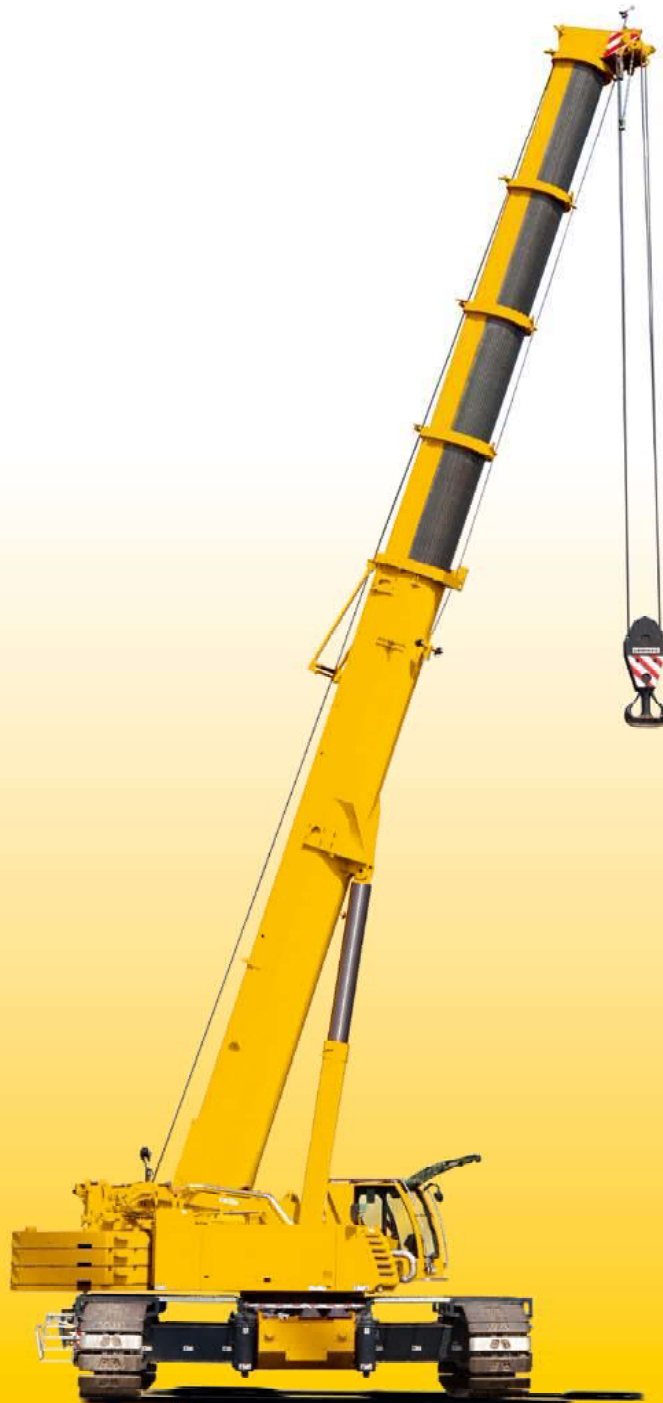


Telescopic Crawler Crane

LTR 1220

Technical Data



LIEBHERR



PORTLAND OFFICE: 503.283.3111
SEATTLE OFFICE: 206.784.1854
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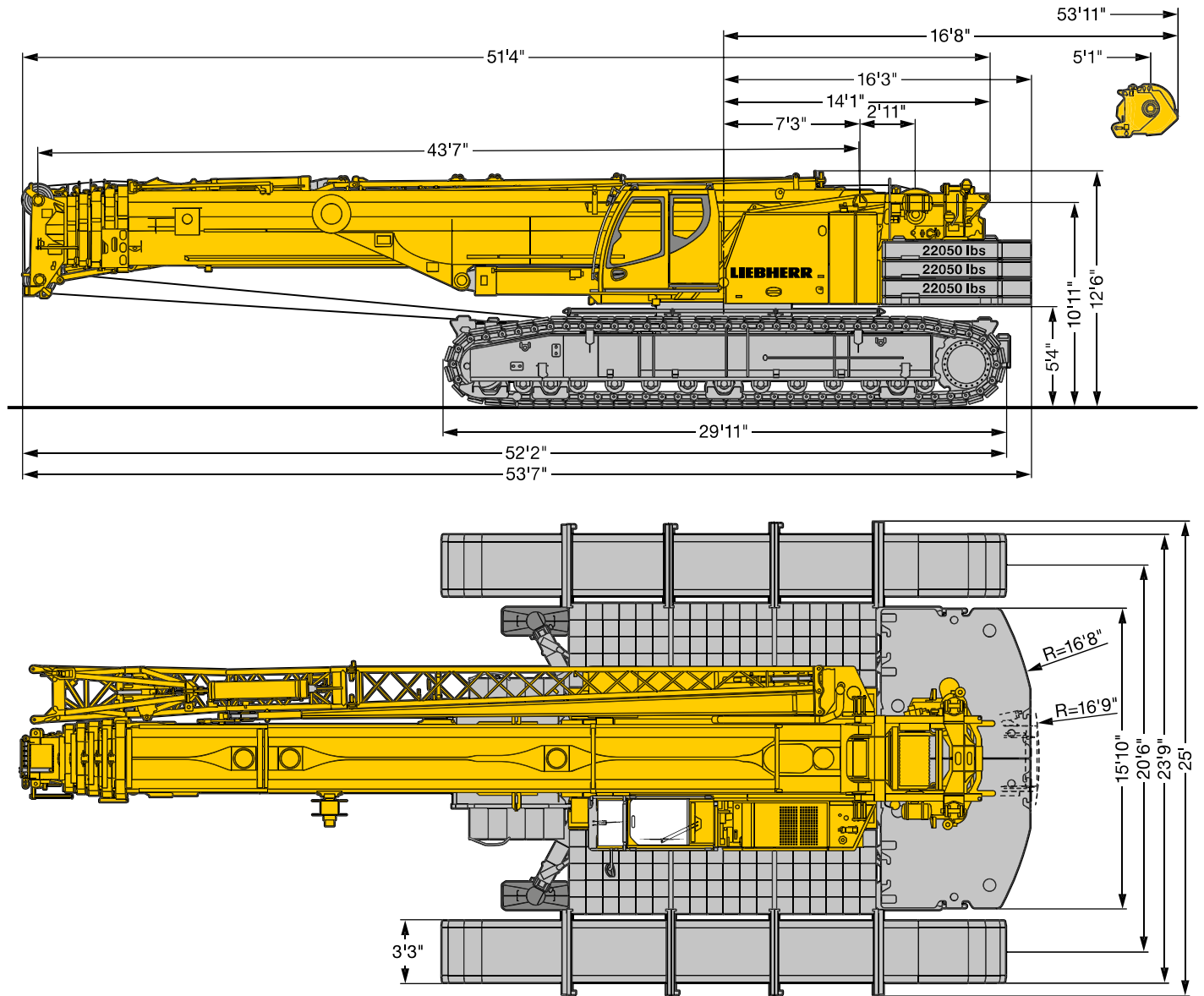
THIS INFORMATION IS FOR REFERENCE USE ONLY. OPERATORS MANUALS SHOULD BE CONSULTED AND ADHERED TO. PLEASE CONTACT NESS CAMPBELL AT INFO@NESSCAMPBELL.COM FOR FURTHER INFORMATION.

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Technical Data Caractéristiques technique

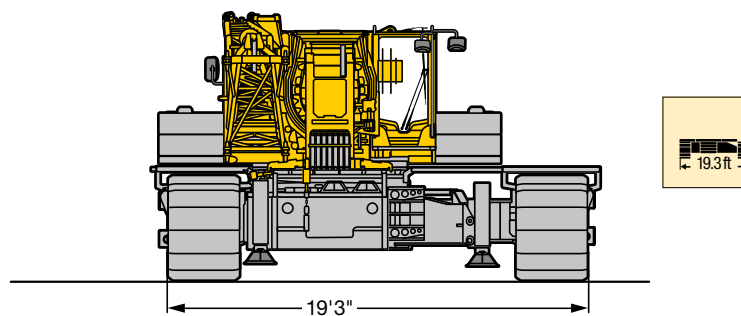
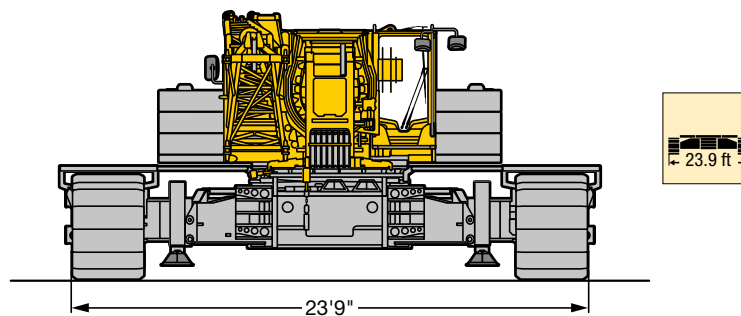
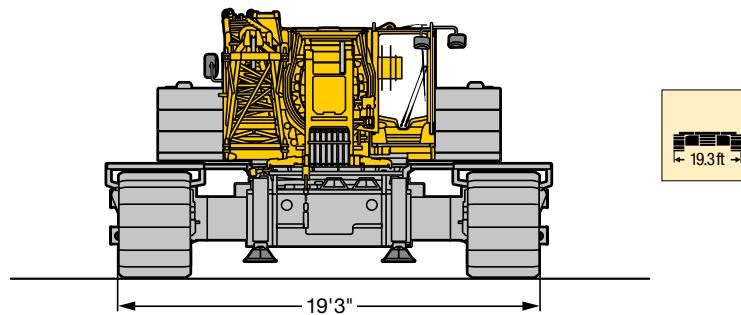
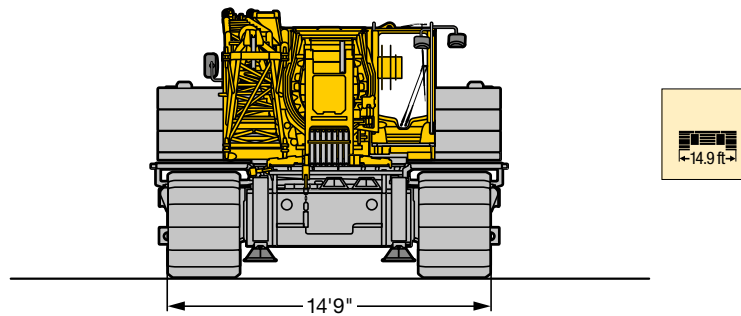
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Dimensions Encombrement



US2786,01

Dimensions Encombrement



US2803.01

Crane data Dates de la grue

	Total driving force Puissance propulsive totale	254000 lbs
	Total weight with 154350 lbs counterweight, 44100 lbs central ballast, 3-sheave hook block and 3.28 ft track pads Poids total avec contrepoids de 154350 lbs, lest central de 44100 lbs, moufle à crochet à 3 poulies et des tuiles de 3.28 ft	~ 397900 lbs
	Average ground pressure without jack-up cylinders at ~397900 lbs total weight and with 3.28 ft track pads Pression au sol moyenne sans vérin Jack-up pour un poids total de ~397900 lbs et des tuiles de 3.28 ft	16.5 lbs / inch ²
	normal gear · marche normale rapid gear · marche rapide	0 – 0.37 mph 0 – 1.55 mph
	Max. permissible gradability Pente admissible maxi.	47 %



Load kips Forces de levage kips	No. of sheaves Poulies	No. of lines Brins	Weight lbs Poids lbs
332.9	9	16	4400
314.4	7	15	3300
237.4	5	11	2866
155.6	3	7	2292
68.7	1	3	1851
23.1	–	1	1102



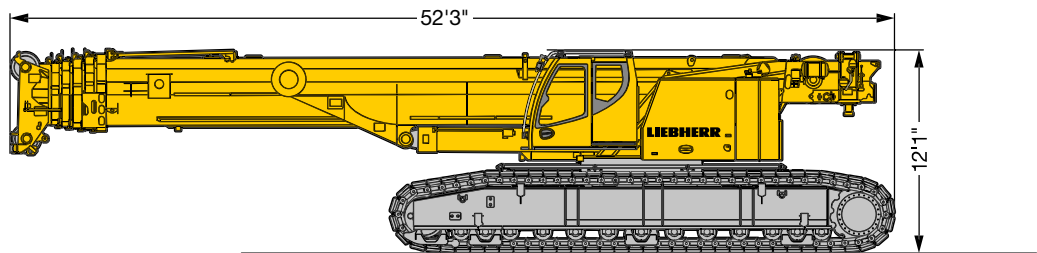
Drive Mécanismes	infinitely variable en continu	Rope diameter / Rope length Diamètre du câble / Longueur du câble	Max. single line pull Effort au brin maxi.
	0 – 426 ft/min single line ft/min au brin simple	0'9" / 920 ft	23605 lbs
	0 – 426 ft/min single line ft/min au brin simple	0'9" / 1150 ft	23605 lbs
	0 – 1.8 rpm		
	approx. 50 seconds to reach 82° boom angle env. 50 s jusqu'à 82°		
	approx. 420 seconds for boom extension from 44 ft – 197 ft env. 420 s pour passer de 44 ft – 197 ft		

Transportation plan Plan de transport

Without slewing platform counterweight and without centre counterweight · Sans contrepoids de la partie tournante et sans contrepoids central

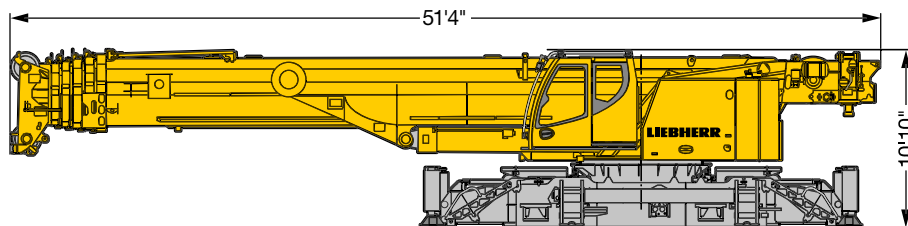
Basic machine, width 16'5", double grouser crawler carrier 3'3"
Machine de base, largeur 16'5", 2 nervures longerons 3'3"

203930 lbs



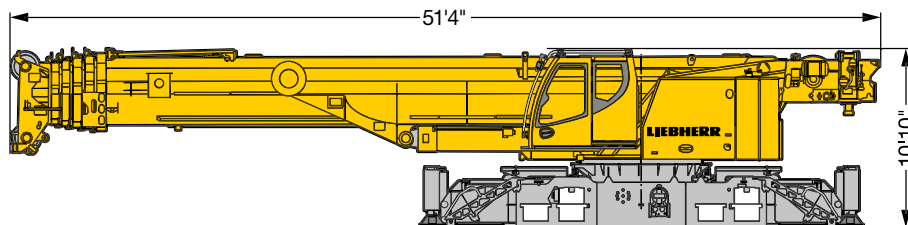
Basic machine, width 9'10", with jack-Up cylinder and traverse beam
Machine de base, largeur 9'10", avec verin Jack-Up, avec traverse

121900 lbs



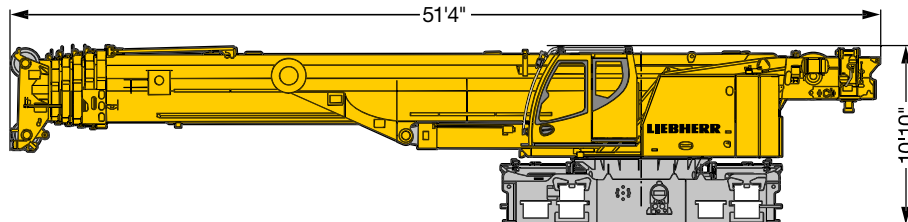
Basic machine, width 9'10", with jack-Up cylinder, **without** traverse beam
Machine de base, largeur 9'10" avec verin Jack-Up, **sans** traverse

105820 lbs



Basic machine, width 9'10", without jack-Up cylinder, **without** traverse beam
Machine de base, largeur 9'10" sans verin Jack-Up, **sans** traverse

99200 lbs



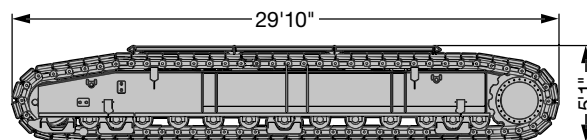
US2626.02

Transportation plan Plan de transport

Crawler carrier, 2 x, 2-bar crawler shoes, width 3'3"
Longerons, 2 x, tuiles 2 nervures, largeur 3'3"

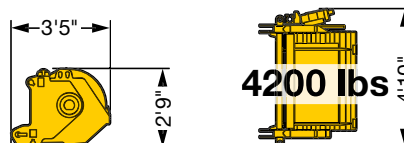
39500 lbs (2x)

41000 lbs (2x)³⁾



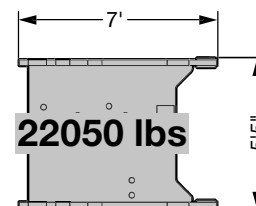
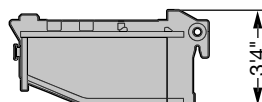
Winch 2 incl. rope
Treuil 2 avec câble

(1x)



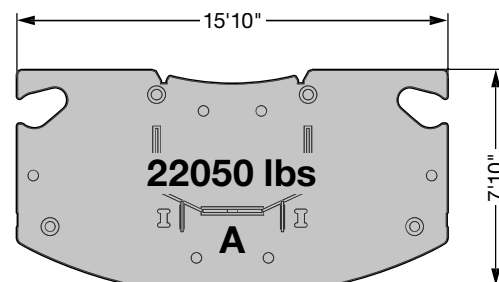
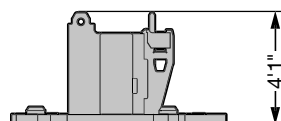
Center counterweight
Contrepoids de base

(2x)



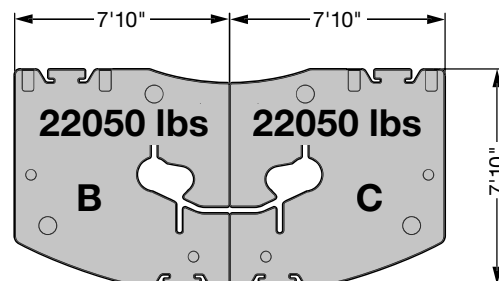
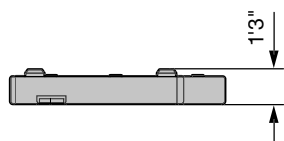
Part A / Partie A
Superstructure ballast
Contrepoids de la partie tournante

(1x)



Part B, C / Partie B, C
Superstructure ballast
Contrepoids de la partie tournante

(3x + 3x)



US2627

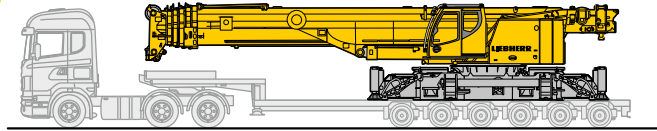
	Part A / Partie A à 22050 lbs	Part B / Partie B à 22050 lbs	Part C / Partie C à 22050 lbs
110250 lbs	1 x	2 x	2 x
154350 lbs*	1 x	3 x	3 x

* optional · en option

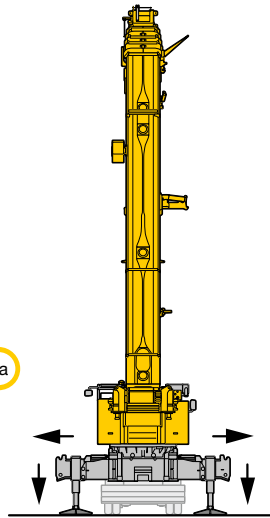
Transportation plan A Plan de transport A

~121250 lbs

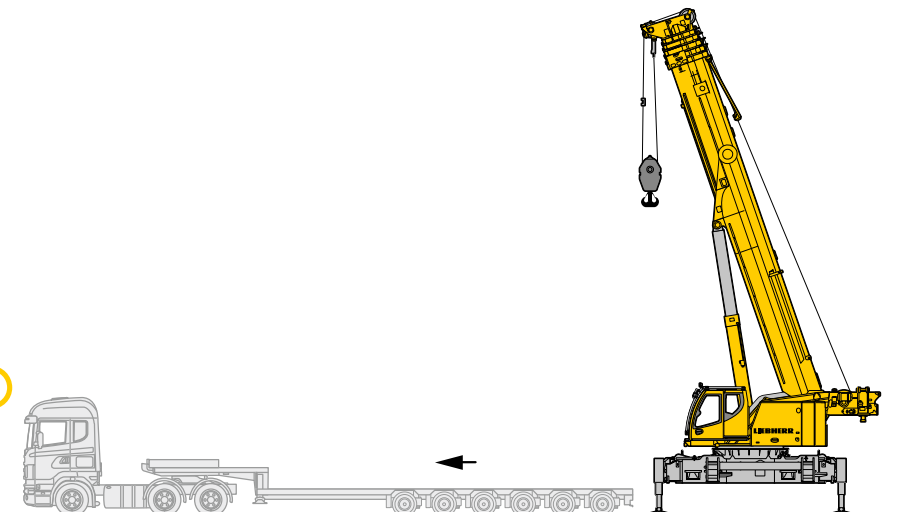
1a



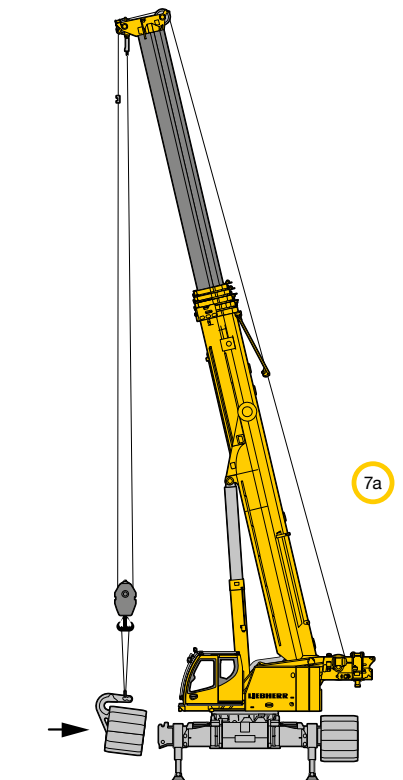
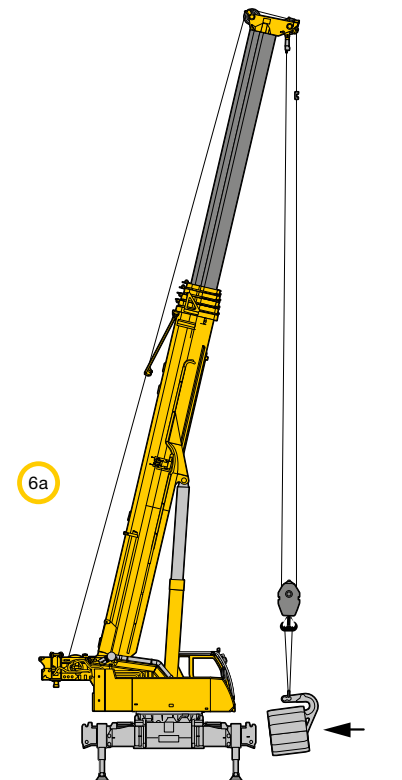
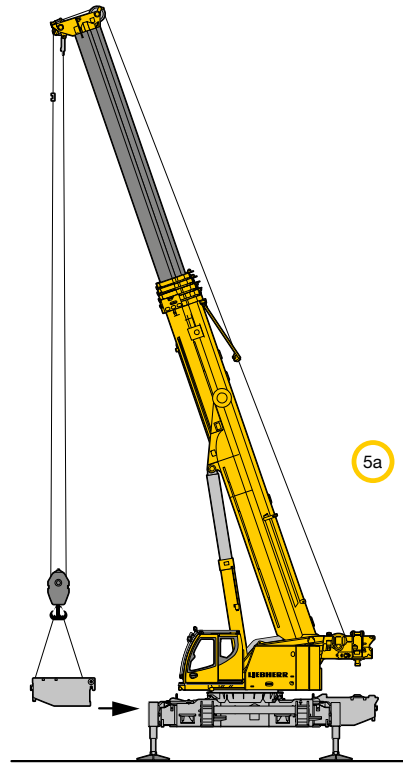
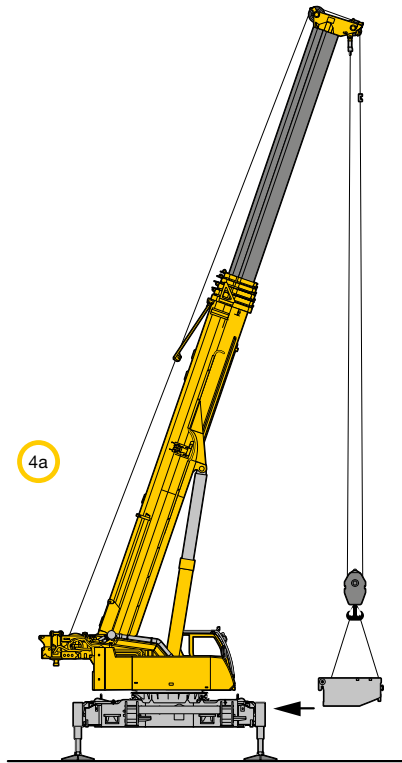
2a



3a

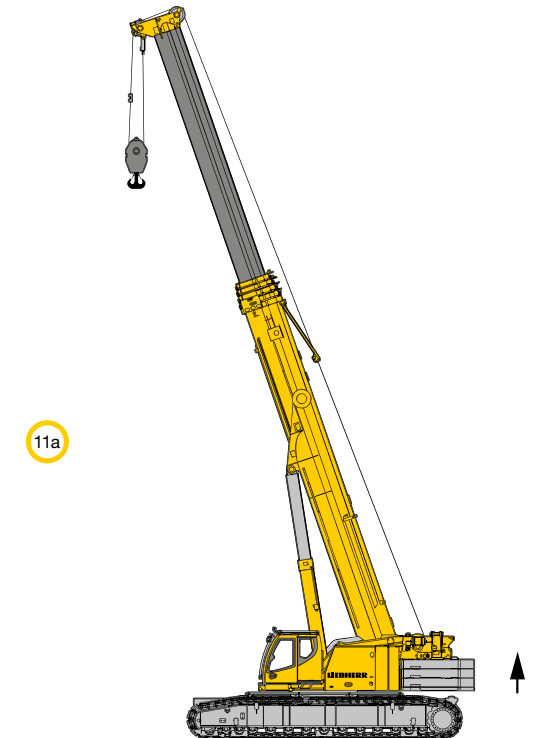
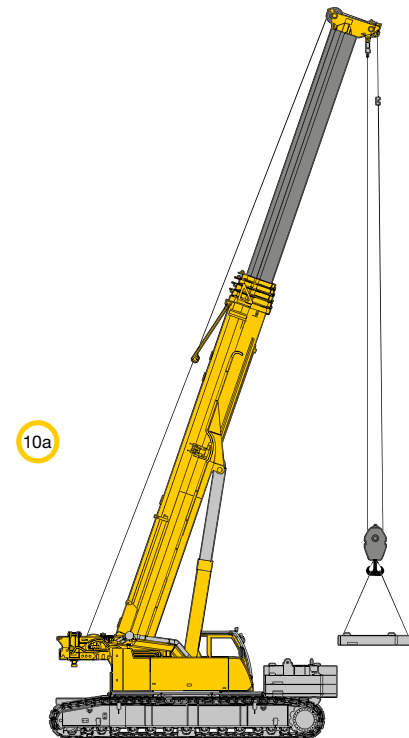
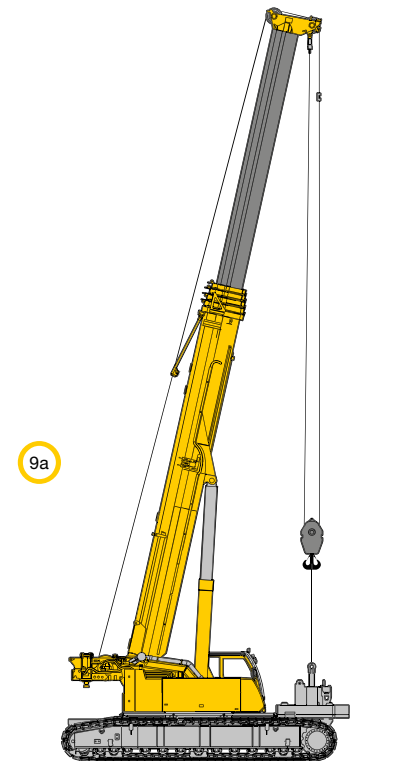
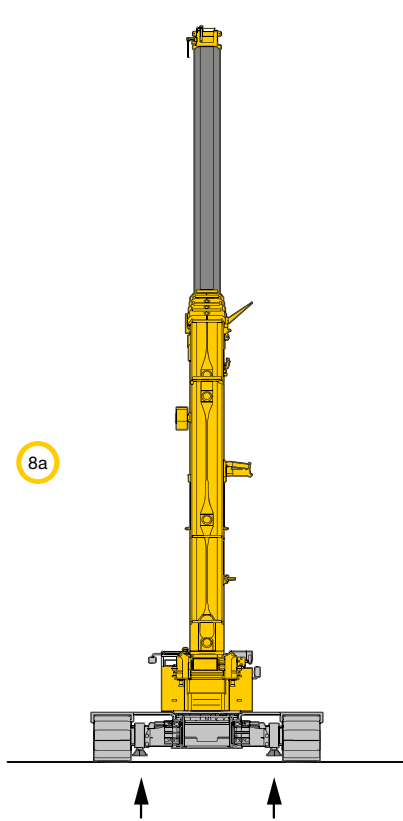


Transportation plan A Plan de transport A



Transportation plan A

Plan de transport A

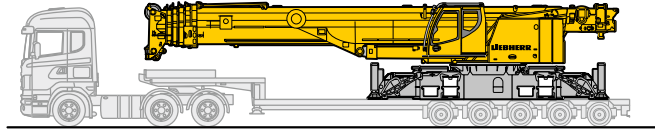


US2628.01

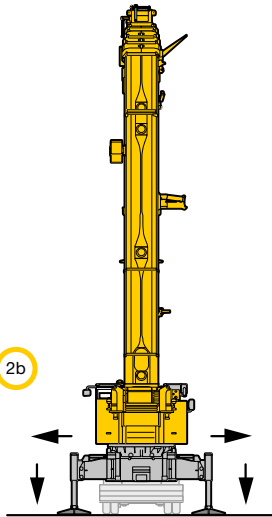
Transportation plan B Plan de transport B

~ 105800 lbs

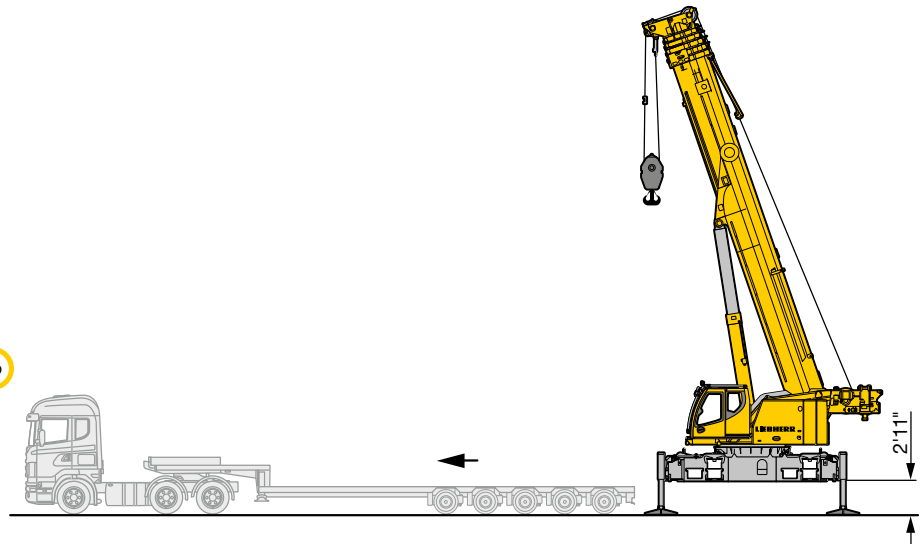
1b



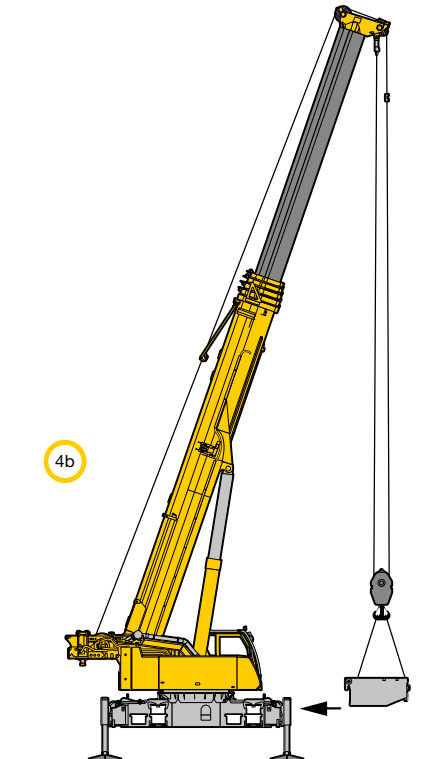
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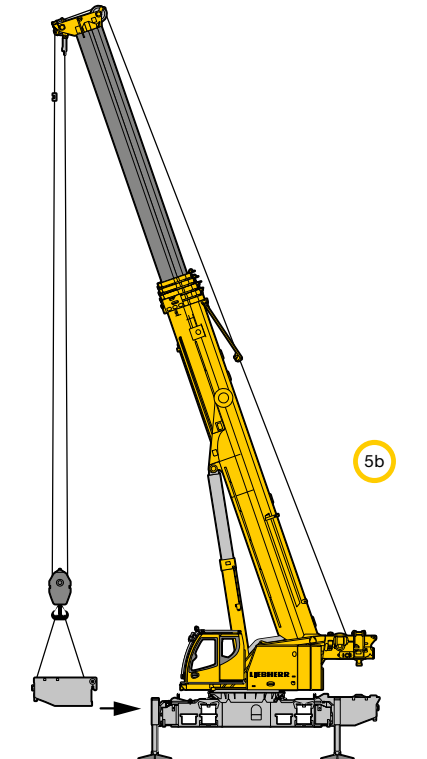
3b



4b

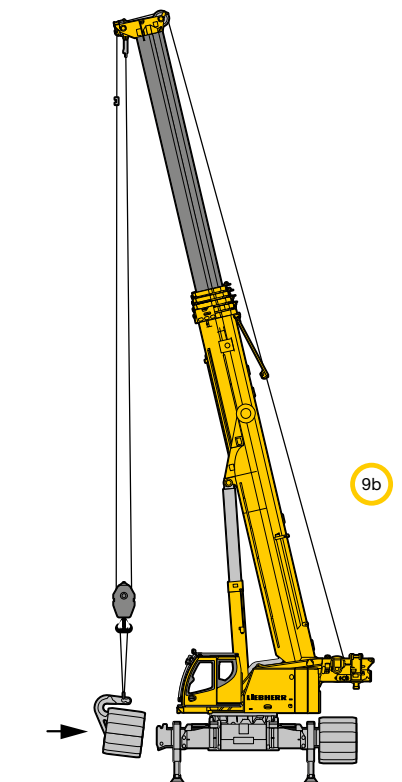
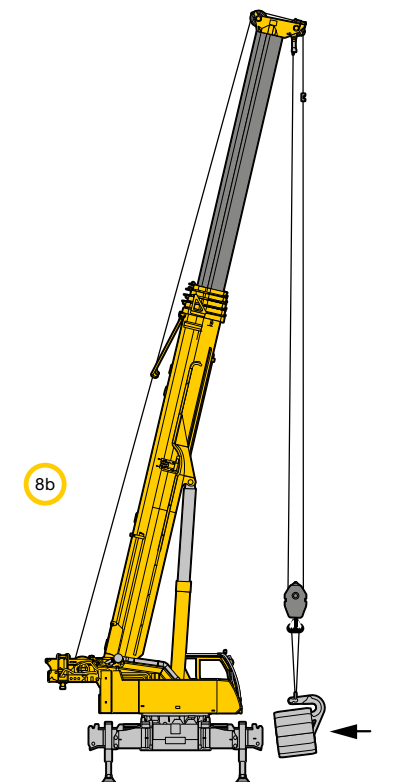
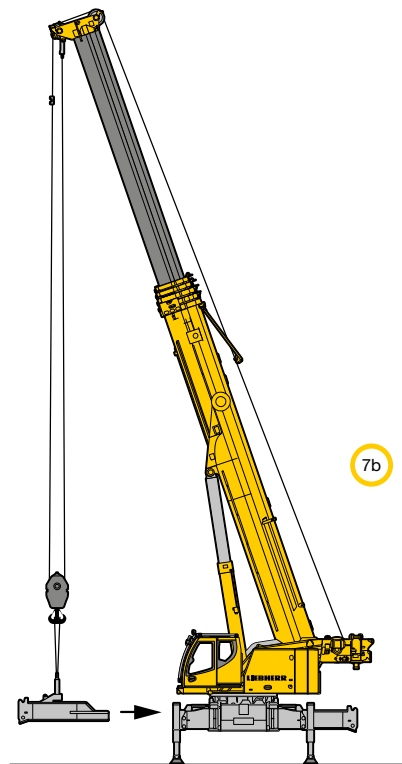
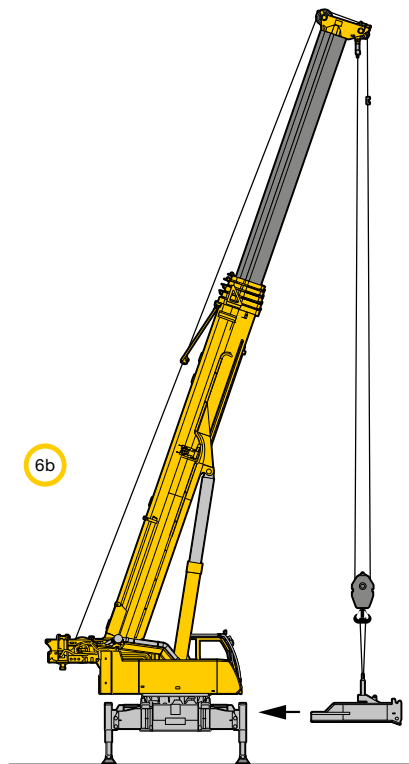


5b

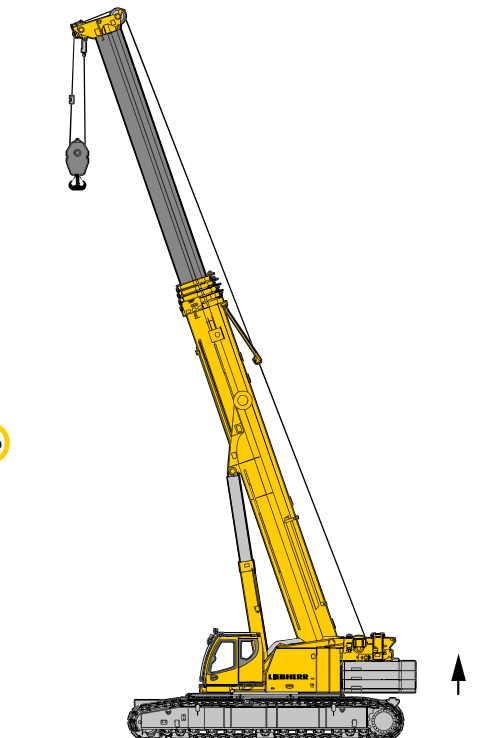
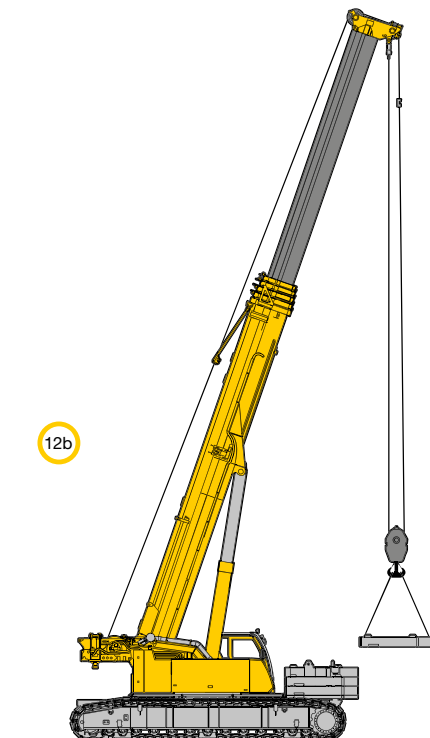
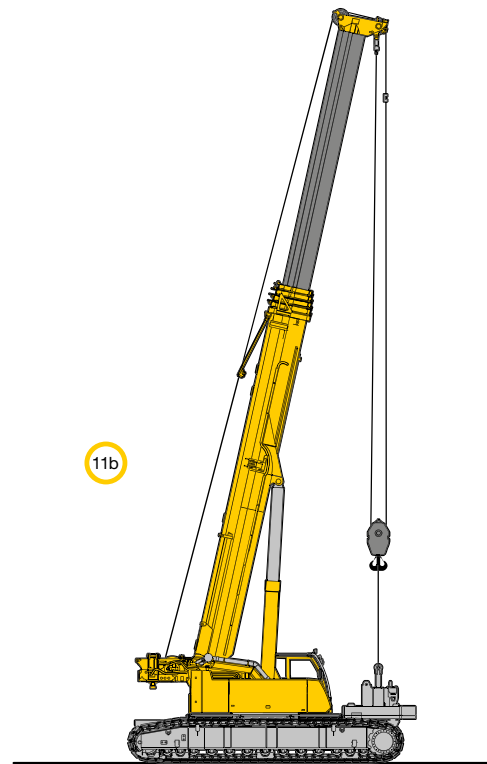
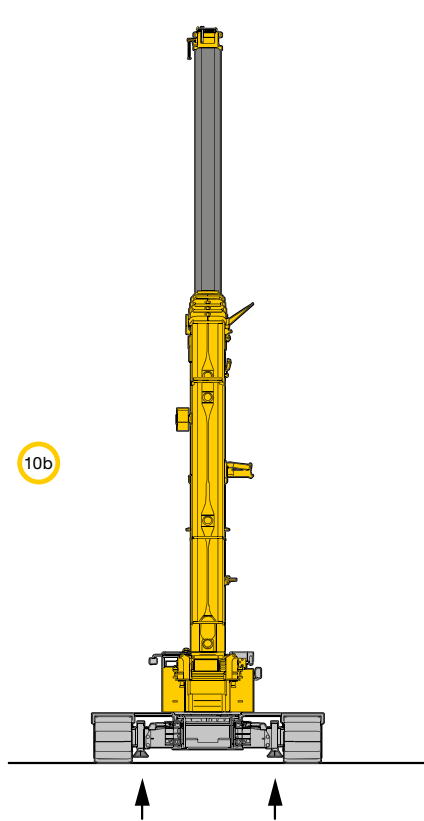


Transportation plan B

Plan de transport B



Transportation plan B Plan de transport B



US2762

Overview of load charts

Aperçu des tableaux de charge

				
154350 lbs 110230 lbs 66100 lbs 22050 lbs 0 lbs	 	 	 	 
	 	 	 	 
 				
154350 lbs 110230 lbs 66100 lbs 22050 lbs 0 lbs	 		 	 
	 		 	 
 				
154350 lbs 110230 lbs 66100 lbs	 			-
	 		-	-
  				
154350 lbs 110230 lbs 66100 lbs	 			-
	 		-	-

ballast versions see operation manual · variantes de lestage, voir le manuel d'instructions

n.v. / n.h. = over front/rear · en avant/arrière

Overview of load charts

Aperçu des tableaux de charge

			
110230 lbs 66100 lbs 22050 lbs 0 lbs			
			
 			
110230 lbs 66100 lbs 22050 lbs 0 lbs			
			
 			
154350 lbs 110230 lbs 66100 lbs			
			
  			
154350 lbs 110230 lbs 66100 lbs			
			

ballast versions see operation manual · variantes de lestage, voir le manuel d'instructions

Lifting capacities Forces de levage

T

44 – 197 ft 23.9 ft 360° 154350 lbs 110200 lbs 66100 lbs 44100 lbs 75%															
	44 ft	58 ft	72 ft	86 ft	100 ft	114 ft	128 ft	142 ft	156 ft	171 ft	185 ft	197 ft			
ft	*												ft		
10	485	295.4	295.4	295.4									10		
11	330	295.4	295.4	295.4									11		
12	323	294.1	295.2	293.9	240.9								12		
13	311.2	290.2	289.5	288.3	261.8								13		
14	292.4	277.9	278.2	276.9	263.7								14		
15	277.9	266.7	266.9	263.5	259								15		
16	265.4	256.1	255.8	249.8	244.8	216.9							16		
17	254.2	246.2	245.8	240.2	235.6	216.5							17		
18	244.5	237	237.4	231.7	226.3	215							18		
19	235.5	228.2	229.4	223.2	217.7	212.1	176						19		
20	226.9	219.7	221.2	215.2	210	205.8	175.4						20		
22	211.2	204.3	206	201.3	195.8	191.7	174	117.7					22		
24	196.8	190.7	192.5	188.7	183.5	179.3	171.7	124.8					24		
26	183.3	178.6	180.4	177.6	172.6	168.4	167.1	120.8	99.5				26		
28	170.3	167.7	169.5	167.6	163.1	160.6	158.2	116.4	98.7				28		
30	157.3	157	159.2	158.7	154.4	153	149.6	111.9	96.2	81			30		
32	143.3	143.3	150.1	150.5	146.4	145.4	141.8	107.6	93.4	79.6			32		
34	126.7	126.7	141.5	142	139.1	138.1	134.8	103.4	90.4	77.9	64.6		34		
36	99.3	99.3	133.3	133.9	132.7	131.8	128.5	99.2	87.4	75.9	63.8		36		
38			125.9	126.5	125.8	125.9	122.8	95.1	84.9	73.9	62.5		38		
40			118.8	119.5	118.9	120.4	117.3	91.2	82.6	71.9	61.2	52.1	40		
45			101.7	104.2	103.5	105.5	104.2	82.7	76.8	67.1	57.7	49.8	45	41.8	
50			68.8	90.8	93.3	92.3	90.8	75.1	70.9	62.8	54.3	47.1	50	40	
55				82.2	82.3	81.3	80	68.7	65.5	58.8	51.1	44.6	55	38	
60				72.1	73.4	72.4	71	63.4	60.6	54.9	48.2	42.2	60	36.1	
65					65.9	64.9	63.5	59.7	56.1	51.3	45.6	39.9	65	34.3	
70					59.7	58.6	57.2	56.6	52.2	48	43.1	37.9	70	32.6	
75					52	53.2	51.7	53.5	48.5	45.1	40.9	36	75	31	
80						48.5	47.2	48.8	45.3	42.4	38.8	34.2	80	29.5	
85						44.4	45	44.6	42.2	39.9	36.9	32.5	85	28	
90						39.4	42.4	40.9	39.2	37.9	35.1	30.9	90	26.7	
95							39.2	37.6	36	35.9	33.3	29.5	95	25.4	
100							36.3	34.7	33.9	33.8	31.6	28.1	100	24.3	
105							28.2	32.1	31.8	31.3	29.9	26.8	105	23.2	
110								29.7	30.4	28.9	28.3	25.7	110	22.2	
115								27.5	28.3	26.7	26.7	24.5	115	21.2	
120								20.5	26.3	25.4	25	23.5	120	20.3	
125									24.5	23.8	23.2	22.5	125	19.4	
130									22.4	22.7	21.5	21.1	130	18.6	
135									12.6	21.4	19.9	19.6	135	17.8	
140										19.9	18.9	18.1	140	17.1	
145										17.1	18	16.8	145	16.5	
150											16.8	15.5	150	15.7	
155											15.7	14.4	155	14.6	
160											12.2	13.3	160	13.5	
165												12.3	165	12.5	
170												11.4	170	11.5	
175												7.7	175	10.6	
180													180	9.8	
185													185	8.1	

* 0° = over rear/front - en arrière/avant

t_242_00090_00_001 / 00100_00_001 / 00101_00_001 / 00102_00_001

Lifting capacities Forces de levage

T

44 – 197 ft 19.3 ft 360° 154350 lbs 110200 lbs 66100 lbs 44100 lbs 75%													
ft	44 ft	58 ft	72 ft	86 ft	100 ft	114 ft	128 ft	142 ft	156 ft	171 ft	185 ft	197 ft	ft
10	295.4	295.4	295.4										10
11	295.4	295.4	295.4										11
12	294.1	295.2	293.9	240.9									12
13	290.2	289.5	288.3	261.8									13
14	277.9	278.2	276.9	263.7									14
15	266.7	266.9	263.5	259									15
16	256.1	255.8	249.8	244.8	216.9								16
17	246.2	245.8	240.2	235.6	216.5								17
18	237	237.4	231.7	226.3	213.6								18
19	228.2	229.4	223.2	217.7	207.7	176							19
20	219.7	221.2	215.2	210	200.8	175.4							20
22	204.3	206	201.3	195.8	187	169.7	117.7						22
24	190.7	192.5	188.7	183.5	175.5	160.4	124.8						24
26	178.6	180.4	177.6	172.6	168.2	151.3	120.8	99.5					26
28	167.7	169.5	167.6	162.5	158.7	143	116.4	98.7					28
30	156.8	159.1	158.7	151.4	147	135.6	111.9	96.2	81				30
32	142.5	145.4	146.1	140.2	137	128.8	107.6	93.4	79.6				32
34	126.7	132.6	133.6	130.4	127.6	120.8	103.4	90.4	77.9	64.6			34
36	99.3	121.8	122.7	123.7	119.8	113.3	99.2	87.4	75.9	63.8			36
38		112.4	113.3	116	112.5	106.7	95.1	84.9	73.9	62.5			38
40		105.5	107	107.6	106	100.5	91.2	82.6	71.9	61.2	52.1		40
45		88.9	90.6	90.9	90.1	87.6	82.6	76.8	67.1	57.7	49.8	41.8	45
50		68.8	78	78.2	77.4	76	73.1	70.9	62.8	54.3	47.1	40	50
55			68.1	68.2	67.3	66.2	66.8	64.9	58.8	51.1	44.6	38	55
60			60.2	60.3	59.4	59.3	59.9	58.1	54.9	48.2	42.2	36.1	60
65				53.7	52.8	54.6	53.3	51.9	51	45.6	39.9	34.3	65
70				48.3	47.9	49.1	47.8	47.1	46.5	43.1	37.9	32.6	70
75				43.7	45.1	44.3	43	42.9	42.4	40.9	36	31	75
80					41.2	40.3	39.1	39.8	38.4	38.1	34.2	29.5	80
85					37.8	36.8	35.9	36.3	35.6	34.8	32.5	28	85
90					34.8	33.8	33.9	33.2	32.7	32.2	30.9	26.7	90
95						31.1	31.7	30.4	30.4	29.4	29.1	25.4	95
100						28.8	29.3	28.2	28.2	27.4	26.7	24.3	100
105						26.7	27.2	26.2	26	25.6	24.5	23.2	105
110							25.2	24.7	24.1	23.6	22.5	22.2	110
115							23.5	23.3	22.3	21.8	20.6	20.8	115
120							20.5	21.7	20.7	20.1	18.9	19.1	120
125								20.3	19.4	18.6	17.3	17.6	125
130								19	18	17.1	15.9	16.1	130
135								12.6	16.7	15.8	14.6	14.8	135
140									15.5	14.6	13.4	13.6	140
145									14.4	13.5	12.3	12.5	145
150										12.5	11.2	11.4	150
155										11.5	10.2	10.4	155
160										10.7	9.4	9.5	160
165											8.5	8.7	165
170											7.8	7.9	170
175											7.1	7.1	175
180												6.4	180
185												5.8	185

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Lifting capacities Forces de levage

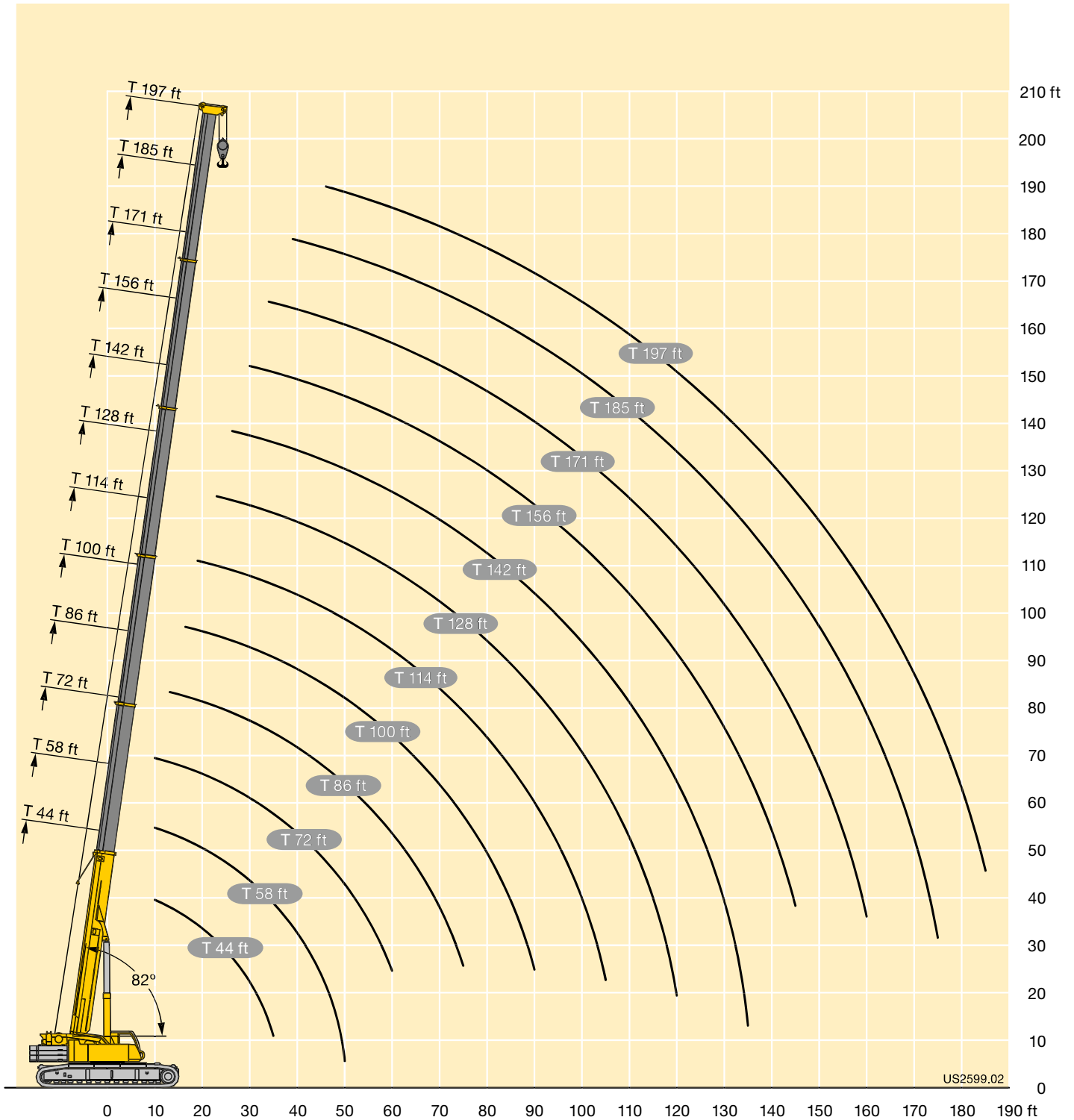
T

44 – 197 ft 14.9 ft 360° 154350 lbs 110200 lbs 66100 lbs 44100 lbs 75%													
ft	44 ft	58 ft	72 ft	86 ft	100 ft	114 ft	128 ft	142 ft	156 ft	171 ft	185 ft	197 ft	ft
10	294	237.9	189.2										10
11	265.4	224	179.5										11
12	237.6	209.6	170.6	135.9									12
13	213.3	193.7	162.4	136.6									13
14	193.9	179.2	155.1	132.1									14
15	177.5	165.2	148.3	127.3									15
16	196.7	182.9	141.4	122.6	106								16
17	196.4	179.1	164.6	136.6	102.7								17
18	190.4	174.3	161.3	131.6	99.5								18
19	178.8	165.6	152.7	130.5	96.4	85.3							19
20	167.8	159.4	144	126.1	107.9	82.9							20
22	145.8	142.7	133	122.4	101.3	91.7	69.4						22
24	127.2	128.8	123.2	112.5	99.5	86.7	66.5						24
26	112.5	116.4	112.4	106.6	99.7	87.5	76.1	56.8					26
28	100.5	104.5	103.1	98.4	94.5	84.8	76.6	68					28
30	116.2	94.3	95.2	105.4	89.3	82.6	74.5	67.1	60.4				30
32	105.8	105.2	103.6	97.4	83.3	78.5	73.1	65.7	59.1				32
34	96.9	99.3	97.6	93.5	77.7	73.5	70.2	64.3	58.4	52.9			34
36	89.1	91.5	89.8	87.4	82.4	68.9	67.3	61.8	56.3	51			36
38		85.9	85.5	81.4	80.8	64.9	63.6	59.6	54.3	49.2			38
40		79.9	79.5	78.9	75.9	71.7	60	57.5	52.4	47.5	42.7		40
45		67.6	69.2	69.4	68.6	66.8	63.4	59.8	48.1	43.6	39.1	37.1	45
50		58.2	59.6	59.8	61.7	59.6	58.7	55.7	52.7	40	36	34.2	50
55			52.5	52.2	54	53.2	52.2	51.2	49.2	47.2	32.9	31.6	55
60			46.4	47.7	47.8	46.9	47.7	46.5	45	42.8	40.8	36.1	60
65				42.7	42.6	41.8	42.6	41.7	40.7	39.1	36.8	34.3	65
70				38.4	38.3	38.7	38.2	37.9	36.9	35.5	33.2	32.6	70
75				34.8	34.6	35.1	34.5	34.4	33.8	32.3	30.1	29.8	75
80					31.6	31.9	31.3	31.2	30.6	29.4	27.3	27.1	80
85					29	29.1	28.8	28.4	27.8	26.9	24.8	24.6	85
90					26.6	26.7	26.3	25.9	25.3	24.5	22.6	22.4	90
95						24.6	24.2	23.7	23.1	22.3	20.6	20.4	95
100						22.7	22.2	21.8	21.1	20.3	18.8	18.6	100
105						21	20.5	20	19.3	18.4	17.1	17	105
110							18.9	18.4	17.6	16.7	15.5	15.5	110
115							17.4	16.9	16.1	15.2	14	14.2	115
120							16.1	15.5	14.7	13.8	12.6	12.8	120
125								14.3	13.4	12.5	11.3	11.6	125
130								13.2	12.3	11.4	10.2	10.4	130
135								12.2	11.2	10.3	9.1	9.3	135
140									10.2	9.3	8.1	8.3	140
145									9.4	8.4	7.2	7.4	145
150										7.6	6.4	6.5	150
155										6.8	5.6	5.7	155
160										6.2	4.9	5	160
165											4.2	4.3	165
170											3.6	3.7	170
175											3	3.1	175
180												2.5	180

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Lifting heights Hauteurs de levage

T



Lifting capacities Forces de levage

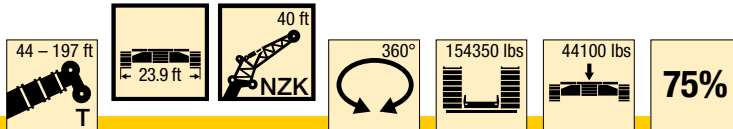
TNZK

44 – 197 ft  T  23.9 ft  40 ft NZK  360°  154350 lbs  44100 lbs 75%																			
 ft	44 ft			58 ft			72 ft			86 ft			100 ft			114 ft			ft 
	40 ft			40 ft			40 ft			40 ft			40 ft			40 ft			
	0°	22.5°	45°	0°	22.5°	45°	0°	22.5°	45°	0°	22.5°	45°	0°	22.5°	45°	0°	22.5°	45°	
10	46.1																		10
11	46.1			46.1															11
12	46.1			46.1															12
13	46.1			46.1			46.1												13
14	46.1			46.1			46.1												14
15	46.1			46.1			46.1												15
16	46.1			46.1			46.1			46.1									16
17	46.1			46.1			46.1			46.1									17
18	46.1			46.1			46.1			46.1									18
19	46.1			46.1			46.1			46.1			46.1						19
20	46.1			46.1			46.1			46.1			46.1						20
22	46.1			46.1			46.1			46.1			46.1						22
24	46.1	36.8		46.1			46.1			46.1			46.1			46.1			24
26	46.1	35		46.1	36.6		46.1			46.1			46.1			46.1			26
28	46.1	33.3		46.1	35.1		46.1			46.1			46.1			46.1			28
30	45.7	31.8		46.1	33.7		46.1	34.5		46.1			46.1			46.1			30
32	44.4	30.5		46.1	32.4		46.1	33.3		46.1			46.1			46.1			32
34	42.9	29.3	23.2	46.1	31.2		46.1	32.2		46.1	33.2		46			45.8			34
36	41.4	28.2	23.2	45.9	30.1	23.2	46	31.2		46.1	32.2		45.3	32.6		45.3			36
38	39.5	27.2	23.1	44.7	29.1	23.2	45.8	30.2		45.6	31.3		44.5	31.7		44.5			38
40	37.3	26.2	22.7	43	28.2	23.2	44.5	29.3	23.2	45.1	30.4		43.2	30.9		43.5	31.5		40
45	32.5	24.1	21.5	38.5	26	22.3	40.7	27.3	22.7	43.2	28.4		39.6	29		40.3	29.7		45
50	28.7	22.3	20.5	34.3	24.3	21.3	37.2	25.6	21.8	39.9	26.7	22.3	36.3	27.4	22.6	37.4	28.1		50
55	25.6	20.8	19.8	30.8	22.7	20.5	33.9	24.1	21.1	36.9	25.3	21.6	33.5	26	21.8	34.8	26.6	22.1	55
60	23.2	19.5	19.2	27.8	21.4	19.9	31.2	22.8	20.4	34.2	23.9	20.9	31	24.7	21.2	32.4	25.4	21.5	60
65	21	18.5	19	25.3	20.2	19.4	28.8	21.6	19.9	31.8	22.8	20.4	28.9	23.5	20.7	30.3	24.3	21	65
70	19.2	17.6	10.4	23.3	19.2	19.1	26.6	20.6	19.5	29.5	21.8	19.9	26.8	22.5	20.2	28.5	23.3	20.5	70
75	17.6	17.4		21.4	18.4	19	24.7	19.7	19.1	27.5	20.9	19.5	25.1	21.7	19.8	26.8	22.4	20.1	75
80				19.8	17.7		22.9	18.9	19	25.7	20.1	19.2	23.4	20.8	19.5	25.2	21.6	19.8	80
85				18.5	17.3		21.4	18.3	18.9	24.2	19.3	19.1	22	20.1	19.3	23.8	20.9	19.5	85
90				17.3			20.1	17.7	18.9	22.7	18.7	19	20.6	19.4	19	22.4	20.2	19.3	90
95							18.9	17.4		21.4	18.2	19	19.4	18.8	18.7	21.2	19.7	19.1	95
100							17.9	17.3		20.2	17.7	19	18.3	18	18.1	20.1	19	18.9	100
105										19.2	17.4	19	17.3	17.1	17.3	19.1	18.4	18.3	105
110										18.3	17.3		16.3	16.2	16.5	18.1	17.7	17.6	110
115										17.5			15.5	15.4	15.7	17.3	16.9	17	115
120													14.7	14.7		16.5	16.2	16.4	120
125													14.1	14.1		15.7	15.6	15.8	125
130													13.5			15.1	15	15.2	130
135																14.5	14.4		135
140																14			140
145																13.5			145

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Lifting capacities Forces de levage

TNZK



	128 ft			142 ft			156 ft			171 ft			185 ft			197 ft			
	40 ft			40 ft			40 ft			40 ft			40 ft			40 ft			
	0°	22.5°	45°	0°	22.5°	45°	0°	22.5°	45°	0°	22.5°	45°	0°	22.5°	45°	0°	22.5°	45°	
30	42.6			45.3															30
32	42.4			45.1															32
34	42.2			44.9															34
36	41.9			44.6			40.4												36
38	41.7			44.3			40.2												38
40	41.2			44			40			34.7									40
45	38.8			43			39.3			34.3									45
50	36	28.3		41.8	30.5		38.6			33.9			28.5						50
55	33.6	27	22.2	40.6	29		37.8	29.3		33.5			28			24			55
60	31.4	25.7	21.7	39.4	27.6	22.3	37	27.9	22.6	32.9	27.6		27.6			23.6			60
65	29.3	24.7	21.1	37.8	26.4	21.8	36.1	26.8	22	32.1	26.5		27.3			23.2	22.2		65
70	27.4	23.7	20.7	36	25.3	21.3	34.9	25.7	21.5	31	25.5	21.5	26.8	24.8		22.9	22		70
75	25.7	22.9	20.3	34.1	24.4	20.9	33.6	24.8	21.1	29.7	24.5	21	25.8	24	20.9	22.5	21.6		75
80	24.2	22.1	19.9	32.2	23.5	20.5	32.1	23.9	20.7	28.2	23.7	20.6	24.8	23.2	20.6	21.6	20.7	19.7	80
85	22.7	21.3	19.7	30.4	22.8	20.2	30.5	23.1	20.4	26.9	23	20.3	23.7	22.5	20.2	20.6	20	19	85
90	21.4	20.5	19.4	28.8	22	19.9	29	22.4	20.1	25.7	22.3	20.1	22.7	21.7	20	19.7	19.2	18.3	90
95	20.2	19.7	19.1	27.2	21.4	19.6	27.6	21.8	19.8	24.5	21.7	19.8	21.7	20.9	19.7	18.9	18.5	17.7	95
100	19.1	18.8	18.8	25.8	20.8	19.4	26.4	21.2	19.6	23.3	21.2	19.6	20.8	20.2	19.3	18.1	17.8	17.1	100
105	18.1	17.8	17.9	24.5	20.2	19.2	25.1	20.6	19.4	22.3	20.6	19.4	19.9	19.4	18.7	17.2	17.1	16.5	105
110	17.1	16.9	17.1	23.2	19.7	19.1	23.9	20.1	19.2	21.3	20.1	19.3	19	18.7	18.1	16.5	16.4	16	110
115	16.2	16.1	16.3	22.1	19.3	19	22.9	19.7	19.1	20.3	19.5	19	18.2	18	17.5	15.7	15.8	15.5	115
120	15.4	15.3	15.5	21	18.8	18.9	21.8	19.2	19	19.4	18.9	18.6	17.5	17.3	16.9	15	15.1	14.9	120
125	14.6	14.6	14.8	20	18.5	18.9	20.8	18.8	19	18.6	18.3	18.1	16.7	16.6	16.4	14.4	14.4	14.4	125
130	13.9	13.9	14.1	19.1	18.1	18.8	19.8	18.5	18.9	17.8	17.7	17.6	16	15.9	15.8	13.7	13.8	13.8	130
135	13.2	13.3	13.5	18.2	17.8	18.3	18.3	18.2	18.6	17	17	16.9	15.4	15.3	15.2	13.1	13.2	13.3	135
140	12.5	12.6	12.9	17.4	17.4	17.6	16.8	17.7	18.2	16.3	16.3	16.3	14.7	14.7	14.7	12.5	12.6	12.7	140
145	12	12.1		16.6	16.7	16.9	15.5	16.5	17.3	15.6	15.6	15.7	14.1	14.1	14.1	11.9	12.1	12.2	145
150	11.4	11.5		15.7	16	16.2	14.3	15.2	15.8	14.5	15	15.1	13.6	13.5	13.6	11.4	11.5	11.7	150
155	11			14.6	15.2	15.4	13.6	14	14.5	13.4	14.2	14.5	13	13	13.1	10.9	11	11.2	155
160	9.9			13.5	14		13	13.1	13.3	12.3	13.2	13.7	12.5	12.5	12.6	10.4	10.5	10.7	160
165				12.6	12.9		12.4	12.6	12.7	11.4	12.1	12.6	11.8	12.1	12.1	10	10.1	10.3	165
170				10.9	11.6		11.7	12	12.2	10.9	11.1	11.5	10.9	11.5	11.7	9.5	9.7	9.8	170
175				5.4			10.9	11.3		10.5	10.6	10.7	10	10.7	11.2	9.2	9.3	9.4	175
180							10	9.3		10	10.2	10.3	9.3	9.8	10.3	8.8	8.9	9.1	180
185							8.5	9		9.7	9.8		8.6	9.1	9.4	8.4	8.6	8.7	185
190										9.1	9.4		8	8.4	8.7	7.8	8.2	8.4	190
195										8.3			7.4	7.8	8	7.2	7.7	8	195
200										5.4			6.9	7.2	7.3	6.6	7.1	7.3	200
205													6.4	6.6	6.6	6.1	6.5	6.7	205
210													5.3	6		5.6	6	6	210
215													2.2			5.1	5.4		215
220																4.6			220
225																2.5			225

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Lifting capacities Forces de levage

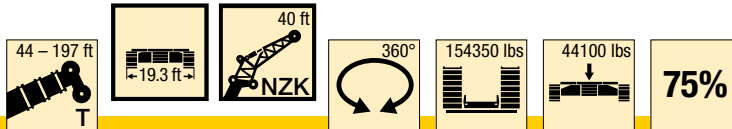
TNZK

44 – 197 ft      75%																			
	44 ft			58 ft			72 ft			86 ft			100 ft			114 ft			
	40 ft			40 ft			40 ft			40 ft			40 ft			40 ft			
	0°	22.5°	45°	0°	22.5°	45°	0°	22.5°	45°	0°	22.5°	45°	0°	22.5°	45°	0°	22.5°	45°	
10	46.1																		10
11	46.1			46.1															11
12	46.1			46.1															12
13	46.1			46.1			46.1												13
14	46.1			46.1			46.1												14
15	46.1			46.1			46.1												15
16	46.1			46.1			46.1			46.1									16
17	46.1			46.1			46.1			46.1									17
18	46.1			46.1			46.1			46.1									18
19	46.1			46.1			46.1			46.1			46.1						19
20	46.1			46.1			46.1			46.1			46.1						20
22	46.1			46.1			46.1			46.1			46.1						22
24	46.1	36.8		46.1			46.1			46.1			46.1			46.1			24
26	46.1	35		46.1	36.6		46.1			46.1			46.1			46.1			26
28	46.1	33.3		46.1	35.1		46.1			46.1			46.1			46.1			28
30	45.7	31.8		46.1	33.7		46.1	34.5		46.1			46.1			46.1			30
32	44.4	30.5		46.1	32.4		46.1	33.3		46.1			46.1			46.1			32
34	42.9	29.3	23.2	46.1	31.2		46.1	32.2		46.1	33.2		46			45.8			34
36	41.4	28.2	23.2	45.9	30.1	23.2	46	31.2		46.1	32.2		45.3	32.6		45.3			36
38	39.5	27.2	23.1	44.7	29.1	23.2	45.8	30.2		45.6	31.3		44.5	31.7		44.5			38
40	37.3	26.2	22.7	43	28.2	23.2	44.5	29.3	23.2	45.1	30.4		43.2	30.9		43.5	31.5		40
45	32.5	24.1	21.5	38.5	26	22.3	40.7	27.3	22.7	43.2	28.4		39.6	29		40.3	29.7		45
50	28.7	22.3	20.5	34.3	24.3	21.3	37.2	25.6	21.8	39.9	26.7	22.3	36.3	27.4	22.6	37.4	28.1		50
55	25.6	20.8	19.8	30.8	22.7	20.5	33.9	24.1	21.1	36.9	25.3	21.6	33.5	26	21.8	34.8	26.6	22.1	55
60	23.2	19.5	19.2	27.8	21.4	19.9	31.2	22.8	20.4	34.2	23.9	20.9	31	24.7	21.2	32.4	25.4	21.5	60
65	21	18.5	19	25.3	20.2	19.4	28.8	21.6	19.9	31.8	22.8	20.4	28.9	23.5	20.7	30.3	24.3	21	65
70	19.2	17.6	10.4	23.3	19.2	19.1	26.6	20.6	19.5	29.5	21.8	19.9	26.8	22.5	20.2	28.5	23.3	20.5	70
75	17.6	17.4		21.4	18.4	19	24.7	19.7	19.1	27.5	20.9	19.5	25.1	21.7	19.8	26.8	22.4	20.1	75
80				19.8	17.7		22.9	18.9	19	25.7	20.1	19.2	23.4	20.8	19.5	25.2	21.6	19.8	80
85				18.5	17.3		21.4	18.3	18.9	24.2	19.3	19.1	22	20.1	19.3	23.8	20.9	19.5	85
90				17.3			20.1	17.7	18.9	22.7	18.7	19	20.6	19.4	19	22.4	20.2	19.3	90
95							18.9	17.4		21.4	18.2	19	19.4	18.8	18.7	21.2	19.7	19.1	95
100							17.9	17.3		20.2	17.7	19	18.3	18	18.1	20.1	19	18.9	100
105										19.2	17.4	19	17.3	17.1	17.3	19.1	18.4	18.3	105
110										18.3	17.3		16.3	16.2	16.5	18.1	17.7	17.6	110
115										17.5			15.5	15.4	15.7	17.3	16.9	17	115
120													14.7	14.7		16.5	16.2	16.4	120
125													14.1	14.1		15.7	15.6	15.8	125
130													13.5			15.1	15	15.2	130
135																14.5	14.4		135
140																14			140
145																13.5			145

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Lifting capacities Forces de levage

TNZK

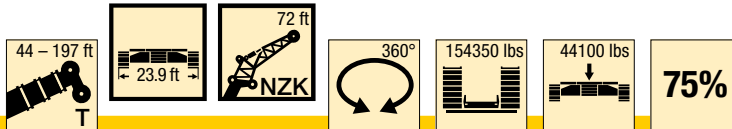


	128 ft			142 ft			156 ft			171 ft			185 ft			197 ft			
	40 ft			40 ft			40 ft			40 ft			40 ft			40 ft			
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30	42.6			45.3															30
32	42.4			45.1															32
34	42.2			44.9															34
36	41.9			44.6			40.4												36
38	41.7			44.3			40.2												38
40	41.2			44			40			34.7									40
45	38.8			43			39.3			34.3									45
50	36	28.3		41.8	30.5		38.6			33.9			28.5						50
55	33.6	27	22.2	40.6	29		37.8	29.3		33.5			28			24			55
60	31.4	25.7	21.7	39.4	27.6	22.3	37	27.9	22.6	32.9	27.6		27.6			23.6			60
65	29.3	24.7	21.1	37.8	26.4	21.8	36.1	26.8	22	32.1	26.5		27.3			23.2	22.2		65
70	27.4	23.7	20.7	36	25.3	21.3	34.9	25.7	21.5	31	25.5	21.5	26.8	24.8		22.9	22		70
75	25.7	22.9	20.3	34.1	24.4	20.9	33.6	24.8	21.1	29.7	24.5	21	25.8	24	20.9	22.5	21.6		75
80	24.2	22.1	19.9	32.2	23.5	20.5	32.1	23.9	20.7	28.2	23.7	20.6	24.8	23.2	20.6	21.6	20.7	19.7	80
85	22.7	21.3	19.7	30.4	22.8	20.2	30.5	23.1	20.4	26.9	23	20.3	23.7	22.5	20.2	20.6	20	19	85
90	21.4	20.5	19.4	28.8	22	19.9	29	22.4	20.1	25.7	22.3	20.1	22.7	21.7	20	19.7	19.2	18.3	90
95	20.2	19.7	19.1	27.2	21.4	19.6	27.3	21.8	19.8	24.5	21.7	19.8	21.7	20.9	19.7	18.9	18.5	17.7	95
100	19.1	18.8	18.8	25.8	20.8	19.4	25.4	21.2	19.6	23.3	21.2	19.6	20.8	20.2	19.3	18.1	17.8	17.1	100
105	18.1	17.8	17.9	24.5	20.2	19.2	23.3	20.6	19.4	22.3	20.6	19.4	19.9	19.4	18.7	17.2	17.1	16.5	105
110	17.1	16.9	17.1	22.6	19.7	19.1	21.3	20.1	19.2	21.2	20.1	19.3	19	18.7	18.1	16.5	16.4	16	110
115	16.2	16.1	16.3	20.8	19.3	19	19.9	19.7	19.1	19.6	19.5	19	18.2	18	17.5	15.7	15.8	15.5	115
120	15.4	15.3	15.5	19.1	18.8	18.9	18.9	19	19	18	18.9	18.6	17.5	17.3	16.9	15	15.1	14.9	120
125	14.6	14.6	14.8	17.5	18.4	18.9	17.7	17.9	18.7	16.4	17.8	18.1	16.7	16.6	16.4	14.4	14.4	14.4	125
130	13.9	13.9	14.1	16.1	17.2	18	16.3	17.1	17.2	15.7	16.4	17.3	15.5	15.9	15.8	13.7	13.8	13.8	130
135	13.2	13.3	13.5	14.8	15.8	16.5	15	16.1	16.5	14.9	15	16	14.2	15.3	15.2	13.1	13.2	13.3	135
140	12.5	12.6	12.9	13.8	14.5	15.1	13.8	14.8	15.6	14.2	14.3	14.6	13	14.2	14.7	12.4	12.6	12.7	140
145	12	12.1		13.2	13.3	13.8	12.7	13.6	14.3	13.1	13.7	13.8	11.9	13	13.9	11.6	12.1	12.2	145
150	11.4	11.5		12.7	12.7	12.9	12.1	12.5	13.1	12.1	13	13.2	10.8	11.9	12.8	10.6	11.5	11.7	150
155	11			12.2	12.2	12.4	11.5	11.7	11.9	11.1	12	12.5	9.9	10.9	11.7	9.7	10.7	11.2	155
160	9.9			11.7	11.8		10.9	11.1	11.3	10.2	11	11.6	8.9	9.9	10.6	8.8	9.7	10.6	160
165				11.3	11.4		10.3	10.6	10.8	9.4	10.1	10.5	8.1	9	9.6	7.9	8.8	9.6	165
170				10.8	11		9.6	10	10.2	8.6	9.2	9.6	7.3	8.1	8.7	7.1	8	8.7	170
175				5.4			8.9	9.3		7.9	8.4	8.7	6.6	7.3	7.8	6.4	7.2	7.8	175
180							8.2	8.5		7.2	7.7	7.9	5.9	6.6	7	5.7	6.4	7	180
185							7.6	7.8		6.5	7		5.3	5.8	6.2	5	5.7	6.2	185
190										6	6.3		4.7	5.2	5.4	4.4	5	5.5	190
195										5.4			4.1	4.5	4.7	3.9	4.4	4.8	195
200										4.9			3.6	3.9	4	3.3	3.8	4.1	200
205													3.1	3.4	3.3	2.8	3.2	3.4	205
210													2.6	2.8		2.3	2.7	2.8	210
215													2.1			1.9	2.2		215
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Lifting capacities Forces de levage

TNZK

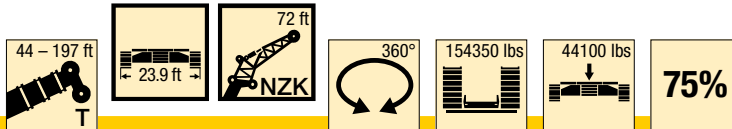


	44 ft			58 ft			72 ft			86 ft			100 ft			114 ft			
	72 ft			72 ft			72 ft			72 ft			72 ft			72 ft			
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12	21.8																		12
13	22																		13
14	22.2																		14
15	22.2																		15
16	22.2			21.5															16
17	22.1			21.5															17
18	22.1			21.5															18
19	22			21.5			20.5												19
20	21.9			21.4			20.5												20
22	21.7			21.3			20.5			19.9									22
24	21.6			21.2			20.4			19.9									24
26	21.3			21			20.3			19.8			19						26
28	21.1			20.8			20.2			19.7			18.9						28
30	20.9			20.7			20			19.6			18.9			18.3			30
32	20.6			20.5			19.9			19.5			18.8			18.3			32
34	20.3			20.3			19.7			19.4			18.7			18.2			34
36	20			20			19.5			19.2			18.6			18.1			36
38	19.7			19.7			19.3			19.1			18.4			18			38
40	19.3	16.6		19.5			19.1			18.9			18.3			17.9			40
45	18.4	15.7		18.7	15.8		18.5			18.4			17.9			17.5			45
50	17.5	14.9		17.9	15.1		17.9			17.8			17.4			17.2			50
55	16.5	14.1		17.2	14.4		17.3	14.4		17.3	14.4		17			16.8			55
60	15.6	13.3	11.3	16.4	13.7		16.6	13.8		16.8	13.9		16.6	13.8		16.4	13.8		60
65	14.7	12.7	10.9	15.6	13.1	11	16	13.3	11	16.2	13.4		16.1	13.4		16	13.3		65
70	13.9	12.1	10.5	14.8	12.5	10.7	15.3	12.7	10.7	15.7	12.9		15.6	12.9		15.6	13		70
75	13.1	11.6	10.3	14.1	12	10.4	14.7	12.3	10.4	15.1	12.5	10.5	15.2	12.5	10.4	15.2	12.6		75
80	12.4	11.1	10	13.4	11.6	10.1	14	11.9	10.2	14.6	12.1	10.2	14.7	12.2	10.2	14.8	12.2	10.2	80
85	11.6	10.7	9.8	12.7	11.2	9.9	13.4	11.5	10	14	11.7	10.1	14.2	11.8	10.1	14.4	11.9	10	85
90	10.8	10.3	9.7	12.1	10.8	9.8	12.8	11.1	9.8	13.4	11.4	9.9	13.7	11.5	9.9	14	11.6	9.9	90
95	10.1	10	9.7	11.5	10.4	9.7	12.3	10.8	9.7	12.9	11.1	9.8	13.3	11.2	9.8	13.6	11.3	9.8	95
100	9.4	9.8	9.7	10.9	10.2	9.7	11.8	10.5	9.6	12.5	10.8	9.7	12.8	10.9	9.7	13.1	11.1	9.7	100
105	8.9	9.7		10.2	9.9	9.7	11.3	10.2	9.6	12	10.5	9.6	12.4	10.6	9.6	12.7	10.8	9.6	105
110				9.6	9.8	9.7	10.8	10	9.6	11.6	10.3	9.6	12	10.4	9.5	12.4	10.6	9.5	110
115				9.2	9.7		10.2	9.8	9.6	11.1	10	9.6	11.6	10.2	9.5	12	10.4	9.5	115
120				8.8	9.7		9.7	9.7	9.6	10.7	9.9	9.6	11.2	10	9.5	11.6	10.2	9.4	120
125							9.3	9.6	9.6	10.3	9.7	9.6	10.9	9.9	9.5	11.3	10	9.4	125
130							9	9.6		9.8	9.6	9.6	10.5	9.7	9.5	11	9.8	9.4	130
135							8.6	9.6		9.4	9.6	9.6	10.1	9.6	9.5	10.7	9.7	9.4	135
140										9.1	9.6	9.6	9.8	9.5	9.5	10.4	9.6	9.4	140
145										8.8	9.6		9.5	9.5	9.5	10.1	9.5	9.4	145
150										8.6			9.2	9.5	9.5	9.8	9.5	9.4	150
155													8.9	9.2		9.5	9.4	9.4	155
160													8.7	9.1		9.2	9.4	9.4	160
165																9	9.3	9.4	165
170																8.8	9.2		170
175																8.6	9.1		175

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Lifting capacities Forces de levage

TNZK

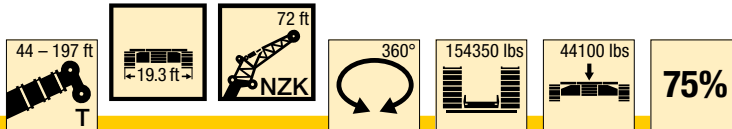


	128 ft			142 ft			156 ft			171 ft			185 ft			197 ft			
	72 ft			72 ft			72 ft			72 ft			72 ft			72 ft			
	0°	22.5°	45°	0°	22.5°	45°	0°	22.5°	45°	0°	22.5°	45°	0°	22.5°	45°	0°	22.5°	45°	
32	17.5			18.2															32
34	17.5			18.2															34
36	17.4			18.1															36
38	17.3			18															38
40	17.2			17.9			17.2												40
45	16.9			17.6			16.9			15.8									45
50	16.6			17.3			16.7			15.6									50
55	16.3			17			16.4			15.4			14.1			13			55
60	16			16.7			16.2			15.2			13.9			12.8			60
65	15.7	13.2		16.4	13.7		15.9			14.9			13.8			12.7			65
70	15.3	12.8		16	13.3		15.6			14.7			13.6			12.5			70
75	15	12.5		15.7	13		15.3	12.8		14.5	12.4		13.4			12.4			75
80	14.6	12.2		15.4	12.6		15	12.5		14.3	12.1		13.2	11.5		12.2			80
85	14.3	11.9	10	15	12.3	10.2	14.7	12.2	10.1	14	11.8		13	11.3		12	10.8		85
90	13.9	11.6	9.9	14.7	12	10	14.4	12	10	13.7	11.6		12.8	11.1		11.9	10.6		90
95	13.6	11.3	9.8	14.3	11.8	9.9	14.1	11.7	9.8	13.5	11.4	9.7	12.6	10.9		11.7	10.5		95
100	13.2	11.1	9.6	13.9	11.5	9.8	13.8	11.4	9.7	13.2	11.2	9.6	12.4	10.7	9.4	11.6	10.3		100
105	12.8	10.8	9.6	13.6	11.3	9.7	13.4	11.2	9.6	12.9	11	9.5	12.2	10.6	9.3	11.4	10.2	9.2	105
110	12.4	10.6	9.5	13.2	11	9.6	13.1	11	9.5	12.7	10.8	9.4	12	10.4	9.3	11.2	10	9.1	110
115	12.1	10.4	9.4	12.8	10.8	9.5	12.8	10.8	9.5	12.4	10.6	9.4	11.7	10.2	9.2	11.1	9.9	9.1	115
120	11.8	10.2	9.4	12.5	10.6	9.4	12.5	10.6	9.4	12.1	10.4	9.3	11.5	10.1	9.2	10.9	9.8	9	120
125	11.5	10.1	9.4	12.2	10.4	9.4	12.2	10.4	9.3	11.9	10.3	9.3	11.3	10	9.1	10.8	9.7	9	125
130	11.2	9.9	9.4	11.9	10.2	9.4	11.9	10.2	9.3	11.7	10.1	9.2	11.1	9.8	9.1	10.6	9.5	9	130
135	10.9	9.8	9.4	11.6	10.1	9.3	11.7	10.1	9.3	11.4	10	9.2	11	9.7	9.1	10.4	9.4	8.9	135
140	10.6	9.7	9.4	11.3	9.9	9.3	11.4	9.9	9.2	11.2	9.8	9.2	10.8	9.6	9	10.2	9.3	8.9	140
145	10.3	9.6	9.4	11	9.8	9.3	11.1	9.8	9.2	11	9.7	9.2	10.6	9.5	9	9.9	9.3	8.9	145
150	9.9	9.5	9.4	10.8	9.6	9.3	10.9	9.7	9.2	10.8	9.6	9.2	10.4	9.4	9	9.6	9.2	8.9	150
155	9.5	9.4	9.4	10.5	9.5	9.3	10.7	9.6	9.2	10.6	9.5	9.2	10.2	9.3	9	9.3	9.1	8.9	155
160	9.2	9.2	9.4	10.3	9.5	9.3	10.4	9.5	9.2	10.4	9.4	9.2	10	9.3	9	8.9	8.9	8.9	160
165	8.9	9	9.2	10	9.4	9.3	10.2	9.4	9.2	10.2	9.3	9.2	9.9	9.2	9	8.6	8.8	8.8	165
170	8.5	8.7	8.9	9.8	9.4	9.3	10	9.3	9.2	10	9.3	9.2	9.7	9.1	9	8.4	8.6	8.7	170
175	8.2	8.4	8.6	9.6	9.3	9.3	9.8	9.3	9.2	9.8	9.2	9.2	9.4	9.1	9	8.1	8.3	8.6	175
180	8	8.1	8.5	9.4	9.3	9.3	9.7	9.2	9.2	9.6	9.2	9.2	9.1	9	9	7.8	8.1	8.4	180
185	7.7	7.9		9.2	9.3	9.3	9.3	9.2	9.2	9.3	9.2	9.2	8.8	8.8	9	7.5	7.8	8.1	185
190	7.5			9	9.3	8.6	9	9.2	9.2	8.7	9.1	9.2	8.6	8.6	8.9	7.2	7.5	7.8	190
195				8.8	9.3		8.7	8.9	9.2	8.1	8.9	9.1	8.3	8.4	8.7	7	7.2	7.5	195
200				7.8			8.4	8.6	7.6	7.7	8.3	8.6	7.7	8.2	8.5	6.7	7	7.2	200
205				6.3			8.1	8.4	7.3	7.5	7.7	7.9	7.2	7.9	8.2	6.5	6.7	7	205
210							7.5	8		7.3	7.5	7.6	6.7	7.5	7.8	6.2	6.5	6.7	210
215							6.5			7	7.2	7.4	6.2	6.9	7.1	5.9	6.2	6.4	215
220							3.3			6.8	7		5.7	6.4	6.5	5.5	6	6.2	220
225										6.2	6.7		5.3	5.9	5.9	5	5.7	5.9	225
230										4.3			4.8	5.4	5.2	4.5	5.2	5.4	230
235													4.4	4.9		4.1	4.7	4.8	235
240													3.8			3.7	4.2		240
245																3.3	3.7		245
250																2.9	3.2		250

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Lifting capacities Forces de levage

TNZK

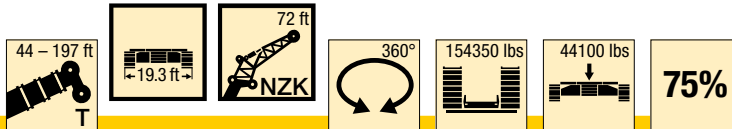


	44 ft			58 ft			72 ft			86 ft			100 ft			114 ft			
	72 ft			72 ft			72 ft			72 ft			72 ft			72 ft			
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12	21.8																		12
13	22																		13
14	22.2																		14
15	22.2																		15
16	22.2			21.5															16
17	22.1			21.5															17
18	22.1			21.5															18
19	22			21.5			20.5												19
20	21.9			21.4			20.5												20
22	21.7			21.3			20.5			19.9									22
24	21.6			21.2			20.4			19.9									24
26	21.3			21			20.3			19.8			19						26
28	21.1			20.8			20.2			19.7			18.9						28
30	20.9			20.7			20			19.6			18.9			18.3			30
32	20.6			20.5			19.9			19.5			18.8			18.3			32
34	20.3			20.3			19.7			19.4			18.7			18.2			34
36	20			20			19.5			19.2			18.6			18.1			36
38	19.7			19.7			19.3			19.1			18.4			18			38
40	19.3	16.6		19.5			19.1			18.9			18.3			17.9			40
45	18.4	15.7		18.7	15.8		18.5			18.4			17.9			17.5			45
50	17.5	14.9		17.9	15.1		17.9			17.8			17.4			17.2			50
55	16.5	14.1		17.2	14.4		17.3	14.4		17.3	14.4		17			16.8			55
60	15.6	13.3	11.3	16.4	13.7		16.6	13.8		16.8	13.9		16.6	13.8		16.4	13.8		60
65	14.7	12.7	10.9	15.6	13.1	11	16	13.3	11	16.2	13.4		16.1	13.4		16	13.3		65
70	13.9	12.1	10.5	14.8	12.5	10.7	15.3	12.7	10.7	15.7	12.9		15.6	12.9		15.6	13		70
75	13.1	11.6	10.3	14.1	12	10.4	14.7	12.3	10.4	15.1	12.5	10.5	15.2	12.5	10.4	15.2	12.6		75
80	12.4	11.1	10	13.4	11.6	10.1	14	11.9	10.2	14.6	12.1	10.2	14.7	12.2	10.2	14.8	12.2	10.2	80
85	11.6	10.7	9.8	12.7	11.2	9.9	13.4	11.5	10	14	11.7	10.1	14.2	11.8	10.1	14.4	11.9	10	85
90	10.8	10.3	9.7	12.1	10.8	9.8	12.8	11.1	9.8	13.4	11.4	9.9	13.7	11.5	9.9	14	11.6	9.9	90
95	10.1	10	9.7	11.5	10.4	9.7	12.3	10.8	9.7	12.9	11.1	9.8	13.3	11.2	9.8	13.6	11.3	9.8	95
100	9.4	9.8	9.7	10.9	10.2	9.7	11.8	10.5	9.6	12.5	10.8	9.7	12.8	10.9	9.7	13.1	11.1	9.7	100
105	8.9	9.7		10.2	9.9	9.7	11.3	10.2	9.6	12	10.5	9.6	12.4	10.6	9.6	12.7	10.8	9.6	105
110				9.6	9.8	9.7	10.8	10	9.6	11.6	10.3	9.6	12	10.4	9.5	12.4	10.6	9.5	110
115				9.2	9.7		10.2	9.8	9.6	11.1	10	9.6	11.6	10.2	9.5	12	10.4	9.5	115
120				8.8	9.7		9.7	9.7	9.6	10.7	9.9	9.6	11.2	10	9.5	11.6	10.2	9.4	120
125							9.3	9.6	9.6	10.3	9.7	9.6	10.9	9.9	9.5	11.3	10	9.4	125
130							9	9.6		9.8	9.6	9.6	10.5	9.7	9.5	11	9.8	9.4	130
135							8.6	9.6		9.4	9.6	9.6	10.1	9.6	9.5	10.7	9.7	9.4	135
140										9.1	9.6	9.6	9.8	9.5	9.5	10.4	9.6	9.4	140
145										8.8	9.6		9.5	9.5	9.5	10.1	9.5	9.4	145
150										8.6			9.2	9.5	9.5	9.8	9.5	9.4	150
155													8.9	9.2		9.5	9.4	9.4	155
160													8.7	9.1		9.2	9.4	9.4	160
165																9	9.3	9.4	165
170																8.8	9.2		170
175																8.6	9.1		175

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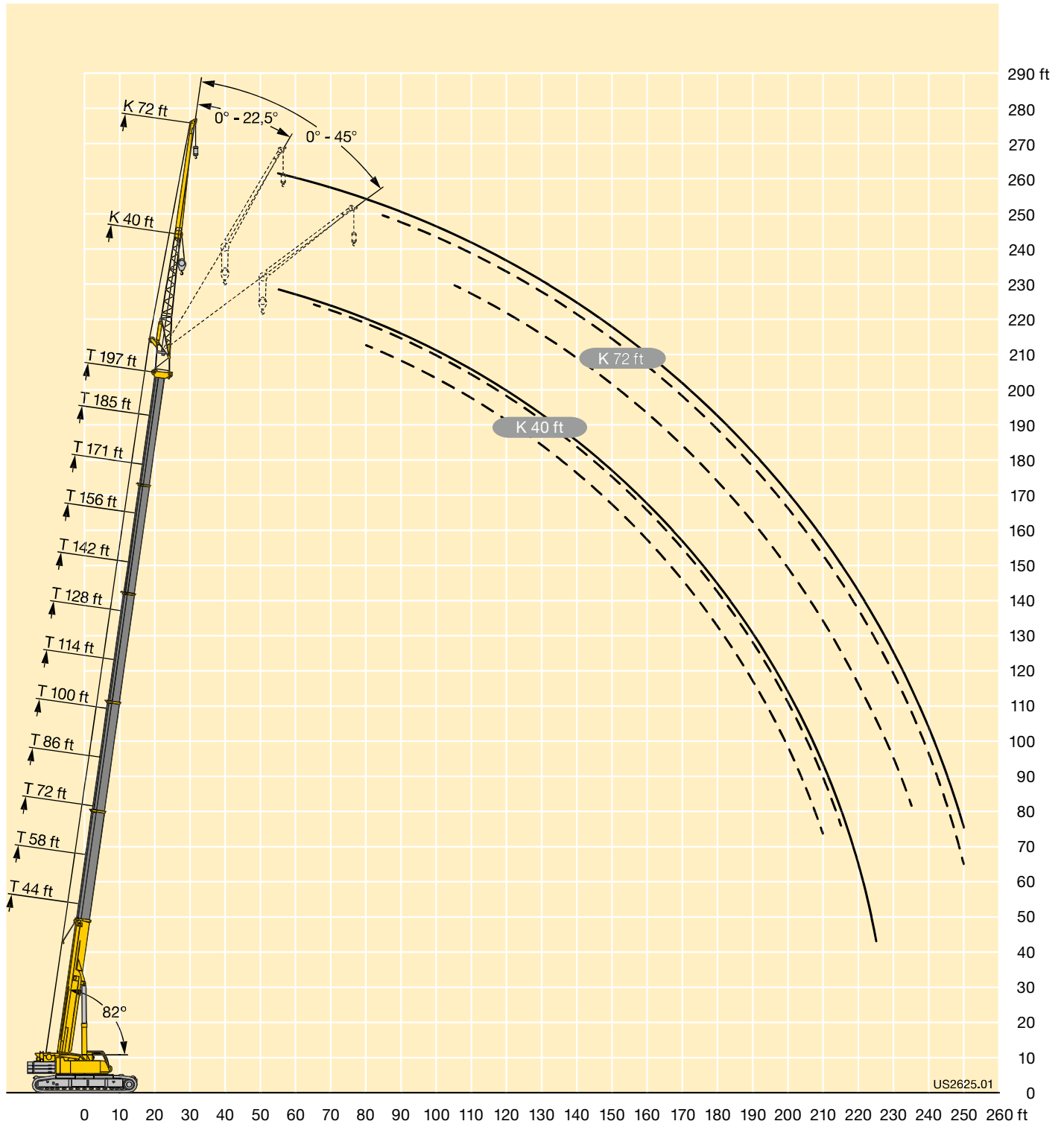
Lifting capacities Forces de levage

TNZK



	128 ft			142 ft			156 ft			171 ft			185 ft			197 ft			
	72 ft			72 ft			72 ft			72 ft			72 ft			72 ft			
	0°	22.5°	45°	0°	22.5°	45°	0°	22.5°	45°	0°	22.5°	45°	0°	22.5°	45°	0°	22.5°	45°	
32	17.5			18.2															32
34	17.5			18.2															34
36	17.4			18.1															36
38	17.3			18															38
40	17.2			17.9			17.2												40
45	16.9			17.6			16.9			15.8									45
50	16.6			17.3			16.7			15.6									50
55	16.3			17			16.4			15.4			14.1			13			55
60	16			16.7			16.2			15.2			13.9			12.8			60
65	15.7	13.2		16.4	13.7		15.9			14.9			13.8			12.7			65
70	15.3	12.8		16	13.3		15.6			14.7			13.6			12.5			70
75	15	12.5		15.7	13		15.3	12.8		14.5	12.4		13.4			12.4			75
80	14.6	12.2		15.4	12.6		15	12.5		14.3	12.1		13.2	11.5		12.2			80
85	14.3	11.9	10	15	12.3	10.2	14.7	12.2	10.1	14	11.8		13	11.3		12	10.8		85
90	13.9	11.6	9.9	14.7	12	10	14.4	12	10	13.7	11.6		12.8	11.1		11.9	10.6		90
95	13.6	11.3	9.8	14.3	11.8	9.9	14.1	11.7	9.8	13.5	11.4	9.7	12.6	10.9		11.7	10.5		95
100	13.2	11.1	9.6	13.9	11.5	9.8	13.8	11.4	9.7	13.2	11.2	9.6	12.4	10.7	9.4	11.6	10.3		100
105	12.8	10.8	9.6	13.6	11.3	9.7	13.4	11.2	9.6	12.9	11	9.5	12.2	10.6	9.3	11.4	10.2	9.2	105
110	12.4	10.6	9.5	13.2	11	9.6	13.1	11	9.5	12.7	10.8	9.4	12	10.4	9.3	11.2	10	9.1	110
115	12.1	10.4	9.4	12.8	10.8	9.5	12.8	10.8	9.5	12.4	10.6	9.4	11.7	10.2	9.2	11.1	9.9	9.1	115
120	11.8	10.2	9.4	12.5	10.6	9.4	12.5	10.6	9.4	12.1	10.4	9.3	11.5	10.1	9.2	10.9	9.8	9	120
125	11.5	10.1	9.4	12.2	10.4	9.4	12.2	10.4	9.3	11.9	10.3	9.3	11.3	10	9.1	10.8	9.7	9	125
130	11.2	9.9	9.4	11.9	10.2	9.4	11.9	10.2	9.3	11.7	10.1	9.2	11.1	9.8	9.1	10.6	9.5	9	130
135	10.9	9.8	9.4	11.6	10.1	9.3	11.7	10.1	9.3	11.4	10	9.2	11	9.7	9.1	10.4	9.4	8.9	135
140	10.6	9.7	9.4	11.3	9.9	9.3	11.4	9.9	9.2	11.2	9.8	9.2	10.8	9.6	9	10.2	9.3	8.9	140
145	10.3	9.6	9.4	11	9.8	9.3	11.1	9.8	9.2	11	9.7	9.2	10.6	9.5	9	9.9	9.3	8.9	145
150	9.9	9.5	9.4	10.8	9.6	9.3	10.9	9.7	9.2	10.8	9.6	9.2	10.4	9.4	9	9.6	9.2	8.9	150
155	9.5	9.4	9.4	10.5	9.5	9.3	10.5	9.6	9.2	10.5	9.5	9.2	10.2	9.3	9	9.3	9.1	8.9	155
160	9.2	9.2	9.4	10.3	9.5	9.3	10.3	9.5	9.2	10	9.4	9.2	9.9	9.3	9	8.9	8.9	8.9	160
165	8.9	9	9.2	10	9.4	9.3	10	9.4	9.2	9.8	9.3	9.2	9.3	9.2	9	8.6	8.8	8.8	165
170	8.5	8.7	8.9	9.5	9.4	9.3	9.5	9.3	9.2	9.5	9.3	9.2	8.5	9.1	9	8.1	8.6	8.7	170
175	8.2	8.4	8.6	8.8	9.3	9.3	8.7	9.3	9.2	9	9.1	9.1	7.8	9.1	9	7.5	8.3	8.6	175
180	8	8.1	8.5	8.6	9	9.2	8.4	9	9.2	8.3	9	9.1	7.1	8.5	9	6.8	8.1	8.4	180
185	7.7	7.9		8.3	8.4	8.7	8.1	8.4	8.8	7.6	8.7	9.1	6.4	7.8	8.6	6.1	7.6	8.1	185
190	7.5			8.1	8.2	8.6	7.8	8	8.2	7	8	8.6	5.7	7	7.8	5.5	6.9	7.6	190
195				7.8	7.9		7.4	7.7	7.9	6.4	7.4	7.8	5.2	6.4	7	4.9	6.2	7	195
200				7.6			6.8	7.4	7.5	5.8	6.7	7	4.6	5.7	6.2	4.3	5.6	6.2	200
205				6.3			6.3	6.8	6.7	5.3	6.1	6.3	4.1	5.1	5.5	3.8	4.9	5.5	205
210							5.8	6.2		4.8	5.5	5.6	3.6	4.5	4.9	3.3	4.3	4.9	210
215							5.3			4.3	4.9	4.9	3.1	3.9	4.2	2.8	3.8	4.2	215
220							3.3			3.9	4.4		2.6	3.4	3.5	2.3	3.3	3.6	220
225										3.5	3.8		2.2	2.9	2.9	1.9	2.8	3	225
230										3.1			1.8	2.4	2.2	1.4	2.3	2.4	230
235													1.4	1.9			1.8	1.8	235

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Technical description

Description techniques

Crawler travel gear

Frame	Low torsion box construction, consisting of crawler center section, two traverse beams and two crawler carriers. The crawler carriers can be removed from the telescoping traverse beams. Hydraulic track width adjustment.
Tracks	Maintenance free crawler chassis with 3'3" wide flat crawler pads.
Travel drive	Per crawler carrier, a hydraulic travel drive consisting of an axial piston motor, planetary gear with spring-loaded hydraulically-releasable travel brake. The crawler chains can be controlled synchronously as well as independently and counter-rotating. Travel speed: 0 – 1.55 mph.
Central ballast	44100 lbs, placement blocks at 22050 lbs each, mounting on crawler center section.

Crane superstructure

Frame	Liebherr-manufactured, torsionally rigid steel construction made from high-tensile fine-grain steel. Triple-roller slewing rim.
Crane engine	Diesel, 4 cylinder, watercooled, make Liebherr, output 230 kW (312 h.p.), max. torque 1062 lbs-ft. Exhaust emissions acc. to (EU) 2016/1628, EPA/CARB or ECE-R.96. Fuel tank capacity: 185 gallons.
Crane drive	Diesel-hydraulic, with 5 axial piston variable displacement pumps, with servo-control and capacity control, 1 double gear pump. Compact hydraulic drive flanged to the Diesel engine. Drive assembly completely enclosed for noise abatement.
Control	Electronic control by the LICCON computer system (PLC control), two self-centering control levers (joy-sticks). Infinitely variable crane motions through displacement control of the hydraulic pump. Additional working speed control by variation of the Diesel engine.
Hoist gear	Axial piston variable displacement motor, Liebherr hoist drum with integrated planetary gear and spring-loaded static brake. Actuation by closed regulated oil circuit.
Luffing gear	1 differential ram with nonreturn valve.
Slewing gear	Axial piston fixed displacement motor, planetary gear, spring-loaded static brake.
Crane cab	Large screen area, compound glass, comfort furnishing, cabin tiltable 20° to rear.
Safety devices	LICCON2 safe load indicator, test system, hoist limit switches, safety valves against rupture of pipes and hoses.

Telescopic boom	1 base section and 5 telescopic sections. All telescopic sections extendable individually by means of the rapid-cycle telescoping system Telematik. Boom length 44 ft to 197 ft.
Counterweight	110250 lbs
Electrical system	Modern data bus technique, 24 Volt DC, 2 batteries of 170 Ah each.

Additional equipment

Swing-away jib K/NZK	40 ft – 72 ft long, mountable to the telescopic boom at 0°, 22.5° or 45°. Hydraulic ram for operating the swing-away jib from 0° – 45° (option).
Telescopic boom extension V	23 ft long lattice section, thus 23 ft higher pinning point for swing-away jib.
Intermediate sections	2 intermediate sections of 23 ft each for the extension of the biparted swing-away jib to 95 ft or 118 ft.
Erection jib HK	11 ft
2nd hoist gear	For two-hook operation or for operation with swing-away jib if the hoist rope shall remain reeved.
Additional counterweight	2 additional counterweight slabs of 22050 lbs each for a total counterweight of 154350 lbs.

Other items of equipment available on request.

Description of symbols Explication des symboles

General symbols Symboles généraux

	Radius Portée		Width crawler chassis Largeur du train de chenilles
	Boom length Longueur de la flèche		Total weight Poids total
	Boom position Position de la flèche		Hookblock / Capacity Moufle à crochet / Capacité de charge
	Ground pressure Pression au sol		Hoist gear Treuil de levage
	Slewing gear / Working area Mécanisme d'orientation / Plage de travail		Crane superstructure Partie tournante de la grue
	Driving speed Vitesse de translation		Standard Norme
	Counterweight Contrepoids		Gradability Aptitude à graver les pentes
	Central ballast Contrepoids central		Driving force Puissance propulsive

Crane specific symbols Symboles spécifiques à la grue

	Telescopic boom Flèche télescopique		Telescopic boom extension Rallonge fleche telescopique
	Hydraulic swing away jib Fléchette pliante hydraulique		Erection jib Fléchette de montage

Remarks referring to load charts

1. The lifting capacities do not exceed 75 % of the tipping load according to ASME B 30.5.
The crane's structural steelwork is in accordance with EN 13000 and ASME B 30.5.
2. For the calculation of the load charts at least a wind speed of 30 ft/s (9 m/s, 20.1 mph) and regarding the load a sail area of 1 m² per ton load and a wind resistance coefficient of 1.2 on the load have been taken into account. For lifting of loads with large sail areas and/or high wind resistance coefficients the maximum wind speed as stated in the load charts has to be reduced.
3. The lifting capacities stated are valid for lifting operation only (corresponding with crane classification according to ISO 4301-1, crane group A1).
4. Lifting capacities are given in kips.
5. The weight of the hook blocks and hooks is part of the load and therefore it must be deducted from the lifting capacities.
6. Working radii are measured from the slewing centreline.
7. The stated lengths of the telescopic boom are maximum values and may deviate slightly.
8. The lifting capacities given for the telescopic boom only apply if the folding jib is taken off.
9. Subject to modification of lifting capacities.
10. Lifting capacities above 295400 lbs/332900 lbs only with additional pulley block/special equipment.
11. Lateral inclination $\pm 0.3^\circ$.
12. The data of this brochure serves only for general information. All information is provided without warranty. Instructions for the correct commissioning of the crane please take from the operation manual and the load chart book.