



135 USt



217 ft



210 ft



299 ft

There's nothing more on 4

LTM 1120-4.1

Mobile crane
Grue mobile

LIEBHERR

Mobile and crawler cranes



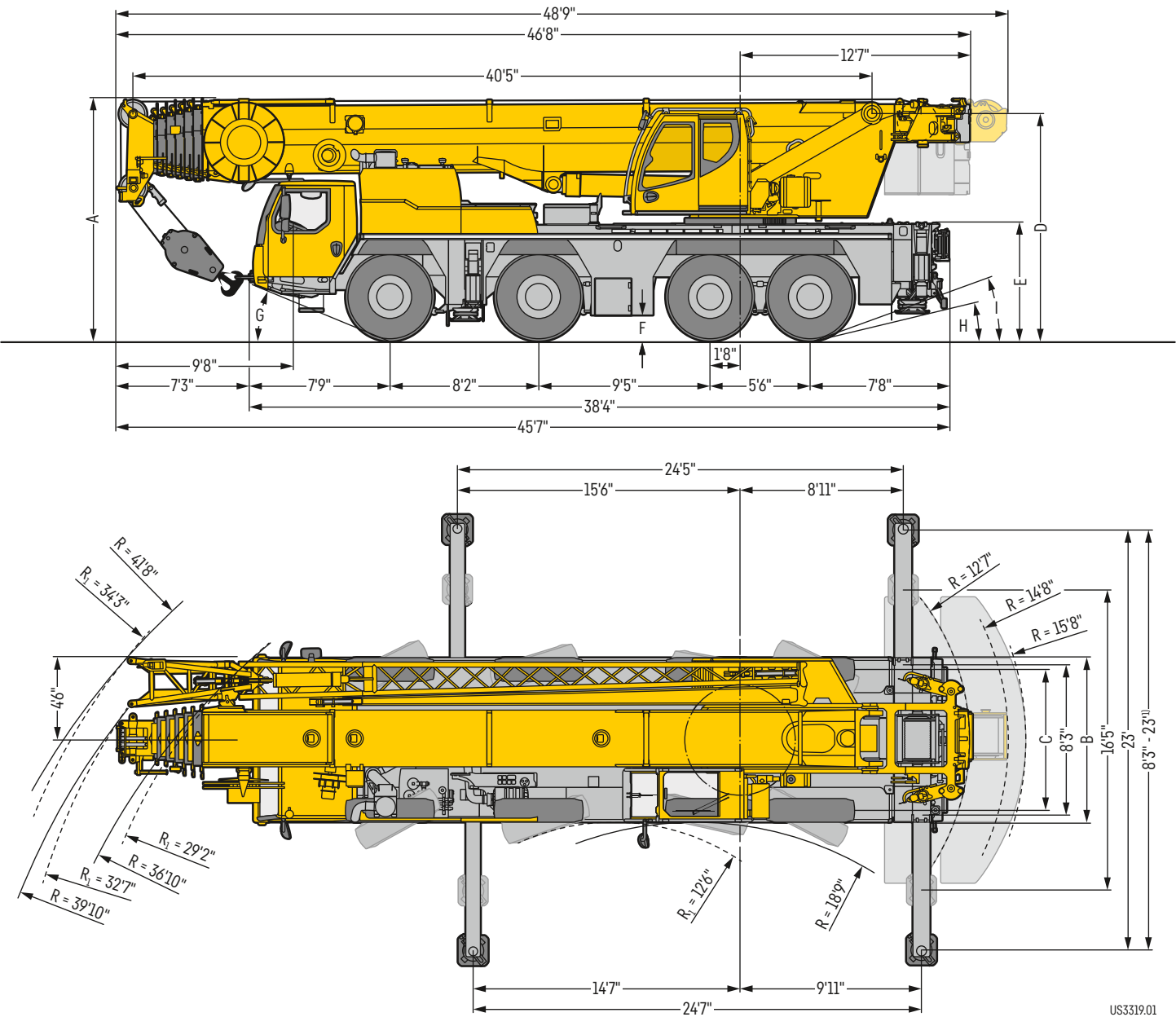
Technical data

Caractéristiques technique

Dimensions	
Encombrement	3
Mobile Crane	
Grue mobile	4-5
Equipment	
Equipement	6-7
Weights	
Poids	8
Working speeds	
Vitesses	8
VarioBallast Counterweight radius	
Rayon de contrepoids	9
Counterweight	
Contrepoids	9
On-road driving	
Déplacement sur route	10
Jobsite driving	
Déplacement sur chantier	10
Boom/jib combinations	
Configurations de flèche	11
T	12-17
TK/TNZK	18-20
TVK/TVNZK	21-23
TK	24-25
Equipment	
Equipement	26-27
Description of symbols	
Explication des symboles	28
Remarks	
Remarques	29

Dimensions

Encombrement



R₁ = All-wheel steering · Direction toutes roues

¹⁾ only with VarioBase® · seulement avec VarioBase®

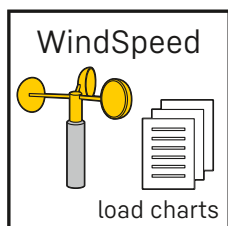
Dimensions · Encombrement

	A	A 4" *	B	C	D	E	F	G	H	I
445/95 R 25 (16.00 R 25)	13'1"	12'10"	9'	7'7"	12'4"	6'3"	1'3"	23°	13°	20°
525/80 R 25 (20.5 R 25)	13'1"	12'10"	9'6"	7'9"	12'4"	6'3"	1'3"	23°	13°	20°

* lowered · abaissé

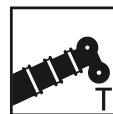
LTM 1120-4.1





Increased flexibility and safety by using lifting capacity tables with different maximum wind speeds.

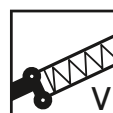
Une flexibilité et une sécurité accrues grâce aux tableaux de charge avec différentes vitesses de vent autorisées.



217 ft



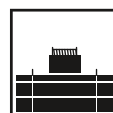
35 ft – 62 ft



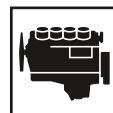
23 ft



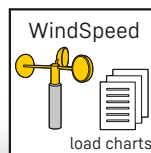
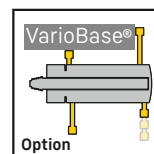
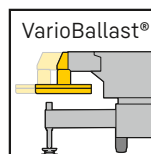
9.5 ft



68,300 lb



330 kW (449 PS)



Far away, yet very close

Loin et pourtant si proche

Camera system for telescopic boom and equipment including colour monitor

- Ideal for working over difficult edges
- Helpful zoom function

Système de caméra pour flèche télescopique et équipement avec écran couleur

- Idéal pour travailler au-dessus d'arêtes gênantes
- Fonction zoom pratique

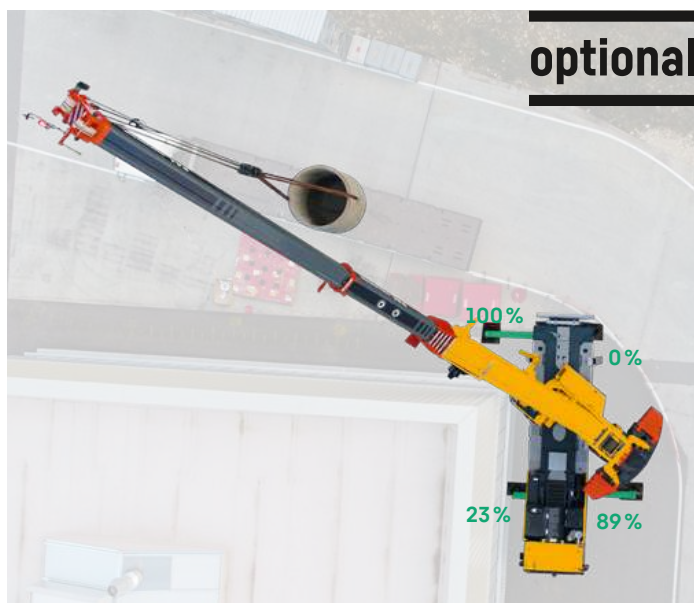
optional



Constricted site? – VarioBase®!

Le chantier est étroit ? – VarioBase® !

optional



- Variable extension of outriggers to any position
- Best possible lifting capacities using real-time calculation
- Greater economy by reducing counter weights
- Déploiement variable des longerons coulissants quelle que soit la position
- Capacités de charge optimales grâce au calcul en temps réel
- Rentabilité supérieure grâce à l'économie de contrepoids

VarioBallast® – For greater flexibility every day

Une plus grande flexibilité au quotidien



- 12.6 ft radius for smaller footprint
- Rayon de 12.6 ft nécessitant moins de place



- 15.6 ft radius for higher lifting capacities
- Rayon de 15.6 ft pour des capacités de charge supérieures



- Simple mechanical adjustment
- Réglage mécanique simple

Practical work equipment

Équipement de travail pratique

- Mechanically or hydraulically adjustable double swing-away jib
- Greater working range and working over difficult edges
- Interchangeable with many of the crane models
- Double fléchette pliante réglable mécaniquement et hydrauliquement
- Grande zone de travail et travail au-dessus d'arêtes gênantes
- Échangeable avec de nombreux autres types de grue



Weights

Poids

Hook block • Moufles à crochet

			
181,200 lb	7	12	2,750 lb
167,300 lb	5	10	2,000 lb
109,570 lb	3	7	1,550 lb
48,500 lb	1	3	1,000 lb
16,300 lb	-	1	550 lb

Working speeds

Vitesses

Crane carrier • Châssis porteur

	 min.	 max.	 %		
445/95 R 25 (16.00 R 25)	0.3	53	56,5 %		12 / R2
525/80 R 25 (20.5 R 25)	0.3	53	56,5 %		4 / R2

Theoretical gradeability • Aptitude théorique en pente

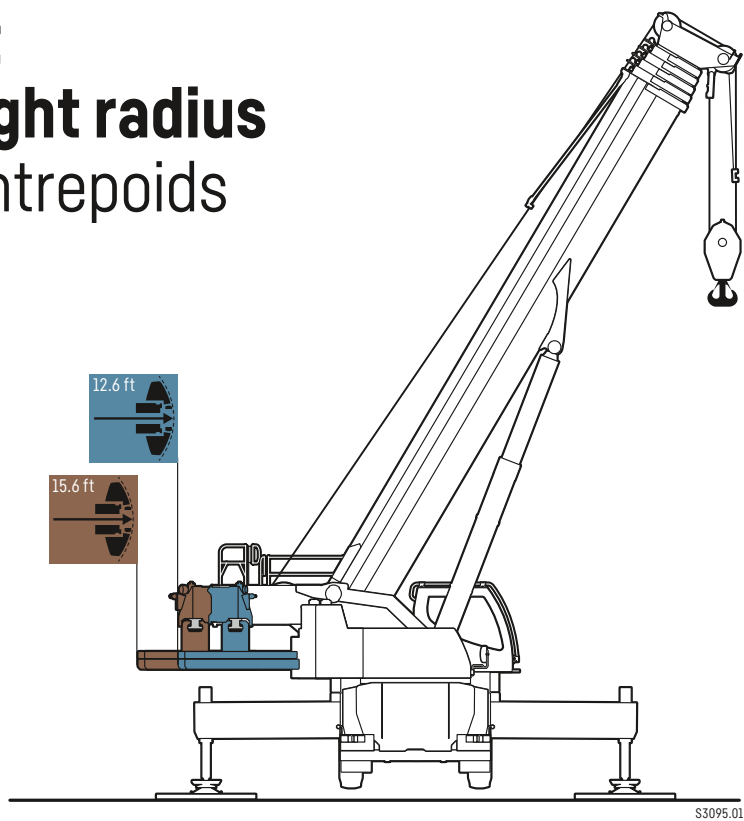
Crane superstructure • Partie tournante

			
 1	0 - 374 ft/min single line • au brin simple	0.74"	820 ft
 2	0 - 374 ft/min single line • au brin simple	0.74"	820 ft
 360°	0 - 1.8 rpm		
	approx. 63 seconds to reach 83° boom angle env. 63 s jusqu'à 83°		
	approx. 475 seconds for boom extension from 40 ft - 217 ft env. 475 s pour passer de 40 ft - 217 ft		

VarioBallast

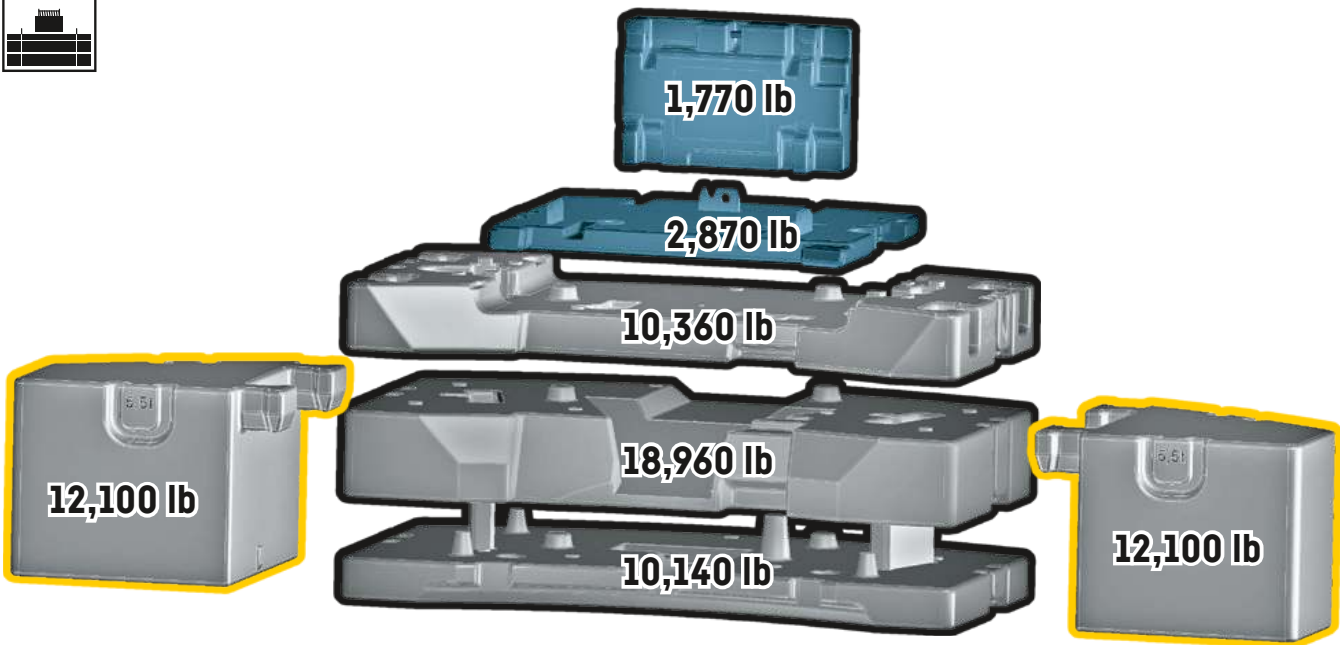
Counterweight radius

Rayon de contrepoids



Counterweight

Contrepoids



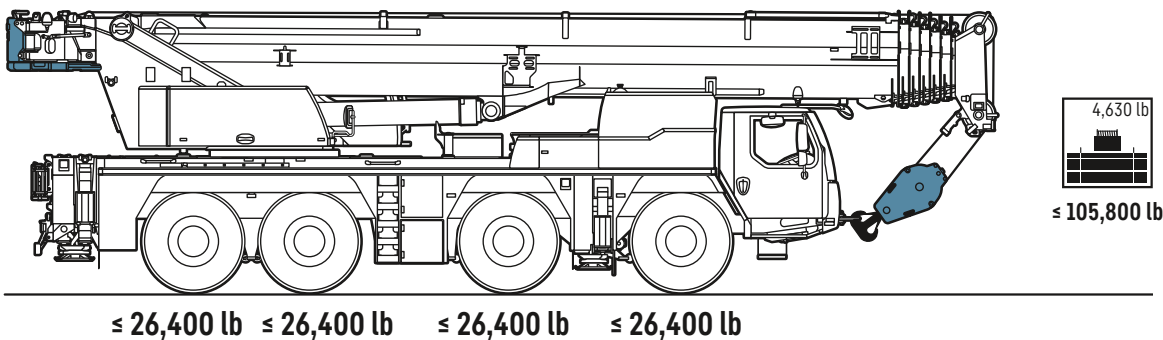
26,400 lb axle load
26,400 lb de charge par essieu

Technichally transportable
Transport techniquement simplifié

Additional counterweight
Contrepoids additionnel

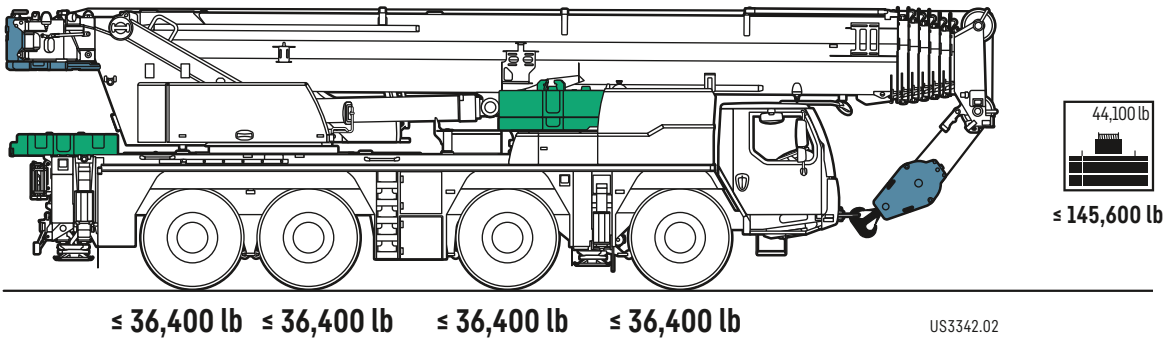
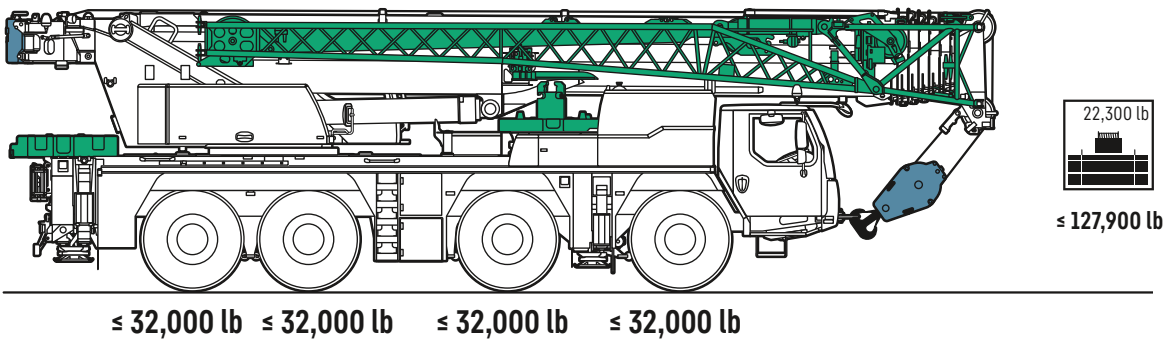
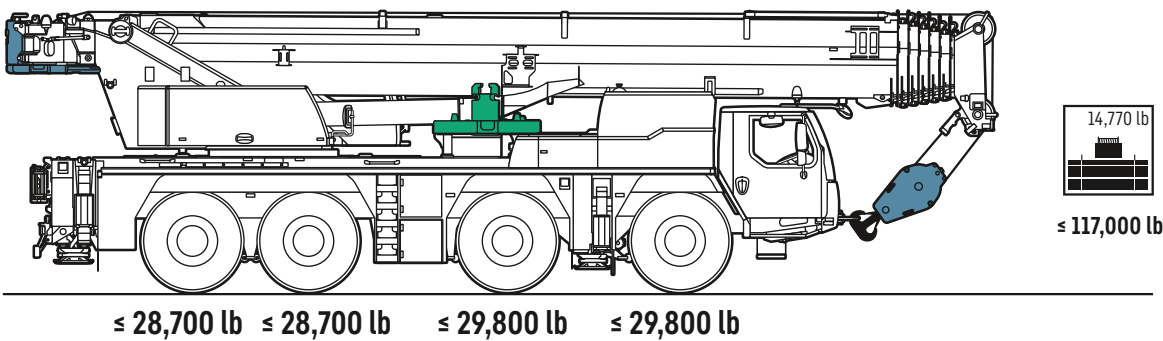
On-road driving

Déplacement sur route



Jobsite driving

Déplacement sur chantier



US3342.02

Boom/jib combinations

Configurations de flèche

T	Telescopic boom - Flèche télescopique
K/NZK	Mechanically/hydraulically adjustable folding jib - Pointe pliante réglable mecaniquement/hydrauliquement
V	Telescopic boom extension - Rallonge de flèche télescopique
K	Assembly jib - Fléchette de montage

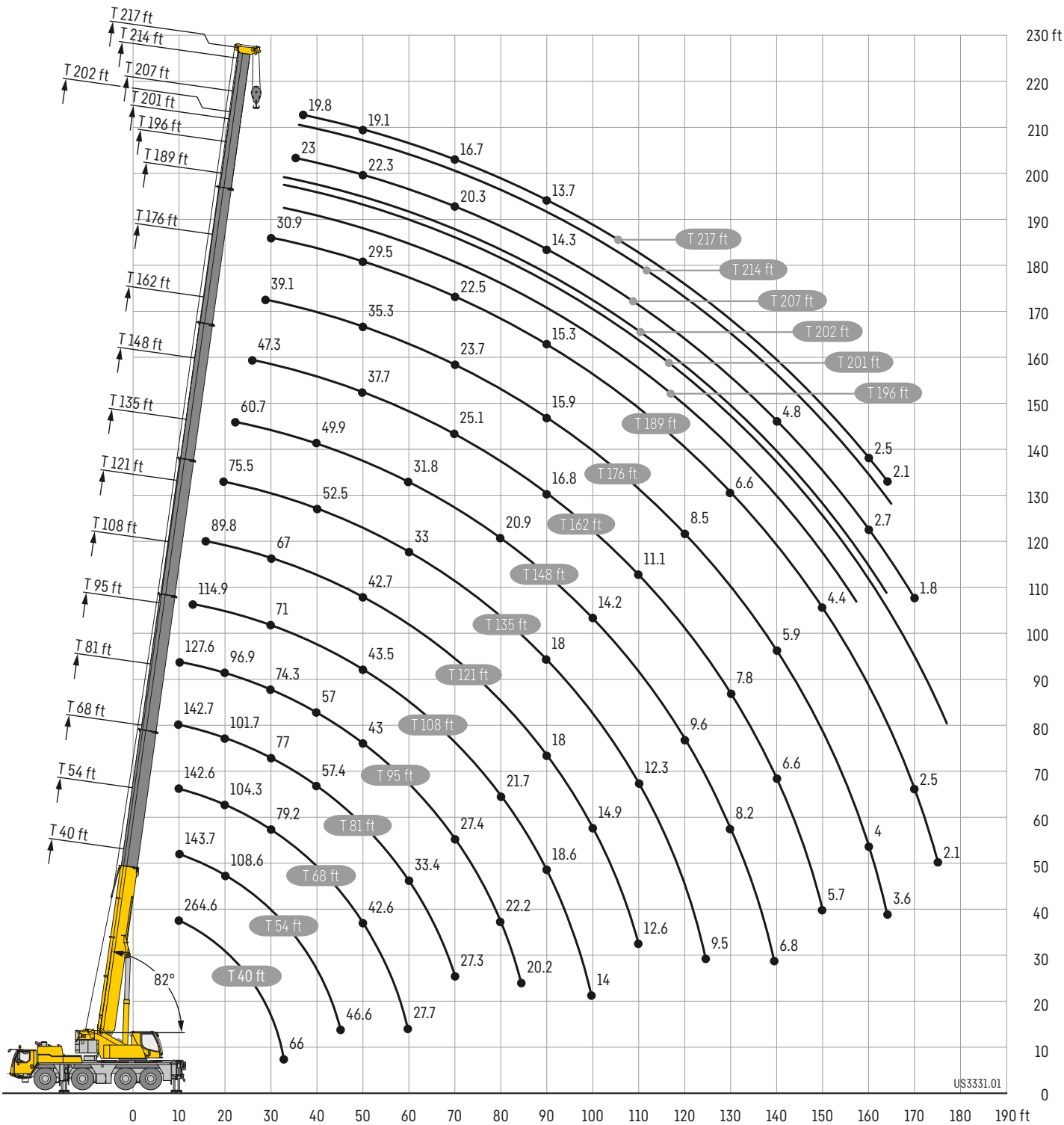


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Lifting heights

Hauteurs de levage

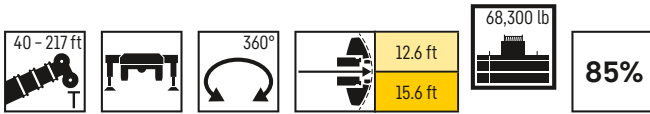
T



Lifting capacities

Forces de levage

T



	40 ft		54 ft	68 ft	81 ft	95 ft	108 ft	121 ft	135 ft	148 ft	162 ft	176 ft	189 ft	196 ft	201 ft	202 ft	207 ft	214 ft	217 ft	
	*																			
10	264.6	153.2	143.7	142.6	142.7	127.6														10
11	202.1	153.2	143.7	142.6	142.7	138.5														11
12	162.1	151.4	143.7	142.6	142.5	137.2														12
13	155.1	147.2	143.7	141.1	135.7	129.8	114.9													13
14	147.1	140.6	138.7	133.7	128.7	123.2	114.5													14
15	139.2	134.6	131.4	127.5	123.4	117.7	109.6	89.8												15
16	132.4	128.7	125.5	121.3	116.9	110.8	104.4	92.8												16
17	126.9	123.3	121.2	116.4	112.6	106.3	101.3	92.6												17
18	122.1	118.2	116.7	112	108.6	102.4	98.6	91.7												18
19	117.6	113.4	112.6	108	104.7	99.7	95.7	89.7	75.5											19
20	113.3	109	108.6	104.3	101.7	96.9	92.8	87.9	75.3											20
22	105.3	101	101.9	98.9	95.3	90.9	87.3	82.7	74.9	60.7										22
24	98	94	95.5	92.9	89.3	87.7	83.1	78.3	73.4	60.6	47.3									24
26	90.9	87.7	89.5	88.3	85.3	83	78.6	74.2	70.4	60.3	48.9									26
28	83.8	81.6	83.9	83.9	81.3	78.4	74.6	70.5	67.5	60	48.8	39.1								28
30	76.1	75.4	77.9	79.2	77	74.3	71	67	65.1	59.5	48.7	39.1	30.9							30
32	66	66	72.4	73.8	73	70.5	67.7	63.8	62.1	58.3	48.5	39	30.9	26.7	23.2					32
34			67.6	68.9	69.2	67.2	64.5	61.6	59.3	56.1	48.2	38.9	30.9	26.6	23.1	24.8	23			34
36			63.3	64.6	64.9	63.9	61.5	59.6	56.8	53.8	47.9	38.8	30.9	26.3	23	24.8	23	20.3	19.8	36
38			59.4	60.7	61	60.7	58.7	57.7	54.4	52	47.3	38.5	30.7	26.1	22.8	24.7	22.9	20.2	19.7	38
40			55.6	57	57.4	57	55.9	55.1	52.5	49.9	46.4	38.2	30.6	25.8	22.6	24.6	22.8	20.1	19.6	40
45			46.6	49	49.3	49	49.4	48.7	46.4	44.2	41.7	37.2	30.1	24.9	22.2	24.3	22.6	19.9	19.4	45
50				42.6	42.9	43	43.5	42.7	40.6	39.2	37.7	35.3	29.5	23.9	21.6	23.9	22.3	19.6	19.1	50
55				37.4	37.7	38.8	38.3	37.5	36.6	35.3	33.9	32	28.6	22.9	21	23.5	21.9	19.2	18.7	55
60				27.7	33.4	34.4	34	33.2	33	31.8	30.4	29.1	27.4	21.9	20.3	22.9	21.4	18.7	18	60
65					30.4	30.7	30.2	29.5	30	28.8	27.9	26.4	24.8	20.9	19.5	22.3	20.9	18.2	17.4	65
70					27.3	27.4	26.9	26.5	26.6	26.2	25.1	23.7	22.5	19.8	18.8	21.1	20.3	17.7	16.7	70
75						24.6	24.1	24.6	23.8	23.4	22.5	22	21	18.6	18	19.5	19.4	17.1	16.1	75
80																				
85						22.2	21.7	22.1	21.4	20.9	20.7	20	19	16.9	17.2	17.5	17.5	16.4	15.4	80
						20.2	19.9	19.9	19.2	18.9	18.7	17.8	17.1	15.2	16.4	15.8	15.8	15.5	14.6	85
90							18.6	18	18	17.3	16.8	15.9	15.3	13.5	15.2	14.2	14.3	14	13.7	90
95							16.9	16.4	16.3	15.7	15.1	14.2	13.6	11.8	13.6	12.7	12.8	12.6	12.4	95
100							14	14.9	14.8	14.2	13.6	12.8	12.2	10.4	12.2	11.2	11.3	11.2	11.1	100
105								13.6	13.5	12.8	12.3	11.5	10.9	9.2	10.9	9.9	10	10	9.8	105
110								12.6	12.3	11.6	11.1	10.3	9.7	8.2	9.7	8.9	9	8.9	8.8	110
115									11.2	10.5	10	9.3	8.8	7.4	8.8	8	8.1	8	7.9	115
120									10.3	9.6	9.1	8.5	8	6.6	8	7.2	7.3	7.3	7.1	120
125									9.5	8.9	8.4	7.8	7.3	5.9	7.3	6.5	6.6	6.6	6.4	125
130										8.2	7.8	7.1	6.6	5.2	6.6	5.9	6	5.9	5.8	130
135										7.6	7.2	6.5	6	4.6	6	5.3	5.4	5.3	5.2	135
140										6.8	6.6	5.9	5.4	3.9	5.5	4.7	4.8	4.7	4.6	140
145											6.1	5.4	4.9	3.3	5	4.1	4.3	4.2	4.1	145
150											5.7	5	4.4	2.7	4.5	3.6	3.8	3.7	3.6	150
155												4.5	3.9	2.2	4	3	3.2	3.2	3	155
160												4	3.4		3.5	2.5	2.7	2.7	2.5	160
165												3.6	2.9		3	2.1	2.2	2.2	2.1	165
170													2.5		2.6		1.8			170
175													2.1		2.2					175
180															1.8					180

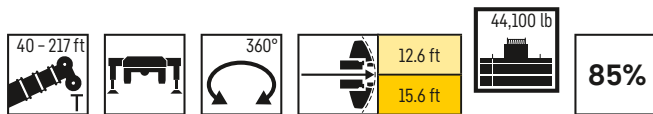
* ± 0° over rear - en arrière

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Lifting capacities

Forces de levage

T



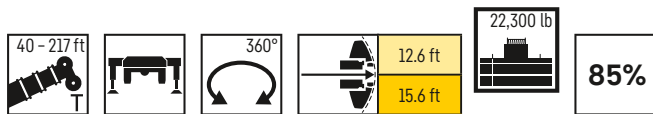
	40 ft	54 ft	68 ft	81 ft	95 ft	108 ft	121 ft	135 ft	148 ft	162 ft	176 ft	189 ft	196 ft	201 ft	202 ft	207 ft	214 ft	217 ft	
10	153.2	143.7	142.6	142.7	127.6														10
11	153.2	143.7	142.6	142.7	138.5														11
12	150.8	143.7	142.6	142.5	137.2														12
13	145.5	143.7	141.1	135.7	129.8	114.9													13
14	138.5	138.4	133.7	128.7	123.2	114.5													14
15	132.2	131.4	127.5	123.4	117.7	109.6	89.8												15
16	126.4	125.5	121.3	116.9	110.8	104.4	92.8												16
17	121	121.2	116.4	112.6	106.3	101.3	92.6												17
18	116	116.6	112	108.6	102.4	98.6	91.7												18
19	111.3	112.1	108	104.7	99.7	95.7	89.7	75.5											19
20	106.9	107.6	104.3	101.7	96.9	92.8	87.9	75.3											20
22	97.4	99.3	98.7	95.3	90.9	87.3	82.6	74.9	60.7										22
24	88.5	90.5	91.3	89.3	87.7	82.6	77.8	72	60.6	47.3									24
26	81	83.5	84.8	83.8	80.4	75.4	70.7	67.7	60.3	48.9									26
28	73.8	76.7	78.2	77.5	73.3	68.9	67.3	63.2	58.8	48.8	39.1								28
30	67.5	70.3	71.8	70.9	67.4	64.6	62	58.6	55.4	48.7	39.1	30.9							30
32	62	64.8	66.2	65.2	62	60.9	57.4	54.2	51.5	47.2	39	30.9	26.7	23.2					32
34		59.9	61.4	60.2	57.4	56.6	53.3	51.2	48.3	44.7	38.9	30.9	26.6	23.1	24.8	23			34
36		55.3	56.9	56	54.7	52.7	49.7	47.8	45.4	43.1	38.8	30.9	26.3	23	24.8	23	20.3	19.8	36
38		50.6	52.5	52.2	51.6	49.3	46.9	44.7	43.1	40.8	37.5	30.7	26.1	22.8	24.7	22.9	20.2	19.7	38
40		46.4	48.3	48.6	48.4	46.1	44.1	42.8	40.6	38.6	36.1	30.6	25.8	22.6	24.6	22.8	20.1	19.6	40
45		38.2	40	41.5	41.5	39.7	38.2	37.2	35.9	33.9	32	29.9	24.9	22.2	24.3	22.6	19.9	19.4	45
50			33.8	35.2	35.4	34.5	34.3	32.7	31.4	29.9	28.6	26.4	23.9	21.6	23.9	22.3	19.6	19.1	50
55			28.9	30.3	30.4	30.4	30.3	28.7	27.7	26.9	25.2	23.9	21.4	21	22	21.5	19.2	18.7	55
60			25	26.4	26.5	27	26.5	26.2	24.9	23.7	22.2	21	18.6	20	19.2	19.1	18.4	18	60
65				23.1	23.4	23.5	23	22.1	21	19.6	18.6	16.2	17.9	16.8	16.8	16.3	16.1		65
70				20.4	20.4	20.6	20.3	20.1	19.4	18.6	17.4	16.4	14.1	15.9	14.8	14.8	14.4	14.1	70
75					18	18.2	17.8	17.6	16.9	16.3	15.4	14.5	12.2	14.1	13	13	12.7	12.4	75
80					15.9	16.1	15.7	15.6	14.9	14.3	13.4	12.7	10.6	12.5	11.4	11.4	11.2	10.9	80
85					14.2	14.3	13.9	13.7	13.1	12.5	11.6	10.9	9.2	10.9	9.9	10	9.8	9.6	85
90						12.7	12.3	12.2	11.5	10.9	10.1	9.4	7.9	9.4	8.6	8.7	8.6	8.4	90
95						11.4	11	10.8	10.1	9.6	8.9	8.3	6.8	8.3	7.5	7.6	7.5	7.4	95
100						10.3	9.7	9.6	9	8.6	7.9	7.4	5.8	7.4	6.6	6.7	6.6	6.4	100
105							8.8	8.7	8.1	7.7	7	6.5	4.8	6.5	5.7	5.8	5.7	5.5	105
110							8.1	7.9	7.4	6.9	6.2	5.7	4	5.8	4.9	5	4.9	4.7	110
115								7.2	6.7	6.2	5.5	5	3.2	5.1	4.1	4.3	4.1	3.9	115
120								6.6	6	5.6	4.9	4.4	2.5	4.4	3.4	3.6	3.4	3.2	120
125								6	5.5	5	4.3	3.8	1.8	3.8	2.8	2.9	2.8	2.6	125
130									4.9	4.5	3.8	3.2		3.3	2.2	2.3	2.2	2	130
135									4.4	3.9	3.2	2.6		2.7					135
140									3.9	3.4	2.7	2.1		2.2					140
145										2.9	2.2								145
150										2.5									150

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Lifting capacities

Forces de levage

T



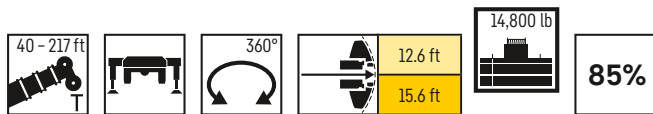
	40 ft	54 ft	68 ft	81 ft	95 ft	108 ft	121 ft	135 ft	148 ft	162 ft	176 ft	189 ft	196 ft	201 ft	202 ft	207 ft	214 ft	217 ft	
10	153.2	143.7	142.6	142.7	127.6														10
11	153.2	143.7	142.6	142.7	138.5														11
12	149.6	143.7	142.6	142.5	137.2														12
13	142.8	142.3	141.1	135.7	129.7	114.9													13
14	136	136	133.7	128.7	123.2	113.1													14
15	129.8	129.7	127.5	123.4	116.8	106.2	89.8												15
16	124	123.9	121.3	116.9	107.9	100	91.5												16
17	117.2	118.4	116.3	108.8	100.4	95.1	88.2												17
18	110.5	111.5	108.4	101	96.6	89.2	82.8												18
19	104.4	105.5	100.5	95	90.3	84	78.5	72.5											19
20	98.7	100.5	95.5	90.3	85.4	79.4	76	70.3											20
22	87.8	88.8	85.6	80.8	75.7	73.1	67.9	63.3	58.5										22
24	78.5	78.6	75.9	72	69.8	65.7	61.8	58.1	53.7	46.9									24
26	69.2	69.9	67.9	64.9	63.2	59.5	56.1	52.9	49.6	44.8									26
28	60.1	62.8	61.3	60.1	57.5	54.2	51.2	49.4	46	42.8	37.9								28
30	52.8	56.6	55.7	55.1	52.7	49.6	48.3	45.5	43	40	36.9	30.9							30
32	46.7	50.6	51	50.4	48.2	45.9	44.4	41.8	39.6	37	34.4	30.9	26.7	23.2					32
34		45.4	46.6	46.2	44.3	43.2	40.9	38.7	36.7	34.8	31.9	29.4	26.5	23.1	24.8	23			34
36		41	42.7	42.6	40.9	40	37.9	36.7	34.7	32.8	30.6	28.1	25.4	23	24.6	23	20.3	19.8	36
38		37	39.2	39.4	38.1	37.1	35.4	34.1	32.2	30.5	28.5	26.6	24	22.8	24.3	22.9	20.2	19.7	38
40		33.5	35.7	36.5	35.4	34.5	33.1	31.8	30	28.4	26.5	25	22.2	22.6	23	22.5	20.1	19.6	40
45		26.7	28.7	30.3	29.9	29.2	28	27.1	25.4	24.1	22.3	21	18.4	20.5	19.2	19.2	18.5	18.1	45
50			23.5	25.1	25.3	25	24	23.2	21.8	20.5	19	17.7	15.2	17.4	16.1	16.1	15.6	15.3	50
55			19.6	20.9	21.1	21.3	20.7	20	18.8	17.7	16.2	15.1	12.7	14.8	13.5	13.6	13.1	12.9	55
60			16.4	17.6	17.8	18	17.6	17.4	16.3	15.3	13.9	12.8	10.5	12.6	11.4	11.5	11.1	10.8	60
65				14.9	15.1	15.3	14.9	14.8	14	13.2	12	11	8.7	10.8	9.5	9.6	9.4	9.1	65
70				12.7	12.8	13	12.7	12.5	11.8	11.2	10.2	9.3	7.1	9.2	8	8.1	7.9	7.6	70
75					11	11.2	10.8	10.6	10	9.5	8.7	7.9	5.7	7.8	6.6	6.7	6.5	6.3	75
80					9.4	9.6	9.3	9.2	8.6	8.2	7.4	6.6	4.5	6.6	5.4	5.5	5.4	5.2	80
85					8.4	8.5	8.2	8.1	7.5	7.1	6.3	5.5	3.4	5.5	4.3	4.4	4.3	4.1	85
90						7.5	7.2	7.1	6.6	6.1	5.3	4.5	2.3	4.5	3.3	3.5	3.3	3.1	90
95						6.7	6.4	6.3	5.7	5.3	4.5	3.7		3.6	2.4	2.6	2.4	2.2	95
100						6.1	5.6	5.5	5	4.5	3.6	2.9		2.8					100
105							5	4.8	4.3	3.9	2.9	2.1		2					105
110							4.4	4.2	3.7	3.2	2.2								110
115								3.6	3.1	2.6									115
120								3.1	2.5	2									120
125								2.6	2										125

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Lifting capacities

Forces de levage

T



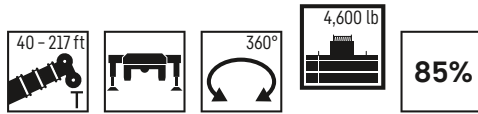
	40 ft	54 ft	68 ft	81 ft	95 ft	108 ft	121 ft	135 ft	148 ft	162 ft	176 ft	189 ft	196 ft	201 ft	202 ft	207 ft	214 ft	217 ft	
10	153.2	143.7	142.6	142.7	127.6														10
11	153.1	143.7	142.6	142.7	138.5														11
12	148.9	143.7	142.5	142.4	134.3														12
13	141.5	141.1	140.8	134	126	111.2													13
14	134.7	134.7	133.5	123.2	114.7	103.5													14
15	128.2	128.2	125.7	115.6	104.7	98.7	88.2												15
16	120.5	121	114.6	105.5	99.2	91.6	84.3												16
17	113.2	113.1	104.8	98.6	92.8	85.6	80.3												17
18	106.6	104	98.3	93.1	86.9	81.1	76.5												18
19	100.2	97.5	91.6	86.9	81.1	77.6	71.9	66.3											19
20	93.9	90.7	85.9	81.5	77.4	73.1	67.7	63.5											20
22	81.4	79.2	76.1	72.2	69.5	65	60.7	56.7	52.3										22
24	70.8	69.6	67.3	65.5	62.1	58.2	54.9	51.5	47.6	43.7									24
26	60.8	61.7	60.3	58.9	55.8	52.1	50.5	47.3	44.4	40.4									26
28	52.6	54.9	53.9	53	50.2	48.5	45.7	42.9	40.4	37.5	34.8								28
30	46	49	48.4	47.8	45.7	44.2	41.7	40.2	37.7	35.3	32.9	29.4							30
32	40	44	43.8	43.5	41.9	40.4	38.5	36.8	34.6	32.6	30.3	27.8	25.2	23.2					32
34		39.1	39.9	39.7	38.4	37.2	35.4	33.9	31.9	30.1	27.9	26.1	23.2	23.1	23.4	22.4			34
36		34.9	36.4	36.5	35.4	34.3	32.7	31.3	29.5	27.7	25.7	24.1	21.3	22.5	22	21.6	19.8	19.2	36
38		31.3	33.4	33.7	32.6	31.8	30.3	29.1	27.3	25.7	23.8	22.3	19.5	21.6	20.3	20.1	19.1	18.5	38
40		28.2	30.4	31.1	30.2	29.4	28.2	27	25.4	23.9	22.1	20.6	17.9	20.1	18.7	18.7	17.9	17.5	40
45		22.2	24.2	25.7	25.3	24.8	23.6	22.8	21.3	20	18.4	17.1	14.5	16.7	15.3	15.4	14.9	14.6	45
50			19.5	20.9	21.1	21	20.1	19.4	18.1	16.9	15.4	14.2	11.8	13.9	12.6	12.7	12.3	12	50
55			15.9	17.2	17.4	17.6	17.1	16.6	15.4	14.4	12.9	11.9	9.5	11.6	10.4	10.5	10.2	9.9	55
60			13.1	14.3	14.4	14.6	14.3	14.1	13.2	12.2	10.9	9.9	7.6	9.7	8.5	8.6	8.3	8.1	60
65				11.9	12	12.2	11.9	11.7	11	10.3	9.2	8.2	6	8	6.8	7	6.8	6.5	65
70				10	10.1	10.3	10	9.8	9.2	8.7	7.7	6.8	4.5	6.7	5.5	5.6	5.4	5.2	70
75					8.6	8.8	8.5	8.4	7.8	7.4	6.3	5.5	3.3	5.4	4.2	4.4	4.2	4	75
80					7.5	7.6	7.4	7.3	6.7	6.3	5.2	4.4	2	4.3	3.1	3.3	3.1	2.9	80
85					6.6	6.7	6.4	6.3	5.7	5.3	4.2	3.4		3.4		2.1			85
90						5.8	5.6	5.4	4.9	4.4	3.3	2.5		2.5					90
95						5.1	4.8	4.7	4.1	3.5	2.5								95
100						4.6	4.2	4	3.5	2.8									100
105							3.5	3.4	2.8	2.1									105
110							2.9	2.8	2.2										110
115								2.2											115

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Lifting capacities

Forces de levage

T



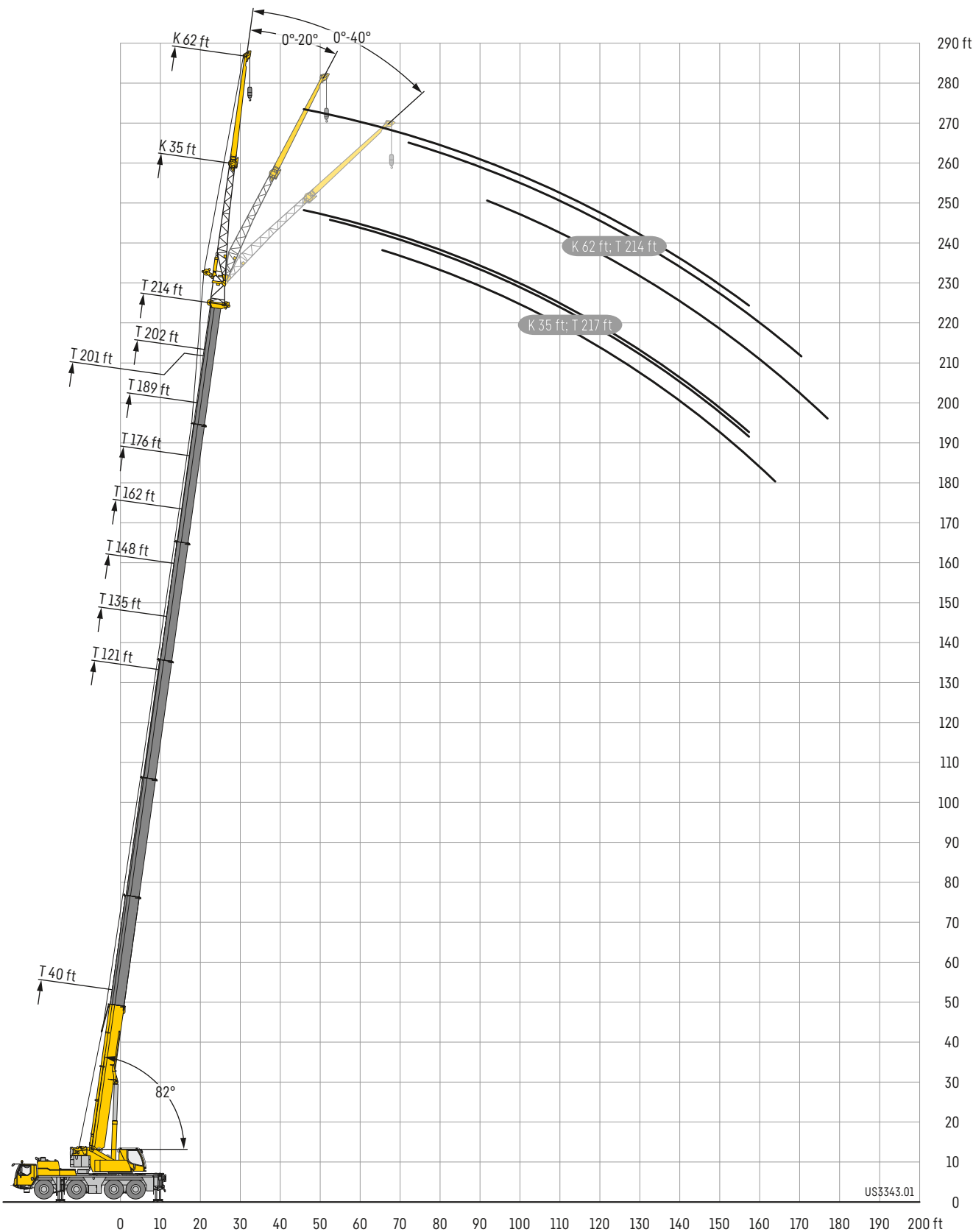
	40 ft	54 ft	68 ft	81 ft	95 ft	108 ft	121 ft	135 ft	148 ft	162 ft	176 ft	189 ft	196 ft	201 ft	202 ft	207 ft	214 ft	217 ft	
10	153.2	143.7	142.6	142.7	127.6														10
11	152.1	143.7	142.6	137.9	128.2														11
12	147.4	143.7	139.2	128.9	118														12
13	139.7	139.8	129.1	117.7	106	99.1													13
14	131.6	129.1	118	107.4	97.9	90.5													14
15	122.8	117.2	106.1	99.7	92	86.1	75.5												15
16	114.4	105.7	98.3	92	86.4	80.9	73.6												16
17	104.3	97.4	90.5	84.8	81.2	74.9	69												17
18	94.4	88.8	84.6	79.7	75.6	69.8	64.2												18
19	86	83	78.7	75.4	70.5	64.8	59.8	56.2											19
20	78.8	76.4	73.1	70.3	65.7	60.5	57.1	52.8											20
22	66.9	65.6	63.3	61	57.1	54.1	50.7	46.9	43.6										22
24	56.6	56.3	54.9	53.3	50.6	48.3	45.3	42.6	39.1	34.8									24
26	48.7	48.9	48.2	47.4	45.1	43.1	40.6	38.6	36	33.5									26
28	41.5	43.1	42.7	42.3	40.4	38.8	36.7	34.9	32.5	30.3	28								28
30	35.3	38.2	38.1	38	36.6	35.1	33.3	31.7	29.5	27.6	25.3	23.5							30
32	30.4	34.1	34.3	34.4	33.1	32	30.3	29	27	25.2	23.1	21.4	18.5	20.7					32
34		30.4	31	31.2	30.2	29.3	27.7	26.5	24.7	23.1	21.1	19.5	16.7	18.9	17.5	17.5			34
36		26.9	28.2	28.5	27.7	26.9	25.5	24.4	22.7	21.1	19.3	17.8	15.1	17.3	15.9	15.9	15.3	14.9	36
38		23.9	25.7	26.2	25.4	24.8	23.5	22.5	20.9	19.4	17.7	16.3	13.6	15.8	14.5	14.5	14.1	13.7	38
40		21.3	23.3	24.1	23.4	22.8	21.8	20.8	19.3	17.9	16.3	14.9	12.3	14.5	13.2	13.2	12.9	12.6	40
45		16.2	18	19.4	19.3	18.9	17.9	17.2	15.9	14.7	13.2	12	9.5	11.7	10.4	10.4	10.1	9.9	45
50			14	15.4	15.7	15.8	15	14.4	13.2	12.1	10.7	9.6	7.2	9.4	8.1	8.2	8	7.7	50
55			11	12.3	12.5	12.8	12.4	12	11	10	8.6	7.6	5.3	7.5	6.2	6.3	6.1	5.9	55
60			8.9	9.9	10.1	10.3	10	9.8	9.1	8.2	7	6	3.7	5.9	4.6	4.8	4.6	4.4	60
65				8.3	8.4	8.6	8.3	8.2	7.5	6.7	5.5	4.6		4.5	3.3	3.4	3.2	2.9	65
70				7	7.1	7.2	7	6.8	6.2	5.4	4.2	3.3		3.3	1.8				70
75					6	6.1	5.9	5.7	5	4.3	3.1	2.1		2.1					75
80					5	5.2	4.9	4.8	4	3.3	2								80
85					4.2	4.4	4.1	4	3.2	2.2									85
90						3.6	3.3	3.2	2.2										90
95						2.9	2.6	2.5											95
100						2.3	1.8												100

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Lifting heights

Hauteurs de levage

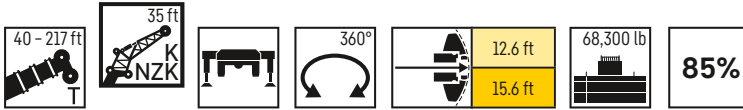
TK/TNZK



Lifting capacities

Forces de levage

TK/TNZK



	40 ft			121 ft			135 ft			148 ft			162 ft			176 ft			189 ft			201 ft			202 ft			214 ft			217 ft			
	35 ft																																	
	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°				
10	32.5																														10			
11	32.5																														11			
12	32.5																														12			
13	32.5																														13			
14	32.5	32.5																													14			
15	32.5	32.5																													15			
16	32.5	32.5																													16			
17	32.5	32.4																													17			
18	32.5	32.1																													18			
19	32.5	31.5																													19			
20	32.5	30.7																													20			
22	32.3	29.2		32.5																											22			
24	31.3	27.8	21.6	32.5																											24			
26	29.6	26.6	20.9	32.5			32.5																								26			
28	28	25.4	20.2	32.5			32.5																								28			
30	26.4	24.4	19.6	32.5	32.5		32.5			32.4																					30			
32	24.8	23.4	19	32.5	32.3		32.5			32.3																					32			
34	23.4	22.5	18.6	32.5	32		32.5	30.7		32.1			27.3					14.9													34			
36	22.2	21.7	18.1	32.5	31.4		32.5	30.3		32	28.4		27.2					17.6													36			
38	21	20.9	17.7	32.5	30.7	21.3	32.5	29.9		31.8	28.1		27.1			22.1		17.6				12.1			13						38			
40	20	20.2	17.3	32.5	30	21	32.5	29.5	21.1	31.5	27.8		26.9	24.9		22		17.6				12.1			13			10.6			40			
45	17.7	18.7	16.5	32.5	28.3	20.3	32.5	28.4	20.4	30.9	26.9	20.3	26.6	24.4		21.9	20.3	17.5				12			13			10.6		10.3	45			
50	15.9	17.5	16	32.5	26.7	19.6	32.4	27.1	19.8	30.2	26.2	19.7	26.2	23.9	19.5	21.5	20.1		17.3	16.1		11.9	12		12.9	13		10.5		10.2	50			
55	14.3	16.5	15.7	31.8	25.4	19	31.1	25.8	19.2	29.3	25.4	19.2	25.9	23.4	19	21	20	18.5	16.8	16		11.7	11.8		12.9	12.8		10.4	10.5	10.1	10.2	55		
60	13.1	14.8	15.3	29.9	24.2	18.5	28.5	24.6	18.6	27	24.6	18.7	25.2	22.9	18.5	20.5	19.8	18.1	16.5	15.8	15.3	11.5	11.5	11.7	12.8	12.6	12.4	10.2	10.3	10	10.1	60		
65	12.1	13	8.8	27.1	23.1	18	25.4	23.5	18.2	24.5	23.6	18.2	22.7	22.5	18.1	20.1	19.6	17.8	16.1	15.7	15.3	11.3	11.2	11.4	12.6	12.4	12.4	10.1	10.2	10.2	9.9	9.9	10	65
70				24.3	22.1	17.6	22.7	22.6	17.7	21.9	22.4	17.8	20.9	21.8	17.7	19	19.3	17.4	15.8	15.6	15.3	11	10.9	11.1	12.4	12.3	12.3	9.9	10	10.1	9.7	9.7	9.9	70
75				21.7	21.2	17.2	20.4	21.5	17.4	19.6	20.9	17.5	19.1	19.9	17.3	17.5	18.9	17.1	15.6	15.4	15.3	10.7	10.6	10.8	12.2	12.1	12.1	9.7	9.7	9.9	9.6	9.6	9.8	75
80				19.2	20.4	16.8	18.2	19.5	17	17.6	19	17.1	17.1	18.4	17.1	16.4	17	16.8	14.8	15.2	15	10.4	10.3	10.5	11.9	11.8	11.8	9.6	9.5	9.7	9.4	9.4	9.5	80
85				17	18.2	16.5	16	17.3	16.7	15.6	17	16.7	15.4	16.7	16.5	15.1	15.3	16	13.7	14.6	14.5	10.1	10	10.1	11.7	11.4	11.4	9.4	9.3	9.5	9.2	9.2	9.3	85
90				15.2	16.2	16.3	14.2	15.3	16	13.8	15	15.9	13.7	14.9	15.9	13.7	14.5	14.8	12.3	13.5	13.9	9.8	9.7	9.8	11.3	11.1	11.1	9.2	9.1	9.3	9	9	9.1	90
95				13.5	14.4	15.1	12.5	13.5	14.4	12.3	13.2	14.1	12.5	13.2	14.1	12.4	13.3	14	11.6	12.1	13.1	9.5	9.4	9.5	10.9	10.8	10.8	9	8.9	9	8.8	8.8	8.9	95
100				12	12.9	13.5	11.4	12	12.7	11.7	11.7	12.5	12	11.7	12.5	11.7	11.8	12.6	11	10.9	11.8	9.2	9.2	9.2	10.1	10.4	10.4	8.8	8.7	8.8	8.6	8.6	8.7	100
105				10.7	11.5	12	10.8	10.6	11.2	11.1	10.8	11	11.3	11.1	11	10.6	11.1	11.2	9.9	10.5	10.5	9	8.9	9	9.1	9.8	10.1	8.4	8.5	8.6	8.2	8.4	8.5	105
110				9.5	10.2	10.6	10.2	10.1	10.1	10.5	10.4	10.4	10.3	10.6	10.6	9.5	10.2	10.5	9	9.8	10	8.7	8.7	8.7	8.1	9	9.4	7.8	8.3	8.4	7.6	8.2	8.3	110
115				8.9	9.1	9.5	9.7	9.6	9.7	9.8	9.9	9.9	9.2	9.8	10.1	8.6	9.2	9.7	8.1	8.8	9.3	8	8.3	8.5	7.3	8	8.6	7	7.8	8.2	6.8	7.7	8	115
120				8.5	8.6	8.7	9.2	9.2	9.3	9	9.4	9.5	8.5	9	9.4	7.8	8.4	8.8	7.3	7.9	8.4	7.2	7.9	8.2	6.5	7.2	7.7	6.2	7	7.7	6	6.8	7.5	120
125				8.1	8.2	8.3	8.8	8.8	8.9	8.2	8.7	9	7.7	8.2	8.6	7.1	7.6	8	6.6	7.2	7.6	6.5	7.1	7.5	5.7	6.5	7	5.5	6.3	6.9	5.3	6.1	6.7	125
130				7.7	7.8	7.9	8.2	8.4	8.5	7.6	8	8.2	7.1	7.5	7.8	6.4	6.9	7.3	5.9	6.5	6.9	5.9	6.4	6.8	5.1	5.8	6.2	4.9	5.6	6.1	4.7	5.4	6	130
135				7.4	7.5	7.6	7.6	7.9	8	7	7.3	7.5	6.5	6.9	7.2	5.8	6.3	6.6	5.3	5.9	6.2	5.3	5.8	6.2	4.4	5.1	5.6	4.2	4.9	5.4	4.1	4.7	5.3	135
140				7.1	7.1	7.2	7	7.3	7.4	6.4	6.7	6.9	5.9	6.3	6.5	5.2	5.7	6	4.8	5.3	5.6	4.7	5.2	5.6	3.9	4.5	5	3.7	4.3	4.8	3.5	4.2	4.6	140
145				6.8			6.5	6.7	6.8	5.9	6.2	6.3	5.4	5.8	6	4.7	5.2	5.4	4.3	4.7	5	4.2	4.7	5	3.3	3.9	4.3	3.1	3.7	4.2	3	3.6	4	145
150							6	6.2	6.2	5.5	5.7	5.8	4.9	5.3	5.4	4.3	4.6	4.9	3.7	4.2	4.5	3.7	4.2	4.5	2.8	3.4	3.8	2.6	3.2	3.6		3	3.5	150
155							5.6	5.7	5.7	5	5.2	5.3	4.5	4.8	4.9	3.7	4.2	4.4	3.2	3.7	4	3.2	3.7	4	2.2	2.8	3.2		2.7	3.1	2.5	2.9		155
160							5.3			4.6	4.8	4.8	4	4.3	4.5	3.2	3.6	3.9	2.7	3.2	3.4	2.7	3.2	3.5		2.3	2.7		2.2	2.6			2.4	160
165										4.1	4.3	4.3	3.6	3.8	3.9	2.8	3.2	3.3	2.2	2.7	2.9		2.7	3		1.8	2.1			2.1				165
170										3.7	3.8	3.7	3.1	3.4	3.4	2.4	2.7	2.8	1.8	2.2	2.4			2.5										170
175										3			2.7			1.9					1.9													175
180													2.4																					180
185													2																					185

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Lifting capacities

Forces de levage

TK/TNZK

40 - 214 ft

62 ft
K
TNZK



360°



12.6 ft
15.6 ft

68,300 lb

85%

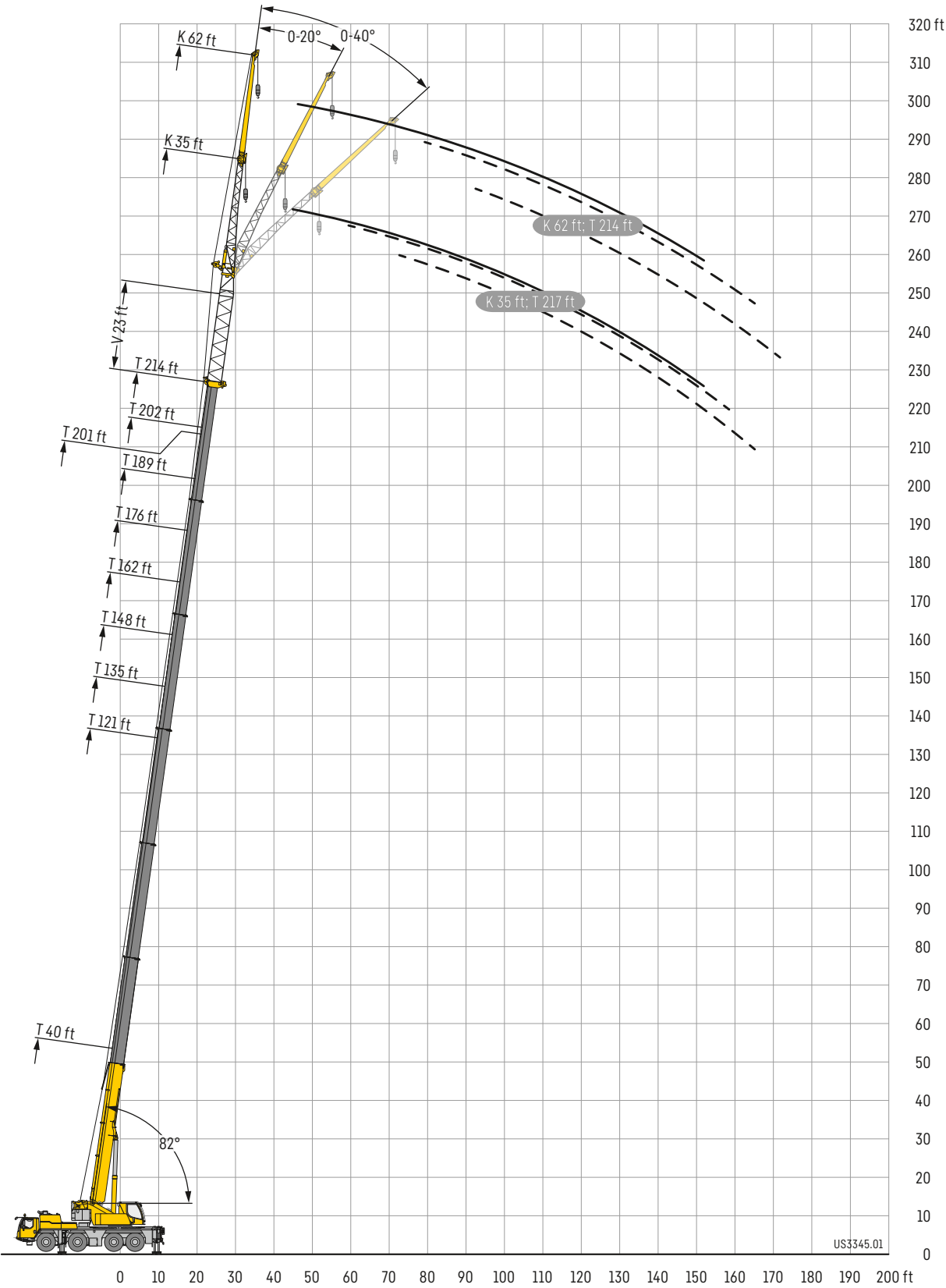
	40 ft			121 ft			135 ft			148 ft			162 ft			176 ft			189 ft			201 ft			202 ft			214 ft				
	62 ft																															
	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°		
11	15.6																													11		
12	15.5																													12		
13	15.4																													13		
14	15.3																													14		
15	15.1																													15		
16	15																													16		
17	14.8																													17		
18	14.6																													18		
19	14.4																													19		
20	14.2																													20		
22	13.8																													22		
24	13.4																													24		
26	13				15.5																									26		
28	12.6	10.6		15.5																										28		
30	12.2	10.2		15.3				14.7																						30		
32	11.8	9.9		15.2				14.6																						32		
34	11.4	9.7		15				14.5			13.7																			34		
36	11.1	9.4		14.8				14.3			13.6			12.4																36		
38	10.7	9.2		14.6				14.2			13.5			12.4																38		
40	10.4	9		14.3				14			13.4			12.3		11			9.5											40		
45	9.7	8.6	7.7	13.8	10.2			13.6	10.2		13.1			12.2		10.9			9.5			7.8				8.2			6.6	45		
50	9.2	8.2	7.4	13.2	9.8			13.1	9.8		12.7	9.7		11.9		10.8			9.4			7.8				8.2			6.6	50		
55	8.7	7.9	7.2	12.6	9.4			12.6	9.5		12.3	9.4		11.6	9.3		10.6	9		9.4			7.6			8.1			6.6	55		
60	8.1	7.6	7	12.1	9.2	7.6		12.1	9.2	7.6	11.9	9.2		11.4	9.1		10.4	8.8		9.3	8.5		7.4			8			6.6	60		
65	7.6	7.4	6.9	11.6	8.9	7.5		11.7	9	7.5	11.5	9	7.5	11.1	8.8		10.2	8.6		9.2	8.3		7.3	7		7.8	7.4		6.6	65		
70	7.1	7.2	6.8	11.1	8.7	7.4		11.2	8.7	7.4	11.1	8.8	7.4	10.8	8.7	7.3	10	8.5		9.1	8.2		7.2	6.9		7.7	7.3		6.6	6.3	70	
75	6.6	7	6.8	10.6	8.5	7.3		10.8	8.5	7.3	10.8	8.6	7.3	10.4	8.5	7.3	9.8	8.3	7.2	9.1	8		7.1	6.9		7.6	7.3		6.5	6.3	75	
80	6.2	6.9	6.8	10.2	8.3	7.2		10.3	8.3	7.2	10.4	8.4	7.2	10.1	8.3	7.2	9.6	8.2	7.1	8.9	7.9	7	7	6.9		7.5	7.3		6.4	6.3	80	
85	5.8	6.9	6.8	9.8	8.1	7.1		10	8.2	7.1	10	8.2	7.1	9.8	8.1	7.1	9.4	8	7	8.8	7.8	6.9	6.9	6.9	6.7	7.4	7.2	6.8	6.3	6.2	85	
90	5.5	6.8	6.8	9.4	7.9	7		9.7	8	7.1	9.7	8.1	7	9.6	8	7	9.2	7.9	7	8.7	7.7	6.9	6.8	6.8	6.7	7.3	7.2	6.7	6.2	6.2	6.2	90
95	5.2			9.1	7.8	7		9.4	7.8	7	9.5	7.9	7	9.3	7.9	7	9	7.8	6.9	8.6	7.6	6.8	6.8	6.8	6.6	7.2	7.2	6.7	6.2	6.2	6.2	95
100				8.9	7.6	6.9		9.1	7.7	6.9	9.2	7.8	6.9	9.1	7.7	6.9	8.9	7.6	6.9	8.5	7.5	6.8	6.7	6.8	6.6	7.1	7.2	6.6	6.1	6.2	6.2	100
105				8.6	7.5	6.9		8.8	7.6	6.9	8.9	7.6	6.9	8.9	7.6	6.9	8.6	7.5	6.8	8.3	7.4	6.8	6.7	6.8	6.6	7.1	7.1	6.6	6	6.2	6.2	105
110				8.3	7.4	6.8		8.6	7.5	6.8	8.7	7.5	6.8	8.6	7.5	6.8	8.3	7.4	6.8	8.1	7.3	6.7	6.6	6.8	6.5	7	7	6.6	6	6.2	6.2	110
115				8	7.3	6.8		8.3	7.4	6.8	8.3	7.4	6.8	8.1	7.4	6.8	8	7.3	6.8	7.7	7.2	6.7	6.6	6.7	6.5	7	7	6.5	6	6.2	6.2	115
120				7.7	7.2	6.8		8	7.3	6.8	7.7	7.3	6.8	7.8	7.3	6.8	7.7	7.2	6.7	7.5	7.1	6.6	6.5	6.6	6.5	6.6	6.9	6.5	5.9	6.1	6.2	120
125				7.4	7.1	6.8		7.2	7.2	6.8	7.4	7.2	6.8	7.6	7.2	6.7	7.5	7.1	6.7	6.9	7	6.6	6.4	6.5	6.5	5.9	6.9	6.5	5.6	6.1	6.2	125
130				7.1	7	6.8		7	7.1	6.8	7.2	7.1	6.7	7.4	7	6.7	7	6.9	6.7	6.3	6.9	6.6	6	6.4	6.4	5.3	6.4	6.5	5	6	6.2	130
135				6.7	6.9	6.8		6.8	6.8	6.8	7	6.9	6.7	7	6.9	6.7	6.4	6.8	6.7	5.7	6.7	6.6	5.4	6.2	6.3	4.7	5.9	6.5	4.4	5.6	6.2	135
140				6.3	6.7	6.8		6.6	6.7	6.8	6.8	6.8	6.7	6.4	6.8	6.7	5.8	6.6	6.6	5.2	6.1	6.5	4.9	5.9	6.2	4.1	5.3	6.2	3.8	5	5.9	140
145				6.1	6.2	6.5		6.4	6.5	6.6	6.4	6.6	6.7	5.9	6.6	6.7	5.3	6.1	6.6	4.6	5.5	6.2	4.3	5.4	6	3.6	4.7	5.6	3.3	4.5	5.4	145
150				5.9	6	6.1		6.2	6.3	6.5	5.9	6.4	6.6	5.4	6.1	6.5	4.8	5.5	6.1	4.1	5	5.6	3.8	4.8	5.5	3.1	4.1	5	2.8	3.9	4.8	150
155				5.6	5.7	5.9		6	6.1	6.2	5.5	6	6.3	5	5.6	6	4.3	5	5.5	3.6	4.5	5.1	3.4	4.3	5	2.6	3.6	4.4	2.4	3.4	4.2	155
160				5.4	5.5	5.6		5.6	5.9	6.1	5.1	5.5	5.9	4.6	5.1	5.5	3.9	4.6	5	3.2	4.1	4.6	2.9	3.8	4.5	2.2	3.1	3.9	2.9	3.7	160	
165				5.2	5.3	5.4		5.2	5.6	5.7	4.7	5.1	5.4	4.2	4.7	5	3.5	4.1	4.6	2.8	3.6	4.1		3.4	4		2.7	3.4		3.2	165	
170				5	5.1			4.9	5.2	5.2	4.3	4.7	4.9	3.8	4.3	4.6	3	3.7	4.1	2.3	3.2	3.7		3	3.5		2.9			2.7	170	
175				4.2				4.5	4.8	4.8	3.9	4.3	4.5	3.3	3.9	4.2	2.6	3.3	3.7		2.7	3.2		2.5	3.1		2.4				175	
180								4.2	4.4		3.5	3.9	4	3	3.5	3.7	2.2	2.8	3.2		2.3	2.7			2.6						180	
185								3.8			3.1	3.5	3.5	2.6	3	3.3	1.9	2.4	2.8		1.9	2.3									185	
190											2.8	3.1	3	2.2	2.6			2	2.3												190	
195											2.5	2.7					1.9															195
200											2.2						1.9															200

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Lifting heights

Hauteurs de levage

TVK/TVNZK



Forces de levage

TVK/TVNZK



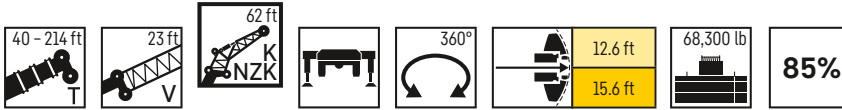
	40 ft + 23 ft			121 ft + 23 ft			135 ft + 23 ft			148 ft + 23 ft			162 ft + 23 ft			176 ft + 23 ft			189 ft + 23 ft			201 ft + 23 ft			202 ft + 23 ft			214 ft + 23 ft			
	35 ft																														
	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	
10	28.9																													10	
11	28.6																													11	
12	28.2																													12	
13	27.9																													13	
14	27.5																													14	
15	27.1																													15	
16	26.6																													16	
17	26.2																													17	
18	25.7	24																												18	
19	25.2	23.6																												19	
20	24.8	23.2																												20	
22	23.8	22.3		29.2																										22	
24	22.9	21.5		28.9			26.3																							24	
26	22.1	20.7		28.5			26.1																							26	
28	21.3	19.9	18.9	28.1			25.9			23			16.4																	28	
30	20.5	19.2	18.3	27.7			25.6			22.9			16.4																	30	
32	19.8	18.5	17.6	27.3			25.3			22.7			16.4			14.7														32	
34	19.1	17.9	17.1	26.8	23.1		24.9			22.4			16.4			14.7														34	
36	18.4	17.3	16.5	26.3	22.6		24.6			22.2			16.4			14.7			11.4											36	
38	17.8	16.7	16	25.8	22.2		24.2	21.3		22			16.4			14.7			11.4			8.4			9					38	
40	17.2	16.2	15.5	25.3	21.7		23.8	20.9		21.7	19.7		16.4			14.6			11.4			8.4			9					40	
45	15.8	15	14.5	24	20.6	18.2	22.8	20		21.1	18.9		16.4	16.3		14.5			11.4			8.4			9			7.4		45	
50	14.6	13.9	13.5	22.8	19.6	17.4	21.9	19.1	17.1	20.4	18.2	16.5	16.4	16		14.2	13.7		11.4	11.3		8.4			8.9			7.4		50	
55	13.4	12.9	12.7	21.6	18.7	16.7	21	18.3	16.4	19.7	17.6	15.9	16.3	15.5	14.6	14	13.5		11.3	11.2		8.3	8.3		8.9	9		7.4		55	
60	12.4	12	11.8	20.6	17.8	16	20.1	17.5	15.9	19	16.9	15.4	16.2	15.1	14.2	13.8	13.2	12.7	11.3	11.1	9.4	8.2	8.2		8.9	8.9		7.4	7.5	60	
65	11.5	11.2	11.1	19.6	17	15.4	19.2	16.8	15.3	18.3	16.3	14.9	15.9	14.7	13.8	13.6	12.9	12.5	11.1	10.9	10.7	8.1	8.1	8	8.8	8.8	8.5	7.4	7.4	65	
70	10.7	10.5	10.5	18.6	16.3	14.8	18.4	16.2	14.8	17.6	15.7	14.4	15.5	14.3	13.4	13.3	12.6	12.2	10.9	10.7	10.5	8	8	8	8.8	8.7	8.5	7.3	7.3	7.2	70
75	10.1	9.9	10	17.8	15.6	14.3	17.6	15.6	14.3	17	15.2	14	15.1	13.9	13	13	12.4	11.9	10.7	10.5	10.4	7.9	7.9	7.9	8.7	8.6	8.4	7.2	7.2	7.2	75
80	9.5	9.4	9.7	17	15	13.9	16.9	15	13.8	15.9	14.6	13.6	14.7	13.5	12.7	12.7	12.1	11.7	10.5	10.4	10.2	7.7	7.7	7.8	8.5	8.5	8.4	7.1	7.2	7.2	80
85	9	9.1	9.3	16.2	14.4	13.4	16	14.4	13.4	15.1	14.1	13.2	13.8	13.1	12.4	12.5	11.8	11.4	10.3	10.1	10.1	7.6	7.6	7.6	8.4	8.4	8.4	7	7	7.1	85
90	8.5	8.6		15.2	13.8	13	14.3	13.9	13	13.8	13.6	12.8	13.1	12.8	12.1	11.9	11.5	11.2	10	9.9	9.8	7.4	7.4	7.5	8.3	8.2	8.2	6.9	6.9	7	90
95				13.7	13.3	12.5	12.7	13.2	12.5	12.2	12.7	12.4	12.1	12.1	11.8	10.8	11.3	11	9.7	9.6	9.6	7.2	7.3	7.3	8.1	8.1	8.1	6.7	6.8	6.9	95
100				12.2	12.8	12.1	11.2	12.2	12.1	10.7	11.8	11.9	10.8	11.5	11.4	10	10.6	10.7	9.2	9.4	9.3	7.1	7.1	7.2	7.9	7.9	7.9	6.6	6.6	6.7	100
105				10.9	11.7	11.7	9.9	10.8	11.5	9.5	10.4	11.1	9.5	10.4	10.9	9.4	9.5	10.4	8.4	9	9.1	6.9	6.9	7	7.8	7.7	7.7	6.5	6.5	6.6	105
110				9.7	10.4	10.9	8.8	9.6	10.2	8.5	9.3	9.9	8.5	9.3	9.9	8.6	9.1	9.2	7.9	8.4	8.9	6.7	6.7	6.8	7.3	7.5	7.5	6.3	6.4	6.4	110
115				8.8	9.4	9.8	8	8.6	9.1	7.8	8.3	8.8	7.9	8.4	8.9	7.8	8.5	8.7	7.6	7.6	8.2	6.5	6.5	6.6	6.6	7.3	7.4	6	6.2	6.3	115
120				8	8.5	8.8	7.4	7.8	8.2	7.5	7.5	8	7.6	7.6	8.1	7.5	7.6	8.1	7	7.3	7.4	6.4	6.4	6.4	5.9	6.7	7.1	5.5	6.1	6.2	120
125				7.2	7.7	8	7.1	7.1	7.4	7.2	7.2	7.2	7.4	7.3	7.3	7	7.2	7.3	6.3	7	7.2	6	6.2	6.3	5.2	6	6.6	4.9	5.6	6	125
130				6.6	7	7.3	6.9	6.9	7	6.9	7	7	7.1	7.1	6.3	6.8	7.1	5.6	6.3	6.7	5.3	5.9	6.1	4.5	5.3	5.8	4.2	5	5.6		130
135				6.2	6.4	6.6	6.6	6.6	6.7	6.7	6.7	6.8	6.4	6.8	6.9	5.7	6.3	6.6	5	5.7	6.1	4.7	5.4	5.7	3.9	4.6	5.2	3.7	4.4	4.9	135
140				5.9	6	6.1	6.3	6.4	6.4	6.3	6.5	6.5	5.8	6.3	6.5	5.2	5.7	6	4.4	5	5.5	4.1	4.8	5.2	3.4	4	4.5	3.1	3.8	4.3	140
145				5.6	5.7	5.8	6.1	6.1	6.2	5.8	6.2	6.3	5.3	5.7	6	4.7	5.1	5.4	3.9	4.5	4.9	3.6	4.2	4.7	2.8	3.5	3.9	2.6	3.2	3.7	145
150				5.4	5.5	5.5	5.8	5.9	6	5.3	5.7	5.8	4.8	5.2	5.4	4.2	4.6	4.9	3.4	3.9	4.3	3.1	3.7	4.1	2.3	2.9	3.4		2.7	3.2	150
155				5.1	5.2	5.3	5.4	5.6	5.7	4.9	5.2	5.3	4.4	4.7	4.9	3.7	4.1	4.4	2.9	3.4	3.8		3.2	3.6		2.4	2.8		2.7		155
160				4.9	5		5	5.2	5.3	4.5	4.7	4.9	3.9	4.3	4.5	3.2	3.7	3.9	2.4	2.9	3.3		2.7	3.1		2	2.3				160
165				4.7	4.7		4.6	4.8	4.9	4	4.3	4.4	3.5	3.8	4	2.7	3.2	3.4		2.5	2.8						1.9				165
170				4.4			4.2	4.4		3.6	3.8	3.9	3	3.4	3.5	2.3	2.7	2.9		2	2.3										170
175							3.8	3.9		3.1	3.4	3.5	2.6	2.9	3.1	1.9	2.3	2.5			1.9										175
180							3.4			2.8	3			2.2	2.5	2.6		1.8	2												180
185							2.3			2.4	2.6			1.9	2.1	2.2															185
190										2.1	2.2																				190
195										1.8																					195

† 284 005 00501 00 000 · † 284 005 00001 00 000

Lifting capacities

Forces de levage

TVK/TVNZK



	40 ft + 23 ft			121 ft + 23 ft			135 ft + 23 ft			148 ft + 23 ft			162 ft + 23 ft			176 ft + 23 ft			189 ft + 23 ft			201 ft + 23 ft			202 ft + 23 ft			214 ft + 23 ft				
	62 ft																															
	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°*	0°	20°	40°	0°	20°	40°*		
15	13.5																													15		
16	13.4																													16		
17	13.4																													17		
18	13.3																													18		
19	13.2																													19		
20	13.1																													20		
22	13																													22		
24	12.8																													24		
26	12.6																													26		
28	12.3																													28		
30	12.1																													30		
32	11.9	10			13.4																									32		
34	11.6	9.8			13.3											9.1														34		
36	11.4	9.6			13.2			12.5								9.1															36	
38	11.1	9.4			13.1			12.4			11.5					9.1															38	
40	10.9	9.2			13			12.3			11.5					9			7.3												40	
45	10.3	8.8			12.7			12.1			11.4			10.2		9			7.3			5.2				5.5			3.9		45	
50	9.8	8.5	7.5		12.4	9.7		11.9	9.6		11.2			10.1		8.9			7.3			5.2				5.5			3.9		50	
55	9.3	8.2	7.3	12	9.4			11.7	9.3		11	9.2		10		8.9			7.3			5.2				5.5			3.9		55	
60	8.9	7.9	7.2	11.7	9.1			11.4	9.1		10.8	9		9.9	8.8			8.8			7.3			5.2		5.5			3.9		60	
65	8.5	7.7	7	11.3	8.9	7.5		11.1	8.9	7.5	10.6	8.8		9.8	8.6		8.7	8.1		7.3	6.8		5.2			5.5			3.9		65	
70	8.1	7.5	6.9	10.9	8.7	7.4	10.8	8.7	7.4	10.4	8.6	7.3	9.6	8.4		8.6	8.1		7.3	6.7		5.2	5.2		5.5	5.5		3.9			70	
75	7.6	7.3	6.8	10.5	8.5	7.3	10.5	8.5	7.3	10.1	8.5	7.2	9.4	8.3	7.2	8.5	8		7.2	6.7		5.2	5.1		5.5	5.5		3.9	4.6		75	
80	7.3	7.1	6.8	10.2	8.3	7.2	10.1	8.3	7.2	9.9	8.3	7.2	9.2	8.1	7.1	8.3	7.9	7	7.1	6.7		5.2	5.1		5.5	5.5		3.9	4.6		80	
85	6.9	6.8	6.7	9.8	8.2	7.1	9.8	8.2	7.1	9.6	8.1	7.1	9	8	7	8.2	7.7	6.9	7	6.7	6.3	5.2	5.1		5.5	5.4		3.9	4.6		85	
90	6.6	6.5	6.6	9.6	8	7	9.6	8	7.1	9.4	8	7	8.8	7.9	7	8	7.6	6.9	6.9	6.7	6.3	5.2	5.1	4.9	5.5	5.4	5.2	3.9	4.6		90	
95	6.3	6.3	6.4	9.3	7.9	7	9.3	7.9	7	9.1	7.9	7	8.6	7.8	6.9	7.9	7.4	6.8	6.8	6.7	6.3	5.1	5	4.9	5.5	5.4	5.2	3.9	4.5	4.4	95	
100	6.1	6	6.2	9.1	7.7	6.9	9.1	7.8	6.9	8.9	7.8	6.9	8.4	7.7	6.9	7.7	7.3	6.8	6.8	6.6	6.3	5.1	5	4.9	5.4	5.4	5.2	3.9	4.5	4.4	100	
105	5.8	5.8	6.1	8.8	7.6	6.9	8.8	7.7	6.9	8.7	7.6	6.9	8.2	7.5	6.8	7.6	7.1	6.7	6.7	6.5	6.3	5	5	4.9	5.4	5.4	5.2	3.9	4.5	4.4	105	
110	5.5	5.7	6	8.5	7.5	6.8	8.6	7.5	6.8	8.4	7.5	6.8	7.9	7.4	6.8	7.3	7	6.7	6.6	6.4	6.3	5	5	4.9	5.3	5.4	5.2	3.9	4.5	4.4	110	
115	5.2	5.6		8.3	7.4	6.8	8.3	7.4	6.8	8.1	7.4	6.8	7.6	7.3	6.8	7	6.9	6.6	6.4	6.3	6.2	5	5	4.9	5.3	5.4	5.2	3.9	4.5	4.4	115	
120				8	7.3	6.8	7.8	7.3	6.8	7.5	7.3	6.8	7.2	7.1	6.7	6.8	6.7	6.5	5.9	6.2	6.1	4.9	5	4.9	5	5.2	5.3	5.2	3.9	4.5	4.4	120
125				7.8	7.1	6.8	7.2	7.2	6.7	6.8	7.2	6.7	6.6	7	6.7	6.4	6.5	6.4	5.7	6.2	6.1	4.9	5	4.9	5	5.3	5.2	3.9	4.5	4.4	125	
130				7.3	7	6.7	6.5	7.1	6.7	6.2	7	6.7	6	6.7	6.6	5.8	6.3	6.3	5.7	6	6	4.8	4.9	4.9	4.6	5.3	5.2	3.9	4.5	4.4	130	
135				6.7	6.9	6.7	5.9	6.7	6.7	5.7	6.5	6.6	5.7	6.3	6.5	5.7	6.1	6.3	5.1	5.5	5.9	4.7	4.8	4.9	4	5.2	5.2	3.7	4.4	4.4	135	
140				6.1	6.7	6.6	5.4	6.2	6.6	5.5	5.9	6.4	5.5	5.8	6.2	5.4	5.7	6	4.5	5.3	5.6	4.2	4.7	4.8	3.5	4.7	5.2	3.2	4.3	4.4	140	
145				5.6	6.3	6.5	5.2	5.6	6.2	5.3	5.3	6	5.4	5.3	5.9	4.9	5.3	5.8	4	5	5.2	3.7	4.5	4.7	3	4.1	4.9		3.9	4.4	145	
150				5.1	5.7	6.1	5	5.1	5.6	5.1	5.1	5.4	5.1	5.2	5.3	4.4	5.1	5.4	3.5	4.6	5.1	3.2	4.2	4.6	2.5	3.6	4.5		3.3	4.1	150	
155				4.6	5.2	5.6	4.8	4.9	5.1	4.9	5	5	4.7	5	5.1	3.9	4.8	5	3.1	4	4.8		3.8	4.4		3.1	4		2.9	3.7	155	
160				4.4	4.7	5.1	4.7	4.7	4.8	4.7	4.8	4.9	4.3	4.8	4.9	3.5	4.4	4.8	2.6	3.6	4.3		3.3	4		2.6	3.5		3.2		160	
165				4.2	4.3	4.6	4.5	4.6	4.7	4.4	4.6	4.8	3.9	4.5	4.8	3.1	3.9	4.4		3.1	3.8		2.8	3.6			3		2.7		165	
170				4	4.1	4.2	4.3	4.4	4.5	4	4.4	4.6	3.5	4.1	4.5	2.7	3.5	4		2.7	3.3			3.1			2.5				170	
175				3.9	4	4.1	4.2	4.2	4.3	3.6	4.1	4.4	3	3.7	4		3	3.6		2.3	2.9			2.7							175	
180				3.7	3.8		3.8	4.1	4.2	3.2	3.7	4	2.7	3.3	3.6		2.7	3.1					2.4								180	
185				3.5	3.6		3.5	3.9	4	2.8	3.3	3.6	2.3	2.9	3.2		2.3	2.7													185	
190				3.4	3.4		3.1	3.5		2.5	2.9	3.2		2.5	2.8			2.3													190	
195				3.2			2.8	3.1		2.1	2.6	2.7		2.1	2.4																195	
200							2.5	2.7		1.8	2.2	2.3			1.9																200	
205							2.2	2.4																							205	
210							2																								210	

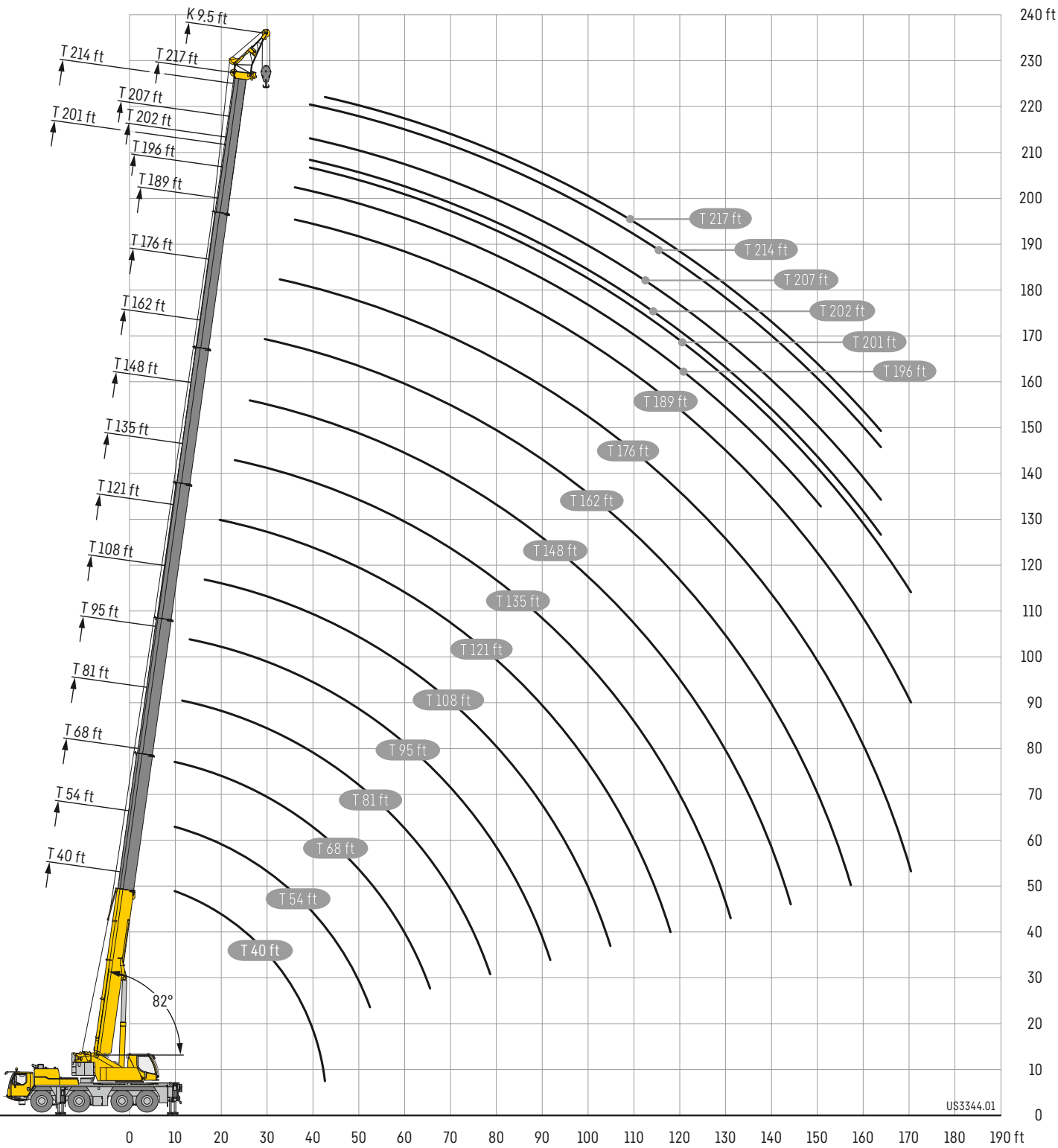
* only possible in TVNZK mode - uniquement possible en cas de fonctionnement de la pointe pliante hydraulique de la fleche telescopique (TVNZK)

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Lifting heights

Hauteurs de levage

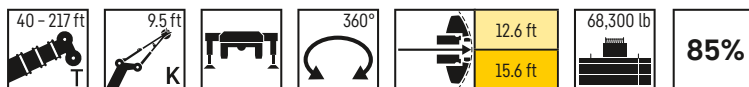
TK



Lifting capacities

Forces de levage

TK



	40 ft	54 ft	68 ft	81 ft	95 ft	108 ft	121 ft	135 ft	148 ft	162 ft	176 ft	189 ft	196 ft	201 ft	202 ft	207 ft	214 ft	217 ft	
	9.5 ft																		
10	64.1	64.1	64.1																10
11	64.1	64.1	64.1	64.1															11
12	64.1	64.1	64.1	64.1															12
13	64.1	64.1	64.1	64.1	64.1														13
14	64.1	64.1	64.1	64.1	64.1														14
15	64.1	64.1	64.1	64.1	64.1														15
16	64.1	64.1	64.1	64.1	64.1	64.1													16
17	64.1	64.1	64.1	64.1	64.1	64.1													17
18	64.1	64.1	64.1	64.1	64.1	64.1													18
19	64.1	64.1	64.1	64.1	64.1	64.1	64.1												19
20	64.1	64.1	64.1	64.1	64.1	64.1	64.1												20
22	64.1	64.1	64.1	64.1	64.1	64.1	64.1												22
24	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1											24
26	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64	51.7										26
28	64.1	64.1	64.1	64.1	64.1	64.1	64.1	63.7	51.6	36.3									28
30	64.1	64.1	64.1	64.1	64.1	64.1	64.1	63.9	51.4	41.9									30
32	64.1	64.1	64.1	64.1	64.1	64.1	62	58.5	51.1	41.8	33.8								32
34	64.1	64.1	64.1	64.1	63.7	62.8	59.3	56.3	50.7	41.6	33.8	24.3							34
36	63.3	63.8	64.1	63.4	62.3	60.3	56.7	53.8	50.1	41.4	33.7	26.4	22.9						36
38	59.4	60.3	60.6	61.7	60.2	57.8	54.3	51.5	48.3	41.1	33.5	26.3	22.8	19.6	21.2	19.4			38
40	55.6	56.6	57	58.1	57.6	55.2	52.2	49.4	46.4	40.8	33.3	26.1	22.7	19.5	21.2	19.4	17.2	16.8	40
45		48.4	49.9	50	49.7	48.6	46.3	43.8	42.2	39.7	32.6	25.8	22.2	19.1	21	19.2	17	16.6	45
50		42	43.4	43.6	43.2	42.4	40.4	39.8	38.1	35.8	31.8	25.4	21.4	18.6	20.6	18.9	16.8	16.4	50
55		36.7	38.2	38.3	37.9	37.1	37.2	35.5	33.7	32.4	30.6	24.9	20.6	18.1	20.3	18.6	16.5	16.1	55
60			33.8	33.9	33.5	33.4	33.4	31.6	30.5	29.2	27.3	24.2	19.7	17.6	19.9	18.3	16.1	15.8	60
65			30	30.1	29.7	30.5	29.7	28.9	27.3	26.2	25.1	23.5	18.9	17.1	19.4	17.9	15.8	15.4	65
70				26.7	27.3	27.2	26.3	25.8	25	24.1	23.1	21.5	18	16.5	18.9	17.5	15.4	14.8	70
75				23.9	24.8	24.3	23.4	23.5	22.9	22.1	20.8	19.4	17.1	15.9	18.2	17	14.9	14.3	75
80				21.7	22.3	21.8	21	21	20.7	19.8	18.8	18.2	16.1	15.3	16.9	16.3	14.4	13.7	80
85					20.2	19.6	19.4	18.9	18.5	17.9	17.5	16.6	14.7	14.6	15.3	15.1	13.9	13.2	85
90					18.3	17.6	17.8	17.1	16.5	16.5	15.6	15	13.1	14	13.8	13.8	13.3	12.5	90
95					16.6	15.9	16.1	15.4	15.1	14.8	13.9	13.3	11.6	13.1	12.3	12.4	12.1	11.7	95
100						14.9	14.6	14.4	13.9	13.3	12.4	11.9	10.1	11.8	10.9	11	10.8	10.6	100
105						13.9	13.2	13.2	12.5	11.9	11.1	10.5	9	10.5	9.6	9.7	9.6	9.5	105
110						10.7	12	12	11.3	10.7	9.9	9.4	8	9.3	8.6	8.7	8.6	8.5	110
115							11	10.8	10.2	9.7	9	8.5	7.1	8.5	7.7	7.8	7.7	7.6	115
120							10	9.9	9.3	8.8	8.2	7.7	6.3	7.7	6.9	7	7	6.8	120
125								9.1	8.5	8.1	7.4	7	5.6	6.9	6.2	6.3	6.2	6.1	125
130								8.4	7.9	7.4	6.8	6.3	5	6.3	5.6	5.6	5.6	5.4	130
135								7.8	7.3	6.8	6.2	5.7	4.3	5.7	4.9	5	5	4.8	135
140									6.7	6.2	5.6	5.1	3.6	5.1	4.4	4.5	4.4	4.3	140
145									6.2	5.7	5.1	4.6	3	4.6	3.8	3.9	3.9	3.7	145
150									5.2	5.3	4.6	4.1	2.4	4.1	3.2	3.4	3.3	3.1	150
155										4.8	4	3.5	1.9	3.6	2.7	2.8	2.8	2.6	155
160										4.3	3.6	3		3	2.1	2.3	2.3	2.1	160
165											3.1	2.5		2.6		1.8	1.8		165
170											2.7	2.1		2.1					170
175											2.3								175

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Department of Labor and Industries
Division of Occupational Safety & Health
PO Box 44650
Olympia WA 98504-4650
(360) 902-4943



ANNUAL TEST/EXAMINATION CERTIFICATE

Date of Issue 05/09/2022

NESSCAMPBELL CRANE + RIGGING/OR
KAI DAVIDSON
PO BOX 20517
PORTLAND OR 97294

Certificate Expiration Date
4/29/2023

CRANE ID # C0022405

OWNER'S ID # AT1301

Certified for "On Rubber" Use: No

Location:

Model #: LTM 1120-4.1

Crane Type: MOBILE: HYDRAULIC
BOOM

Serial #: 090683

Maximum Capacity: 270000.00 LBS.

Manufacturer: LIEBHERR

Main Hoist Certified: Yes

Aux Hoist Certified: Yes

The Department of Labor and Industries, Division of Occupational Safety & Health certifies that any deficiencies considered to constitute an unsatisfactory condition have been corrected and that the device was tested and examined by the certified inspector and that said test and examination met with the requirements specified in WAC 296-155

CERTIFIED BY: KIJKA DAVIDSON

CERTIFIER ID #: 123431

IN ACCORDANCE WITH WAC 296-56, 304 or 155, THIS CERTIFICATE SHALL BE POSTED IN
OPERATORS CAB OR AT OPERATORS WORK STATION.

Department of Labor and Industries
Division of Occupational Safety & Health
PO Box 44650
Olympia WA 98504-4650
(360) 902-4943



ANNUAL TEST/EXAMINATION CERTIFICATE

Date of Issue 05/09/2022

NESSCAMPBELL CRANE + RIGGING/OR
KAI DAVIDSON
PO BOX 20517
PORTLAND OR 97294

Certificate Expiration Date
4/29/2023

CRANE ID # C0022405

OWNER'S ID # AT1301

Certified for "On Rubber" Use: No

Location:

Model #: LTM 1120-4.1

Crane Type: MOBILE: HYDRAULIC
BOOM

Serial #: 090683

Maximum Capacity: 270000.00 LBS.

Manufacturer: LIEBHERR

Main Hoist Certified: Yes

Aux Hoist Certified: Yes

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CERTIFIED BY: KIJKA DAVIDSON

CERTIFIER ID #: 123431

IN ACCORDANCE WITH WAC 296-56, 304 or 155, THIS CERTIFICATE SHALL BE POSTED IN
OPERATORS CAB OR AT OPERATORS WORK STATION.



NCCCO CERTIFIED

Operator

Certification #:101160277R

Certification Designations:
TLL,TSS,BTF,STC



Issued to: **COLIN B. PFEIFER**

Issued: **11/30/2020**

Expires: **11/30/2025**

Verify cardholder status at www.verifycco.org. Subject to provisions of suspension or revocation.

National Commission for the Certification of Crane Operators



OPERATOR QUALIFICATION CARD

Operator Name	Pfeifer, Colin
---------------	----------------

Class/Equipment	Expiration Date
Forklift: Class 4/5/7	N/A
Versa-Lift	N/A
Tri-Lifter	N/A
Twin Lift	N/A
Scissor Lift	N/A
Aerial Lift	N/A

I, Trevor Broten, a designated competent person, do hereby certify that I performed the required training and evaluation for the above named person and they are qualified to operate the classes of equipment dated above. Records on file.

Trevor Broten

Trevor Broten, NessCampbell Training Director

DISCLAIMER: This document is only for the purpose of attesting to the satisfactory completion of classroom training and practical proficiency verification in the type of equipment as prescribed by local jurisdiction.



SAFETY TRAINING RECORD

Employee Name	Pfeifer, Colin
---------------	----------------

Training	Expiration Date
Fall Protection	02/05/24
Drop Tool	02/05/24
Rigger	02/05/24
Signalperson	02/05/24
Confined Space	N/A
Assembly/Disassembly Director: XXXXXX	02/05/24

DRUG TEST CERTIFICATION

Date of Test	00/00/00	SS#	XXX-XX-####
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I, Trevor Broten, a designated competent person, do hereby certify that the above named person has completed the required training for the courses dated above. Records on file.

Trevor Broten

Trevor Broten, NessCampbell Training Director



QUALIFIED OPERATOR EVALUATION MOBILE CRANES

EVALUATION DATE 5/9/2022

OPERATOR NAME Pfeifer, Colin

CERTIFICATION ISSUED BY NCCCO

CERTIFICATION # 101160277R

CRANE MAKE Liebherr

MODEL LTM 1120 4.1

CONFIGURATION

Rubber-Tired

- ☒ Base configuration (includes attached single/double stage jib/multiple counterweight and multiple outrigger configurations)
- ☒ Jib Inserts
- ☐ Luffing Jib/Wind Jib
- ☐ Guying System
- ☒ Lattice Boom
- ☐ Telescopic Boom
- ☐ Other _____

Crawler

- ☐ Base Main Boom Configuration (regardless of track position, counterweight configurations or boom head types)
- ☐ Straight Jib
- ☐ Luffing Jib/Wind Jib
- ☐ Derrick Attachments
- ☐ Lattice Boom
- ☐ Telescopic Boom
- ☐ Maxer/Wagon/Sled
- ☐ Other _____

I have evaluated the operator on the following knowledge areas and have determined he/she is competent in these areas for the equipment which he/she will operate. (Evaluator to initial each area)

TB Operation

TB Software

TB Operational Aids

TB Shutdown

TB Safety Devices

TB Assembly & Disassembly

I have evaluated the operator with respect to the equipment that he/she will operate and have determined that he/she:

1. Has the skills and knowledge, as well as the ability to recognize and avert risk, necessary to operate the aforementioned equipment safely, including those specific to the safety devices, operational aids, software, and the size and configuration of the equipment. [OSHA 1926.1427(f)(1)(i)]
2. Has the ability to perform the hoisting activities required for assigned work including blind lifts, personnel hoisting, and multi-crane lifts. [OSHA 1926.1427(f)(1)(ii)]; and
3. Understands and can apply the equipment's load charts as well as the manufacturer's procedures.

Trevor L. Broten

Training Director's Name (Print)

Trevor Broten

Training Director's Signature

5/9/2022

Date

Steve Spurlock

Safety Director: Name (Print)

Steve Spurlock

Safety Director's Signature

5/9/2022

Date

Colin Pfeifer

Crane Operator Name (Print)

Colin Pfeifer

Crane Operator Signature

5/9/2022

Date

DISCLAIMER: The operator identified on this form has been evaluated as an employee of NessCampbell Crane + Rigging; this evaluation is only valid when this operator is in the direct employment of NessCampbell Crane + Rigging and is operating equipment owned or rented by NessCampbell Crane + Rigging



**SAFETY TRAINING
RECORD**

Employee Name	David Lancaster
Training	Expiration Date
Fall Protection	10/22/25
Drop Tool	10/22/25
Rigger	10/22/25
Signalperson	10/22/25
Tri-Lifter	N/A
Forklift: Class 4/5/7	10/22/23

DRUG TEST CERTIFICATION

Date of test	10/22/2020	SS#	XXX-XX-####
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I, Trevor Broten, a designated competent person, do hereby certify that the above named person has completed the required training for the courses dated above. Records on file.

Trevor Broten

Trevor Broten, NessCampbell Training Director