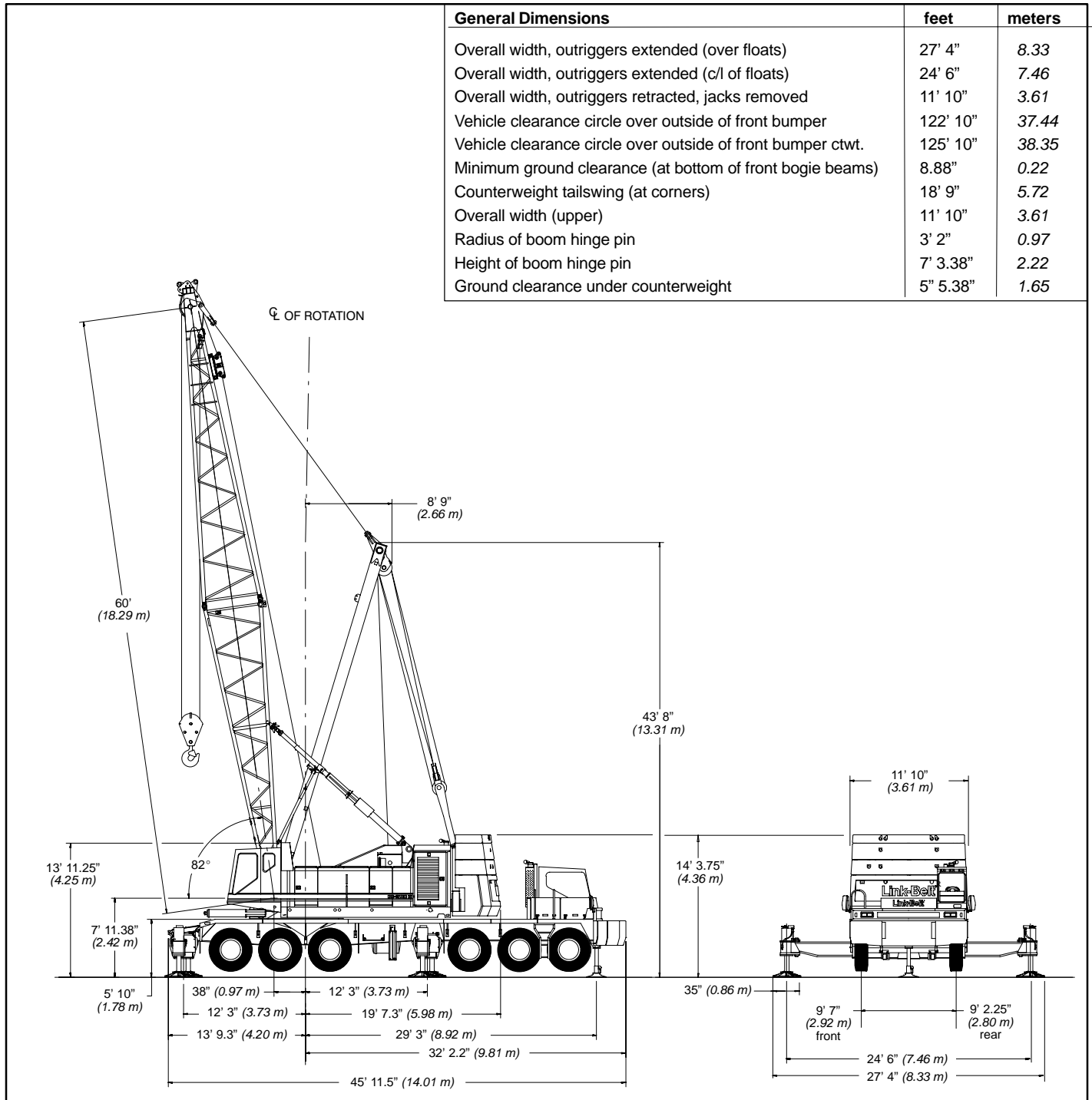
# Specifications

Lattice Boom Truck Crane

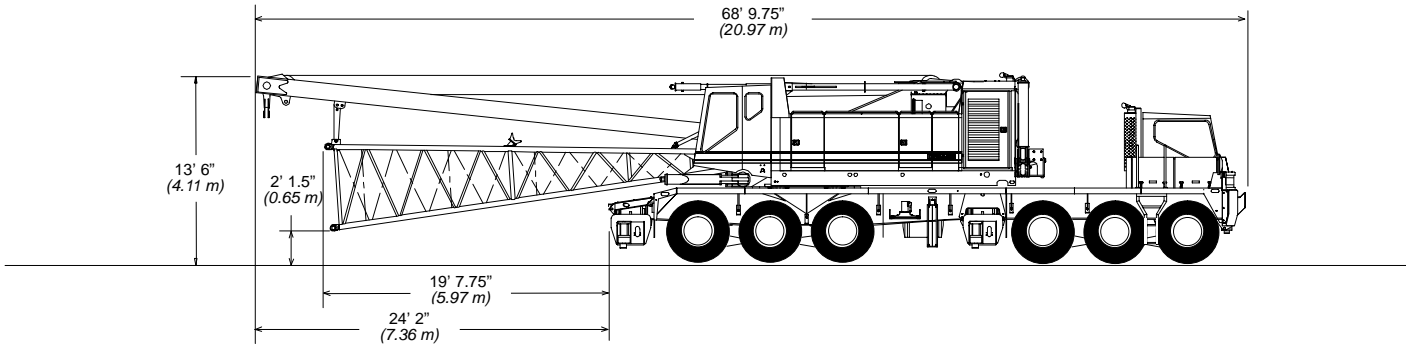
## HC-278H II

300-ton (272 metric ton)

### HYLAB Series



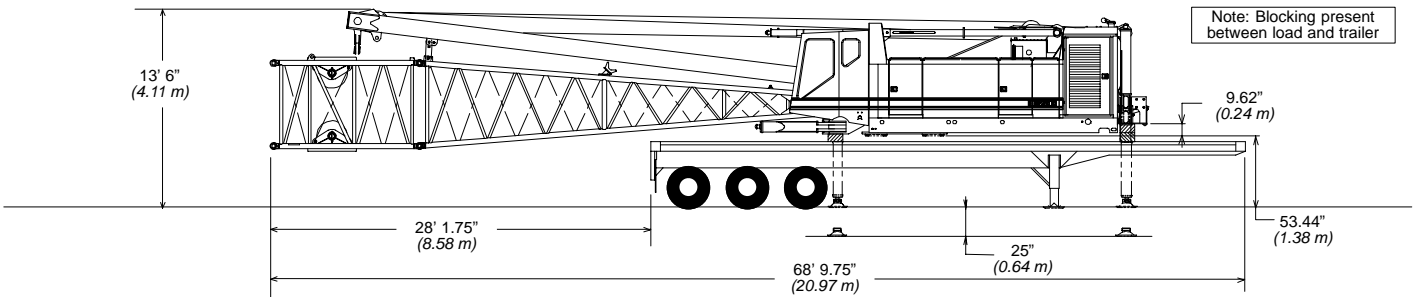
# HC-278H II Machine Transport Weights and Dimensions – approximate



### Transport Weights

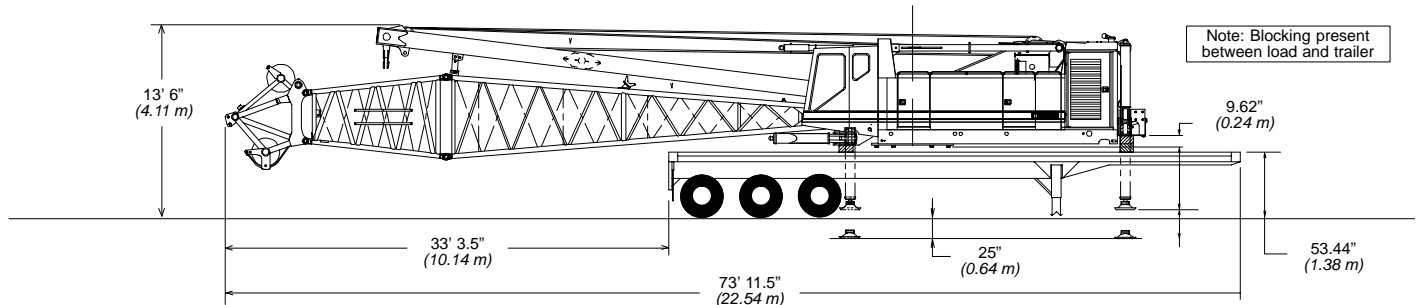
- without boom base or 10 ft. self-assembly section, – 168,824 lbs. (76 577 kg)
- with boom base and without 10 ft self-assembly section – 173,736 lbs. (78 805 kg)
- with boom base and 10 ft. self-assembly section – 177,011 lbs. (80 291 kg)

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



### Transport Weights

- without boom base or 10 ft. self-assembly section, – 76,976 lbs. (34 916 kg)
- with boom base and without 10 ft. self-assembly section, – 83,173 lbs. (34 197 kg)
- with boom base and 10 ft. self-assembly section, – 84,757 lbs. (38 455 kg)

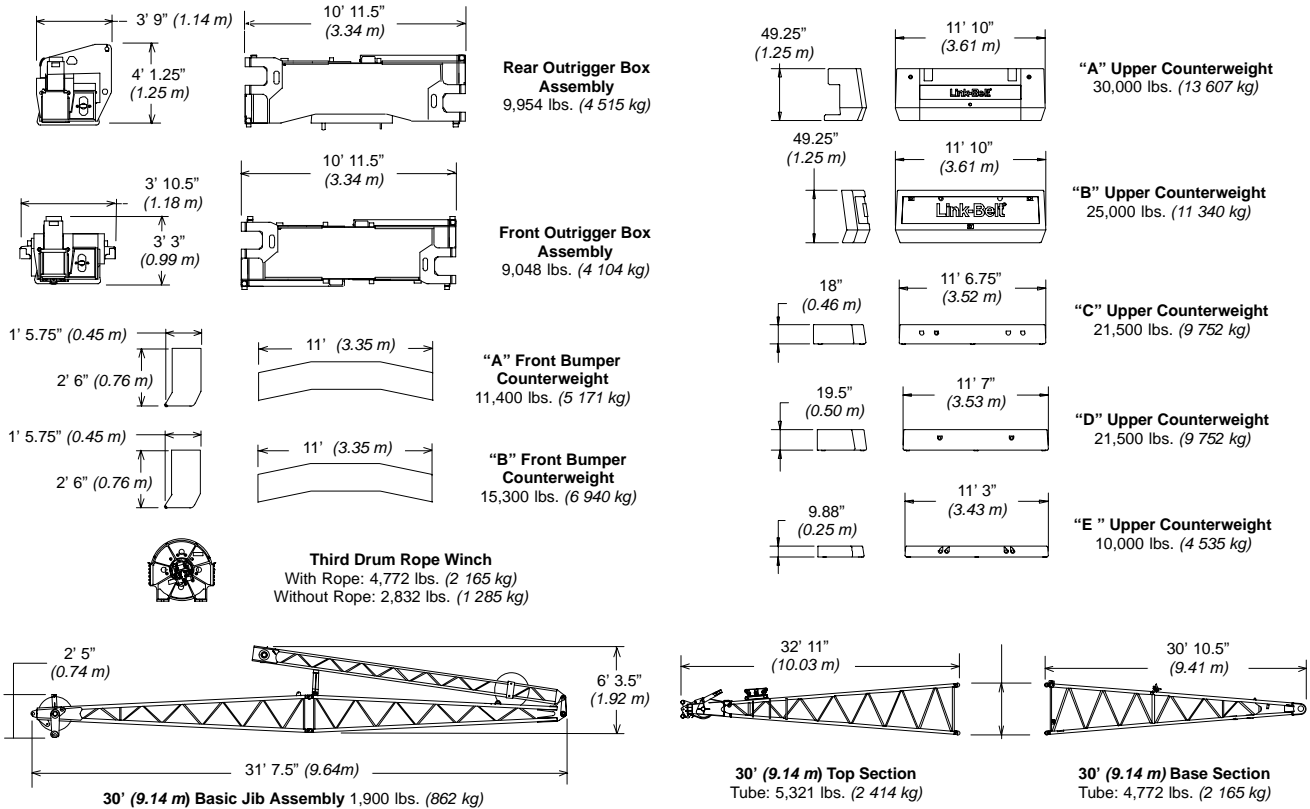


### Transport Weights

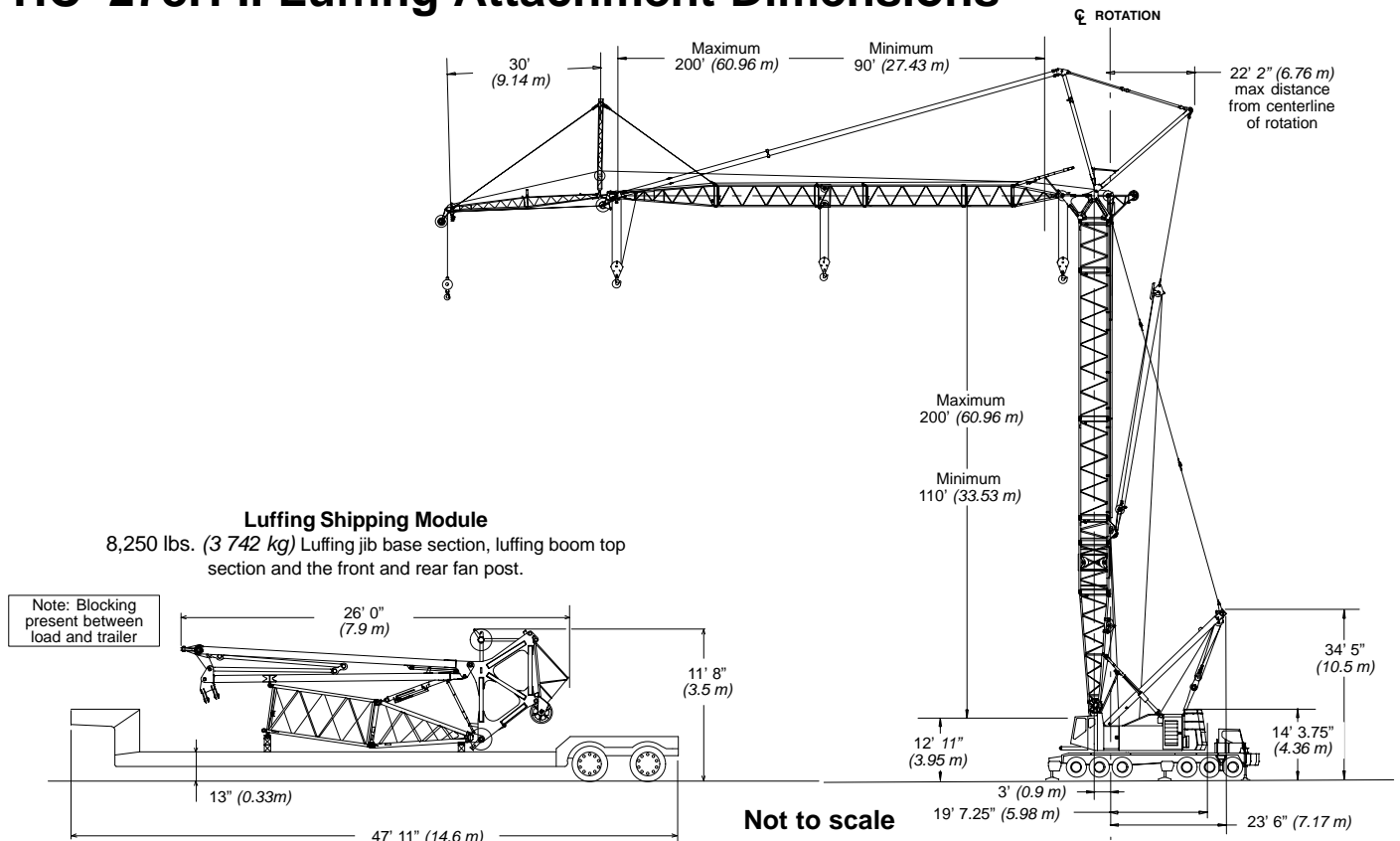
- with hammer head and transition section and head machinery, – 86,996 lbs. (39 447 kg)



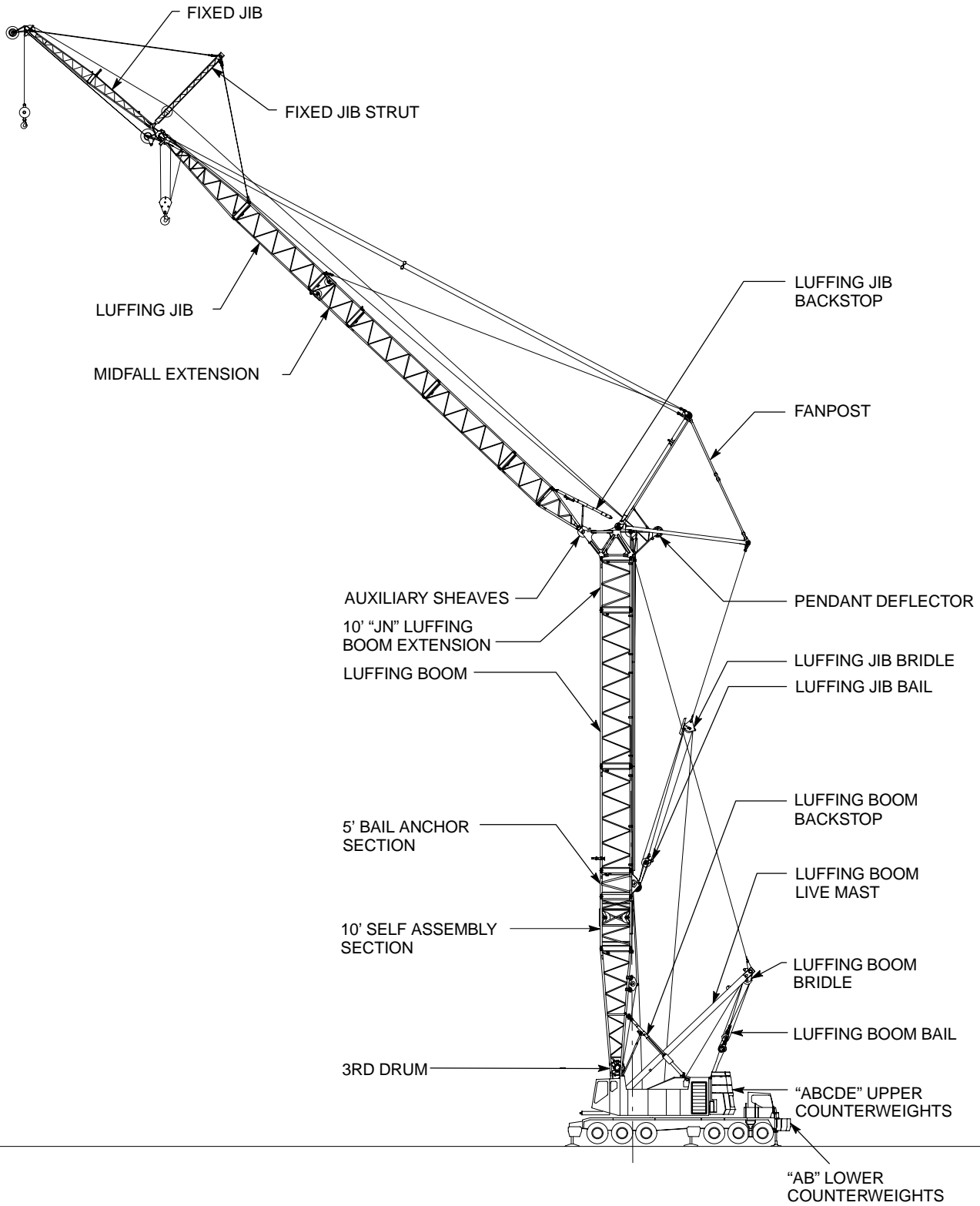
## HC-278H II Machine Transport Weights and Dimensions – approximate



## HC-278H II Luffing Attachment Dimensions



# HC-278H II Luffing Attachment Nomenclature



# HC-278H II Transportation Weights – approximate

**Base Machine:** 85 gallons (321 L) 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' (290 m) front hoist rope, 600' (182.88 m) rear hoist rope and 77 (291 L) gallons of upper machine fuel.

Item Description	Gross Weight		Transport Loads										
	lbs.	kg.	#1	#2	#3	#4	#5	#6	#7	#8	#9		
Base Machine	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' (100.58 m) of tube boom + 30' (9.14 m) of jib with full counterweight.</p> <p>Loads were estimated for a 8' 6" (2.6 m) wide, 48' (14.6 m) long, and 13' 6" (4.1 m) 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 of #1</b> 70,500 lbs. (34 916 kg).</p> <p><b>Estimated Total Load of #2</b> 76,976 lbs. (34 916 kg).</p> <p><b>Estimated Total Load of #3</b> 45,966 lbs. (20 850 kg).</p> <p><b>Estimated Total Load of #4</b> 37,320 lbs. (16 928 kg).</p> <p><b>Estimated Total Load of #5</b> 44,889 lbs. (23 361 kg).</p> <p><b>Estimated Total Load of #6</b> 44,736 lbs. (20 292 kg).</p> <p><b>Estimated Total Load of #7</b> 11,596 lbs. (5 260 kg).</p> <p><b>Estimated Total Load of #8</b> 4,583 lbs. (2 058 kg).</p> <p><b>Estimated Total Load of #9</b> 15,103 lbs. (6 851 kg).</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 floats	5,060	2 295				1							
Add Front outrigger float	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' (6.10 m) Boom base section	-4,912	-2 228											
Add 30' (9.14 m) Boom top section	5,612	2 546							1				
Add 10' (3.05 m) "JN" Boom extension w/ pins, pendants & roller	1,584	719			1								
Remove 10' (3.05 m) "J" Boom extension w/ lifting sheaves, pins, pendants & roller	-3,275	-1 486											
Add 20' (6.10 m) "JE" Boom extension w/ pins, pendants & roller	2,524	1 145							1	1			
Add 30' (9.14 m) "JE" Boom extension w/ pins, pendants & roller	3,464	1 571								1			
Add 40' (12.19 m) "JE" Boom extension w/ pins, pendants & roller	4,609	2 091						1					
Add 50' (15.24 m) "JE" Boom extension w/ pins, pendants & roller	5,608	2 544								1			
Add 10' (3.05 m) "HJ" Boom extension w/ pins, pendants & roller	1,382	627			1								
Add 20' (6.10 m) "HJ" Boom extension w/ pins, pendants & roller	2,163	981									1		
Add 30' (9.14 m) "HJ" Boom extension w/ pins, pendants & roller	2,940	1 334										1	
Add 40' (12.19 m) "HJ" Boom extension w/ pins, pendants & roller	3,687	1 672											
Add 50' (15.24 m) "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' (9.14 m) Tubular Jib	2,180	990					1						
Add 10' (3.05 m) Tubular Jib Extension	259	118											
Add 20' (6.1 m) 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 (13.6 mt) Hook Ball – Non Swivel or Swivel	1,400	635											
Add 60-ton (54 mt) 2-Sheave Hook Block	1,650	747											
Add 150-ton (136 mt) 6-Sheave Hook Block	3,525	1 599											
Add 200-ton (181 mt) 6-Sheave Hook Block	3,860	1 751						1					
Add 250-ton (227 mt) 6-Sheave Hook Block	5,721	2 595											

# HC-278H II Machine Working Weights

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

## Attachment Options

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

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

- 250-ton (226.8 mt) maximum capacity
- Max boom tip height of 333' (101.5 m)
- Boom feet on 66" (1.67 m) centers
- 4.25" (10.79 cm) diameter chords
- Lugs on base section to attach carrying links
- Skywalk platform
- Deflector roller on top section
- Rigid sheave guards
- Six, 21" (0.53 m) 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' (42.67 m) for boom lengths 250' (72.6 m) and longer.

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

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

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

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

- 200-ton (178.6 mt) maximum capacity
- Maximum boom tip height is 243' (74.07m)
- 4.25 (10.80 m) tubular "JE" wall chords
- Lugs on base section to attach carrying links.
- Skywalk platform
- Deflector roller on top section
- Rigid sheave guards
- Six, 21" (0.53 m) 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' (6.10 m)	1
30' (9.14 m)	1
40' (12.19 m)	0
50' (15.24 m)	3

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

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

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

- 30-ton (27.2 mt) maximum capacity
- Maximum tip height of tube boom + jib is 403.8' (123.1 m).
- Jib offset angles at 5, 15 and 25 degrees
- 2.25" (57 mm) tubular chords
- One 18.5" (0.47 m) 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' (3.05 m) increments.

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

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

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

**Basic Luffing Jib** – 90' (24.38 m) five-piece design utilizes a 5' (1.52 m) luffing boom top section, 10' (3.05 m) base section, 10' (3.05 m) extension, 20' (6.01 m) extension, 30' (9.14 m) extension, and 20' (6.10 m) top section with in-line connecting pins. Boom extensions are 50" (1.12 m) wide and 60" (1.37 m) deep at the centers.

- 52.2-ton (47.36 mt) maximum capacity
- Working boom lengths of 90' (27.43 m) to 200' (60.96 m)
- Top section includes mounting lugs for all attachment options.
- Lugs on base section to attach fan-post transport links.
- Two polyamide 24" (0.46 m) diameter luffing jib head sheaves
- Two polyamide 25" (0.54 m) diameter luffing boom auxiliary head sheaves
- Pin on nose wheel
- Ten-part luffing jib hoist.
- 1.25" (31.75 mm) 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' (3.05 m) increments. Midpoint pendants are not required.

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

**Midfall Extension** – The midfall (if equipped) consists of a 10' (3.05 m) 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 – 61.0 m).
- Midfall capacities range from 18,800 lbs. (8 528 kg) to 9,400 lbs. (4 264 kg).

## ■ Luffing Boom

- Base and extensions are common to open throat boom.
- 10' (3.05 m) Self-Assembly section required for bail anchor assembly.
- Working angles of 90, 85, 80, 75, 70, and 65 degrees.
- Working lengths of 110' (25.91 m) to 220' (50.29 m)
- 1.25" (34.92 mm) 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' (3.05 m) increments. Midpoint pendants are not required.

Luffing Boom Extensions	Suggested Quantity for Maximum Boom
* 10' (3.05 m)	2
20' (6.10 m)	1
30' (9.14 m)	1
40' (12.19 m)	1
50' (15.24 m)	1
* : One 10' (3.05 m) must be the self-assembly and one 10ft. 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 machine transport
- Job site mobility with attachment
- Rolled out or rolled under erection methods
- Compact transport module.

## ■ Auxiliary 5' (1.5 m) 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" (0.72 m) root diameter steel sheaves mounted on sealed anti-friction bearing. Maximum capacity is 25-tons (22.32 mt).

## ■ 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" (0.51 m) root diameter steel sheaves mounted on sealed anti-friction bearing. Maximum capacity is 17.5-tons (15.9 mt).

## ■ Boom Hoist System

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

- Hydraulic controlled retractable gantry frame.
- 18-part reeving with 1" (2.54 cm) type "W" wire rope
- Bridle assembly and 35' (10.67 m) live mast
- Four 1.25" x 26' 4" (3.18 cm x 8.03 m) pendants
- Two 1" x 112' 10" (25.4 cm x 34.39 m) 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' (45.72 m) 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 r.p.m.
Peak torque – ft./lb. (joules)	1,450 (1 966) @ 1,200 r.p.m.
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 (36 025 kPa) and 94 gal/min (355 L/min) powers front hoist drum.
- One variable displacement pump operating at 5,100 psi (35 163 kPa) and 94 gal/min (355.8 L/min) powers the rear hoist drum.
- One variable displacement pump operating at 4,600 psi (31 717 kPa) and 73 gal/min (278 L/min) powers the boom hoist drum.
- One variable displacement pump operating at 4,350 psi (29 993 kPa) and 73 gal/min (276 L/min) powers the swing system.
- One fixed displacement gear type pump operating at 1,250 psi (88 kg/cm<sup>2</sup>) and 8 gal/min (32 L/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 (545 L), 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" (0.53 m) root diameter
- 36" (0.91 m) flange diameter
- 31.94" (0.81 m) width
- Optional – 1.12" (28.4 mm) 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" (0.78 m) root diameter
- 40.5" (1.03 m) flange diameter
- 31.94" (0.81 m) width
- Optional – 1" (25.4 mm) 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" (2.54 cm) grooved lagging
- Drum pawl controlled automatically
- Mounted on anti-friction bearings
- 20.88" (0.53 m) root diameter
- 31" (0.79 m) flange diameter
- 30.75" (0.78 m) width

## ■ Swing System

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

- Spring applied, hydraulically released, 360 degree multi-plate brake
- Free swing mode when lever is in neutral position
- 360 degree 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 lbs. (48 988 kg) 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 arm chair 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 line-riders, angle sensor, computer, graphics display, and anti two block equipment to provide the following information:

- Graphic representation of Machine Configuration
- Graphical step-by-step machine 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 cranes rated load.
- Provides an audio/visual warning and limits functions when the load on hook is at 100% of the cranes 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" (2.36 m) outside diameter turn table bearing.
- Front, and removable left catwalks.
- 77 (usable) U.S. Gallons (291.5 L) 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" (28 mm) 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	20 539	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" (28 mm) 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" (28 mm) 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	11 459	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" (28 mm) 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	12 689	408	124	207	63	19.7	500	150	46	150	46
2	20,862	9 461	449	136	228	69	21.7	551	165	50	315	96
3	19,102	7 663	491	149	249	75	23.7	602	180	55	495	152
4	17,615	7 988	532	161	270	82	25.7	652	195	60	690	210
5	16,343	7 411	574	174	291	88	27.7	703	211	64	901	275

Application	Size: Diameter		Type	Max. Permissible Load		
	inch	mm		lb	kg	
Main hoist – 1,025 ft (312.4 m)	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. (330 m)	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 (259 m)	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 (369 m)	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 (259 m)	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 (265.2 m)	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 (320 m)	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" (3.61 m) wide
- 288" (7.32 m) wheel base.
- 12 x 6 drive.
- 100,000 psi (689.5 mPa) alloy steel, triple box construction.

### ■ Axles

#### Front

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

#### Rear

- Planetary type, bogie mounted tridem axles, dual wheels, 110.25" (2.80 m).
- Oil lubed wheel bearings with see through hubcaps.
- 9.14:1 ratio
- 85,840 lbs. (39 937 kg) maximum axle loading at 65 m.p.h. (105 km/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" (0.42 m x 0.18 m) S–Cam brakes.

#### Rear

- 16.5" x 7" (0.42 m x 0.15 m) 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 (413.7 kPa) in both systems.

### ■ Steering

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

### ■ Transmissions

#### Main

- 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

- 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–degree 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" (0.86 m) diameter quick–release steel floats.
- 24" (0.61 m) diameter self–storing aluminum bumper float.

### Jack Reactions

- Maximum 180,000 lbs. (81 648 kg) force and 198 psi (1 365 kPa) ground bearing pressure on main outriggers
- Maximum 41,000 lbs. (18 598 kg) force and 91 psi (627 kPa) 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 r.p.m.
Peak torque – ft./lb. (joules)	1,450 (1 966) @ 1,200 r.p.m.
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 lbs. (5 171 kg)
- "B" counterweight – 15,300 lbs. (6 940 kg) – optional

### ■ 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 controls

- Engine fan override switch
- Heater and defroster controls
- Park brake switch and applied 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. (321.76 L) 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 (13 608 kg) "A" counterweight, self undecking equipment mounted on 288" (7.32 m) wheelbase, 12 x 6 drive carrier, 11' 10" (3.61 m) wide, equipped with Detroit Diesel 60 Series 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	lbs	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' (259 m) of 1" (25 mm) Type "RB"	1,700	771	-142	-64	1,842	836	497	225	1,203	546
Add front drum wire rope – 1,170' (357 m) of 1-1/8" (29 mm) 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' (308 m) 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 floats	660	299	309	140	351	159	309	140	351	159
Add bumper outrigger float	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' (9.14 m) (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' (10.67 m) 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' (18.29 m) open throat tubular boom – horizontal over rear of carrier.	10,524	4 774	-	-	-	-	-14,229	-6 554	24,753	11 228
45' (13.72 m) 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 (29 692 kg)
Rear Tridem	128,760 lb (58 405 kg)