

Derrick equipment

Complies with ANSI/ASME B 30.5

LR 1300.1 SX

EN-US

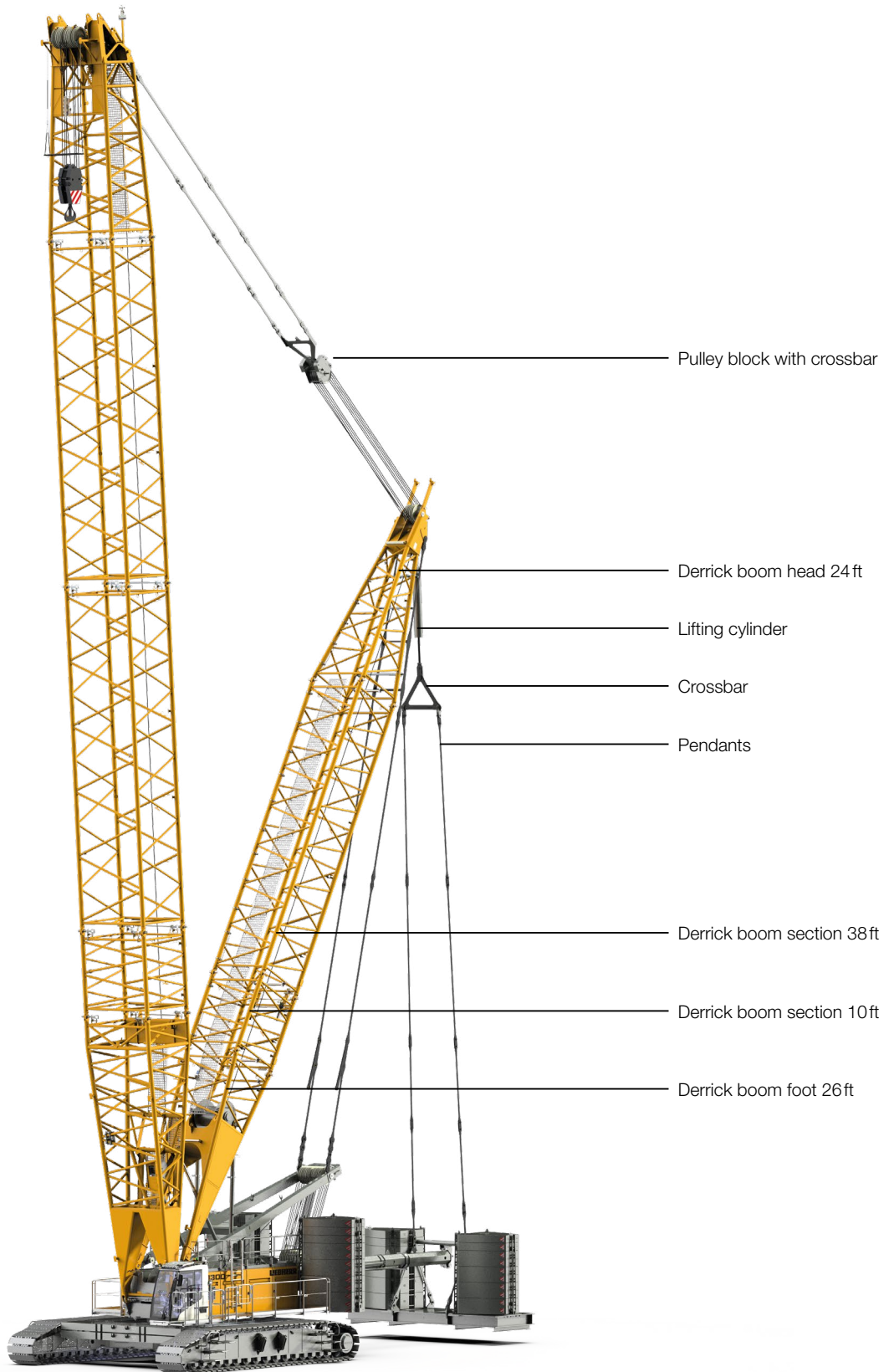
LR 1006.02.07



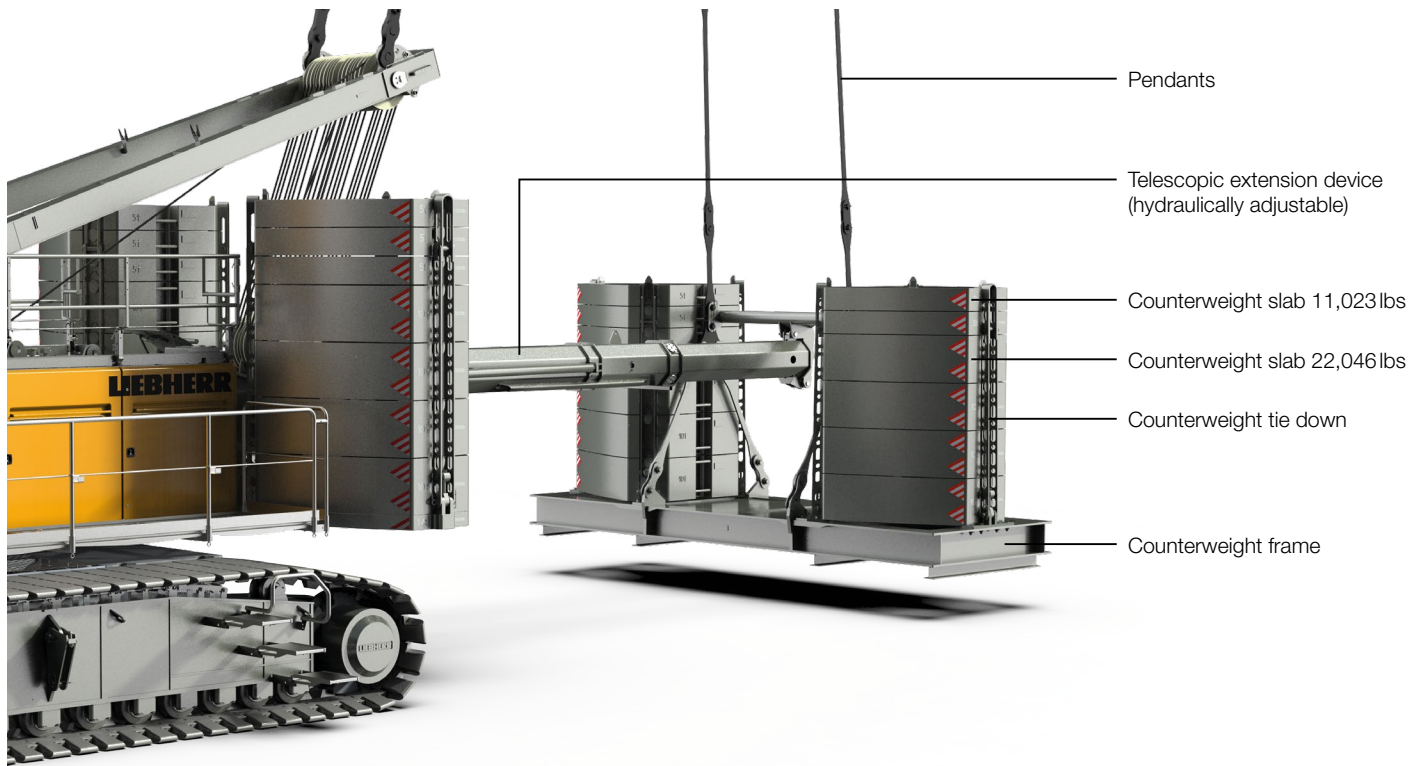
LIEBHERR

Concept and characteristics

Derrick equipment with suspended counterweight

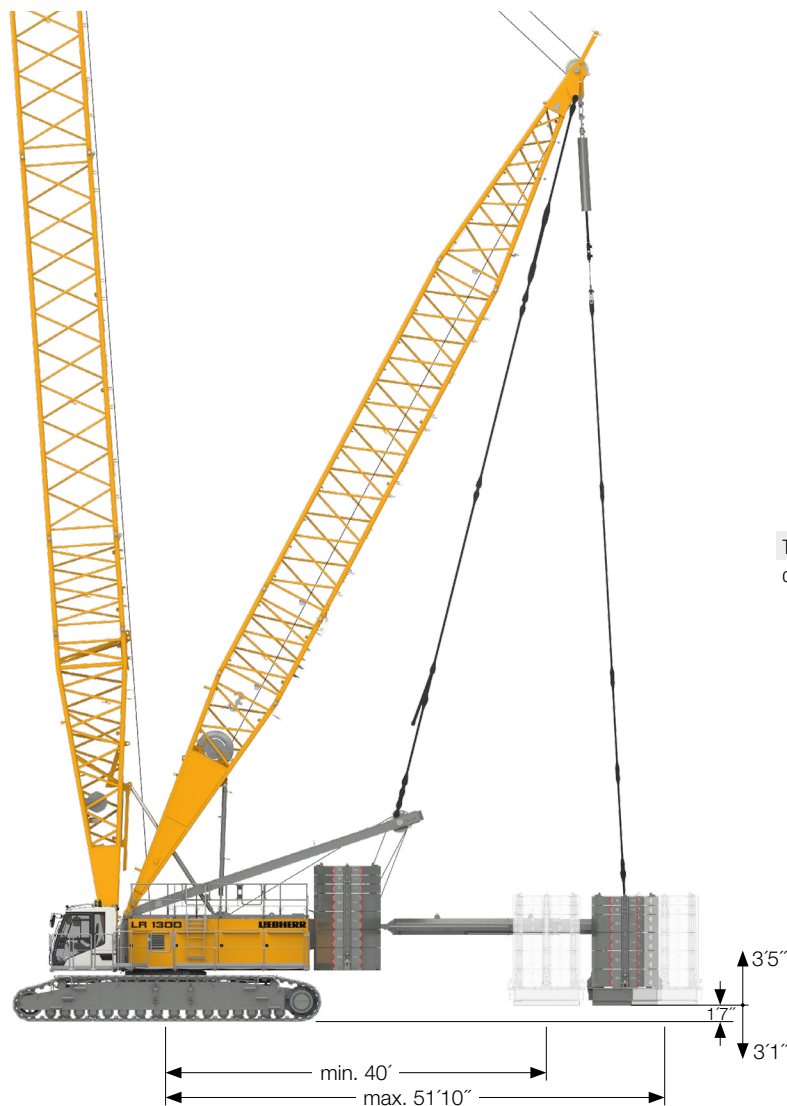


Suspended counterweight



Dimensions

Derrick equipment with suspended counterweight

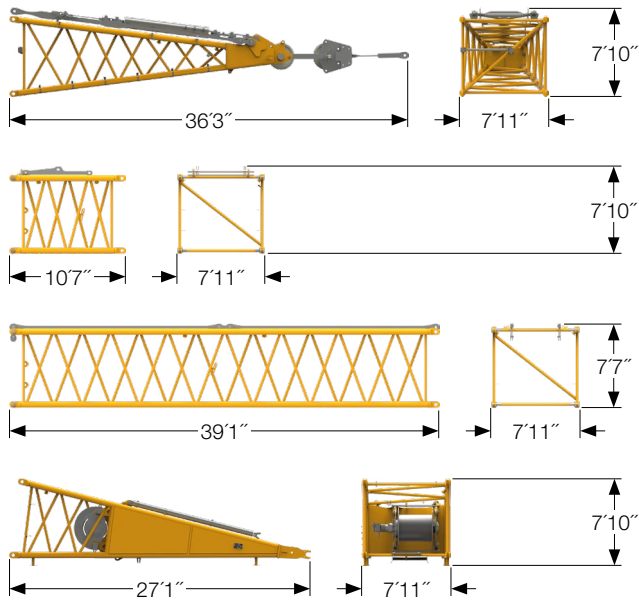


Telescopic extension device, hydraulic
continuously adjustable from 40 to 51.8ft

Remarks

1. The lifting capacities stated are valid for lifting operation only (corresponding with crane classification according to ISO 4301-1, crane group A1).
2. Crane standing on firm, horizontal ground.
3. The weight of the lifting device (pulley block, hoist ropes, shackle etc.) must be deducted from the gross lifting capacity to obtain a net lifting value.
4. Additional equipment on boom (e.g. platforms) must be deducted from the load capacity.
5. The max. admissible wind speed can be preselected in the LML software and is shown in the load chart
6. Working radii are measured from centre 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 ANSI/ASME B 30.5 load ratings as well as ISO 4305 Table 2 and tested according to SAE J765 and SAE J987.
9. Weights may vary depending on the delivered configuration of the machine, filling level of the tanks as well as generally valid tolerances.
10. The figures in this brochure may include options which are not within the standard scope of supply of the machine.

Transport dimensions and weights



Derrick equipment (No. 2220.xx)

Derrick boom head (No. 2220.22) **24 ft**

Weight including lifting cylinder with crossbar,
including pulley block with crossbar 14,440 lbs

Derrick boom section (No. 2220.24) **10 ft**

Weight including pendants 2,271 lbs

Derrick boom section (No. 2220.22) **38 ft**

Weight including pendants 5,644 lbs

Derrick boom foot (No. 2220.24) **26 ft**

Weight including rope 17,196 lbs

Suspended counterweight with telescopic extension device

Counterweight frame

Weight including pendants 28,506 lbs

Counterweight slab **4x**

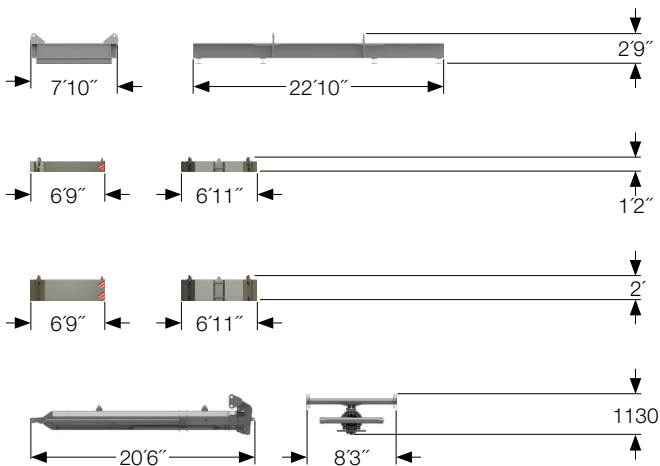
Weight 11,023 lbs

Counterweight slab **8x**

Weight 22,046 lbs

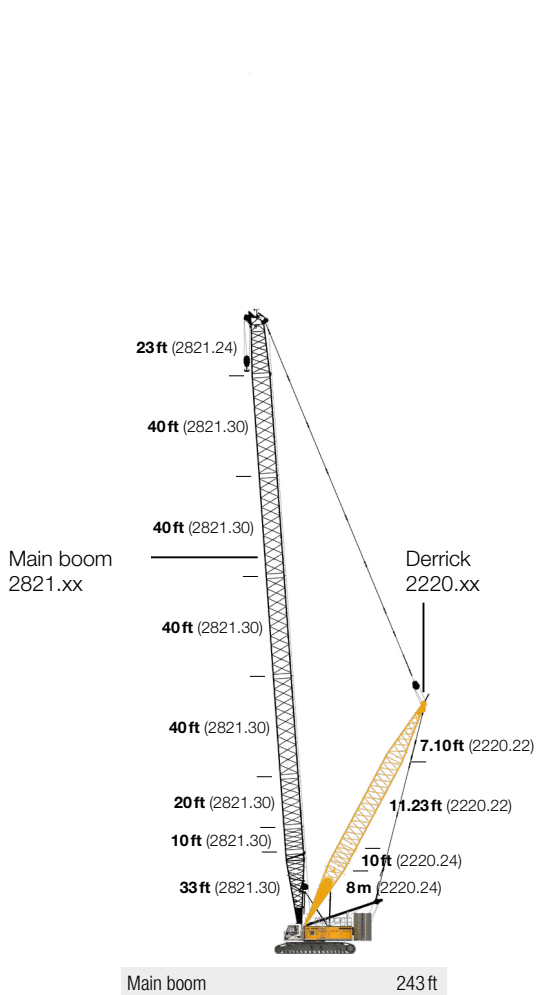
Telescopic extension device, hydraulic

Weight 6,504 lbs

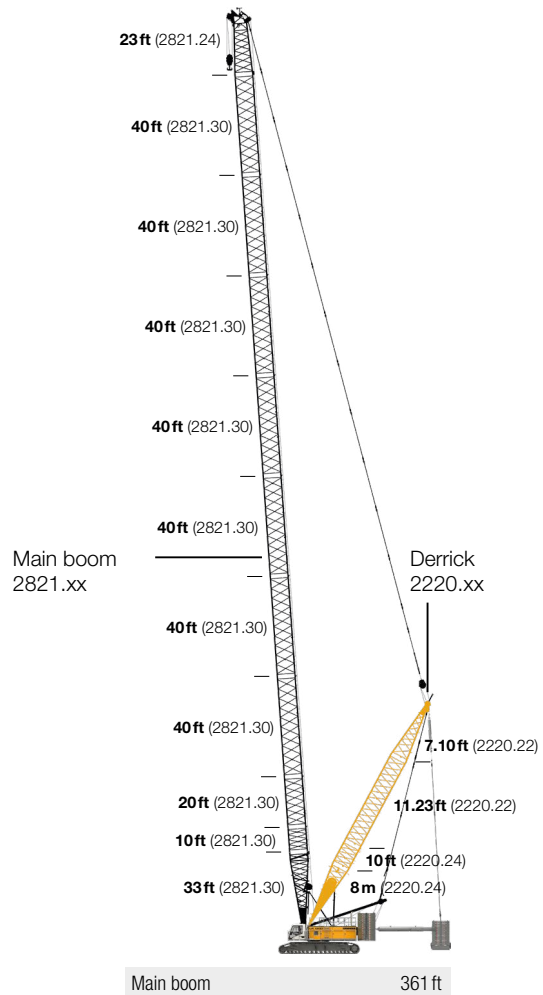


Boom combinations

Derrick equipment



Further information on page 8.

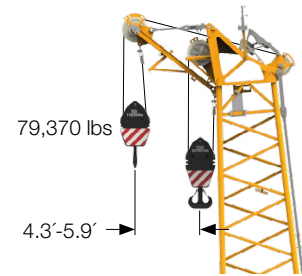
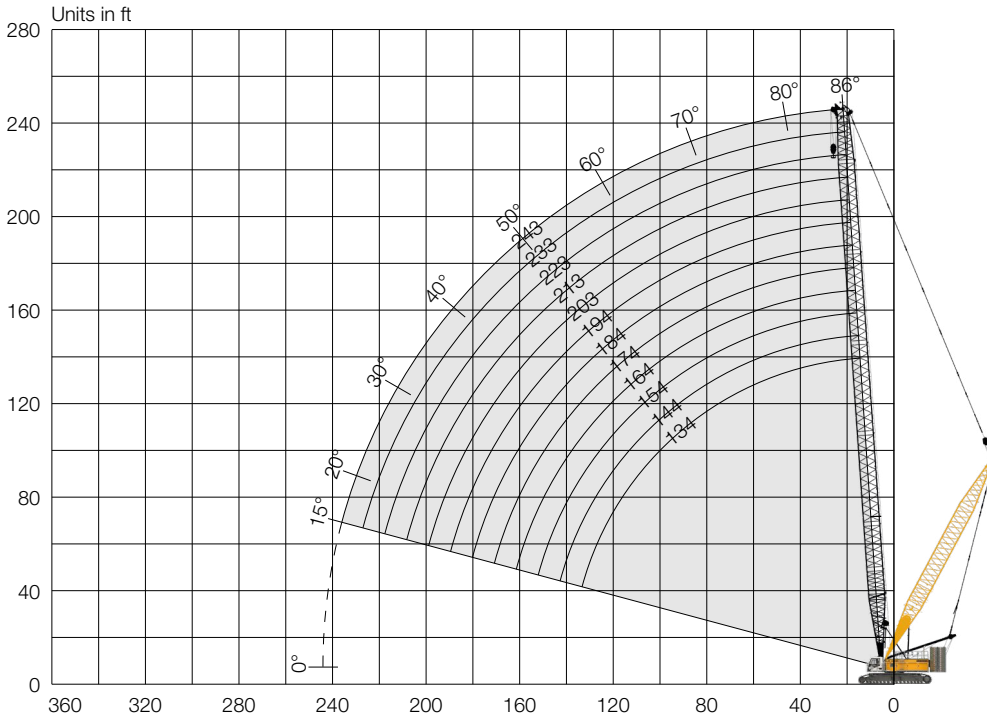


Further information on page 10.

Main boom (No. 2821.xx)

Main boom 86–15°, 134-243ft

Derrick equipment without suspended counterweight



Auxiliary jib 79,370 lbs (option)
 The maximum capacity of the auxiliary jib is 79,370 lbs.
 The corresponding load chart is programmed in the LML system.

Main boom 243ft

Main boom configuration (No. 2821.xx)

	Length	Amount of boom sections											
Boom foot	33 ft	1	1	1	1	1	1	1	1	1	1	1	1
Boom section	10 ft		1		1		1		1		1		1
Boom section	20 ft			1	1			1	1			1	1
Boom section	40 ft	2	2	2	2	3	3	3	3	4	4	4	4
Boom head	23 ft	1	1	1	1	1	1	1	1	1	1	1	1
Boom length [ft]		134	144	154	164	174	184	194	203	213	223	233	243
Auxiliary jib applicable		✓	✓	✓	✓	✓	✓	✓	✓	✓			

* Actual lengths of boom sections are metric (e.g. 3 m, 6 m, 7 m, 10 m, 12 m).
 The figures shown above are approximate conversions to feet.

Load capacities in 1000lbs with main boom (No. 2821.xx)

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

Derrick equipment without suspended counterweight

Load capacities in 1000lbs with 229,300lbs rear counterweight and 125,700lbs carbody counterweight

Radius	Boom length [ft]											Radius		
	134	154	164	184	203	223	243	262*	282*	312*	341*		361*	
[ft]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[ft]
19	591.3													19
20	556.7													20
23	448.0	448.0	447.8	447.8										23
26	373.9	373.9	373.5	373.0	372.4	371.7								26
30	319.2	319.2	319.2	318.8	317.9	317.0	315.9	295.4	255.1					30
33	278.7	278.2	277.8	277.1	276.0	275.1	274.0	272.9	255.1	207.9				33
39	220.7	220.0	219.4	218.5	217.4	216.3	215.0	213.8	212.3	207.9	171.3	151.0		39
46	181.0	180.1	179.5	178.6	177.3	176.1	174.8	173.5	172.0	170.0	167.8	151.0		46
53	152.8	151.9	151.0	150.1	148.8	147.5	146.2	144.8	143.3	141.1	138.9	137.1		53
59	141.3	130.5	129.9	129.0	127.4	126.3	124.6	123.2	121.7	119.5	117.1	115.5		59
66	123.7	122.6	121.9	111.3	110.0	108.7	107.1	105.8	104.1	101.9	99.4	98.8		66
72	108.7	107.6	106.9	106.0	97.0	95.7	94.1	92.6	91.1	88.6	86.2	84.4		72
79	97.2	96.3	95.5	94.6	85.3	84.0	82.5	80.9	79.4	76.9	74.5	72.8		79
85	86.9	86.0	85.1	84.2	82.9	74.5	72.8	71.4	69.7	67.5	65.7	63.9		85
92	78.3	77.2	76.5	75.4	74.1	72.8	66.4	63.9	62.2	60.0	57.3	55.6		92
98	70.8	69.7	69.0	67.9	66.6	65.9	64.4	56.9	55.1	52.7	50.0	48.3		98
105	64.6	63.7	62.8	61.9	60.6	59.3	57.8	56.4	48.9	46.5	43.9	42.1		105
112	58.9	57.8	57.1	56.2	54.7	53.6	52.0	50.5	48.9	41.2	38.6	36.8		112
118	53.6	52.7	52.0	50.9	49.6	48.5	46.7	45.4	43.7	41.4	33.7	33.3		118
125	48.9	48.1	47.4	46.5	45.0	43.9	42.3	40.8	39.2	36.8	31.1	29.1		125
131	45.0	44.1	43.2	42.3	41.0	39.7	38.1	36.8	35.1	33.3	31.7	25.1		131
138		40.3	39.7	38.8	37.3	36.2	34.6	33.3	32.8	30.6	28.0	26.0		138
144		37.0	36.2	35.3	34.0	33.3	32.4	31.1	29.3	27.1	24.5	22.7		144
151		34.0	33.3	33.3	32.2	30.9	29.3	28.0	26.2	24.0	21.4	19.6		151
158			31.3	30.6	29.3	28.0	26.5	25.1	23.4	21.2	18.5	16.8		158
164			28.4	27.8	26.7	25.4	23.8	22.5	20.7	18.5	15.9	14.1		164
180				22.0	20.7	19.6	18.1	16.8	15.2	12.8	10.4	8.4		180
197					15.9	15.0	13.4	12.1	10.4	8.2	5.5	3.7		197
213						10.8	9.5	8.2	6.4	4.2				213
230							6.0	4.6	3.1					230

* Not possible without suspended counterweight.
 TLT 10539958. Above load charts are for reference only.
 For actual lift duty please refer to load chart in operator's cabin or manual.

Load capacities in 1000lbs with main boom (No. 2821.xx)

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

Derrick equipment with 264,600lbs suspended counterweight at 42.6 ft radius

Load capacities in 1000lbs with 229,300lbs rear counterweight and 125,700lbs carbody counterweight | 264,600lbs suspended counterweight at 42.6ft radius

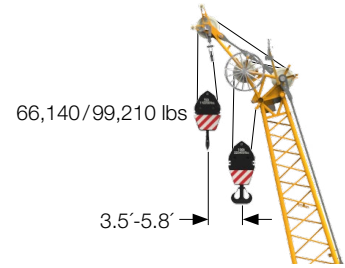
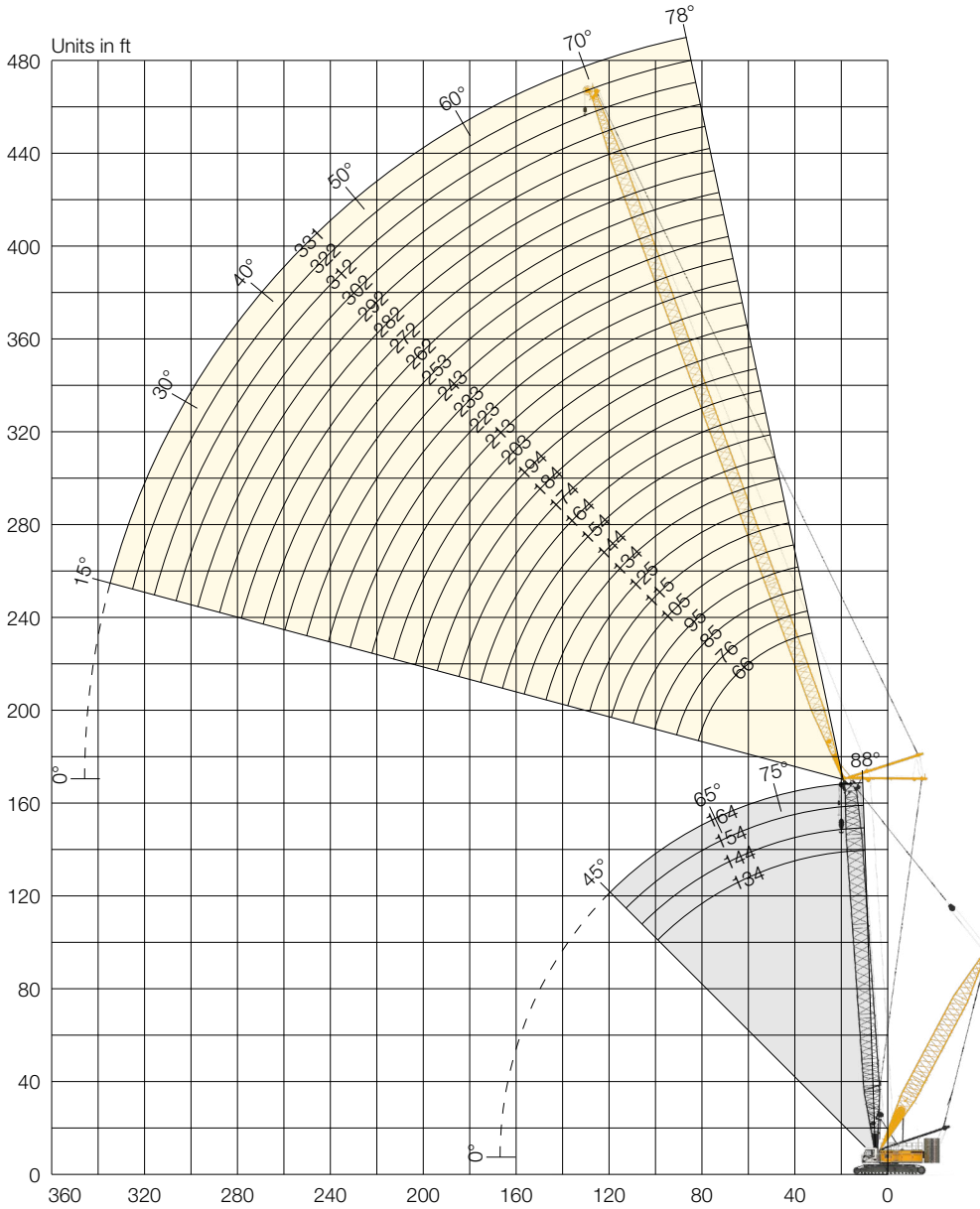
Radius	Boom length [m]											Radius		
	134	154	164	184	203	223	243	262	282	312	341		361	
[ft]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[ft]
30	661.2	591.5												30
33	660.1	588.4	553.4											33
39	528.7	527.8	527.1	487.0	428.6									39
46	439.2	438.3	437.8	437.0	425.7	377.0	332.5							46
52	375.2	374.1	373.2	372.4	370.8	369.7	332.5	295.4						52
59	336.6	325.2	324.3	323.2	321.9	320.6	319.0	295.4	255.1					59
66	297.2	296.1	295.4	285.5	284.0	282.6	281.1	279.5	255.1	207.9				66
79	239.6	238.5	237.9	236.8	227.7	226.9	225.3	223.8	222.0	207.9	171.3			79
92	199.3	198.2	197.5	196.4	195.3	194.2	186.1	184.7	183.0	180.6	171.3	151.0		92
105	169.8	168.7	167.8	166.9	165.3	164.2	162.9	161.6	154.3	151.9	149.3	147.5		105
118	146.8	145.7	145.1	144.2	142.6	141.5	139.8	138.5	136.7	134.5	127.4	125.7		118
131	126.3	127.9	127.0	126.1	124.8	123.5	121.9	120.6	118.8	116.6	114.0	107.8		131
138		119.9	119.3	118.4	116.8	115.7	114.2	112.7	111.1	108.9	106.3	104.5		138
144		112.9	112.0	111.1	109.8	108.7	107.1	105.6	104.1	101.9	99.2	97.9		144
151		106.0	105.6	104.7	103.4	102.3	100.5	99.2	97.9	95.7	93.3	91.3		151
157			99.6	99.2	97.9	96.6	95.0	93.7	92.2	89.7	87.3	85.5		157
164			93.0	93.7	92.4	91.3	89.7	88.4	86.6	84.4	81.8	80.0		164
180				81.6	80.5	79.4	77.8	76.5	75.0	72.5	70.1	68.3		180
197					70.5	69.4	68.1	66.8	65.3	63.1	60.6	58.9		197
213						61.1	59.7	58.6	56.9	54.7	52.2	50.5		213
230							52.7	51.4	49.8	47.6	45.2	43.4		230
295										27.6	25.4	23.6		295
328											17.8	16.3		328
344												13.0		344

Above load charts are for reference only.

For actual lift duty please refer to load chart in operator's cabin or manual.

Luffing jib (No. 2316.xx)

Main boom 88-45°, 134-164 ft | Luffing jib 78-15°, 66-331 ft
 Derrick equipment without suspended counterweight



Auxiliary jib 66,140/99,210 lbs (option)
 The maximum capacity of the auxiliary jib is 66,140/99,210 lbs. The corresponding load chart is programmed in the LML system.

Max. combination	486 ft
Main boom	164 ft
Luffing jib	322 ft
Max. combination	465 ft
Main boom	134 ft
Luffing jib	331 ft

Jib configuration (No. 2316.xx)

Length	Amount of jib sections																											
	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
Jib foot 33 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
Jib section 10 ft			1	1		1		1		1		1		1		1		1		1		1		1		1		1
Jib section 20 ft				1	1		1	1		1	1		1	1		1	1		1	1		1	1		1	1		1
Jib section 40 ft					1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
Jib head 33 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
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
Auxiliary jib applicable	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

* Actual lengths of boom sections are metric (e.g. 3 m, 6 m, 10 m, 12 m). The figures shown above are approximate conversions to feet.

Load capacities in 1000lbs with luffing jib (No. 2316.xx)

Max. 273,400lbs rear counterweight and 125,700lbs carbody counterweight

Derrick equipment without suspended counterweight

Main boom 144 ft | 88°

Radius	Jib [ft]							
	134	174	213	253	292	312	341*	371*
[ft]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]
43	186.5							
59	142.9	130.7						
66	126.5	124.8	94.6					
72	112.9	111.1	92.6	66.4				
79	101.6	99.9	91.1	66.4	50.5			
85	93.0	91.3	88.8	66.4	50.3	42.5		
92	85.1	83.3	81.6	65.7	48.9	41.9	32.8	
180		34.8	33.3	32.4	30.4	29.5	24.3	18.1
213			26.2	24.7	22.7	21.8	20.5	16.5
246				19.0	17.2	16.3	15.0	13.4
279					13.0	12.1	10.8	9.3
312						8.8	7.5	2.2
345							4.9	

Main boom 164 ft | 88°

Radius	Jib [ft]							
	134	174	213	253	292	312	341*	371*
[ft]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]
44	169.5							
59	142.6	120.6						
66	126.3	118.2	88.8					
72	112.7	110.9	87.3	65.5				
79	101.6	99.6	86.0	65.0	48.7			
85	93.0	91.3	83.3	63.5	48.7	41.4		
92	84.9	83.1	81.4	62.6	47.8	41.0	32.2	
180		34.8	33.3	32.2	30.4	29.5	23.8	17.9
213			26.2	24.5	22.7	21.8	20.5	16.3
246				19.0	17.2	16.3	15.0	13.4
279					13.0	12.1	10.8	9.3
312						8.8	7.5	2.4
345							4.9	

Main boom 203 ft | 88°

Radius	Jib [ft]							
	134*	174*	213*	253*	292*	312*	341*	371*
[ft]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]
46	138.9							
59	131.0	103.0						
66	125.7	100.1	77.8					
72	112.0	97.0	76.5	58.6				
79	101.0	94.1	75.0	58.2	44.5			
85	92.4	90.6	73.0	57.1	44.5	38.6		
92	84.4	82.7	71.2	56.2	43.9	38.4	30.2	
180		34.4	33.3	32.0	30.0	28.4	23.1	17.2
213			26.0	24.3	22.5	21.6	20.1	15.9
246				18.7	17.0	16.1	14.8	13.2
279					12.8	11.9	10.6	9.0
312						8.6	7.3	2.6
345							4.6	

Main boom 243 ft | 88°

Radius	Jib [ft]							
	134*	174*	213*	253*	292*	312*	341*	371*
[ft]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]
47	115.3							
59	108.7	87.3						
66	104.7	84.9	66.4					
72	100.1	82.5	66.1	51.8				
79	95.7	80.0	64.8	51.6				
85	91.7	77.4	62.8	50.7	40.1	35.3		
92	83.8	74.3	61.3	49.8	39.5	35.1	28.4	
180		34.2	33.3	31.5	29.5	27.1	21.8	16.3
213			25.8	24.0	22.0	21.2	19.8	15.0
246				18.5	16.5	15.7	14.3	12.8
279					12.6	11.7	10.4	8.8
312					0.0	8.4	7.1	2.9
345							4.4	

* Not possible without suspended counterweight.
 TLT 10539958. Above load charts are for reference only.
 For actual lift duty please refer to load chart in operator's cabin or manual.

Load capacities in 1000lbs with luffing jib (No. 2316.xx)

Max. 273,400lbs rear counterweight and 125,700lbs carbody counterweight

Derrick equipment without suspended counterweight

Main boom 144ft | 83°

Radius	Jib [ft]							
	134	174	213	253	292	312	341*	371*
[ft]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]
68	113.8							
85	86.2	84.2						
92	78.7	76.7	74.5					
105	66.8	65.7	63.5	61.5				
118	58.4	56.4	54.5	52.2	46.1			
125	54.5	52.7	50.7	48.5	45.6	38.4		
131	50.9	49.2	47.2	45.2	43.0	37.9	28.7	
180		32.6	30.6	28.7	26.7	25.8	24.3	18.7
213			23.6	21.6	19.6	18.7	17.2	15.7
246				16.5	14.6	13.7	12.1	10.6
279					10.6	9.7	8.4	6.8
312						6.6	5.3	3.7
345							2.9	

Main boom 164ft | 83°

Radius	Jib [ft]							
	134	174	213	253	292	312	341*	371*
[ft]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]
70	107.1							
85	84.9	82.7						
98	71.2	69.0	67.0					
105	66.4	64.4	62.4	60.2				
118	57.3	55.3	53.4	51.1	45.2			
125	53.6	51.6	49.6	47.4	45.0	37.5		
131	50.0	48.3	46.3	44.1	42.1	37.5	28.4	
180		32.0	30.0	28.0	26.0	24.9	23.4	18.7
213			22.9	20.9	19.0	18.1	16.5	15.0
246				15.9	14.1	13.0	11.7	9.9
279					10.1	9.3	7.9	6.4
312						3.2	6.2	4.9
345							2.4	

Main boom 203ft | 83°

Radius	Jib [ft]							
	134*	174*	213*	253*	292*	312*	341*	371*
[ft]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]
74	95.9							
92	74.3	72.1						
98	68.3	66.4	64.8					
112	59.1	57.1	54.9	52.7				
125	51.4	49.4	47.2	45.0	42.8			
131	48.1	46.1	43.9	41.9	39.7	35.7		
138	45.0	43.2	41.0	39.0	36.8	35.5	27.1	
144	42.3	40.6	38.4	36.4	34.2	33.1	27.1	20.3
197		26.5	24.7	22.7	20.5	19.6	18.1	16.3
230			18.7	17.0	15.0	13.9	12.6	10.8
279				10.8	9.0	8.2	6.8	5.1
312					6.2	5.3	4.0	2.4
328						4.0	2.6	

Main boom 243ft | 83°

Radius	Jib [ft]							
	134*	174*	213*	253*	292*	312*	341*	371*
[ft]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]
79	84.7							
92	70.8	68.3						
105	60.6	58.4	56.0					
118	52.2	50.0	47.8	45.4				
131	45.6	43.4	41.2	39.0	36.8	33.5		
144	40.1	38.1	36.2	34.0	32.6	31.5	25.6	
158	35.7	33.7	32.6	30.4	28.2	27.1	24.7	19.0
180		28.4	26.5	24.3	22.0	21.2	19.6	17.2
213			19.8	17.9	15.9	14.8	13.2	11.5
246				13.2	11.2	10.4	8.8	7.1
279					9.7	7.7	6.8	5.5
312						5.1	4.2	2.6
328							2.9	

* Not possible without suspended counterweight.

TLT 10539958. Above load charts are for reference only.

For actual lift duty please refer to load chart in operator's cabin or manual.

Load capacities in 1000lbs with luffing jib (No. 2316.xx)

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

Derrick equipment with max. 264,600lbs suspended counterweight at 42.6ft radius

Main boom 144ft | 88°

Radius	Jib [ft]		
	134	174	213
[ft]	[lbs]	[lbs]	[lbs]
46	186.5		
59	174.8	130.7	
62	171.1	128.7	94.6
72	149.0	123.5	92.6
79	135.4	120.4	91.1
85	123.9	113.1	88.8
92	112.9	106.0	87.1
98	103.8	100.5	84.7
180		39.2	44.3
246			
295			

Main boom 164ft | 88°

Radius	Jib [ft]		
	134	174	213
[ft]	[lbs]	[lbs]	[lbs]
44	169.5		
52	164.9	121.7	
62	155.6	119.3	88.8
72	142.9	114.2	87.3
79	134.7	110.9	86.0
85	125.2	106.7	83.3
92	114.0	102.5	81.6
98	104.7	99.2	79.4
180		39.9	44.5
246			
295			

Main boom 203ft | 88°

Radius	Jib [ft]		
	134	253	341
[ft]	[lbs]	[lbs]	[lbs]
46	138.9		
56	134.0		
62	128.3		
72	120.2	58.6	
79	114.9	58.2	
85	109.8	57.1	
92	103.6	56.2	30.2
98	98.3	54.9	30.0
180		40.6	23.1
246		25.4	19.4
295			14.6

Main boom 243ft | 88°

Radius	Jib [ft]		
	134	213	292
[ft]	[lbs]	[lbs]	[lbs]
47	115.3		
56	110.7		
66	104.7	66.4	
72	100.1	66.1	
85	92.2	62.8	40.1
92	87.3	61.3	39.5
98	83.1	59.7	38.6
180		39.2	29.8
213		31.1	26.9
262			22.5
295			14.8

Main boom 144ft | 83°

Radius	Jib [ft]		
	134	174	213
[ft]	[lbs]	[lbs]	[lbs]
68	179.5		
85	149.7	129.6	
92	135.4	125.0	92.8
105	112.4	108.5	90.2
118	95.9	93.9	84.4
125	88.4	86.9	80.7
138	76.5	76.1	73.6
180		49.2	50.5
263			
295			
312			

Main boom 164ft | 83°

Radius	Jib [ft]		
	134	174	213
[ft]	[lbs]	[lbs]	[lbs]
70	170.2		
85	153.4	123.2	
98	128.1	117.5	88.4
105	116.2	109.6	86.9
118	98.8	96.8	82.7
125	91.1	89.5	79.6
138	78.7	77.6	74.3
144	72.5	73.2	69.7
197		39.9	45.0
263			
312			

Main boom 203ft | 83°

Radius	Jib [ft]		
	134	253	341
[ft]	[lbs]	[lbs]	[lbs]
74	141.1		
92	131.2		
98	125.9		
112	109.3	59.1	
125	95.5	57.5	
131	88.6	56.7	
138	82.5	55.6	27.1
144	77.6	54.5	27.1
197		43.7	23.1
279		21.2	17.9
312			15.7

Main boom 243ft | 83°

Radius	Jib [ft]		
	134	213	292
[ft]	[lbs]	[lbs]	[lbs]
79	115.5		
92	110.5		
105	102.5	65.7	
118	93.0	64.8	
131	85.1	62.2	39.5
144	76.9	59.3	38.4
151	73.4	57.5	37.7
197		45.2	33.5
230		35.3	30.9
279			24.0
312			17.0

TLT 10539958. Above load charts are for reference only.
For actual lift duty please refer to load chart in operator's cabin or manual.



Please contact us.



Download datasheet