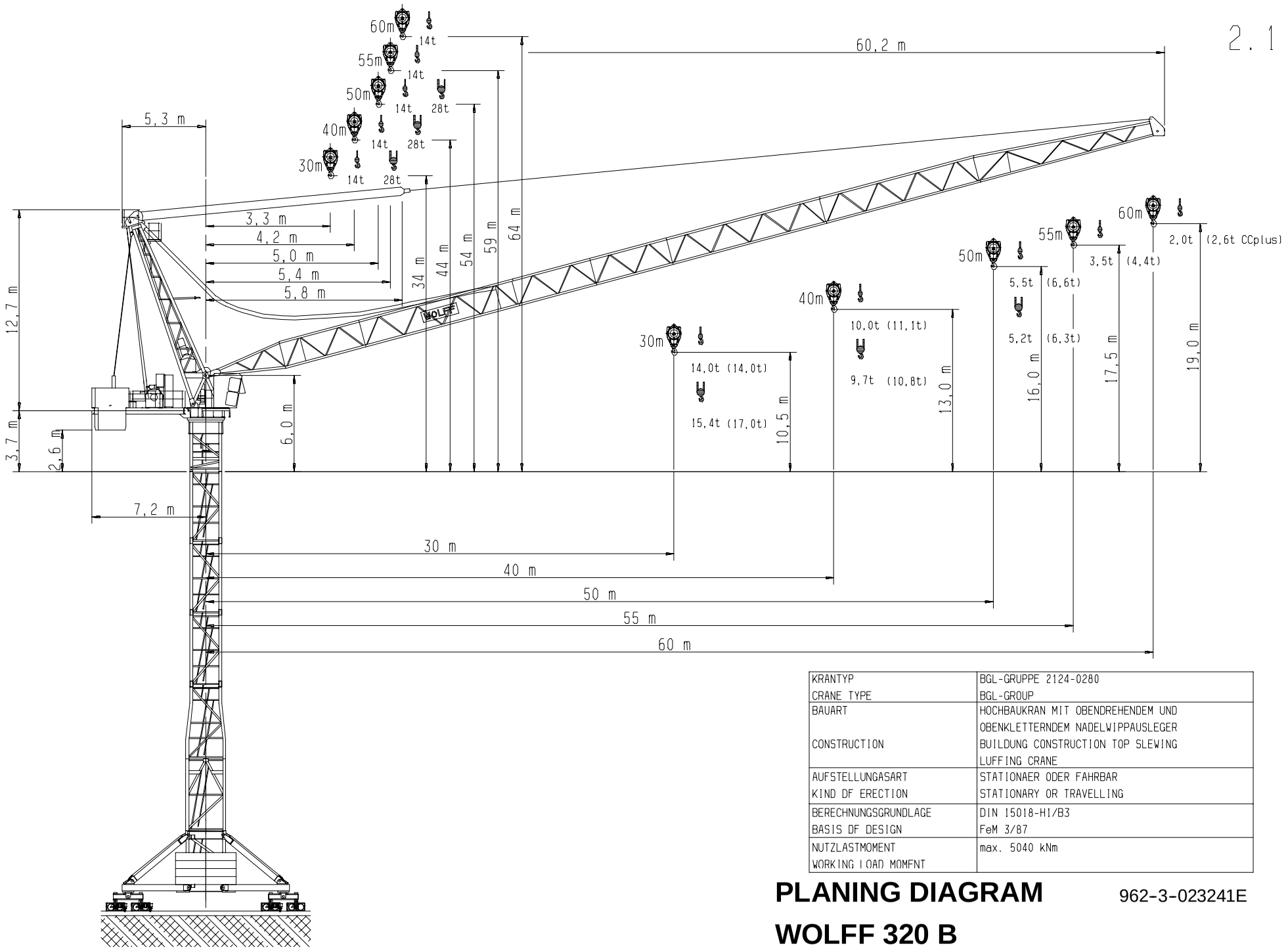


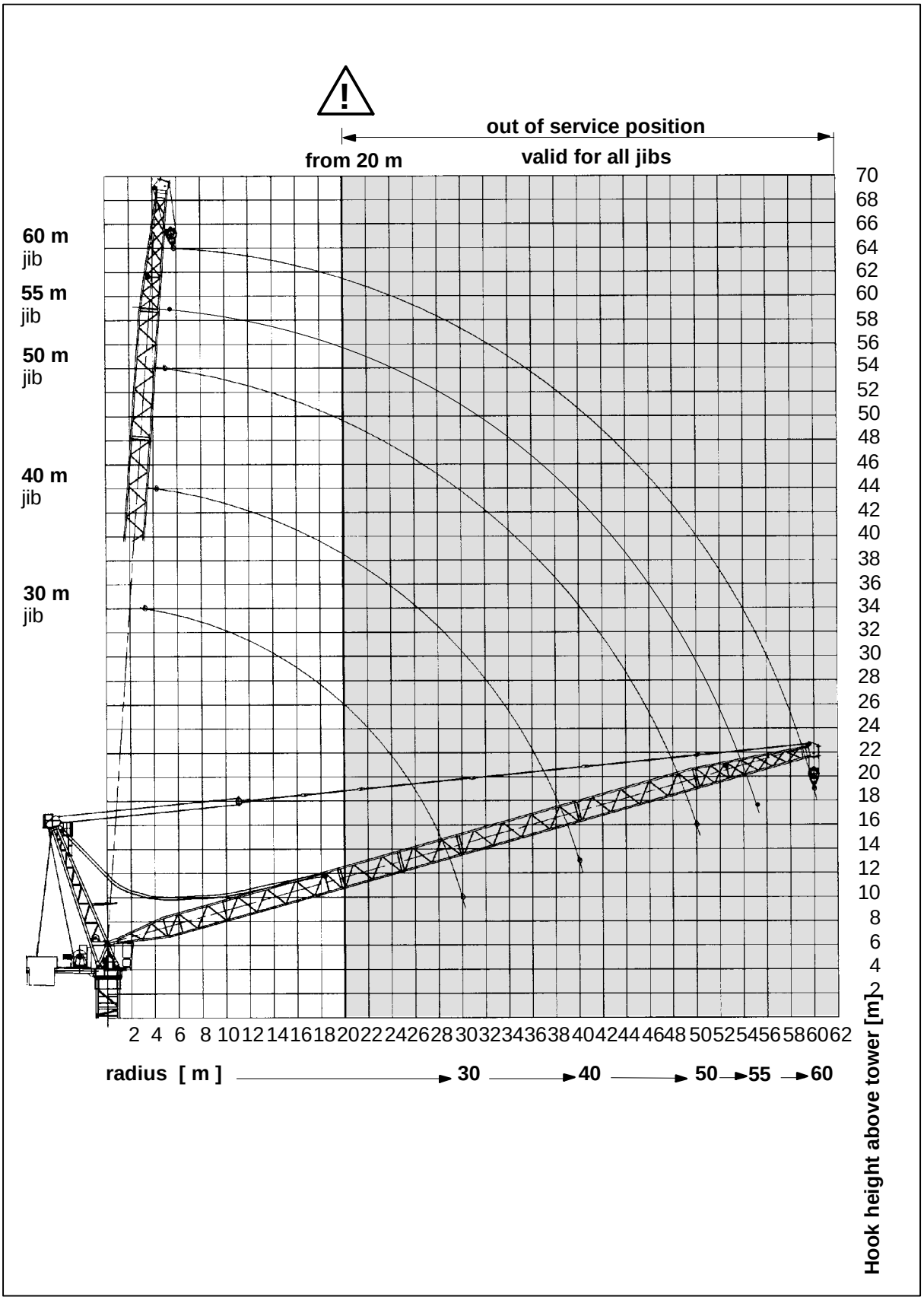
KRANTYP CRANE TYPE	BGL-GRUPPE 2124-0280 BGL-GROUP
BAUART CONSTRUCTION	HOCHBAUKRAN MIT OBENDREHENDEM UND OBENKLETTERNDEM NADELWIPPAUSLEGER BUILDUNG CONSTRUCTION TOP SLEWING LUFFING CRANE
AUFSTELLUNGASART KIND DF ERECTION	STATIONAER ODER FAHRBAR STATIONARY OR TRAVELLING
BERECHNUNGSGRUNDLAGE BASIS DF DESIGN	DIN 15018-HI/B3 FeM 3/87
NUTZLASTMOMENT WORKING LOAD MOMENT	max. 5040 kNm

PLANING DIAGRAM

962-3-023241E

WOLFF 320 B

2.1.2 **Hook positions**



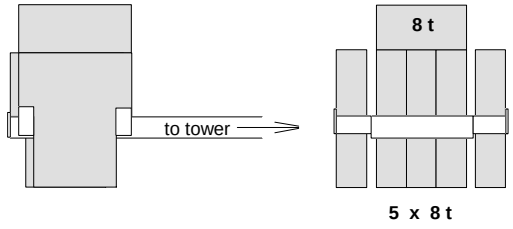
2.2.1.1 **Load capacity table**

jib length [m]		radius [m]	20	25	30	35	40	45	50	55	60	load capacity [t]
60												
55												
50	5,0 – 15,0		19,9	15,0	11,7	9,4	7,7	6,3	**5,2**			
40	4,2 – 16,0	**28,0**	21,9	17,0	13,8	11,5	**9,7**					
30	3,3 – 18,0		24,9	19,2	**15,4**							

jib length [m]		radius [m]	20	25	30	35	40	45	50	55	60	load capacity [t]
60	5,8 – 25,0		14,0	14,0	10,6	8,1	6,3	4,8	3,7	2,8	**2,0**	
55	5,4 – 26,0		14,0	14,0	11,3	8,9	7,0	5,6	4,4	**3,5**		
50	5,0 – 27,0		14,0	14,0	12,2	9,8	8,0	6,6	**5,5**			
40	4,2 – 30,0	**14,0**	14,0	14,0	14,0	11,7	**10,0**					
30	3,3 – 30,0		14,0	14,0	**14,0**							

The load capacities refer to a tower height of 45,0 m. With greater tower heights the safe working load will be minimized by the additional weight of the hoisting cable (with 2 fall operation = 7,30 kg per meter hook path, with 1 fall operation = 3,65 kg per meter hook path).

Arrangement of counterweights **Hw 28110 KFU**

jib length [m]	60	55	50	40	30
counterweights **total weight 48 t**					

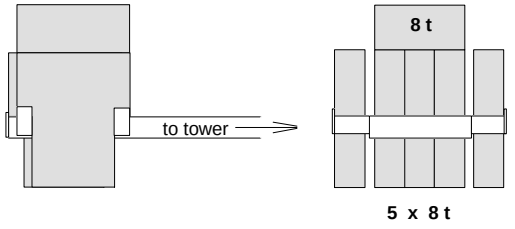
2.2.1.2 **Load capacity table** (these load values are switch-off values)

jib length [m]		radius [m]	20	25	30	35	40	45	50	55	60	load capacity [t]
60												
55												
50	5,0 – 15,5		20,9	16,0	12,8	10,5	8,7	7,4	**6,3**			
40	4,2 – 17,0	**28,0**	23,5	18,4	15,0	12,6	**10,8**					
30	3,3 – 19,0		26,5	20,8	**17,0**							

jib length [m]		radius [m]	20	25	30	35	40	45	50	55	60	load capacity [t]
60	5,8 – 26,0		14,0	14,0	11,3	8,8	7,0	5,5	4,3	3,4	**2,6**	
55	5,4 – 27,5		14,0	14,0	12,4	9,9	8,0	6,5	5,4	**4,4**		
50	5,0 – 29,0		14,0	14,0	13,4	11,0	9,2	7,7	**6,6**			
40	4,2 – 32,5	**14,0**	14,0	14,0	14,0	12,9	**11,1**					
30	3,3 – 30,0		14,0	14,0	**14,0**							

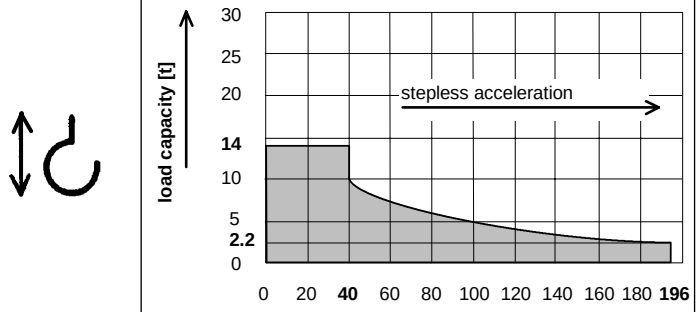
The load capacities refer to a tower height of 45,0 m. With greater tower heights the safe working load will be minimized by the additional weight of the hoisting cable (with 2 fall operation = 7,30 kg per meter hook path, with 1 fall operation = 3,65 kg per meter hook path).

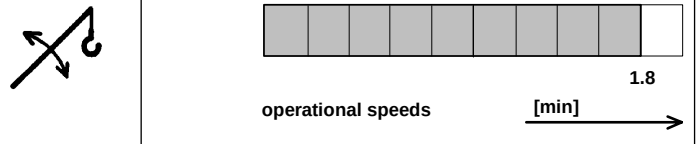
Arrangement of counterweights **Hw 28110 KFU**

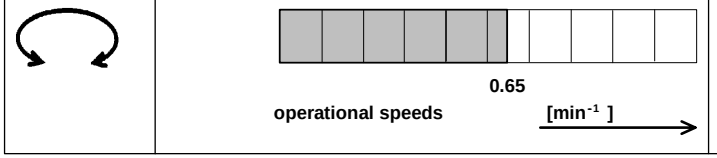
jib length [m]	60	55	50	40	30
counterweights **total weight 48 t**					

2.2.2.1 **Operational speeds** 400 V, 50 Hz

drive [model]	operational speeds load capacity [1-fall operation]	hook path max. [m]	output [kW]	total output [kVA]
Hw 28110KFU	hoisting	460	110	
Ew 1575KFU	jib up - down		75	
Dw	slewing	1 x	7,5	



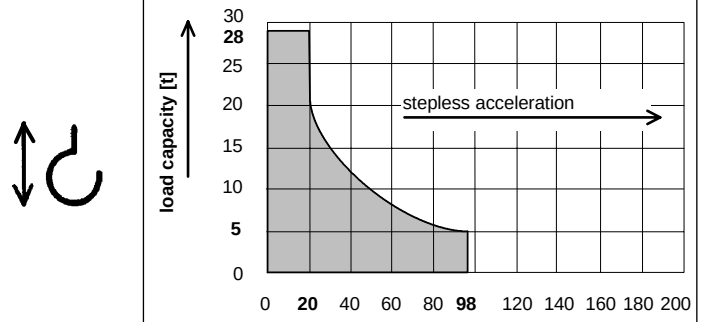


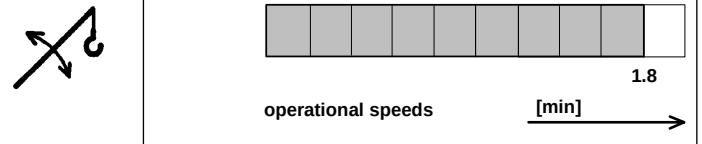


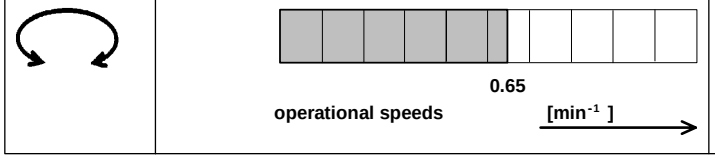
194
total output for a simultaneity factor of 0,8

2.2.2.2 **Operational speeds** 400 V, 50 Hz

drive [model]	operational speeds load capacity [2-fall operation]	hook path max. [m]	output [kW]	total output [kVA]
Hw 28110KFU	hoisting	230	110	
Ew 1575KFU	jib up - down		75	
Dw	slewing	1 x	7,5	







194
total output for a simultaneity factor of 0.8

2.2.3.1 **Load capacity table [kg] for 2 fall operation** **DIN 15018 / H1 - B3**

radius [m]	30	40	50	55	60
16,0	28 000	28 000	25 950		
17,0	28 000	26 200	24 150		
18,0	28 000	24 600	22 550		
19,0	26 350	23 200	21 150		
20,0	24 900	21 900	19 900		
21,0	23 500	20 750	18 700		
22,0	22 250	19 700	17 650		
23,0	21 150	18 700	16 650		
24,0	20 150	17 850	15 800		
25,0	19 200	17 000	15 000		
26,0	18 300	16 250	14 200		
27,0	17 500	15 550	13 500		
28,0	16 750	14 900	12 900		
29,0	16 050	14 300	12 300		
30,0	15 400	13 800	11 700		
31,0		13 250	11 200		
32,0		12 750	10 700		
33,0		12 300	10 250		
34,0		11 850	9 800		
35,0		11 500	9 400		
36,0		11 050	9 000		
37,0		10 700	8 650		
38,0		10 350	8 300		
39,0		10 000	7 950		
40,0		9 700	7 700		
41,0			7 350		
42,0			7 050		
43,0			6 800		
44,0			6 550		
45,0			6 300		
46,0			6 050		
47,0			5 800		
48,0			5 600		
49,0			5 400		
50,0			5 200		
51,0					
52,0					
53,0					
54,0					
55,0					
56,0					
57,0					
58,0					
59,0					
60,0					

The load capacities refer to a tower height of 45,0 m. With greater tower heights the safe working load will be minimized by the additional weight of the hoisting cable = 7.296 kg per meter hook path.

2.2.3.2 **Load capacity table [kg] for 2 fall operation** **DIN 15018 / H1 - B3**

radius [m]	30	40	50	55	60
16,0	28 000	28 000	27 020		
17,0	28 000	28 000	25 230		
18,0	28 000	26 340	23 630		
19,0	28 000	24 850	22 210		
20,0	26 500	23 500	20 900		
21,0	25 140	22 300	19 760		
22,0	23 910	21 200	18 710		
23,0	22 780	20 200	17 750		
24,0	21 750	19 280	16 860		
25,0	20 800	18 400	16 000		
26,0	19 920	17 650	15 300		
27,0	19 110	16 920	14 610		
28,0	18 360	16 250	13 960		
29,0	17 660	15 620	13 360		
30,0	17 000	15 000	12 800		
31,0		14 490	12 280		
32,0		13 980	11 780		
33,0		13 500	11 320		
34,0		13 040	10 890		
35,0		12 600	10 500		
36,0		12 210	10 090		
37,0		11 830	9 730		
38,0		11 470	9 380		
39,0		11 130	9 050		
40,0		10 800	8 700		
41,0			8 440		
42,0			8 160		
43,0			7 890		
44,0			7 630		
45,0			7 400		
46,0			7 150		
47,0			6 920		
48,0			6 710		
49,0			6 500		
50,0			6 300		
51,0					
52,0					
53,0					
54,0					
55,0					
56,0					
57,0					
58,0					
59,0					
60,0					

The load capacities refer to a tower height of 45,0 m. With greater tower heights the safe working load will be minimized by the additional weight of the hoisting cable = 7.296 kg per meter hook path.

2.2.3.3 **Load capacity cable [kg] for 1 fall operation** **DIN 15018 / H1 - B3**

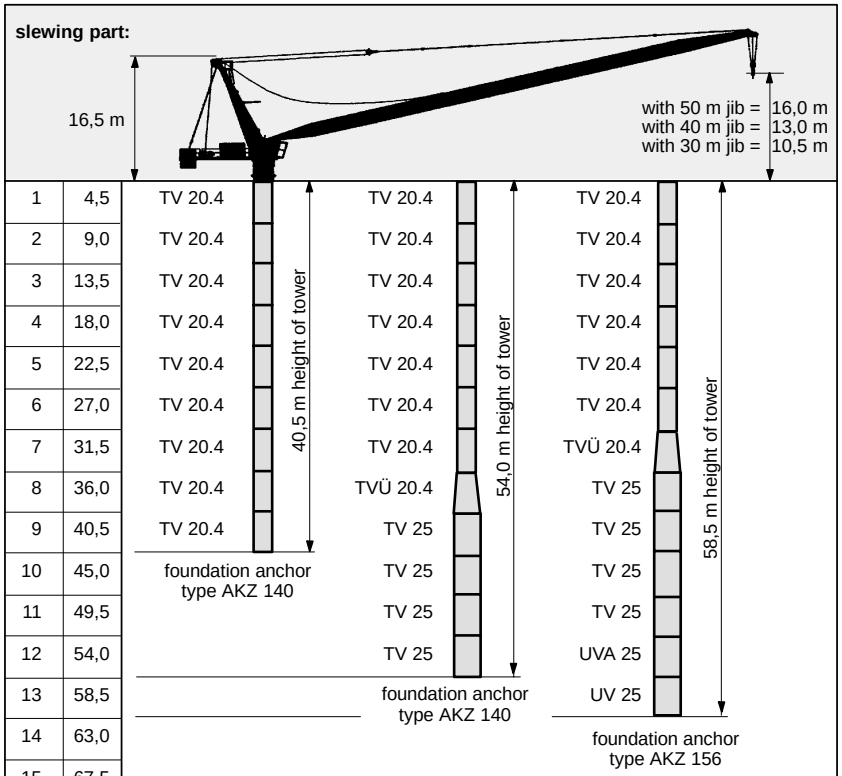
radius [m]	30	40	50	55	60
16,0	14 000	14 000	14 000	14 000	14 000
17,0	14 000	14 000	14 000	14 000	14 000
18,0	14 000	14 000	14 000	14 000	14 000
19,0	14 000	14 000	14 000	14 000	14 000
20,0	14 000	14 000	14 000	14 000	14 000
21,0	14 000	14 000	14 000	14 000	14 000
22,0	14 000	14 000	14 000	14 000	14 000
23,0	14 000	14 000	14 000	14 000	14 000
24,0	14 000	14 000	14 000	14 000	14 000
25,0	14 000	14 000	14 000	14 000	14 000
26,0	14 000	14 000	14 000	14 000	13 210
27,0	14 000	14 000	14 000	13 260	12 480
28,0	14 000	14 000	13 350	12 580	11 800
29,0	14 000	14 000	12 750	11 940	11 160
30,0	14 000	14 000	12 200	11 300	10 600
31,0		13 500	11 600	10 790	10 020
32,0		13 000	11 100	10 270	9 500
33,0		12 550	10 650	9 780	9 010
34,0		12 100	10 200	9 310	8 560
35,0		11 700	9 800	8 900	8 100
36,0		11 350	9 400	8 470	7 710
37,0		10 950	9 000	8 080	7 330
38,0		10 650	8 650	7 710	6 960
39,0		10 300	8 300	7 360	6 620
40,0		10 000	8 000	7 000	6 300
41,0			7 700	6 710	5 970
42,0			7 400	6 410	5 670
43,0			7 100	6 130	5 390
44,0			6 850	5 850	5 120
45,0			6 600	5 600	4 800
46,0			6 350	5 340	4 610
47,0			6 150	5 100	4 370
48,0			5 900	4 870	4 140
49,0			5 700	4 650	3 920
50,0			5 500	4 400	3 700
51,0				4 240	3 510
52,0				4 040	3 320
53,0				3 860	3 130
54,0				3 670	2 950
55,0				3 500	2 800
56,0					2 610
57,0	The load capacities refer to a tower height of 45,0 m. With greater tower heights the safe working load will be minimized by the additional weight of the hoisting cable = 3.648 kg per meter hook path.				2 450
58,0					2 300
59,0					2 150
60,0					2 000

2.2.3.3 **Load capacity table [kg] for 1 fall operation** **DIN 15018 / H1 - B3**

Ausladung [m]	30	40	50	55	60
16,0	14 000	14 000	14 000	14 000	14 000
17,0	14 000	14 000	14 000	14 000	14 000
18,0	14 000	14 000	14 000	14 000	14 000
19,0	14 000	14 000	14 000	14 000	14 000
20,0	14 000	14 000	14 000	14 000	14 000
21,0	14 000	14 000	14 000	14 000	14 000
22,0	14 000	14 000	14 000	14 000	14 000
23,0	14 000	14 000	14 000	14 000	14 000
24,0	14 000	14 000	14 000	14 000	14 000
25,0	14 000	14 000	14 000	14 000	14 000
26,0	14 000	14 000	14 000	14 000	14 000
27,0	14 000	14 000	14 000	14 000	13 260
28,0	14 000	14 000	14 000	13 660	12 560
29,0	14 000	14 000	14 000	13 010	11 920
30,0	14 000	14 000	13 400	12 400	11 300
31,0		14 000	12 860	11 830	10 760
32,0		14 000	12 350	11 300	10 230
33,0		13 770	11 860	10 800	9 730
34,0		13 320	11 410	10 330	9 230
35,0		12 900	11 000	9 900	8 800
36,0		12 500	10 570	9 470	8 410
37,0		12 120	10 190	9 070	8 020
38,0		11 760	9 830	8 700	7 650
39,0		11 420	9 480	8 340	7 290
40,0		11 100	9 200	8 000	7 000
41,0			8 840	7 680	6 640
42,0			8 550	7 370	6 340
43,0			8 260	7 080	6 050
44,0			7 990	6 800	5 770
45,0			7 700	6 500	5 500
46,0			7 490	6 280	5250
47,0			7 250	6 030	5 010
48,0			7 030	5 800	4 780
49,0			6 810	5 580	4 560
50,0			6 600	5 400	4 300
51,0				5 150	4 140
52,0				4 950	3 940
53,0				4 760	3 750
54,0				4 580	3 570
55,0				4 400	3 400
56,0					3 220
57,0	The load capacities refer to a tower height of 45,0 m. With greater tower heights the safe working load will be minimized by the additional weight of the hoisting cable = 3.648 kg per meter hook path.				3 060
58,0					2 900
59,0					2 750
60,0					2 600

2.2.6.1 **Tower configurations** **30 m to 50 m jib**

for a free standing stationary crane without climbing device on a concrete foundation



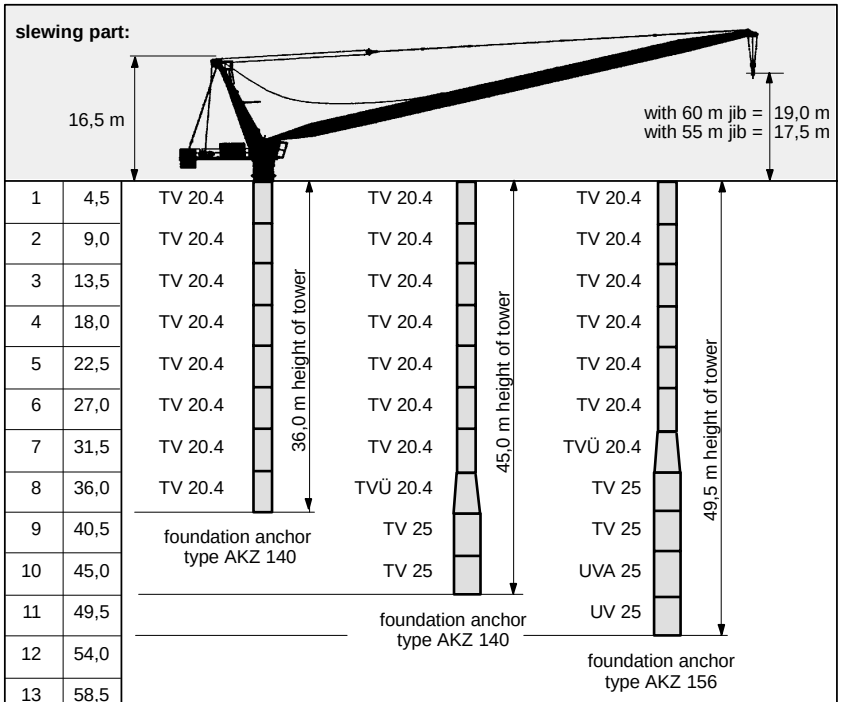
tower element	height of tower [m]			
1	4,5	TV 20.4	TV 20.4	TV 20.4
2	9,0	TV 20.4	TV 20.4	TV 20.4
3	13,5	TV 20.4	TV 20.4	TV 20.4
4	18,0	TV 20.4	TV 20.4	TV 20.4
5	22,5	TV 20.4	TV 20.4	TV 20.4
6	27,0	TV 20.4	TV 20.4	TV 20.4
7	31,5	TV 20.4	TV 20.4	TVÜ 20.4
8	36,0	TV 20.4	TVÜ 20.4	TV 25
9	40,5	TV 20.4	TV 25	TV 25
10	45,0		TV 25	TV 25
11	49,5		TV 25	TV 25
12	54,0		TV 25	UVA 25
13	58,5			UV 25
14	63,0			
15	67,5			
16	72,0			
17	76,5			
18	81,0			

For data regarding foundation anchors see section 12.
The tower configurations shown here are recommended for economic crane installation.

Tower configurations with other tower elemnts are possible, but must be checked and confirmed by the manufacturer before assembly.

2.2.6.2 **Tower configurations** **55 m to 60 m jib**

for a free standing stationary crane without climbing device on a concrete foundation



tower element	height of tower [m]			
1	4,5	TV 20.4	TV 20.4	TV 20.4
2	9,0	TV 20.4	TV 20.4	TV 20.4
3	13,5	TV 20.4	TV 20.4	TV 20.4
4	18,0	TV 20.4	TV 20.4	TV 20.4
5	22,5	TV 20.4	TV 20.4	TV 20.4
6	27,0	TV 20.4	TV 20.4	TV 20.4
7	31,5	TV 20.4	TV 20.4	TVÜ 20.4
8	36,0	TV 20.4	TVÜ 20.4	TV 25
9	40,5		TV 25	TV 25
10	45,0		TV 25	UVA 25
11	49,5			UV 25
12	54,0			
13	58,5			
14	63,0			
15	67,5			
16	72,0			
17	76,5			
18	81,0			

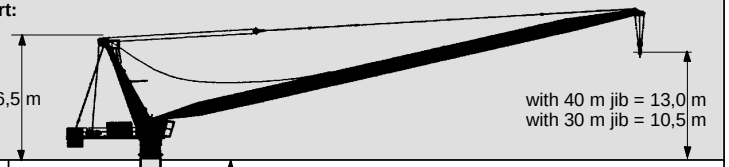
For data regarding foundation anchors see section 12.
The tower configurations shown here are recommended for economic crane installation.

Tower configurations with other tower elemnts are possible, but must be checked and confirmed by the manufacturer before assembly.

2.2.6.3 **Tower configurations** **30 m to 40 m jib**

for a free standing stationary crane without climbing device on a concrete foundation

slewing part:



tower elements	height of tower [m]	
1	4,5	TV 20
2	9,0	TV 20
3	13,5	TV 20
4	18,0	TV 20
5	22,5	TV 20
6	27,0	TV 20
7	31,5	TVÜ 20
8	36,0	TV 25
9	40,5	TV 25
10	45,0	TV 25
11	49,5	UVA 25
12	50,7	VR 2529
13	55,2	UV 29
14	59,7	UV 29
15	64,2	UV 29
16	68,7	UV 29
17	73,2	UV 29
18	83,2	BT 29

83,2 m height of tower

foundation ancor
type FUA – BT 29

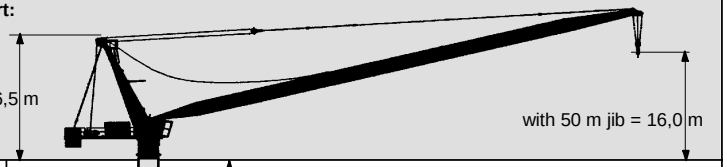
For data regarding foundation anchors see section 12.
The tower configurations shown here are recommended for economic crane installation.

Tower configurations with other tower elemnts are possible, but must be checked and confirmed by the manufacturer before assembly.

2.2.6.4 **Tower configurations** **jib 50 m**

for a free standing stationary crane without climbing device on a concrete foundation

slewing part:



tower elementts	height of tower [m]	
1	4,5	TV 20
2	9,0	TV 20
3	13,5	TV 20
4	18,0	TV 20
5	22,5	TV 20
6	27,0	TV 20
7	31,5	TVÜ 20
8	36,0	TV 25
9	40,5	TV 25
10	45,0	TV 25
11	49,5	UVA 25
12	50,7	VR 2529
13	55,2	UV 29
14	59,7	UV 29
15	64,2	UV 29
16	68,7	UV 29
17	78,7	BT 29

78,7 m height of tower

foundation anchor
type FUA – BT 29

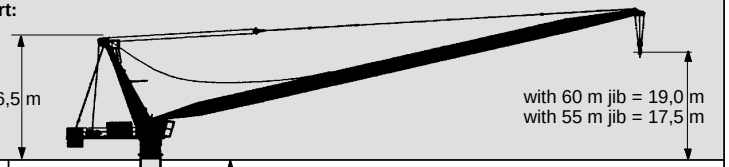
For data regarding foundation anchors see section 12.
The tower configurations shown here are recommended for economic crane installation.

Tower configurations with other tower elemnts are possible, but must be checked and confirmed by the manufacturer before assembly.

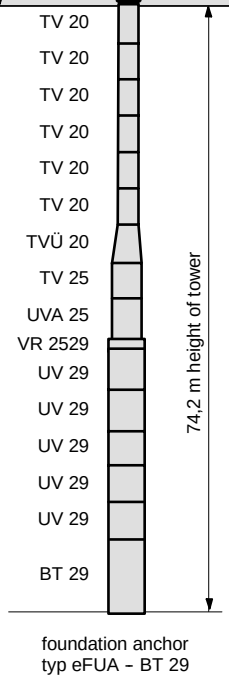
2.2.6.5 **Tower configurations** **55 m to 60 m jib**

for a free standing stationary crane without climbing device on a concrete foundation

slewing part:



tower elementts	height of tower [m]	
1	4,5	TV 20
2	9,0	TV 20
3	13,5	TV 20
4	18,0	TV 20
5	22,5	TV 20
6	27,0	TV 20
7	31,5	TVÜ 20
8	36,0	TV 25
9	40,5	UVA 25
10	41,7	VR 2529
11	46,2	UV 29
12	50,7	UV 29
13	55,2	UV 29
14	59,7	UV 29
15	64,2	UV 29
16	74,2	BT 29



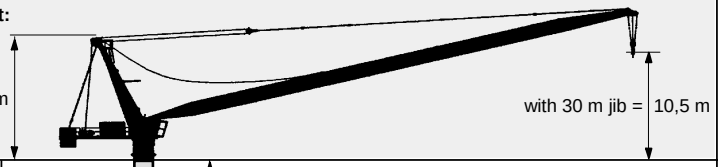
For data regarding foundation anchors see section 12.
The tower configurations shown here are recommended for economic crane installation.

Tower configurations with other tower elemnts are possible, but must be checked and confirmed by the manufacturer before assembly.

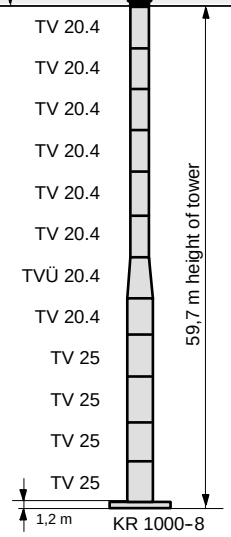
2.2.7.1 **Tower configurations** **30 m jib**

for a free standing stationary crane without climbing device on a cross frame

slewing part:



tower element	height of tower [m]	
1	4,5	TV 20.4
2	9,0	TV 20.4
3	13,5	TV 20.4
4	18,0	TV 20.4
5	22,5	TV 20.4
6	27,0	TV 20.4
7	31,5	TVÜ 20.4
8	36,0	TV 20.4
9	40,5	TV 25
10	45,0	TV 25
11	49,5	TV 25
12	54,0	TV 25
13	58,5	
14	63,0	
15	67,5	
16	72,0	
17	76,5	
18	81,0	



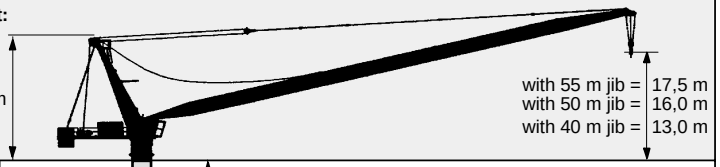
For data regarding cross frames see section 12.
The tower configurations shown here are recommended for economic crane installation.

Tower configurations with other tower elemnts are possible, but must be checked and confirmed by the manufacturer before assembly.

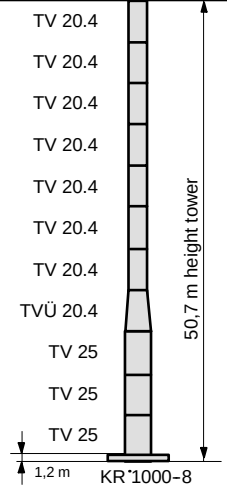
2.2.7.2 **Tower configurations** **40 m to 55 m jib**

for a free standing stationary crane without climbing device on a cross frame

slewing part:



tower element	height of tower [m]	
1	4,5	TV 20.4
2	9,0	TV 20.4
3	13,5	TV 20.4
4	18,0	TV 20.4
5	22,5	TV 20.4
6	27,0	TV 20.4
7	31,5	TV 20.4
8	36,0	TVÜ 20.4
9	40,5	TV 25
10	45,0	TV 25
11	49,5	TV 25
12	54,0	
13	58,5	
14	63,0	
15	67,5	
16	72,0	
17	76,5	
18	81,0	



For data regarding cross frames see section 12.
The tower configurations shown here are recommended for economic crane installation.

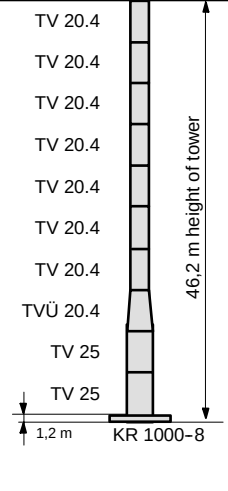
Tower configurations with other tower elemnts are possible, but must be checked and confirmed by the manufacturer before assembly.

2.2.7.3 **Tower configurations** **60 m jib**

for a free standing stationary crane without climbing device on a cross frame

slewing part:

tower element	height of tower [m]	
1	4,5	TV 20.4
2	9,0	TV 20.4
3	13,5	TV 20.4
4	18,0	TV 20.4
5	22,5	TV 20.4
6	27,0	TV 20.4
7	31,5	TV 20.4
8	36,0	TVÜ 20.4
9	40,5	TV 25
10	45,0	TV 25
11	49,5	
12	54,0	
13	58,5	
14	63,0	
15	67,5	
16	72,0	
17	76,5	
18	81,0	



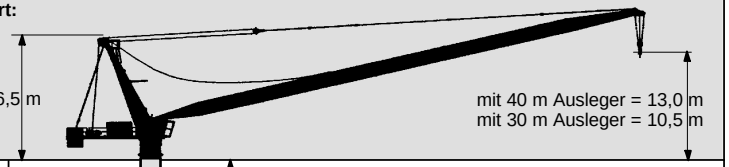
For data regarding cross frames see section 12.
The tower configurations shown here are recommended for economic crane installation.

Tower configurations with other tower elemnts are possible, but must be checked and confirmed by the manufacturer before assembly.

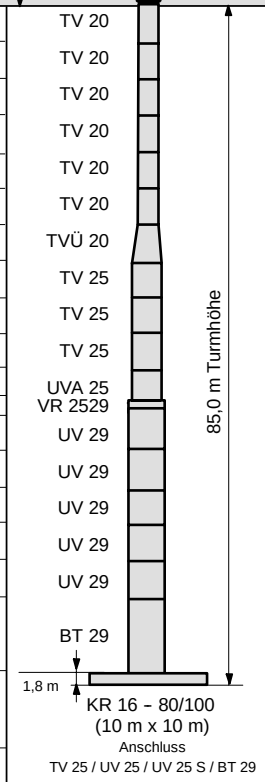
2.2.7.4 **Tower configurations** **30 m to 40 m jib**

for a free standing stationary crane without climbing device on a cross frame

slewing part:



Turm-element	Turmhöhe [m]	
1	4,5	TV 20
2	9,0	TV 20
3	13,5	TV 20
4	18,0	TV 20
5	22,5	TV 20
6	27,0	TV 20
7	31,5	TVÜ 20
8	36,0	TV 25
9	40,5	TV 25
10	45,0	TV 25
11	49,5	UVA 25
12	50,7	VR 2529
13	55,2	UV 29
14	59,7	UV 29
15	64,2	UV 29
16	68,7	UV 29
17	73,2	UV 29
18	83,2	BT 29



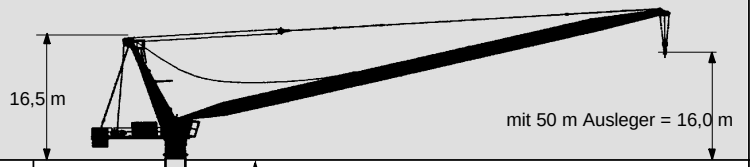
Angaben über Kreuzrahmen siehe Abschnitt 12.
Die hier gezeigten Turmkombinationen stellen Empfehlungen für eine kostengünstige Kranaufstellung dar.
Turmkombinationen mit anderen Turmelementen sind möglich, müssen aber vor der Aufstellung des Turmdrehkranes vom Hersteller geprüft und schriftlich bestätigt werden.

962-4-027028

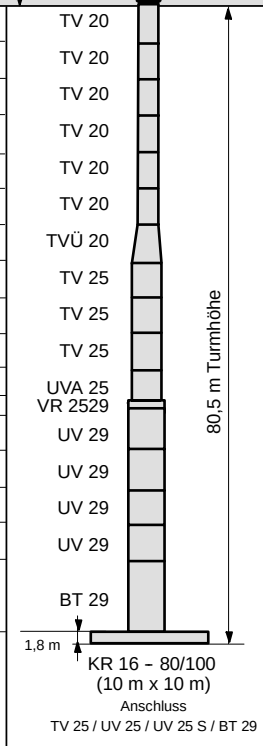
2.2.7.5 **Turmkombinationen** **Ausleger 50 m**

für einen freistehenden stationären Turmdrehkran ohne Klettereinrichtung auf einem Kreuzrahmen.

Drehteil



Turm-element	Turmhöhe [m]	
1	4,5	TV 20
2	9,0	TV 20
3	13,5	TV 20
4	18,0	TV 20
5	22,5	TV 20
6	27,0	TV 20
7	31,5	TVÜ 20
8	36,0	TV 25
9	40,5	TV 25
10	45,0	TV 25
11	49,5	UVA 25
12	50,7	VR 2529
13	55,2	UV 29
14	59,7	UV 29
15	64,2	UV 29
16	68,7	UV 29
17	78,7	BT 29



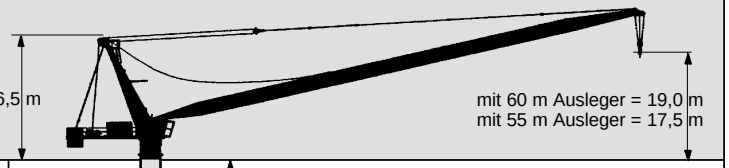
Angaben über Kreuzrahmen siehe Abschnitt 12.
Die hier gezeigten Turmkombinationen stellen Empfehlungen für eine kostengünstige Kranaufstellung dar.
Turmkombinationen mit anderen Turmelementen sind möglich, müssen aber vor der Aufstellung des Turmdrehkranes vom Hersteller geprüft und schriftlich bestätigt werden.

962-4-027101

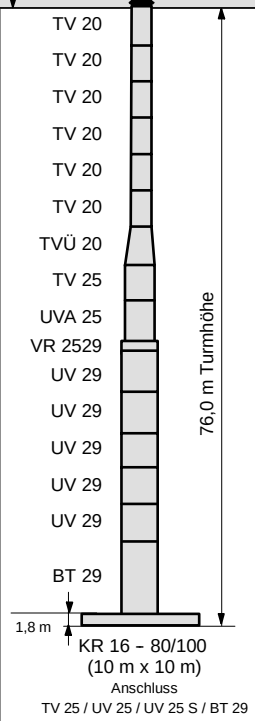
2.2.7.6 **Turmkombinationen** **Ausleger 55 m und 60 m**

für einen freistehenden stationären Turmdrehkran ohne Klettereinrichtung auf einem Kreuzrahmen.

Drehteil:



Turm-element	Turmhöhe [m]	
1	4,5	TV 20
2	9,0	TV 20
3	13,5	TV 20
4	18,0	TV 20
5	22,5	TV 20
6	27,0	TV 20
7	31,5	TVÜ 20
8	36,0	TV 25
9	40,5	UVA 25
10	41,7	VR 2529
11	46,2	UV 29
12	50,7	UV 29
13	55,2	UV 29
14	59,7	UV 29
15	64,2	UV 29
16	74,2	BT 29

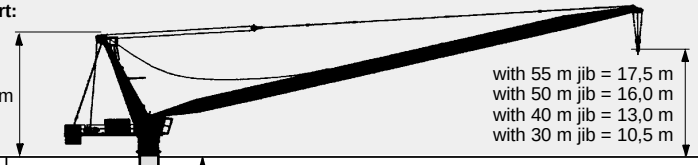


Angaben über Kreuzrahmen siehe Abschnitt 12.
Die hier gezeigten Turmkombinationen stellen Empfehlungen für eine kostengünstige Kranaufstellung dar.
Turmkombinationen mit anderen Turmelementen sind möglich, müssen aber vor der Aufstellung des Turmdrehkranes vom Hersteller geprüft und schriftlich bestätigt werden.

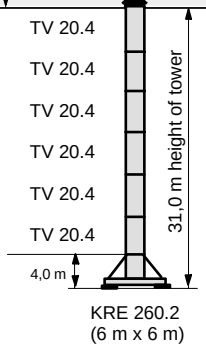
2.2.8.1 **Tower configurations** **30 m to 55 m jib**

for a free standing stationary tower crane without climbing device on a cross frame element

Slewing part:



tower element	tower height [m]	
1	4,5	TV 20.4
2	9,0	TV 20.4
3	13,5	TV 20.4
4	18,0	TV 20.4
5	22,5	TV 20.4
6	27,0	TV 20.4
7	31,5	
8	36,0	
9	40,5	
10	45,0	
11	49,5	
12	54,0	
13	58,5	
14	63,0	
15	67,5	
16	72,0	
17	76,5	
18	81,0	

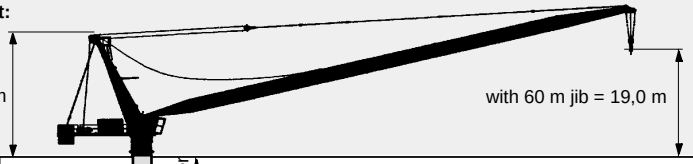


For data regarding cross frame elements see section 12.
The tower configurations are recommended for economic crane installation and may be used in any case.
Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

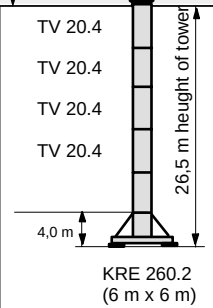
2.2.8.2 **Tower configurations** **60 m jib**

for a free standing stationary tower crane without climbing device on a cross frame element

Slewing part:



tower element	tower height [m]	
1	4,5	TV 20.4
2	9,0	TV 20.4
3	13,5	TV 20.4
4	18,0	TV 20.4
5	22,5	
6	27,0	
7	31,5	
8	36,0	
9	40,5	
10	45,0	
11	49,5	
12	54,0	
13	58,5	
14	63,0	
15	67,5	
16	72,0	
17	76,5	
18	81,0	

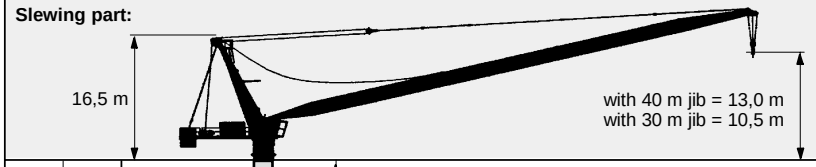


For data regarding cross frame elements see section 12.
The tower configurations are recommended for economic crane installation and may be used in any case.
Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

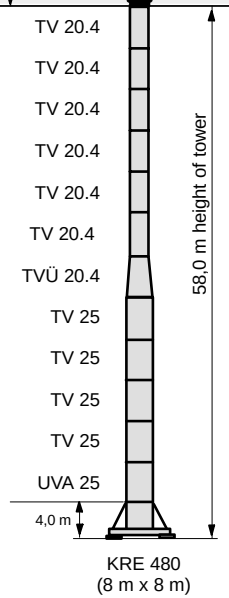
2.2.8.3 **Tower configurations** **30 m to 40 m jib**

for a free standing stationary tower crane without climbing device on a cross frame element

Slewing part:



tower element	tower height [m]	
1	4,5	TV 20.4
2	9,0	TV 20.4
3	13,5	TV 20.4
4	18,0	TV 20.4
5	22,5	TV 20.4
6	27,0	TV 20.4
7	31,5	TVÜ 20.4
8	36,0	TV 25
9	40,5	TV 25
10	45,0	TV 25
11	49,5	TV 25
12	54,0	UVA 25
13	58,5	
14	63,0	
15	67,5	
16	72,0	
17	76,5	
18	81,0	



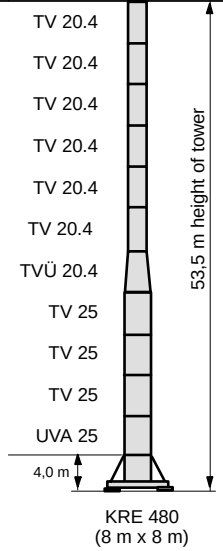
For data regarding cross frame elements see section 12.
The tower configurations are recommended for economic crane installation and may be used in any case.
Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

2.2.8.4 **Tower configurations** **50 m jib**

for a free standing stationary tower crane without climbing device on a cross frame element

Slewing part:

tower element	tower height [m]	
1	4,5	TV 20.4
2	9,0	TV 20.4
3	13,5	TV 20.4
4	18,0	TV 20.4
5	22,5	TV 20.4
6	27,0	TV 20.4
7	31,5	TVÜ 20.4
8	36,0	TV 25
9	40,5	TV 25
10	45,0	TV 25
11	49,5	UVA 25
12	54,0	
13	58,5	
14	63,0	
15	67,5	
16	72,0	
17	76,5	
18	81,0	

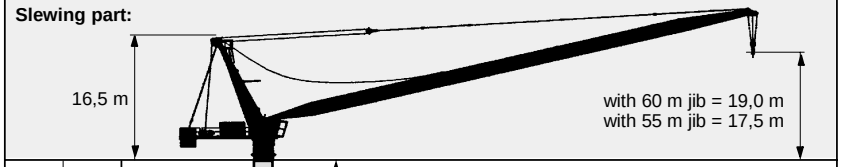


For data regarding cross frame elements see section 12.
The tower configurations are recommended for economic crane installation and may be used in any case.
Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

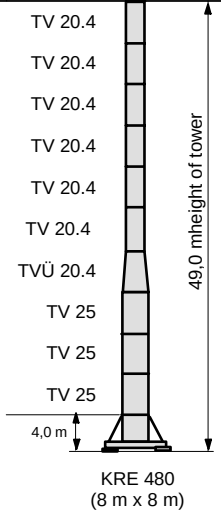
2.2.8.5 **Tower configurations** **55 m to 60 m jib**

for a free standing stationary tower crane without climbing device on a cross frame element

Slewing part:



tower element	tower height [m]	
1	4,5	TV 20.4
2	9,0	TV 20.4
3	13,5	TV 20.4
4	18,0	TV 20.4
5	22,5	TV 20.4
6	27,0	TV 20.4
7	31,5	TVÜ 20.4
8	36,0	TV 25
9	40,5	TV 25
10	45,0	TV 25
11	49,5	
12	54,0	
13	58,5	
14	63,0	
15	67,5	
16	72,0	
17	76,5	
18	81,0	

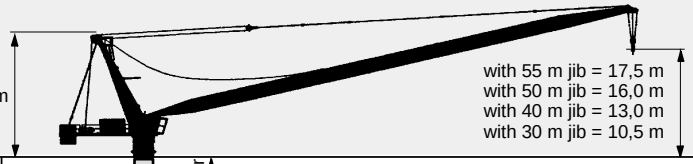


For data regarding cross frame elements see section 12.
The tower configurations are recommended for economic crane installation and may be used in any case.
Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

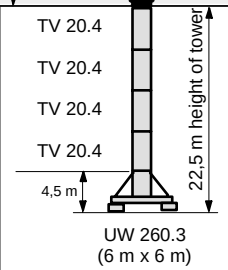
2.2.9.1 **Tower configurations** **30 m to 55 m jib**

for a travelling tower crane without climbing device

Drehteil:



tower element	tower height [m]
1	4,5
2	9,0
3	13,5
4	18,0
5	22,5
6	27,0
7	31,5
8	36,0
9	40,5
10	45,0
11	49,5
12	54,0
13	58,5
14	63,0
15	67,5
16	72,0
17	76,5
18	81,0

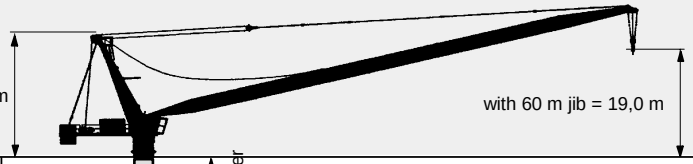


For data regarding undercarriages see section 12.
The tower configurations are recommended for economic crane installation and may be used in any case.
Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

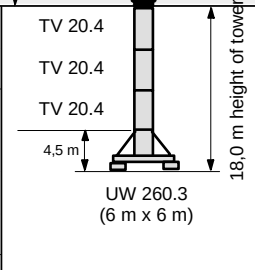
2.2.9.2 **Tower configurations** **60 m jib**

for a travelling tower crane without climbing device

Drehteil:



tower element	tower height [m]
1	4,5
2	9,0
3	13,5
4	18,0
5	22,5
6	27,0
7	31,5
8	36,0
9	40,5
10	45,0
11	49,5
12	54,0
13	58,5
14	63,0
15	67,5
16	72,0
17	76,5
18	81,0



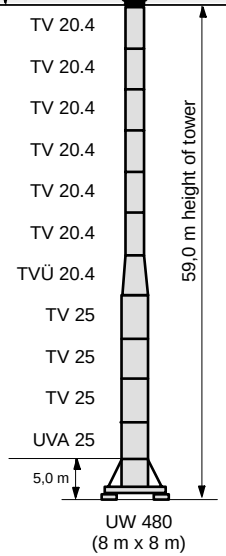
For data regarding undercarriages see section 12.
The tower configurations are recommended for economic crane installation and may be used in any case.
Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

2.2.9.3 **Tower configurations** **30 m - 50 m jib**

for a travelling tower crane without climbing device

Drehteil:

tower element	tower height [m]	
1	4,5	TV 20.4
2	9,0	TV 20.4
3	13,5	TV 20.4
4	18,0	TV 20.4
5	22,5	TV 20.4
6	27,0	TV 20.4
7	31,5	TVÜ 20.4
8	36,0	TV 25
9	40,5	TV 25
10	45,0	TV 25
11	49,5	UVA 25
12	54,0	
13	58,5	
14	63,0	
15	67,5	
16	72,0	
17	76,5	
18	81,0	

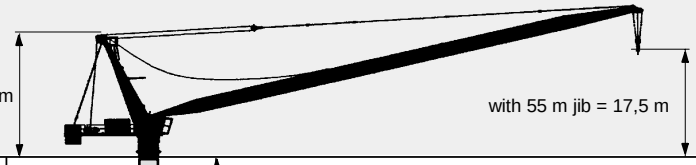


For data regarding undercarriages see section 12.
The tower configurations are recommended for economic crane installation and may be used in any case.
Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

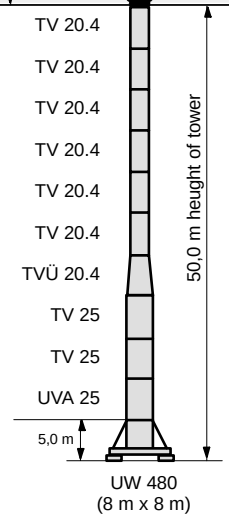
2.2.9.4 **Tower configurations** **55 m jib**

for a travelling tower crane without climbing device

Drehteil:



tower element	tower height [m]	
1	4,5	TV 20.4
2	9,0	TV 20.4
3	13,5	TV 20.4
4	18,0	TV 20.4
5	22,5	TV 20.4
6	27,0	TV 20.4
7	31,5	TVÜ 20.4
8	36,0	TV 25
9	40,5	TV 25
10	45,0	UVA 25
11	49,5	
12	54,0	
13	58,5	
14	63,0	
15	67,5	
16	72,0	
17	76,5	
18	81,0	

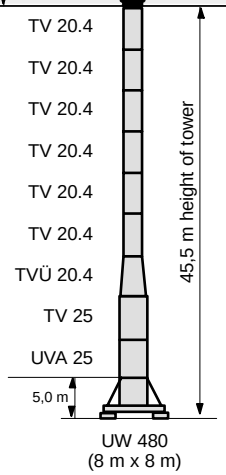


For data regarding undercarriages see section 12.
The tower configurations are recommended for economic crane installation and may be used in any case.
Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

2.2.9.5 **Tower configurations** **60 m jib**

for a travelling tower crane without climbing device

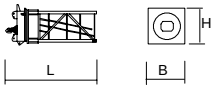
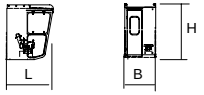
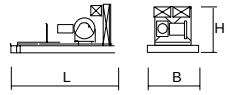
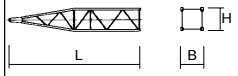
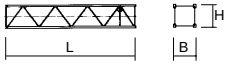
Drehteil:



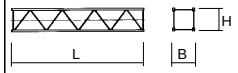
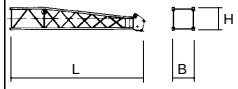
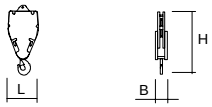
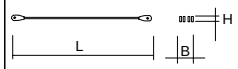
tower element	tower height [m]	
1	4,5	TV 20.4
2	9,0	TV 20.4
3	13,5	TV 20.4
4	18,0	TV 20.4
5	22,5	TV 20.4
6	27,0	TV 20.4
7	31,5	TVÜ 20.4
8	36,0	TV 25
9	40,5	UVA 25
10	45,0	
11	49,5	
12	54,0	
13	58,5	
14	63,0	
15	67,5	
16	72,0	
17	76,5	
18	81,0	

For data regarding undercarriages see section 12.
The tower configurations are recommended for economic crane installation and may be used in any case.
Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

2.3.1 **Colli list**

item	pcs.	designation	colli	L (m)	B (m)	H (m)	weight (kg)	volume (m^3)
1	1	tower top, upper part with platforms and bracing brackets		13,40	2,40	2,25	13150	72,36
2	1	tower top, lower part with slewing part, slewing connection, slewing drives and slip ring system		5,55	2,50	2,70	10000	37,46
3	1	driver's cabin		1,90	1,44	2,34	750	6,40
	1	driver's cabin with suspension		2,15	1,87	0,65	390	2,61
4	1	counterjib complete with bracing brackets without hoisting rope (ø28mm x 583 m = 2150 kg)		6,20	2,60	2,90	10000	46,75
5	1	jib part **1**		10,45	2,50	1,75	2250	45,72
6	1	jib part **2**		10,50	1,75	1,77	2100	32,52
7	1	jib part **3/4**		5,35	1,75	1,75	1000	1638

2.3.2 **Colli list**

item	pcs.	designation	colli	L (m)	B (m)	H (m)	weight (kg)	volume (m^3)
8	1	jib part **3/4**		5,35	1,75	1,75	1000	16,38
9	1	jib part **5**		10,60	1,75	1,75	1800	32,46
10	1	jib part **6**		10,80	1,75	2,01	2850	37,99
11	1	hook block		0,67	0,26	1,45	500	0,25
12	1	bracing brackets (loose parts)		9,74	0,84	0,20	1840	1,64
13	1	standard handrails (loose parts)		2,55	1,11	0,9	320	2,55
13	1	small parts box (loose part)		1,60	0,90	0,80	300	1,15

Loose parts and small parts can be distributed depending on the available space.

2.5.1 **Assembly weights**

Tower top	complete	**13 150 kg**
with build in derricking drive, pulley block and mechanical parts		
with loose parts:		
2 bracing brackets for counterjib	280 kg	
platforms	185 kg	
standard handrails	50 kg	
built-on buffer	195 kg	
Tower top - lower part	complete	**10 000 kg**
with slewing frame, slewing drives and slewing connection		
with lower part of tower top TV 20		
with mechanical parts and main supply leads		
with loose parts:		
standard handrails and posts	65 kg	
Driver's cabin	complete	**1 380 kg**
with driver's cabin suspension and standard handrails	480 kg	
Counterjib	complete	**10 000 kg**
with switch cabinet, resistors, hoisting winch, hoistin rope 583 m		
with loose parts:		
2 bracing brackets	100 kg	
assembly trestles for counterweights	170 kg	
platforms and standard handrails	380 kg	
gratings	160 kg	
tie-bar with hook attachment	180 kg	
Jib 60,0 m (consisting of jib parts 1/2/3/4/5/5/6)	complete	**14 600 kg**
with mechanical parts, bracing brackets, trestles, assembly bracing ropes, assembly rope guidances		
Jib 55,0 m (consisting of jib parts 1/2/3/5/5/6)	complete	**13 600 kg**
with mechanical parts, bracing brackets, trestles, assembly bracing ropes, assembly rope guidances		
Jib 50,0 m (consisting of jib parts 1/2/3/4/5/6)	complete	**12 800 kg**
with mechanical parts, bracing brackets, trestles, assembly bracing ropes, assembly rope guidances		
Jib 40,0 m (consisting of jib parts 1/2/3/4/6)	complete	**10 500 kg**
with mechanical parts, bracing brackets, trestles, assembly bracing ropes, assembly rope guidances		
Jib 30,0 m (consisting of jib parts 1/2/6)	complete	**8100 kg**
with mechanical parts, bracing brackets, trestles, assembly bracing ropes, assembly rope guidances		
Hook block		**520 kg**
14 t / 28 t		

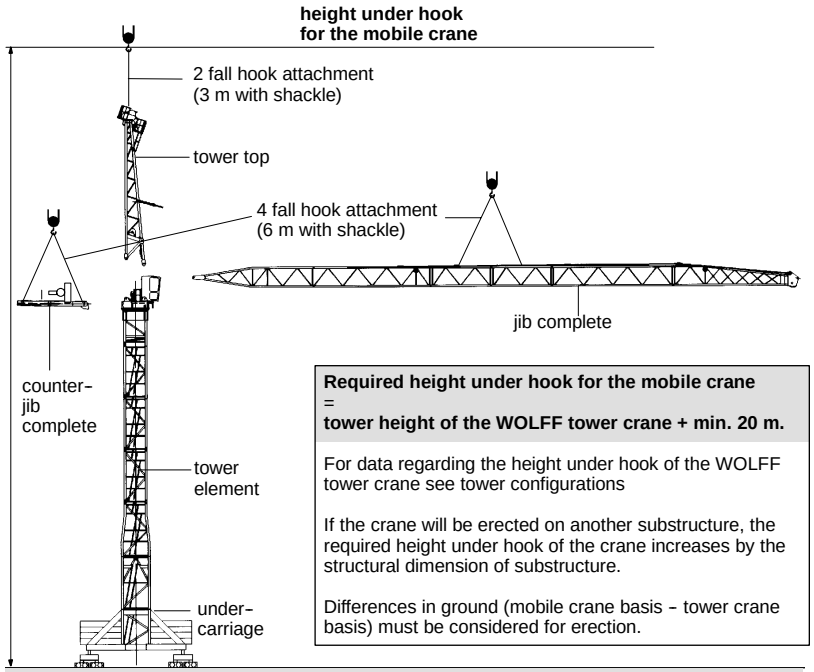
2.5.2 **Assembly weights**

Counterweight - hanging 5 x 8 t	complete	**40 000 kg**
Counterweight - hanging 1 x 8 t	complete	**8 000 kg**

Cross frame KR 1000 - 8 (without optional features)	complete	**14 000 kg**
- 4 spigots TV 20 / TV 25		684 kg
Cross frame KR 16 - 80/100 (without optional features) (8,0 m x 8,0 m)		**21 450 kg**
- 4 spigots AZR 140 E KR16-80		620 kg
- 4 spigots AZ 156 M KR16-80		680 kg
- 4 spigots AZ 156S M KR16-80		675 kg
Cross frame KR 16 - 80/100 (without optional features) (10,0 m x 10,0 m)		**25 400 kg**
- 4 spigots AZR 140 E KR16-80		620 kg
- 4 spigots AZ 156 M KR16-80		680 kg
- 4 spigots AZ 156S M KR16-80		675 kg
Crss frame element KRE 480 complete		**24 250 kg**
- base mast part	7 100 kg	
- swivel arms with structural edge bearings	6 250 kg	
- diagonal struts and ballast supports	9 250 kg	
- assembly platform, ladder and small parts	1 640 kg	
Undercarriage UW 480 complete		**34 000 kg**
- base mast part	7 100 kg	
- swivel arms with traverse and subframe	(2x) 8 000 kg	
- diagonal struts and ballast supports	(2x) 4 630 kg	
- assembly platform, ladder and small parts	1 640 kg	

2.5.3 **Required height under hook for the mobile crane**

Danger!
Use suspension ropes with sufficient capacity and observe the suspension plan!



Required height under hook for the mobile crane
=
tower height of the WOLFF tower crane + min. 20 m.

For data regarding the height under hook of the WOLFF tower crane see tower configurations

If the crane will be erected on another substructure, the required height under hook of the crane increases by the structural dimension of substructure.

Differences in ground (mobile crane basis - tower crane basis) must be considered for erection.

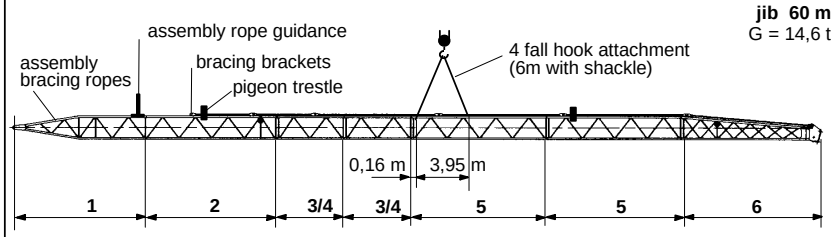
2.6.1 **Suspension plan - jib length 60 m / 55 m / 50 m**

!

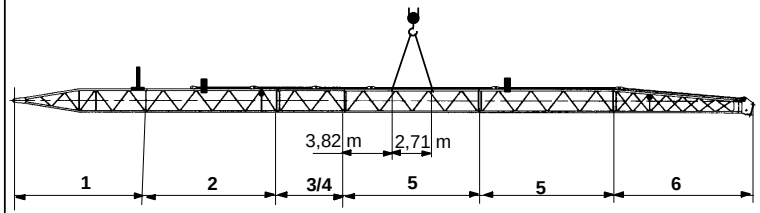
Attention!
The jib must be balanced and hang safely in horizontal position. The suspension points must be labeled, old labels must be removed. There mustn't be any loose pats on the jib.
The several jib parts are labeled with a building part identification at the top chord.

lengths:	jib parts	**1/2/5/6**	= 10,0 m
	jib pars	**3/4**	= 5,0 m

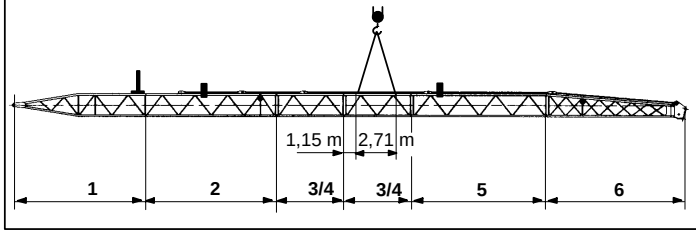
jib 60 m
G = 14,6 t



jib 55 m
G = 13,6 t



jib 50 m
G = 12,8 t



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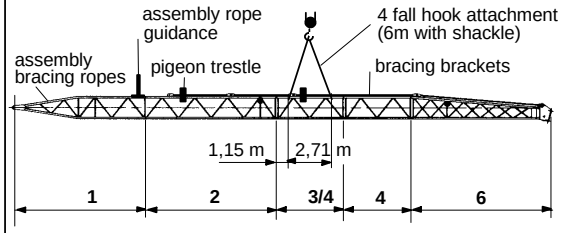
2.6.2 **Suspension plan - jib length 40 m / 30 m**

!

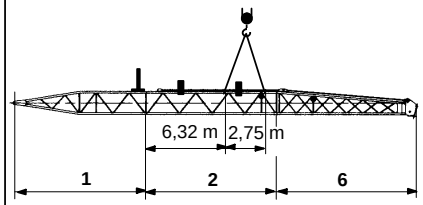
Attention!
The jib must be balanced and hang safely in horizontal position. The suspension points must be labeled, old labels must be removed. There mustn't be any loose pats on the jib.
The several jib parts are labeled with a building part identification at the top chord.

lengths:	jib parts	**1/2/6**	= 10,0 m
	jib parts	**3/4**	= 5,0 m

jib 40 m
G = 10,5 t



jib 30 m
G = 8,1 t



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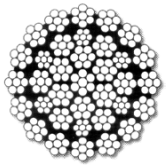
2.7.1.1 **Hoisting rope**

Rope Ø = 28 mm + 4% + 2%	design according to DIN 15020 kind of operation TWG 1 Am
First equipment	**CASAR STARLIFT –** non–twisting, flexible hoisting rope with compressed steel rope core.  **nominal strength = 1960 N/mm²** **calc. breaking strength = 788,1 kN** **min. breaking strength = 607,7 kN** **weight per meter = 3,619 kg**
Design	langs lay rope, left handed, made from blank cable wire. middle space factor = 0,654 middle spinning loss factor = 0,76 middle weight factor = 0,90 total twist number = 245 number of carrying wires in the outer strands is to be judged by the state of wear according to DIN 15020 Bl. 2 / ISO DIS 4309 = **112**

Basic equipment

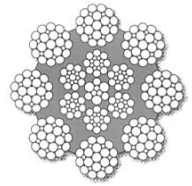
cable lenght	**286 m**	**for crane with:**	**operation 2–fall** **radius 50 m** **tower height 40,5 m**

By lengthening the hook path by 1 tower element (4,5 m) the necessary rope length increases by **4,5 m for operation in 1 fall** and by **9,0 m for operation in 2 falls**

! **Attention!**
A wire rope is a complex machine element.

Conventional rope design frequently doesn't meet the requirements of modern rope drives. Short service life is the result.

2.7.1.2 **Derricking rope**

Rope Ø = 22 mm + 4 % max.	design according to DIN 15020 kind of operation TWG 1 Am
First equipment	**CASAR STRATOPLAST –** cable with 8 strands, made of uncompressed strands (steel rope core).  **nominal strength = 1770 N/mm²** **calc. breaking strength = 434,4 kN** **min. breaking strength = 356,2 kN** **weight per meter = 2,184 kg**
Design	langs lay rope, left handed, made from blank cable wires. middle space factor = 0,617 spinning loss factor = 0,86 weight factor = 0,89 total twist number = 319 Number of carrying wires in outer strands is to be judged by the state of wear according to DIN 15020 Bl. 2 / ISO DIS 4309 = **152**

rope length	**1 x 182 m**	**30 – 60 m radius**

! **Attention!**
A wire rope is a complex machine element.

Conventional rope design frequently doesn't meet the requirements of modern rope drives. Short service life is the result.

2.7.1.3 **Assembly bracing ropes**

Rope Ø = 22 mm + 4% + 2%	design according to DIN 15020 kind of operation TWG 1 Am
First equipment	**CASAR STRATOLIFT –** cable with 8 strands in non–overlapped double parallel construction, made out of uncompressed strands.
	nominal strength = 1770 N/mm² **calc. breaking strength = 451,9 kN** **min. breaking strength = 388,5 kN** **weight per meter = 2,195 kg**
Design	ordinary lay rope, right handed, made of zinced rope wires.
	2 pressed in thimbles DIN 3091 NG 22, bore = Ø 38 mm width of thimble = 33,5 mm
	middle space factor = 0,661 middle spinning loss factor = 0,86 middle weight factor = 0,86 total twist number = 303
	Number of carryig wires in the outer strands is to be judged by the state of wear according to DIN 15020 Bl. 2 / ISO DIS 4309 = **152**

rope length	**2 x 47,0 m**	**30 – 60 m radius**

! **Attention!**
The assembly bracing ropes are used paired. Keep the exact length
Length from center of thimble hole to center of thimble hole = 47,0 m.

! **Attention!**
A wire rope is a complex machine element.

Conventional rope design frequently doesn't meet the requirements of modern rope drives. Short service life is the result.

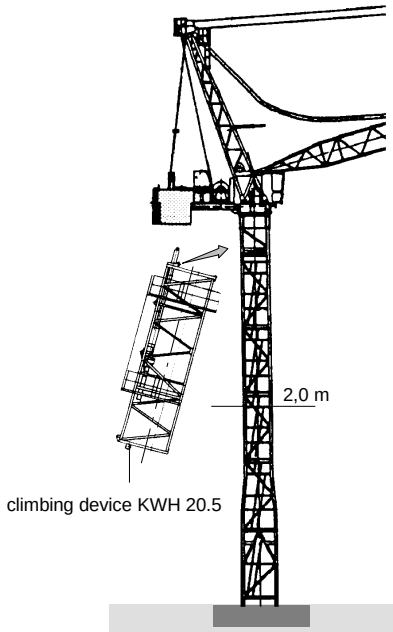
2.8.1 **Insertable exterior climbing device KWH 20.5**

! **Attention!**
The assembly of the climbing device with the WOLFF 320 B is possible with operation in 2 falls.

More details about the climbing device KWH 20.5 see additional equipment, section 12.

Minimum height with stationary erection:
3 tower elements = 13,5 m tower height

Minimum height with travelling erection:
2 tower elements + undercarriage appr. 13,5 m tower height



2.8.1.1 **Table of balancing weights**

* The given balancing weights are the weights of the tower elements or of a load.

** The given radius is measured from the middle of the tower and has to be taken as standard value. An exact balancing will be reached by luffing in and out of the jib with the tower elements or loads given in the table and can be controlled at the locations of the joints of the tower parts by a shiftless separating from one another.

-- balancing not possible (not climbable)

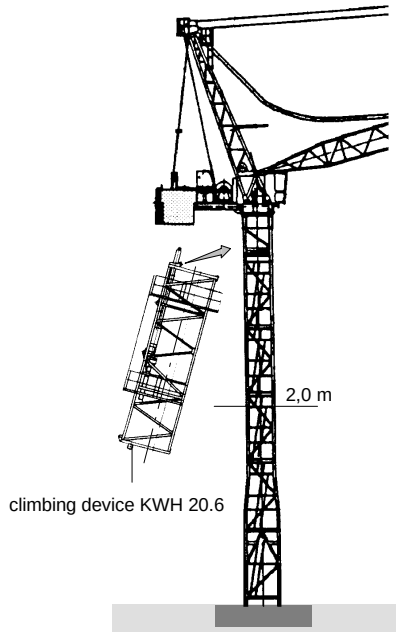
for climbing in	**Jib**					
TV 20.4 tower elements	**30 m**	**40 m**	**50 m**	**55 m**	**60 m**	
with balancing load * TV 20.4 = 2,98 t	** 25,6 m	22,2 m	20,1 m	---	---	
without balancing load	---	---	31,0 m	---	---	

⚠ **Danger!**
While climbing, the slewing part of the crane must be locked in the insertion direction of the tower sections. Until the tower has been repinned fully and in all holes, the balancing must be kept and the slewing part must remain locked. (For details, please see operational manual KWH 20.5).
The climbing device is an auxilliary device for assembly and mustn't stay at the tower crane WOLFF under normal working conditions.

2.8.2 **Insertable exterior climbing device KWH 20.6**

! **Attention!**
The assembly of the climbing device with the WOLFF 320 B is possible with operation in 2 falls.

More details about the climbing device KWH 20.6 see additional equipment, section 12.



Minimum height with stationary erection:
3 tower elements = 13,5 m tower height

Minimum height with travelling erection:
2 tower elements + undercarriage appr. 13,5 m tower height

2.8.2.1 **Table of balancing weights**

* The given balancing weights are the weights of the tower elements or of a load.

** The given radius is measured from the middle of the tower and has to be taken as standard value. An exact balancing will be reached by luffing in and out of the jib with the tower elements or loads given in the table and can be controlled at the locations of the joints of the tower parts by a shiftless separating from one another.

-- balancing not possible

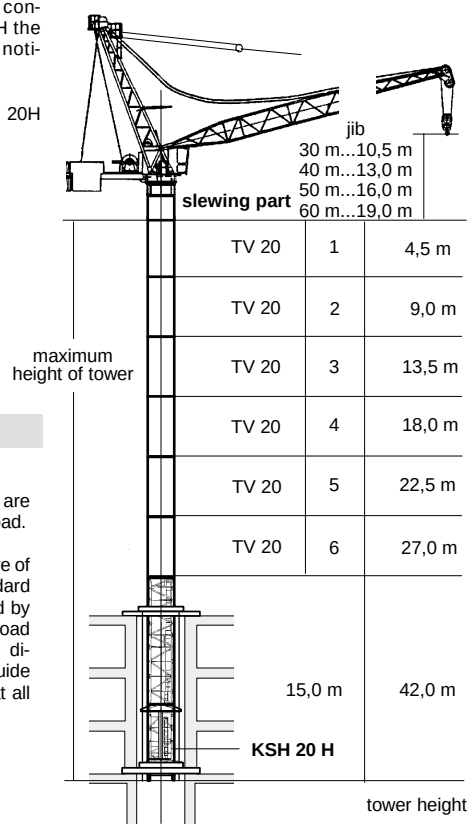
for climbing in	**Jib**					
TV 20.4 tower elements	**30 m**	**40 m**	**50 m**	**55 m**	**60 m**	
with balancing load * TV 20.4 = 2,98 t	** 25,6 m	22,2 m	20,1 m	---	---	
without balancing load	---	---	31,0 m	28,4 m	26,4 m	

Danger!
While climbing, the slewing part of the crane must be locked in the insertion direction of the tower sections. Until the tower has been repinned fully and in all holes, the balancing must be kept and the slewing part must remain locked. (For details, please see operational manual KWH 20.6).
The climbing device is an auxilliary device for assembly and mustn't stay at the tower crane WOLFF under normal working conditions.

2.8.4 **Insertable interior climbing drive KSH 20 H**

For the assembly of the WOLFF 320B in connection with the climbing drive KSH 20H the here shown tower configuration has to be noticed.

More details about the climbing drive KSH 20H see additional equipment, section 12.



2.8.4.1 **Table of balancing weights**

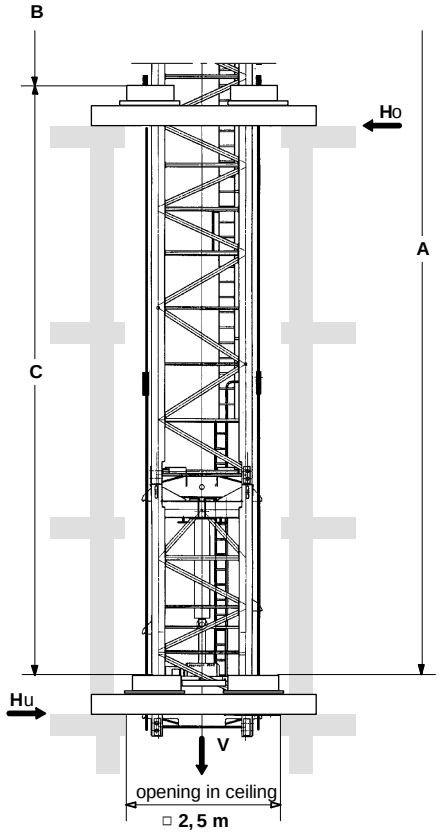
***** The indicated balancing weights are gross-weights of tower elements or load.

****** The indicated radius refers to the centre of the tower and shall be treated as standard value. Exact balancing must achieved by travelling of jib with tower element or load and can checked by measuring the distance between corner posts and guide plates. This distance shall be equal at all four corner posts.

-- balancing not possible.

320 B	**Jib**						
with balancing load *	30 m	40 m	50 m	55 m	60 m		
load = 7,00 t	28,0 m**	--	--	--	--		
TV 20.4 = 2,98 t	--	38,0 m**	--	--	--		
withoaut load	--	--	48,0 m	44,5 m	42,0 m		

2.8.4.2 **Fixed end forces in the building** **for hydraulic interior climbing drive KSH 20 H**



A = tower height

B = A - C

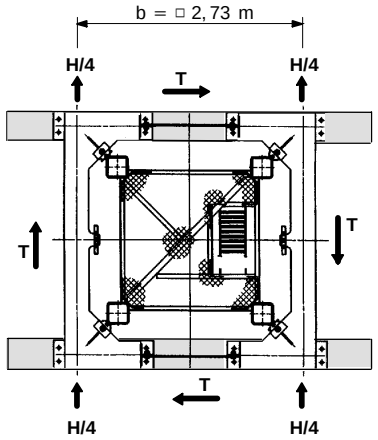
C = distance between guiding frames

C_{min} = 11,0 m
C_{max} = 14,0 m

$Ho = \frac{M}{C} + H$

Hu = Ho - H

$T = \frac{M_D}{2 \times b}$



Fixed end forces in the building (kN)

A (m)	**42,0**				**37,5**				**33,0**				**28,5**			
C (m)	11	12	13	14	11	12	13	14	11	12	13	14	11	12	13	14
V	1497	1497	1497	1497	1453	1453	1453	1453	1422	1422	1422	1422	1391	1391	1391	1391
Ho	731	681	638	602	660	615	576	544	535	495	460	431	506	468	435	407
Hu	602	552	509	473	541	496	457	425	489	449	414	385	462	424	391	363
T	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91

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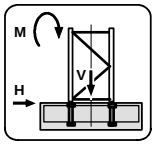
3.1.1 **Foundation loads according DIN**

Inclusive all dynamic factors, theory order II taken into account
for statioary tower crane on a concrete foundation
according to tower configuration without climbing device
M = moment **H** = horizintal force **V** = vertical load
Permanent acting moment = **2370 kNm**

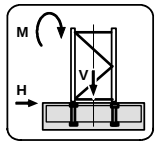


Foundation loads — Jib 30 m - 50 m

Tower height	Crane in service torque moment **493** kNm			Crane out of service			Assembly		
	M	**H**	**V**	**M**	**H**	**V**	**M**	**H**	**V**
[m]	[kNm]	[kN]	[kN]	[kNm]	[kN]	[kN]	[kNm]	[kN]	[kN]
13,5	4436	34	1099	1690	95	990	3216	19	546
18,0	4856	38	1196	2092	102	1018	3321	21	574
22,5	5102	40	1227	2579	110	1046	3441	23	602
27,0	5375	42	1258	3119	119	1075	3575	25	631
31,5	5681	44	1289	3716	127	1103	3726	27	659
36,0	6022	46	1320	4375	136	1131	3894	29	687
40,5	6404	48	1351	5103	144	1159	4080	31	715
45,0	6661	51	1399	5787	155	1199	4230	33	755
49,5	7045	53	1434	6611	165	1231	4431	36	787
54,0	7468	55	1469	7517	175	1263	4652	38	819
58,5	7824	58	1518	8467	186	1307	4868	41	863
Attention! Tower configuration with basis tower BT 29									
65,2	8010	64	1710	9870	203	1400	5580	44	920
69,7	8490	67	1766	11080	214	1446	5850	47	967
74,2	9020	69	1802	12420	226	1493	6140	50	1013
78,7	9600	72	1849	13830	238	1540	6440	52	1069

3.1.2 **Foundation loads according DIN**

Inclusive all dynamic factors, theory order II taken into account
for statioary tower crane on a concrete foundation
according to tower configuration without climbing device
M = moment **H** = horizintal force **V** = vertical load
Permanent acting moment = **1720 kNm**

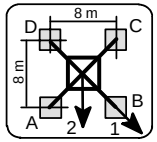


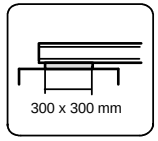
Foundation loads — Jib 55 m - 60 m

Tower height	Crane in service torque moment **493** kNm			Crane out of service			Assembly		
	M	**H**	**V**	**M**	**H**	**V**	**M**	**H**	**V**
[m]	[kNm]	[kN]	[kN]	[kNm]	[kN]	[kN]	[kNm]	[kN]	[kN]
4,5	3993	34	1053	2547	102	956	4497	14	514
9,0	4165	36	1084	2869	109	984	4570	16	546
13,5	4359	38	1115	3228	115	1012	4659	18	577
18,0	4575	40	1147	3627	121	1041	4765	20	608
22,5	4816	42	1178	4115	130	1067	4887	22	639
27,0	5084	44	1209	4661	138	1097	5027	24	670
31,5	5384	46	1240	5270	146	1125	5187	25	701
36,0	5718	48	1271	5946	155	1154	5367	27	732
40,5	6004	50	1315	6618	165	1193	5528	30	776
45,0	6348	53	1350	7385	175	1225	5722	32	811
49,5	6641	55	1399	8164	185	1269	5860	35	860
Attention! Tower configuration with basis tower BT 29									
56,2	6990	56	1512	9500	196	1356	6620	40	877
60,7	7370	59	1558	10640	207	1403	6870	43	923
65,2	7790	61	1604	11900	219	1449	7130	46	969
69,7	8240	63	1651	13230	230	1495	7420	48	1016
74,2	8720	67	1697	14650	241	1542	7730	51	1061

3.2.1.1 **Centralballast and Cornerloads according to DIN 15019**

for a stationary tower crane on a
cross frame without climbing gear



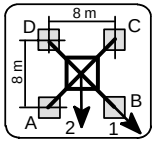


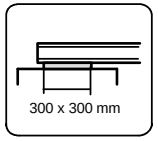
KR 1000 - 8 **Corner distance 8 m x 8 m** **Jib 30 m**

Tower height	Centralballast	Jib position	Crane in service torque moment: **493** kNm Cornerloads				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm Cornerloads				Horizontal force
			A	**B**	**C**	**D**			**A**	**B**	**C**	**D**	
[m]	[t]		[kN]	[kN]	[kN]	[kN]	[kN]		[kN]	[kN]	[kN]	[kN]	[kN]
5,7	40	1	425	749	425	101	35	1	355	488	355	221	73
		2	654	654	196	196		2	449	449	261	261	
10,2	40	1	432	769	432	95	37	1	362	438	362	286	98
		2	671	671	193	193		2	416	416	308	308	
14,7	40	1	439	792	439	86	39	1	369	413	369	326	104
		2	689	689	190	190		2	400	400	338	338	
19,2	40	1	446	816	446	76	41	1	376	385	376	368	110
		2	708	708	184	184		2	382	382	370	370	
23,7	40	1	453	843	453	63	43	1	383	420	383	346	118
		2	729	729	177	177		2	410	410	357	357	
28,2	40	1	460	872	460	48	44	1	390	470	390	310	127
		2	752	752	169	169		2	447	447	334	334	
32,7	40	1	467	904	467	30	46	1	397	528	397	267	135
		2	776	776	158	158		2	490	490	305	305	
37,2	40	1	474	939	474	10	48	1	404	590	404	219	144
		2	803	803	146	146		2	536	536	273	273	
41,7	50	1	507	1003	507	10	50	1	437	682	437	191	152
		2	857	857	156	156		2	610	610	263	263	
46,2	60	1	542	1060	542	25	53	1	472	781	472	164	164
		2	908	908	177	177		2	691	691	254	254	
50,7	75	1	588	1137	588	39	55	1	518	896	518	139	173
		2	976	976	200	200		2	786	786	250	250	
55,2	90	1	633	1217	633	49	58	1	563	1018	563	109	183
		2	1046	1046	221	221		2	885	885	242	242	

3.2.1.2 **Centralballast and Cornerloads according to DIN 15019**

for a stationary tower crane on a
cross frame without climbing gear



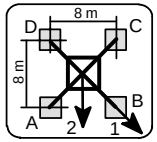


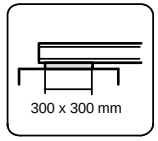
KR 1000 - 8 **Corner distance 8 m x 8 m** **Jib 40 m**

Tower height	Centralballast	Jib position	Crane in service torque moment: **493** kNm Cornerloads				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm Cornerloads				Horizontal force
			A	**B**	**C**	**D**			**A**	**B**	**C**	**D**	
[m]	[t]		[kN]	[kN]	[kN]	[kN]	[kN]		[kN]	[kN]	[kN]	[kN]	[kN]
5,7	45	1	400	754	400	47	38	1	253	449	253	56	101
		2	662	662	223	223		2	409	409	337	337	
10,2	45	1	450	775	450	125	40	1	260	459	260	60	107
		2	679	679	220	220		2	401	401	119	119	
14,7	45	1	457	798	457	115	42	1	267	470	267	64	113
		2	698	698	215	215		2	427	427	346	346	
19,2	45	1	464	824	464	104	43	1	394	483	394	305	119
		2	718	718	209	209		2	457	457	331	331	
23,7	45	1	471	852	471	90	45	1	401	530	401	272	127
		2	740	740	202	202		2	492	492	310	310	
28,2	45	1	478	882	478	74	47	1	408	580	408	236	136
		2	764	764	192	192		2	530	530	286	286	
32,7	45	1	485	915	485	55	49	1	415	635	415	195	144
		2	789	789	181	181		2	571	571	260	260	
37,2	45	1	492	951	492	33	51	1	422	695	422	149	153
		2	817	817	168	168		2	615	615	229	229	
41,7	60	1	537	1028	537	45	53	1	467	805	467	128	161
		2	884	884	189	189		2	706	706	227	227	
46,2	70	1	573	1086	573	59	56	1	503	908	503	97	173
		2	936	936	209	209		2	789	789	216	216	
50,7	85	1	618	1165	618	71	58	1	548	1029	548	68	182
		2	1005	1005	231	231		2	888	888	208	208	

3.2.1.3 **Centralballast and Cornerloads according to DIN 15019**

for a stationary tower crane on a
cross frame without climbing gear



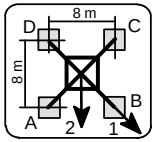


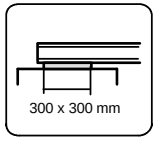
KR 1000 - 8 **Corner distance 8 m x 8 m** **Jib 50 m**

Tower height	Centralballast	Jib position	Crane in service torque moment: **493** kNm Cornerloads				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm Cornerloads				Horizontal force
			A	**B**	**C**	**D**			**A**	**B**	**C**	**D**	
[m]	[t]		[kN]	[kN]	[kN]	[kN]	[kN]		[kN]	[kN]	[kN]	[kN]	[kN]
5,7	35	1	423	727	423	119	40	1	168	595	168	0	110
		2	638	638	208	208		2	443	443	22	22	
10,2	35	1	430	749	430	110	42	1	179	602	179	0	116
		2	656	656	204	204		2	453	453	266	266	
14,7	35	1	437	774	437	100	44	1	189	609	189	0	122
		2	675	675	198	198		2	482	482	252	252	
19,2	35	1	444	801	444	87	46	1	199	618	199	0	128
		2	696	696	192	192		2	513	513	235	235	
23,7	35	1	451	830	451	72	48	1	208	629	208	0	137
		2	719	719	183	183		2	549	549	213	213	
28,2	35	1	458	861	458	55	50	1	388	672	388	105	145
		2	743	743	173	173		2	589	589	188	188	
32,7	40	1	478	908	478	48	52	1	408	742	408	73	154
		2	782	782	174	174		2	644	644	171	171	
37,2	55	1	522	982	522	62	54	1	452	843	452	62	162
		2	848	848	197	197		2	728	728	176	176	
41,7	70	1	567	1061	567	73	56	1	497	949	497	44	170
		2	916	916	217	217		2	817	817	177	177	
46,2	80	1	603	1120	603	85	58	1	533	1045	533	20	182
		2	968	968	237	237		2	895	895	170	170	
50,7	95	1	648	1200	648	97	61	1	572	1168	572	0	191
		2	1038	1038	258	258		2	991	991	165	165	

3.2.1.4 **Centralballast and Cornerloads according to DIN 15019**

for a stationary tower crane on a
cross frame without climbing gear



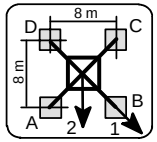


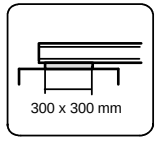
KR 1000 - 8 **Corner distance 8 m x 8 m** **Jib 55 m**

Tower height	Centralballast	Jib position	Crane in service torque moment: **493** kNm Cornerloads				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm Cornerloads				Horizontal force
			A	**B**	**C**	**D**			**A**	**B**	**C**	**D**	
[m]	[t]		[kN]	[kN]	[kN]	[kN]	[kN]		[kN]	[kN]	[kN]	[kN]	[kN]
5,7	55	1	440	771	440	110	35	1	213	716	213	0	116
		2	674	674	207	207		2	539	539	32	32	
10,2	55	1	447	791	447	103	37	1	223	723	223	0	122
		2	690	690	204	204		2	550	550	274	274	
14,7	55	1	454	813	454	95	38	1	234	731	234	0	128
		2	708	708	200	200		2	579	579	259	259	
19,2	55	1	461	838	461	85	40	1	243	740	243	0	134
		2	727	727	195	195		2	611	611	242	242	
23,7	55	1	469	864	468	73	42	1	251	752	251	0	143
		2	748	748	189	189		2	648	648	219	219	
28,2	55	1	476	893	476	58	44	1	441	792	441	90	151
		2	771	771	181	181		2	689	689	192	192	
32,7	55	1	483	924	483	41	46	1	448	851	448	44	160
		2	795	795	171	171		2	733	733	162	162	
37,2	60	1	502	971	502	34	48	1	467	929	467	6	168
		2	833	833	171	171		2	794	794	141	141	
41,7	70	1	537	1029	537	46	51	1	484	1040	484	0	178
		2	885	885	190	190		2	870	870	134	134	
46,2	85	1	583	1102	583	63	53	1	507	1176	507	0	188
		2	950	950	215	215		2	964	964	132	132	
50,7	100	1	631	1174	631	88	56	1	523	1340	523	0	199
		2	1015	1015	247	247		2	1070	1070	122	122	

3.2.1.5 **Centralballast and Cornerloads according to DIN 15019**

for a stationary tower crane on a
cross frame without climbing gear



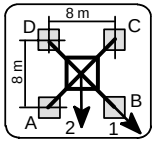


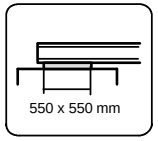
KR 1000 - 8 **Corner distance 8 m x 8 m** **Jib 60 m**

Tower height	Centralballast	Jib position	Crane in service torque moment: **493** kNm Cornerloads				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm Cornerloads				Horizontal force
			A	**B**	**C**	**D**			**A**	**B**	**C**	**D**	
[m]	[t]		[kN]	[kN]	[kN]	[kN]	[kN]		[kN]	[kN]	[kN]	[kN]	[kN]
5,7	75	1	493	817	493	168	37	1	256	839	256	0	122
		2	722	722	263	263		2	635	635	41	41	
10,2	75	1	500	839	500	161	39	1	267	846	267	0	128
		2	739	739	260	260		2	648	648	282	282	
14,7	75	1	507	862	507	152	41	1	277	855	277	0	134
		2	758	758	256	256		2	678	678	266	266	
19,2	75	1	514	887	514	141	43	1	286	865	286	0	140
		2	778	778	250	250		2	710	710	248	248	
23,7	75	1	521	914	521	128	45	1	294	877	294	0	149
		2	799	799	243	243		2	748	748	224	224	
28,2	75	1	528	944	528	112	47	1	493	913	493	73	157
		2	822	822	234	234		2	790	790	196	196	
32,7	75	1	535	976	535	94	49	1	500	974	500	26	166
		2	847	847	223	223		2	835	835	165	165	
37,2	75	1	542	1011	542	73	50	1	481	1068	481	0	174
		2	874	874	210	210		2	885	885	130	130	
41,7	85	1	577	1070	577	84	53	1	490	1188	490	0	185
		2	926	926	228	228		2	962	962	122	122	
46,2	100	1	623	1145	623	100	55	1	513	1325	513	0	194
		2	992	992	253	253		2	1056	1056	119	119	

3.2.2.1 **Centralballast and Cornerloads according to DIN 15019**

for a stationary tower crane on a
cross frame without climbing gear



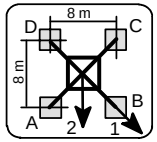


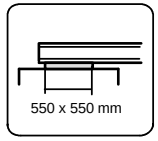
KR 16 - 80 **Corner distance 8 m x 8 m** **Jib 30 m**

Tower height	Centralballast	Jib position	Crane in service torque moment: **493** kNm Cornerloads				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm Cornerloads				Horizontal force
			A	**B**	**C**	**D**			**A**	**B**	**C**	**D**	
[m]	[t]		[kN]	[kN]	[kN]	[kN]	[kN]		[kN]	[kN]	[kN]	[kN]	[kN]
60,3	105	1	692	1309	692	75	63	1	622	1168	622	75	189
		2	1128	1128	256	256		2	1008	1008	236	236	
62,5	105	1	705	1325	705	86	64	1	635	1212	635	59	191
		2	1143	1143	267	267		2	1043	1043	228	228	
67,0	125	1	767	1422	767	112	67	1	697	1363	697	31	202
		2	1230	1230	304	304		2	1168	1168	226	226	
71,5	145	1	828	1523	829	134	69	1	752	1531	752	0	214
		2	1319	1319	338	338		2	1300	1300	217	217	
76,0	165	1	890	1627	890	153	72	1	770	1741	770	0	225
		2	1411	1411	369	369		2	1436	1436	204	204	
80,5	190	1	964	1747	964	181	74	1	805	1967	805	0	236
		2	1518	1518	411	411		2	1590	1590	199	199	
85,0	220	1	1051	1884	1051	218	77	1	857	2210	857	0	247
		2	1640	1640	462	462		2	1762	1762	199	199	

3.2.2.2 **Centralballast and Cornerloads according to DIN 15019**

for a stationary tower crane on a
cross frame without climbing gear



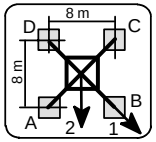


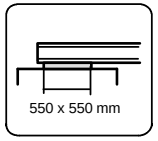
KR 16 - 80 **Corner distance 8 m x 8 m** **Jib 40 m**

Tower height [m]	Centralballast [t]	Jib position	Crane in service torque moment: **493** kNm Cornerloads A [kN]	B [kN]	C [kN]	D [kN]	Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm Cornerloads A [kN]	B [kN]	C [kN]	D [kN]	Horizontal force [kN]
60,3	120	1	735	1352	735	117	66	1	665	1325	665	5	198
		2	1171	1171	298	298		2	1131	1131	198	198	
62,5	120	1	748	1369	748	127	67	1	667	1380	667	0	200
		2	1187	1187	309	309		2	1166	1166	190	190	
67,0	135	1	797	1455	797	139	70	1	669	1571	669	0	211
		2	1262	1262	332	332		2	1283	1283	172	172	
71,5	160	1	871	1570	871	173	72	1	712	1782	712	0	223
		2	1365	1365	378	378		2	1431	1431	171	171	
76,0	190	1	958	1700	958	216	75	1	773	2005	774	0	234
		2	1483	1483	433	433		2	1597	1597	179	179	
80,5	225	1	1057	1847	1057	267	77	1	852	2244	852	0	245
		2	1615	1615	498	498		2	1780	1780	193	193	
85,0	265	1	1168	2010	1169	327	80	1	946	2502	946	0	257
		2	1764	1764	573	573		2	1983	1983	214	214	

3.2.2.3 **Centralballast and Cornerloads according to DIN 15019**

for a stationary tower crane on a
cross frame without climbing gear



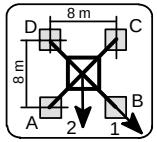


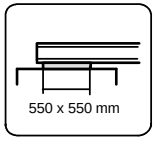
KR 16 - 80 **Corner distance 8 m x 8 m** **Jib 50 m**

Tower height [m]	Centralballast [t]	Jib position	Crane in service torque moment: **493** kNm Cornerloads A [kN]	B [kN]	C [kN]	D [kN]	Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm Cornerloads A [kN]	B [kN]	C [kN]	D [kN]	Horizontal force [kN]
60,3	130	1	765	1390	765	139	68	1	615	1550	615	0	208
		2	1207	1207	323	323		2	1243	1243	147	147	
62,5	135	1	791	1419	791	162	70	1	636	1611	636	0	209
		2	1235	1235	346	346		2	1290	1290	151	151	
67,0	165	1	877	1544	877	210	72	1	708	1813	708	0	220
		2	1349	1349	406	406		2	1448	1448	166	166	
71,5	195	1	964	1673	964	255	75	1	769	2036	770	0	232
		2	1465	1465	463	463		2	1614	1614	174	174	
76,0	235	1	1075	1830	1075	321	77	1	875	2272	875	0	243
		2	1609	1609	542	542		2	1809	1809	202	202	
80,5	270	1	1174	1978	1175	371	80	1	946	2525	947	0	255
		2	1743	1743	606	606		2	1997	1997	212	212	

3.2.2.4 **Centralballast and Cornerloads according to DIN 15019**

for a stationary tower crane on a
cross frame without climbing gear



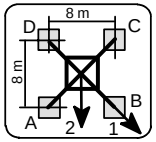


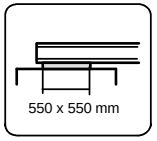
KR 16 - 80 **Corner distance 8 m x 8 m** **Jib 55 m**

Tower height	Centralballast	Jib position	Crane in service torque moment: **493** kNm Cornerloads				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm Cornerloads				Horizontal force
			A	**B**	**C**	**D**			**A**	**B**	**C**	**D**	
[m]	[t]		[kN]	[kN]	[kN]	[kN]	[kN]		[kN]	[kN]	[kN]	[kN]	[kN]
51,3	100	1	641	1188	641	95	58	1	534	1358	534	0	194
		2	1028	1028	255	255		2	1086	1086	126	126	
53,5	105	1	667	1219	667	116	60	1	555	1418	555	0	196
		2	1057	1057	277	277		2	1134	1134	130	130	
58,0	130	1	741	1323	741	160	62	1	611	1603	611	0	207
		2	1152	1152	330	330		2	1273	1273	139	139	
62,5	160	1	828	1441	828	214	65	1	682	1807	683	0	219
		2	1262	1262	394	394		2	1432	1432	154	154	
67,0	195	1	927	1575	927	278	67	1	773	2021	774	0	230
		2	1385	1385	468	468		2	1606	1606	177	177	
71,5	230	1	1026	1712	1026	339	70	1	856	2251	857	0	241
		2	1511	1511	541	541		2	1787	1787	195	195	
76,0	265	1	1125	1852	1125	398	72	1	931	2498	931	0	252
		2	1639	1639	611	611		2	1973	1973	207	207	

3.2.2.5 **Centralballast and Cornerloads according to DIN 15019**

for a stationary tower crane on a
cross frame without climbing gear



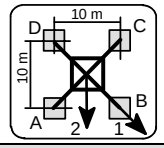


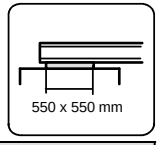
KR 16 - 80 **Corner distance 8 m x 8 m** **Jib 60 m**

Tower height	Centralballast	Jib position	Crane in service torque moment: **493** kNm Cornerloads				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm Cornerloads				Horizontal force
			A	**B**	**C**	**D**			**A**	**B**	**C**	**D**	
[m]	[t]		[kN]	[kN]	[kN]	[kN]	[kN]		[kN]	[kN]	[kN]	[kN]	[kN]
51,3	120	1	694	1244	694	143	60	1	572	1491	572	0	200
		2	1083	1083	304	304		2	1186	1186	131	131	
53,5	125	1	720	1276	720	164	62	1	593	1553	593	0	202
		2	1113	1113	326	326		2	1234	1234	136	136	
58,0	155	1	806	1393	806	219	65	1	671	1744	671	0	213
		2	1221	1221	391	391		2	1388	1388	154	154	
62,5	185	1	893	1513	893	272	67	1	738	1955	739	0	225
		2	1331	1331	454	454		2	1549	1549	167	167	
67,0	220	1	992	1648	992	335	70	1	825	2177	826	0	236
		2	1456	1456	528	528		2	1727	1727	187	187	
71,5	255	1	1091	1786	1091	396	72	1	904	2415	905	0	247
		2	1583	1583	599	599		2	1910	1910	202	202	

3.2.3.1 **Centralballast and Cornerloads according to DIN 15019**

for a stationary tower crane on a
cross frame without climbing gear



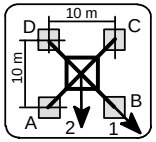


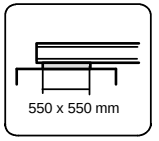
KR 16 - 100 **Corner distance 10 m x 10 m** **Jib 30 m**

Tower height	Centralballast	Jib position	Crane in service torque moment: **493** kNm Cornerloads				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm Cornerloads				Horizontal force
			A	**B**	**C**	**D**			**A**	**B**	**C**	**D**	
[m]	[t]		[kN]	[kN]	[kN]	[kN]	[kN]		[kN]	[kN]	[kN]	[kN]	[kN]
60,3	55	1	572	1065	572	78	63	1	502	939	502	65	189
		2	921	921	223	223		2	811	811	193	193	
62,5	55	1	585	1081	585	90	64	1	515	976	515	54	191
		2	936	936	235	235		2	841	841	189	189	
67,0	65	1	622	1146	622	98	67	1	552	1085	552	19	202
		2	993	993	251	251		2	929	929	175	175	
71,5	80	1	671	1226	671	116	69	1	590	1225	590	0	214
		2	1064	1064	278	278		2	1034	1034	168	168	
76,0	95	1	720	1309	720	131	72	1	604	1393	604	0	225
		2	1137	1137	303	303		2	1143	1143	158	158	
80,5	115	1	782	1408	782	156	74	1	637	1573	637	0	236
		2	1224	1224	339	339		2	1268	1268	155	155	
85,0	140	1	856	1522	856	189	77	1	688	1768	688	0	247
		2	1327	1327	385	385		2	1411	1411	161	161	

3.2.3.2 **Centralballast and Cornerloads according to DIN 15019**

for a stationary tower crane on a
cross frame without climbing gear



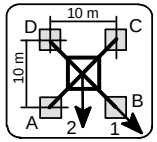


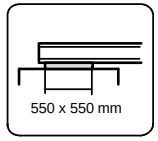
KR 16 - 100 **Corner distance 10 m x 10 m** **Jib 40 m**

Tower height	Centralballast	Jib position	Crane in service torque moment: **493** kNm Cornerloads				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm Cornerloads				Horizontal force
			A	**B**	**C**	**D**			**A**	**B**	**C**	**D**	
[m]	[t]		[kN]	[kN]	[kN]	[kN]	[kN]		[kN]	[kN]	[kN]	[kN]	[kN]
60,3	65	1	602	1096	602	108	66	1	532	1060	532	4	198
		2	951	951	253	253		2	905	905	159	159	
62,5	65	1	616	1112	616	119	67	1	540	1104	540	0	200
		2	967	967	265	265		2	936	936	155	155	
67,0	75	1	652	1178	652	126	70	1	536	1257	536	0	211
		2	1024	1024	280	280		2	1027	1027	138	138	
71,5	95	1	714	1272	714	155	72	1	575	1425	575	0	223
		2	1109	1109	319	319		2	1148	1148	140	140	
76,0	120	1	788	1381	788	194	75	1	634	1604	634	0	234
		2	1208	1208	368	368		2	1285	1285	151	151	
80,5	145	1	862	1494	862	230	77	1	686	1795	687	0	245
		2	1309	1309	415	415		2	1427	1427	157	157	
85,0	175	1	948	1622	949	275	80	1	756	2001	757	0	257
		2	1425	1425	472	472		2	1586	1586	171	171	

3.2.3.3 **Centralballast and Cornerloads according to DIN 15019**

for a stationary tower crane on a
cross frame without climbing gear



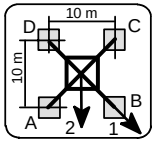


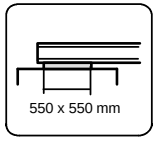
KR 16 - 100 **Corner distance 10 m x 10 m** **Jib 50 m**

Tower height [m]	Centralballast [t]	Jib position	Crane in service torque moment: **493** kNm Cornerloads A [kN]	B [kN]	C [kN]	D [kN]	Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm Cornerloads A [kN]	B [kN]	C [kN]	D [kN]	Horizontal force [kN]
60,3	75	1	632	1132	632	132	68	1	505	1240	505	0	208
		2	986	986	279	279		2	1001	1001	124	124	
62,5	75	1	646	1148	646	143	70	1	507	1288	507	0	209
		2	1001	1001	290	290		2	1031	1031	120	120	
67,0	100	1	720	1253	720	186	72	1	574	1450	574	0	220
		2	1097	1097	342	342		2	1163	1163	137	137	
71,5	125	1	794	1361	794	227	75	1	633	1629	633	0	232
		2	1195	1195	393	393		2	1300	1300	148	148	
76,0	150	1	868	1471	868	264	77	1	687	1817	687	0	243
		2	1294	1294	441	441		2	1441	1441	155	155	
80,5	180	1	954	1597	954	312	80	1	759	2020	759	0	255
		2	1409	1409	500	500		2	1599	1599	170	170	

3.2.3.4 **Centralballast and Cornerloads according to DIN 15019**

for a stationary tower crane on a
cross frame without climbing gear



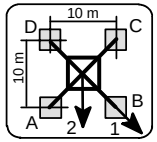


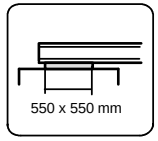
KR 16 - 100 **Corner distance 10 m x 10 m** **Jib 55 m**

Tower height [m]	Centralballast [t]	Jib position	Crane in service torque moment: **493** kNm Cornerloads A [kN]	B [kN]	C [kN]	D [kN]	Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm Cornerloads A [kN]	B [kN]	C [kN]	D [kN]	Horizontal force [kN]
51,3	50	1	521	958	521	84	58	1	429	1086	430	0	194
		2	830	830	212	212		2	870	870	102	102	
53,5	55	1	547	988	547	106	60	1	457	1135	457	0	196
		2	859	859	235	235		2	913	913	111	111	
58,0	75	1	609	1074	609	144	62	1	506	1282	507	0	207
		2	938	938	280	280		2	1027	1027	120	120	
62,5	95	1	670	1161	670	179	65	1	548	1445	548	0	219
		2	1017	1017	323	323		2	1146	1146	124	124	
67,0	120	1	744	1263	744	225	67	1	610	1617	611	0	230
		2	1111	1111	377	377		2	1281	1281	138	138	
71,5	150	1	831	1380	831	282	70	1	692	1801	692	0	241
		2	1219	1219	443	443		2	1433	1433	159	159	
76,0	175	1	905	1487	905	323	72	1	741	1999	741	0	252
		2	1316	1316	493	493		2	1577	1577	163	163	

3.2.3.5 **Centralballast and Cornerloads according to DIN 15019**

for a stationary tower crane on a
cross frame without climbing gear



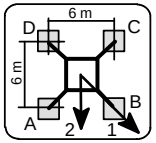


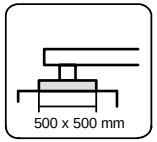
KR 16 - 100 **Corner distance 10 m x 10 m** **Jib 60 m**

Tower height	Centralballast	Jib position	Crane in service torque moment: **493** kNm Cornerloads				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm Cornerloads				Horizontal force
			A	**B**	**C**	**D**			**A**	**B**	**C**	**D**	
[m]	[t]		[kN]	[kN]	[kN]	[kN]	[kN]		[kN]	[kN]	[kN]	[kN]	[kN]
51,3	65	1	561	1002	561	121	60	1	456	1193	456	0	200
		2	873	873	250	250		2	948	948	104	104	
53,5	70	1	587	1032	587	142	62	1	483	1242	484	0	202
		2	902	902	273	273		2	991	991	113	113	
58,0	90	1	649	1118	649	179	65	1	530	1395	530	0	213
		2	981	981	317	317		2	1107	1107	120	120	
62,5	115	1	723	1219	723	227	67	1	594	1564	594	0	225
		2	1074	1074	372	372		2	1241	1241	135	135	
67,0	140	1	797	1322	797	272	70	1	653	1741	653	0	236
		2	1168	1168	426	426		2	1378	1378	146	146	
71,5	170	1	883	1440	883	327	72	1	731	1932	731	0	247
		2	1277	1277	490	490		2	1532	1532	165	165	
76,0	200	1	970	1560	970	380	75	1	802	2137	802	0	258
		2	1387	1387	553	553		2	1690	1690	179	179	

3.3.1.1 **Centralballast and Cornerloads according to DIN 15019**

for a stationary tower crane on a
cross frame element without climbing gear



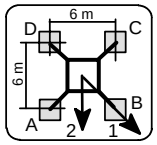


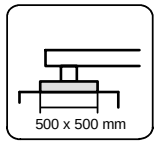
KRE 260.2 **Corner distance 6 m x 6 m** **Jib 30 m**

Tower height	Centralballast	Jib position	Crane in service torque moment: **493** kNm Cornerloads				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm Cornerloads				Horizontal force
			A	**B**	**C**	**D**			**A**	**B**	**C**	**D**	
[m]	[t]		[kN]	[kN]	[kN]	[kN]	[kN]		[kN]	[kN]	[kN]	[kN]	[kN]
8,5	100	1	566	1010	566	123	37	1	496	609	496	383	99
		2	880	880	252	252		2	576	576	416	416	
13,0	100	1	573	1036	573	110	39	1	503	574	503	432	106
		2	900	900	246	246		2	553	553	453	453	
17,5	100	1	580	1065	580	96	41	1	390	550	390	231	112
		2	923	923	238	238		2	528	528	492	492	
22,0	100	1	587	1096	587	78	43	1	397	562	397	233	118
		2	947	947	227	227		2	539	539	496	496	
26,5	100	1	594	1131	594	58	45	1	524	608	524	441	126
		2	974	974	215	215		2	584	584	465	465	
31,0	100	1	601	1169	601	34	47	1	531	679	531	384	135
		2	1003	1003	200	200		2	636	636	427	427	

3.3.1.2 **Centralballast and Cornerloads according to DIN 15019**

for a stationary tower crane on a
cross frame element without climbing gear



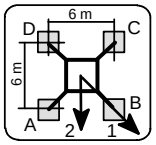


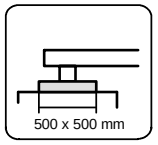
KRE 260.2 **Corner distance 6 m x 6 m** **Jib 40 m**

Tower height	Centralballast	Jib position	Crane in service torque moment: **493** kNm Cornerloads				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm Cornerloads				Horizontal force
			A	**B**	**C**	**D**			**A**	**B**	**C**	**D**	
[m]	[t]		[kN]	[kN]	[kN]	[kN]	[kN]		[kN]	[kN]	[kN]	[kN]	[kN]
8,5	105	1	542	1022	542	61	40	1	394	659	394	129	109
		2	885	885	282	282		2	581	581	206	206	
13,0	105	1	549	1043	549	54	42	1	401	670	401	132	115
		2	907	907	275	275		2	591	591	211	211	
17,5	105	1	598	1068	598	128	44	1	408	682	408	134	121
		2	930	930	265	265		2	603	603	453	453	
22,0	105	1	605	1101	605	109	46	1	415	695	415	135	127
		2	956	956	254	254		2	642	642	428	428	
26,5	105	1	612	1137	612	87	48	1	542	749	542	336	135
		2	984	984	241	241		2	688	688	396	396	
31,0	105	1	619	1177	619	61	50	1	549	817	549	281	144
		2	1014	1014	225	225		2	738	738	360	360	

3.3.1.3 **Centralballast and Cornerloads according to DIN 15019**

for a stationary tower crane on a
cross frame element without climbing gear



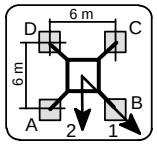


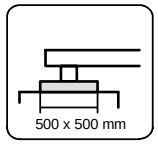
KRE 260.2 **Corner distance 6 m x 6 m** **Jib 50 m**

Tower height	Centralballast	Jib position	Crane in service torque moment: **493** kNm Cornerloads				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm Cornerloads				Horizontal force
			A	**B**	**C**	**D**			**A**	**B**	**C**	**D**	
[m]	[t]		[kN]	[kN]	[kN]	[kN]	[kN]		[kN]	[kN]	[kN]	[kN]	[kN]
8,5	85	1	485	964	485	7	43	1	298	800	298	0	118
		2	835	835	243	243		2	632	632	66	66	
13,0	85	1	546	987	546	105	45	1	308	809	308	0	124
		2	858	858	234	234		2	642	642	70	70	
17,5	85	1	553	1018	553	88	47	1	316	820	316	0	130
		2	882	882	224	224		2	658	658	308	308	
22,0	85	1	486	1054	486	0	48	1	324	833	324	0	136
		2	908	908	212	212		2	699	699	281	281	
26,5	85	1	436	1104	436	0	50	1	497	851	497	144	145
		2	937	937	197	197		2	747	747	247	247	
31,0	90	1	447	1161	447	0	52	1	517	935	517	99	153
		2	981	981	193	193		2	812	812	221	221	

3.3.1.4 **Centralballast and Cornerloads according to DIN 15019**

for a stationary tower crane on a
cross frame element without climbing gear



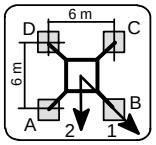


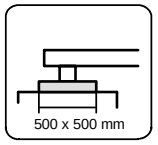
KRE 260.2 **Corner distance 6 m x 6 m** **Jib 55 m**

Tower height	Centralballast	Jib position	Crane in service torque moment: **493** kNm Cornerloads				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm Cornerloads				Horizontal force
			A	**B**	**C**	**D**			**A**	**B**	**C**	**D**	
[m]	[t]		[kN]	[kN]	[kN]	[kN]	[kN]		[kN]	[kN]	[kN]	[kN]	[kN]
8,5	95	1	531	983	531	79	37	1	272	961	272	0	124
		2	851	851	212	212		2	716	716	36	36	
13,0	95	1	538	1010	538	67	39	1	282	971	282	0	130
		2	872	872	205	205		2	727	727	40	40	
17,5	95	1	545	1038	545	53	41	1	290	982	290	0	136
		2	894	894	197	197		2	746	746	275	275	
22,0	95	1	553	1069	553	36	43	1	297	996	297	0	142
		2	918	918	187	187		2	788	788	247	247	
26,5	95	1	560	1103	560	16	45	1	303	1012	303	0	151
		2	944	944	175	175		2	837	837	212	212	
31,0	95	1	480	1154	480	0	47	1	532	1041	532	23	159
		2	973	973	161	161		2	892	892	172	172	

3.3.1.5 **Centralballast and Cornerloads according to DIN 15019**

for a stationary tower crane on a
cross frame element without climbing gear



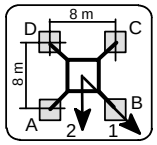


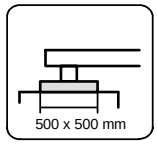
KRE 260.2 **Corner distance 6 m x 6 m** **Jib 60 m**

Tower height	Centralballast	Jib position	Crane in service torque moment: **493** kNm Cornerloads				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm Cornerloads				Horizontal force
			A	**B**	**C**	**D**			**A**	**B**	**C**	**D**	
[m]	[t]		[kN]	[kN]	[kN]	[kN]	[kN]		[kN]	[kN]	[kN]	[kN]	[kN]
8,5	120	1	596	1042	596	151	39	1	320	1125	320	0	130
		2	911	911	281	281		2	839	839	43	43	
13,0	120	1	603	1069	603	138	41	1	329	1135	329	0	136
		2	933	933	274	274		2	850	850	47	47	
17,5	120	1	610	1099	610	122	43	1	337	1148	337	0	142
		2	956	956	265	265		2	873	873	278	278	
22,0	120	1	618	1131	618	104	45	1	344	1163	344	0	148
		2	981	981	254	254		2	915	915	250	250	
26,5	120	1	625	1166	625	83	47	1	350	1180	350	0	157
		2	1008	1008	241	241		2	966	966	213	213	

3.3.2.1 **Centralballast and Cornerloads according to DIN 15019**

for a staionary tower crane on a
cross frame element without climbing gear



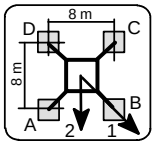


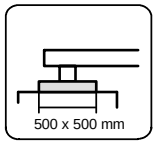
KRE 480 **Corner distance 8 m x 8 m** **Jib 30 m**

Tower height	Centralballast	Jib position	Crane in service torque moment: **493** kNm Cornerloads				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm Cornerloads				Horizontal force
			A	**B**	**C**	**D**			**A**	**B**	**C**	**D**	
[m]	[t]		[kN]	[kN]	[kN]	[kN]	[kN]		[kN]	[kN]	[kN]	[kN]	[kN]
8,5	30	1	422	755	422	89	39	1	352	436	352	268	103
		2	658	658	187	187		2	412	412	293	293	
13,0	30	1	429	777	429	82	41	1	359	412	359	307	110
		2	675	675	184	184		2	396	396	322	322	
17,5	30	1	436	800	436	73	42	1	366	385	366	348	116
		2	693	693	179	179		2	379	379	353	353	
22,0	30	1	443	825	443	61	44	1	373	397	373	350	122
		2	714	714	173	173		2	390	390	357	357	
26,5	30	1	451	853	450	48	46	1	380	444	380	317	130
		2	735	735	166	166		2	425	425	336	336	
31,0	30	1	458	884	458	32	48	1	388	499	388	276	139
		2	759	759	156	156		2	466	466	309	309	
35,5	30	1	465	917	465	13	50	1	395	559	395	230	147
		2	784	784	145	145		2	511	511	278	278	
40,0	40	1	497	978	497	16	52	1	427	649	427	204	156
		2	837	837	156	156		2	584	584	269	269	
44,5	50	1	529	1043	529	15	54	1	459	744	459	173	164
		2	892	892	165	165		2	661	661	257	257	
49,0	65	1	577	1114	577	40	57	1	507	859	507	155	176
		2	957	957	198	198		2	756	756	258	258	
53,5	80	1	623	1193	623	52	59	1	553	978	553	128	185
		2	1026	1026	219	219		2	853	853	252	252	
58,0	95	1	668	1275	668	61	61	1	598	1103	598	93	195
		2	1097	1097	239	239		2	955	955	241	241	

3.3.2.2 **Centralballast and Cornerloads according to DIN 15019**

for a staionary tower crane on a
cross frame element without climbing gear



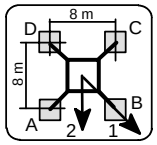


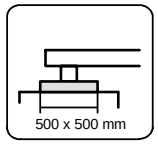
KRE 480 **Corner distance 8 m x 8 m** **Jib 40 m**

Tower height	Centralballast	Jib position	Crane in service torque moment: **493** kNm Cornerloads				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm Cornerloads				Horizontal force
			A	**B**	**C**	**D**			**A**	**B**	**C**	**D**	
[m]	[t]		[kN]	[kN]	[kN]	[kN]	[kN]		[kN]	[kN]	[kN]	[kN]	[kN]
8,5	35	1	440	760	440	120	41	1	250	449	250	51	113
		2	666	666	214	214		2	391	391	109	109	
13,0	35	1	447	783	447	112	43	1	257	459	257	55	119
		2	684	684	210	210		2	412	412	342	342	
17,5	35	1	454	807	454	101	45	1	264	470	264	59	125
		2	704	704	205	205		2	441	441	327	327	
22,0	35	1	461	834	461	89	47	1	391	505	391	277	131
		2	725	725	198	198		2	472	472	311	311	
26,5	35	1	468	862	468	74	49	1	398	554	398	243	139
		2	747	747	189	189		2	508	508	288	288	
31,0	35	1	475	894	475	57	51	1	405	607	405	204	148
		2	771	771	179	179		2	548	548	263	263	
35,5	35	1	482	928	482	37	53	1	412	664	412	160	156
		2	798	798	167	167		2	591	591	234	234	
40,0	45	1	514	991	514	38	55	1	444	757	444	132	165
		2	851	851	178	178		2	665	665	224	224	
44,5	60	1	559	1069	559	49	57	1	489	870	489	108	173
		2	920	920	198	198		2	759	759	220	220	
49,0	75	1	607	1141	607	73	60	1	537	989	537	86	185
		2	985	985	230	230		2	857	857	218	218	
53,5	90	1	653	1222	653	84	62	1	583	1114	583	52	194
		2	1055	1055	251	251		2	958	958	208	208	
58,0	110	1	711	1318	711	104	64	1	641	1258	641	24	204
		2	1140	1140	282	282		2	1077	1077	205	205	

3.3.2.3 **Centralballast and Cornerloads according to DIN 15019**

for a staionary tower crane on a
cross frame element without climbing gear



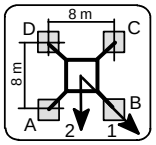


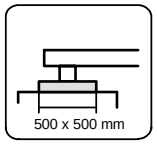
KRE 480 **Corner distance 8 m x 8 m** **Jib 50 m**

Tower height	Centralballast	Jib position	Crane in service torque moment: **493** kNm Cornerloads				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm Cornerloads				Horizontal force
			A	**B**	**C**	**D**			**A**	**B**	**C**	**D**	
[m]	[t]		[kN]	[kN]	[kN]	[kN]	[kN]		[kN]	[kN]	[kN]	[kN]	[kN]
8,5	30	1	432	747	432	118	44	1	185	600	185	0	122
		2	655	655	210	210		2	455	455	30	30	
13,0	30	1	440	770	440	109	46	1	196	607	196	0	128
		2	673	673	206	206		2	479	479	260	260	
17,5	30	1	447	796	447	97	48	1	206	615	206	0	134
		2	694	694	200	200		2	509	509	245	245	
22,0	30	1	454	823	454	84	50	1	215	625	215	0	140
		2	715	715	192	192		2	541	541	227	227	
26,5	30	1	461	853	461	68	52	1	391	657	391	125	149
		2	738	738	183	183		2	579	579	203	203	
31,0	30	1	468	886	468	50	54	1	398	712	398	84	157
		2	763	763	172	172		2	620	620	176	176	
35,5	40	1	500	946	500	54	55	1	430	798	430	62	166
		2	816	816	184	184		2	690	690	170	170	
40,0	55	1	544	1022	544	66	57	1	474	901	474	48	174
		2	882	882	206	206		2	776	776	173	173	
44,5	70	1	589	1102	589	76	59	1	519	1011	519	27	182
		2	952	952	226	226		2	867	867	171	171	
49,0	85	1	637	1176	637	99	62	1	567	1123	567	12	194
		2	1018	1018	257	257		2	960	960	174	174	
53,5	100	1	683	1257	683	108	64	1	588	1275	588	0	203
		2	1089	1089	277	277		2	1064	1064	162	162	

3.3.2.4 **Centralballast and Cornerloads according to DIN 15019**

for a staionary tower crane on a
cross frame element without climbing gear



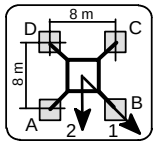


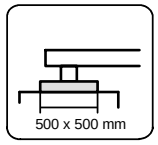
KRE 480 **Corner distance 8 m x 8 m** **Jib 55 m**

Tower height	Centralballast	Jib position	Crane in service torque moment: **493** kNm Cornerloads				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm Cornerloads				Horizontal force
			A	**B**	**C**	**D**			**A**	**B**	**C**	**D**	
[m]	[t]		[kN]	[kN]	[kN]	[kN]	[kN]		[kN]	[kN]	[kN]	[kN]	[kN]
8,5	45	1	437	777	437	98	38	1	205	721	205	0	128
		2	677	677	197	197		2	537	537	27	27	
13,0	45	1	445	798	445	91	40	1	215	728	215	0	134
		2	695	695	194	194		2	563	563	256	256	
17,5	45	1	452	821	452	82	42	1	225	737	225	0	140
		2	713	713	190	190		2	594	594	239	239	
22,0	45	1	459	846	459	71	44	1	234	747	234	0	146
		2	733	733	184	184		2	627	627	221	221	
26,5	45	1	466	874	466	58	46	1	431	763	431	98	155
		2	754	754	177	177		2	666	666	196	196	
31,0	45	1	473	904	473	42	48	1	438	820	438	55	163
		2	777	777	168	168		2	708	708	167	167	
35,5	45	1	480	936	480	24	50	1	445	883	445	7	172
		2	802	802	157	157		2	754	754	135	135	
40,0	60	1	524	1009	524	40	52	1	481	997	481	0	180
		2	867	867	182	182		2	842	842	137	137	
44,5	75	1	572	1081	572	63	54	1	513	1122	513	0	190
		2	932	932	212	212		2	934	934	140	140	
49,0	90	1	617	1156	617	79	57	1	525	1281	525	0	200
		2	998	998	237	237		2	1035	1035	129	129	

3.3.2.5 **Centralballast and Cornerloads according to DIN 15019**

for a stationary tower crane on a
cross frame element without climbing gear



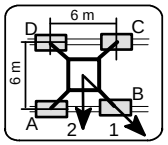


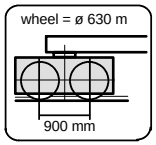
KRE 480 **Corner distance 8 m x 8 m** **Jib 60 m**

Tower height	Centralballast	Jib position	Crane in service torque moment: **493** kNm Cornerloads				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm Cornerloads				Horizontal force
			A	**B**	**C**	**D**			**A**	**B**	**C**	**D**	
[m]	[t]		[kN]	[kN]	[kN]	[kN]	[kN]		[kN]	[kN]	[kN]	[kN]	[kN]
8,5	65	1	490	824	490	156	41	1	248	844	248	0	134
		2	726	726	254	254		2	634	634	36	36	
13,0	65	1	497	846	497	148	43	1	259	852	259	0	140
		2	744	744	250	250		2	661	661	263	263	
17,5	65	1	504	870	504	138	45	1	268	861	268	0	146
		2	763	763	245	245		2	693	693	246	246	
22,0	65	1	511	897	511	126	46	1	277	872	277	0	152
		2	784	784	239	239		2	726	726	226	226	
26,5	65	1	518	925	518	112	48	1	284	885	284	0	161
		2	806	806	231	231		2	766	766	200	200	
31,0	65	1	525	956	525	95	50	1	490	942	490	38	169
		2	830	830	221	221		2	810	810	171	171	
35,5	65	1	532	989	532	76	52	1	486	1018	486	0	178
		2	855	855	210	210		2	857	857	137	137	
40,0	75	1	564	1050	564	79	54	1	487	1144	487	0	186
		2	908	908	221	221		2	934	934	125	125	
44,5	85	1	599	1111	599	88	57	1	493	1272	493	0	197
		2	961	961	238	238		2	1014	1014	115	115	
49,0	110	1	670	1212	670	128	59	1	562	1416	562	0	206
		2	1053	1053	287	287		2	1136	1136	134	134	

3.4.1.1 **Centralballast and Cornerloads acc. to DIN 15019**

for a travelling tower crane on
undercarriage without climbing gear



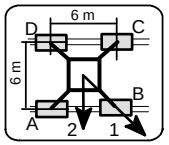


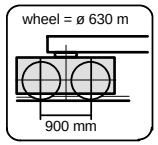
UW 260.3 **Corner distance 6 m x 6 m** **Jib 30 m**

Tower height	Centralballast	Jib position	Crane in service torque moment: **493** kNm Cornerloads				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm Cornerloads				Horizontal force
			A	**B**	**C**	**D**			**A**	**B**	**C**	**D**	
[m]	[t]		[kN]	[kN]	[kN]	[kN]	[kN]		[kN]	[kN]	[kN]	[kN]	[kN]
9,0	100	1	582	1028	582	135	39	1	512	619	512	404	99
		2	897	897	266	266		2	588	588	435	435	
13,5	100	1	589	1055	589	123	41	1	519	584	519	453	106
		2	918	918	259	259		2	565	565	472	472	
18,0	100	1	596	1084	596	107	43	1	406	566	406	246	112
		2	941	941	250	250		2	539	539	512	512	
22,5	100	1	603	1117	603	89	45	1	413	578	413	248	120
		2	966	966	239	239		2	562	562	503	503	

3.4.1.2 **Centralballast and Cornerloads acc. to DIN 15019**

for a travelling tower crane on undercarriage without climbing gear



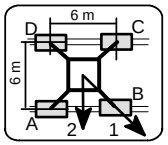


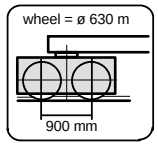
UW 260.3 **Corner distance 6 m x 6 m** **Jib 40 m**

Tower height [m]	Centralballast [t]	Jib position	Crane in service torque moment: **493** kNm Cornerloads A [kN]	B [kN]	C [kN]	D [kN]	Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm Cornerloads A [kN]	B [kN]	C [kN]	D [kN]	Horizontal force [kN]
9,0	105	1	557	1039	557	75	42	1	409	675	409	144	109
		2	903	903	296	296		2	597	597	222	222	
13,5	105	1	564	1061	564	67	44	1	416	686	416	147	115
		2	925	925	288	288		2	607	607	226	226	
18,0	105	1	613	1088	613	139	46	1	423	698	423	149	121
		2	949	949	278	278		2	622	622	465	465	
22,5	105	1	621	1122	621	119	48	1	551	713	551	388	129
		2	975	975	266	266		2	665	665	436	436	

3.4.1.3 **Centralballast and Cornerloads acc. to DIN 15019**

for a travelling tower crane on undercarriage without climbing gear



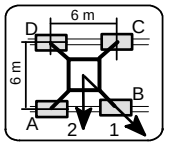


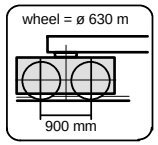
UW 260.3 **Corner distance 6 m x 6 m** **Jib 50 m**

Tower height [m]	Centralballast [t]	Jib position	Crane in service torque moment: **493** kNm Cornerloads A [kN]	B [kN]	C [kN]	D [kN]	Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm Cornerloads A [kN]	B [kN]	C [kN]	D [kN]	Horizontal force [kN]
9,0	85	1	501	981	501	21	44	1	313	816	313	15	118
		2	852	852	256	256		2	648	648	81	81	
13,5	85	1	561	1006	561	117	46	1	322	826	322	15	124
		2	876	876	247	247		2	658	658	85	85	
18,0	85	1	503	1038	503	15	48	1	331	837	331	15	130
		2	901	901	236	236		2	678	678	319	319	
22,5	85	1	498	1078	498	15	51	1	339	850	339	15	138
		2	928	928	223	223		2	722	722	289	289	

3.4.1.4 **Centralballast and Cornerloads acc. to DIN 15019**

for a travelling tower crane on undercarriage without climbing gear



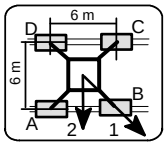


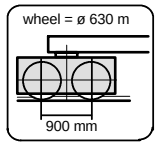
UW 260.3 **Corner distance 6 m x 6 m** **Jib 55 m**

Tower height [m]	Centralballast [t]	Jib position	Crane in service torque moment: **493** kNm Cornerloads A [kN]	B [kN]	C [kN]	D [kN]	Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm Cornerloads A [kN]	B [kN]	C [kN]	D [kN]	Horizontal force [kN]
9,0	95	1	547	1002	547	92	38	1	287	977	287	15	124
		2	868	868	225	225		2	732	732	52	52	
13,5	95	1	554	1028	554	80	41	1	297	987	297	15	130
		2	889	889	218	218		2	743	743	55	55	
18,0	95	1	561	1057	561	64	43	1	305	999	305	15	136
		2	912	912	210	210		2	766	766	286	286	
22,5	95	1	568	1089	568	47	45	1	312	1013	312	15	145
		2	937	937	199	199		2	811	811	255	255	

3.4.1.5 **Centralballast and Cornerloads acc. to DIN 15019**

for a travelling tower crane on undercarriage without climbing gear



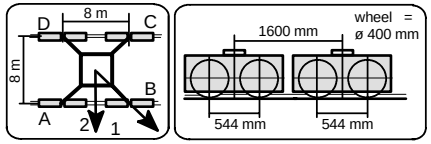


UW 260.3 **Corner distance 6 m x 6 m** **Jib 60 m**

Tower height [m]	Centralballast [t]	Jib position	Crane in service torque moment: **493** kNm Cornerloads A [kN]	B [kN]	C [kN]	D [kN]	Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm Cornerloads A [kN]	B [kN]	C [kN]	D [kN]	Horizontal force [kN]
9,0	120	1	612	1060	612	164	41	1	335	1142	335	15	130
		2	929	929	295	295		2	855	855	58	58	
13,5	120	1	619	1088	619	150	43	1	344	1152	344	15	136
		2	950	950	287	287		2	866	866	62	62	
18,0	120	1	626	1118	626	134	45	1	352	1165	352	15	142
		2	974	974	278	278		2	892	892	290	290	

3.4.2.1 **Centralballast and Cornerloads acc. to DIN 15019**

for a travelling tower crane on undercarriage without climbing gear

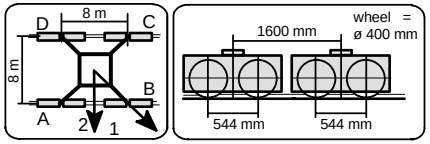


UW 480 **Corner distance 8 m x 8 m** **Jib 30 m**

Tower height	Centralballast	Jib position	Crane in service torque moment: **493** kNm Cornerloads				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm Cornerloads				Horizontal force
			A	**B**	**C**	**D**			**A**	**B**	**C**	**D**	
[m]	[t]		[kN]	[kN]	[kN]	[kN]	[kN]		[kN]	[kN]	[kN]	[kN]	[kN]
9,5	30	1	447	784	447	110	41	1	377	453	377	301	103
		2	685	685	209	209		2	431	431	323	323	
14,0	30	1	454	806	454	103	43	1	384	428	384	340	110
		2	703	703	206	206		2	415	415	353	353	
18,5	30	1	461	830	461	93	46	1	391	401	391	382	116
		2	722	722	201	201		2	398	398	385	385	
23,0	30	1	468	856	468	80	48	1	398	435	398	362	124
		2	743	743	194	194		2	424	424	373	373	
27,5	30	1	475	885	475	66	50	1	405	483	405	328	133
		2	765	765	186	186		2	460	460	351	351	
32,0	30	1	483	917	483	49	52	1	413	540	413	286	141
		2	789	789	176	176		2	502	502	323	323	
36,5	30	1	490	951	490	28	54	1	420	600	420	239	150
		2	816	816	163	163		2	548	548	292	292	
41,0	40	1	522	1014	522	30	57	1	452	691	452	212	158
		2	870	870	174	174		2	621	621	282	282	
45,5	55	1	566	1093	566	40	59	1	496	800	496	193	166
		2	939	939	194	194		2	711	711	282	282	
50,0	70	1	615	1166	615	63	62	1	545	916	545	173	178
		2	1004	1004	225	225		2	807	807	282	282	
54,5	85	1	660	1247	660	73	65	1	590	1036	590	144	188
		2	1075	1075	245	245		2	906	906	275	275	

3.4.2.2 **Centralballast and Cornerloads acc. to DIN 15019**

for a travelling tower crane on undercarriage without climbing gear

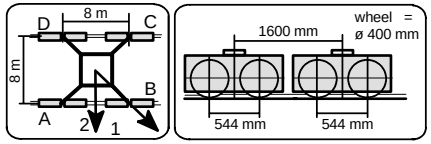


UW 480 **Corner distance 8 m x 8 m** **Jib 40 m**

Tower height	Centralballast	Jib position	Crane in service torque moment: **493** kNm Cornerloads				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm Cornerloads				Horizontal force
			A	**B**	**C**	**D**			**A**	**B**	**C**	**D**	
[m]	[t]		[kN]	[kN]	[kN]	[kN]	[kN]		[kN]	[kN]	[kN]	[kN]	[kN]
9,5	35	1	465	789	465	141	44	1	275	474	275	75	113
		2	694	694	236	236		2	416	416	134	134	
14,0	35	1	472	812	472	132	46	1	282	485	282	79	119
		2	713	713	231	231		2	443	443	361	361	
18,5	35	1	479	837	479	121	48	1	409	498	409	321	125
		2	732	732	226	226		2	472	472	346	346	
23,0	35	1	486	865	486	107	51	1	416	543	416	289	133
		2	754	754	218	218		2	506	506	326	326	
27,5	35	1	493	895	493	92	53	1	423	593	423	254	142
		2	777	777	209	209		2	543	543	303	303	
32,0	35	1	500	927	500	73	55	1	430	646	430	214	150
		2	802	802	198	198		2	583	583	277	277	
36,5	35	1	507	963	507	52	57	1	437	705	437	170	159
		2	829	829	185	185		2	627	627	248	248	
41,0	50	1	552	1039	552	65	59	1	482	812	482	152	167
		2	896	896	207	207		2	716	716	248	248	
45,5	65	1	597	1120	597	73	62	1	526	927	526	126	176
		2	966	966	227	227		2	810	810	243	243	
50,0	80	1	645	1194	645	96	65	1	575	1047	575	103	187
		2	1033	1033	257	257		2	909	909	241	241	
54,5	95	1	690	1276	690	105	68	1	620	1173	620	67	197
		2	1105	1105	276	276		2	1011	1011	229	229	

3.4.2.3 **Centralballast and Cornerloads acc. to DIN 15019**

for a travelling tower crane on undercarriage without climbing gear

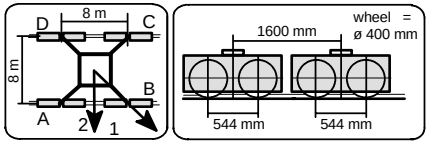


UW 480 **Corner distance 8 m x 8 m** **Jib 50 m**

Tower height [m]	Centralballast [t]	Jib position	Crane in service torque moment: **493** kNm Cornerloads A [kN]	B [kN]	C [kN]	D [kN]	Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm Cornerloads A [kN]	B [kN]	C [kN]	D [kN]	Horizontal force [kN]
9,5	30	1	457	776	457	139	47	1	209	626	209	24	122
		2	683	683	232	232		2	481	481	294	294	
14,0	30	1	464	800	464	129	49	1	220	633	220	24	128
		2	702	702	227	227		2	509	509	280	280	
18,5	30	1	472	826	472	117	51	1	230	642	230	24	134
		2	722	722	221	221		2	539	539	264	264	
23,0	30	1	479	855	479	102	53	1	239	652	239	24	142
		2	745	745	213	213		2	575	575	242	242	
27,5	30	1	486	886	486	86	55	1	416	696	416	136	151
		2	769	769	203	203		2	614	614	218	218	
32,0	30	1	493	919	493	66	58	1	423	752	423	94	159
		2	794	794	191	191		2	656	656	190	190	
36,5	45	1	537	994	537	81	60	1	467	851	467	84	168
		2	860	860	215	215		2	739	739	196	196	
41,0	60	1	582	1071	582	93	62	1	512	956	512	68	176
		2	928	928	236	236		2	826	826	198	198	
45,5	75	1	627	1153	626	100	64	1	557	1066	556	47	185
		2	999	999	254	254		2	917	917	196	196	
50,0	90	1	675	1228	675	122	67	1	605	1180	605	30	196
		2	1066	1066	284	284		2	1011	1011	198	198	
54,5	105	1	720	1312	720	129	70	1	615	1347	615	24	206
		2	1139	1139	302	302		2	1118	1118	183	183	

3.4.2.4 **Centralballast and Cornerloads acc. to DIN 15019**

for a travelling tower crane on undercarriage without climbing gear

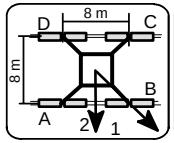


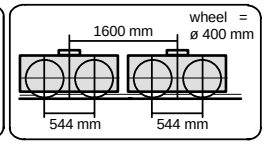
UW 480 **Corner distance 8 m x 8 m** **Jib 55 m**

Tower height [m]	Centralballast [t]	Jib position	Crane in service torque moment: **493** kNm Cornerloads A [kN]	B [kN]	C [kN]	D [kN]	Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm Cornerloads A [kN]	B [kN]	C [kN]	D [kN]	Horizontal force [kN]
9,5	45	1	462	806	462	119	41	1	229	747	229	24	128
		2	705	705	220	220		2	565	565	290	290	
14,0	45	1	469	827	469	111	43	1	239	755	239	24	134
		2	723	723	216	216		2	594	594	275	275	
18,5	45	1	477	851	477	102	45	1	249	764	249	24	140
		2	742	742	212	212		2	625	625	258	258	
23,0	45	1	484	877	484	90	48	1	258	774	258	24	149
		2	762	762	205	205		2	661	661	236	236	
27,5	45	1	491	906	491	76	50	1	456	802	456	109	157
		2	784	784	197	197		2	701	701	211	211	
32,0	45	1	498	936	498	59	52	1	463	860	463	65	165
		2	808	808	188	188		2	744	744	182	182	
36,5	50	1	517	983	517	52	54	1	482	936	482	28	174
		2	846	846	188	188		2	803	803	161	161	
41,0	65	1	562	1057	562	67	56	1	513	1056	513	24	182
		2	912	912	212	212		2	892	892	162	162	
45,5	80	1	609	1131	609	88	59	1	545	1184	545	24	193
		2	978	978	241	241		2	984	984	164	164	
50,0	95	1	655	1207	655	102	62	1	552	1350	552	24	202
		2	1046	1046	264	264		2	1089	1089	151	151	

3.4.2.5 **Centralballast and Cornerloads acc. to DIN 15019**

for a travelling tower crane on undercarriage without climbing gear





UW 480 **Corner distance 8 m x 8 m** **Jib 60 m**

Tower height	Centralballast	Jib position	Crane in service torque moment: **493** kNm Cornerloads				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm Cornerloads				Horizontal force
			A	**B**	**C**	**D**			**A**	**B**	**C**	**D**	
[m]	[t]		[kN]	[kN]	[kN]	[kN]	[kN]		[kN]	[kN]	[kN]	[kN]	[kN]
9,5	65	1	515	853	515	177	43	1	272	871	272	24	134
		2	754	754	276	276		2	663	663	297	297	
14,0	65	1	522	876	522	168	45	1	283	878	283	24	140
		2	772	772	272	272		2	692	692	282	282	
18,5	65	1	529	901	529	157	48	1	292	888	292	24	146
		2	792	792	266	266		2	724	724	264	264	
23,0	65	1	536	928	536	145	50	1	300	899	300	24	155
		2	813	813	259	259		2	761	761	241	241	
27,5	65	1	543	957	543	130	52	1	508	923	508	93	163
		2	836	836	251	251		2	802	802	215	215	
32,0	65	1	550	989	550	112	54	1	515	983	515	48	172
		2	860	860	240	240		2	846	846	185	185	
36,5	65	1	557	1023	557	91	57	1	495	1075	495	24	180
		2	887	887	228	228		2	894	894	151	151	
41,0	75	1	589	1086	589	93	59	1	495	1204	495	24	189
		2	941	941	238	238		2	971	971	137	137	
45,5	90	1	637	1161	637	113	62	1	524	1334	524	24	199
		2	1007	1007	266	266		2	1065	1065	139	139	