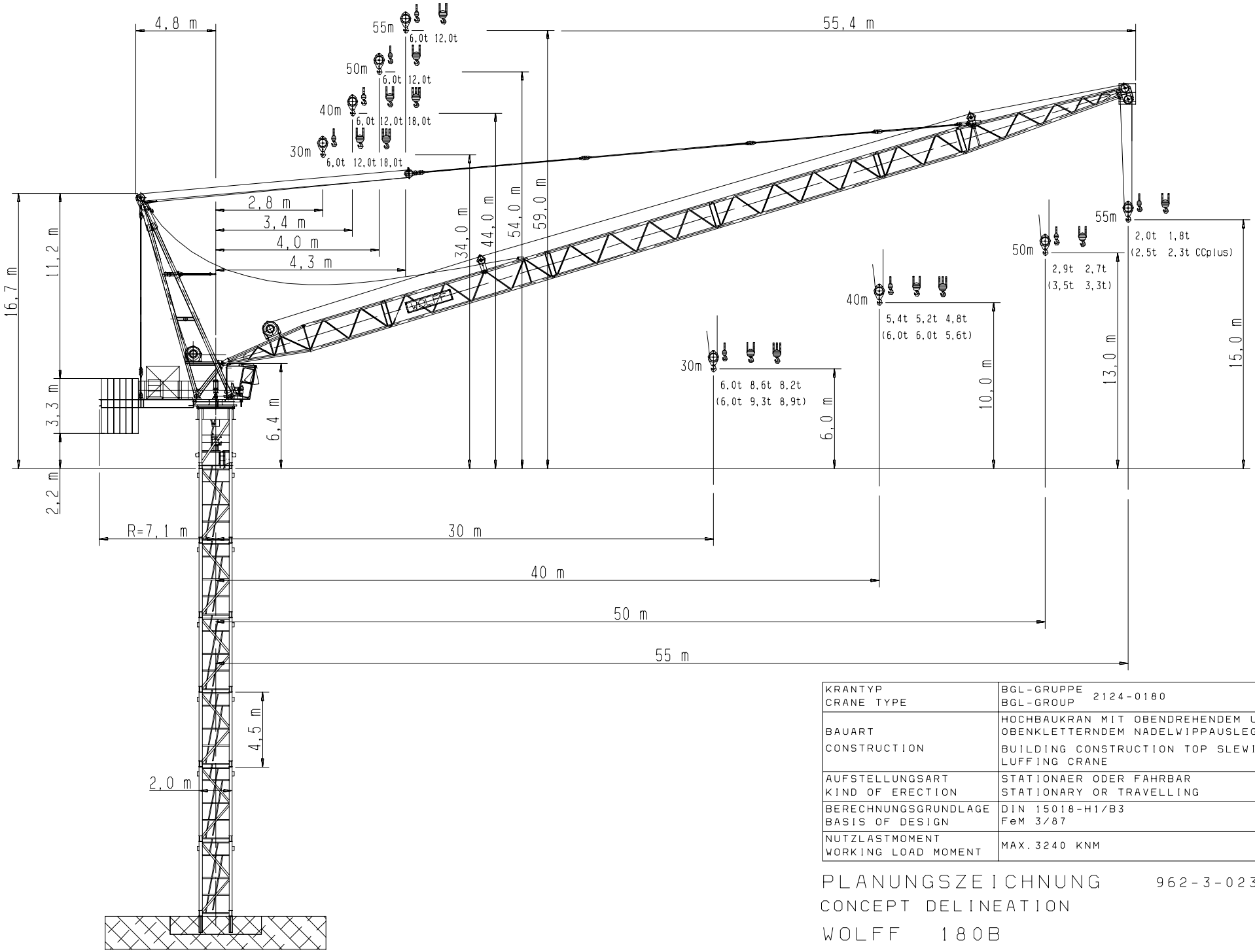


KRANTYP CRANE TYPE	BGL-GRUPPE BGL-GROUP 2124-0180
BAUART CONSTRUCTION	HOCHBAUKRAN MIT OBENDREHENDEM UND OBENKLETTERNDEM NADELWIPPAUSLEGER BUILDING CONSTRUCTION TOP SLEWING LUFFING CRANE
AUFSTELLUNGSART KIND OF ERECTION	STATIONAER ODER FAHRBAR STATIONARY OR TRAVELLING
BERECHNUNGSGRUNDLAGE BASIS OF DESIGN	DIN 15018-H1/B3 FeM 3/87
NUTZLASTMOMENT WORKING LOAD MOMENT	MAX. 3240 KNM

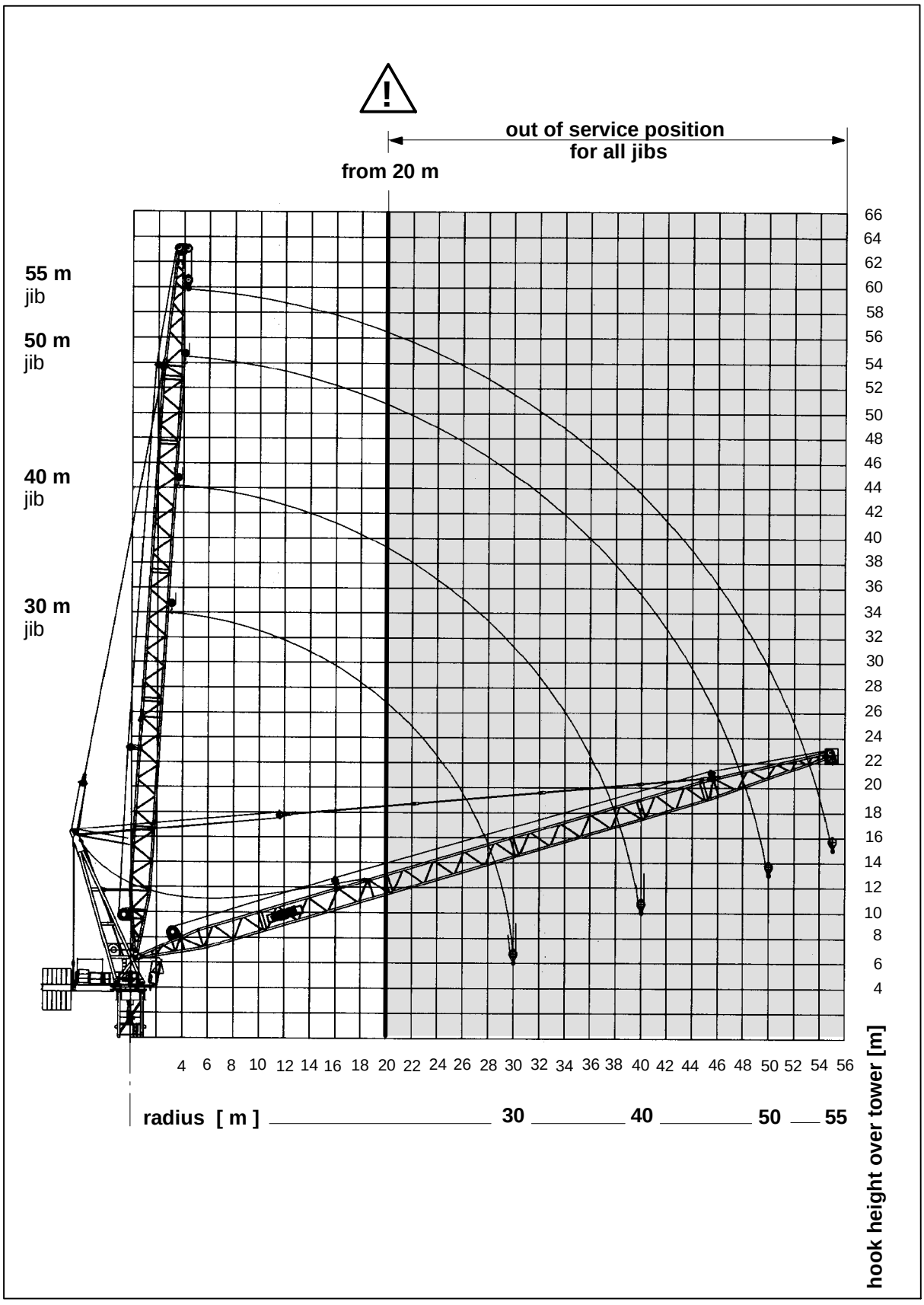
PLANUNGSZEICHNUNG

962-3-023133

CONCEPT DELINEATION

WOLFF 180B

2.1.2 **Hook positions**



2.2.1.1 **Load capacity table**

radius [m]			25	30	35	40	45	50	55
length of jib [m]									
55									
50									
40	3,4 – 17,0	**18,0**	10,6	8,1	6,2	**4,8**			
30	2,8 – 18,0		11,1	**8,2**					

load capacity [t]

radius [m]			25	30	35	40	45	50	55
length of jib [m]									
55	4,3 – 20,0		8,8	6,7	5,1	4,0	3,1	2,4	**1,8**
50	4,0 – 21,0		9,4	7,2	5,6	4,4	3,5	**2,7**	
40	3,4 – 23,0	**12,0**	10,7	8,3	6,5	**5,2**			
30	2,8 – 24,0		11,3	**8,6**					

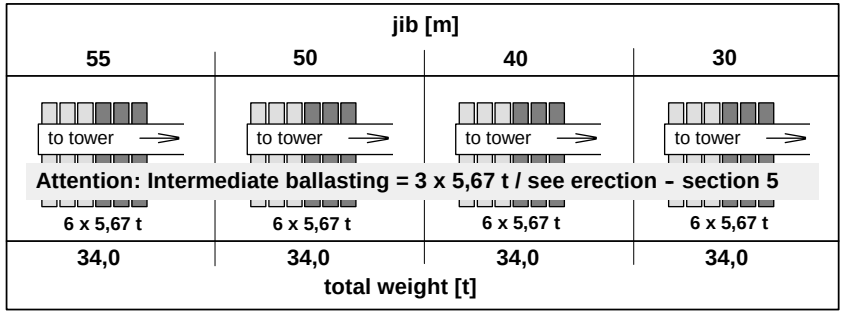
load capacity [t]

radius [m]			25	30	35	40	45	50	55
length of jib [m]									
55	4,5 – 32,0		6,0	6,0	5,2	4,1	3,2	2,6	**2,0**
50	4,2 – 34,0		6,0	6,0	5,7	4,6	3,6	**2,9**	
40	3,6 – 37,0	**6,0**	6,0	6,0	6,0	**5,4**			
30	3,0 – 30,0		6,0	**6,0**					

load capacity [t]

The load capacities refer to a height of tower of 45,0 m. With greater tower heights the safe working load will be minimized by the additional weight of the hoisting cable (with 3 fall operation = 6,09 kg per meter hook path, with 2 fall operation = 4,06 kg per meter hook path, with 1 fall operation = 2,03 kg per meter hook path).

Arrangement of counterweights **W 1260 FU**



2.2.1.2 **Load capacity table**

radius [m]			25	30	35	40	45	50	55
length of jib [m]									
55									
50									
40	3,4 – 17,0	**18,0**	11,1	8,7	6,9	**5,6**			
30	2,8 – 18,0		11,6	**8,9**					

load capacity [t]

radius [m]			25	30	35	40	45	50	55
length of jib [m]									
55	4,3 – 21,0		9,5	7,3	5,7	4,5	3,6	2,9	**2,3**
50	4,0 – 22,0		10,1	7,9	6,2	5,0	4,1	**3,3**	
40	3,4 – 24,0	**12,0**	11,4	9,0	7,3	**6,0**			
30	2,8 – 25,0		12,0	**9,3**					

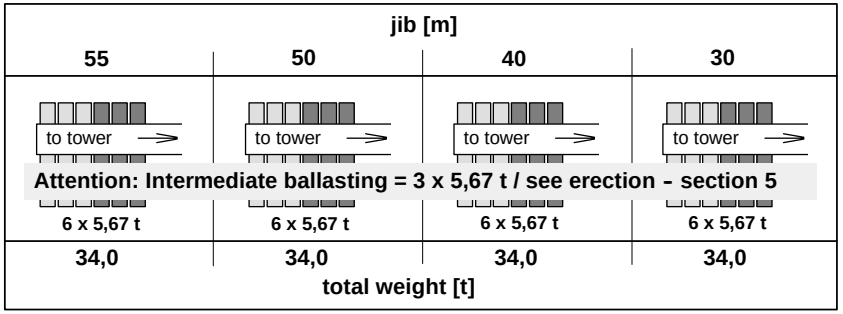
load capacity [t]

radius [m]			25	30	35	40	45	50	55
length of jib [m]									
55	4,5 – 35,0		6,0	6,0	6,0	4,8	3,9	3,1	**2,5**
50	4,2 – 37,0		6,0	6,0	6,0	5,3	4,3	**3,5**	
40	3,6 – 40,0	**6,0**	6,0	6,0	6,0	**6,0**			
30	3,0 – 30,0		6,0	**6,0**					

load capacity [t]

The load capacities refer to a height of tower of 45,0 m. With greater tower heights the safe working load will be minimized by the additional weight of the hoisting cable (with 3 fall operation = 6,09 kg per meter hook path, with 2 fall operation = 4,06 kg per meter hook path, with 1 fall operation = 2,03 kg per meter hook path).

Arrangement of counterweights **W 1260 FU**



2.2.1.3 **Load capacity table**

length of jib [m]	radius [m]		25	30	35	40	45	50	55
55									
50									
40	3,4 – 17,0	**18,0**	10,6	8,1	6,2	**4,8**			
30	2,8 – 18,0		11,1	**8,2**					

load capacity [t]

length of jib [m]	radius [m]		25	30	35	40	45	50	55
55	4,3 – 20,0		8,8	6,7	5,1	4,0	3,1	2,4	**1,8**
50	4,0 – 21,0		9,4	7,2	5,6	4,4	3,5	**2,7**	
40	3,4 – 23,0	**12,0**	10,7	8,3	6,5	**5,2**			
30	2,8 – 24,0		11,3	**8,6**					

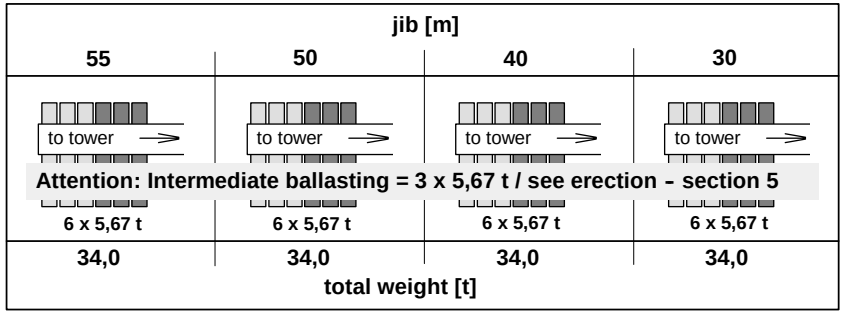
load capacity [t]

length of jib [m]	radius [m]		25	30	35	40	45	50	55
55	4,5 – 32,0		6,0	6,0	5,2	4,1	3,2	2,6	**2,0**
50	4,2 – 34,0		6,0	6,0	5,7	4,6	3,6	**2,9**	
40	3,6 – 37,0	**6,0**	6,0	6,0	6,0	**5,4**			
30	3,0 – 30,0		6,0	**6,0**					

load capacity [t]

The load capacities refer to a height of tower of 45,0 m. With greater tower heights the safe working load will be minimized by the additional weight of the hoisting cable (with 3 fall operation = 6,09 kg per meter hook path, with 2 fall operation = 4,06 kg per meter hook path, with 1 fall operation = 2,03 kg per meter hook path).

Arrangement of counterweights **W 1275 FU**



2.2.1.4 **Load capacity table**

length of jib [m]	radius [m]		25	30	35	40	45	50	55
55									
50									
40	3,4 – 17,0	**18,0**	11,1	8,7	6,9	**5,6**			
30	2,8 – 18,0		11,6	**8,9**					

load capacity [t]

length of jib [m]	radius [m]		25	30	35	40	45	50	55
55	4,3 – 21,0		9,5	7,3	5,7	4,5	3,6	2,9	**2,3**
50	4,0 – 22,0		10,1	7,9	6,2	5,0	4,1	**3,3**	
40	3,4 – 24,0	**12,0**	11,4	9,0	7,3	**6,0**			
30	2,8 – 25,0		12,0	**9,3**					

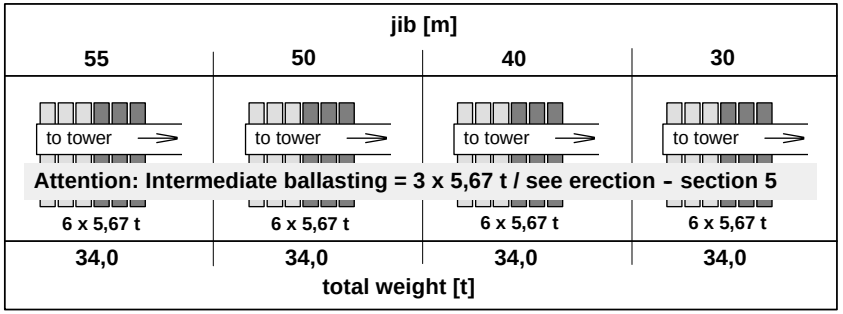
load capacity [t]

length of jib [m]	radius [m]		25	30	35	40	45	50	55
55	4,5 – 35,0		6,0	6,0	6,0	4,8	3,9	3,1	**2,5**
50	4,2 – 37,0		6,0	6,0	6,0	5,3	4,3	**3,5**	
40	3,6 – 40,0	**6,0**	6,0	6,0	6,0	**6,0**			
30	3,0 – 30,0		6,0	**6,0**					

load capacity [t]

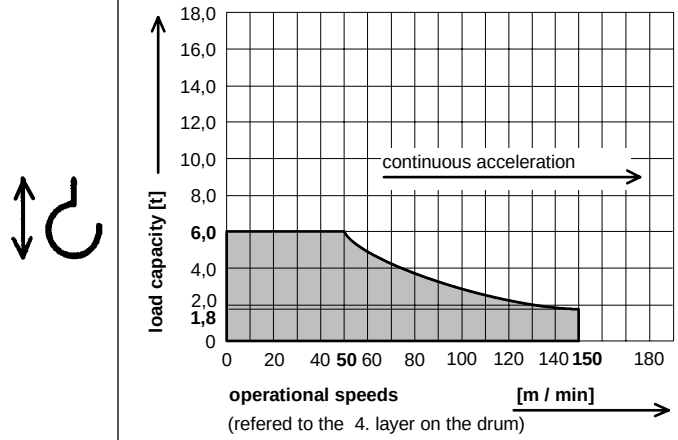
The load capacities refer to a height of tower of 45,0 m. With greater tower heights the safe working load will be minimized by the additional weight of the hoisting cable (with 3 fall operation = 6,09 kg per meter hook path, with 2 fall operation = 4,06 kg per meter hook path, with 1 fall operation = 2,03 kg per meter hook path).

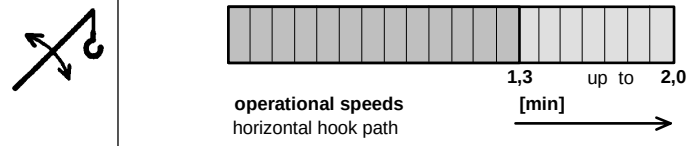
Arrangement of counterweights **W 1275 FU**

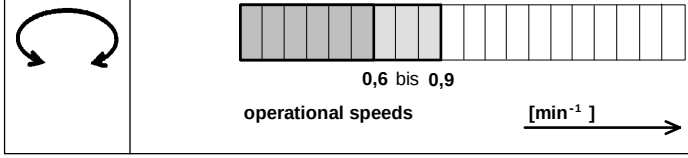


2.2.2.1 **Operational speeds** **400 V, 50 Hz, 60 % ED**

drive [type]	operational speeds load capacity [1-fall operation]	max. lift [m]	output [kW]	total output [kVA]
W 1260 FU	hoisting	380	60	120 total output for a simultaneity factor of 0,8
W 1260 FU	jib UP - DOWN		60	
Dw 6 FU	slewing		2 x 6	

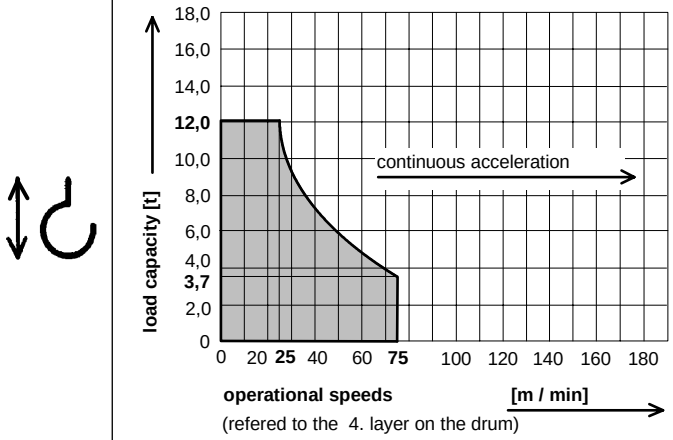


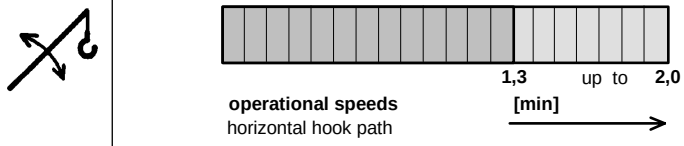


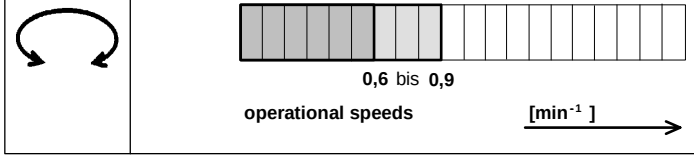


2.2.2.2 **Operational speeds** **400 V, 50 Hz, 60 % ED**

drive [type]	operational speeds load capacity [2-fall operation]	max. lift [m]	output [kW]	total output [kVA]
W 1260 FU	hoisting	190	60	120 total output for a simultaneity factor of 0,8
W 1260 FU	jib UP - DOWN		60	
Dw 6 FU	slewing		2 x 6	

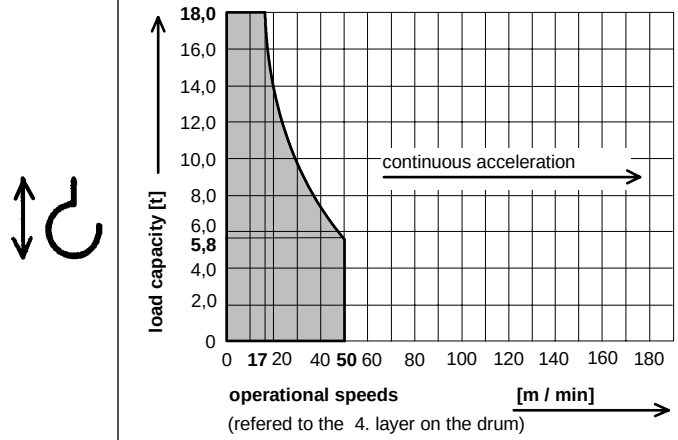


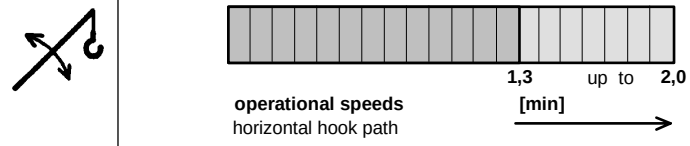


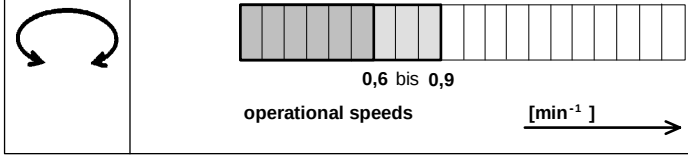


2.2.2.3 **Operational speeds** **400 V, 50 Hz, 60 % ED**

drive [type]	operational speeds load capacity [3-fall operation]	max. lift [m]	output [kW]	total output [kVA]
W 1260 FU	**hoisting**	**125**	**60**	**120** total output for a simultaneity factor of 0,8
W 1260 FU	**jib UP - DOWN**		**60**	
Dw 6 FU	**slewing**		**2 x 6**	

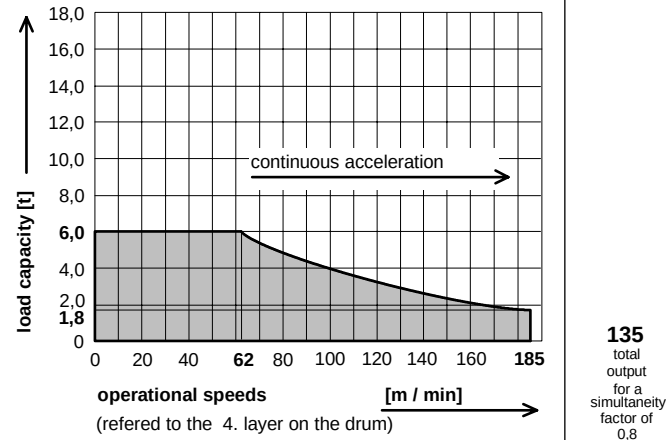


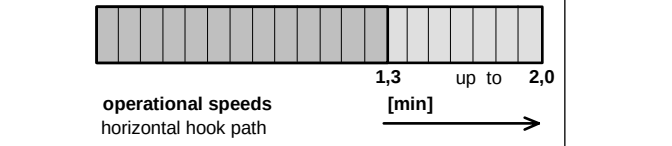


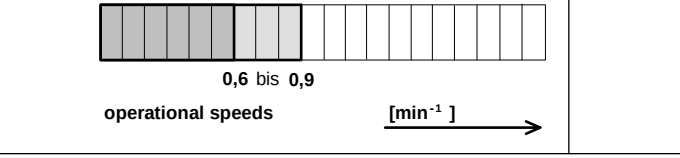


2.2.2.4 **Operational speeds** **400 V, 50 Hz, 60 % ED**

drive [type]	operational speeds load capacity [1-fall operation]	max. lift [m]	output [kW]	total output [kVA]
W 1275 FU	**hoisting**	**380**	**75**	**135** total output for a simultaneity factor of 0,8
W 1260 FU	**jib UP - DOWN**		**60**	
Dw 6 FU	**slewing**		**2 x 6**	

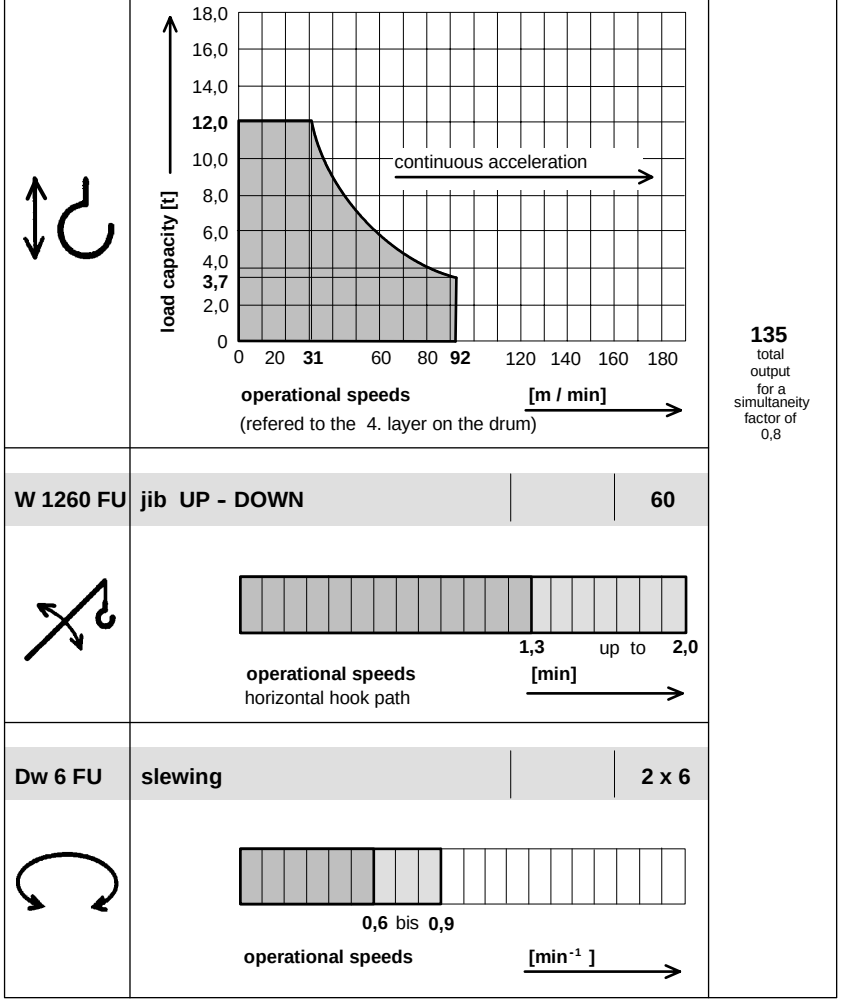






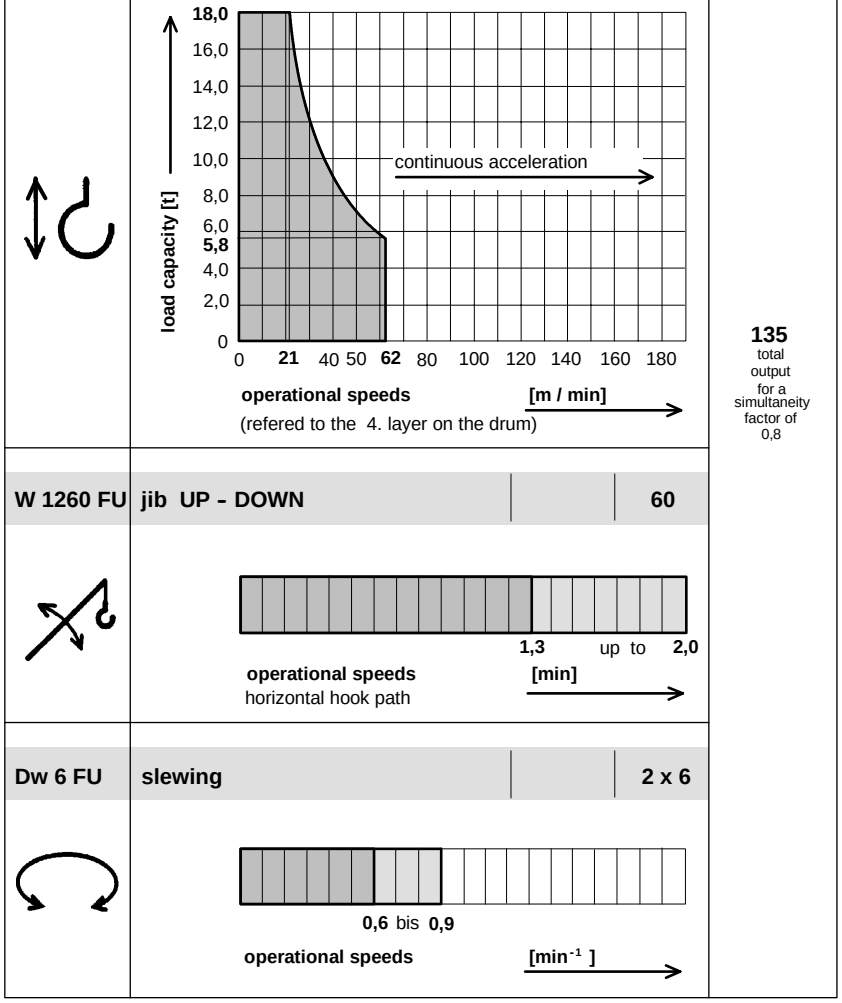
2.2.2.5 **Operational speeds** **400 V, 50 Hz, 60 % ED**

drive [type]	operational speeds load capacity [2-fall operation]	max. lift [m]	output [kW]	total output [kVA]
W 1275 FU	hoisting	190	75	135 total output for a simultaneity factor of 0,8
W 1260 FU	jib UP - DOWN		60	
Dw 6 FU	slewing		2 x 6	



2.2.2.6 **Operational speeds** **400 V, 50 Hz, 60 % ED**

drive [type]	operational speeds load capacity [3-fall operation]	max. lift [m]	output [kW]	total output [kVA]
W 1275 FU	hoisting	125	75	135 total output for a simultaneity factor of 0,8
W 1260 FU	jib UP - DOWN		60	
Dw 6 FU	slewing		2 x 6	



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

radius [m]	jib length [m] 30 m	40 m	50 m	55 m
17,0	6000	6000	6000	6000
18,0	6000	6000	6000	6000
19,0	6000	6000	6000	6000
20,0	6000	6000	6000	6000
21,0	6000	6000	6000	6000
22,0	6000	6000	6000	6000
23,0	6000	6000	6000	6000
24,0	6000	6000	6000	6000
25,0	6000	6000	6000	6000
26,0	6000	6000	6000	6000
27,0	6000	6000	6000	6000
28,0	6000	6000	6000	6000
29,0	6000	6000	6000	6000
30,0	6000	6000	6000	6000
31,0		6000	6000	6000
32,0		6000	6000	6000
33,0		6000	6000	5710
34,0		6000	6000	5440
35,0		6000	5700	5200
36,0		6000	5460	4940
37,0		6000	5210	4710
38,0		5790	4980	4490
39,0		5590	4760	4280
40,0		5400	4600	4100
41,0			4350	3900
42,0			4160	3720
43,0			3970	3550
44,0			3800	3390
45,0			3600	3200
46,0			3470	3090
47,0			3320	2950
48,0			3170	2810
49,0			3030	2680
50,0			2900	2600
51,0				2436
52,0				2320
53,0				2210
54,0				2100
55,0				2000

The load capacity refers 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 = 2,03 kg per meter.

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

radius [m]	jib length [m] 30 m	40 m	50 m	55 m
17,0	6000	6000	6000	6000
18,0	6000	6000	6000	6000
19,0	6000	6000	6000	6000
20,0	6000	6000	6000	6000
21,0	6000	6000	6000	6000
22,0	6000	6000	6000	6000
23,0	6000	6000	6000	6000
24,0	6000	6000	6000	6000
25,0	6000	6000	6000	6000
26,0	6000	6000	6000	6000
27,0	6000	6000	6000	6000
28,0	6000	6000	6000	6000
29,0	6000	6000	6000	6000
30,0	6000	6000	6000	6000
31,0		6000	6000	6000
32,0		6000	6000	6000
33,0		6000	6000	6000
34,0		6000	6000	6000
35,0		6000	6000	6000
36,0		6000	6000	5730
37,0		6000	6000	5480
38,0		6000	5750	5240
39,0		6000	5510	5010
40,0		6000	5300	4800
41,0			5060	4590
42,0			4860	4400
43,0			4660	4210
44,0			4470	4030
45,0			4300	3900
46,0			4120	3700
47,0			3950	3540
48,0			3800	3390
49,0			3650	3250
50,0			3500	3100
51,0				2980
52,0				2850
53,0				2730
54,0				2610
55,0				2500

The load capacity refers 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 = 2,03 kg per meter.

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

radius [m]	jib length [m] 30 m	40 m	50 m	55 m
17,0	12000	12000	12000	12000
18,0	12000	12000	12000	12000
19,0	12000	12000	12000	12000
20,0	12000	12000	12000	12000
21,0	12000	12000	12000	11240
22,0	12000	12000	11270	10540
23,0	12000	12000	10610	9910
24,0	12000	11330	10000	9330
25,0	11300	10700	9400	8800
26,0	10690	10150	8920	8300
27,0	10110	9630	8440	7840
28,0	9570	9140	7990	7420
29,0	9070	8690	7580	7030
30,0	8600	8300	7200	6700
31,0		7870	6830	6310
32,0		7500	6490	5990
33,0		7150	6170	5690
34,0		6820	5870	5400
35,0		6500	5600	5100
36,0		6220	5320	4880
37,0		5950	5070	4640
38,0		5680	4830	4410
39,0		5440	4600	4190
40,0		5200	4400	4000
41,0			4180	3790
42,0			3980	3600
43,0			3800	3430
44,0			3620	3260
45,0			3500	3100
46,0			3290	2940
47,0			3130	2790
48,0			2980	2650
49,0			2840	2510
50,0			2700	2400
51,0				2260
52,0				2140
53,0				2020
54,0				1910
55,0				1800

The load capacity refers 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 = 4,06 kg per meter.

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

radius [m]	jib length [m] 30 m	40 m	50 m	55 m
17,0	12000	12000	12000	12000
18,0	12000	12000	12000	12000
19,0	12000	12000	12000	12000
20,0	12000	12000	12000	12000
21,0	12000	12000	12000	12000
22,0	12000	12000	12000	11290
23,0	12000	12000	11330	10640
24,0	12000	12000	10710	10040
25,0	12000	11400	10100	9500
26,0	11380	10850	9610	8980
27,0	10800	10330	9120	8510
28,0	10260	9860	8670	8080
29,0	9770	9410	8250	7670
30,0	9300	9000	7900	7300
31,0		8610	7490	6940
32,0		8250	7150	6610
33,0		7910	6820	6290
34,0		7590	6520	6000
35,0		7300	6200	5700
36,0		7000	5960	5460
37,0		6730	5700	5220
38,0		6470	5460	4980
39,0		6230	5230	4760
40,0		6000	5000	4500
41,0			4800	4350
42,0			4600	4150
43,0			4410	3970
44,0			4230	3800
45,0			4100	3600
46,0			3890	3470
47,0			3740	3320
48,0			3590	3170
49,0			3440	3030
50,0			3300	2900
51,0				2770
52,0				2650
53,0				2530
54,0				2410
55,0				2300

The load capacity refers 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 = 4,06 kg per meter.

2.2.3.5 **Load capacity [kg] for 3 fall operation** **DIN 15018 / H1 - B3**

radius [m]	jib length [m] 30 m	40 m	50 m	55 m
17,0	18000	18000		
18,0	18000	16730		
19,0	16710	15580		
20,0	15550	14560		
21,0	14500	13630		
22,0	13550	12780		
23,0	12670	12010		
24,0	11880	11300		
25,0	11100	10600		
26,0	10460	10050		
27,0	9830	9500		
28,0	9250	8980		
29,0	8710	8500		
30,0	8200	8100		
31,0		7630		
32,0		7240		
33,0		6870		
34,0		6520		
35,0		6200		
36,0		5880		
37,0		5590		
38,0		5310		
39,0		5050		
40,0		4800		
41,0				
42,0				
43,0				
44,0				
45,0				
46,0				
47,0				
48,0				
49,0				
50,0				
51,0				
52,0				
53,0				
54,0				
55,0				

The load capacity refers 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 = 6,09 kg per meter.

2.2.3.6 **Load capacity [kg] for 3 fall operation** **DIN 15018 / H1 - B3**

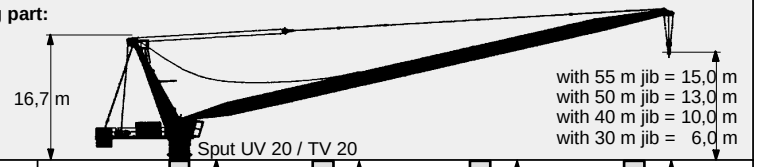
radius [m]	jib length [m] 30 m	40 m	50 m	55 m
17,0	18000	18000		
18,0	18000	16800		
19,0	16800	15730		
20,0	15730	14770		
21,0	14750	13890		
22,0	13860	13100		
23,0	13950	12370		
24,0	12310	11710		
25,0	11600	11100		
26,0	11000	10540		
27,0	10420	10010		
28,0	9880	9530		
29,0	9370	9080		
30,0	8900	8700		
31,0		8260		
32,0		7890		
33,0		7540		
34,0		7220		
35,0		6900		
36,0		6620		
37,0		6340		
38,0		6080		
39,0		5840		
40,0		5600		
41,0				
42,0				
43,0				
44,0				
45,0				
46,0				
47,0				
48,0				
49,0				
50,0				
51,0				
52,0				
53,0				
54,0				
55,0				

The load capacity refers 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 = 6,09 kg per meter.

2.2.6.1 **Tower configuration**

for a free standing stationary tower crane without climbing drive on a concrete foundation

Slewing part:



tower element	height of tower [m]				
1	4,5	UV 20.4	UV 20.4	UV 20.4	UV 20.4
2	9,0	UV 20.4	UV 20.4	UV 20.4	UV 20.4
3	13,5	UV 20.4	UV 20.4	UV 20.4	UV 20.4
4	18,0	UV 20.4	UV 20.4	UV 20.4	UV 20.4
5	22,5	UV 20.4	TVA 20.4	TVA 20.4	TVA 20.4
6	27,0	UV 20.4	TV 20	TV 20	TV 20
7	31,5		TV 20	TV 20	TV 20
8	36,0		TV 20	TV 20	TV 20
9	40,5		TV 20	TV 20	TV 20
10	45,0		TV 20	TV 20	TV 20
11	49,5		TV 20	TVÜ 20	TVÜ 20
12	54,0			TV 25	TV 25
13	58,5			TV 25	UVA 25
14	63,0				
15	67,5				
16	72,0				
17	76,5				
18	81,0				

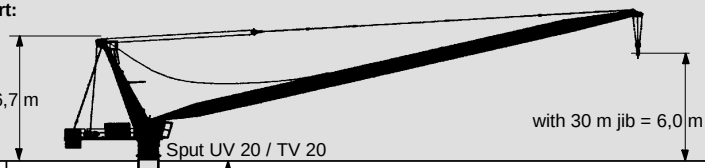
27,0 m height of tower
49,5 m height of tower
58,5 m height of tower
58,5 m height of tower
foundation anchor type AKZ 140
foundation anchor type AKZ 140
foundation anchor type AKZ 140
foundation anchor type AKZ 156

For data regarding foundation anchors see section 12.
The tower configurations shown here are recommended for economic crane installation. Each tower element shown in any position can be used as tower base element for a stationary installation with lower heights of hook.
Tower configurations with other tower elements are possible, but must be checked and confirmed by the manufacturer before assembly.

2.2.6.2 **Tower configuration** **jib 30 m**

for a free standing stationary tower crane without climbing drive on a concrete foundation.

Slewing part:



tower elements	height of tower [m]	
1	4,5	UV 20.4
2	9,0	UV 20.4
3	13,5	UV 20.4
4	18,0	UV 20.4
5	22,5	TVA 20
6	27,0	TV 20
7	31,5	TV 20
8	36,0	TV 20
9	40,5	TV 20
10	45,0	TV 20
11	49,5	TVÜ 20
12	54,0	TV 25
13	55,2	VR 2529
14	59,7	UV 29
15	64,2	UV 29
16	68,7	UV 29
17	73,2	UV 29
18	77,7	UV 29
19	82,2	UV 29
20	92,2	BT 29

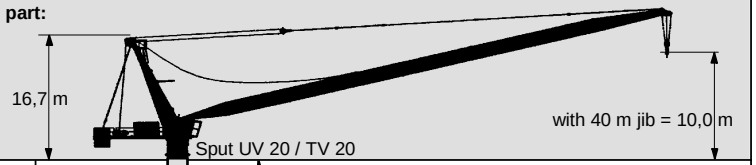
92,2 m height of tower
foundation anchor type FUA – BT 29

For data regarding foundation anchors 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.

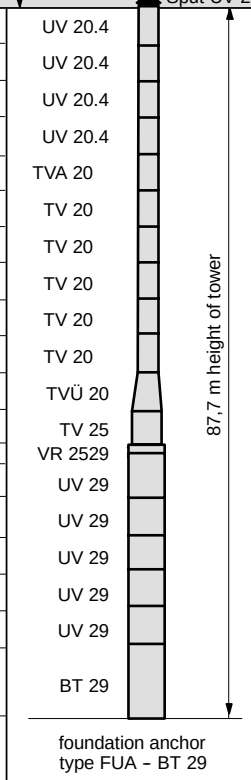
2.2.6.3 **Tower configuration** **jib 40 m**

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

Slewing part:



tower elements	height of tower [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	55,2
14	59,7
15	64,2
16	68,7
17	73,2
18	77,7
19	87,7

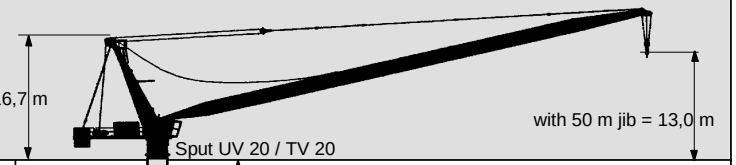


For data regarding foundation anchors see section 12.
The tower configurations are recommended for economic crane installation and may be used in any case. Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation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

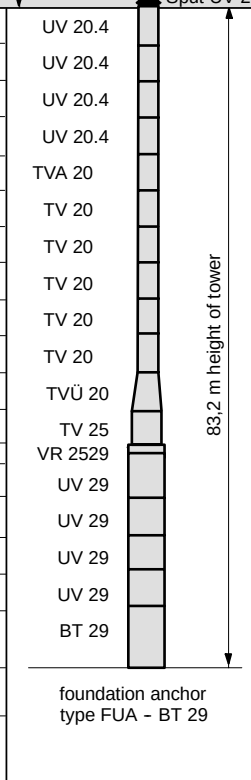
2.2.6.4 **Tower configuration** **jib 50 m**

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

Drehteil:



tower elements	height of tower [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	55,2
14	59,7
15	64,2
16	68,7
17	73,2
18	83,2

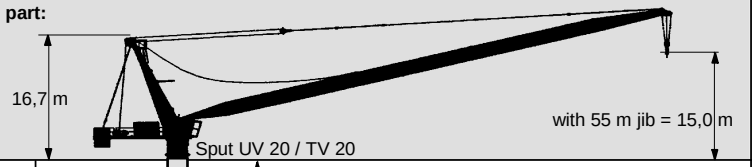


For data regarding foundation anchors see section 12.
The tower configurations are recommended for economic crane installation and may be used in any case. Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation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

2.2.6.5 **Tower configuration** **jib 55 m**

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

Slewing part:



tower elements	height of tower [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	55,2
14	59,7
15	64,2
16	68,7
17	78,7

UV 20.4 / UV 20.4 / UV 20.4 / UV 20.4 / TVA 20 / TV 20 / TV 20 / TV 20 / TV 20 / TV 20 / TVÜ 20 / TV 25 / VR 2529 / UV 29 / UV 29 / UV 29 / BT 29

78,7 m height of tower

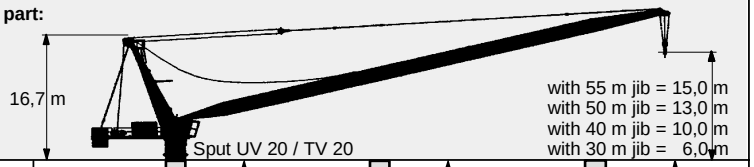
foundation anchor
type FUA – BT 29

For data regarding foundation anchors see section 12.
The tower configurations 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.

2.2.7.1 **Tower configuration**

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

Slewing part:



tower element	height of tower [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

UV 20.4 / UV 20.4 / UV 20.4 / UV 20.4 / TVA 20.4 / TV 20 / TV 20 / TV 20 / TV 20

37,2 m height of tower

1,2 m KR 10-46 connection UV 20 / TV 20

UV 20.4 / UV 20.4 / UV 20.4 / UV 20.4 / TVA 20.4 / TV 20 / TV 20 / TV 20 / TV 20 / TV 20

41,7 m height of tower

1,2 m KR 10-60 connection UV 20 / TV 20

UV 20.4 / UV 20.4 / UV 20.4 / UV 20.4 / TVA 20.4 / TV 20 / TV 20 / TV 20 / TV 20 / TV 20 / TVÜ 20 / TV 25

55,2 m height of tower

1,2 m KR 1000-8 connection UV 25 / TV 25

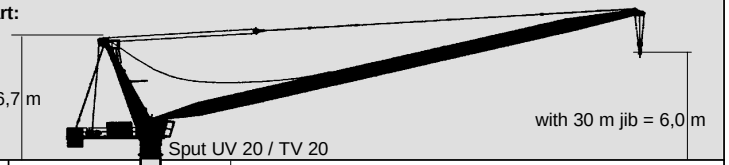
For data regarding cross frames see section 12.
The tower configurations shown here are recommended for economic crane installation.

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

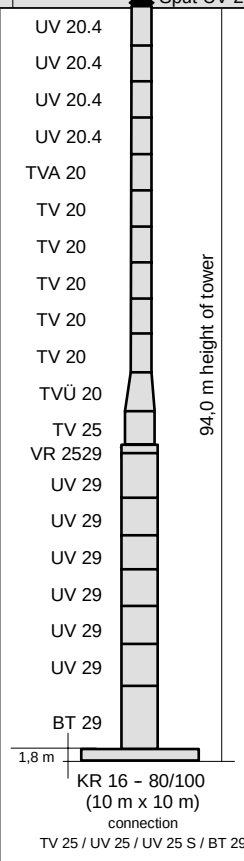
2.2.7.2 **Tower configuration** **jib 30 m**

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

Slewing part:



tower elements	height of tower [m]	
1	4,5	UV 20.4
2	9,0	UV 20.4
3	13,5	UV 20.4
4	18,0	UV 20.4
5	22,5	TVA 20
6	27,0	TV 20
7	31,5	TV 20
8	36,0	TV 20
9	40,5	TV 20
10	45,0	TV 20
11	49,5	TVÜ 20
12	54,0	TV 25
13	55,2	VR 2529
14	59,7	UV 29
15	64,2	UV 29
16	68,7	UV 29
17	73,2	UV 29
18	77,7	UV 29
19	82,2	UV 29
20	92,2	BT 29

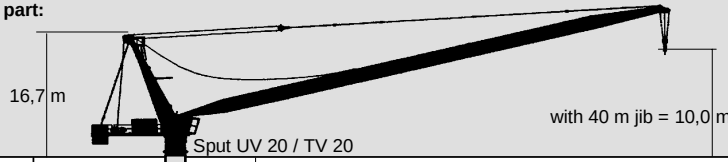


For data regarding cross frames see section 12.
The tower configurations are recommended for economic crane installation and may be used in any case. Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation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

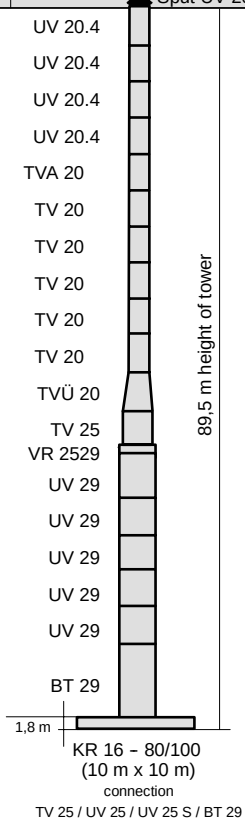
2.2.7.3 **Tower configuration** **jib 40 m**

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

Slewing part:



tower elements	height of tower [m]	
1	4,5	UV 20.4
2	9,0	UV 20.4
3	13,5	UV 20.4
4	18,0	UV 20.4
5	22,5	TVA 20
6	27,0	TV 20
7	31,5	TV 20
8	36,0	TV 20
9	40,5	TV 20
10	45,0	TV 20
11	49,5	TVÜ 20
12	54,0	TV 25
13	55,2	VR 2529
14	59,7	UV 29
15	64,2	UV 29
16	68,7	UV 29
17	73,2	UV 29
18	77,7	UV 29
19	87,7	BT 29

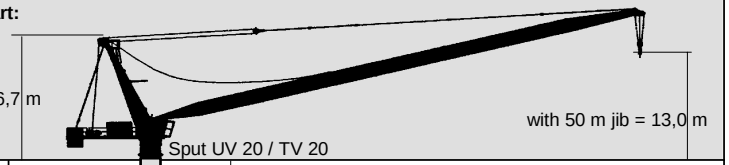


For data regarding cross frames see section 12.
The tower configurations are recommended for economic crane installation and may be used in any case. Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation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

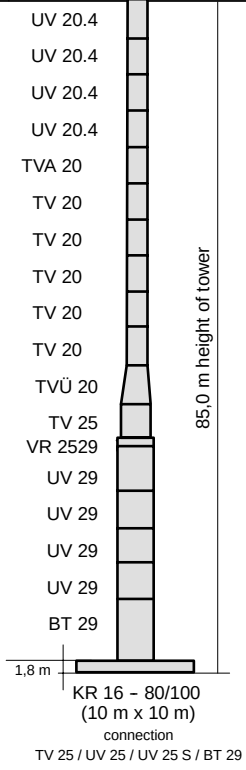
2.2.7.4 **Tower configuration** **jib 50 m**

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

Slewing part:



tower elements	height of tower [m]	
1	4,5	UV 20.4
2	9,0	UV 20.4
3	13,5	UV 20.4
4	18,0	UV 20.4
5	22,5	TVA 20
6	27,0	TV 20
7	31,5	TV 20
8	36,0	TV 20
9	40,5	TV 20
10	45,0	TV 20
11	49,5	TVÜ 20
12	54,0	TV 25
13	55,2	VR 2529
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

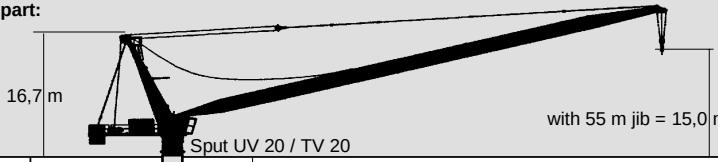


For data regarding cross frames see section 12.
The tower configurations are recommended for economic crane installation and may be used in any case. Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation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

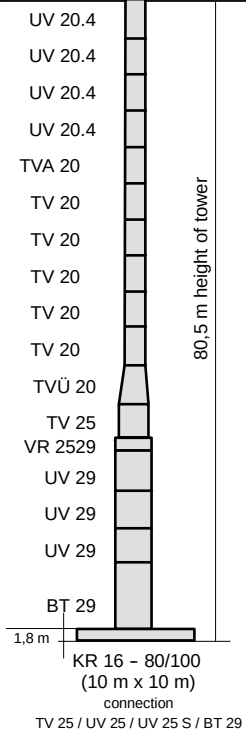
2.2.7.5 **Tower configuration** **jib 55 m**

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

Slewing part:



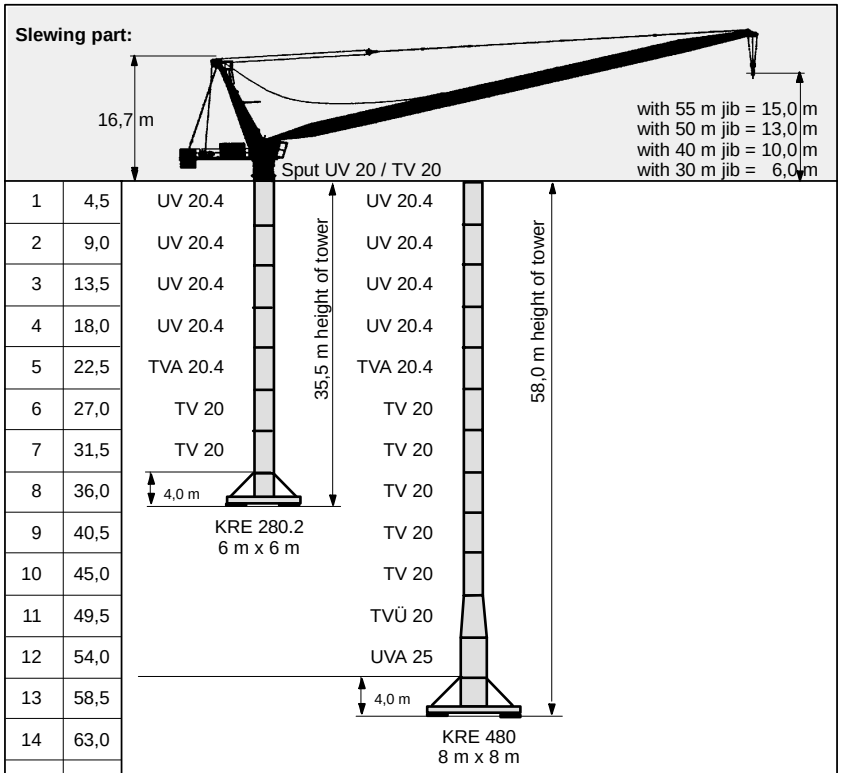
tower elements	height of tower [m]	
1	4,5	UV 20.4
2	9,0	UV 20.4
3	13,5	UV 20.4
4	18,0	UV 20.4
5	22,5	TVA 20
6	27,0	TV 20
7	31,5	TV 20
8	36,0	TV 20
9	40,5	TV 20
10	45,0	TV 20
11	49,5	TVÜ 20
12	54,0	TV 25
13	55,2	VR 2529
14	59,7	UV 29
15	64,2	UV 29
16	68,7	UV 29
17	78,7	BT 29



For data regarding cross frames 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.

2.2.8.1 **Tower configuration**

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



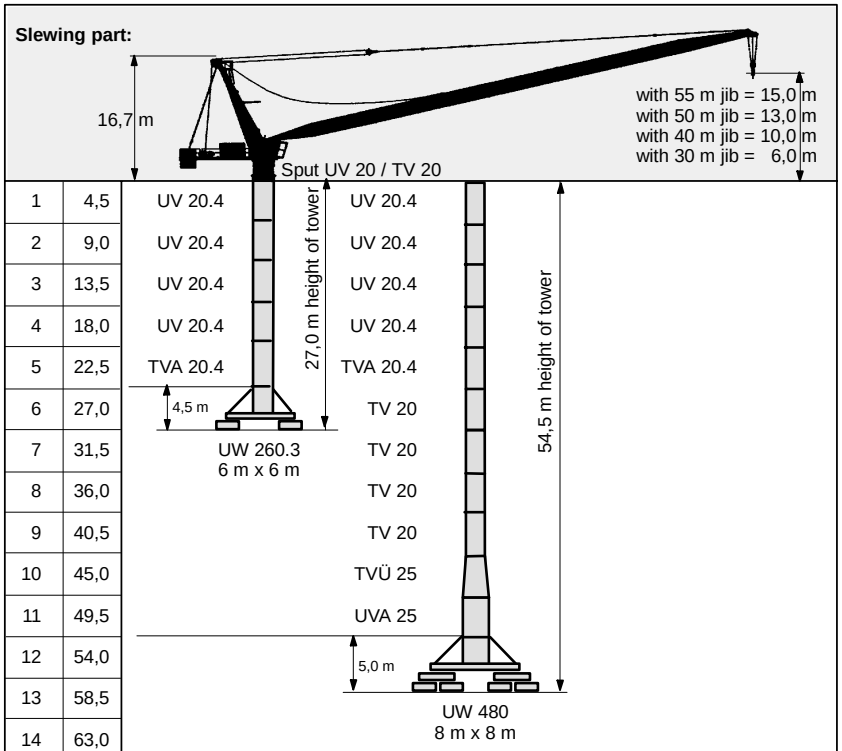
tower element	height of tower [m]		
1	4,5	UV 20.4	UV 20.4
2	9,0	UV 20.4	UV 20.4
3	13,5	UV 20.4	UV 20.4
4	18,0	UV 20.4	UV 20.4
5	22,5	TVA 20.4	TVA 20.4
6	27,0	TV 20	TV 20
7	31,5	TV 20	TV 20
8	36,0		TV 20
9	40,5		TV 20
10	45,0		TV 20
11	49,5		TVÜ 20
12	54,0		UVA 25
13	58,5		
14	63,0		
15	67,5		
16	72,0		
17	76,5		
18	81,0		

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

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

2.2.9.1 **Tower configuration**

for a travelling tower crane without climbing drive

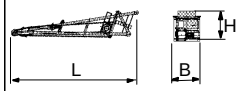
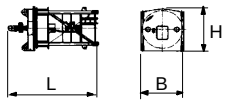
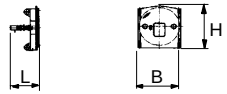
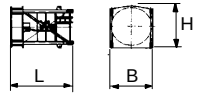
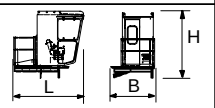
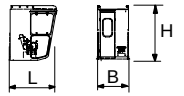
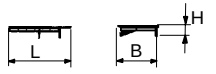
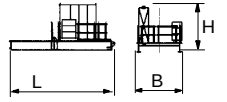


tower element	height of tower [m]		
1	4,5	UV 20.4	UV 20.4
2	9,0	UV 20.4	UV 20.4
3	13,5	UV 20.4	UV 20.4
4	18,0	UV 20.4	UV 20.4
5	22,5	TVA 20.4	TVA 20.4
6	27,0		TV 20
7	31,5		TV 20
8	36,0		TV 20
9	40,5		TV 20
10	45,0		TVÜ 25
11	49,5		UVA 25
12	54,0		
13	58,5		
14	63,0		
15	67,5		
16	72,0		
17	76,5		
18	81,0		

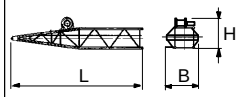
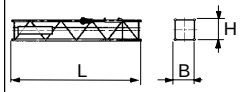
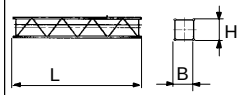
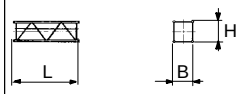
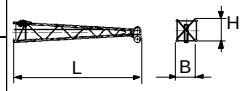
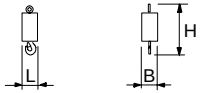
For data regarding undercarriages see section 12.
The tower configurations shown here are recommended for economic crane installation.

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

2.3.1 **Colli list**

item	pcs.	Designation	Colli	L (m)	B (m)	H (m)	weight (kg)	volume (m^3)
1	1	tower top with luffing drive, pulley block and div. bracing brackets		13,60	2,60	2,34	10320	82,74
2	1	tower top-lower part with slewing frame, slewing drive and slipring system		5,40	2,42	2,60	8240	33,98
3	1	slewing frame with slewing drive and slewing bearing		1,70	2,42	2,60	5040	10,70
4	1	tower top-lower part with slipring system		3,70	2,32	2,42	3200	20,77
5	1	drivers cabin suspension		4,20	1,95	2,72	1270	22,28
6	1	drivers cabin		1,96	1,25	2,20	900	5,39
7	1	drivers cabin suspension		3,30	1,95	0,66	370	4,25
8	1	counterjib complete		5,86	2,30	2,60	3180	35,04

2.3.2 **Colli list**

Item	pcs.	Designation	Colli	L (m)	B (m)	H (m)	weight (kg)	volume (m^3)
9	1	jib part **1** with hoisting drive, 350 m hoisting rope		10,60	2,40	2,5	4000	63,60
10	1	jib part **2** with assembly rope		10,60	1,60	2,15	1650	36,46
11	1	jib part **3**		10,60	1,50	1,50	1450	23,85
12	1	jib part **4**		5,40	1,50	1,50	850	12,15
13	1	jib part **5** with bracing parts and erection platform		11,00	1,50	2,40	2210 3800	39,60
14	1	hook block **12 t** (loose parts) hook block **18 t** (loose parts)		0,65 0,65	0,30 0,40	1,50 1,50	600 900	0,30 0,40
15	1	hook block **6 t** (loose parts)		0,33	0,33	0,9	330	0,10
16	1	standard handrail (loose parts)		2,55	1,11	1,80	320	5,09
17	1	box (loose parts)		1,60	0,90	0,80	300	1,15

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

2.5.1 **Assembly weights**

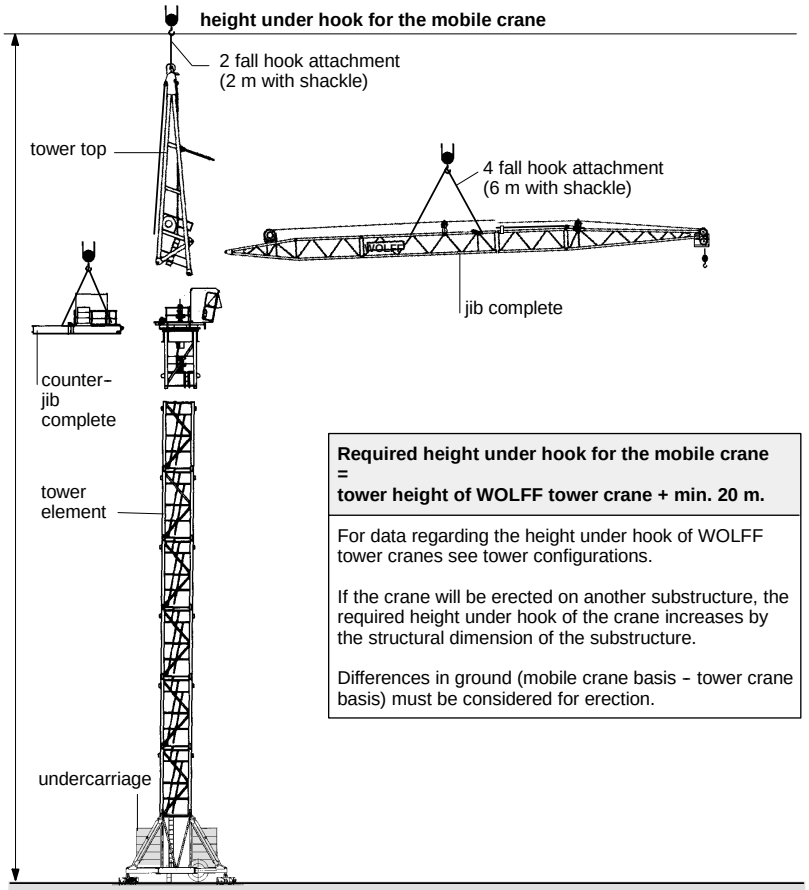
Tower top – upper part with derricking drive, pulley block and several bracing brackets			**10 320 kg**
Tower top – lower part slewing frame and lower part of tower top connected by ball race bearing, with 2 slewing drives, mechanical parts and standard posts			**8 240 kg**
Driver's cabin with driver's cabin suspension and standard handrail			**1 270 kg**
Counterjib with switch cabinet, resistors, platforms and standard handrails			**3 180 Kg**
Jib 55,0 m	(consisting of jib parts 1/2/3/3/4/5) with mechanical parts, bracing brackets, pigeon trestles, assembly trestles, assembly bracing ropes, and assembly platform – jib part 5.		**13 800 kg**
Jib 50,0 m	(consisting of jib parts 1/2/3/3/5) with mechanical parts, bracing brackets, pigeon trestles, assembly trestles, assembly bracing ropes, and assembly platform – jib part 5.		**12 800 kg**
Jib 40,0 m	(consisting of jib parts 1/2/3/5) with mechanical parts, bracing brackets, pigeon trestles, assembly trestles, assembly bracing ropes, and assembly platform – jib part 5.		**11 100 kg**
Jib 30,0 m	(consisting of jib parts 1/2//5) with mechanical parts, bracing brackets, pigeon trestles, assembly trestles, assembly bracing ropes, and assembly platform – jib part 5.		**9 300 kg**
Hook block	18 t **12 t**	900 kg	**600 kg**
hook tackle	6 t		330 kg
Counterweights	6 x 5,67 t		**34 000 kg**

2.5.2 **Assembly weights – cross frame / cross frame elements / undercarriage**

Cross frame KR 10 – 46/60 (without optional features)			**7 000 kg**
(4,6 m x 4,6 m)	– 4 spigots AZR 120 E 15.5 - 4 spigots AZ 120 M		560 kg 684 kg
Cross frame KR 10 – 46/60 (without optional features)			**8 805 kg**
(6,0 m x 6,0 m)	– 4 spigots AZR 120 E 15.5 - 4 spigots AZ 120 M		560 kg 684 kg
Cross frame KR 1000 – 8 (without optional features)			**14 000 kg**
	- 4 spigots TV 20 / TV 25		684 kg
Cross frame KR 16 – 80/100 (without optional features)			**21 450 kg**
(8,0 m x 8,0 m)	– 4 spigots AZR 140 E – 4 spigots AZ 156 M - 4 spigots AZ 156S M	KR16-80 KR16-80 KR16-80	620 kg 680 kg 675 kg
Cross frame KR 16 – 80/100 (without optional features)			**25 400 kg**
(10,0 m x 10,0 m)	– 4 spigots AZR 140 E – 4 spigots AZ 156 M - 4 spigots AZ 156S M	KR16-80 KR16-80 KR16-80	620 kg 680 kg 675 kg
Cross frame element KRE 260.2 complete			**10 900 kg**
– base mast part with diagonal struts and track rod – cross frame platform with swivel arms, corner bearings and saftey devices for transport			5 445 kg 5 455 kg
Cross frame element KRE 480 complete			**24 250 kg**
– base mast part – swivel arms with corner bearings – diagonal struts and ballast rest – assembly platform, ladder and small parts			7 100 kg 6 250 kg 9 260 kg 1 640 kg
Undercarriage UW 260.2 complete			**13 930 kg**
subframes and safety devices for transport – base mast part with diagonal struts and track rod – undercarriage platform with swivel arms,			 5 880 kg 8 050 kg
Undercarriage UW 260.3 complete			**17 100 kg**
– base mast part with diagonal struts and track rod – undercarriage platform with swivel arms, subframes and safety devices for transport			5 880 kg 11 220 kg
Undercarriage UW 480 complete			**34 000 kg**
– base mast part swivel arms with equalizer and subframe (2x) – diagonal struts and ballast rest (2x) – assembly platform, ladder and small parts			7 100 kg 8 000 kg 4 630 kg 1 640 kg

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

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



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

For data regarding the height under hook of WOLFF tower cranes 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 the substructure.

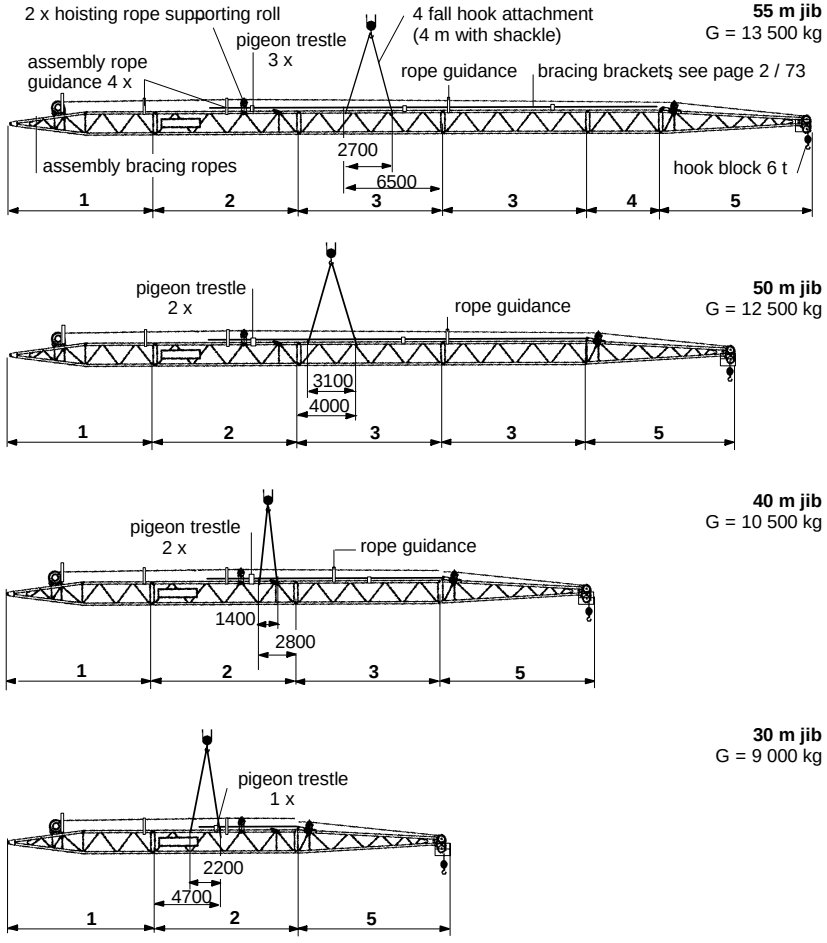
Differences in ground (mobile crane basis – tower crane basis) must be considered for erection.

2.6.1.2 **Jib – suspension plan from 30 m up to 55 m** **1 fall operation**

Danger!
The jib must be balanced and safely hang in horizontal position. There mustn't be any loose parts on the jib.

The parts of the jib are labeled with a building part identification at the top chord.

Lengths: jib part 1 / 2 / 3 / 5 = 10 m
4 = 5 m

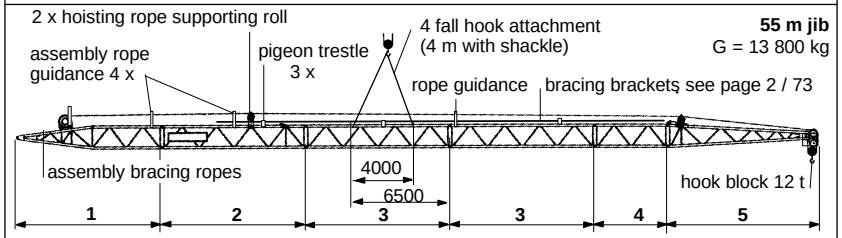


2.6.1.2 **Jib - suspension plan from 30 m up to 55 m** **2 fall operation**

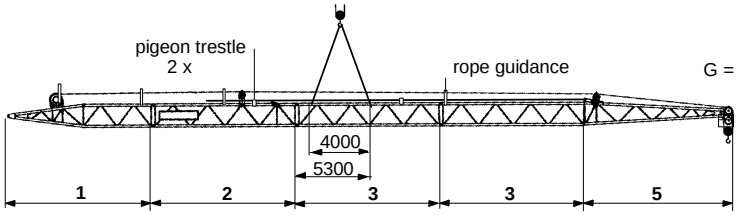
Danger!
The jib must be balanced and safely hang in horizontal position. There mustn't be any loose parts on the jib.

The parts of the jib are labeled with a building part identification at the top chord.

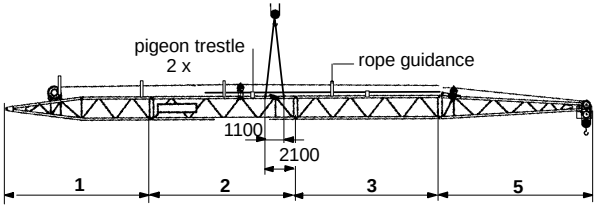
Lengths: jib part 1 / 2 / 3 / 5 = 10 m
4 = 5 m



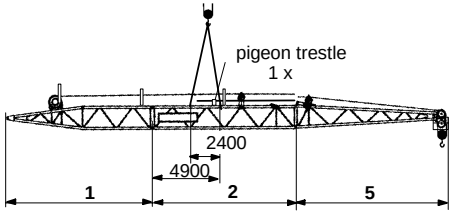
55 m jib
G = 13 800 kg



50 m jib
G = 12 800 kg



40 m jib
G = 10 800 kg



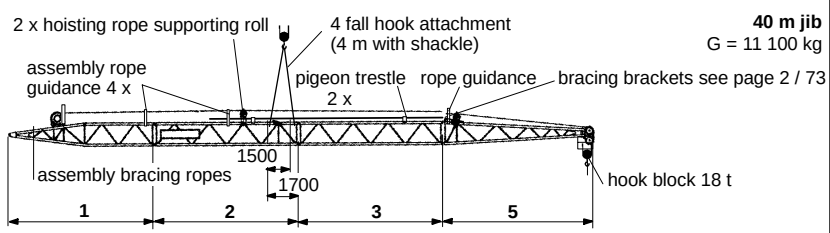
30 m jib
G = 9 300 kg

2.6.1.3 **Jib - suspension plan from 30 m up to 40 m** **3 fall operation**

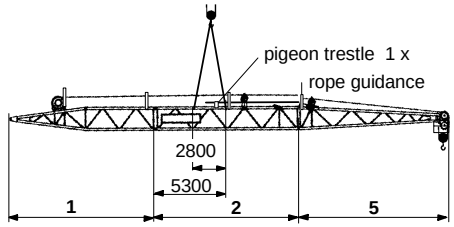
Danger!
The jib must be balanced and safely hang in horizontal position. There mustn't be any loose parts on the jib.

The parts of the jib are labeled with a building part identification at the top chord.

Lengths: jib part 1 / 2 / 3 / 5 = 10 m
4 = 5 m

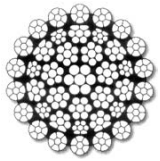


40 m jib
G = 11 100 kg



30 m jib
G = 9 700 kg

2.7.1.1 **Hoisting rope** **for hoisting winch - W 1260 FU / W 1275 FU**

Cable Ø = 20 mm + 4% + 2%	design according to FEM 3 / 87 kind of operation acc. to M 4
First equipment	**CASAR EUROLIFT -** non-twisting, flexible hoisting rope with compressed strands and compressed steel cable core. 
	nominal strength = 1960,0 N/mm² **calc. breaking strength = 445,9 kN** **min. beaking strength = 362,2 kN** **weight per meter = 1,979kg**
Design	langs-lay rope, right handed, made from blank cable wire.
	middle space factor = 0,720 middle space spinning loss factor = 0,82 middle space weight factor = 0,87 total twist number = 280
	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 = **126**

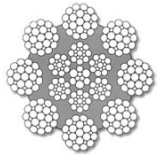
Basic equipment

cable length 280 m	**for crane with:**	**operation 2 fall** **radius 55 m** **tower height 40,5 m**

By lengthening the hook path by 1 tower element the necessary cable length increases by **4,5 m** for **operation in 1 fall**, by **9 m** for **operation in 2 falls** and by **13,5 m** with **operation in 3 falls.**

! **Attention!**
A wire cable is a complex machine element.
Conventional cable 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 = 20 mm + 4% + 2%	design according to FEM 3 / 87 kind of operation M 4
Factory equipment	**CASAR STRATOPLAST -** cable with 8 strands made out of uncompressed strands (cable core) 
	nominal strength = 1960,0 N/mm² **calc. breaking strength = 388,4 kN** **min. breaking strength = 327,0 kN** **weight per meter = 1,764 kg**
Design	langs-lay rope, right handed, made from blank cable wire.
	middle space factor = 0,617 middle spinning loss factor = 0,86 middle weight factor = 0,89 total twist number = 319
	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 = **152**

Basic equipment

Rope length 200 m	**for crane with:**	**30 m - 55 m jib**

! **Attention!**
A wire cable is a complexe machine element.
Conventional cable design frequently doesn't meet the requirements of modern rope drives. Short service life is the result.

Longer tests on our rope drives led us to the choice of this cable.

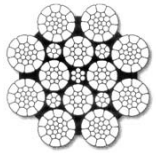
2.7.1.3 **Assembly bracing rope**

Rope Ø = 24 mm + 4% + 2%

design according to FEM 3 / 87
kind of operation M 4

Factory equipment

CASAR TURBOLIFT -
cable with 8 strands
in non-overlapped double
parallel construction, made
with compressed strands



nominal strength = 1960,0 N/mm²
calc. breaking strength = 647,8 kN
min. breaking strength = 542,8 kN
weight per meter = 2,776 kg

Design

ordinary lay rope, right handed,
made from zinced cable wires.

each with 2 pressed in thimbles DIN 3091, ∅ 51 mm

middle space factor = 0,734
middle spinning loss factor = 0,83
middle weight factor = 0,84
total twist number = 311

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 = **208**

Basic equipment

Rope length 2 x 24,15 m	**for crane with: 30 m - 55 m jib**

! **Attention!**
The assembly bracing ropes are used and changed paired.
Exactly keep the same length. Cable length from center of thimble hole
to center of thimble hole = 24,15 m.

! **Attention!**
A wire cable is a complexe machine element.
Conventional cable design frequently doesn't meet the requirements of modern rope drives. Short service life is the result.

Longer tests on our rope drives led us to the choice of this cable.

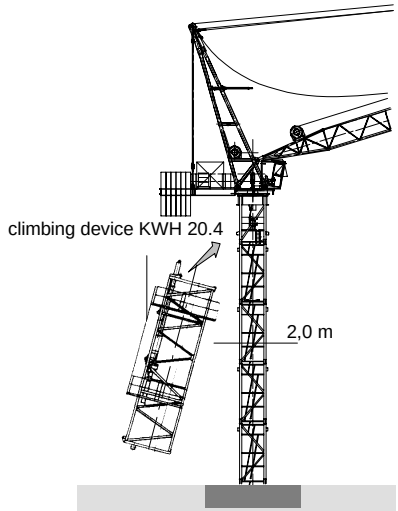
2.8.1 **Insertable exterior climbing device KWH 20.4**

! **Attention!**
The assembly of the climbing device with the WOLFF 180 B is possible with operation in 2 falls.

More details about the climbing device KWH 20.4 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

for climbing in UV 20.4 tower elements	**Jib**					
	30 m	**40 m**	**50 m**	**55 m**		
with balancing load * UV 20.4 = 1,94 t	** 20,0 m	---	---	---		
without balancing load	---	25,0 m	22,0 m	20,0 m		
for climbing in TV 20.4 tower elements						
with balancing load * TV 20.4 = 2,98 t	** 16,0 m	---	---	---		
without balancing load	---	24,0 m	21,0 m	19,0 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 20.4).
The climbing device is an auxilliary device for assembly and mustn't stay at the tower crane WOLFF under normal working conditions.

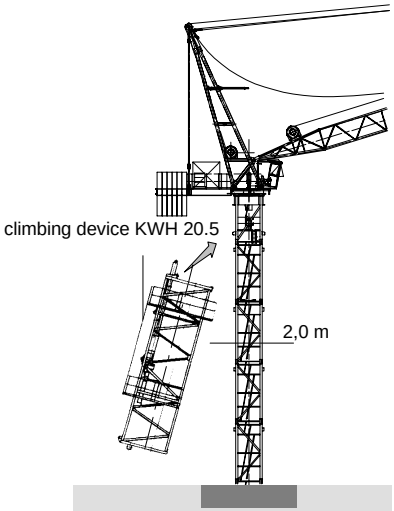
2.8.2 Insertable exterior climbing device KWH 20.5

! **Attention!**
The assembly of the climbing device with the WOLFF 180 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



2.8.2.1 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 UV 20.4 tower elements	**Jib**					
	30 m	**40 m**	**50 m**	**55 m**		
with balancing load * UV 20.4 = 1,94 t	** 20,0 m	---	---	---		
without balancing load	---	25,0 m	22,0 m	20,0 m		
for climbing in TV 20.4 tower elements						
with balancing load * TV 20.4 = 2,98 t	** 16,0 m	---	---	---		
without balancing load	---	24,0 m	21,0 m	19,0 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.

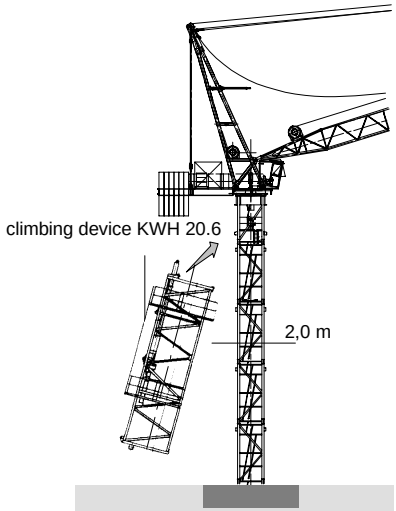
2.8.3 Insertable exterior climbing device KWH 20.6

! **Attention!**
The assembly of the climbing device with the WOLFF 180 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



2.8.3.1 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

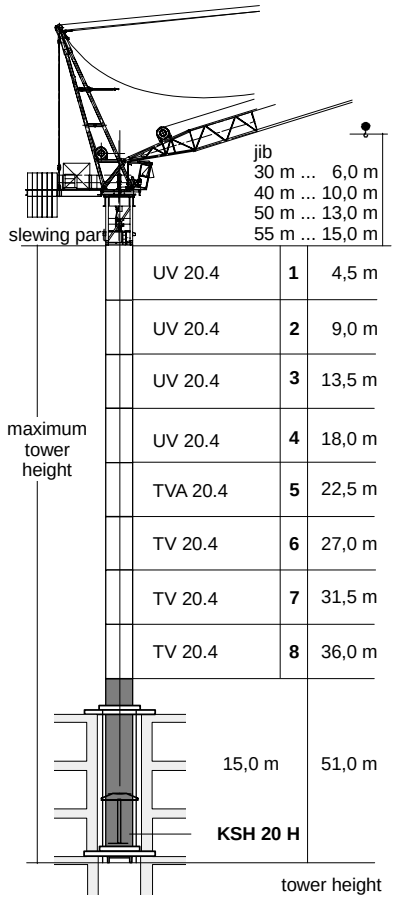
for climbing in UV 20.4 tower elements	**Jib**					
	30 m	**40 m**	**50 m**	**55 m**		
with balancing load * UV 20.4 = 1,94 t	** 20,0 m	---	---	---		
without balancing load	---	25,0 m	22,0 m	20,0 m		
for climbing in TV 20.4 tower elements						
with balancing load * TV 20.4 = 2,98 t	** 16,0 m	---	---	---		
without balancing load	---	24,0 m	21,0 m	19,0 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 20.6).
The climbing device is an auxilliary device for assembly and mustn't stay at the tower crane WOLFF under normal working conditions.

2.8.5. **Insertable interior climbing drive KSH 20 H**

For the assembly of the WOLFF 180B 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.



2.8.5.1 **Table of balancing weights**

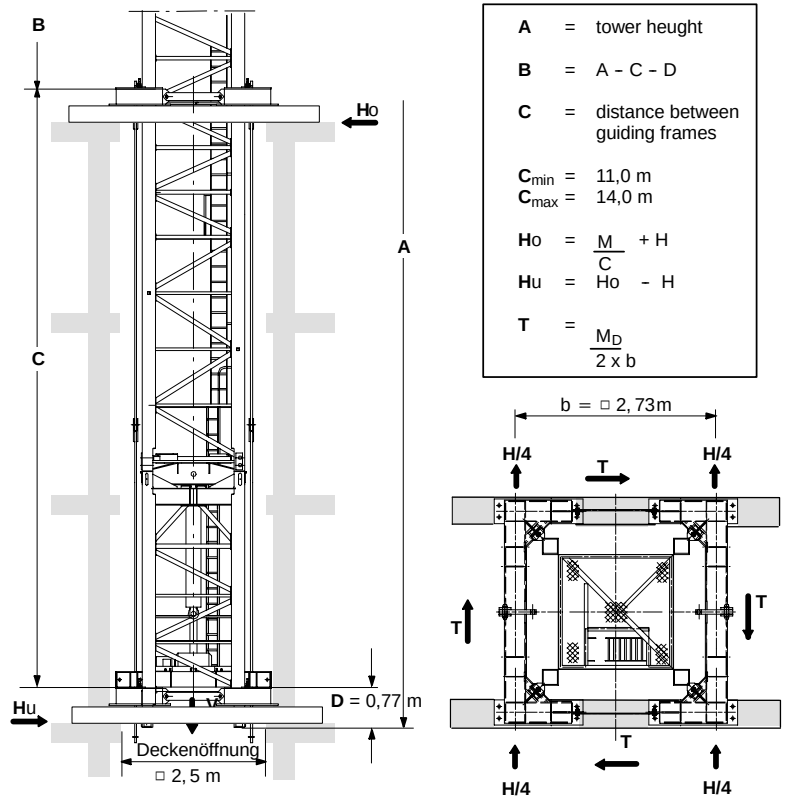
* The indicated balancing weights are gross-weights of tower elements or load.

** 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.

180 B	jib								
with balancing load *	30 m	40 m	50 m	55 m					
load = 5,00 t	24,0 m **	23,0 m	--	--					
TV 20.4 = 3,02 t	--	28,5 m	--	--					
without load	--	--	39,5 m	37,0 m					

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



Fixed end forces in the building (kN) in operation

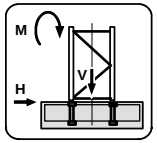
A(m)	51,0				46,5				42,0				37,5			
C(m)	11	12	13	14	11	12	13	14	11	12	13	14	11	12	13	14
V	1202				1174				1126				1107			
Ho	448	410	379	352	422	387	357	331	401	367	339	315	378	347	320	297
Hu	401	363	332	305	377	342	312	286	359	325	297	273	337	306	279	256
T	60				60				60				60			

Fixed end forces in the building (kN) out of operation

A(m)	51,0				46,5				42,0				37,5			
C(m)	11	12	13	14	11	12	13	14	11	12	13	14	11	12	13	14
V	1009				981				932				914			
Ho	743	681	628	584	671	615	568	527	604	553	511	474	544	499	460	428
Hu	574	512	459	415	510	454	407	366	452	401	359	322	400	355	316	284
T	0				0				0				0			

3.1.1 **Foundation loads according to DIN**

Inclusive all dynamic factors,theory order II. taken into account
for stationary tower crane on a concrete foundation
according to tower configuration without climbing gear



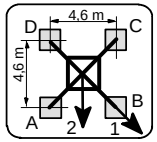
M = moment **H** = horizontal force **V** = vertical load

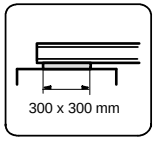
Foundation loads — Jib 30 - 55 m

tower height	crane in service torque moment **320** kNm			crane out of service			assembly		
[m]	M [kNm]	H [kN]	V [kN]	M [kNm]	H [kN]	V [kN]	M [kNm]	H [kN]	V [kN]
4,5	2885	31	864	1817	80	670	2469	13	500
9,0	3026	32	882	2084	85	689	2538	14	519
13,5	3188	33	900	2380	89	707	2620	16	537
18,0	3371	35	918	2707	94	725	2715	17	555
22,5	3578	36	936	3105	101	743	2824	19	573
27,0	3812	37	955	3550	107	761	2948	20	591
31,5	3997	40	1003	4014	118	810	3058	23	640
36,0	4253	42	1031	4550	126	838	3203	25	668
40,5	4537	43	1060	5156	135	867	3364	27	697
45,0	4852	45	1088	5823	143	895	3543	29	725
49,5	5202	47	1116	6560	152	923	3741	31	753
54,0	5491	49	1156	7314	162	963	3919	34	793
58,5	5843	52	1188	8244	172	995	4129	36	825
Attention! Tower configuration with basis tower BT 29									
60,7	5930	54	1236	8510	174	1053	4170	37	883
65,2	6280	57	1268	9510	182	1085	4390	40	915
69,7	6630	60	1315	10560	192	1131	4620	43	961
74,2	7000	63	1361	11720	204	1177	4870	45	1007
78,7	7400	65	1407	12940	215	1224	5140	48	1053
83,2	7830	68	1453	15840	240	1270	5430	50	1100

3.2.1.1 **Centerballasts and cornerloads acc. to DIN 15019**

for a stationary towe crane on a cross frame
without climbing drive



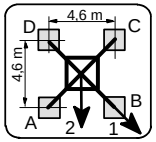


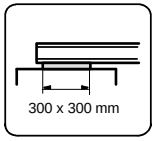
KR 10 - 46 **Corner distance 4,6 m x 4,6 m** **Jib 30 m**

tower height [m]	centerballasts [t]	jib position	crane in service torque moment: **320** 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]
5,7	75	1	313	834	313	0	31	1	300	501	300	99	55
		2	673	673	149	149		2	442	442	287	287	
10,2	75	1	302	874	302	0	32	1	304	515	304	94	73
		2	691	691	140	140		2	453	453	156	156	
14,7	75	1	289	918	289	0	34	1	309	530	309	88	78
		2	711	711	129	129		2	465	465	153	153	
19,2	75	1	274	967	274	0	35	1	314	547	313	80	83
		2	732	732	117	117		2	479	479	148	148	
23,7	75	1	256	1021	256	0	37	1	318	566	318	71	89
		2	756	756	102	102		2	493	493	143	143	
28,2	85	1	285	1081	285	0	38	1	413	621	413	204	96
		2	807	807	110	110		2	560	560	265	265	
32,7	90	1	308	1134	308	0	41	1	437	715	437	160	106
		2	850	850	117	117		2	633	633	241	241	
37,2	105	1	364	1200	364	0	43	1	482	835	482	129	114
		2	918	918	138	138		2	731	731	232	232	
41,7	125	1	441	1274	441	0	45	1	539	980	539	97	122
		2	1002	1002	168	168		2	851	851	227	227	
46,2	150	1	540	1354	540	0	47	1	609	1149	608	68	131
		2	1100	1100	209	209		2	991	991	226	226	

3.2.1.2 **Centerballasts and cornerloads acc. to DIN 15019**

for a stationary towe crane on a cross frame
without climbing drive



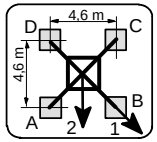


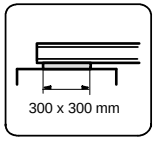
KR 10 - 46 **Corner distance 4,6 m x 4,6 m** **Jib 40 m**

tower height [m]	centerballasts [t]	jib position	crane in service torque moment: **320** 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]
5,7	90	1	379	866	379	0	33	1	363	542	363	184	61
		2	728	728	176	176		2	490	490	237	237	
10,2	90	1	366	910	366	0	35	1	368	557	368	179	81
		2	747	747	166	166		2	502	502	234	234	
14,7	90	1	351	958	351	0	36	1	415	578	415	252	86
		2	769	769	153	153		2	530	530	300	300	
19,2	90	1	334	1011	333	0	38	1	420	630	419	209	91
		2	792	792	139	139		2	568	568	271	271	
23,7	90	1	313	1070	313	0	39	1	424	692	424	156	97
		2	818	818	122	122		2	614	614	234	234	
28,2	90	1	290	1136	290	0	41	1	429	761	429	96	104
		2	846	846	103	103		2	663	663	194	194	
32,7	105	1	361	1192	360	0	44	1	478	881	478	76	114
		2	915	915	133	133		2	763	763	194	194	
37,2	125	1	439	1264	439	0	46	1	535	1016	535	54	122
		2	998	998	165	165		2	875	875	195	195	
41,7	145	1	514	1343	513	0	48	1	592	1162	592	23	131
		2	1084	1084	193	193		2	995	995	190	190	

3.2.1.3 **Centerballasts and cornerloads acc. to DIN 15019**

for a stationary towe crane on a cross frame
without climbing drive



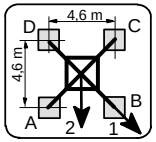


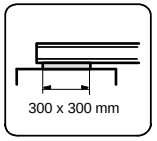
KR 10 - 46 **Corner distance 4,6 m x 4,6 m** **Jib 50 m**

tower height [m]	centerballasts [t]	jib position	crane in service torque moment: **320** 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]
5,7	80	1	319	900	318	0	35	1	342	651	342	32	86
		2	703	703	66	66		2	560	560	123	123	
10,2	80	1	305	945	305	0	36	1	346	666	346	26	89
		2	723	723	54	54		2	572	572	120	120	
14,7	80	1	289	996	289	0	38	1	393	694	393	93	94
		2	745	745	41	41		2	606	606	181	181	
19,2	80	1	270	1051	270	0	39	1	398	748	398	48	99
		2	770	770	26	26		2	645	645	150	150	
23,7	90	1	299	1112	299	0	41	1	427	838	427	16	105
		2	821	821	34	34		2	718	718	137	137	
28,2	105	1	349	1180	349	0	42	1	461	957	461	0	112
		2	887	887	52	52		2	808	808	131	131	
32,7	120	1	419	1239	419	0	45	1	488	1100	488	0	122
		2	957	957	81	81		2	908	908	130	130	
37,2	140	1	496	1313	496	0	47	1	520	1264	520	0	130
		2	1040	1040	112	112		2	1023	1023	129	129	
41,7	160	1	569	1394	569	0	49	1	542	1449	542	0	138
		2	1126	1126	140	140		2	1146	1146	121	121	

3.2.1.4 **Centerballasts and cornerloads acc. to DIN 15019**

for a stationary towe crane on a cross frame
without climbing drive



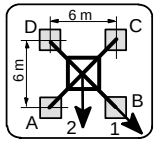


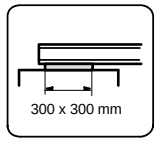
KR 10 - 46 **Corner distance 4,6 m x 4,6 m** **Jib 55 m**

tower height [m]	centerballasts [t]	jib position	crane in service torque moment: **320** 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]
5,7	75	1	282	930	282	0	36	1	280	765	280	0	90
		2	702	702	44	44		2	601	601	60	60	
10,2	75	1	267	978	267	0	38	1	278	786	278	0	93
		2	724	724	32	32		2	614	614	57	57	
14,7	80	1	275	1030	275	0	39	1	299	812	299	0	98
		2	759	759	30	30		2	661	661	129	129	
19,2	85	1	280	1088	280	0	41	1	398	853	397	0	103
		2	797	797	27	27		2	714	714	110	110	
23,7	95	1	307	1152	307	0	42	1	394	978	394	0	109
		2	849	849	34	34		2	788	788	95	95	
28,2	110	1	356	1223	356	0	44	1	409	1117	409	0	116
		2	916	916	51	51		2	879	879	88	88	
32,7	130	1	450	1284	450	0	46	1	461	1262	460	0	126
		2	1000	1000	92	92		2	992	992	99	99	
37,2	150	1	525	1361	525	0	48	1	491	1430	491	0	134
		2	1084	1084	121	121		2	1109	1109	97	97	

3.2.2.1 **Centerballasts and cornerloads acc. to DIN 15019**

for a stationary towe crane on a cross frame
without climbing drive



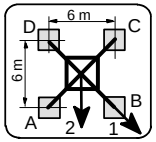


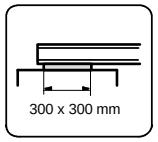
KR 10 - 60 **Corner distance 6 m x 6 m** **Jib 30 m**

tower height [m]	centerballasts [t]	jib position	crane in service torque moment: **320** 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]
5,7	35	1	210	640	210	0	31	1	267	350	267	184	64
		2	514	514	112	112		2	326	326	209	209	
10,2	35	1	204	670	204	0	32	1	207	353	207	60	84
		2	529	529	107	107		2	310	310	103	103	
14,7	35	1	197	703	197	0	34	1	211	362	211	61	89
		2	545	545	100	100		2	318	318	105	105	
19,2	35	1	187	741	187	0	35	1	216	370	216	62	94
		2	563	563	91	91		2	333	333	229	229	
23,7	40	1	200	782	200	0	37	1	298	414	298	182	100
		2	595	595	93	93		2	380	380	216	216	
28,2	45	1	211	828	211	0	38	1	315	478	315	152	107
		2	628	628	94	94		2	430	430	200	200	
32,7	50	1	241	868	241	0	41	1	340	556	340	123	118
		2	667	667	105	105		2	493	493	187	187	
37,2	60	1	279	919	279	0	43	1	372	646	372	98	126
		2	717	717	119	119		2	566	566	178	178	
41,7	75	1	340	975	340	0	45	1	416	758	416	74	134
		2	782	782	143	143		2	658	658	174	174	
46,2	95	1	424	1036	424	0	47	1	473	892	473	55	143
		2	861	861	178	178		2	769	769	178	178	
50,7	110	1	480	1103	480	0	49	1	518	1020	518	16	151
		2	931	931	197	197		2	873	873	163	163	

3.2.1.2 **Centerballasts and cornerloads acc. to DIN 15019 2**

for a stationary towe crane on a cross frame
without climbing drive



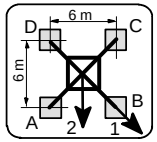


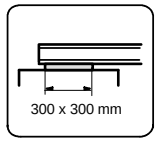
KR 10 - 60 **Corner distance 6 m x 6 m** **Jib 40 m**

tower height [m]	centerballasts [t]	jib position	crane in service torque moment: **320** 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]
5,7	50	1	280	664	280	0	33	1	266	392	266	140	70
		2	566	566	143	143		2	355	355	177	177	
10,2	50	1	272	697	272	0	35	1	313	408	313	218	92
		2	582	582	136	136		2	380	380	246	246	
14,7	50	1	263	734	263	0	36	1	317	446	317	189	97
		2	599	599	128	128		2	408	408	227	227	
19,2	50	1	252	775	252	0	38	1	322	486	322	158	102
		2	618	618	118	118		2	438	438	206	206	
23,7	50	1	238	820	238	0	39	1	327	535	327	118	108
		2	639	639	106	106		2	474	474	179	179	
28,2	50	1	223	870	223	0	41	1	331	589	331	74	115
		2	662	662	93	93		2	513	513	149	149	
32,7	60	1	275	913	275	0	44	1	368	680	368	56	126
		2	714	714	115	115		2	589	589	147	147	
37,2	75	1	337	968	337	0	46	1	413	785	413	40	134
		2	778	778	139	139		2	676	676	150	150	
41,7	90	1	396	1028	396	0	48	1	457	898	457	17	143
		2	845	845	162	162		2	769	769	146	146	
46,2	105	1	452	1094	452	0	50	1	484	1040	484	0	151
		2	914	914	182	182		2	870	870	134	134	

3.2.2.3 **Centerballasts and cornerloads acc. to DIN 15019**

for a stationary towe crane on a cross frame
without climbing drive



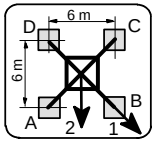


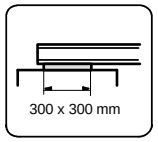
KR 10 - 60 **Corner distance 6 m x 6 m** **Jib 50 m**

tower height [m]	centerballasts [t]	jib position	crane in service torque moment: **320** 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]
5,7	40	1	224	690	224	0	35	1	244	469	244	19	95
		2	528	528	40	40		2	405	405	168	168	
10,2	40	1	215	725	215	0	36	1	291	490	291	93	100
		2	545	545	32	32		2	432	432	151	151	
14,7	40	1	205	763	205	0	38	1	296	529	296	62	105
		2	563	563	23	23		2	461	461	131	131	
19,2	45	1	218	805	218	0	39	1	313	584	313	41	110
		2	595	595	25	25		2	505	505	121	121	
23,7	50	1	229	852	229	0	41	1	330	648	330	12	116
		2	629	629	26	26		2	555	555	105	105	
28,2	60	1	262	904	262	0	42	1	349	739	349	0	123
		2	677	677	37	37		2	621	621	98	98	
32,7	70	1	314	949	314	0	45	1	368	851	368	0	134
		2	730	730	58	58		2	697	697	96	96	
37,2	85	1	375	1006	375	0	47	1	394	976	394	0	142
		2	794	794	83	83		2	786	786	96	96	
41,7	100	1	433	1068	433	0	49	1	412	1118	412	0	150
		2	861	861	105	105		2	881	881	90	90	

3.2.2.4 **Centerballasts and cornerloads acc. to DIN 15019**

for a stationary towe crane on a cross frame
without climbing drive



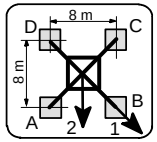


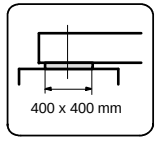
KR 10 - 60 **Corner distance 6 m x 6 m** **Jib 55 m**

tower height [m]	centerballasts [t]	jib position	crane in service torque moment: **320** 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]
5,7	40	1	216	713	216	0	36	1	212	560	212	0	99
		2	538	538	34	34		2	446	446	130	130	
10,2	40	1	206	749	206	0	38	1	217	568	217	0	104
		2	555	555	25	25		2	474	474	112	112	
14,7	45	1	220	789	220	0	39	1	310	601	310	19	109
		2	587	587	28	28		2	516	516	104	104	
19,2	45	1	207	834	207	0	41	1	299	660	299	0	114
		2	607	607	17	17		2	548	548	81	81	
23,7	55	1	242	883	242	0	42	1	310	756	310	0	120
		2	654	654	29	29		2	611	611	77	77	
28,2	65	1	274	937	274	0	44	1	316	862	316	0	127
		2	702	702	40	40		2	679	679	69	69	
32,7	80	1	350	983	350	0	46	1	359	975	359	0	138
		2	769	769	73	73		2	768	768	78	78	
37,2	95	1	410	1042	410	0	48	1	384	1103	384	0	146
		2	834	834	97	97		2	858	858	78	78	
41,7	115	1	492	1107	492	0	50	1	426	1248	426	0	154
		2	914	914	131	131		2	966	966	83	83	

3.2.3.1 **Centerballasts and cornerloads acc. to DIN 15019**

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



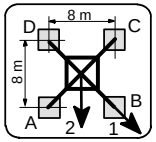


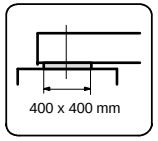
KR 1000 - 8 **Corner distance 8,0 m x 8,0 m** **Jib 30 m**

tower height	centerballasts	jib position	crane in service, torque moment: **320** 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	0	1	143	479	143	0	31	1	194	256	194	131	64
		2	390	390	89	89		2	238	238	150	150	
10,2	0	1	141	502	141	0	32	1	133	243	133	23	84
		2	403	403	86	86		2	211	211	56	56	
14,7	0	1	137	527	137	0	34	1	138	250	138	25	89
		2	416	416	82	82		2	223	223	182	182	
19,2	5	1	157	555	157	0	35	1	220	275	220	164	94
		2	443	443	89	89		2	259	259	181	181	
23,7	5	1	151	586	151	0	37	1	224	311	224	137	100
		2	458	458	83	83		2	286	286	163	163	
28,2	10	1	168	620	168	0	38	1	241	363	241	119	107
		2	487	487	87	87		2	328	328	155	155	
32,7	10	1	177	650	177	0	41	1	253	415	253	91	118
		2	510	510	89	89		2	368	368	139	139	
37,2	20	1	222	688	222	0	43	1	286	491	286	80	126
		2	556	556	108	108		2	431	431	140	140	
41,7	30	1	265	730	265	0	45	1	318	574	318	61	134
		2	603	603	125	125		2	499	499	136	136	
46,2	40	1	307	776	307	0	47	1	350	663	350	37	143
		2	651	651	140	140		2	571	571	128	128	
50,7	55	1	440	828	440	53	49	1	394	770	394	19	151
		2	714	714	166	166		2	660	660	129	129	
55,2	65	1	475	885	475	65	51	1	420	878	420	0	162
		2	765	765	185	185		2	740	740	119	119	
59,7	80	1	521	958	521	84	53	1	440	1019	440	0	171
		2	830	830	212	212		2	835	835	114	114	

3.2.3.2 **Centerballasts and cornerloads acc. to DIN 15019**

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



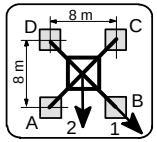


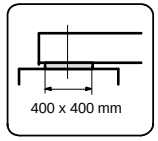
KR 1000 - 8 **Corner distance 8,0 m x 8,0 m** **Jib 40 m**

tower height	centerballasts	jib position	crane in service, torque moment: **320** 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	10	1	191	498	191	0	33	1	180	274	180	85	70
		2	427	427	110	110		2	246	246	113	113	
10,2	10	1	187	523	187	0	35	1	227	298	227	155	92
		2	440	440	106	106		2	277	277	176	176	
14,7	10	1	183	550	183	0	36	1	231	327	231	135	97
		2	454	454	100	100		2	299	299	163	163	
19,2	10	1	176	581	176	0	38	1	236	359	236	113	102
		2	469	469	94	94		2	323	323	149	149	
23,7	10	1	169	614	169	0	39	1	240	397	240	84	108
		2	486	486	87	87		2	351	351	130	130	
28,2	15	1	184	652	184	0	41	1	257	450	257	64	115
		2	516	516	90	90		2	394	394	121	121	
32,7	20	1	217	684	217	0	44	1	282	516	282	48	126
		2	552	552	104	104		2	447	447	117	117	
37,2	30	1	261	725	261	0	46	1	314	593	314	35	134
		2	599	599	121	121		2	511	511	117	117	
41,7	40	1	303	770	303	0	48	1	346	676	346	16	143
		2	648	648	137	137		2	579	579	113	113	
46,2	50	1	342	819	342	0	50	1	367	778	367	0	151
		2	698	698	151	151		2	654	654	103	103	
50,7	65	1	469	884	469	54	52	1	389	913	389	0	160
		2	762	762	175	175		2	746	746	100	100	
55,2	80	1	516	955	516	77	54	1	416	1049	416	0	170
		2	827	827	206	206		2	841	841	99	99	
59,7	100	1	574	1042	574	106	56	1	457	1200	457	0	179
		2	905	905	243	243		2	953	953	104	104	

3.2.3.3 **Centerballasts and cornerloads acc. to DIN 15019**

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



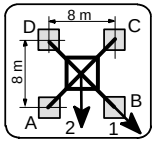


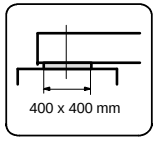
KR 1000 - 8 **Corner distance 8,0 m x 8,0 m** **Jib 50 m**

tower height	centerballasts	jib position	crane in service torque moment: **320** 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	5	1	162	517	162	0	35	1	170	339	170	2	95
		2	400	400	86	86		2	301	301	124	124	
10,2	5	1	159	543	159	0	36	1	217	366	217	69	100
		2	413	413	81	81		2	323	323	112	112	
14,7	5	1	153	572	153	0	38	1	222	397	222	47	105
		2	428	428	76	76		2	346	346	98	98	
19,2	10	1	172	603	172	0	39	1	239	442	239	36	110
		2	456	456	82	82		2	383	383	95	95	
23,7	10	1	163	638	163	0	41	1	244	482	244	5	116
		2	472	472	75	75		2	412	412	75	75	
28,2	20	1	203	677	203	0	42	1	270	554	270	0	123
		2	515	515	91	91		2	469	469	77	77	
32,7	25	1	235	711	235	0	45	1	277	637	277	0	134
		2	551	551	104	104		2	523	523	72	72	
37,2	35	1	278	753	278	0	47	1	294	731	294	0	142
		2	598	598	121	121		2	588	588	71	71	
41,7	50	1	344	799	344	0	49	1	330	837	330	0	150
		2	659	659	150	150		2	670	670	78	78	
46,2	65	1	408	850	408	0	51	1	361	953	361	0	159
		2	722	722	176	176		2	756	756	82	82	
50,7	90	1	486	939	486	33	53	1	431	1093	431	0	167
		2	811	811	226	226		2	875	875	102	102	
55,2	110	1	546	1023	546	69	55	1	479	1237	479	0	178
		2	888	888	269	269		2	986	986	111	111	

3.2.3.4 **Centerballasts and cornerloads acc. to DIN 15019**

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



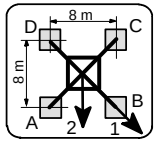


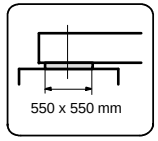
KR 1000 - 8 **Corner distance 8,0 m x 8,0 m** **Jib 55 m**

tower height	centerballasts	jib position	crane in service torque moment: **320** 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	5	1	157	534	157	0	36	1	134	420	134	0	99
		2	405	405	85	85		2	333	333	96	96	
10,2	5	1	153	562	153	0	38	1	141	426	141	0	104
		2	418	418	80	80		2	355	355	84	84	
14,7	10	1	172	592	172	0	39	1	236	454	236	18	109
		2	446	446	87	87		2	390	390	82	82	
19,2	10	1	164	625	164	0	41	1	234	495	234	0	114
		2	462	462	80	80		2	416	416	66	66	
23,7	15	1	180	661	180	0	42	1	233	566	233	0	120
		2	491	491	84	84		2	458	458	57	57	
28,2	25	1	219	702	219	0	44	1	252	646	252	0	127
		2	535	535	100	100		2	516	516	59	59	
32,7	30	1	251	736	251	0	46	1	259	730	259	0	138
		2	571	571	113	113		2	570	570	54	54	
37,2	40	1	293	781	293	0	48	1	275	826	275	0	146
		2	619	619	129	129		2	636	636	52	52	
41,7	60	1	383	829	383	0	50	1	335	935	335	0	154
		2	693	693	169	169		2	732	732	70	70	
46,2	80	1	456	897	456	15	52	1	390	1054	390	0	163
		2	768	768	208	208		2	831	831	85	85	
50,7	100	1	513	982	513	43	54	1	438	1185	438	0	171
		2	846	846	245	245		2	934	934	96	96	
55,2	125	1	585	1080	585	91	57	1	513	1325	513	0	182
		2	936	936	300	300		2	1056	1056	119	119	

3.2.4.1 **Centerballasts and cornerloads acc. to DIN 15019**

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



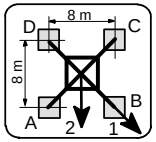


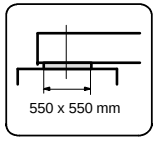
KR 16 - 80 **Corner distance 8,0 m x 8,0 m** **Jib 30 m**

tower height [m]	centerballasts [t]	jib position	crane in service torque moment: **320** 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]
62,5	75	1	533	976	533	89	58	1	431	1085	431	0	168
		2	846	846	219	219		2	870	870	103	103	
67,0	100	1	603	1075	603	131	60	1	495	1239	495	0	178
		2	937	937	269	269		2	996	996	119	119	
71,5	120	1	665	1166	665	164	62	1	535	1406	535	0	188
		2	1019	1019	311	311		2	1116	1116	122	122	
76,0	150	1	751	1283	751	220	65	1	616	1590	616	0	200
		2	1127	1127	376	376		2	1268	1268	143	143	
80,5	175	1	825	1390	825	261	68	1	667	1784	667	0	211
		2	1225	1225	426	426		2	1410	1410	148	148	
85,0	205	1	912	1512	912	312	70	1	736	1993	736	0	223
		2	1336	1336	488	488		2	1571	1571	161	161	
89,5	240	1	1011	1650	1011	372	73	1	822	2216	822	0	234
		2	1463	1463	560	560		2	1749	1749	181	181	

3.2.4.2 **Centerballasts and cornerloads acc. to DIN 15019**

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



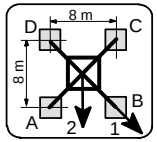


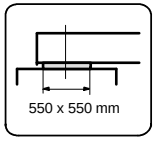
KR 16 - 80 **Corner distance 8,0 m x 8,0 m** **Jib 40 m**

tower height [m]	centerballasts [t]	jib position	crane in service torque moment: **320** 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]
62,5	105	1	611	1086	611	136	61	1	497	1267	497	0	176
		2	947	947	275	275		2	1013	1013	117	117	
67,0	130	1	682	1188	682	176	63	1	556	1432	556	0	186
		2	1039	1039	324	324		2	1142	1142	129	129	
71,5	155	1	756	1292	756	220	65	1	616	1608	616	0	197
		2	1135	1135	377	377		2	1278	1278	141	141	
76,0	180	1	830	1399	830	261	68	1	667	1802	667	0	209
		2	1232	1232	428	428		2	1421	1421	147	147	
80,5	210	1	916	1521	917	312	70	1	738	2006	738	0	220
		2	1344	1344	489	489		2	1580	1580	161	161	
85,0	245	1	1015	1658	1016	373	73	1	826	2226	827	0	231
		2	1470	1470	561	561		2	1757	1757	182	182	

3.2.4.3 **Centerballasts and cornerloads acc. to DIN 15019**

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



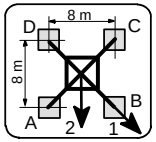


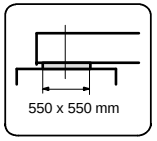
KR 16 - 80 **Corner distance 8,0 m x 8,0 m** **Jib 50 m**

tower height [m]	centerballasts [t]	jib position	crane in service torque moment: **320** 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]
62,5	135	1	643	1158	644	129	62	1	554	1466	554	0	184
		2	1008	1008	339	339		2	1162	1162	125	125	
67,0	160	1	714	1259	714	169	64	1	608	1641	608	0	194
		2	1100	1100	388	388		2	1294	1294	134	134	
71,5	190	1	800	1376	801	225	66	1	688	1826	688	0	204
		2	1208	1208	453	453		2	1446	1446	155	155	
76,0	220	1	887	1495	887	279	69	1	760	2030	760	0	216
		2	1318	1318	516	516		2	1605	1605	169	169	
80,5	250	1	974	1616	974	331	71	1	825	2244	826	0	227
		2	1429	1429	578	578		2	1767	1767	180	180	

3.2.4.4 **Centerballasts and cornerloads acc. to DIN 15019**

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



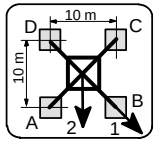


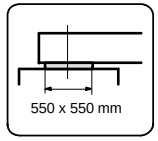
KR 16 - 80 **Corner distance 8,0 m x 8,0 m** **Jib 55 m**

tower height [m]	centerballasts [t]	jib position	crane in service torque moment: **320** 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]
62,5	150	1	683	1216	683	149	63	1	585	1560	586	0	188
		2	1060	1060	305	305		2	1234	1234	131	131	
67,0	180	1	766	1331	766	201	65	1	662	1740	662	0	198
		2	1165	1165	366	366		2	1381	1381	150	150	
71,5	205	1	840	1436	840	244	68	1	715	1930	715	0	208
		2	1261	1261	418	418		2	1522	1522	157	157	
76,0	235	1	926	1556	926	297	70	1	784	2138	784	0	220
		2	1371	1371	481	481		2	1682	1682	170	170	
80,5	270	1	1025	1691	1026	360	73	1	872	2358	872	0	231
		2	1496	1496	555	555		2	1859	1859	192	192	

3.2.5.1 **Centerballasts and cornerloads acc. to DIN 15019**

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



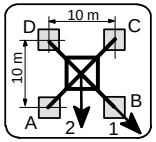


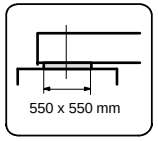
KR 16 - 100 **Corner distance 10,0 m x 10,0 m** **Jib 30 m**

tower height [m]	centerballasts [t]	jib position	crane in service torque moment: **320** 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]
62,5	35	1	438	793	438	83	58	1	350	868	350	0	168
		2	689	689	187	187		2	699	699	85	85	
67,0	50	1	483	861	483	105	60	1	379	991	379	0	178
		2	750	750	216	216		2	788	788	87	87	
71,5	70	1	545	945	545	144	62	1	435	1125	436	0	188
		2	828	828	262	262		2	897	897	101	101	
76,0	90	1	606	1031	606	181	65	1	485	1272	485	0	200
		2	907	907	306	306		2	1010	1010	110	110	
80,5	110	1	668	1120	668	216	68	1	530	1427	530	0	211
		2	987	987	349	349		2	1127	1127	117	117	
85,0	135	1	742	1222	742	262	70	1	595	1594	595	0	223
		2	1081	1081	403	403		2	1260	1260	132	132	
89,5	160	1	816	1327	816	305	73	1	654	1773	654	0	234
		2	1177	1177	455	455		2	1397	1397	143	143	
94,0	220	1	978	1522	978	433	75	1	795	2136	796	0	255
		2	1362	1362	593	593		2	1687	1687	176	176	

3.2.5.2 **Centerballasts and cornerloads acc. to DIN 15019**

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



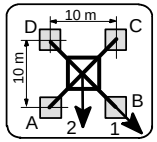


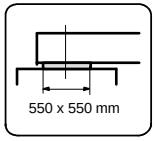
KR 16 - 100 **Corner distance 10,0 m x 10,0 m** **Jib 40 m**

tower height [m]	centerballasts [t]	jib position	crane in service torque moment: **320** 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]
62,5	55	1	491	871	491	111	61	1	384	1014	384	0	176
		2	760	760	222	222		2	804	804	87	87	
67,0	75	1	549	954	549	145	63	1	434	1145	434	0	186
		2	835	835	263	263		2	908	908	98	98	
71,5	95	1	611	1040	611	182	65	1	487	1286	487	0	197
		2	914	914	307	307		2	1020	1020	110	110	
76,0	115	1	672	1128	672	217	68	1	532	1441	532	0	209
		2	994	994	351	351		2	1136	1136	117	117	
80,5	140	1	746	1230	746	263	70	1	599	1605	599	0	220
		2	1088	1088	405	405		2	1268	1268	133	133	
85,0	165	1	820	1334	821	307	73	1	659	1780	659	0	231
		2	1184	1184	457	457		2	1404	1404	145	145	
89,5	225	1	982	1529	982	436	75	1	791	2162	792	0	253
		2	1368	1368	596	596		2	1701	1701	172	172	

3.2.5.3 **Centerballasts and cornerloads acc. to DIN 15019**

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



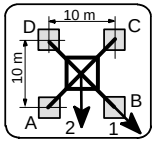


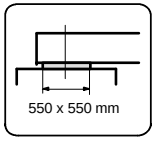
KR 16 - 100 **Corner distance 10,0 m x 10,0 m** **Jib 50 m**

tower height	centerballasts	jib position	crane in service torque moment: **320** 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]
62,5	80	1	511	923	511	99	62	1	436	1173	436	0	184
		2	809	809	273	273		2	926	926	96	96	
67,0	105	1	581	1018	581	145	64	1	507	1313	507	0	194
		2	897	897	326	326		2	1046	1046	117	117	
71,5	125	1	643	1103	643	183	66	1	556	1461	556	0	204
		2	975	975	371	371		2	1160	1160	126	126	
76,0	145	1	705	1191	705	218	69	1	598	1624	598	0	216
		2	1055	1055	414	414		2	1279	1279	130	130	
80,5	170	1	779	1293	779	265	71	1	660	1795	660	0	227
		2	1149	1149	468	468		2	1414	1414	144	144	
85,0	235	1	953	1496	953	409	74	1	809	2193	809	0	251
		2	1344	1344	621	621		2	1728	1728	177	177	

3.2.5.4 **Centerballasts and cornerloads acc. to DIN 15019**

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



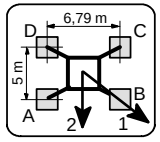


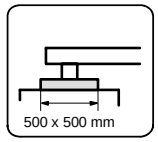
KR 16 - 100 **Corner distance 10,0 m x 10,0 m** **Jib 55 m**

tower height	centerballasts	jib position	crane in service torque moment: **320** 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]
62,5	95	1	550	977	550	123	63	1	477	1248	477	0	188
		2	856	856	305	305		2	992	992	109	109	
67,0	115	1	608	1060	608	156	65	1	521	1392	521	0	198
		2	932	932	345	345		2	1100	1100	116	116	
71,5	135	1	670	1147	670	193	68	1	568	1544	568	0	208
		2	1011	1011	389	389		2	1216	1216	124	124	
76,0	160	1	744	1247	744	240	70	1	633	1710	633	0	220
		2	1104	1104	444	444		2	1349	1349	139	139	
80,5	185	1	818	1350	818	286	73	1	693	1886	693	0	231
		2	1198	1198	498	498		2	1485	1485	151	151	

3.3.1.1 **Centerballasts and cornerloads acc. to DIN 15019**

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



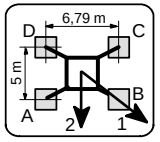


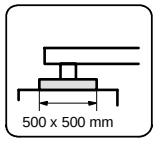
KRE 260.2 **Corner distance 5,0 m x 6,79 m** **Jib 30 m**

tower height	centerballasts	jib position	crane in service torque moment: **320** 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	55	1	395	695	189	0	33	1	303	411	212	104	72
		2	618	618	119	119		2	381	381	134	134	
13,0	55	1	393	728	177	0	35	1	308	419	215	105	92
		2	635	635	110	110		2	388	388	135	135	
17,5	55	1	389	765	162	0	36	1	314	427	218	105	97
		2	654	654	101	101		2	396	396	137	137	
22,0	60	1	409	806	169	0	38	1	380	454	317	242	102
		2	687	687	101	101		2	434	434	263	263	
26,5	65	1	427	851	174	0	39	1	411	518	320	212	108
		2	723	723	100	100		2	489	489	242	242	
31,0	75	1	468	901	201	0	41	1	456	600	334	190	115
		2	773	773	109	109		2	560	560	230	230	
35,5	85	1	527	946	246	0	44	1	511	697	353	167	126
		2	827	827	129	129		2	646	646	218	218	
40,0	100	1	596	1002	299	0	45	1	575	807	379	146	134
		2	895	895	151	151		2	743	743	211	211	

3.3.1.2 **Centerballasts and cornerloads acc. to DIN 15019**

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



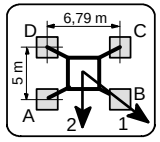


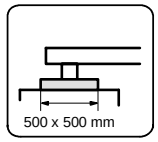
KRE 260.2 **Corner distance 5,0 m x 6,79 m** **Jib 40 m**

tower height	centerballasts	jib position	crane in service torque moment: **320** 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	75	1	519	748	325	95	36	1	403	468	348	283	96
		2	684	684	159	159		2	450	450	301	301	
13,0	75	1	528	770	324	82	37	1	418	506	343	255	100
		2	703	703	149	149		2	481	481	279	279	
17,5	75	1	484	799	246	0	39	1	433	547	337	223	105
		2	724	724	138	138		2	515	515	254	254	
22,0	75	1	477	844	227	0	40	1	449	592	329	187	110
		2	746	746	124	124		2	552	552	227	227	
26,5	75	1	469	893	204	0	42	1	468	645	319	143	116
		2	771	771	109	109		2	596	596	192	192	
31,0	85	1	509	947	228	0	43	1	514	729	333	118	123
		2	823	823	116	116		2	669	669	177	177	
35,5	100	1	591	995	296	0	46	1	582	840	364	106	134
		2	892	892	146	146		2	769	769	177	177	

3.3.1.3 **Centerballasts and cornerloads acc. to DIN 15019**

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



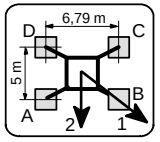


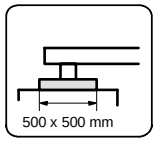
KRE 260.2 **Corner distance 5,0 m x 6,79 m** **Jib 50 m**

tower height	centerballasts	jib position	crane in service torque moment: **320** 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	439	751	216	0	37	1	413	555	294	153	103
		2	654	654	49	49		2	515	515	192	192	
13,0	65	1	435	789	201	0	39	1	428	594	289	123	108
		2	674	674	38	38		2	548	548	169	169	
17,5	65	1	429	831	183	0	40	1	444	637	282	89	113
		2	695	695	26	26		2	584	584	143	143	
22,0	70	1	447	877	187	0	42	1	474	696	286	64	118
		2	731	731	24	24		2	635	635	126	126	
26,5	80	1	488	928	213	0	43	1	519	777	301	42	124
		2	781	781	33	33		2	706	706	114	114	
31,0	100	1	578	984	286	0	45	1	590	889	338	39	131
		2	858	858	65	65		2	806	806	122	122	
35,5	110	1	635	1034	328	0	47	1	646	989	357	14	142
		2	915	915	82	82		2	894	894	109	109	

3.3.1.4 **Centerballasts and cornerloads acc. to DIN 15019**

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



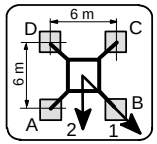


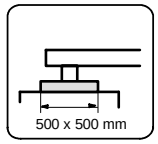
KRE 260.2 **Corner distance 5,0 m x 6,79 m** **Jib 55 m**

tower height	centerballasts	jib position	crane in service torque moment: **320** 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	60	1	409	776	178	0	39	1	420	603	266	83	107
		2	653	653	28	28		2	553	553	134	134	
13,0	65	1	429	816	187	0	40	1	448	656	272	64	112
		2	686	686	29	29		2	598	598	122	122	
17,5	70	1	448	860	192	0	42	1	477	712	278	42	117
		2	721	721	28	28		2	647	647	107	107	
22,0	75	1	465	908	195	0	43	1	507	773	282	16	122
		2	758	758	26	26		2	699	699	90	90	
26,5	90	1	530	961	245	0	45	1	564	868	308	5	128
		2	821	821	47	47		2	784	784	89	89	
31,0	105	1	594	1020	291	0	46	1	613	980	322	0	135
		2	887	887	65	65		2	873	873	84	84	

3.3.2.1 **Centerballasts and cornerloads acc. to DIN 15019**

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



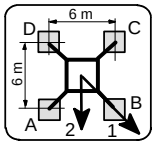


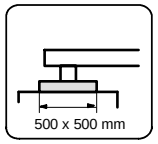
KRE 260.2 **Corner distance 6,0 m x 6,0 m** **Jib 30 m**

tower height	centerballasts	jib position	crane in service torque moment: **320** 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	185	660	185	0	33	1	195	340	195	49	72
		2	514	514	98	98		2	304	304	215	215	
13,0	30	1	178	691	178	0	35	1	199	348	199	50	92
		2	529	529	92	92		2	305	305	94	94	
17,5	35	1	195	726	195	0	36	1	216	369	216	63	97
		2	558	558	97	97		2	327	327	236	236	
22,0	40	1	210	765	210	0	38	1	298	399	298	198	102
		2	589	589	100	100		2	369	369	227	227	
26,5	40	1	197	807	197	0	39	1	303	448	303	158	108
		2	608	608	90	90		2	406	406	200	200	
31,0	45	1	208	855	208	0	41	1	320	514	320	126	115
		2	642	642	90	90		2	457	457	183	183	
35,5	55	1	261	898	261	0	44	1	357	609	357	105	126
		2	694	694	112	112		2	535	535	179	179	
40,0	70	1	323	951	323	0	45	1	402	715	402	88	134
		2	758	758	138	138		2	623	623	181	181	
44,5	85	1	384	1008	384	0	47	1	446	833	446	59	142
		2	823	823	161	161		2	720	720	173	173	

3.3.2.2 **Centerballasts and cornerloads acc. to DIN 15019**

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



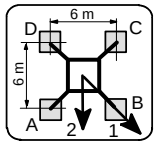


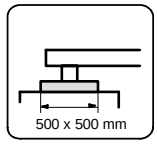
KRE 260.2 **Corner distance 6,0 m x 6,0 m** **Jib 40 m**

tower height	centerballasts	jib position	crane in service torque moment: **320** 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	50	1	279	686	279	0	36	1	313	401	313	226	96
		2	578	578	140	140		2	375	375	251	251	
13,0	50	1	271	720	271	0	37	1	318	437	318	198	100
		2	595	595	133	133		2	402	402	233	233	
17,5	50	1	261	759	261	0	39	1	322	476	322	168	105
		2	613	613	124	124		2	431	431	213	213	
22,0	50	1	249	801	249	0	40	1	327	519	327	135	110
		2	632	632	114	114		2	463	463	191	191	
26,5	50	1	234	847	234	0	42	1	331	570	331	93	116
		2	653	653	101	101		2	500	500	163	163	
31,0	55	1	243	899	243	0	43	1	348	638	348	59	123
		2	689	689	100	100		2	553	553	143	143	
35,5	70	1	319	945	319	0	46	1	398	747	398	50	134
		2	755	755	133	133		2	645	645	152	152	
40,0	80	1	355	1001	355	0	48	1	430	842	430	18	142
		2	807	807	145	145		2	721	721	139	139	

3.3.2.3 **Centerballasts and cornerloads acc. to DIN 15019**

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



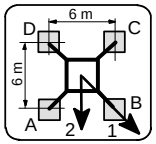


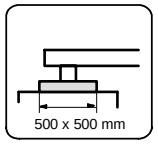
KRE 260.2 **Corner distance 6,0 m x 6,0 m** **Jib 50 m**

tower height [m]	centerballasts [t]	jib position	crane in service torque moment: **320** 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]
8,5	40	1	222	713	222	0	37	1	291	482	291	101	103
		2	541	541	37	37		2	426	426	157	157	
13,0	40	1	213	749	213	0	39	1	296	519	296	73	108
		2	558	558	29	29		2	454	454	138	138	
17,5	40	1	202	788	202	0	40	1	301	560	301	41	113
		2	577	577	19	19		2	484	484	117	117	
22,0	45	1	214	832	214	0	42	1	318	617	318	18	118
		2	609	609	21	21		2	530	530	106	106	
26,5	55	1	249	880	249	0	43	1	346	697	346	0	124
		2	656	656	33	33		2	594	594	100	100	
31,0	65	1	282	934	282	0	45	1	351	806	351	0	131
		2	704	704	44	44		2	662	662	92	92	
35,5	80	1	357	981	357	0	47	1	390	925	390	0	142
		2	771	771	77	77		2	754	754	99	99	
40,0	95	1	417	1040	417	0	49	1	413	1057	413	0	150
		2	836	836	101	101		2	845	845	97	97	

3.3.2.4 **Centerballasts and cornerloads acc. to DIN 15019**

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



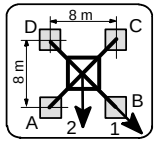


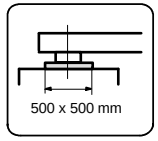
KRE 260.2 **Corner distance 6,0 m x 6,0 m** **Jib 55 m**

tower height [m]	centerballasts [t]	jib position	crane in service torque moment: **320** 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]
8,5	35	1	188	737	188	0	39	1	194	565	194	0	107
		2	539	539	18	18		2	455	455	106	106	
13,0	40	1	204	774	204	0	40	1	298	578	298	17	112
		2	569	569	21	21		2	496	496	99	99	
17,5	45	1	217	816	217	0	42	1	312	636	312	0	117
		2	601	601	24	24		2	540	540	90	90	
22,0	50	1	228	862	228	0	43	1	305	718	305	0	122
		2	634	634	25	25		2	586	586	78	78	
26,5	60	1	262	912	262	0	45	1	314	818	314	0	128
		2	682	682	36	36		2	651	651	72	72	
31,0	75	1	318	968	318	0	46	1	342	930	342	0	135
		2	743	743	59	59		2	732	732	75	75	
35,5	85	1	368	1017	368	0	49	1	356	1051	356	0	146
		2	798	798	78	78		2	812	812	69	69	

3.3.3.1 **Centerballasts and cornerloads acc. to DIN 15019**

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



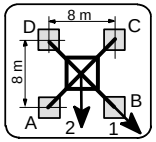


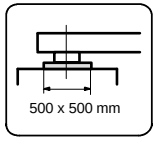
KRE 480 **Corner distance 8,0 m x 8,0 m** **Jib 30 m**

tower height	centerballasts	jib position	crane in service torque moment: **320** 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	0	1	179	495	179	0	34	1	216	262	216	169	76
		2	418	418	106	106		2	249	249	183	183	
13,0	0	1	177	519	177	0	36	1	155	267	155	44	96
		2	430	430	102	102		2	237	237	203	203	
17,5	0	1	173	545	173	0	37	1	160	275	160	45	101
		2	444	444	98	98		2	260	260	190	190	
22,0	0	1	167	574	167	0	39	1	230	306	230	153	106
		2	459	459	92	92		2	283	283	176	176	
26,5	0	1	160	606	160	0	40	1	234	344	234	124	112
		2	475	475	85	85		2	312	312	157	157	
31,0	5	1	177	641	177	0	42	1	251	397	251	105	119
		2	505	505	90	90		2	355	355	148	148	
35,5	10	1	210	674	210	0	45	1	276	465	276	86	130
		2	540	540	103	103		2	410	410	142	142	
40,0	20	1	254	713	254	0	47	1	308	544	308	72	138
		2	587	587	121	121		2	475	475	141	141	
44,5	30	1	297	757	297	0	49	1	340	631	340	49	146
		2	634	634	137	137		2	545	545	134	134	
49,0	40	1	337	804	337	0	51	1	372	722	372	21	155
		2	684	684	152	152		2	620	620	124	124	
53,5	55	1	463	866	463	59	52	1	417	832	417	1	163
		2	748	748	177	177		2	710	710	123	123	
58,0	65	1	497	924	497	71	55	1	420	965	420	0	174
		2	799	799	196	196		2	793	793	110	110	
62,5	80	1	543	998	543	88	57	1	437	1113	437	0	183
		2	865	865	221	221		2	891	891	103	103	

3.3.3.2 **Centerballasts and cornerloads acc. to DIN 15019**

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



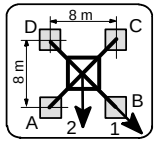


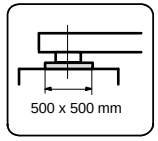
KRE 480 **Corner distance 8,0 m x 8,0 m** **Jib 40 m**

tower height	centerballasts	jib position	crane in service torque moment: **320** 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	5	1	202	515	202	0	37	1	232	298	232	166	100
		2	442	442	114	114		2	279	279	185	185	
13,0	5	1	198	541	198	0	39	1	236	327	236	146	104
		2	456	456	109	109		2	300	300	173	173	
17,5	5	1	192	569	192	0	40	1	241	357	241	125	109
		2	470	470	104	104		2	323	323	159	159	
22,0	5	1	186	601	186	0	42	1	246	390	246	101	114
		2	486	486	97	97		2	348	348	143	143	
26,5	5	1	177	636	177	0	43	1	250	430	250	70	120
		2	503	503	89	89		2	377	377	123	123	
31,0	10	1	192	674	192	0	45	1	267	485	267	49	127
		2	534	534	92	92		2	421	421	113	113	
35,5	15	1	224	709	224	0	48	1	292	554	292	30	138
		2	571	571	105	105		2	477	477	106	106	
40,0	25	1	267	751	267	0	50	1	324	633	324	14	146
		2	618	618	121	121		2	543	543	105	105	
44,5	40	1	333	798	333	0	51	1	368	733	368	4	155
		2	680	680	149	149		2	626	626	110	110	
49,0	50	1	446	849	446	44	53	1	372	858	372	0	163
		2	731	731	162	162		2	704	704	97	97	
53,5	65	1	491	923	491	59	55	1	391	999	391	0	172
		2	796	796	186	186		2	798	798	92	92	
58,0	85	1	551	1008	551	94	58	1	439	1142	439	0	182
		2	874	874	228	228		2	909	909	101	101	
62,5	110	1	621	1109	621	134	60	1	501	1300	501	0	191
		2	966	966	277	277		2	1035	1035	116	116	

3.3.3.3 **Centerballasts and cornerloads acc. to DIN 15019**

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



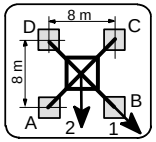


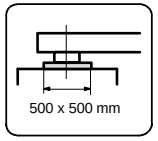
KRE 480 **Corner distance 8,0 m x 8,0 m** **Jib 50 m**

tower height	centerballasts	jib position	crane in service torque moment: **320** 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	0	1	173	535	173	0	38	1	223	366	223	79	107
		2	416	416	89	89		2	324	324	121	121	
13,0	0	1	169	562	169	0	40	1	227	395	227	59	112
		2	430	430	85	85		2	346	346	108	108	
17,5	0	1	163	592	163	0	41	1	232	427	232	36	117
		2	444	444	79	79		2	370	370	93	93	
22,0	0	1	156	624	156	0	43	1	236	462	236	11	122
		2	460	460	72	72		2	396	396	77	77	
26,5	5	1	172	661	172	0	44	1	245	524	245	0	128
		2	490	490	77	77		2	439	439	68	68	
31,0	15	1	211	701	211	0	46	1	263	606	263	0	135
		2	533	533	93	93		2	497	497	69	69	
35,5	25	1	267	736	267	0	49	1	293	695	293	0	146
		2	582	582	117	117		2	566	566	74	74	
40,0	35	1	309	780	309	0	51	1	307	794	307	0	154
		2	630	630	134	134		2	633	633	71	71	
44,5	50	1	374	828	374	0	53	1	341	906	341	0	162
		2	691	691	162	162		2	717	717	76	76	
49,0	70	1	451	892	451	10	55	1	391	1033	391	0	171
		2	767	767	200	200		2	819	819	88	88	
53,5	95	1	521	990	521	51	56	1	455	1184	455	0	179
		2	857	857	249	249		2	942	942	104	104	
58,0	115	1	581	1076	581	86	59	1	499	1336	499	0	190
		2	935	935	291	291		2	1056	1056	111	111	

3.3.3.4 **Centerballasts and cornerloads acc. to DIN 15019**

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



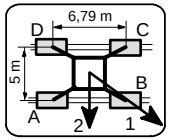


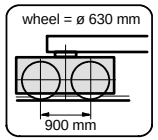
KRE 480 **Corner distance 8,0 m x 8,0 m** **Jib 55 m**

tower height	centerballasts	jib position	crane in service torque moment: **320** 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	0	1	168	553	168	0	40	1	152	424	152	0	111
		2	421	421	88	88		2	356	356	93	93	
13,0	0	1	163	581	163	0	41	1	229	440	229	18	116
		2	435	435	83	83		2	378	378	80	80	
17,5	0	1	156	612	156	0	43	1	228	478	228	0	121
		2	450	450	77	77		2	403	403	64	64	
22,0	5	1	173	647	173	0	44	1	232	539	232	0	126
		2	479	479	82	82		2	441	441	60	60	
26,5	10	1	188	684	188	0	46	1	228	615	228	0	132
		2	509	509	86	86		2	485	485	50	50	
31,0	20	1	226	726	226	0	47	1	245	699	245	0	139
		2	553	553	101	101		2	544	544	50	50	
35,5	30	1	282	763	282	0	50	1	274	789	274	0	150
		2	603	603	126	126		2	613	613	55	55	
40,0	45	1	348	809	348	0	52	1	313	890	313	0	158
		2	663	663	154	154		2	694	694	64	64	
44,5	65	1	433	863	433	4	54	1	370	1004	370	0	166
		2	738	738	194	194		2	791	791	81	81	
49,0	85	1	490	947	490	34	56	1	422	1129	422	0	175
		2	814	814	232	232		2	892	892	94	94	
53,5	110	1	560	1047	560	73	58	1	490	1271	490	0	183
		2	905	905	280	280		2	1012	1012	113	113	
58,0	130	1	620	1133	620	107	60	1	532	1427	532	0	194
		2	984	984	321	321		2	1127	1127	118	118	

3.4.1.1 **Centerballasts and cornerloads acc. to DIN 15019**

for a travelling tower crane on an undercarriage
without climbing drive



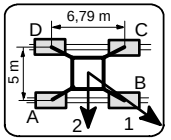


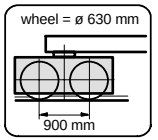
UW 260.3 **Corner distance 5,0 m x 6,79 m** **Jib 30 m**

tower height	centerballasts	jib position	crane in service torque moment: **320** 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	60	1	420	756	200	15	42	1	331	439	240	131	72
		2	663	663	130	130		2	409	409	161	161	
13,5	65	1	439	798	207	15	43	1	349	460	256	145	92
		2	696	696	130	130		2	429	429	176	176	
18,0	70	1	457	845	211	15	45	1	367	481	271	158	97
		2	732	732	129	129		2	449	449	189	189	
22,5	80	1	498	895	237	15	47	1	448	529	380	298	103
		2	781	781	138	138		2	507	507	321	321	
27,0	85	1	513	951	235	15	48	1	479	594	383	268	110
		2	821	821	133	133		2	562	562	300	300	
31,5	95	1	551	1012	255	15	50	1	524	676	397	245	117
		2	875	875	137	137		2	634	634	287	287	
36,0	100	1	580	1068	267	15	53	1	567	762	403	209	128
		2	922	922	140	140		2	708	708	262	262	

3.4.1.2 **Centerballasts and cornerloads acc. to DIN 15019**

for a travelling tower crane on an undercarriage
without climbing drive



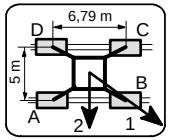


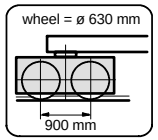
UW 260.3 **Corner distance 5,0 m x 6,79 m** **Jib 40 m**

tower height	centerballasts	jib position	crane in service torque moment: **320** 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	75	1	489	792	259	15	45	1	420	488	363	295	96
		2	720	720	154	154		2	469	469	314	314	
13,5	75	1	482	837	238	15	46	1	434	526	357	266	100
		2	743	743	140	140		2	501	501	291	291	
18,0	75	1	474	887	215	15	48	1	450	567	351	233	105
		2	768	768	125	125		2	535	535	266	266	
22,5	85	1	514	942	239	15	50	1	493	642	367	218	112
		2	819	819	132	132		2	600	600	259	259	
27,0	95	1	552	1001	259	15	51	1	537	721	382	198	118
		2	873	873	137	137		2	670	670	249	249	
31,5	105	1	588	1067	276	15	53	1	583	805	395	173	125
		2	930	930	140	140		2	744	744	234	234	

3.4.1.3 **Centerballasts and cornerloads acc. to DIN 15019**

for a travelling tower crane on an undercarriage
without climbing drive



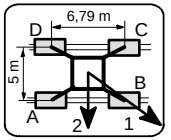


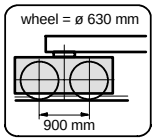
UW 260.3 **Corner distance 5,0 m x 6,79 m** **Jib 50 m**

tower height [m]	centerballasts [t]	jib position	crane in service torque moment: **320** 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	65	1	437	818	198	15	45	1	430	574	309	165	103
		2	690	690	44	44		2	534	534	205	205	
13,5	75	1	479	865	227	15	47	1	470	639	328	159	108
		2	739	739	54	54		2	592	592	206	206	
18,0	80	1	495	915	228	15	49	1	499	695	333	137	113
		2	776	776	51	51		2	641	641	192	192	
22,5	90	1	535	971	251	15	50	1	542	771	349	120	119
		2	828	828	58	58		2	708	708	183	183	
27,0	100	1	573	1032	271	15	52	1	587	853	363	97	126
		2	882	882	63	63		2	779	779	171	171	

3.4.1.4 **Centerballasts and cornerloads acc. to DIN 15019**

for a travelling tower crane on an undercarriage
without climbing drive



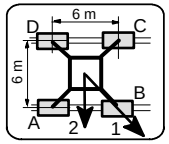


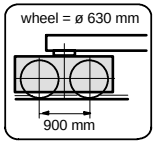
UW 260.3 **Corner distance 5,0 m x 6,79 m** **Jib 55 m**

tower height [m]	centerballasts [t]	jib position	crane in service torque moment: **320** 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	70	1	455	847	208	15	47	1	462	648	305	119	107
		2	716	716	46	46		2	597	597	171	171	
13,5	80	1	497	895	236	15	48	1	502	714	324	113	112
		2	765	765	56	56		2	655	655	171	171	
18,0	85	1	513	948	236	15	50	1	531	770	329	90	117
		2	804	804	52	52		2	704	704	156	156	
22,5	95	1	551	1006	257	15	52	1	575	848	345	72	123
		2	856	856	58	58		2	772	772	147	147	
27,0	105	1	588	1069	275	15	54	1	621	931	358	48	130
		2	911	911	62	62		2	845	845	134	134	

3.4.2.1 **Centerballasts and cornerloads acc. to DIN 15019**

for a travelling tower crane on an undercarriage
without climbing drive



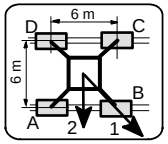


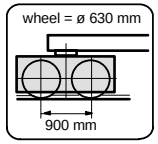
UW 260.3 **Corner distance 6,0 m x 6,0 m** **Jib 30 m**

tower height [m]	centerballasts [t]	jib position	crane in service, torque moment: **320** 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	35	1	204	719	204	15	42	1	223	369	223	77	72
		2	556	556	112	112		2	330	330	246	246	
13,5	40	1	218	758	218	15	43	1	240	389	240	90	92
		2	587	587	115	115		2	345	345	134	134	
18,0	45	1	230	802	230	15	45	1	257	410	257	103	97
		2	619	619	117	117		2	370	370	273	273	
22,5	50	1	240	850	240	15	47	1	339	449	339	229	103
		2	653	653	117	117		2	416	416	261	261	
27,0	60	1	273	903	273	15	48	1	368	523	368	214	110
		2	701	701	128	128		2	478	478	259	259	
31,5	65	1	278	961	278	15	50	1	385	590	385	181	117
		2	739	739	124	124		2	530	530	241	241	
36,0	70	1	301	1014	301	15	53	1	410	672	410	148	128
		2	782	782	130	130		2	596	596	225	225	
40,5	75	1	308	1079	308	15	56	1	430	756	430	103	136
		2	825	825	126	126		2	661	661	199	199	

3.4.2.2 **Centerballasts and cornerloads acc. to DIN 15019**

for a travelling tower crane on an undercarriage
without climbing drive



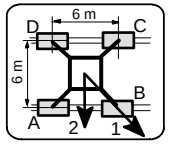


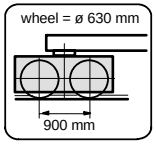
UW 260.3 **Corner distance 6,0 m x 6,0 m** **Jib 40 m**

tower height [m]	centerballasts [t]	jib position	crane in service, torque moment: **320** 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	50	1	269	752	269	15	45	1	329	420	329	237	96
		2	611	611	139	139		2	393	393	264	264	
13,5	50	1	256	795	256	15	46	1	333	457	333	210	100
		2	630	630	128	128		2	421	421	246	246	
18,0	50	1	242	843	242	15	48	1	338	496	338	179	105
		2	652	652	116	116		2	450	450	226	226	
22,5	60	1	275	894	275	15	50	1	367	568	367	166	112
		2	700	700	127	127		2	510	510	225	225	
27,0	65	1	281	951	281	15	51	1	384	633	384	136	118
		2	737	737	124	124		2	560	560	209	209	
31,5	75	1	309	1013	309	15	53	1	414	714	414	114	125
		2	789	789	131	131		2	626	626	202	202	
36,0	80	1	330	1070	330	15	56	1	439	798	439	79	136
		2	834	834	136	136		2	693	693	184	184	

3.4.2.3 **Centerballasts and cornerloads acc. to DIN 15019**

for a travelling tower crane on an undercarriage
without climbing drive



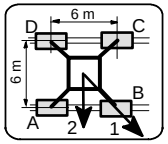


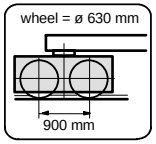
UW 260.3 **Corner distance 6,0 m x 6,0 m** **Jib 50 m**

tower height	centerballasts	jib position	crane in service torque moment: **320** 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	45	1	238	777	238	15	45	1	319	514	319	125	103
		2	586	586	48	48		2	457	457	182	182	
13,5	50	1	250	821	250	15	47	1	337	564	337	109	108
		2	619	619	49	49		2	498	498	175	175	
18,0	55	1	260	870	260	15	49	1	354	618	354	89	113
		2	653	653	49	49		2	541	541	166	166	
22,5	60	1	267	922	267	15	50	1	371	680	371	61	119
		2	689	689	47	47		2	589	589	152	152	
27,0	70	1	298	980	298	15	52	1	400	759	400	42	126
		2	739	739	56	56		2	654	654	147	147	
31,5	75	1	300	1044	300	15	54	1	406	842	406	15	133
		2	778	778	51	51		2	709	709	125	125	

3.4.2.4 **Centerballasts and cornerloads acc. to DIN 15019**

for a travelling tower crane on an undercarriage
without climbing drive



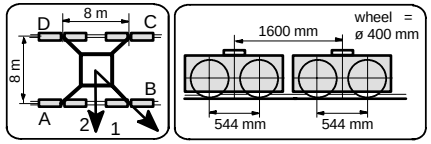


UW 260.3 **Corner distance 6,0 m x 6,0 m** **Jib 55 m**

tower height	centerballasts	jib position	crane in service torque moment: **320** 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	45	1	228	804	228	15	47	1	259	582	259	15	107
		2	598	598	40	40		2	499	499	144	144	
13,5	55	1	264	850	264	15	48	1	351	636	351	66	112
		2	644	644	53	53		2	552	552	149	149	
18,0	60	1	273	901	273	15	50	1	368	691	368	45	117
		2	678	678	52	52		2	596	596	140	140	
22,5	65	1	279	956	279	15	52	1	385	753	385	16	123
		2	715	715	50	50		2	645	645	124	124	
27,0	75	1	308	1016	308	15	54	1	395	853	395	15	130
		2	766	766	58	58		2	711	711	118	118	

3.4.3.1 **Centerballasts and cornerloads acc. to DIN 15019**

for a travelling tower crane on an undercarriage without climbing drive

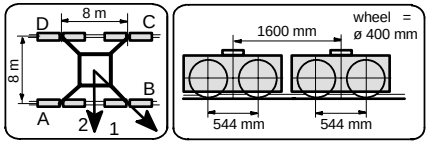


UW 480 **Corner distance 8 m x 8 m** **Jib 30 m**

tower height [m]	centerballasts [t]	jib position	crane in service, torque moment: 320 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	0	1	186	557	186	24	44	1	176	286	176	66	76
		2	455	455	119	119		2	270	270	212	212	
14,0	0	1	180	587	180	24	46	1	180	293	180	68	96
		2	470	470	113	113		2	267	267	224	224	
18,5	5	1	198	620	198	24	47	1	262	318	262	207	101
		2	498	498	118	118		2	302	302	223	223	
23,0	10	1	214	656	214	24	49	1	279	366	279	193	107
		2	528	528	123	123		2	341	341	218	218	
27,5	15	1	228	696	228	24	51	1	297	417	297	176	114
		2	559	559	126	126		2	382	382	211	211	
32,0	20	1	240	739	240	24	52	1	314	472	314	155	121
		2	592	592	127	127		2	425	425	202	202	
36,5	20	1	244	780	244	24	56	1	326	528	326	123	132
		2	618	618	125	125		2	469	469	183	183	
41,0	25	1	259	828	259	24	58	1	345	597	345	94	140
		2	655	655	127	127		2	523	523	167	167	
45,5	35	1	297	881	297	24	60	1	377	685	377	70	149
		2	707	707	140	140		2	595	595	160	160	
50,0	45	1	332	939	332	24	62	1	409	777	409	42	157
		2	760	760	151	151		2	670	670	149	149	
54,5	60	1	390	1002	390	24	65	1	450	892	450	24	166
		2	828	828	172	172		2	761	761	147	147	
59,0	70	1	431	1058	431	24	68	1	451	1029	451	24	176
		2	883	883	186	186		2	844	844	134	134	
63,5	90	1	515	1124	515	24	70	1	492	1180	492	24	185
		2	965	965	220	220		2	955	955	138	138	

3.4.3.2 **Centerballasts and cornerloads acc. to DIN 15019**

for a travelling tower crane on an undercarriage without climbing drive

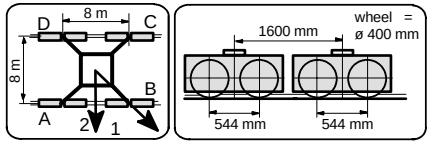


UW 480 **Corner distance 8 m x 8 m** **Jib 40 m**

tower height [m]	centerballasts [t]	jib position	crane in service, torque moment: 320 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	5	1	205	582	205	24	47	1	257	329	257	184	100
		2	481	481	124	124		2	308	308	206	206	
14,0	5	1	198	615	198	24	49	1	261	358	261	165	104
		2	497	497	117	117		2	330	330	193	193	
18,5	10	1	214	650	214	24	50	1	278	402	278	155	109
		2	527	527	122	122		2	365	365	191	191	
23,0	15	1	229	689	229	24	52	1	295	451	295	140	116
		2	558	558	125	125		2	405	405	186	186	
27,5	20	1	242	732	242	24	54	1	313	504	313	121	122
		2	590	590	127	127		2	448	448	177	177	
32,0	25	1	253	779	253	24	55	1	330	560	330	99	129
		2	624	624	127	127		2	492	492	167	167	
36,5	25	1	255	822	255	24	59	1	342	617	342	66	140
		2	652	652	124	124		2	536	536	147	147	
41,0	30	1	268	874	268	24	61	1	361	686	361	37	149
		2	690	690	124	124		2	591	591	132	132	
45,5	45	1	329	930	329	24	63	1	405	788	405	24	157
		2	755	755	148	148		2	676	676	136	136	
50,0	55	1	363	991	363	24	65	1	404	920	404	24	165
		2	810	810	158	158		2	754	754	121	121	
54,5	75	1	444	1058	444	24	68	1	447	1062	447	24	174
		2	892	892	190	190		2	862	862	128	128	
59,0	95	1	601	1129	601	73	71	1	494	1208	494	24	184
		2	974	974	228	228		2	973	973	136	136	
63,5	120	1	671	1236	671	107	73	1	554	1368	554	24	194
		2	1070	1070	272	272		2	1101	1101	150	150	

3.4.3.3 **Centerballasts and cornerloads acc. to DIN 15019**

for a travelling tower crane on an undercarriage without climbing drive

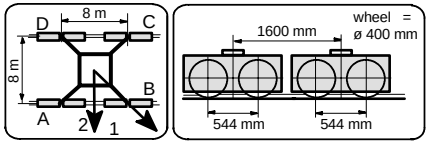


UW 480 **Corner distance 8 m x 8 m** **Jib 50 m**

tower height [m]	centerballasts [t]	jib position	crane in service torque moment: **320** 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	5	1	203	601	203	24	48	1	260	410	260	110	107
		2	467	467	113	113		2	366	366	154	154	
14,0	5	1	195	634	195	24	49	1	265	440	265	90	112
		2	484	484	106	106		2	388	388	141	141	
18,5	10	1	211	671	211	24	51	1	282	484	282	79	117
		2	513	513	110	110		2	425	425	138	138	
23,0	15	1	225	710	225	24	53	1	299	535	299	62	123
		2	544	544	113	113		2	466	466	131	131	
27,5	20	1	237	754	237	24	54	1	316	590	316	42	130
		2	577	577	115	115		2	509	509	122	122	
32,0	25	1	247	802	247	24	56	1	326	655	326	24	137
		2	611	611	115	115		2	556	556	110	110	
36,5	30	1	275	845	275	24	59	1	329	747	329	24	148
		2	650	650	124	124		2	613	613	102	102	
41,0	40	1	313	898	313	24	62	1	342	850	342	24	156
		2	701	701	138	138		2	681	681	98	98	
45,5	60	1	398	956	398	24	64	1	399	963	399	24	165
		2	779	779	174	174		2	778	778	115	115	
50,0	80	1	481	1019	481	24	66	1	447	1096	447	24	173
		2	858	858	209	209		2	882	882	125	125	
54,5	100	1	558	1089	558	27	68	1	485	1249	485	24	182
		2	940	940	241	241		2	994	994	128	128	
59,0	125	1	631	1192	631	69	71	1	552	1403	552	24	192
		2	1034	1034	292	292		2	1121	1121	146	146	

3.4.3.4 **Centerballasts and cornerloads acc. to DIN 15019**

for a travelling tower crane on an undercarriage without climbing drive



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

tower height [m]	centerballasts [t]	jib position	crane in service torque moment: **320** 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	5	1	196	621	196	24	49	1	262	454	262	70	111
		2	473	473	111	111		2	398	398	126	126	
14,0	10	1	212	656	212	24	51	1	279	497	279	61	116
		2	502	502	116	116		2	433	433	125	125	
18,5	15	1	228	694	228	24	53	1	296	542	296	49	121
		2	532	532	120	120		2	470	470	122	122	
23,0	20	1	241	735	241	24	54	1	313	594	313	32	127
		2	563	563	123	123		2	512	512	114	114	
27,5	25	1	252	781	252	24	56	1	316	663	316	24	134
		2	596	596	124	124		2	556	556	104	104	
32,0	30	1	262	830	262	24	58	1	308	748	308	24	141
		2	631	631	124	124		2	603	603	91	91	
36,5	35	1	288	875	288	24	61	1	310	841	310	24	152
		2	671	671	133	133		2	660	660	83	83	
41,0	50	1	350	930	350	24	63	1	347	947	347	24	160
		2	735	735	158	158		2	742	742	90	90	
45,5	70	1	435	990	435	24	66	1	403	1062	403	24	169
		2	813	813	194	194		2	840	840	106	106	
50,0	90	1	516	1054	516	24	68	1	454	1189	454	24	177
		2	893	893	228	228		2	942	942	119	119	
54,5	115	1	597	1148	597	47	70	1	519	1337	519	24	186
		2	988	988	272	272		2	1064	1064	136	136	