

Derrick equipment

LR 1300.1 SX

EN

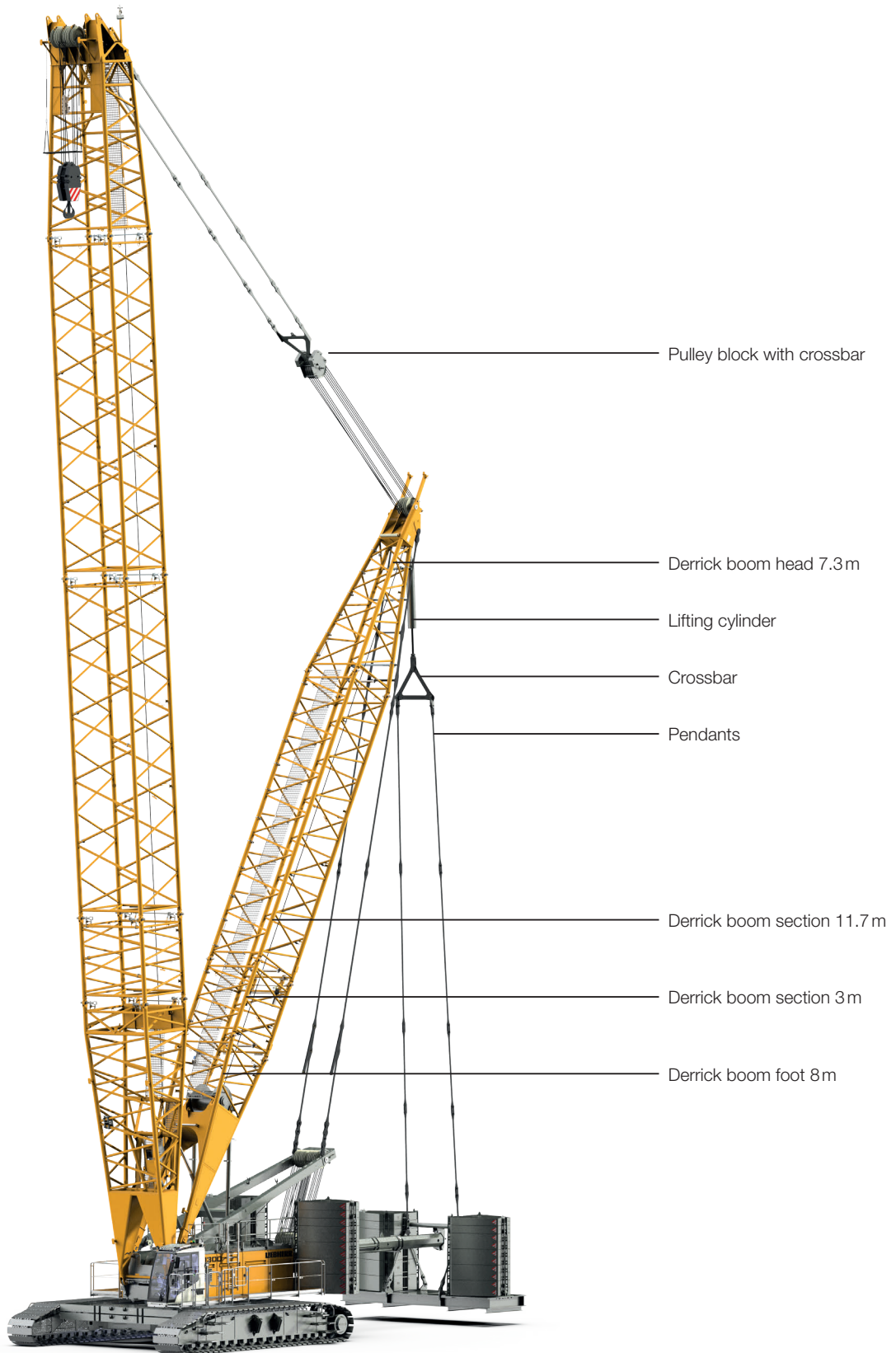
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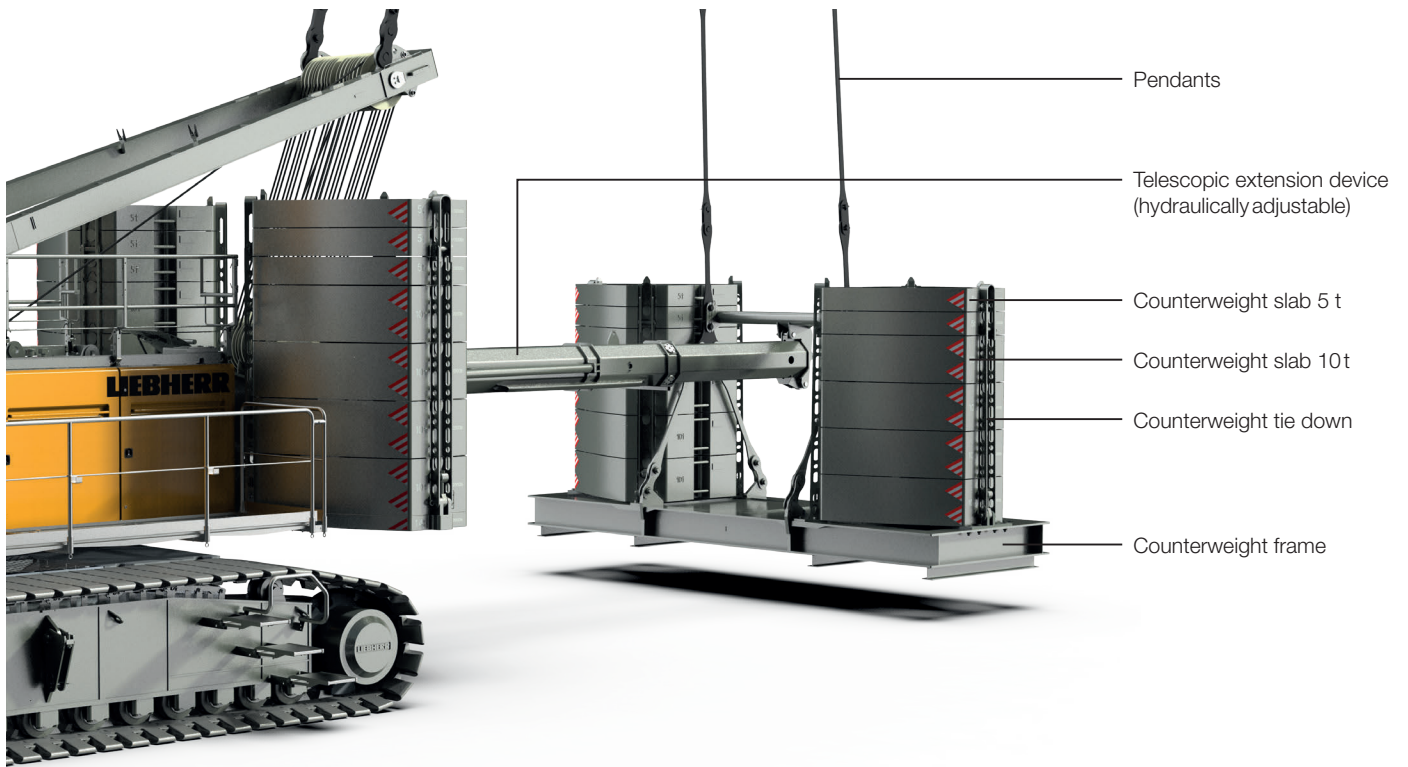
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Concept and characteristics

Derrick equipment with suspended counterweight

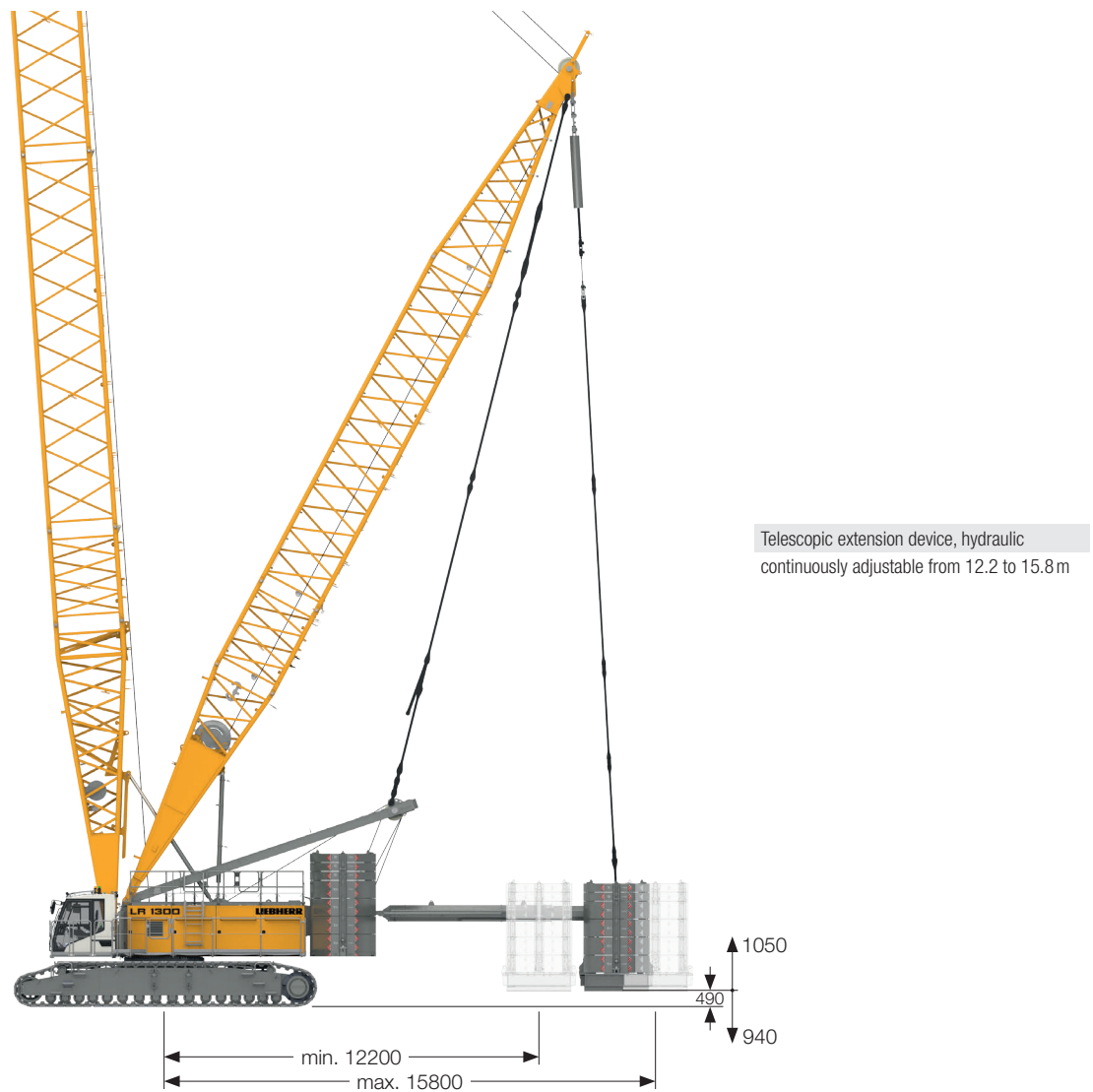


Suspended counterweight



Dimensions

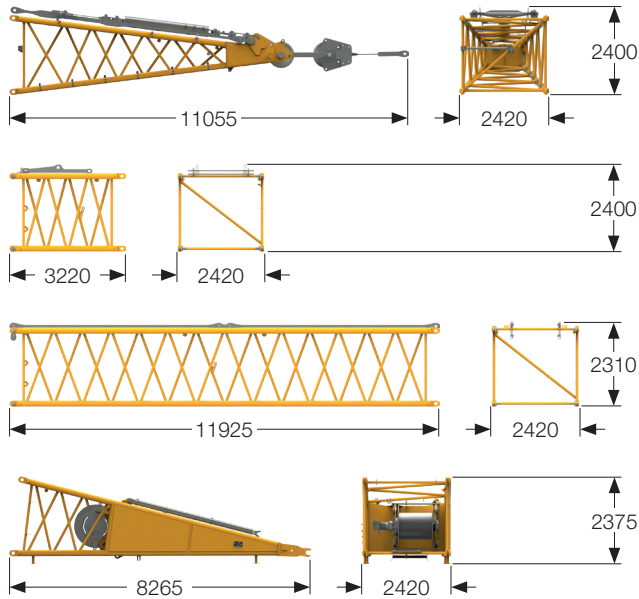
Derrick equipment with suspended counterweight



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. Machine 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 ISO 4305 Table 1 + 2 + 3, tipping angle 4°.
9. The structures are calculated according to EN 13001-1; EN 13001-2.
10. The last digits of the given dimensions are rounded to 0 and 5 and may differ from the actual dimensions.
11. Weights may vary depending on the delivered configuration of the machine, filling level of the tanks as well as generally valid tolerances.
12. 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) **7.3 m**

Weight including lifting cylinder with crossbar, including pulley block with crossbar 6550 kg

Derrick boom section (No. 2220.24) **3 m**

Weight including pendants 1030 kg

Derrick boom section (No. 2220.22) **11.7 m**

Weight including pendants 2560 kg

Derrick boom foot (No. 2220.24) **8 m**

Weight including rope 7800 kg

Suspended counterweight with telescopic extension device

Counterweight frame

Weight including pendants 12930 kg

Counterweight slab **4x**

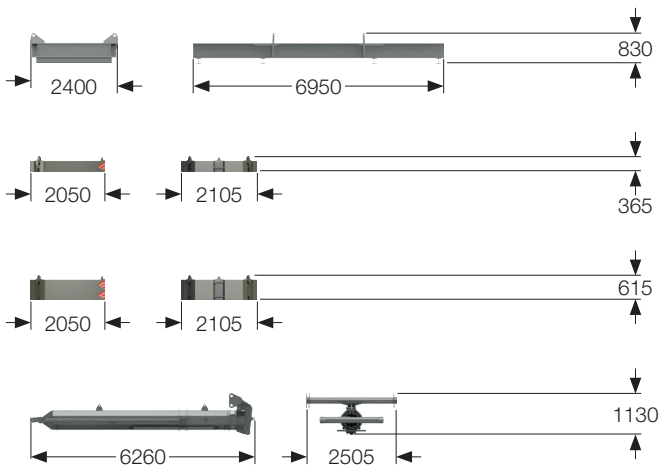
Weight 5000 kg

Counterweight slab **8x**

Weight 10000 kg

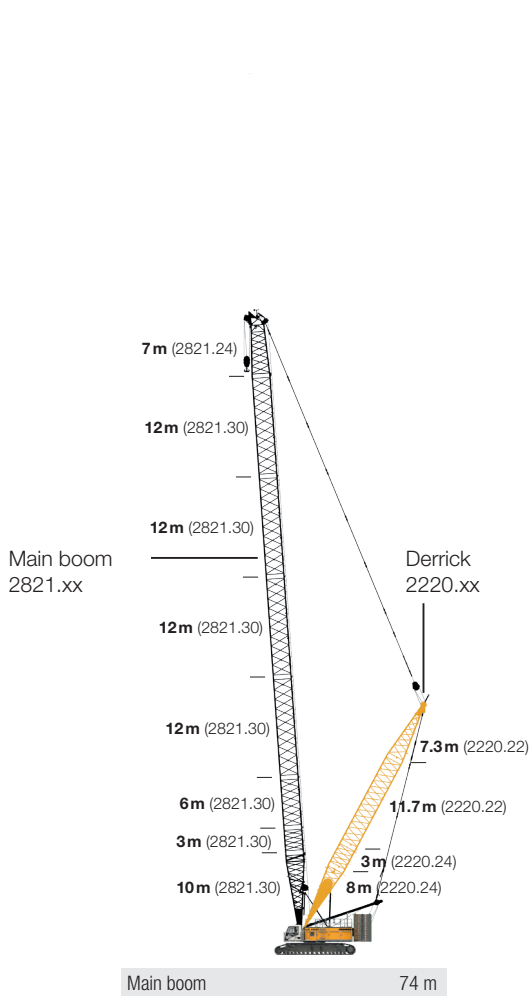
Telescopic extension device, hydraulic

Weight 2950 kg

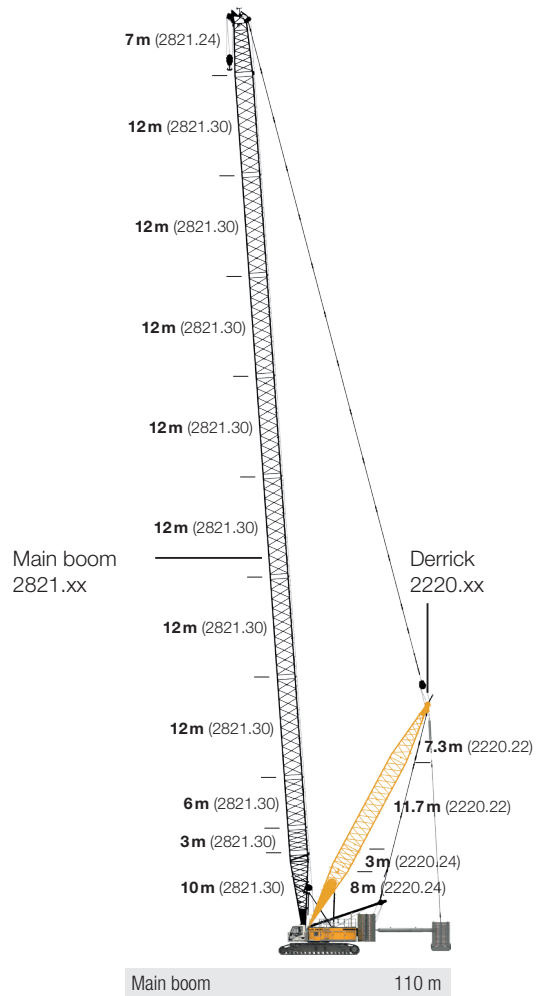


Boom combinations

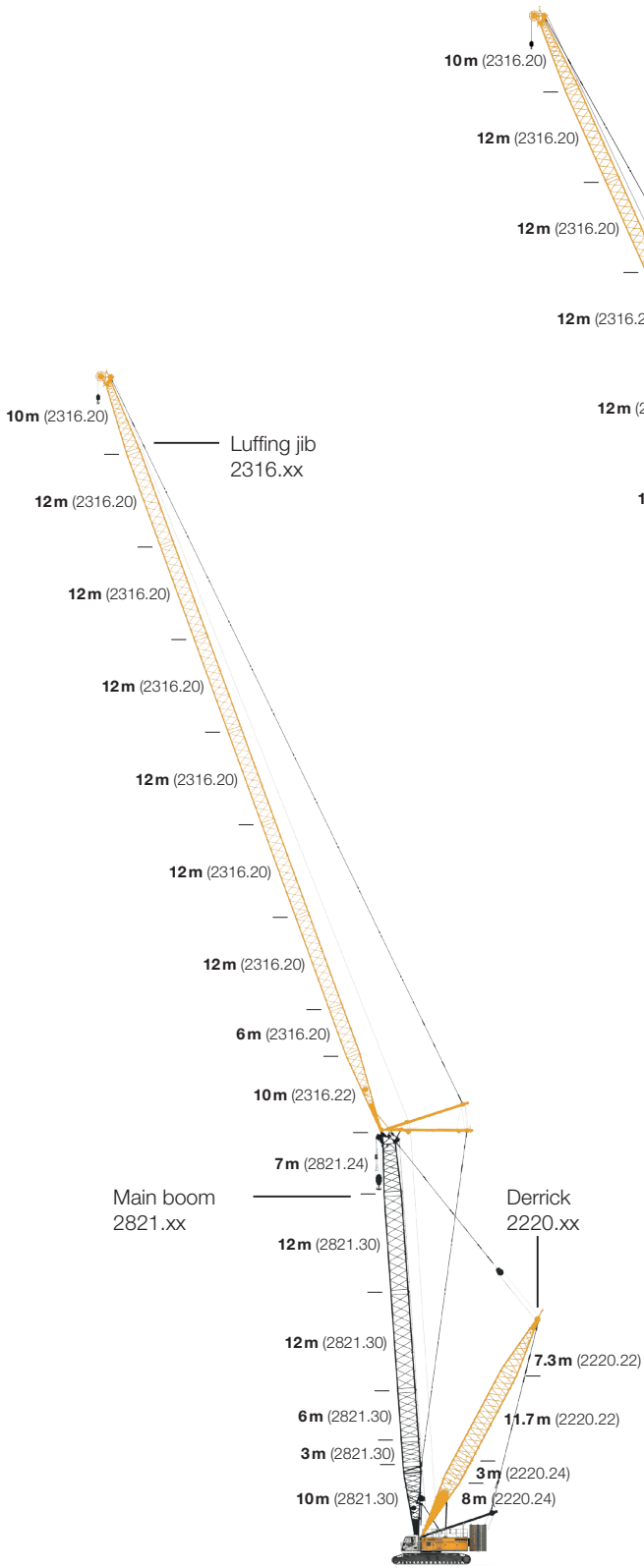
Derrick equipment



Further information on page 8.

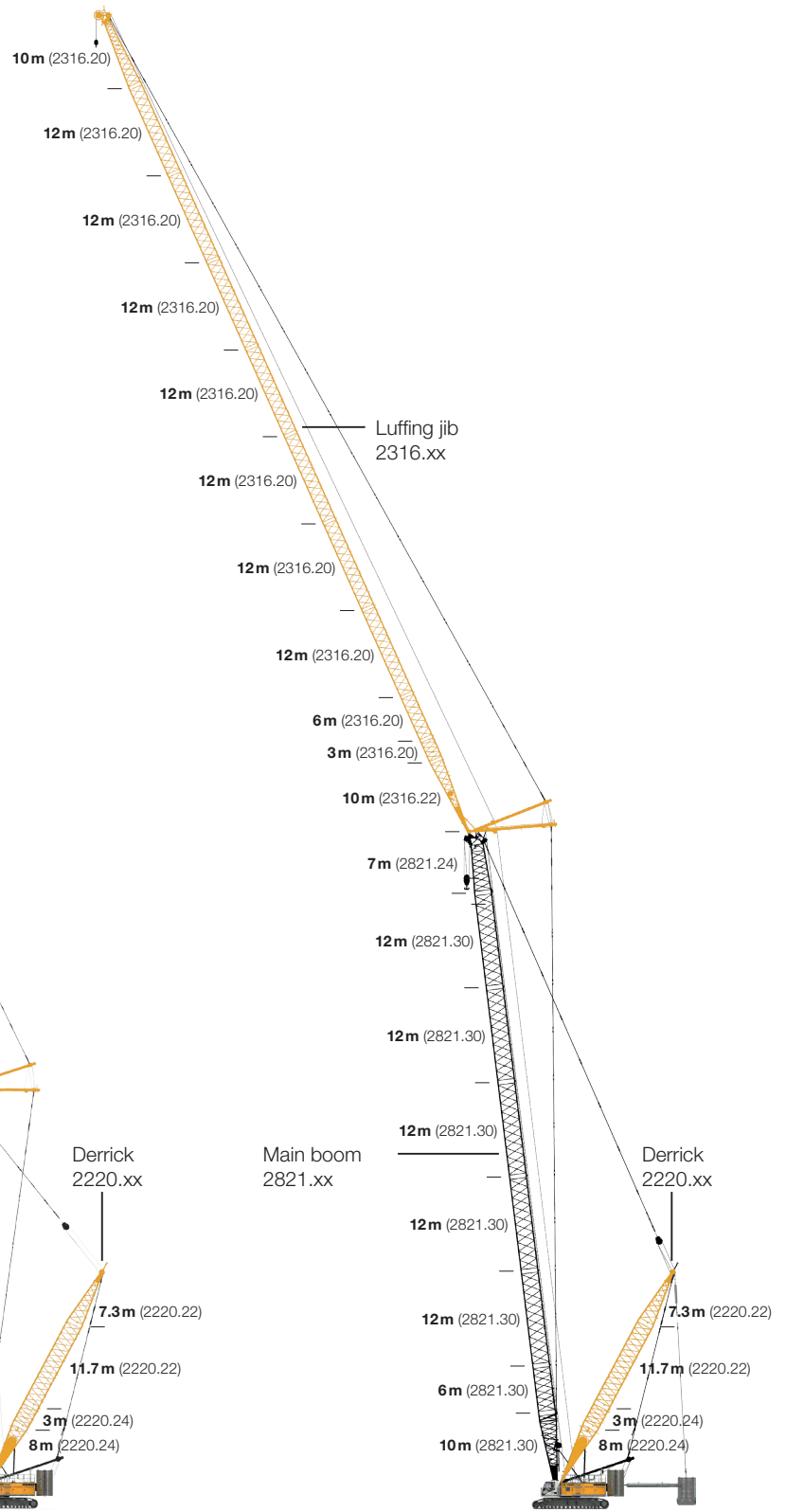


Further information on page 10.



Max. combination	148 m
Main boom	50 m
Luffing jib	98 m
Max. combination	142 m
Main boom	41 m
Luffing jib	101 m

Further information on page 12.



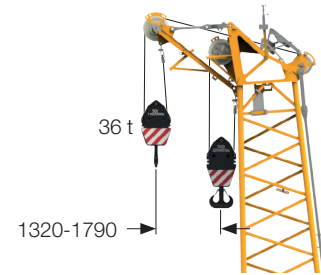
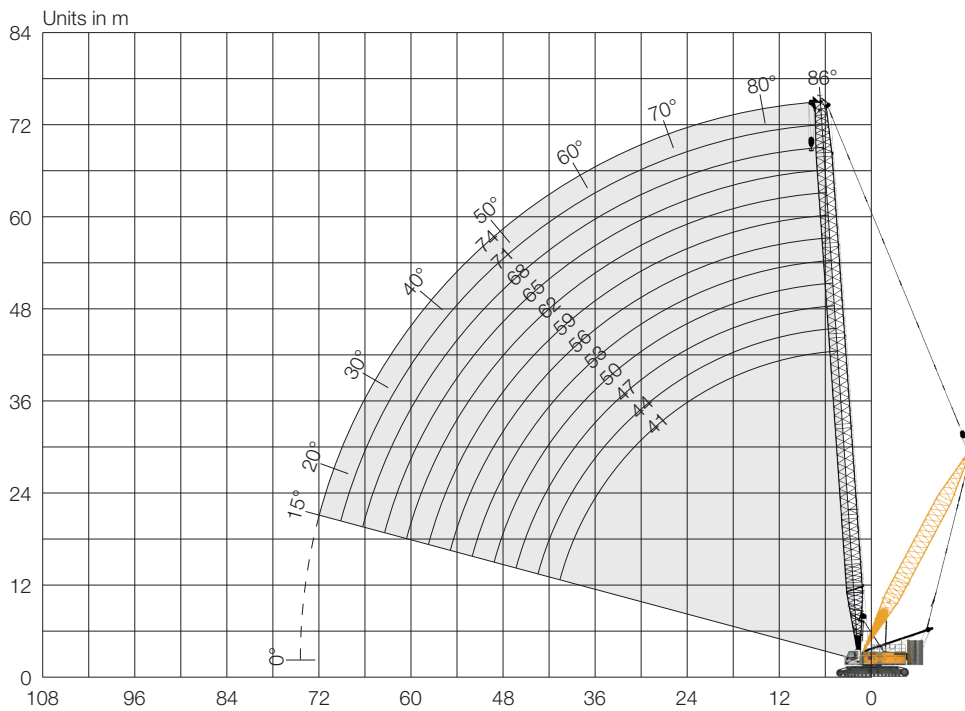
Max. combination	196 m
Main boom	83 m
Luffing jib	113 m
Max. combination	184 m
Main boom	86 m
Luffing jib	98 m

Further information on page 15.

Main boom (No. 2821.xx)

Main boom 86–15°, 41-74 m

Derrick equipment without suspended counterweight



Auxiliary jib 36 t (option)
 The maximum capacity of the auxiliary jib is 36 t. The corresponding load chart is programmed in the LML system.

Main boom 74 m

Main boom configuration (No. 2821.xx)

	Length	Amount of boom sections											
Boom foot	10 m	1	1	1	1	1	1	1	1	1	1	1	1
Boom section	3 m		1		1		1		1		1		1
Boom section	6 m			1	1			1	1			1	1
Boom section	12 m	2	2	2	2	3	3	3	3	4	4	4	4
Boom head	7 m	1	1	1	1	1	1	1	1	1	1	1	1
Boom length [m]		41	44	47	50	53	56	59	62	65	68	71	74
Auxiliary jib applicable		✓	✓	✓	✓	✓	✓	✓	✓	✓			

Load capacities with main boom (No. 2821.xx) | 104t rear counterweight and 57t carbody counterweight
Derrick equipment without suspended counterweight

Load capacities with 104t rear counterweight and 57t carbody counterweight

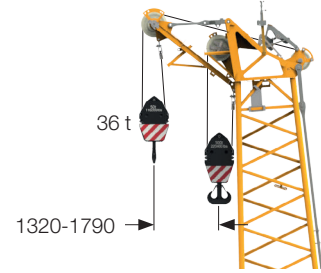
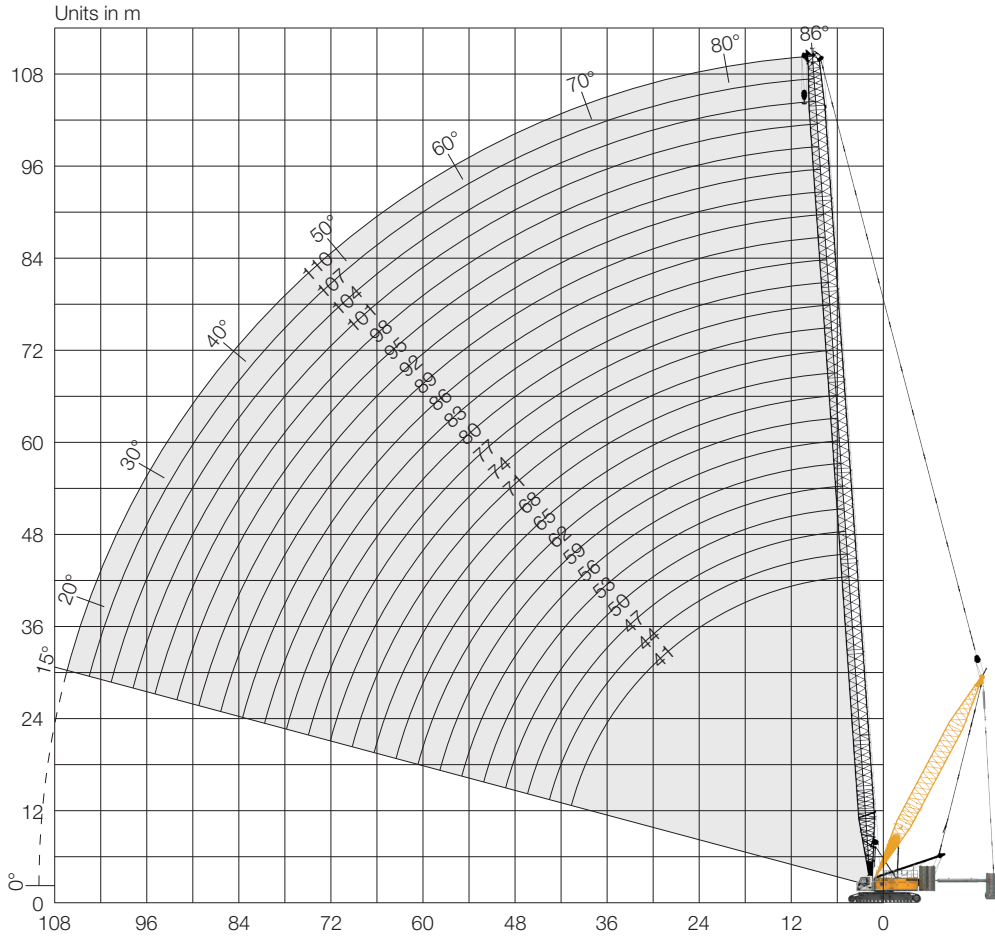
Radius [m]	Boom length [m]											Radius [m]	
	41	47	50	56	62	68	74	80*	86*	95*	104*		110*
	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]
5.8	268.2												5.8
6	252.5												6
7	203.2	203.2	203.1	203.1									7
8	169.6	169.6	169.4	169.2	168.9	159.2							8
9	144.8	144.8	144.8	144.6	144.2	143.8	137.2	119.2	99.8				9
10	126.4	126.2	126.0	125.7	125.2	124.8	124.3	117.9	99.8	79.9			10
12	100.1	99.8	99.5	99.1	98.6	98.1	97.5	97.0	96.3	78.7	64.0	55.9	12
14	82.1	81.7	81.4	81.0	80.4	79.9	79.3	78.7	78.0	76.1	62.4	54.5	14
16	69.3	68.9	68.5	68.1	67.5	66.9	66.3	65.7	65.0	64.0	60.9	53.1	16
18	64.1	59.2	58.9	58.5	57.8	57.3	56.5	55.9	55.2	54.2	53.1	51.7	18
20	56.1	55.6	55.3	50.5	49.9	49.3	48.6	48.0	47.2	46.2	45.1	44.8	20
22	49.3	48.8	48.5	48.1	44.0	43.4	42.7	42.0	41.3	40.2	39.1	38.3	22
24	44.1	43.7	43.3	42.9	38.7	38.1	37.4	36.7	36.0	34.9	33.8	33.0	24
26	39.4	39.0	38.6	38.2	37.6	33.8	33.0	32.4	31.6	30.6	29.8	29.0	26
28	35.5	35.0	34.7	34.2	33.6	33.0	30.1	29.0	28.2	27.2	26.0	25.2	28
30	32.1	31.6	31.3	30.8	30.2	29.9	29.2	25.8	25.0	23.9	22.7	21.9	30
32	29.3	28.9	28.5	28.1	27.5	26.9	26.2	25.6	22.2	21.1	19.9	19.1	32
34	26.7	26.2	25.9	25.5	24.8	24.3	23.6	22.9	22.2	18.7	17.5	16.7	34
36	24.3	23.9	23.6	23.1	22.5	22.0	21.2	20.6	19.8	18.8	15.3	15.1	36
38	22.2	21.8	21.5	21.1	20.4	19.9	19.2	18.5	17.8	16.7	14.1	13.2	38
40	20.4	20.0	19.6	19.2	18.6	18.0	17.3	16.7	15.9	15.1	14.4	11.4	40
42		18.3	18.0	17.6	16.9	16.4	15.7	15.1	14.9	13.9	12.7	11.8	42
44		16.8	16.4	16.0	15.4	15.1	14.7	14.1	13.3	12.3	11.1	10.3	44
46		15.4	15.1	15.1	14.6	14.0	13.3	12.7	11.9	10.9	9.7	8.9	46
48			14.2	13.9	13.3	12.7	12.0	11.4	10.6	9.6	8.4	7.6	48
50			12.9	12.6	12.1	11.5	10.8	10.2	9.4	8.4	7.2	6.4	50
55				10.0	9.4	8.9	8.2	7.6	6.9	5.8	4.7	3.8	55
60					7.2	6.8	6.1	5.5	4.7	3.7	2.5	1.7	60
65						4.9	4.3	3.7	2.9	1.9			65
70							2.7	2.1	1.4				70

* Not possible without suspended counterweight.
TLT 11959002. Above load charts are for reference only.
For actual lift duty please refer to load chart in operator's cabin or manual.

Main boom (No. 2821.xx)

Main boom 86–15°, 41-110m

Derrick equipment with suspended counterweight



Auxiliary jib 36 t (option)

The maximum capacity of the auxiliary jib is 36 t. The corresponding load chart is programmed in the LML system.

Main boom 110 m

Main boom configuration (No. 2821.xx)

	Length	Amount of boom sections																							
Boom foot	10 m	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Boom section	3 m		1		1		1		1		1		1		1		1		1		1				
Boom section	6 m			1	1			1	1			1	1			1	1			1	1				
Boom section	12 m	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7			
Boom head	7 m	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Boom length [m]		41	44	47	50	53	56	59	62	65	68	71	74	77	80	83	86	89	92	95	98	101	104	107	110
Auxiliary jib applicable		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Load capacities with main boom (No. 2821.xx) | 124 t rear counterweight and 57 t carbody counterweight
 Derrick equipment with 120 t suspended counterweight at 15.8 m radius

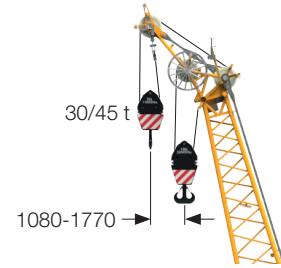
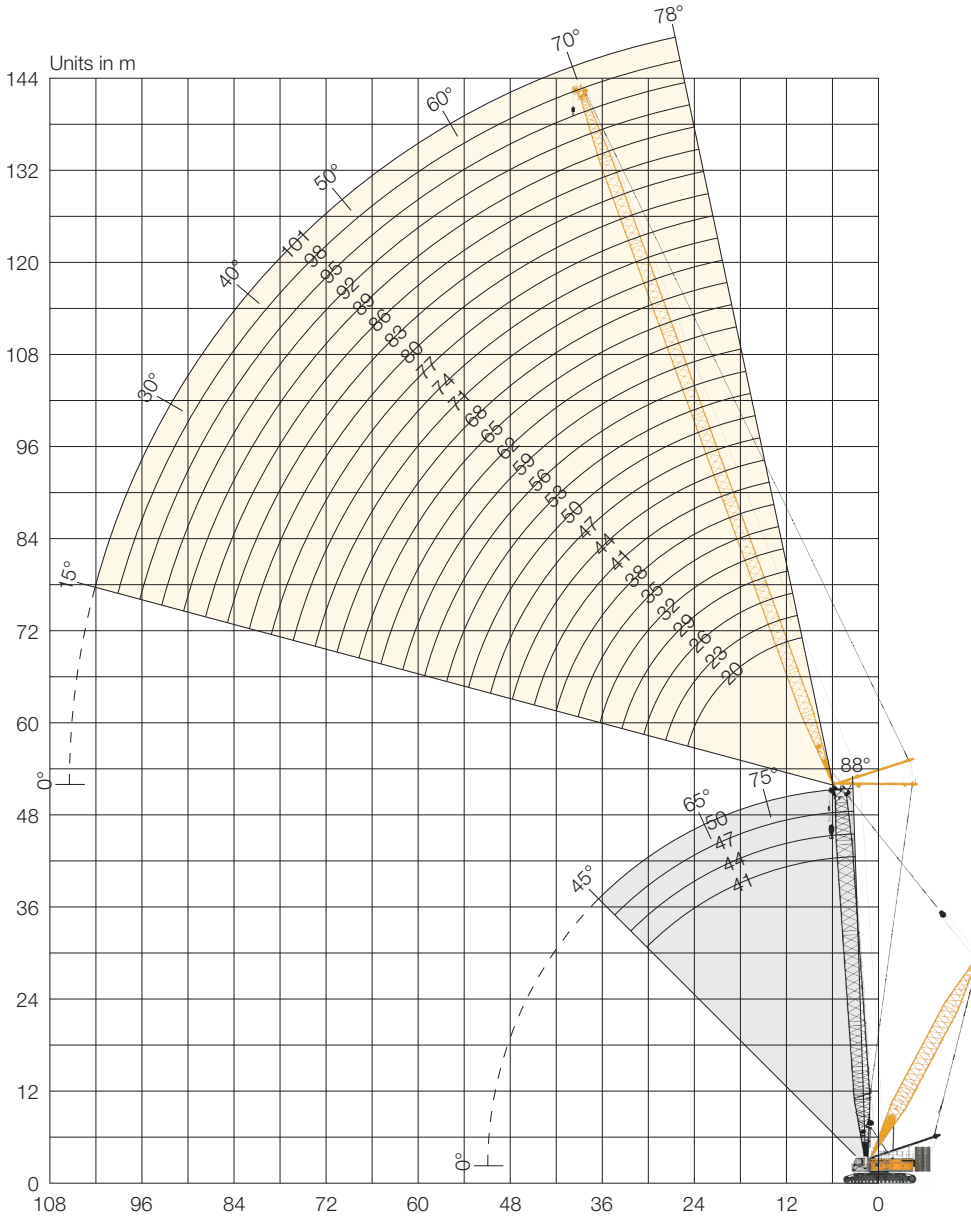
Load capacities with 124 t rear counterweight and 57 t carbody counterweight | 120 t suspended counterweight at 15.8 m radius

Radius [m]	Boom length [m]											Radius [m]		
	41	47	50	56	62	68	74	80	86	95	104		110	
	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]	
11	275.1													11
12	264.3	234.1												12
14	223.8	221.2	206.3											14
16	191.1	190.3	189.9	171.8										16
18	171.2	165.7	165.3	164.8	164.2									18
20	151.3	150.5	150.2	145.5	141.6	125.2								20
22	135.3	134.6	134.2	133.8	129.4	121.6								22
24	122.2	121.5	121.1	120.7	116.7	116.1	104.8							24
26	111.3	110.5	110.2	109.8	109.1	105.4	102.3	92.1						26
28	102.0	101.3	100.9	100.5	99.9	99.3	95.6	90.2	81.5					28
30	93.9	93.2	92.9	92.4	91.8	91.2	90.5	78.3	80.2					30
32	87.0	86.3	86.0	85.5	84.9	84.3	83.6	83.0	78.7	66.8				32
34	80.8	80.2	79.8	79.4	78.7	78.2	77.5	76.8	76.1	66.6				34
36	75.4	77.4	74.4	74.1	73.4	72.9	72.2	71.5	70.8	66.3	53.1			36
38	70.6	70.0	69.7	69.2	68.6	68.0	67.3	66.7	65.9	64.9	53.1			38
40	66.2	65.6	65.3	64.9	64.2	63.7	63.0	42.3	61.6	60.5	53.1	46.6		40
42		61.7	61.4	60.9	60.3	59.8	59.2	58.6	57.8	56.8	53.1	46.6		42
44		58.2	57.9	57.5	56.9	56.4	55.6	55.0	54.3	53.2	52.1	46.6		44
46		58.2	54.6	54.3	53.6	53.1	52.4	51.8	51.0	50.0	48.8	46.6		46
48		54.9	51.6	51.3	50.7	50.1	49.4	48.8	48.1	47.0	45.9	45.1		48
50			48.8	48.5	48.0	47.4	46.7	46.1	45.3	44.5	43.3	42.5		50
55				42.6	42.1	41.6	40.9	40.3	39.6	38.6	37.4	36.6		55
60					37.1	36.7	36.0	35.4	34.7	33.7	32.5	31.7		60
65						32.4	31.8	31.2	30.5	29.4	27.6	27.6		65
70							28.2	27.7	27.0	25.9	23.1	24.0		70
75								24.6	23.9	22.9	19.9	20.9		75
80									21.3	20.2	17.3	18.0		80
90										15.7	14.6	13.8		90
100											11.2	10.3		100

TLT 11962213. 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°, 41-50 m | Luffing jib 78-15°, 20-101 m
Derrick equipment without suspended counterweight



Auxiliary jib 30/45 t (option)
The maximum capacity of the auxiliary jib is 30/45 t. The corresponding load chart is programmed in the LML system.

Max. combination	148 m
Main boom	50 m
Luffing jib	98 m
Max. combination	142 m
Main boom	41 m
Luffing jib	101 m

Jib configuration (No. 2316.xx)

Length	Amount of jib sections																												
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1						
Jib foot	10 m	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1						
Jib section	3 m		1		1		1		1		1		1		1		1		1		1		1						
Jib section	6 m			1	1		1	1		1	1		1	1		1	1		1	1		1	1						
Jib section	12 m					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	10 m	1	1	1	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 [m]		20	23	26	29	32	35	38	41	44	47	50	53	56	59	62	65	68	71	74	77	80	83	86	89	92	95	98	101
Auxiliary jib applicable		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Load capacities with luffing jib (No. 2316.xx) | 124 t rear counterweight and 57 t carbody counterweight
Derrick equipment without suspended counterweight

Main boom 44 m | 88°

Radius	Jib [m]							
	41	53	65	77	89	95	104*	113*
[m]	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]
13.2	68.0							
18	59.3	48.6						
20	53.2	46.5	34.1					
22	45.1	41.7	32.7	23.9				
24	39.2	38.3	31.4	23.2	16.8			
26	35.1	34.1	29.9	22.6	16.7	14.3		
28	31.8	30.6	28.9	22.1	16.3	14.1	11.4	
55		12.1	11.0	9.9	8.9	8.5	8.1	6.3
65			8.3	7.1	6.1	5.7	5.0	4.3
75				5.2	4.0	3.5	3.0	2.0
85					2.5	2.0		

Main boom 50 m | 88°

Radius	Jib [m]							
	41	53	65	77	89	95	104*	113*
[m]	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]
13.4	63.7							
18	56.7	46.2						
20	51.1	44.8	33.1					
22	43.6	39.9	31.7	23.2				
24	38.1	36.5	30.5	22.6	16.4			
26	34.2	32.6	28.9	22.0	16.2	13.9		
28	31.0	29.4	27.7	21.5	15.9	13.7	11.1	
55		11.8	10.8	9.6	8.6	8.1	7.6	6.0
65			8.1	6.9	6.0	5.5	4.7	4.1
75				5.0	3.9	3.4	2.8	
85					2.4			

Main boom 62 m | 88°

Radius	Jib [m]							
	41*	53*	65*	77*	89*	95*	104*	113*
[m]	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]
13.9	54.6							
18	49.6	39.5						
20	46.2	38.0	29.1					
22	40.1	35.3	28.1	20.9				
24	35.3	33.0	27.3	20.6	15.1			
26	31.9	30.1	26.0	20.1	15.0	12.9		
28	29.0	27.3	25.1	19.7	14.9	12.8	10.2	
55		11.3	10.1	9.0	13.6	7.4	6.7	5.2
65			7.7	6.5	5.5	4.9	4.2	3.6
75				4.7	3.5	3.0	2.5	
85					2.1			

Main boom 74 m | 88°

Radius	Jib [m]							
	41*	53*	65*	77*	89*	95*	104*	113*
[m]	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]
14.3	43.3							
18	40.5	31.8						
20	38.8	30.6	23.7					
22	35.1	29.4	23.0	17.2				
24	31.7	28.5	22.2	17.0				
26	29.1	26.6	21.9	16.7	12.6	10.8		
28	26.6	24.3	21.6	16.5	12.5	10.7	8.4	
55		10.4	9.0	8.2	7.0	6.5	5.7	4.3
65			6.8	5.8	4.8	4.2	3.5	2.8
75				4.2	3.1	2.6	2.1	
85								

* Not possible without suspended counterweight.
TLT 11962213. Above load charts are for reference only.
For actual lift duty please refer to load chart in operator's cabin or manual.

Load capacities with luffing jib (No. 2316.xx) | 124t rear counterweight and 57t carbody counterweight
Derrick equipment without suspended counterweight

Main boom 44 m | 83°

Radius	Jib [m]							
	41	53	65	77	89	95	104*	113*
[m]	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]
20.6	51.5							
26	39.1	38.1						
28	35.7	34.7	31.0					
32	30.3	29.7	28.8	22.2				
36	26.5	25.6	24.6	21.5	15.8			
38	24.7	23.9	22.9	21.0	15.6	13.3		
40	23.1	22.3	21.4	20.3	15.3	13.0	10.4	
55		14.8	13.9	13.0	12.0	11.1	9.0	6.8
65			10.7	9.8	8.9	8.5	7.6	4.3
75				7.3	6.6	6.2	5.5	4.7
85					4.7	4.3	3.8	3.0
95						2.5	2.2	

Main boom 50 m | 83°

Radius	Jib [m]							
	41	53	65	77	89	95	104*	113*
[m]	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]
21.3	48.5							
26	38.4	37.4						
30	32.2	31.3	29.9					
32	30.1	29.2	28.2	21.5				
36	26.0	25.1	24.1	21.0	14.7			
38	24.2	23.4	22.4	20.6	15.3	12.9		
40	22.7	21.8	20.9	20.0	15.1	12.8	10.1	
55		14.4	13.6	12.7	11.7	10.9	8.8	6.7
65			10.4	9.5	8.6	8.2	7.3	6.1
75				7.2	6.3	5.9	5.3	4.4
85					4.6	4.2	3.6	2.8
95						2.7	2.6	2.2

Main boom 62 m | 83°

Radius	Jib [m]							
	41*	53*	65*	77*	89*	95*	104*	113*
[m]	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]
22.7	43.4							
28	33.7	32.7						
30	30.9	30.1	27.6					
34	26.8	25.8		19.9				
38	23.3	22.3	21.4	19.6	14.5			
40	21.8	20.9	19.9	18.9	14.4	12.1		
42	20.4	19.5	18.6	17.6	14.1	12.0	9.6	
44	19.2	18.3	17.4	16.4	13.9	11.8	9.5	7.0
60		12.0	11.2	10.2	9.3	8.9	8.0	6.0
70			8.5	7.7	6.8	6.3	5.7	4.8
85				4.9	4.1	3.7	3.0	2.3
95					2.8	2.4		

Main boom 74 m | 83°

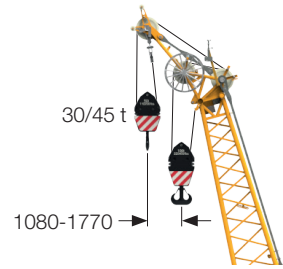
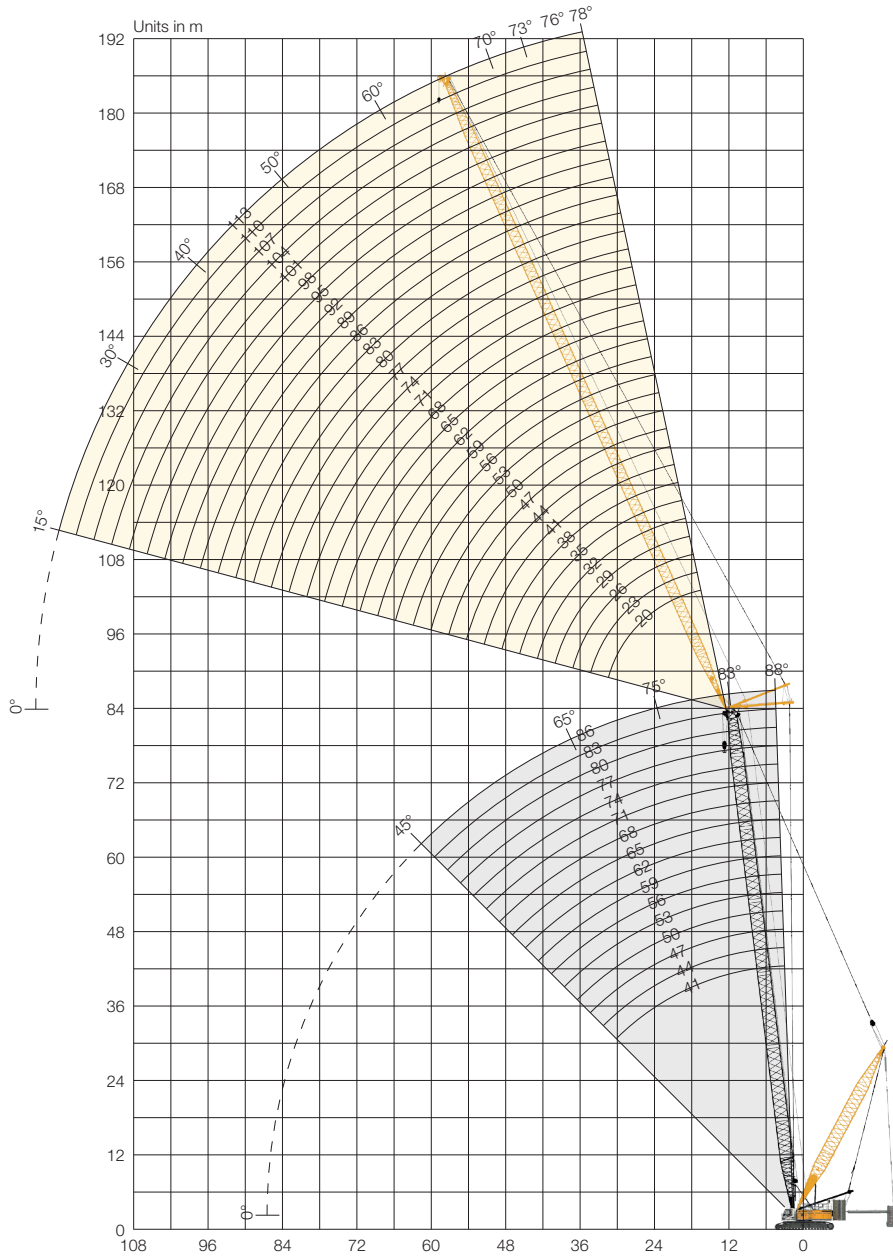
Radius	Jib [m]							
	41*	53*	65*	77*	89*	95*	104*	113*
[m]	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]
24.2	38.3							
28	32.0	30.1						
32	27.5	26.4	23.0					
36	23.6	22.7	21.6	17.3				
40	20.6	19.7	18.7	17.2	12.9	11.0		
44	18.2	17.3	16.3	15.3	12.7	11.0	8.6	
48	16.1	15.3	14.8	13.8	12.2	10.6	8.5	6.2
55		12.9	12.0	11.0	10.0	9.3	8.0	5.9
65			9.0	8.1	7.2	6.7	6.0	5.1
75				6.0	5.1	4.6	4.0	3.2
85					4.4	3.5	3.1	2.4
95						2.3		

* Not possible without suspended counterweight.
TLT 11962213. 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°, 41-86 m | Luffing jib 78-15°, 20-113 m

Derrick equipment with suspended counterweight



Auxiliary jib 30/45 t (option)
 The maximum capacity of the auxiliary jib is 30/45 t. The corresponding load chart is programmed in the LML system.

Max. combination	196 m
Main boom	83 m
Luffing jib	113 m

Max. combination	184 m
Main boom	86 m
Luffing jib	98 m

Jib configuration (No. 2316.xx)

Length	Amount of jib sections																																	
	20	23	26	29	32	35	38	41	44	47	50	53	56	59	62	65	68	71	74	77	80	83	86	89	92	95	98	101	104	107	110	113		
Jib foot 10 m	1	1	1	1	1	1	1	1	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 3 m		1		1		1		1		1		1		1		1		1		1		1		1		1		1		1		1		
Jib section 6 m			1	1		1	1		1	1		1	1		1	1		1	1		1	1		1	1		1	1		1	1		1	
Jib section 12 m					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		
Jib head 10 m	1	1	1	1	1	1	1	1	1	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 [m]	20	23	26	29	32	35	38	41	44	47	50	53	56	59	62	65	68	71	74	77	80	83	86	89	92	95	98	101	104	107	110	113		
Auxiliary jib applicable	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

Load capacities with luffing jib (No. 2316.xx) | 124t rear counterweight and 57t carbody counterweight
 Derrick equipment with 120t suspended counterweight at 15.8m radius

Main boom 44 m | 65°

Radius [m]	Jib [m]		
	29 [t]	35 [t]	41 [t]
38.5	65.0		
40	63.0		
42	57.3	53.2	
44	51.9	50.7	
46	47.6	46.4	44.3
48	43.3	43.2	42.0
50		40.0	38.9
52		37.2	

Main boom 50 m | 65°

Radius [m]	Jib [m]		
	29 [t]	41 [t]	53 [t]
42	60.0		
45	55.7		
48	48.6	44.0	
50	44.6	42.6	
52	39.9	39.4	
54		36.9	
56		34.5	31.7
60		30.5	30.4
62		30.9	28.5

Main boom 62 m | 65°

Radius [m]	Jib [m]		
	41 [t]	71 [t]	107 [t]
53	42.7		
60	35.3		
66	29.4		
72		19.4	
85		15.0	
95		12.0	
110			5.2
120			4.3
130			2.9

Main boom 74 m | 65°

Radius [m]	Jib [m]		
	41 [t]	62 [t]	89 [t]
58	30.1		
65	31.1		
73	27.0	23.9	
78		21.6	
86		18.0	10.3
94		14.8	10.2
102			9.4
110			8.5
120			6.2

Main boom 44 m | 45°

Radius [m]	Jib [m]		
	29 [t]	35 [t]	41 [t]
58	38.7		
60	37.2		
62	35.8		
64		34.1	
66		32.8	
68			31.1
70			30.1
72			28.9

Main boom 50 m | 45°

Radius [m]	Jib [m]		
	29 [t]	41 [t]	53 [t]
63	33.4		
66	31.6		
72		27.6	
74		26.7	
76		25.8	
82			22.3
84			21.7
86			21.0
88			20.3

Main boom 62 m | 45°

Radius [m]	Jib [m]		
	41 [t]	71 [t]	107 [t]
80.3	21.1		
84	19.9		
86	19.2		
105		12.1	
110		11.3	
115		10.5	
135			4.0
145			3.3
150			2.4

Main boom 74 m | 45°

Radius [m]	Jib [m]		
	41 [t]	62 [t]	89 [t]
89	15.4		
92	14.8		
95	14.1		
106		10.0	
111		9.4	
115		8.8	
129			4.5
135			3.9
140			3.5

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