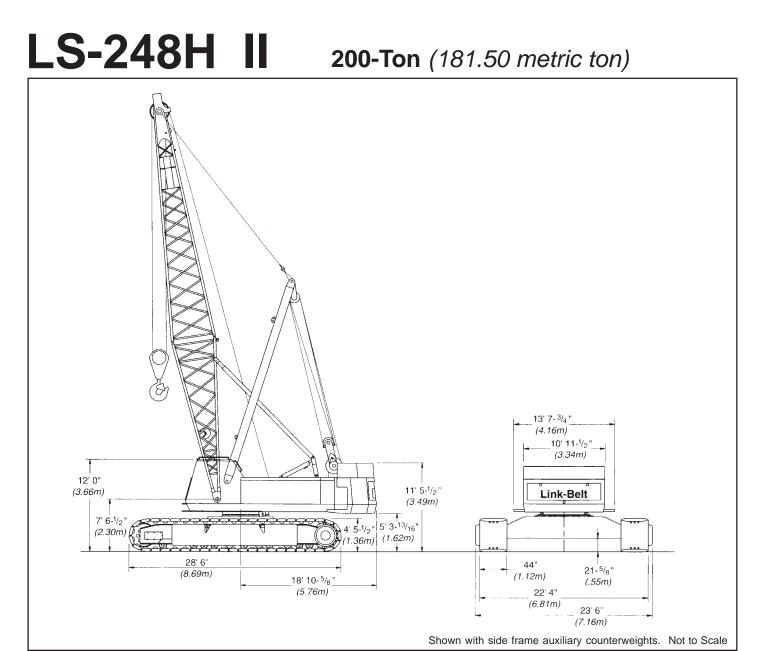
Specifications

Hydraulic Lattice Boom Crawler Crane



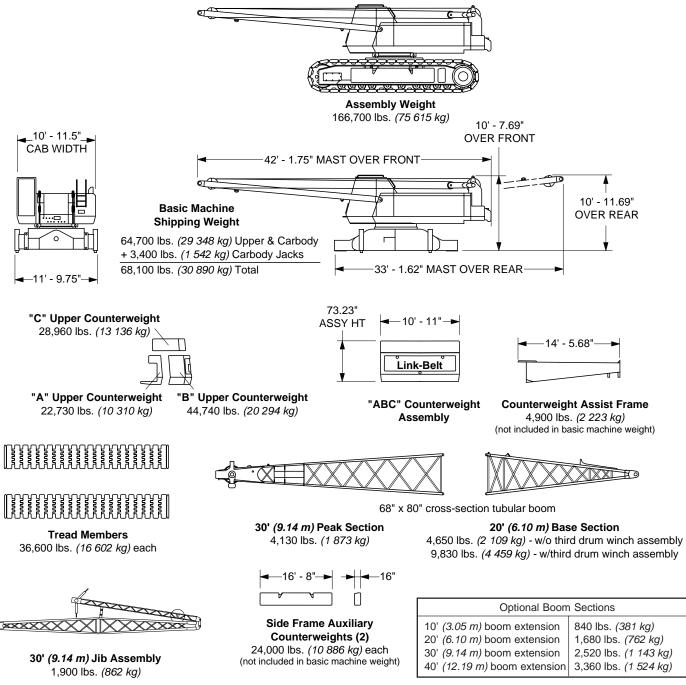
General dimensions	feet	meters
Basic boom length	50	15.24
Overall width of machine with 44" (1.12 m) track shoes	22.5	6.85
Overall width of cab w/catwalks both sides	13.64	4.15
Overall width of cab less catwalks	10.95	3.34

General dimensions	feet	meters
Tailswing of counterweight "A"	16.80	5.12
Tailswing of counterweight "AB"	18.89	5.76
Tailswing of counterweight "ABC"	18.89	5.76
Overall height for transport w/boom base	13.31	4.05
Overall height for transport w/live mast only	13.31	4.05

Machine Working Weights - approximate

Based on standard machine with Isuzu A-6SD1TQB-01 diesel engine, turntable bearing, independent hydraulic powered drums, boomhoist limiting device, independent hydraulic swing and travel, swing brake, drum rotation indicators, and 18' 10" (<i>5.74 m</i>) gauge by 28' 6" (<i>8.69 m</i>) long crawler lower with 44" (<i>1.12 m</i>) wide track shoes, track rollers with	upper c	ed with twt. "A" me ctwts.	upper ct	ed with wt. "AB" me ctwts.	Equipp upper ctv + side fra	
dirt seals, 48,000 lb. $(21\ 772\ kg)$ side frame auxiliary counterweights, catwalks, hydraulic boomfoot pin removal, plus the following:	lbs.	kg	lbs.	kg	lbs.	kg
Lifting Crane - includes 50' (15.24 m) basic tubular boom, 30' (9.14 m) live mast, 1,050' (320.04 m) of 1" (25 mm) diameter wire rope, 715' (217.93 m) of 7/8" (22 mm) diameter boomhoist rope, 175-ton (159 mt) hookblock, and basic pendants.	224,560	101 860	269,300	122 154	298,260	135 290

Transport Weights and Dimensions - ±3%



Crawler Mounting

Lower frame

All welded high strength steel (100,000 psi yield), box construction; precision machined surfaces for turntable bearing and axle plates.

Turntable bearing

Outer race bolted to lower frame; inner race with internal swing gear bolted to upper.

Crawler side frames

All welded, precision machined and removable. Each side frame comes with lifting brackets. Positioned on cross axles by dowels and held in place with adjustable wedgepacks.

Crawler side frame auxiliary counterweights

Removable 24,000 lb. *(10 886 kg)* auxiliary counterweight on each crawler side frame.

Track drive sprockets

Cast steel, heat treated; self-cleaning and sealed for lifetime lubrication. Powered by hydraulic motor(s) through double reduction gear drive.

Track carrier slide rails

Slide rails on top of each side frame.

Track rollers

Heat treated, oil filled, mounted on "sealed for life" anti-friction bearings; 12 per side crawler side frame.

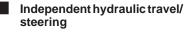
Tracks

Heat treated, self-cleaning, multiple hinged track shoes joined by one piece full floating pins; 51 shoes per side frame - 44" (1.12 m) wide.

Track tension adjustment - Idler wheel adjusted by means of hydraulic cylinder and hand pump. Idler wheel shaft held in position with shims after adjustment is made.

Take up idlers

Cast steel, heat treated, self-cleaning, mounted on aluminum/bronze bushings. Lubricated through idler shaft.

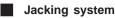


Power transmitted by axial piston hydraulic motors through planetary gear reduction unit to track drive sprocket.

Steering - Axial piston motor with reduction gear is located at inner drive end of each crawler side frame. Each track is driven simultaneously or individually for straight-line, gradual turn, or pivot turn. The tracks can be counterrotated for spin turns.

Brakes - Spring applied, hydraulically released multiple disc brakes are applied automatically when the control lever is in the neutral position.

Travel speed - 0 - .50 mph *(0 - 0.80 km/hr)*. Gradeability - 30%



Optional; four ground controlled, power hydraulic jacks, pinned to the lower carbody frame, used to raise the machine to facilitate removal or installation of the crawler side frames.

Ground contact area and ground bearing pressure

Based on standard machine equipped with "ABC" counterweight and 50' (15.24 m) tubular boom.

Track	shoes	Ground contact area		Ground bearing pressure			
inches	meters	sq. in. cm ²		psi	psi <i>kg/cm</i> ²		
44	1.12	12,760	82 328	11.6	0.82		

Revolving Upperstructure

Frame

All welded and precision machined.

Turntable bearing

With integral swing (ring) gear. Inner race with internal swing gear is bolted to upper revolving frame; outer race is bolted to machined surface on lower.

Engine

Full pressure lubrication, oil filter, air cleaner, hour meter and throttle, electric control shutdown.

Fuel tank

77 gallon (291 liter) capacity; equipped with fuel sight level gauge, flame arrester, and self-closing cap with locking eye for padlock.

Engine Specifications	Isuzu A-6SD1TQB-01
Number of cylinders	6
Bore and stroke: inch	4.72 x 5.71
- (mm)	(120 x 145)
Piston displacement - cu. in.	600
- (cm ³)	(9 839)
High idle speed - rpm	2,400
Engine rpm at full load speed	2,200
Net engine hp at full load speed	237
Peak torque - foot pounds	644
- joules	(873.3)
Peak torque - rpm	1,500
Electrical system	24-volt
Batteries	2 - 12 volt

LS-248H II Load Hoisting 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.

Line Speeds and Pulls

		F	ront Drum	- 1" (25 m	m) wire rope	•		Rea	r Drum -	1" <i>(</i> 25 mm)) wire rope		
Rope layer	Maximur	n line pull	No load li	ne speed	beed Full load line speed		Maximum line pull		No load line speed		Full load line speed		
	lbs.	kg	ft./min	m/min	ft./min	m/min	lbs.	kg	ft./min	m/min	ft./min	m/min	
1	48,620	22 055	225	68.5	112	34.2	29,360	13 318	372	113.4	186	56.7	
2	44,200	20 050	247	75.3	124	37.7	26,690	12 108	409	124.8	205	62.4	
3	40,510	18 379	270	82.2	135	41.1	24,470	11 099	446	136.1	223	68.0	
4	37,400	16 965	292	89.0	146	44.5	22,590	10 245	484	147.5	242	73.7	
5	34,720	15 753	315	95.9	157	47.9	20,970	9 513	521	158.8	260	79.4	
6	32,410	14 703	337	102.7	168	51.3	19,570	8 877	558	170.1	279	85.1	
7	30,390	13 784	359	109.6	179	54.7	18,350	8 324	595	181.5	298	90.7	
		B	oomhoist D	9rum - 7/8'	' (22 <i>mm</i>) w	ire rope		Third Dru	m - 1" <i>(</i> 25	5 <i>mm)</i> wire	rope		
Rope layer	Maximun	n line pull	No load li	ne speed	Full load li	ine speed	Maximu	m line pull	No load l	No load line speed Full load line speed			
	lbs.	kg	ft./min	m/min	ft./min	m/min	lbs.	kg	ft./min	m/min	ft./min	m/min	
1	40,842	18 526	147	44.9	134	40.8	20,656	9 369	442	135	105	32	
2	36,760	16 674	163	49.8	149	45.3	18,752	8 506	486	148	116	35	
3	33,417	15 158	180	54.8	163	49.8	17,169	7 788	531	162	127	39	

54.4

58.9

63.4

67.9

Wire Rope Drum Capacities

30,633

28,276

26,257

24,506

13 895

12 826

11 910

11 116

196

213

229

245

59.8

64.8

69.7

74.7

178

193

208

223

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6

7

	Boomhoist Drum Capacity - 7/8" (22 mm) rope								
Rope layer	Pitch Di	ameter	La	yer	To	tal			
	in.	mm	ft.	m	ft.	т			
1	15.88	403.2	51.8	15.8	51.8	15.8			
2	17.63	447.7	57.1	17.4	108.9	33.2			
3	19.38	492.1	62.3	19.0	171.2	52.2			
4	21.13	536.6	67.2	20.5	238.5	72.7			
5	22.88	581.0	72.5	22.1	311.0	94.8			
6	24.63	625.5	77.4	23.6	388.4	118.4			
7	26.38	669.9	82.7	25.2	471.1	143.6			

	Rear Drum Capacity - 1" (25 mm) wire rope							
Rope layer	Pitch Diameter		Lay	/er	То	tal		
	in.	mm	ft.	m	ft.	m		
1	20	508	113	34.3	113	34.3		
2	22	559	123	37.4	235	71.7		
3	24	610	133	40.4	368	112.1		
4	26	660	142	43.4	510	155.5		
5	28	711	153	46.5	663	202.0		
6	30	762	163	49.6	825	251.6		
7	32	813	173	52.6	998	304.2		

Wire Rope: size, type and working strength

Wire rope application	Size: dia	ameter	Туре	Max. perm	issible load
	inches	mm		lbs.	kg
Boomhoist	7/8	22	LB	25,000	11 340
Main load hoist	1	25	N	29,500	13 400
Jib load hoist (1-part)	1	25	RB	22,760	10 320
Jib load hoist (2-parts)	1	25	RB	45,520	20 640
Boom pendants (dual)	1	25	N	69,000	31 300
Jib staylines	7/8	22	N	26,550	12 040

	Front	Drum Ca	apacity -	1" (25 m	nm) wire	e rope			
Rope layer	Pitch D	iameter	Lay	/er	Total				
	in.	mm	ft.	т	ft.	т			
1	20	508	113	34.3	113	34.3			
2	22	559	123	37.4	235	71.7			
3	24	610	133	40.4	368	112.1			
4	26	660	142	43.4	510	155.5			
5	28	711	153	46.5	663	202.0			
6	30	762	163	49.6	825	251.6			
7	32	813	173	52.6	998	304.2			
	Third Drum Canacity - 1" (25 mm) wire rone								

576

621

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7 182

6 663

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15,833

14,690

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	minu		ipacity -	1 (257	mi) wie	Tobe
Rope layer	Pitch D	iameter	Lay	/er	Tot	tal
	in.	mm	ft.	т	ft.	т
1	19.7	500	150	45.8	150	45.8
2	21.7	551	165	50.4	316	96.2
3	23.7	602	181	55.1	496	151.3
4	25.7	653	196	59.7	692	211.0
5	27.7	704	211	64.4	903	275.3
6	29.7	754	226	68.9	1,129	344.1

Wire Rope: types available

• Type "N" - 6 x 25 (6 x 19 class) filler wire, extra improved plow steel, preformed, independent wire rope center, right lay, regular lay.

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- Type "LB" 6 x 25 (6 x 19 class) filler wire, preformed, independent wire rope center, right lay, regular lay.
- Type "RB" 19 x 19 non-rotating, extra, extra improved plow steel, preformed, right regular lay, swaged.

Hydraulic System

Hydraulic pumps

Two variable displacement piston pumps operating at 4,000 psi (*281.24 kg/cm²*) power travel, main drum, auxiliary drum, third drum, and boomhoist functions. Two fixed displacement gear pumps operating at 3,000 psi (*211 kg/cm²*) power swing, counterweight lowering, and machine jack functions. One fixed displacement gear pump operating at 1,210 psi (*85 kg/cm²*) powers pilot control system, clutches, brakes, and pump controls.

Fine Inching" pump control mode

Special fine metering pump setting selectable from the operator's cab allows very slow movements for precision work. Main hoist, auxiliary hoist, boomhoist, third drum, and travel are all supplied with this standard feature.

Hydraulic reservoir

42 gal. (159 L), equipped with sight level gauge.

Relief valves

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

Brake valves

Travel circuit is provided with brake valves for all terrain capability.

Hydraulic filtration

Ten micron, full flow line filter furnished in control circuit. All oil is filtered prior to return to sump tank.

Hydraulic motors

Main hoist drum, auxiliary hoist drum, boomhoist, swing, and travel are powered by axial piston motors.

Counterbalance valves

Upper - Hoist motors are equipped with counterbalance valves to provide positive load lowering and prevent accidental load drop when hydraulic power is suddenly reduced.

Lower - Travel motors equipped with counterbalance valve to prevent overspeeding of motors when traveling down an incline.

Principal Operating Functions

Control system

Remote controlled hydraulic servo for main drum and auxiliary drum. Mechanical linkage controls swing. Function speed is proportional to lever movement. Levers are adjustable for operator comfort.

Load hoisting and lowering

Main and auxiliary hoist drums are driven by individual axial piston motors and reduction gearing. Load hoisting or lowering is provided by actuating or reversing a hydraulic motor. The control lever provides two speeds for hoisting and lowering. Hoisting or lowering speeds are proportional to lever movement.

Freefall - The incorporation of power hydraulic controlled, two-shoe clutches allow freefall operation of the main and auxiliary hoist drums for high cycle crane and duty cycle application. Mode selection switch on control panel allows operator to select the most productive operation mode.

Load hoist drums

Main (front) and auxiliary (rear) hoist drums are 19" (*.48 m*) root diameter grooved for 1" (*25 mm*) wire rope. Mounted on anti-friction bearings.

Third operating drum - *Optional*; 12-1/2" (.32 m) grooved drum lagging, mounted in boom base section.

Drum clutches

Speed-o-Matic[®] power hydraulic two-shoe clutches; internal expanding, lined shoes. Clutch spiders are splined to shafts; clutch drums are integral with hoist drums.

Load hoist clutches - Front and rear main drums - clutch drums 30" (*.*76 *m*) diameter, 6-1/2" (*.*17 *m*) width.

Drum brakes

External contracting band type; operated by foot pedal equipped with a locking latch. Operator may select automatic brake mode* (spring applied, hydraulically released), which will apply brakes when the hoist control lever is in the neutral position.

*When in the automatic brake mode, the LS-248H II meets all OSHA requirements for personnel handling.

Drum rotation indicators

Standard for front and rear drums. Audibletype indicators.

Drum locking pawl

Standard for front and rear drums; electrically actuated and prevents drum rotation in a lowering direction.

Anti two-block system

Standard - A switch mounted on the boom peak activates a buzzer to warn the operator of a two-block condition and simultaneously disengages hoist function while applying the hoist brakes. Swing system

Independent, hydraulic swing is driven by two axial piston motors through a gear reduction system; free swing when lever is in neutral position.

Swing brake - Spring applied, hydraulically released; controlled by button on swing control lever.

Swing lock - Mechanically controlled, twoposition locking mechanism.

Optional - 360° locking mechanism available to meet New York City code.

Swing speed - Variable from 0 to 2 rpm.

Boomhoist/lowering system

Independent, hydraulic boomhoist is driven by an axial piston motor through a gear reduction system. Boom hoisting or lowering is performed by actuating or reversing the motor. Boomhoist speed is infinitely variable. Boomhoist speed from 0° to 70° boom angle is 90 seconds.

Boomhoist drum

Single grooved lagging 15" (.38 m) root diameter.

Boomhoist drum locking pawl

Electrically operated.

Boomhoist brake

Spring applied, hydraulically released, multiple disc type brake. Brake is automatically applied when control lever is in neutral position.



Boomhoist limiting device - Restricts hoisting boom beyond recommended minimum radius.

Electrical system

24 volt negative ground system with two 12-volt batteries. Standard lighting system includes: two 70 watt headlights mounted on machine front and one interior cab light.

Operator's cab

Full vision, modular compartment with safety glass panels. The completely independent cab is insulated against noise and vibration. Sliding operator's door, swing up roof window. Standard equipment includes: heater, air conditioner, defroster, windshield wiper, dry chemical fire extinguisher, sun visor, bubble-type level, fuel gauge, tachometer, hydraulic temperature gauge, engine oil pressure gauge, coolant temperature gauge, and service monitor system.

Machinery cab

Hinged doors (one on right side, two on left side) for machinery access. Equipped with rooftop access ladder, electric warning horn and skid resistant finish on roof.

Catwalks

Standard on right and left sides. Catwalks remove for reduced travel width.

Bail

Pinned to revolving frame. Seven sheaves are provided for 16 part boomhoist wire rope reeving. Sheaves mounted on "lifetime sealed" anti-friction bearings.

Counterweights

"A" upper ctwt. - 22,730 lb. (10 310 kg)

"AB" upper ctwt. - 67,470 lb. (30 604 kg)

"ABC" upper ctwt. - 96,430 lb. (43 741 kg)

Side frame ctwts. - see side frame auxiliary ctwt. description under Crawler Mounting on page 3.

Boom and Jib

Tubular boom

Two-piece basic boom 50' (15.24 m) long with open throat top section. Boom 80" (2.03 m) wide, 68" (1.73 m) deep at connections. Alloy steel round tubular cords 4" (.10 m) outside diameter. Maximum boom length is 280' (85.34 m).

Base section

20' (6.10 m) long; boomfeet on 55" (1.40 m) centers.

Boom extensions

Available in 10', 20', 30' and 40' (3.05, 6.10, 9.14 and 12.19 m) lengths with appropriate length pendants.

Boom connections

In-line pin connections.

Boom top section

Open throat; 30' (9.14 m) long.

Boompoint machinery

Six 21" (.53 m) root diameter sheaves mounted on "lifetime sealed" anti-friction bearings.

Hydraulic boomfoot pin removal

Standard; Speed-o-Matic controlled; located between mounting lugs on boom base section.

Boom live mast

30' (9.14 m) long; supports boomhoist bridle and boom pendants. Required for all boom lengths. May be used as short boom for assembling and disassembly of side frames and boom, but is not intended for general crane service. Refer to operator's manual for boom live mast lifting capacities.

Jib

Tubular; two-piece basic jib 30' (9.14 m) long; 32" (.81 m) wide, 24" (.61 m) deep at centerline of connections. Alloy steel tubular chords 2-1/4" (57 mm) outside diameter.

Base section - 13' 3" (4.04 m) long.

Jib extensions - Available in 10' (3.05 m) and 20' (6.10 m) lengths with appropriate length pendants.

Jib connections - In-line, tapered pins.

Tip section - 15' (4.57 m) long; equipped with single peak sheave 21" (.53 m) root diameter, heat treated and mounted on anti-friction bearings. Anchor provided at peak of jib tip section for two-part load hoist wire rope (whipline) connection.

Maximum jib length permitted - 100' (30.48 m). All jib lengths may be mounted at 5°, 15°, or 25° offset to boom.



Jib mast

17' 10" (5.44 m) long, mounted on jib base section. Two deflector sheaves mounted within mast to guide whipline; mounted on anti-friction bearings. Two equalizer sheaves mounted on top of mast - one for jib frontstay line, one for jib backstay line.

Jib staylines - Front and back staylines. Back staylines vary in length depending on degree of jib offset from boom centerline; back staylines attached at bottom end of boom top section.

Jib stops - Telescoping type; pinned from iib mast to boom top section and from iib mast to jib base section.

Auxiliary Equipment

Boom angle indicator

Pendulum type; mounted on boom base section. Electronic type readout on load indicator.

Hook blocks

Blocks, or weighted ball with swivel hook, optional - refer to price list.

Rated capacity limiter

Standard: PAT DS-350 rated capacity limiter, programmed with multiple charts, provides the operator with: main boom length, main boom angle, jib angle, jib length, operating mode, load radius, boom tip height, anti-two block indicator, prewarning light, audible alarm, overload light, and load on hook.

Swing alarm

Standard; audio/visual warning device signals when upper is swinging.

Lifting slings

For handling side frames and auxiliary side frame counterweights.

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Boom - <u>Tube</u>; 80" *(2.03 m)* wide, 68" *(1.73m)* deep with open throat top section. Hammerhead top section required for max. pick.

Jib - <u>Tube;</u> 32" *(.81 m)* wide, 24" *(.61m)* deep.

Counterweights - Refer to chart below.

PCSA Class 12-1080 Refer to notes page 11

Mounting - <u>crawler</u>:

overall length: 28' 6" (8.69 m) gauge: 18' 10" (5.74 m)

Counterweights											
"A" Upper		"AB" (Upper	"ABC'	' Upper	"A" Auxillary Lower					
Pounds	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds	Kilograms				
22,730	10 310	67,470	30 604	96,430	43 741	48,000	21 773				

Open throat boom or boom + jib machine can lift off ground unassisted, without load.

			01	ver End Only	
Counterweight		В	oom	Boo	om + jlb
		Feet	meters	Feet	meters
No Ctwt.	Maximum	150	45.72	n/a	n/a
Ctwt. "A"	Maximum	180	54.86	n/a	n/a
Ctwt. "AB"	Maximum	240	73.15	n/a	n/a
Ctwt. "ABC"	Maximum	270	82.30	n/a	n/a
Ctwt. "ABC" + "A"	' Maximum	280	85.34	240 + 100	73.15 + 30.48

Notes:

1. Booms must be erected or lowered over the end with no load.

2. Crane on firm and level surface.

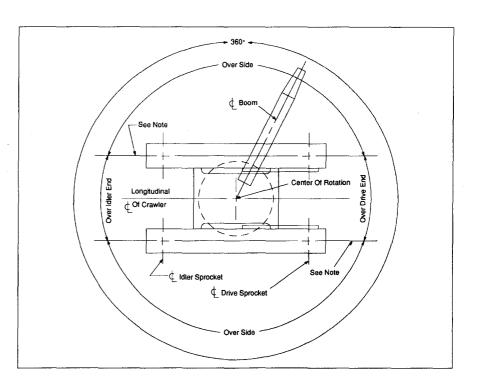
3. Booms 250 ft. (76.20 m) and longer require midpoint suspension pendants.

Working Areas

Note: These lines determine the

limiting position of any load for operation within working areas indicated.

Caution: This material is for reference only. Operator must refer to the Crane Rating Manual to determine allowable machine lifting capacities and operating procedures.



	35 FT. (10.67 m) TUBE BOOM - HAMMERHEAD TOP SECTION										
			3		Over End Blocked						
Load Radius (ft)	Boom Angle (deg)	ABC+A CTWT (lb)	ABC CTWT (lb)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (lb)	ABC+A CTWT (lb)	Load Radius (ft)			
10	82.0	400,000					400,000	10			
11	80.8	375,000					375,000	11			
12	79.0	350,000					350,000	12			
13	77.2	345,000					345,000	13			
14	75.4	336,100					336,100	14			
15	73.5	315,000					315,000	15			
16	71.6	296,300					296,300	16			
17	69.7	279,700					279,700	17			
18	67.8	264,800					264,800	18			
19	65.8	251,300					251,300	19			
20	63.8	239,100					239,100	20			
25	53.1	192,000					192,000	25			
30	40.1	140,100					140,100	30			
35	19.9	72,700					72,700	35			

	50	FT. (15.24	m) TUBE E	300M - OP	EN THROA	T TOP SEC	CTION	
			3	Over End Blocked				
Load	Boom							Load
Radius	Angle	ABC+A	ABC	AB	A	0	ABC+A	Radius
(ft)	(deg)	CTWT	CTWT	CTWT	стwт	CTWT	CTWT	(ft)
		(lb)	(lb)	<u>(lb)</u>	(lb)	(lb)	(lb)	
12	80.0	350,000	350,000	350,000	319,600	300,300	350,000	12
13	78.8	350,000	350,000	336,700	297,000	279,000	350,000	13
14	77.6	337,100	337,100	314,500	277,300	254,100	337,100	14
15	76.4	316,200	316,200	295,000	260,000	204,700	316,200	15
16	75.3	297,700	297,700	277,700	239,800	171,100	297,700	16
17	74.1	281,200	281,200	262,300	206,000	146,800	281,200	17
18	72.9	266,400	266,400	248.400	180,400	128,300	266,400	18
19	71.7	253,000	253,000	235,900	160,300	113,900	253,000	19
20	70.5	240,900	240,900	224,600	144,100	102,200	240,900	20
25	64.3	194,100	191,500	154,500	95,100	66,900	194,100	25
30	57.7	154,800	142,900	114,900	70,200	49,000	154,800	30
35	50.6	127,300	113,400	91,000	55,100	38,100	127,800	35
40	42.7	105,300	93,700	75,000	45,000	30,800	108,000	40
50	20.9	70,200	68,800	54,700	32,200	21,500	70,200	50

	60 FT. (18.29 m) TUBE BOOM - OPEN THROAT TOP SECTION											
e			3	60 ⁰ Rotatio	n		Over End Blocked					
Load Radius (ft)	Boom Angle (deg)	ABC+A CTWT (lb)	ABC CTWT (lb)	AB CTW⊺ (lb)	A CTWT (lb)	0 CTWT (lb)	ABC+A CTWT (lb)	Load Radius (ft)				
.12	81.6	308,300	308,300	308,300	308,300	299,800	308,300	12				
13	80.7	302,300	302,300	302,300	296,500	278,700	302,300	13				
14	79.7	296,500	296,500	296,500	277,000	256,300	296,400	14				
15	78.7	289,500	289,500	289,500	259,800	206,500	289,600	15				
16	77.8	284,200	284,200	277,400	241,300	172,600	284,200	16				
17	76.8	279,200	279,200	262,100	207,300	148,100	279,200	17				
18	75.8	266,200	266,200	248,300	181,600	129,500	266,200	18				
19	74.8	252,900	252,900	235,800	161,400	114,900	252,900	19				
20	73.8	240,800	240,800	224,500	145,100	103,200	240,800	20				
25	68.8	188,100	188,100	155,200	95,800	67,600	188,100	25				
30	63.6	150,500	143,400	115,500	70,800	49,600	150,500	30				
35	58.1	124,800	113,900	91,500	55,700	38,700	124,900	35				
40	52.3	105,800	94,200	75,500	45,500	31,300	106,300	40				
50	38.9	78,000	69,300	55,200	32,700	22,100	79,900	50				
60	19.0	58,400	54,200	42,900	24,900	16,400	58,400	60				



	70	FT. (21.34	m) TUBE	300M - OP	EN THROA	T TOP SE	CTION	<u></u>
			3	Over End Blocked				
Load Radius (ft)	Boom Angle (deg)	ABC+A CTWT (lb)	ABC CTWT (lb)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (lb)	ABC+A CTWT (^{lb})	Load Radius (ft)
13	82.0	286,600	286,000	286,600	286,600	278,700	286,600	13
14	81.2	281,800	281,800	281,800	277,400	261,200	281,800	14
15	80.4	277,000	277,000	277,000	260,200	210,500	277,000	15
16	79.5	272,500	272,500	272,500	244,700	176,000	272,500	16
17	78.7	268,100	268,100	262,500	210,200	151,000	268,100	17
18	77.9	262,400	262,400	248,700	184,100	132,100	262,400	18
19	77.0	253,300	253,300	236,300	163,700	117,200	253,300	19
20	76.2	241,300	241,300	225,000	147,200	105,300	241,300	20
25	71.9	194,600	193,700	156,600	97,200	69,100	194,600	25
30	67.6	161,900	144,600	116,700	71,900	50,700	162,700	30
35	63.1	128,800	114,900	92,500	56,600	39,600	137,100	35
40	58.4	106,600	95,000	76,300	46,300	32,100	117,600	40
50	48.1	78,700	70,000	55,900	33,400	22,700	89,200	50
60	35.9	61,800	54,800	43,600	25,500	17,000	71,300	60
70	17.6	50,400	<u>44,600</u>	<u>35,2</u> 00	20,200	13,000	57,800	70

	80 FT. (24.38 m) TUBE BOOM - OPEN THROAT TOP SECTION										
			3	60 ⁰ Rotatic	ท		Over End Blocked				
Load Radius (ft)	Boom Angle (deg)	ABC+A CTWT (lb)	ABC CTWT (lb)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (lb)	ABC+A CTWT (lb)	Load Radius (ft)			
14.4	82.0	260,100	260,100	260,100	260,100	238,700	260,100	14.4			
15	81.6	257,700	257,700	257,700	257,700	211,400	257,700	15			
16	80.9	253,500	253,500	253,500	244,500	176,800	253,500	16			
17	80.1	249,600	249,600	249,600	210,900	151,700	249,600	17			
18	79.4	245,700	245,700	245,700	184,700	132,700	245,600	18			
19	78.7	241,900	241,900	235,800	164,200	117,800	241,900	19			
20	77.9	238,300	238,300	224,600	147,700	105,800	238,300	20			
25	74.2	194,300	194,000	156,900	97,500	69,300	194,300	25			
30	70.5	162,100	144,800	116,800	72,100	50,900	162,400	30			
35	66.6	128,900	115,000	92,600	56,700	39,700	135,700	35			
40	62.7	106,700	95,100	76,400	46,500	32,300	116,500	40			
50	54.3	78,800	70,100	56,000	33,500	22,800	88,600	50			
60	44.8	61,900	54,900	43,700	25,700	17,100	71,400	60			
70	33.5	50,600	44,800	35,400	20,400	13,200	59,000	70			
80	16.5	42,400	37,400	29,400	16,500	10,400	48,400	80			

	90	FT. (27.43	m) TUBE E	BOOM - OP	EN THROA	T TOP SE	CTION	
			360 ⁰ Rotation					
Load Radius (ft)	Boom Angle (deg)	ABC+A CTWT (lb)	ABC CTWT (lb)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (lb)	ABC+A CTWT (lb)	Load Radius (ft)
15.8	82.0	239,200	239,200	239,200	239,200	183,300	239,200	15.8
16	81.9	238,500	238,500	238,500	238,500	177,400	238,500	16
17	81.2	233,500	233,500	233,500	211,400	152,200	233,500	17
18	80.6	230,000	230,000	230,000	185,200	133,100	230,000	18
19	79.9	226,600	226,600	226,600	164,600	118,100	226,600	19
20	79.3	223,400	223,400	223,400	148,000	106,100	223,300	20
25	76.0	193,900	193,900	157,100	97,700	69,500	193,900	25
30	72.7	160,800	144,900	116,900	72,200	51,000	160,900	30
35	69.4	129,000	115,100	92,700	56,800	39,800	134,300	35
40	65.9	106,700	95,100	76,400	46,500	32,300	115,500	40
50	58.7	78,800	70,100	56,000	33,500	22,800	88,400	50
60	50.9	61,900	54,900	43,700	25,700	17,100	71,000	60
70	42.2	50,600	44,800	35,400	20,400	13,300	59,000	70
80	31.5	42,500	37,500	29,500	16,600	10,500	49,400	80
90	15.5	36,300	31,900	24,900	13,600	8,300	41,300	90
							- 3 -	

	100 FT. (30.48 m) TUBE BOOM - OPEN THROAT TOP SECTION										
			3	60 ⁰ Rotatio	n		Over End Blocked				
Load Radius (ft)	Boom Angle (deg)	ABC+A CTWT (lb)	ABC CTWT (lb)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (lb)	ABC+A CTWT (lb)	Load Radius (ft)			
17.2	82.0	219,200	219,200	219,200	206,100	148,500	219,200	17.2			
18	81.5	216,700	216,700	216,700	185,500	133,500	216,700	18			
19	81.0	213,800	213,800	213,800	164,900	118,500	213,800	19			
20	80.4	210,800	210,800	210,800	148,200	106,400	210,800	20			
25	77.5	193,500	193,500	157,200	97,800	69,600	193,500	25			
30	74.5	159,400	144,900	117,000	72,300	51,000	159,400	30			
35	71.5	129,000	115,100	92,700	56,800	39,800	133,200	35			
40	68.5	106,700	95,100	76,400	46,500	32,300	114,500	40			
50	62.1	78,700	70,000	56,000	33,500	22,800	88,400	50			
60	55.4	61,900	54,900	43,600	25,600	17,100	70,500	60			
70	48.1	50,600	44,800	35,400	20,300	13,200	58,900	70			
80	39.9	42,500	37,500	29,400	16,500	10,400	49,500	80			
90	29.9	36,400	32,000	24,900	13,700	8,300	42,000	90			
100	14.7	31,500	27,600	21,400	11,300	6,600	35,600	100			

	110 F	т. <i>(33.53 п</i>	n) TUBE B	OOM - OPE	N THROAT	TOP SEC	TION	
			3		Over End Blocked			
Load	Boom							Load
Radius	Angle	ABC+A	ABC	AB	A	-0	ABC+A	Radius
(ft)	(deg)	стwт	CTWT	CTWT	CTWT	CTWT	CTWT	(ft)
		(lb)	(lb)	(lb)	(lb)	(lb)	(lb)	
18.6	82.0	201.100	201.100	201,100	173,100	124,500	201,100	18.6
19	81.8	200,000	200,000	200,000	165,100	118,700	200,000	19
20	81.3	197,500	197,500	197,500	148,500	106,600	197,500	20
25	78.6	185,300	185,300	157,300	97,900	69,700	185,400	25
30	75.9	158,100	144,900	117,000	72,300	51,000	158,200	30
35	73.2	128,900	115,000	92,700	56,800	39,800	132,100	35
40	70.5	106,600	95,000	76,300	46,400	32,200	113,500	40
50	64.9	78,600	69,900	55,900	33,400	22,700	87,700	50
60	59.0	61,800	54,800	43,500	25,500	17,000	69,900	60
70	52.7	50,500	44,700	35,300	20,200	13,100	58,700	70
80	45.8	42,400	37,400	29,300	16,400	10,300	49,300	80
90	38.0	36,300	31,900	24,900	13,600	8,200	42,000	90
100	28.4	31,500	27,600	21,300	11,300	6,500	36,200	100
110	14.0	27,600	24,100	<u>18,50</u> 0	9,400	5,100	31,000	110

	120	FT. (36.58	m) TUBE	BOOM - OF	EN THROA	AT TOP SE	CTION	
			3	60 ⁰ Rotatio	n		Over End Blocked	
Load Radius (ft)	Boom Angle (deg)	ABC+A CTWT (lb)	ABC ,CTW⊺ (lb)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (lb)	ABC+A CTWT (lb)	Load Radius (ft)
20.0	82.0	186,200	186,200	186,200	148,900	106,900	186,200	20.0
25	79.6	173,900	173,900	157,300	97,900	69,800	173,900	25
30	77.1	156,900	144,900	117,000	72,200	51,000	156,900	30
35	74.7	128,900	115,000	92,600	56,700	39,700	131,100	35
40	72.2	106,500	94,900	76,300	46,300	32,100	112,600	40
50	67.1	78,500	69,800	55,800	33,200	22,600	86,900	50
60	61.8	61,600	54,600	43,400	25,400	16,800	69,300	60
70	56.2	50,300	44,500	35,100	20,100	13,000	58,300	70
80	50.3	42,200	37,200	29,200	16,300	10,200	49,000	80
90	43.7	36,100	31,800	24,700	13,400	8,100	41,800	90
100	36.3	31,400	27,500	21,200	11,200	6,400	36,100	100
110	27.2	27,500	24,000	18,400	9,400	5,100	31,400	110
120	13.4	24,300	21,100	16,000	7,800	3,900	27,500	120



	130 FT. (39.62 m) TUBE BOOM - OPEN THROAT TOP SECTION											
	130) FT. <i>(39.62</i>	(<u>m)</u> TUBE	BOOM - OF	PEN THRO	AT TOP SE						
			3	60 ⁰ Rotatio	n		Over End					
			ī				Blocked					
Load	Boom					~		Load				
Radius	Angle	ABC+A	ABC	AB	A	0	ABC+A	Radius				
(ft)	(deg)	CTWT	CTWT	CTWT	CTWT	CTWT	стwт	(ft)				
		(lb)	(lb)	(lb)	(lb)	(lb)	(lb)					
21,4	82.0	171,200	171,200	171,200	130,500	93,500	171,200	21.4				
25	80.4	164,400	164,400	157,300	97,900	69,800	164,400	25				
30	78.1	155,800	144,800	116,900	72,200	51,000	155,700	30				
35	75.9	128,800	114,900	92,500	56,600	39,600	130,200	35				
40	73.6	106,400	94,800	76,100	46,200	32,000	111,800	40				
50	68.9	78,400	69,700	55,600	33,100	22,400	86,300	50				
60	64.1	61,500	54,500	43,200	25,200	16,700	68,700	60				
70	59.1	50,200	44,300	35,000	19,900	12,800	57,800	70				
80	53.8	42,100	37,100	29,000	16,100	10,000	48,600	80				
90	48.2	36,000	31,600	24,600	13,300	7,900	41,500	90				
100	41.9	31,200	27,300	21,100	11,000	6,300	35,900	100				
110	34.8	27,400	23,900	18,300	9,200	4,900	31,300	110				
120	26.1	24,200	21,100	15,900	7,700	3,800	28,000	120				
130	12.9	_21,600	18,600	13,900	6,400	2,800	24,100	130				

	140 FT. (42.67 m) TUBE BOOM - OPEN THROAT TOP SECTION										
			3	60 ⁰ Rotatio	n		Over End Blocked				
Load Radius (ft)	Boom Angle (deg)	ABC+A CTWT (lb)	ABC CTWT (lb)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (lb)	ABC+A CTWT (lb)	Load Radius (ft)			
22.8	82.0	158,800	158,800	158,800	115,900	82,900	158,800	22.8			
25	81.1	155,200	155,200	155,200	97,900	69,800	155,200	25			
30	79.0	146,000	144,800	116,900	72,100	50,900	146,000	30			
35	76.9	128,700	114,800	92,400	56,500	39,500	129,300	35			
40	74.8	106,300	94,700	76,000	46,100	31,900	111,000	40			
50	70.5	78,200	69,500	55,500	33,000	22,300	85,600	50			
60	66.1	61,300	54,300	43,1,00	25,000	16,500	68,200	60			
70	61.5	50,000	44,200	34,800	19,700	12,600	57,200	70			
80	56.8	41,900	36,900	28,800	16,000	9,800	48,100	80			
90	51.7	35,800	31,400	24,400	13,100	7,700	41,100	90			
100	46.3	31,000	27,200	20,900	10,900	6,100	35,600	100			
110	40.3	27,200	23,700	18,100	9,100	4,800	31,100	110			
120	33.5	24,100	20,900	15,800	7,600	3,700	28,000	120			
130	25.2	21,400	18,500	13,800	6,300	2,700	24,500	130			
140	12.4	19,200	16,500	12,100	5,200		21,200	140			

	150 FT. (45.72 m) TUBE BOOM - OPEN THROAT TOP SECTION										
			3	Over End Blocked							
Load Radius (ft)	Boom Angle (deg)	ABC+A CTWT (lb)	ABC CTWT (lb)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (lb)	ABC+A CTWT (lb)	Load Radius (ft)			
24.2	82.0	146,000	146,000	146,000	104,000		146,000	24.2			
25	81.7	144,800	144,800	144,800	97,900		144,800	25			
30	79.7	138,100	138,100	116,800	72,000		138,100	30			
35	77.8	128,500	114,700	92,300	56,400		128,500	35			
40	75.8	106,200	94,600	75,900	45,900		110,200	40			
50	71.9	78,100	69,300	55,300	32,800		84,900	50			
60	67.8	61,100	54,100	42,900	24,900		67,600	60			
70	63.6	49,800	44,000	34,600	19,600		56,800	70			
80	59.2	41,700	36,700	28,600	15,800		47,700	80			
90	54.7	35,600	31,200	24,200	12,900		40,700	90			
100	49.8	30,800	27,000	20,700	10,700		35,200	100			
110	44.6	27,000	23,500	17,900	8,900		30,800	110			
120	38.9	23,900	20,700	15,600	7,400		27,800	120			
130	32.3	21,300	18,400	13,700	6,100		24,500	130			
140	24.3	19,000	16,300	12,000	5,000		21,500	140			
150	12.0	17,100	14,600	10,500	4,100		18,700	150			

	160 FT. (48.77 m) TUBE BOOM - OPEN THROAT TOP SECTION										
			3	60 ⁰ Rotatio	n		Over End Blocked				
Load Radius (ft)	Boom Angle (deg)	ABC+A CTWT (Ib)	ABC CTWT (lb)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (lb)	ABC+A CTWT (lb)	Load Radius (ft)			
25.6	82.0	135,700	135,700	135,700	94,200		135,700	25.6			
30	80.4	130,400	130,400	116,700	71,900		130,400	30			
35	78.6	124,600	114,500	92,200	56,300		124,600	35			
40	76.7	106,000	94,400	75,700	45,800		109,600	40			
50	73.0	77,900	69,200	55,100	32,600		84,300	50			
60	69.2	60,900	53,900	42,700	24,700		67,000	60			
70	65.4	49,600	43,800	34,400	19,300		56,200	70			
80	61.3	41,500	36,500	28,400	15,500		47,200	80			
90	57.2	35,400	31,000	24,000	12,700		40,300	90			
100	52.8	30,600	26,700	20,500	10,400		34,800	100			
110	48.2	26,800	23,300	17,700	8,600		30,400	110			
120	43.2	23,700	20,500	15,400	7,200		27,600	120			
130	37.6	21,100	18,100	13,400	5,900		24,300	130			
140	31.3	18,800	16,100	11,800	4,800		21,400	140			
150	23.5	16,900	14,400	10,400	3,900		18,900	150			
160	11.6	15,200	12,900	9,100	3,100		16,500	1,60			

	170	FT. (51.82	m) TUBE	BOOM - OF	EN THRO	AT TOP SE	CTION	
			3	60 ⁰ Rotatio	n		Over End Blocked	
Load Radius (ft)	Boom Angle (deg)	ABC+A CTWT (lb)	ABC CTWT (Ib)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (Ib)	ABC+A CTWT (lb)	Load Radius (ft)
27.0	82.0	126,100	126,100	126,100	86,000		126,100	27.0
30	81.0	122,900	122,900	116,600	71,800		122,900	30
35	79.2	116,100	114,400	92,000	56,100		116,100	35
40	77.5	105,900	94,300	75,600	45,600		108,900	40
50	74.0	77,700	69,000	54,900	32,400		83,700	50
60	70.5	60,700	53,700	42,500	24,500		66,400	60
70	66.9	49,400	43,600	34,200	19,100		55,700	70
80	63.2	41,300	36,300	28,200	15,300		46,700	80
90	59.3	35,200	30,800	23,700	12,500		39,800	90
100	55.3	30,400	26,500	20,200	10,200		34,400	100
110	51.1	26,600	23,100	17,400	8,400		30,100	110
120	46.6	23,500	20,300	15,200	6,900		27,200	120
130	41.8	20,800	17,900	13,200	5,700		24,000	130
140	36.5	18,600	15,900	11,600	4,600	l	21,200	140
150	30.3	16,700	14,200	10,200	3,700		18,800	150
160	22.8	15,000	12,700	8,900	2,900		16,600	160
170	11.3	13,500	11,300	7,800	2,200		14,400	170

180 FT. (54.86 m) TUBE BOOM - OPEN THROAT TOP SECTION										
			3	60 ⁰ Rotatio	n		Over End Blocked			
Load Radius (ft)	Boom Angle (deg)	ABC+A CTWT (Ib)	ABC CTWT (lb)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (lb)	ABC+A CTWT (lb)	Load Radius (ft)		
28.3	82.0	115,900	115,900	115,900	78,900		115,900	28.3		
30	81.5	114,200	114,200	114,200	71,700		114,200	30		
35	79.9	109,500	109,500	91,900	56,000		109,500	35		
[`] 40	78.2	104,900	94,100	75,400	45,500		104,900	40		
50	75.0	77,500	68,800	54,700	32,200		83,100	50		
60	71.6	60,500	53,500	42,300	24,300		65,900	60		
70	68.2	49,200	43,300	34,000	18,900		55,200	70		
80	64.8	41,000	36,000	28,000	15,100		46,200	80		
90	61.2	34,900	30,600	23,500	12,200		39,400	90		
100	57.5	30,200	26,300	20,000	10,000		34,000	100		
110	53.6	26,400	22,900	17,200	8,200		29,600	110		
120	49.6	23,200	20,000	14,900	6,700		26,900	120		
130	45.3	20,600	17,700	13,000	5,500	1	23,600	130		
140	40.6	18,400	15,700	11,400	4,400		20,900	140		
150	35.4	16,500	14,000	10,000	3,500		18,500	150		
160	29.5	14,800	12,500	8,700	2,700		16,400	160		
170	22.1	13,300	11,200	7,600	2,000		14,500	170		
180	11.0	12,000	9,900	6,600		l	12,600	180		



		0 FT (67.04		0001		AT TOD OF		
	19	0 FT. <i>(57.91</i>		BOOM - OF		ATTOPSE	Over End	
Load Radius (ft)	Boom Angle (deg)	ABC+A CTWT (lb)	ABC CTWT (lb)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (lb)	Błocked ABC+A CTWT (lb)	Load Radius (ft)
29.7 30 35 40 50 60 70 80 90 100 100 110 120 130 140 150 160 170 180	82.0 81.9 80.4 78.9 75.8 72.6 69.4 66.2 62.8 59.4 55.8 59.4 55.2 1 48.2 44.0 39.4 48.2 44.0 39.4 28.7 21.5 10.7	107,100 107,100 103,100 98,900 77,300 60,300 40,800 34,700 29,900 26,100 23,000 20,400 18,200 14,600 13,100 11,800 10,600	107,100 107,100 103,100 93,900 68,600 53,300 43,100 35,800 30,300 26,000 22,600 17,500 17,500 15,500 13,700 12,300 9,800 8,700	107,100 107,100 91,700 75,200 54,500 42,100 23,300 19,800 17,000 14,700 12,800 11,100 9,700 8,500 7,400 6,400 5,500			107,100 107,100 103,100 98,900 82,600 65,400 54,700 38,900 33,500 29,500 29,500 28,500 23,300 20,600 18,200 16,100 14,300 12,600 10,900	29.7 30 35 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190
	200	0 FT. <i>(60.96</i>				AT TOP SE	Over End	
Load Radius (ft)	Boom Angle (deg)	ABC+A CTWT (lb)	3 ABC CTWT (lb)	60 ⁰ Rotatio AB CTWT (lb)	n CTWT (łb)	0 CTWT (lb)	ABC+A CTWT (lb)	Load Radius (ft)
31.1 35 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200	82.0 80.9 79.4 76.5 73.5 70.5 67.4 64.3 61.1 57.8 54.3 50.7 46.9 42.8 38.4 33.4 33.4 27.9 21.0 10.4	96,300 94,100 93,100 77,100 60,100 48,700 40,600 34,400 29,700 25,900 22,700 22,700 22,700 22,700 17,900 16,000 14,300 12,900 11,600 11,600 10,400 9,400	95,300 94,100 93,100 68,400 42,900 35,600 30,100 22,800 22,400 13,500 17,200 13,500 12,000 10,700 9,500 8,500 7,500	95,300 91,600 75,100 54,300 41,800 33,500 27,500 23,000 19,500 16,700 14,400 12,500 10,900 9,500 8,200 7,200 6,200 5,300 4,500			95,300 94,100 93,100 82,000 64,800 54,200 38,400 33,100 29,400 26,100 22,900 20,200 17,900 15,800 14,000 12,400 10,900 9,400	31.1 35 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200
	210) FT. <i>(64.01</i>	m) TUBE I	BOOM - OP	EN THROA	AT TOP SE		
Load Radius (ft)	Boom Angle (deg)	ABC+A CTWT (lb)	ABC CTWT (lb)	60 ⁰ Rotatio AB CTWT (Ib)	n A CTWT (Ib)	0 CTWT (lb)	Over End Blocked ABC+A CTWT (lb)	Load Radius (ft)
32.5 35 40 50 60 70 80 90 100 110 120 130 140 150 160 160 180 190 200 210	82.0 81.3 79.9 77.1 74.3 71.5 68.6 65.6 65.6 59.5 56.2 52.9 49.4 45.7 41.7 37.4 45.7 41.7 37.4 22.7 27.2 20.5 10.1	83,900 83,900 82,800 76,900 59,900 48,500 40,300 34,200 29,400 25,600 22,500 19,900 17,700 15,700 14,100 12,600 11,400 10,200 9,200 8,000	83,900 83,900 82,800 68,200 42,600 35,300 29,800 22,100 19,300 16,900 13,200 11,800 11,800 11,800 11,800 10,400 9,300 8,300 7,300 6,400	83,900 83,900 74,900 54,100 41,600 33,300 27,300 22,800 19,300 16,500 14,200 12,200 10,600 9,200 8,000 6,900 6,900 6,000 5,100 4,300 3,600			83,900 83,900 82,600 79,600 64,300 53,700 44,800 38,000 32,700 29,400 25,700 22,500 19,800 17,500 15,500 15,500 15,500 13,700 12,100 10,700 9,300 8,000	32.5 35 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 - 7 -

	220	FT. <i>(67.06</i>	m) TUBE	BOOM - OF	EN THRO	AT TOP SE	CTION	
			3	60 ⁰ Rotatio	n		Over End Blocked	
Load Radius (ft)	Boom Angle (deg)	ABC+A CTWT (lb)	ABC CTWT (lb)	AB CTWT (Ib)	A CTWT (Ib)	0 CTWT (lb)	ABC+A CTWT (lb)	Load Radius (ft)
33.9	82.0	75,200	75,200	75,200			75,200	33.9
35	81.7	75,200	75,200	75,200			75,000	35
40	80.4	74,300	74,300	74,300			74,300	40
50	77.7	72,400	68,000	53,900			73,100	50
60	75.1	59,600	52,700	41,400			63,800	60
70	72.3	48,200	42,400	33,000			53,200	70
80	69.6	40,100	35,100	27,000			44,300	80
90	66.8	34,000	29,600	22,500			37,500	90
100	63.9	29,200	25,300	19,000			32,200	100
110	61.0	25,400	21,900	16,200			29,000	110
120	58.0	22,200	19,000	13,900			25,200	120
130	54.8	19,600	16,700	12,000			22,100	130
140	51.6	17,400	14,700	10,400			19,400	140
150	48.2	15,500	13,000	9,000			17,100	150
160	44.6	13,800	11,500	7,700			15,100	160
170	40.7	12,400	10,200	6,700			13,300	170
180	36.6	11,100	9,000	5,700			11,800	180
190	31.9	10,000	8,000	4,900			10,400	190
200	26.6	8,900	7,100	4,100			9,100	200
210	20.0	7,900	6,200	3,400			7,900	210
220	9.9	6,600	5,400	2,700			6,600	220

	230) FT. (70.10	m) TUBE	BOOM - OF	PEN THRO	AT TOP SE	CTION	
			3	60 ⁰ Rotatio	n		Over End Blocked	
Load Radius (ft)	Boom Angle (deg)	ABC+A CTWT (lb)	ABC CTWT (Ib)	AB CTWT (Ib)	A CTWT (lb)	0 CTWT (Ib)	ABC+A CTWT (lb)	Load Radius (ft)
35.3	82.0	68,100	68,100	68,100			68,100	35.3
40	80.8	67,200	67,200	67,100			67,200	40
50	78.3	65,600	65,600	53,700			65,600	50
60	75.7	59,400	52,400	41,200			61,900	60
70	73.1	48,000	42,200	32,800			52,700	70
80	70.5	39,800	34,800	26,800			43,800	80
90	67.8	33,700	29,300	22,300			37,100	90
100	65.1	28,900	25,000	18,800			31,700	100
110	62.4	25,100	21,600	16,000	1		28,600	110
120	59.5	22,000	18,800	13,700			24,800	120
130	56.6	19,300	16,400	11,700			21,600	130
140	53.5	17,100	14,400	10,100			19,000	140
150	50.4	15,200	12,700	8,700			16,700	150
160	47.0	13,600	11,200	7,500			14,700	160
170	43.5	12,100	9,900	6,400			13,000	170
180	39.8	10,800	8,800	5,500			11,400	180
190	35.7	9,700	7,700	4,600			10,000	190
200	31.2	8,700	6,800	3,800			8,800	200
210	26.0	7,600	6,000	3,200			7,600	210
220	19.6	6,500	5,200	2,500			6,500	220
230	9.7	5,400	4,500		1		5,400	230



	240	FT. (73.15	m) TUBE	BOOM - OF	PEN THRO	AT TOP SE	CTION	
				360 ⁰ Rotatic			Over End Blocked	
Load Radius (ft)	Boom Angle (deg)	ABC+A CTWT (lb)	ABC CTWT (lb)	AB CTWT (Ib)	A CTWT (Ib)	0 CTWT (lb)	ABC+A CTWT (Ib)	Load Radius (ft)
36.7	82.0	61,200	61,200	61,200			61,200	36.7
40	81.2	60,400	60,400	60,400			60,400	40
50	78.8	57,800	57,800	53,500			57,700	50
60	76.3	54,900	52,200	40,900			54,800	60
70	73.9	47,800	41,900	32,500			49,600	70
80	71.4	39,600	34,600	26,500			43,400	80
90	68.8	33,400	29,100	22,000			36,600	90
100	66.2	28,700	24,800	18,500			31,300	100
110	63.6	24,800	21,300	15,700			27,700	110
120	60.9	21,700	18,500	13,400			24,400	120
130	58.1	19,100	16,200	11,500			21,200	130
140	55.3	16,900	14,200	9,800			18,600	140
150	52.3	15,000	12,500	8,400			16,300	150
160	49.2	13,300	11,000	7,200			14,300	160
170	46.0	11,900	9,700	6,100			12,600	170
180	42.6	10,600	8,500	5,200			11,000	180
190	38.9	9,400	7,500	4,300			9,700	190
200	34.9	8,400	6,600	3,600			8,400	200
210	30.5	7,300	5,700	2,900			7,300	210
220	25.4	6,200	5,000	2,300			6,200	220
230	19.1	5,200	4,200				5,200	230
240	9.5	4,200	3,600				4,200	240

	250) FT. <i>(76.20</i>	m) TUBE	BOOM - OF	PEN THRO	AT TOP SE	CTION	
ſ			3	60 ⁰ Rotatio	n		Over End	
	Deserve						Blocked	
Load Radius	Boom	ABC+A	ABC	AB	А	0	ABC+A	Load Radius
(ft)	Angle (deg)		CTWT	CTWT	CTWT	стит	CTWT	(ft)
(10)	(uey)	(lb)	(lb)	(lb)	(lb)	(lb)	(lb)	(14)
		(10)	(10)	(10)	(10)	(10)	(10)	
38.1	82.0	53,900	53,900				53,900	38.1
40	81.6	53,900	53,900				53,900	40
50	79.2	52,500	52,500				52,300	50
60	76.9	49,600	49,600				49,700	60
70	74.5	45,200	41,700				45,300	70
80	72.1	39,300	34,300				41,100	80
90	69.7	33,100	28,800				36,300	90
100	67.2	28,300	24,500				31,100	100
110	64.7	24,500	21,000				26,500	110
120	62.2	21,400	18,200				23,600	120
130	59.5	18,700	15,800				21,100	130
140	56.8	16,500	13,800				18,600	140
150	54.1	14,600	12,100				15,900	150
160	51.2	12,900	10,600				13,700	160
170	48.2	11,500	9,300				11,700	170
180	45.0	9,900	8,100				9,900	180
190	41.7	8,400	7,100				8,400	190
200	38.1	8,000	6,200				8,000	200
210	34.2	7,100	5,300				7,500	210
220	29.9	6,200	4,600				6,500	220
230	24.9	5,300	3,900				5,300	230
240	18.8	3,300	3,200				3,300	240
250	9.3	2,800	2,600				2,800	250

	260	FT. (79.25	m) TUBE	BOOM - OF	PEN THRO	AT TOP SE	CTION	
			3	60 ⁰ Rotatio	n		Over End Blocked	
Load Radius (ft)	Boom Angle (deg)	ABC+A CTWT (lb)	ABC CTWT (lb)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (lb)	ABC+A CTWT (lb)	Load Radius (ft)
39.5	82.0	48,900	48,900				48,900	39.5
40	81.9	48,900	48,900				48,900	40
50	79.6	47,700	47,700				47,700	50
60	77.4	45,000	45,000				45,000	60
70	75.1	41,100	41,100				41,100	70
80	72.8	37,500	34,000				37,500	80
90	70.5	32,900	28,500				33,800	90
100	68.2	28,100	24,200				30,800	100
110	65.8	24,200	20,700				25,000	110
120	63.3	21,100	17,900				23,300	120
130	60.8	18,500	15,500				21,600	130
140	58.3	16,200	13,500				19,900	140
150	55.6	14,300	11,800				17,700	150
160	52.9	12,700	10,300				15,800	160
170	50.1	11,200	9,000				14,100	170
180	47.2	9,900	7,900				12,600	180
190	44.1	8,800	6,800				11,200	190
200	40.8	7,800	5,900				10,000	200
210	37.3	6,800	5,100				8,900	210
220	33.5	6,000	4,300				7,800	220
230	29.3	5,200	3,600				6,800	230
240 250	24.4	4,500	3,000				5,800	240 250
250	18.4	3,800	2,400				4,800	
260	9.1	3,200	!	L			3,500	260

	270 FT. (82.30 m) TUBE BOOM - OPEN THROAT TOP SECTION											
			3	60 ⁰ Rotatio	n		Over End Blocked					
Load Radius (ft)	Boom Angle (deg)	ABC+A CTWT (lb)	ABC CTWT (lb)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (lb)	ABC+A CTWT (lb)	Load Radius (ft)				
40.9	82.0	44,400	44,400				44,400	40.9				
50	80.0	43,300	43,300				43,500	50				
60	77.9	40,900	40,900				40,800	60				
70	75.7	37,300	37,300				37,200	70				
80	73.5	33,800	33,800				33,900	80				
90	71.3	30,800	28,300				31,000	90				
100	69.0	27,000	23,900				26,700	100				
110	66.7	24,000	20,500				24,700	110				
120	64.4	20,800	17,600				22,500	120				
130	62.0	18,200	15,300				20,600	130				
140	59.6	16,000	13,300				19,000	140				
150	57.1	14,100	11,600				17,300	150				
160	54.5	12,400	10,100				16,000	160				
170	51.9	10,900	8,800				14,400	170				
180	49.1	9,700	7,600				12,900	180				
190	46.2	8,500	6,600				11,600	190				
200	43.2	7,500	5,600				10,400	200				
210	40.0	6,600	4,800				9,300	210				
220	36.6	5,700	4,000				8,300	220				
230	32.9	4,900	3,400				7,400	230				
240	28.7	4,200	2,700				6,600	240				
250	24.0	3,600	2,100				5,800	250				
260 270	18.0 8.9	3,000					5,000	260 270				
270	8.9	2,400	1	L	·····		2,400	270				



,	280 FT. (85.34 m) TUBE BOOM - OPEN THROAT TOP SECTION										
1			3	60 ⁰ Rotatio	n		Over End				
							Blocked				
Load	Boom							Load			
Radius	Angle	ABC+A	ABC	AB	A	0	ABC+A	Radius			
(ft)	(deg)	CTWT	CTWT	CTWT	CTWT	CTWT	CTWT	(ft)			
		(lb)	(lb)	(lb)	(lb)	(lb)	(lb)				
42.3	82.0	40,400					40,400	42.3			
50	80.4	39,600					39,600	50			
60	78.3	37,200					37,200	60			
70	76.2	33,900					34,000	70			
80	74.1	30,900					30,800	80			
90	72.0	26,700					26,700	90			
100	69.8	24,300					24,400	100			
110	67.6	22,400					22,300	110			
120	65.4	20,400					20,400	120			
130	63.1	17,900					18,600	130			
140	60.8	15,700					17,200	140			
150	58.4	13,800					15,700	150			
160	56.0	12,100					14,500	160			
170	53.5	10,700					13,500	170			
180	50.9	9,400					12,400	180			
190	48.2	8,200					11,300	190			
200	45.4	7,200					10,100	200			
210	42.4	6,300					9,000	210			
220	39.3	5,400					8,000	220			
230	35.9	4,700					7,100	230			
240	32.3	4,000					6,300	240			
250	28.2	3,300					5,600	250			
260	23.5	2,700					4,900	260			
270	17.7	2,200					3,900	270			
280	8.8						Li	280			

Notes: Lift Crane Capacities

General:

- Rated lifting capacities in pounds as shown on lift charts pertain to the 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.
- Construction equipment can be dangerous if improperly operated or maintained. Operation and maintenance of the crane must be in compliance with the information in the Operator's, Parts and Safety Manuals supplied with the crane. If these manuals are missing, order replacements through the distributor.
- The operator and other personnel associated with the crane shall read and fully understand the latest applicable American National Standards Institute (ANSI) safety standards for cranes.
- The maximum allowable lifting capacities are based on crane standing level on firm supporting surface.
- 5. All capacities listed are in compliance with ASME/ANSI B30.5b-1991, SAE J987-April 1991, and SAE J765-October 1990.

Set-Up:

- The crane shall be leveled on a firm supporting surface. Depending on the nature of the supporting surface, it may be necessary to have structural supports under the crawler side frames to spread the load to a larger bearing surface.
- 2. For required parts of line, see wire rope strength and winch performance tables in Crane Rating Manual.

Lift Crane Operation:

- Capacities shown are in pounds and are not more than 75% of the tipping loads with the crane standing level on firm supporting surface. A deduction must be made from these capacities for weight of hook block, hook, sling, grapple, load weighing device, etc. When using main hook while jib is attached, reduce capacities by values shown in Crane Rating Manual. See Operator's Manual for all limitations when raising or lowering attachment.
- The capacities in the shaded areas are based on structural strength. The capacities in the non-shaded areas are based on stability ratings.
- For recommended reeving, parts of line, wire rope type and wire rope inspection, see wire rope strength chart, Operator's Manual and Parts Manual.
- 4. Load ratings are based on freely suspended loads and make no allowances for such factors as the effect of the wind, ground conditions, and operating speeds. The operator shall therefore reduce load ratings in order to take these conditions into account.
- 5. 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 20 mph (32.19 km/hr) and appropriately reduced for wind speeds greater than 20 mph (32.19 km/hr). Extreme caution should be used when lifting heavy loads or loads with large wind sail area under high wind conditions (over 20 mph 32.19 km/hr).

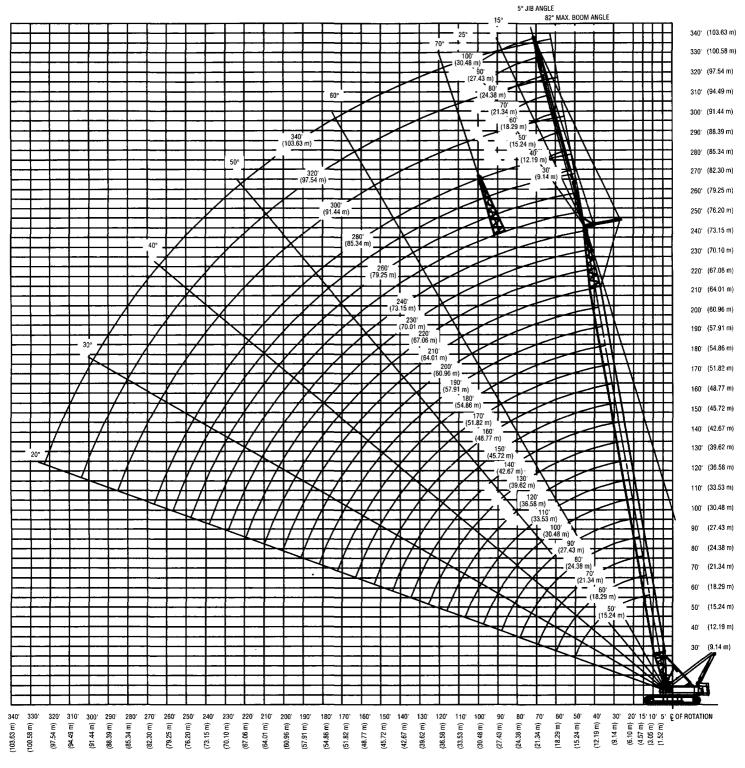
- Auxiliary lower counterweights are to be used for specific, infrequent lifts only. Avoid travel with lower counterweights installed on machine. Doing so may cause decreased travel torque and/or excessive wear to drive components.
- 7. The 30' (9.14 m) live mast must be used for all capacities listed.
- 8. The least stable rated condition is over the side.
- 9. Booms must be erected and lowered over the end.
- 10. 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 the Crane Rating Manual. Any of the above can cause a tipping condition, or boom and jib failure.
- 11. These capacities apply only to the crane as originally manufactured and normally equipped by Link-Belt Construction Equipment Company.

For Over End Capacities Only:

- These capacities can be lifted over either end with crane standing level on firm supporting surface with adequate blocking placed under the tread member sprockets/ idlers at the lift off end, to prevent rocking.
- 2. Do not travel with a load.



LS-248H II Lift Crane Working Range



OPERATING RADIUS

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