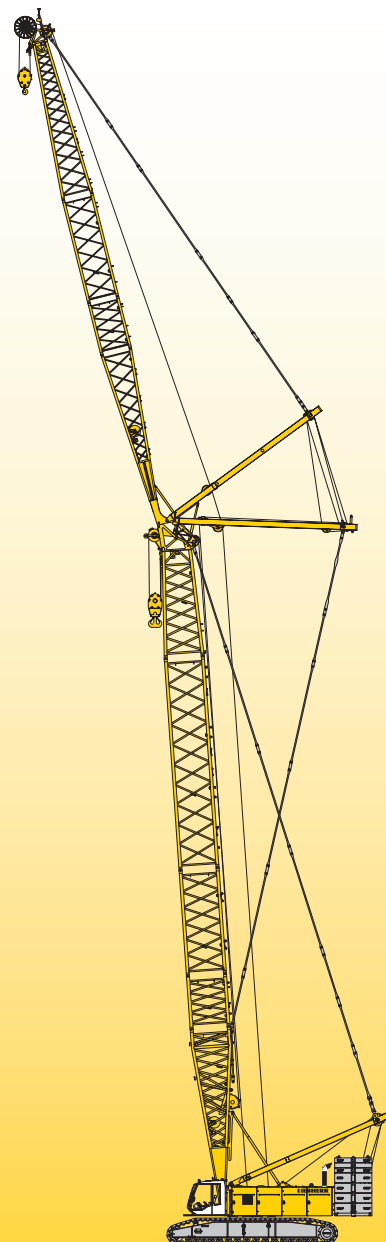


Technical data
Hydraulic lift crane

LR 1300
Litronic®

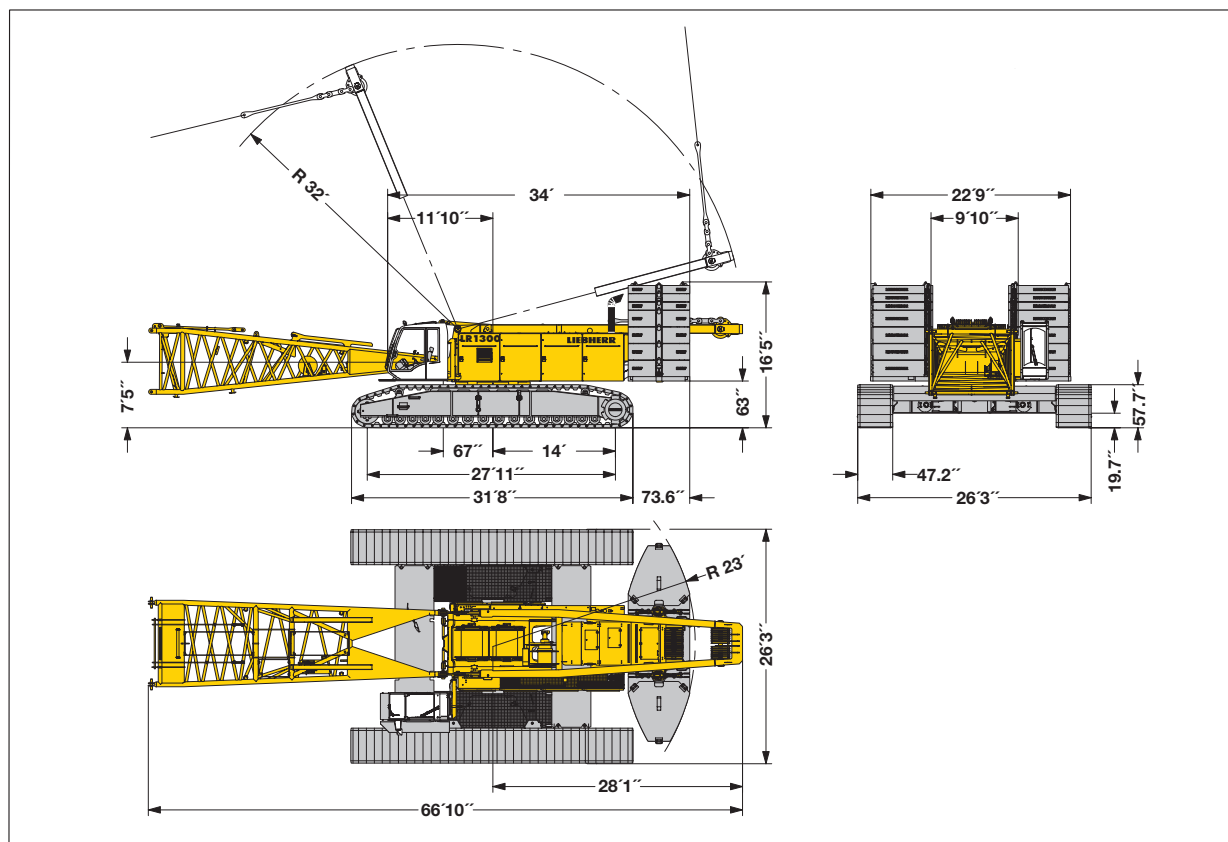
Complies with ANSI B 30.5



LIEBHERR

Dimensions

Basic machine with undercarriage



Operating weight

The operating weight includes the basic machine with crawlers, 2 main winches 33,100 lbs and 66 ft main boom, consisting of A-frame, boom foot (33 ft), boom head (23 ft), boom extension (10 ft), 273,400 lbs basic counterweight, 125,700 lbs carbody counterweight and 661,400 lbs hook block.

Total weight ————— approx. 639,400 lbs

Ground pressure

Ground bearing pressure ————— 20.6 psi

Equipment

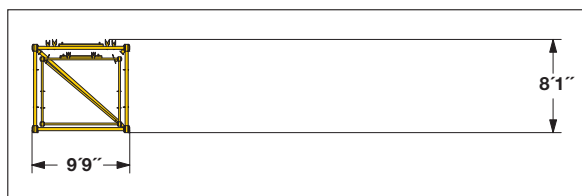
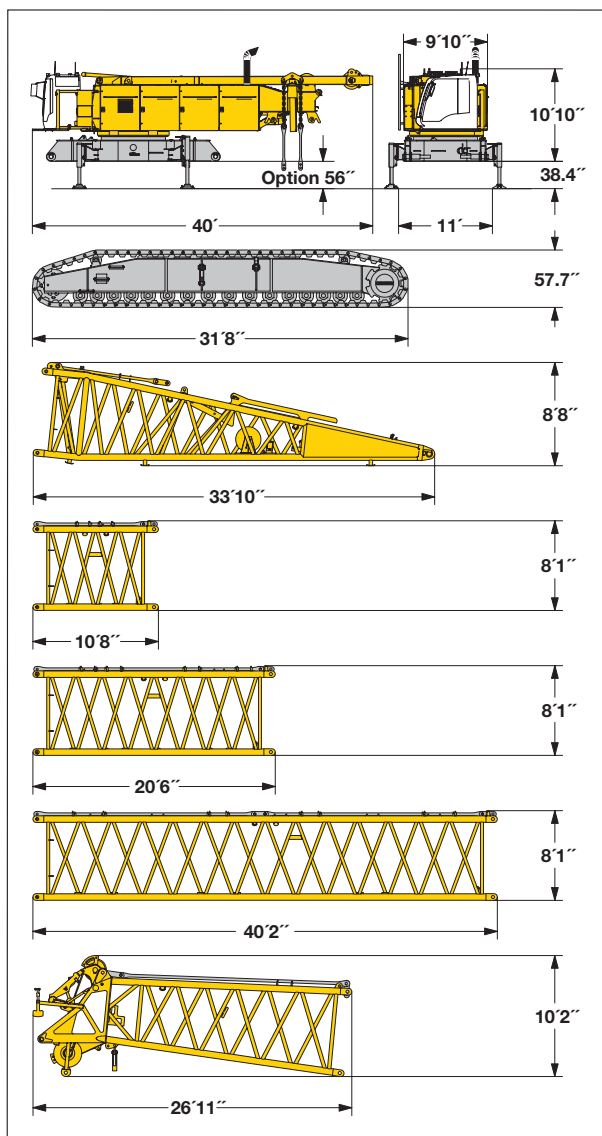
Main boom (No. 2821.xx) max. length ————— 322 ft
 High reach boom (No. 2821.xx and 2316.xx) ————— 404 ft
 Luffing jib (No. 2316.xx) max. length ————— 371 ft
 Max. combination ————— main boom 194 ft and luffing jib 371 ft
 Auxiliary jib ————— 79,400 lbs

Remarks

1. The lifting capacities stated are valid for lifting operation only (corresponding with crane classification according to F.E.M. 1.001. crane group A1).
2. Crane standing on firm, horizontal ground.
3. The weight of the lifting device (hoisting ropes, hook block, shackle etc.) must be deducted from the gross lifting capacity to obtain a net lifting value.
4. Additional equipment on boom (e.g. boom walkways, auxiliary jib) must be deducted to get the net lifting capacity.
5. For max. wind speed please refer to lift chart in operator's cab or manual.
6. Working radii are measured from center of swing and under load.
7. The lifting capacities are valid for 360 degrees of swing.
8. Calculation of stability under load is based on 75% tipping load, ANSI B 30.5 and ISO 4305 Table 2.
9. The structures are calculated according to F.E.M. 1.001 - 1998 (EN 13001-1; EN 13001-2).

Transport dimensions and weights

Basic machine and boom (No. 2821.xx)



*) Including pendants

Basic machine

with A-frame, 2x 33,100 lbs crane winches, without boom foot, hoisting ropes, basic counterweight and crawlers

Width	9'10"
Weight	92,160 lbs

Crawler

Flat track shoes	47.2"
Width	55.1"
Weight	49,300 lbs

Boom foot (No. 2821.30)

Width	9'9"
Weight without winch	12,700 lbs
Weight incl. winch and rope	16,350 lbs

Boom section (No. 2821.24) 10 ft

Width	9'9"
Weight*	2,650 lbs

Boom section (No. 2821.24) 20 ft

Width	9'9"
Weight*	4,200 lbs

Boom section (No. 2821.24) 40 ft

Width	9'9"
Weight*	7,390 lbs

Boom head (No. 2821.24)

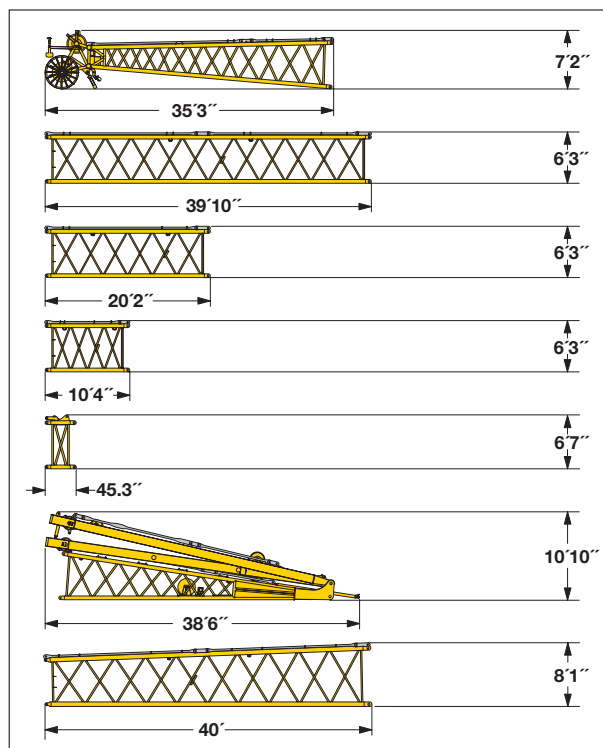
Width	9'9"
Weight*	11,900 lbs

Boom - luffing jib transport option

No. 2821.xx/2316.xx	40/40	20/20	30/30 ft
Length	41'	20'6"	10'8"
Weight*	11,360	6,285	3,990 lbs

Transport dimensions and weights

Luffing jib (No. 2316.xx)



Luffing jib head (No. 2316.20)

Width	8'
Weight*	5,070 lbs

Luffing jib section (No. 2316.20) 40 ft

Width	8'
Weight*	3,970 lbs

Luffing jib section (No. 2316.20) 20 ft

Width	8' mm
Weight*	2,100 lbs

Luffing jib section (No. 2316.20) 10 ft

Width	8'
Weight*	1,350 lbs

L-boom jib section (No. 2316.20) 39.4 inch

Width	8'
Weight*	1,410 lbs

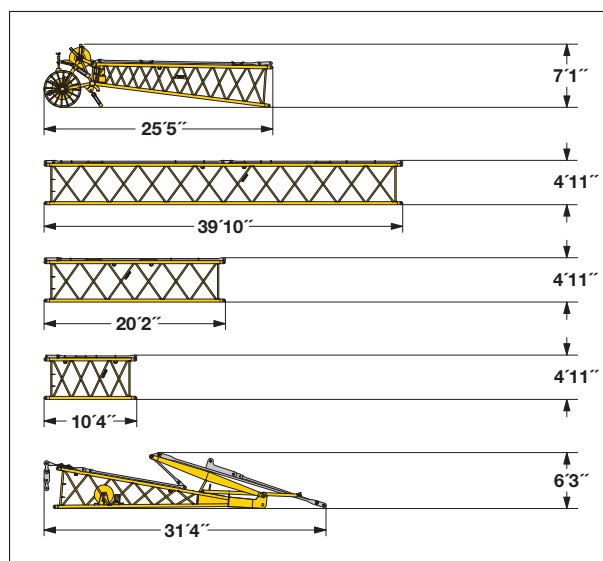
Luffing jib foot with A-frames (No. 2316.22)

Width	8'9"
Weight*	17,450 lbs

L-boom sect. tapered (No. 2821/2316.24) 40 ft

Width	9'9" mm
Weight*	5,950 lbs

Fixed jib (No. 1713.xx)



Fixed jib head (No. 1713.21)

Width	6'
Weight*	3,030 lbs

Luffing jib section (No. 1713.18) 40 ft

Width	6'
Weight*	2,520 lbs

Luffing jib section (No. 1713.18) 20 ft

Width	6'
Weight*	1,400 lbs

Luffing jib section (No. 1713.18) 10 ft

Width	6'
Weight*	930 lbs

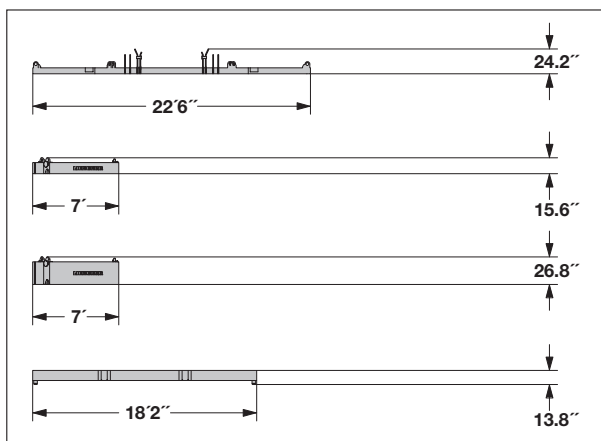
Fixed jib foot with A-frame (No. 1713.22)

Width	8'
Weight*	5,070 lbs

*) Including pendants

Transport dimensions and weights

Counterweights



Counterweight **1x**

Width	6'11"
Weight	32,000 lbs

Counterweight **6x**

Width	6'11"
Weight	11,050 lbs

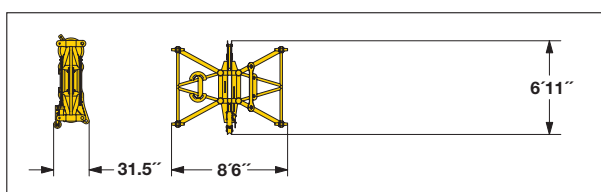
Counterweight **8x**

Width	6'11"
Weight	22,050 lbs

Carbody counterweight **4x**

Width	5'
Weight	31,420 lbs

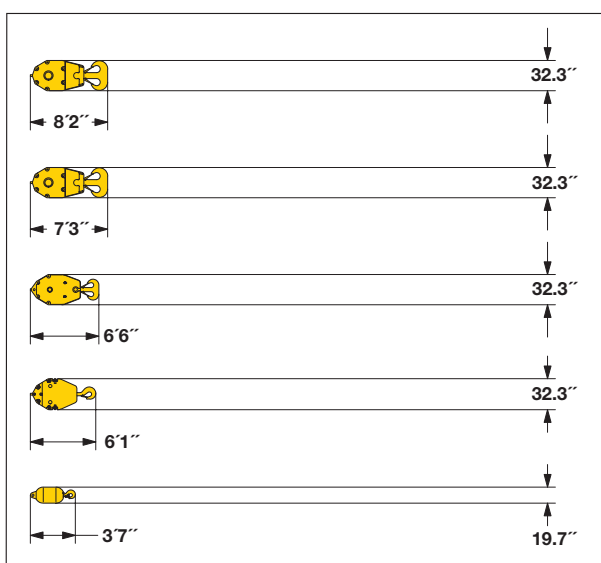
Mid fall (optional)



Mid fall section (No. 2316.25) **1.64 ft**

Width	8'
Weight	1,550 lbs

Hooks



661,400 lbs hook block - 11 sheaves

Width	34.6"	48.4"
Weight	7,050	12,130 lbs

330,700 lbs hook block - 5 sheaves

Width	19.7"	26"	32.3"
Weight	3,500	6,200	8,800 lbs

220,500 lbs hook block - 3 sheaves

Width	13.4"	19"	24.4"
Weight	2,400	4,500	6,600 lbs

110,200 lbs hook block - 1 sheave

Width	11"	16.1"	21.3"
Weight	1,800	3,500	5,300 lbs

35,300 lbs single hook

Width	19.7"
Weight	2,000 lbs

Technical description



Engine

Power rating according to ISO 9249, 450 kW (603 hp) at 1900 rpm
 Engine type ———— Liebherr D 9508 A7
 Fuel tank ———— 238 gal capacity with continuous level indicator and reserve warning
 Engine complies with NRMM exhaust certification EPA / CARB Tier 3 and 97/68 EC Stage III.



Hydraulic system

An axial displacement pump supplies the open loop hydraulic system for boom luffing, jib luffing and travel. The main hoist winches and swing are operated in a closed loop system. All functions can be operated simultaneously. To minimize peak pressure an automatic working pressure cut-off has been installed. All filters are electronically monitored.

The use of synthetic environmentally friendly (biodegradable) oils is possible.

Working pressure ——— max. 5076 psi
 Oil tank capacity ——— 238 gal



Luffing jib winch

Line pull ———— max. 23,150 lbs
 Rope diameter ——— 20 mm
 Jib luffing ———— 69 sec. from 15° to 78°



Boom winch

Line pull ———— max. 48,000 lbs
 Rope diameter ——— 24 mm
 Boom up ———— 127 sec. from 15° to 86°



Swing

Consists of rollerbearing with external teeth, swing drive with fixed axial piston hydraulic motor, spring loaded and hydraulically released multi-disc holding brake, planetary gearbox and pinion.
 Both swing modes are possible – speed control or free swing.
 A multi-disc holding brake acts automatically at zero swing motion.
 Swing speed from 0 – 1.8 rpm continuously variable.



Main winches

Line pull (1st layer) ———— max. 47,400 lbs
 Line pull (7th layer) ———— 33,100 lbs
 Rope diameter ———— 28 mm
 Drum diameter ———— 28.7 inch
 Rope speed ———— 0 – 453 ft/min
 Rope capacity in 7 layers ———— 1,870 ft

The winches are outstanding in their compact design and easy assembly.

Propulsion is via a planetary gearbox in an oil bath.

Load support by the hydraulic system; additional safety factor provided by a spring loaded, multi-disc holding brake.

The main winches use pressure controlled, variable flow hydraulic motors.

This system features sensors that automatically adjust oil flow to provide max. winch speed depending on load.

Option – winch with freefall system:

Clutch and braking functions on the freefall system are provided by a compact designed, low wear and maintenance free multi-disc brake.



Crawlers

Propulsion through axial piston motor, hydraulically released spring loaded multi-disc brake, crawler tracks, hydraulic chain tensioning device.

Flat track shoes ——— 47.2 inch
 Drive speed ———— 0 – 0.8 mph



Control

The control system – developed and manufactured by Liebherr – is designed to withstand extreme environmental conditions such as temperature, vibration and electromagnetic interference and to meet all requirements that are needed in heavy duty crane operation. Complete machine operating data are shown on a high resolution display.

Standard operational information is displayed by means of graphical symbols, fault indications are displayed in plain text (more than 15 languages available).

The cranes are equipped with proportional control for all main movements, which can be carried out simultaneously.

The crane is operated with 2 multi-directional joysticks, the right for winch I and boom, the left for winch II and swing control.

Option:

Bi-directional double T-levers for simultaneous boom and luffing jib operation.

The crawlers are activated by the two foot pedals. Additionally, hand levers can be attached to the pedals.

Remote control for assembly of counterweight and boom hinge pins.

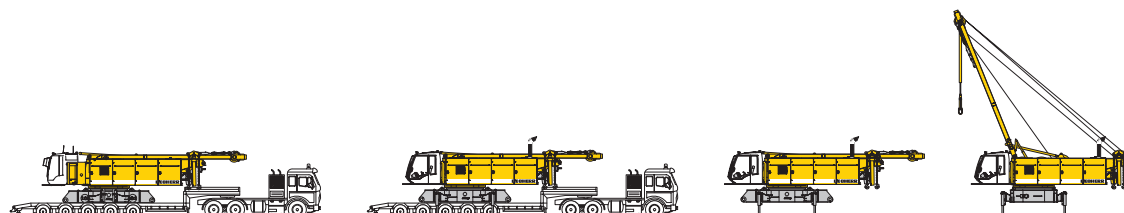


Noise emission

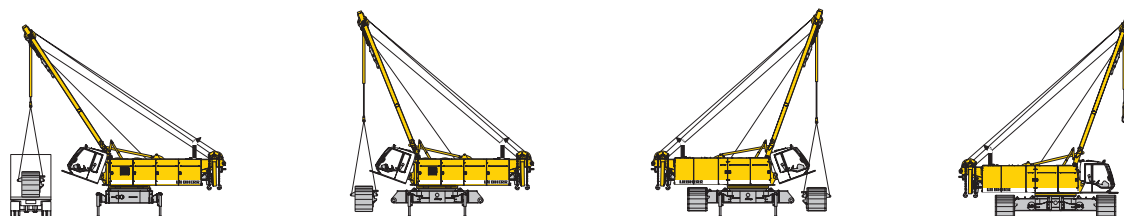
Noise emissions correspond with 2000/14/EC directive on noise emission by equipment used outdoors.



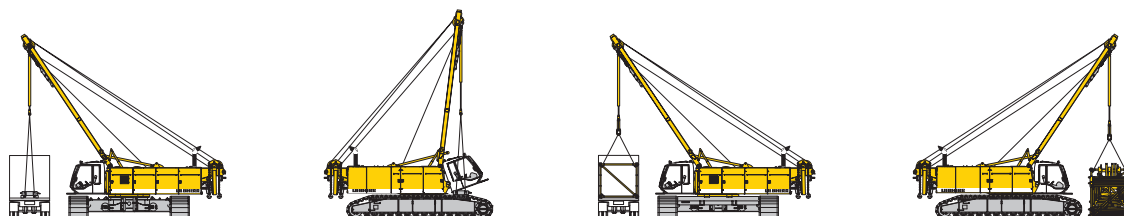
Self assembly system



Unloading of basic machine

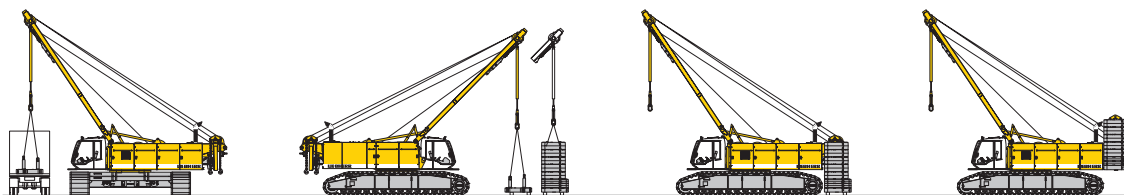


Unloading and assembly of crawlers



Unloading and assembly of carbody counterweight

Unloading and assembly of boom

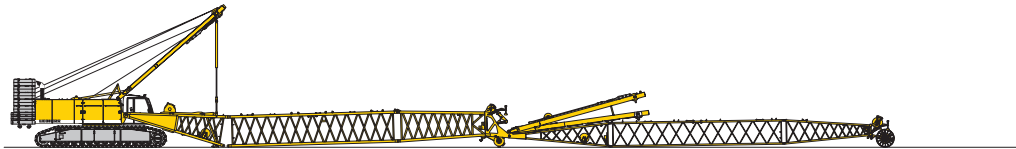


Unloading and assembly of counterweight

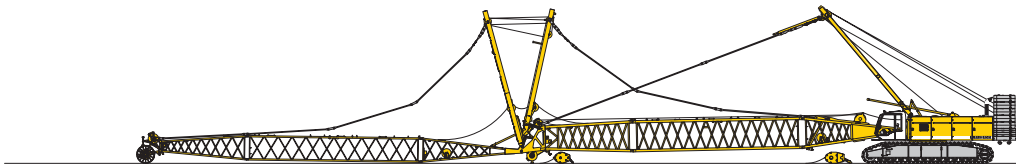


Unloading and assembly of boom foot

Erecting of main boom to working position



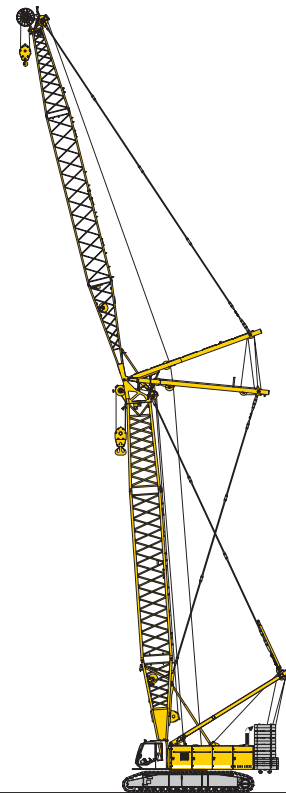
Assembly of boom



Reeving of hoist and luffing jib ropes



Erecting of main boom and luffing jib



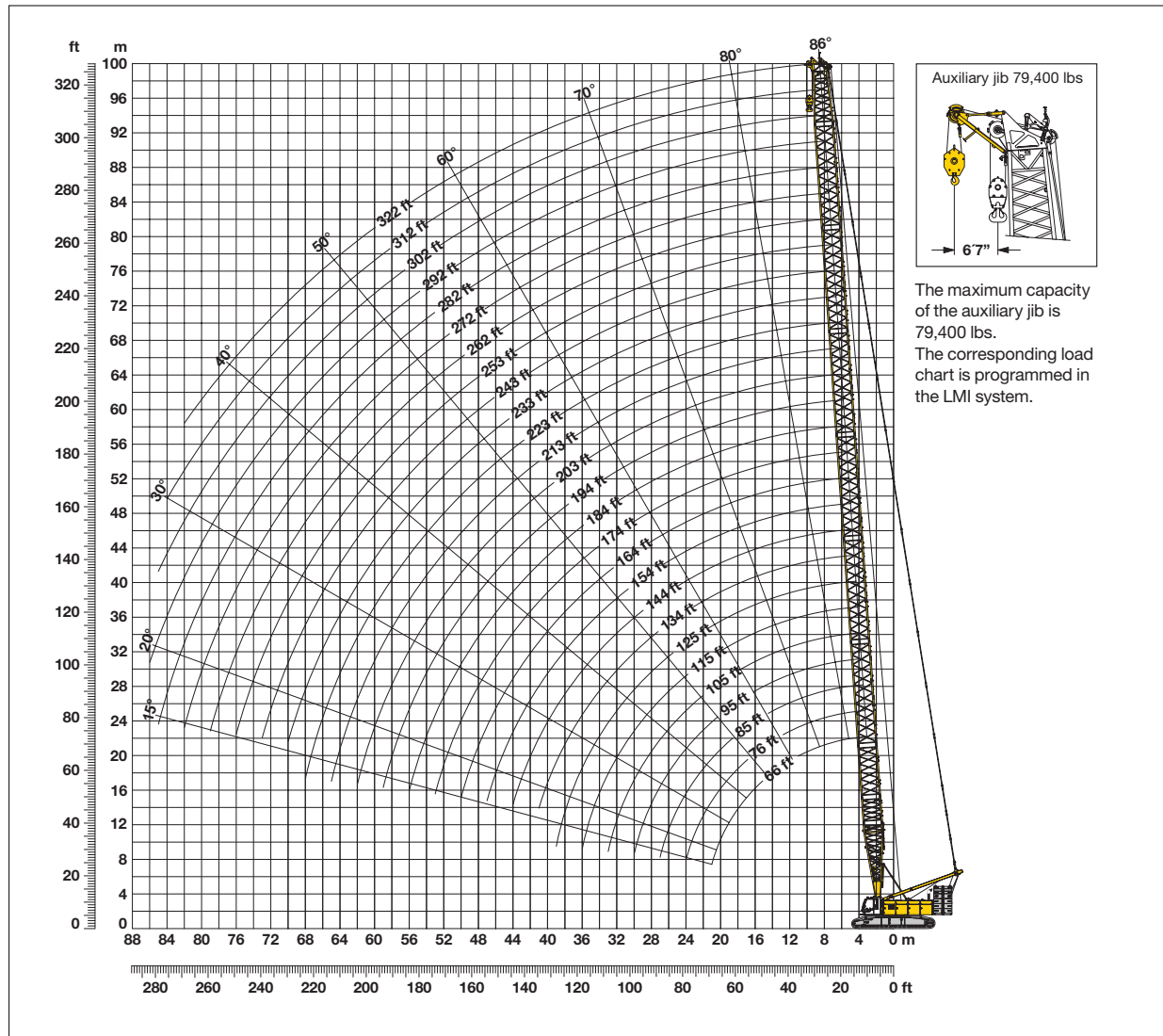
Working position

Main boom

(No. 2821.xx)

86° - 15°

273,400 lbs counterweight and 125,700 lbs carbody counterweight



Main boom configuration (Table 1 – No. 2821.xx)

Configuration for boom lengths between 66 ft and 322 ft

	Length*	Amount of boom extensions																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Boom foot	32.8 ft	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

*Actual lengths of boom sectors are metric (e.g. 3m, 6m, 7m, 12 m). The figures shown above are approximate conversions to feet.



Lift chart for main boom (No. 2821.xx)

229,300 lbs counterweight and 125,700 lbs carbody counterweight

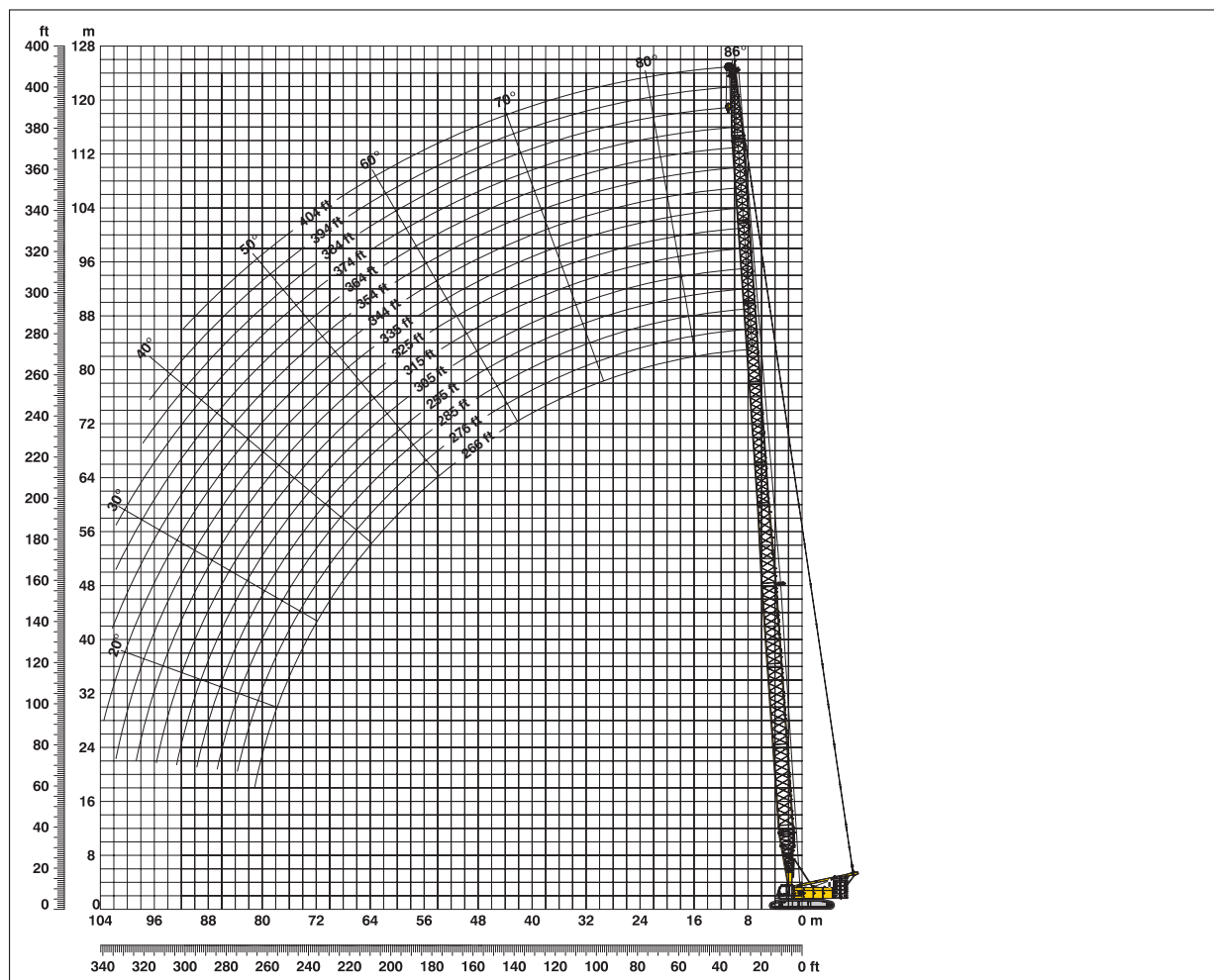
Radius	Boom length in (ft)															Radius
	66	76	85	105	125	144	164	184	203	223	243	262	282	302	312	
(ft)	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	(ft)
15	603,2	661,4														15
20	574,2	578,9	578,1	577,4	570,6	526,6										20
25	459,4	459,3	458,5	457,8	456,4	455,4	446,9	419,7	363,6							25
30	379,5	379,4	378,7	378,0	376,6	375,6	374,0	368,6	344,3	311,2	273,2	239,9	205,3			30
35	322,4	322,4	321,6	321,0	319,6	318,5	317,0	315,7	314,1	296,3	261,0	237,6	204,8	177,3	165,4	35
40	274,2	274,7	274,7	274,9	274,7	274,4	274,0	272,9	267,4	261,1	250,9	234,0	202,9	176,4	164,2	40
50	198,7	199,2	199,1	199,2	198,8	198,5	197,9	197,3	196,7	196,0	192,5	188,1	183,6	170,4	160,1	50
60	154,2	154,8	154,7	154,8	154,3	153,9	153,2	152,5	151,8	151,1	150,3	149,3	145,7	142,2	140,3	60
65	138,0	138,7	138,7	138,8	138,3	137,8	137,1	136,4	135,6	134,9	134,0	133,3	131,4	128,2	126,5	65
75		114,0	114,2	114,4	113,8	113,3	112,5	111,9	111,0	110,2	109,3	108,5	107,5	106,0	104,6	75
85			96,1	96,5	96,0	95,5	94,7	94,0	93,0	92,2	91,3	90,4	89,4	88,5	88,0	85
105				33,4	71,6	71,2	70,4	69,6	68,7	67,8	66,8	65,9	64,9	63,9	63,4	105
125					33,4	55,3	54,6	53,8	52,8	52,0	51,0	50,0	49,0	48,0	47,5	125
140						46,6	45,9	45,2	44,2	43,3	42,3	41,3	40,3	39,3	38,8	140
160							36,9	36,3	35,3	34,5	33,4	32,7	31,6	30,6	30,1	160
180								29,5	28,7	27,8	26,8	25,9	24,8	23,8	23,2	180
200									23,2	22,4	21,4	20,5	19,4	18,4	17,9	200
220										17,9	17,0	16,1	15,0	14,0	13,5	220
235											14,2	13,3	12,2	11,3	10,7	235
255												10,0	9,0	8,1	7,6	255
275													6,2	5,3	4,8	275
280														4,7	4,2	280
295														2,9	2,4	295

Lift chart for main boom (No. 2821.xx)

273,400 lbs counterweight and 125,700 lbs carbody counterweight

Radius	Boom length in (ft)															Radius
	66	75	85	105	125	144	164	184	203	223	243	262	282	302	322	
(ft)	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	(ft)
22,3								419,7								22,3
25							446,9	419,7	363,6							25
30							382,5	368,6	344,3	311,2	273,2	239,9	205,3			30
35			346,3	343,1	339,6	334,5	328,2	323,8	319,1	296,3	261,0	237,6	204,8	177,3	155,5	35
40	301,0	301,1	300,4	299,8	296,5	294,2	290,8	283,7	278,6	272,2	250,9	234,0	202,9	176,4	154,6	40
45	260,9	261,4	261,3	261,5	261,1	260,1	257,5	254,8	247,7	241,1	226,5	221,9	201,1	175,5	153,1	45
50	224,9	225,3	225,3	225,4	225,0	224,6	224,0	223,5	222,8	217,4	206,5	202,5	186,8	170,4	152,0	50
60	174,9	175,5	175,4	175,6	175,0	174,6	173,9	173,3	172,5	171,8	171,0	170,2	165,0	153,6	140,7	60
65	156,8	157,5	157,5	157,6	157,1	156,6	155,9	155,2	154,4	153,7	152,8	152,1	151,2	147,2	136,1	65
75		129,9	130,0	130,2	129,6	129,2	128,4	127,7	126,8	126,0	125,1	124,3	123,4	122,5	119,9	75
85			109,8	110,2	109,6	109,2	108,3	107,6	106,7	105,9	104,9	104,1	103,1	102,2	101,2	85
105				33,4	82,4	81,9	81,1	80,4	79,4	78,6	77,6	76,6	75,6	74,7	73,6	105
125					33,4	64,2	63,4	62,7	61,7	60,8	59,8	58,9	57,8	56,8	55,8	125
140						54,4	53,7	53,0	52,0	51,1	50,1	49,1	48,1	47,1	46,0	140
160							43,6	43,0	42,1	41,2	40,2	39,2	38,1	37,1	36,0	160
180								35,3	34,5	33,6	32,8	31,8	30,7	29,7	28,6	180
200									28,5	27,7	26,7	25,8	24,7	23,7	22,6	200
220										22,8	21,8	20,9	19,8	18,8	17,7	220
235											18,7	17,8	16,7	15,7	14,6	235
255												14,2	13,2	12,2	11,1	255
275													10,1	9,1	8,0	275
295														6,2	4,7	295
310															2,4	310

L - boom high reach (No. 2821/2316.xx) **236 ft - 404 ft** **Working range 86° - 15°**



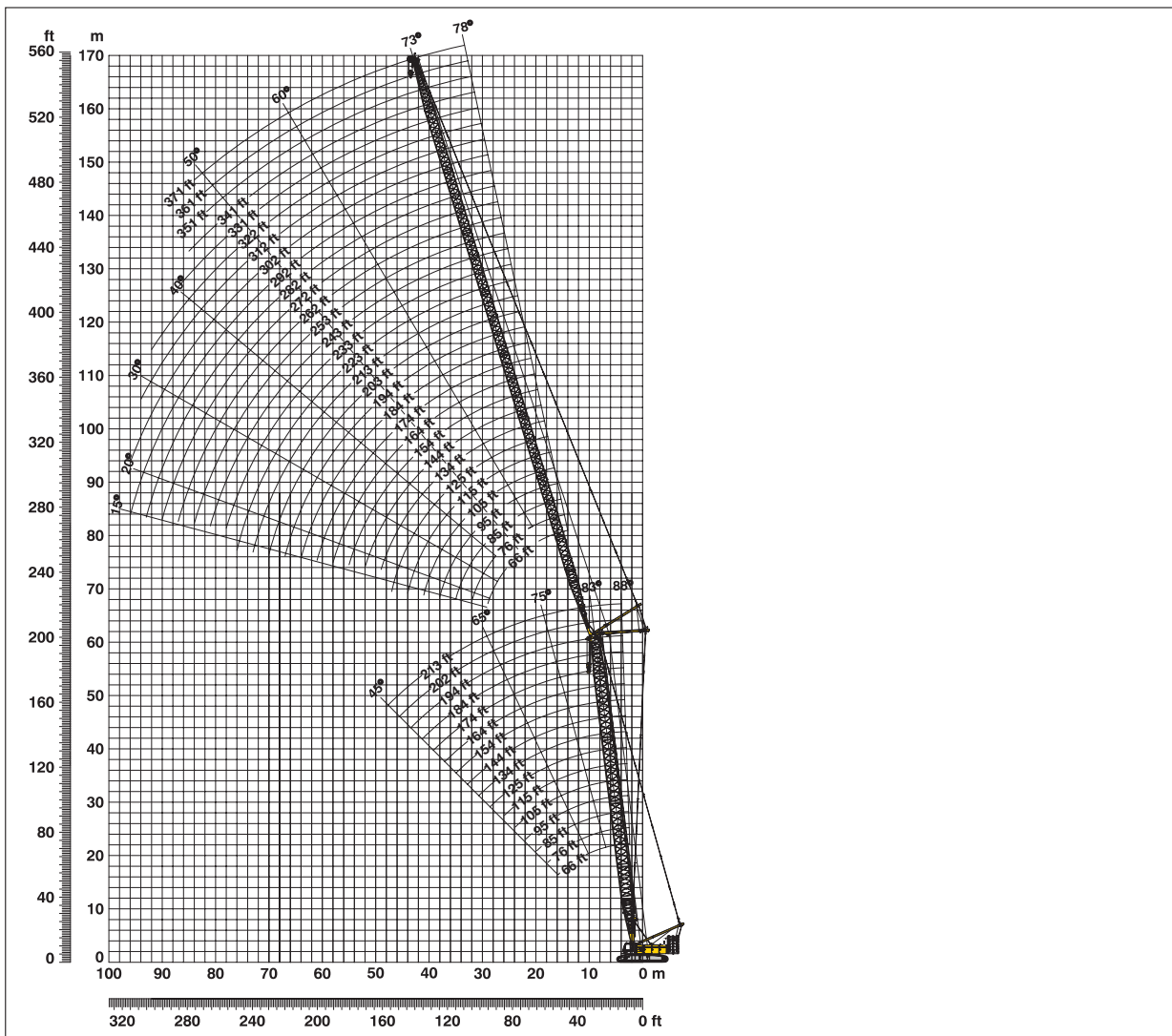
L - boom configuration with 151 ft main boom (No. 2821/2316.xx)

Configuration for L - boom lengths (236 ft - 404 ft)

	Length*	Amount of boom extensions																	
Boom foot	32.8 ft	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Boom insert	40 ft	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Tapered	40 ft	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Luffing insert	10 ft	1		1		1		1		1		1		1		1		1	
Luffing insert	20 ft		1	1			1	1			1	1			1	1		1	
Luffing insert	40 ft				1	1	1	1	2	2	2	2	3	3	3	3	4	4	
Luffing insert	3.2 ft	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Luffing jib head	32.8 m	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Max. L – boom length (ft)		236	246	256	266	276	285	295	305	315	325	335	344	354	364	374	384	394	404

*Actual lengths of boom sectors are metric (e.g. 3m, 6m, 7m, 12 m). The figures shown above are approximate conversions to feet.

Working range - luffing jib (No. 2316.xx) **78° - 15°**
Main boom 88° - 45°



Jib configuration for jib lengths (66 ft - 371 ft)

	Length*	Amount of luffing jib extensions																																															
Luffing jib foot	32.8 ft	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Luffing jib insert	10 ft				1			1					1					1					1					1					1					1					1			1			1
Luffing jib insert	20 ft				1		1					1	1				1	1				1	1				1	1				1	1				1	1				1	1			1	1		
Luffing jib insert	40 ft						1	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
Luffing jib head	32.8 ft	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Luffing jib length (ft)		66	76	85	95	105	115	125	134	144	154	164	174	184	194	203	213	223	233	243	253	262	272	282	292	302	312	322	331	341	351	361	371	381	391	401	411	421	431	441	451	461	471	481	491	501			

*Actual lengths of boom sectors are metric (e.g. 3m, 6m, 7m, 12 m). The figures shown above are approximate conversions to feet.

Lift chart – luffing jib (No. 2316.xx)

Main boom angle 88°

Main boom 66 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs	203 lbs	243 lbs	282 lbs	322 lbs	371 lbs
45		165,4						
50		142,3	141,6					
55		123,5	121,3	110,0				
60	115,7	109,4	107,5	107,4				
65	103,5	99,2	95,3	94,6	86,7			
70	94,7	90,5	86,5	85,7	85,0			
75	33,4	83,3	78,7	77,2	76,9	61,3		
80		77,5	71,8	70,3	69,8	60,8	42,1	
100		57,9	54,2	51,6	50,4	48,9	39,4	26,3
110		51,4	48,3	45,4	43,6	42,1	36,7	24,9
170			28,6	26,5	24,2	22,2	20,3	16,2
205				19,9	17,9	15,6	13,3	9,4
240					13,3	11,4	9,1	2,4
245					12,7	10,9	8,6	
280						7,7	5,7	
320							2,8	

Main boom 105 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs	203 lbs	243 lbs	282 lbs	322 lbs	371 lbs
35,9		242,1						
45	230,5	216,0						
50	208,8	199,5	151,6					
60	173,6	172,4	144,5	109,7				
65	157,1	162,4	137,8	108,3	78,2			
75	112,7	139,3	126,5	104,1	77,0	57,6		
85		120,6	112,7	99,1	75,0	56,3	39,8	
95		101,4	102,5	92,6	72,7	54,6	38,6	25,3
100		93,8	96,4	89,0	71,8	53,4	37,8	25,0
110		75,3	85,9	83,2	69,0	51,5	36,4	23,8
170			40,2	46,6	46,9	41,0	29,6	18,8
205				30,4	34,2	33,7	26,8	17,0
245					21,0	23,7	21,5	15,3
285						13,4	15,7	7,0
310							10,4	2,8
320							8,2	

Main boom 134 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs	203 lbs	243 lbs	282 lbs	322 lbs	371 lbs
28,7	258,0							
40	239,2	221,4						
50	198,7	191,7	136,0					
60	170,3	167,5	131,4	97,6				
70	144,4	148,7	124,3	94,7	71,3			
75	121,0	139,7	121,7	93,0	70,5	53,1		
85		122,3	111,7	89,1	68,5	52,4	37,9	
95		104,6	104,8	84,9	65,9	51,0	37,1	24,0
110		79,1	87,3	78,6	62,6	48,7	35,1	22,9
140			63,1	62,3	55,3	44,4	31,6	20,5
170			42,2	47,8	46,8	39,9	28,8	18,4
205				31,9	35,1	34,2	26,1	16,6
245					21,8	24,5	21,5	14,9
285						14,0	16,6	7,2
310							11,2	2,1
320							9,1	

Main boom 164 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs	203 lbs	243 lbs	282 lbs	322 lbs	371 lbs
29,7	252,2							
40	211,6	188,0						
55	164,9	158,6	115,4					
60	154,3	148,4	112,3	85,8				
70	135,4	133,4	105,9	83,2	64,0			
75	121,1	126,1	103,3	81,9	63,4	48,0		
85		114,8	95,9	77,7	61,4	47,6	35,0	
95		102,8	90,4	74,1	58,9	46,2	34,8	22,1
110		82,1	80,1	68,3	55,7	43,9	33,2	21,4
140			62,6	57,4	49,1	38,2	30,3	19,4
170			43,6	46,8	42,5	33,1	27,8	17,5
205				32,9	34,7	28,5	25,1	15,8
245					22,7	24,4	21,2	14,3
285						14,5	16,5	7,4
310							11,2	2,4
320							9,0	

Main boom 194 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs	203 lbs	243 lbs	282 lbs	322 lbs	371 lbs
30,8	213,9							
40	186,0	155,1						
55	148,0	139,2	99,5					
60	139,4	131,1	96,7	75,2				
70	123,6	119,0	91,1	73,3	56,9			
75	117,3	112,8	88,7	71,9	56,6			
80		107,7	85,8	70,0	55,5	43,6		
85		103,6	82,6	68,2	54,6	43,3	32,5	
95		93,8	77,7	65,0	48,9	42,0	31,9	20,4
115		33,4	66,4	58,3	42,1	39,2	30,8	19,6
170			43,0	41,4	32,9	28,1	26,1	16,7
210				17,1	29,5	24,3	20,8	14,9
245					22,3	21,6	18,1	13,6
285						14,6	16,3	7,4
310							11,4	2,6
320							9,3	

Main boom 213 ft

Radius (ft)	Jib length in (ft)						
	66 lbs	105 lbs	164 lbs	203 lbs	243 lbs	262 lbs	
31,5	185,2						
40	169,4	136,8					
55	137,2	123,9	89,7				
65	122,0	113,0	85,6	68,7			
70	115,5	108,6	82,6	67,2	52,5		
75	110,4	103,0	80,3	65,8	52,4	46,1	
80		98,3	77,9	64,1	51,4	45,9	
115		33,4	60,7	53,5	38,5	34,9	
140			50,9	45,6	34,6	31,6	
170			42,1	38,1	29,8	27,6	
180				35,9	28,9	26,4	
210				21,5	27,1	24,5	
220					26,5	24,1	
245					22,0	21,9	
260						19,2	
265						18,3	

Capacities in metric tons with luffing jib (No. 2316.xx) 273,400 lbs counterweight + 125,700 lbs carbody counterweight. Above lift chart is for reference only. For actual lift duty and complete chart with all available configurations please refer to lift chart in operator's cab or manual.



Lift chart – luffing jib (No. 2316.xx)

Main boom angle 83°

Main boom 66 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs	203 lbs	243 lbs	282 lbs	322 lbs	371 lbs
37,7	257,9							
50	188,8	179,6						
70	110,9	104,7	105,8					
75	101,4	93,9	93,7					
80		85,2	84,9	82,6				
90		73,0	70,1	70,1	65,5			
105		59,9	56,0	54,8	54,3	53,2		
115		52,9	48,9	47,9	46,9	47,9	36,9	
130			41,7	39,4	38,1	38,5	34,5	23,0
140			37,7	35,1	33,9	33,4	32,1	22,4
170			30,0	27,0	24,8	24,8	22,3	18,2
210				19,4	17,6	16,3	14,0	11,7
250					12,5	11,3	9,0	6,6
285						7,9	6,0	2,9
290							5,6	2,5
325							3,0	

Main boom 105 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs	203 lbs	243 lbs	282 lbs	322 lbs	371 lbs
42,5	258,0							
55	206,3	199,6						
75	139,3	138,4	136,1					
85	115,2	118,6	116,4	106,1				
95		103,6	101,5	100,0	75,6			
110		86,7	84,7	83,2	73,2	52,7		
120		77,9	76,1	74,6	70,9	51,2	35,2	
135			65,8	64,3	62,8	48,8	33,8	21,9
160			53,2	51,8	50,3	45,5	31,0	20,1
180			41,8	44,4	43,0	41,1	29,3	18,7
215				31,7	33,5	32,1	26,6	16,8
255					22,5	24,6	21,6	15,2
260						23,9	20,9	14,6
295						14,6	16,5	6,2
315							12,3	2,2
330							9,1	

Main boom 134 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs	203 lbs	243 lbs	282 lbs	322 lbs	371 lbs
46,1	233,1							
60	182,7	181,3						
75	138,0	136,9	130,1					
85	118,2	117,4	115,1					
90		109,5	107,2	97,9				
100		96,3	94,1	92,5	71,0			
110		85,8	83,7	82,1	69,8	50,0		
125		33,4	71,5	69,9	66,5	48,7	33,9	
140			62,1	60,6	59,1	46,5	32,5	21,0
180			45,1	43,8	42,3	40,7	28,9	18,4
220				31,1	32,0	30,4	25,9	16,3
255					24,3	24,1	22,0	14,9
295						15,5	17,3	6,8
315							13,6	2,7
320							12,6	
330							10,5	

Main boom 164 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs	203 lbs	243 lbs	282 lbs	322 lbs	371 lbs
49,7	201,0							
65	163,1	159,2						
80	126,1	124,9	116,4					
90	109,0	108,2	105,7	86,2				
105		89,7	87,4	83,0	63,7			
115		80,3	78,1	76,5	62,6	46,6		
125		72,5	70,5	68,9	60,8	45,9	32,4	
130		33,4	67,1	65,6	59,6	45,3	32,4	
140			61,2	59,7	57,3	44,0	31,7	20,1
185			42,9	41,5	40,0	37,3	27,7	17,5
225				25,0	30,3	28,7	25,1	15,7
240					27,5	26,0	24,1	15,1
260					23,4	22,8	21,3	14,4
300						15,0	16,3	6,6
320							12,9	2,6
335							10,2	

Main boom 194 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs	203 lbs	243 lbs	282 lbs	322 lbs	371 lbs
53,3	184,0							
65	156,1	144,8						
85	115,5	114,3	98,9					
95	100,7	99,8	93,7	75,1				
110		83,5	81,2	72,0	55,9			
120		75,1	72,9	68,0	53,9	43,0		
130		68,1	66,0	64,0	52,3	42,4	30,8	
145			57,6	56,0	45,7	40,7	30,1	19,0
160			50,9	49,3	42,2	38,2	28,8	18,4
190			40,6	39,3	37,7	33,0	26,5	16,7
225				31,0	29,6	27,4	23,8	15,2
265					22,5	21,5	19,6	13,7
280						19,5	17,8	11,8
305						14,7	15,2	6,2
325							12,1	2,4
340							9,6	

Main boom 213 ft

Radius (ft)	Jib length in (ft)						
	66 lbs	105 lbs	164 lbs	203 lbs	243 lbs	262 lbs	
55,7	168,5						
70	139,0	132,6					
85	114,4	111,0	89,0				
95	99,8	98,7	86,1				
100		92,8	84,1	68,0			
110		82,6	77,2	65,9	51,7		
115		78,3	74,5	64,6	50,9	45,3	
130		67,4	65,2	59,7	48,0	43,0	
160			50,2	48,7	38,6	35,3	
190			40,1	38,7	35,9	32,5	
200				36,1	34,3	32,0	
225				30,6	29,1	28,4	
240					26,4	25,7	
265					22,5	21,8	
280						19,9	
285						18,9	

Capacities in metric tons with luffing jib (No. 2316.xx) 273,400 lbs counterweight + 125,700 lbs carbody counterweight. Above lift chart is for reference only. For actual lift duty and complete chart with all available configurations please refer to lift chart in operator's cab or manual.



Lift chart – luffing jib (No. 2316.xx)

Main boom angle 75°

Main boom 66 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs	203 lbs	243 lbs	282 lbs	322 lbs	371 lbs
60	181,2							
75	122,9	122,7						
85	100,1	97,7						
100		75,0	73,9					
115		63,3	58,6	55,6				
125		33,4	50,6	50,0				
135			45,1	44,1	44,2			
150			38,7	36,3	36,5	33,6		
165			33,8	31,5	30,5	30,9	26,1	
180			30,3	27,6	27,0	26,1	23,8	
185				26,5	26,1	24,5	22,3	16,3
220				19,6	19,1	16,7	14,4	12,0
255					13,9	12,1	9,3	6,7
295						8,0	5,4	2,7
300							5,1	2,2
335							3,0	

Main boom 105 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs	203 lbs	243 lbs	282 lbs	322 lbs	371 lbs
70	145,0							
85	114,2	112,8						
95	99,6	98,5						
110		82,4	79,9					
125		70,5	68,2	66,5				
135		64,1	62,0	60,3				
145			56,7	55,1	53,4			
160			50,1	48,5	46,8	45,1		
175			44,6	43,1	41,5	39,8	29,7	
190			40,0	38,6	37,0	35,4	29,0	
195				37,3	35,7	34,0	28,5	17,8
230				29,6	28,1	26,5	24,8	16,5
265					22,5	21,0	19,5	15,1
305						16,2	14,8	7,7
330							12,4	2,2
345							10,4	

Main boom 134 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs	203 lbs	243 lbs	282 lbs	322 lbs	371 lbs
75	129,6							
90	103,7	102,1						
105	33,4	84,7						
115		75,8	73,1					
135		62,3	59,9	58,1				
140		59,5	57,2	55,5				
150			52,4	50,7	49,0			
165			46,4	44,8	43,0	41,3		
185			40,0	38,4	36,7	35,0	22,6	
200			36,0	34,5	33,0	31,3	22,3	
205				33,4	31,8	30,1	22,1	16,6
235				27,5	25,9	24,3	21,1	15,6
275					20,1	18,6	17,0	13,9
310						14,8	13,2	8,2
335							11,0	2,7
350							9,8	

Main boom 164 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs	213 lbs	243 lbs	282 lbs	322 lbs	371 lbs
85	107,7							
100	88,4	86,7						
110	78,6	77,2						
125		66,1	63,3					
145		55,0	52,5	50,1				
150		52,7	50,3	47,9				
160			46,3	44,0	42,7			
175			41,2	39,0	37,7	35,5		
190			37,0	34,8	33,6	31,6	27,4	
205			33,4	31,3	30,2	28,4	25,3	
210				30,3	29,1	27,4	24,3	16,2
255				22,6	21,5	19,9	17,5	13,9
285					17,7	16,2	14,2	10,7
320						12,8	11,2	6,2
340							9,6	2,6
360							8,0	

Main boom 194 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs	213 lbs	243 lbs	282 lbs	322 lbs	371 lbs
90	96,8							
105	80,3	66,4						
120	68,1	66,7						
130		60,5	57,5					
155		48,6	46,0	43,5				
160		46,6	44,1	41,7				
165			42,4	40,0	38,2			
180			37,8	35,5	34,0	30,7		
200			32,8	30,6	29,4	26,4	23,1	
215			29,7	27,6	26,4	23,7	20,5	
220				26,7	25,5	22,8	19,7	15,2
265				19,9	18,8	16,9	14,0	10,2
290					16,0	14,4	11,6	7,9
330						10,8	8,6	4,3
345							7,6	2,3
370							5,6	

Main boom 213 ft

Radius (ft)	Jib length in (ft)						
	66 lbs	105 lbs	164 lbs	213 lbs	243 lbs	262 lbs	
95	88,1						
115	69,9	68,1					
125	63,0	61,5					
135		56,0	52,9				
155		47,1	44,4				
160		45,2	42,6	39,6			
170			39,3	36,7	34,2		
180			36,5	34,0	31,8	30,1	
200			31,7	29,3	27,5	25,9	
220			27,6	25,5	24,0	22,5	
240				22,3	21,1	19,7	
265				18,9	17,8	16,8	
280					16,1	15,3	
295					14,6	13,8	
300						13,4	
315						12,0	

Capacities in metric tons with luffing jib (No. 2316.xx) 273,400 lbs counterweight + 125,700 lbs carbody counterweight. Above lift chart is for reference only. For actual lift duty and complete chart with all available configurations please refer to lift chart in operator's cab or manual.



Lift chart – luffing jib (No. 2316.xx)

Main boom angle 65°

Main boom 66 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs	213 lbs	243 lbs	282 lbs	322 lbs	371 lbs
80	121,9							
100	33,4	77,0						
135		46,8	45,5					
165			30,8	31,3				
180			28,0	25,4	23,8			
195			24,2	21,3	20,0			
200				20,0	18,8	15,0		
225				15,8	14,0	11,9	9,3	
240				13,8	11,9	9,9	7,6	
255					10,5	7,9	5,7	4,4
260					10,0	7,4	5,3	4,0
270					9,0	6,4	4,2	2,0
280						5,8	3,3	
295						4,8	2,1	
300						4,5		
305						4,2		

Main boom 105 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs	203 lbs	243 lbs	282 lbs	322 lbs	371 lbs
95	94,1							
115	33,4	66,4						
150		52,8	50,3					
175			41,2	39,5				
195			35,7	34,0	32,3			
210			32,3	30,7	29,0			
220				28,8	27,1	25,3		
240				25,3	23,7	22,0	20,1	
245				24,5	22,9	21,2	19,5	
270					19,5	17,9	16,2	13,2
285					17,7	16,1	14,5	11,6
300						14,6	12,9	10,2
320						12,7	11,1	8,5
340							9,5	5,0
350							8,8	2,6
360							8,1	

Main boom 134 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs	203 lbs	243 lbs	282 lbs	322 lbs	371 lbs
104,8	66,4							
125	64,1							
130		59,5						
165		44,2	41,6					
185			35,7	33,9				
210			30,1	28,4	26,6			
220			28,2	26,5	24,7			
230				24,8	23,1	21,2		
255				21,1	19,5	17,7	15,5	
260				20,5	18,8	17,1	14,9	
280					16,5	14,8	12,8	9,1
300					14,5	12,8	10,9	7,4
320						11,1	9,4	5,9
335						9,9	8,2	4,9
360							6,1	2,3
375							5,0	

Main boom 164 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs	203 lbs	243 lbs	282 lbs	322 lbs	371 lbs
117,3	65,1							
140	52,3	50,6						
175		38,1	35,3					
180		33,4	34,0					
200			29,5	27,6				
220			25,8	24,0	22,0			
235			23,3	21,6	19,8			
245				20,2	18,4	16,1		
265				17,8	16,0	13,9	10,9	
275				16,6	15,0	12,9	10,0	
295					13,0	11,2	8,3	4,6
310					11,7	10,0	7,2	3,6
335						7,9	5,5	2,1
350						6,7	4,3	
360							3,6	
380							2,2	

Main boom 194 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs	203 lbs	243 lbs	282 lbs	322 lbs	371 lbs
129,8	53,4							
150	44,6							
155		41,0						
190		31,5	28,6					
210			24,8	22,7				
235			20,9	19,1	16,6			
245			19,6	17,8	15,4			
250				17,2	14,9			
255				16,6	14,4	11,3		
280				14,0	12,1	9,2	6,2	
285				13,6	11,8	8,8	5,8	
295					10,9	8,1	5,1	
300					10,5	7,7	4,8	
320					8,9	6,4	3,6	
340						4,9	2,3	
360						3,5		

Main boom 213 ft

Radius (ft)	Jib length in (ft)						
	66 lbs	105 lbs	164 lbs	203 lbs	243 lbs	262 lbs	
138,1	46,7						
160	38,7						
161		36,6					
195		28,4	25,3				
200		27,4	24,5				
220			21,2	18,9			
240			18,5	16,5	13,3		
255			16,8	14,9	11,9	10,5	
260				14,4	11,5	10,0	
280				12,5	9,9	8,5	
295				11,2	8,9	7,5	
300					8,5	7,1	
320					7,0	5,8	
330					6,2	5,0	
340						4,3	
350						3,6	

Capacities in metric tons with luffing jib (No. 2316.xx) 273,400 lbs counterweight + 125,700 lbs carbody counterweight. Above lift chart is for reference only. For actual lift duty and complete chart with all available configurations please refer to lift chart in operator's cab or manual.



Lift chart – luffing jib (No. 2316.xx)

Main boom angle 45°

Main boom 66 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs	203 lbs	243 lbs	282 lbs	322 lbs	371 lbs
109,7	66,4							
115	73,9							
142		54,7						
155		45,8						
195			29,8					
210			24,9					
225				19,3				
250				14,9				
255					10,9			
285					8,6			
290						5,4		
325						3,0		

Main boom 105 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs	203 lbs	243 lbs	282 lbs	322 lbs	371 lbs
137,5	53,5							
145	33,4							
170		39,6						
180		36,8						
220			25,7					
240			22,5					
255				18,8				
275				16,6				
285					13,8			
315					11,2	9,4		
350						7,0	4,5	
385							2,1	

Main boom 134 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs	203 lbs	243 lbs	282 lbs	322 lbs	371 lbs
158,4	40,5							
165	38,4							
195		29,4						
205		27,4						
240			19,2					
260			16,9					
275				13,6				
300				11,4				
305					9,1			
335					7,0			
340						4,0		
370						2,1		

Main boom 164 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs	203 lbs	243 lbs			
179,3	29,9							
185	28,8							
215		21,7						
225		20,2						
260			13,3					
280			11,6					
294				8,4				
320				6,4				
325					3,3			
345					2,2			

Main boom 194 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs	203 lbs				
200,2	21,5							
205	20,8							
235		15,1						
245		14,1						
285			7,2					
305			5,7					
315				2,3				
320				2,0				

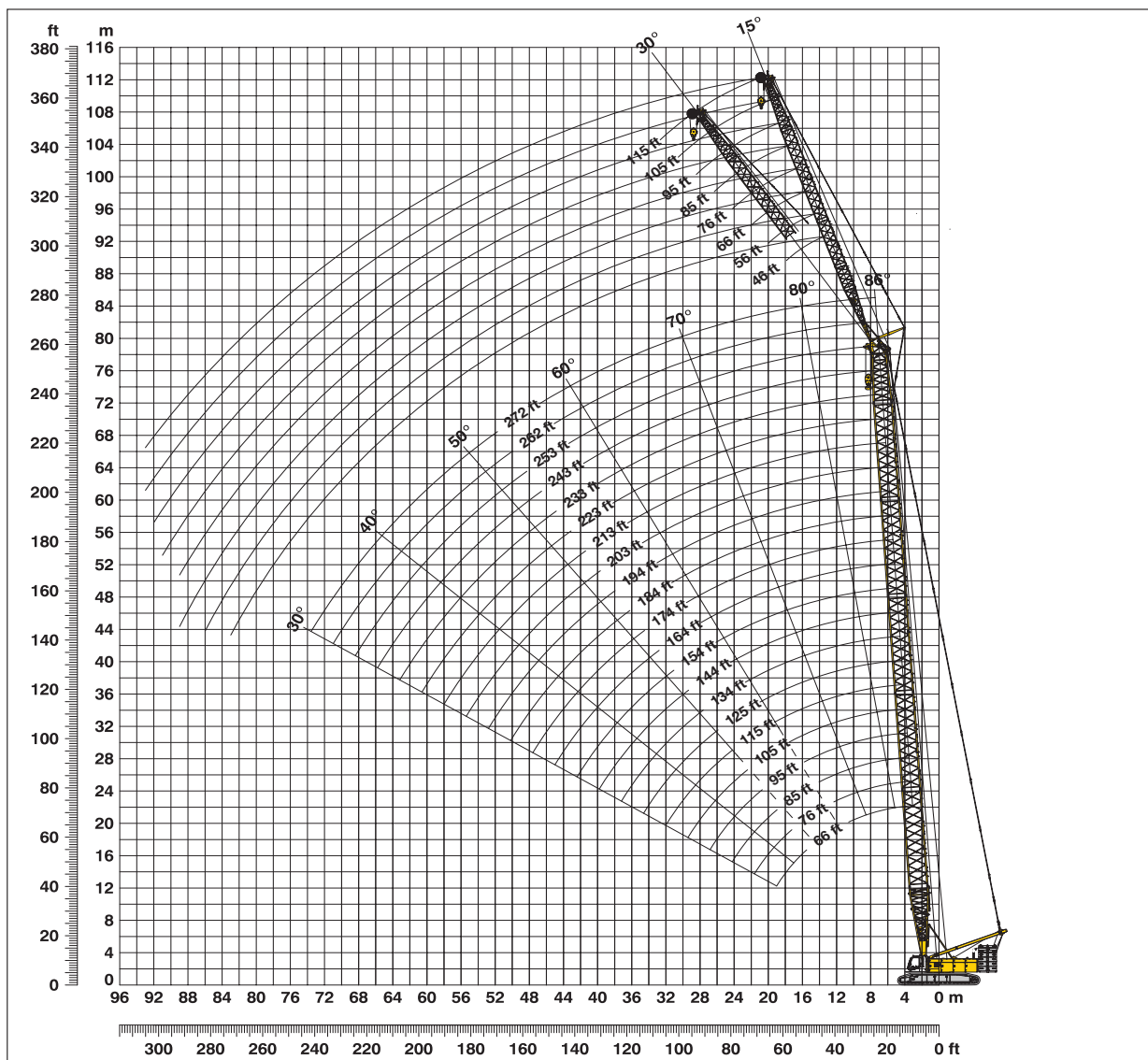
Main boom 213 ft

Radius (ft)	Jib length in (ft)							
	66 lbs	105 lbs	164 lbs					
214,1	16,5							
220	15,9							
250		11,0						
260		10,1						
295			3,1					
300			2,9					
310			2,3					
315			2,0					

Capacities in metric tons with luffing jib (No. 2316.xx) 273,400 lbs counterweight + 125,700 lbs carbody counterweight. Above lift chart is for reference only. For actual lift duty and complete chart with all available configurations please refer to lift chart in operator's cab or manual.



Working range - fixed jib (No. 1713.xx) **15° and 30°** **Main boom 88° - 30°**



Boom configuration for boom lengths (66 ft - 272 ft) – see table 1 on page 10

Fixed jib configuration for fixed jib lengths (36 ft - 115 ft)

	Length*	Amount of fixed jib extensions							
Fixed jib foot	23 ft	1	1	1	1	1	1	1	1
Fixed jib insert	10 ft		1		1		1		1
Fixed jib insert	20 ft			1	1			1	1
Fixed jib insert	40 ft						1	1	1
Fixed jib head	23 ft	1	1	1	1	1	1	1	1
Fixed jib length (ft)		46	56	66	76	85	95	105	115

*Actual lengths of boom sectors are metric (e.g. 3m, 6m, 7m, 12 m). The figures shown above are approximate conversions to feet.

Bigge Crane and Rigging Co.

10700 Bigge Avenue
San Leandro, CA 94577
Phone: (888) 337-BIGGE or (510) 638-8100
Fax: (510) 639-4053
Email: info@bigge.com
Web site: www.bigge.com

Liebherr Nenzing Crane Co.
7075 Bennington Street, Houston, TX 77028-5812
Phone: +1 713 636 4050
Fax: +1 713 636 4051
crawler.crane@inc.liebherr.com
www.liebherr.com

LR 1300—10351595—04/ 2007 Subject to change without notice.

