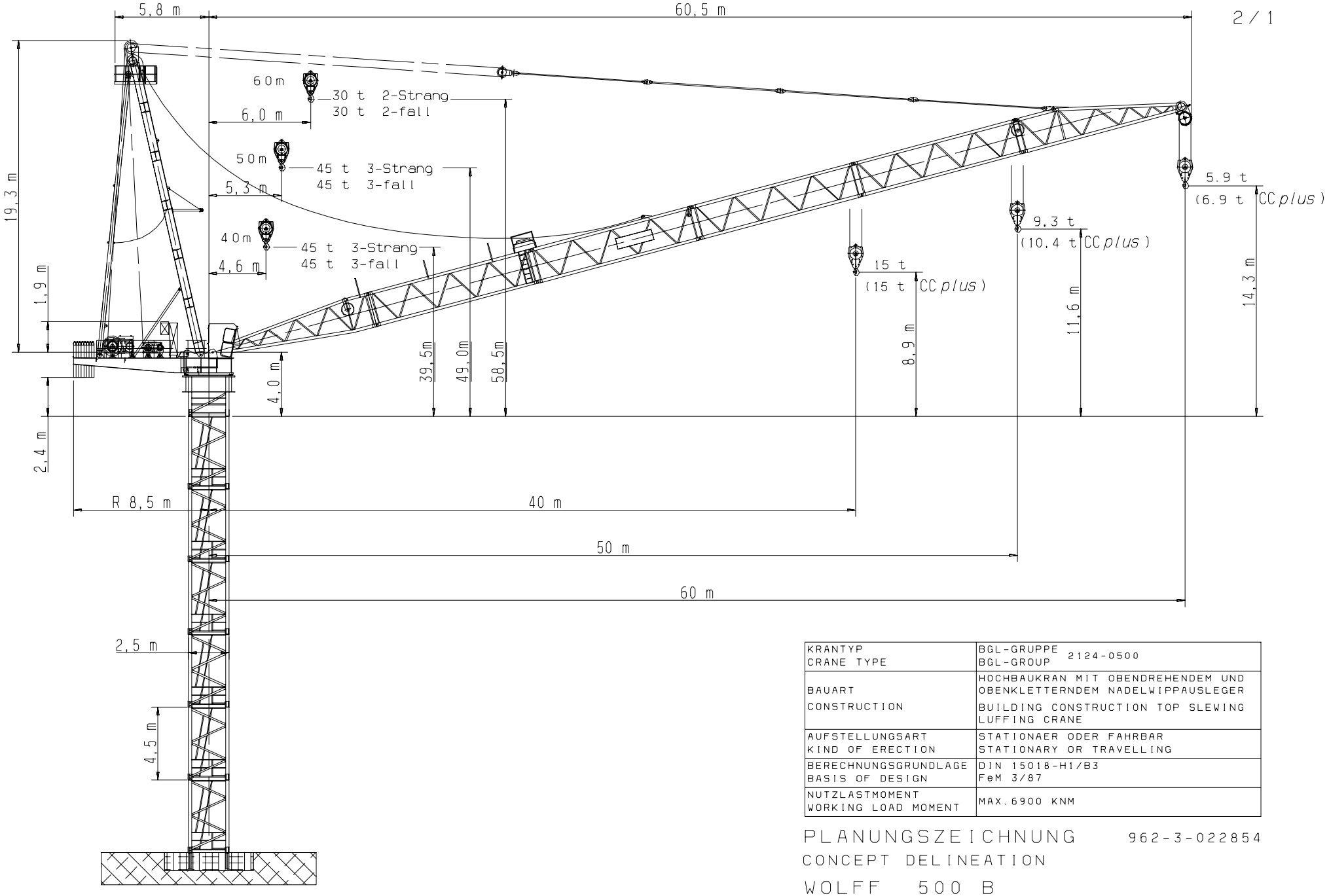


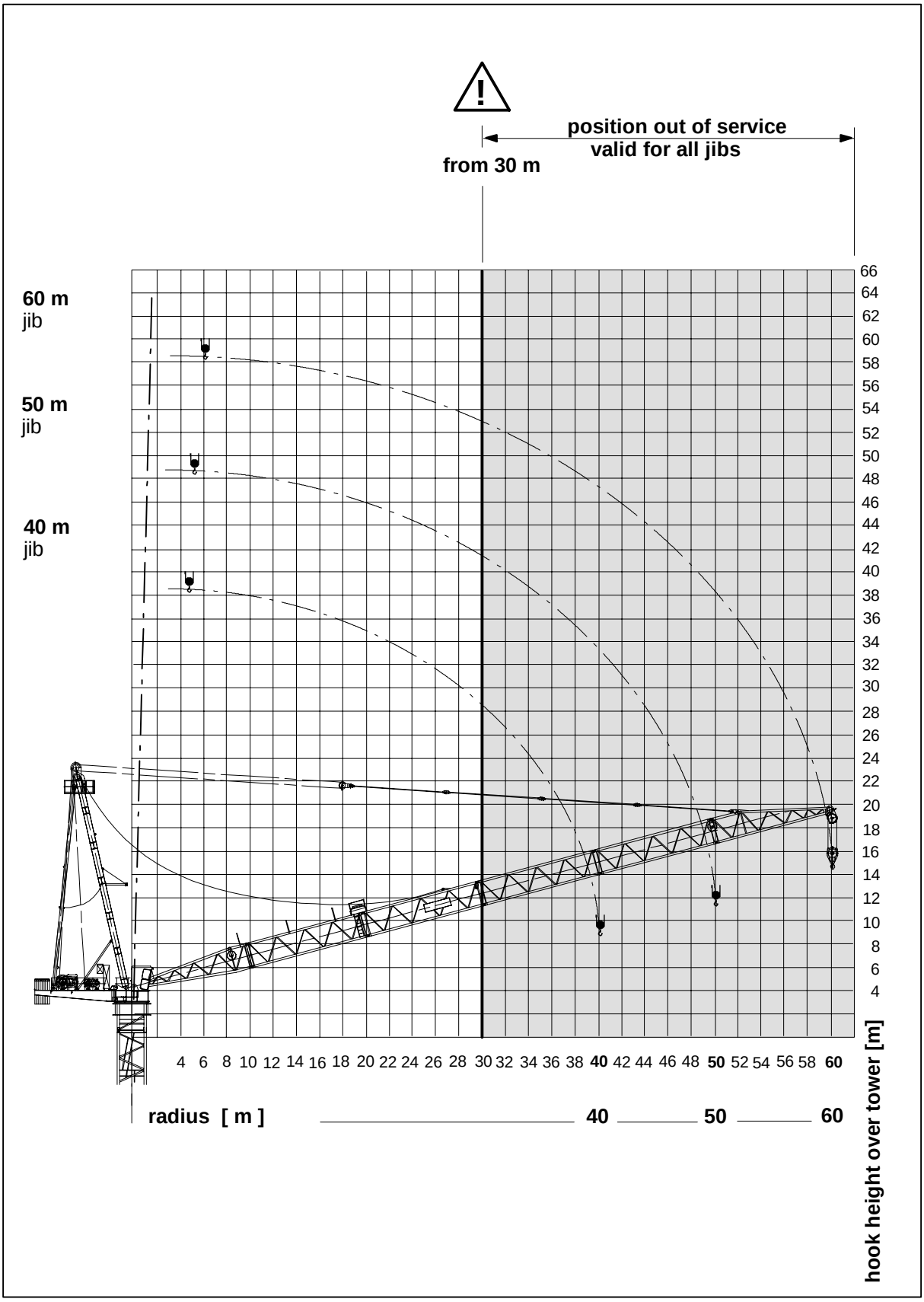
KRANTYP CRANE TYPE	BGL-GRUPPE BGL-GROUP 2124-0500
BAUART CONSTRUCTION	HOCHBAUKRAN MIT OBENDREHENDEM UND OBENKLETTERNDEM NADELWIPPAUSLEGER BUILDING CONSTRUCTION TOP SLEWING LUFFING CRANE
AUFSTELLUNGSART KIND OF ERECTION	STATIONAER ODER FAHRBAR STATIONARY OR TRAVELLING
BERECHNUNGSGRUNDLAGE BASIS OF DESIGN	DIN 15018-H1/B3 FeM 3/87
NUTZLASTMOMENT WORKING LOAD MOMENT	MAX.6900 KNM

PLANUNGSZEICHNUNG 962-3-022854

CONCEPT DELINEATION

WOLFF 500 B

2.1.2 Hook positions



2.2.1 **Load capacity table**

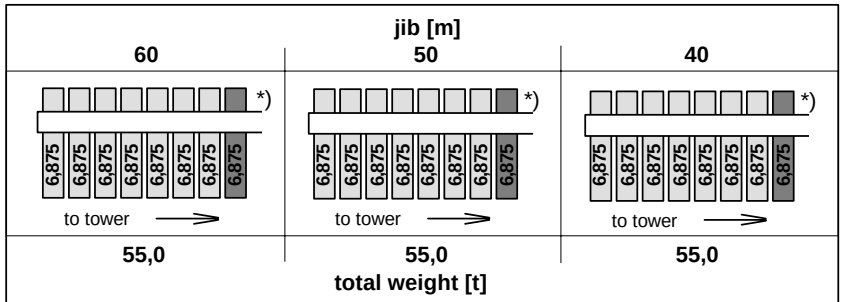
length of jib [m]	radius [m]		30	35	40	45	50	55	60	load capacity [t]
50	5,3 – 13,0	45,0	16,3	13,1	10,8	9,0	**7,5**			
40	4,6 – 14,0		18,8	15,6	**13,1**					

length of jib [m]	radius [m]		30	35	40	45	50	55	60	load capacity [t]
60	6,0 – 18,0	30,0	15,7	12,7	10,4	8,6	7,1	6,0	**5,0**	
50	5,3 – 20,0		18,0	14,6	12,0	10,0	**8,4**			
40	4,6 – 21,0		19,9	16,5	**14,0**					

length of jib [m]	radius [m]		30	35	40	45	50	55	60	load capacity [t]
60	6,0 – 33,0	15,0	15,0	13,8	11,5	9,6	8,1	6,9	**5,9**	
50	5,3 – 36,0		15,0	15,0	13,0	10,9	**9,3**			
40	4,6 – 40,0		15,0	15,0	**15,0**					

The load capacities refer to a tower height of 45,0 m. With greater tower heights the safe working load will be minimized by the additional weight of the hoisting rope (with 3 fall operation = 15,51 kg per meter hook path, with 2 fall operation = 10,34 kg per meter hook path, with 1 fall operation = 5,17 kg per meter hook path).

Arrangement of counterweights



*) Attention: Intermediate ballasting see erection section 5.

2.2.2 **Load capacity table**

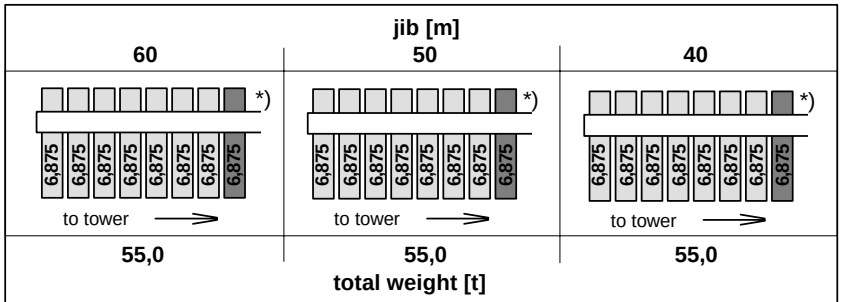
length of jib [m]	radius [m]		30	35	40	45	50	55	60	load capacity [t]
50	5,3 – 13,5	45,0	17,6	14,4	12,0	10,1	**8,6**			
40	4,6 – 14,5		20,1	16,8	**14,3**					

length of jib [m]	radius [m]		30	35	40	45	50	55	60	load capacity [t]
60	6,0 – 19,0	30,0	17,1	13,9	11,6	9,7	8,2	7,0	**6,0**	
50	5,3 – 21,0		19,4	15,9	13,2	11,1	**9,5**			
40	4,6 – 22,0		21,2	17,8	**15,2**					

length of jib [m]	radius [m]		30	35	40	45	50	55	60	load capacity [t]
60	6,0 – 35,0	15,0	15,0	15,0	12,6	10,7	9,2	7,9	**6,9**	
50	5,3 – 38,0		15,0	15,0	14,0	12,0	**10,4**			
40	4,6 – 40,0		15,0	15,0	**15,0**					

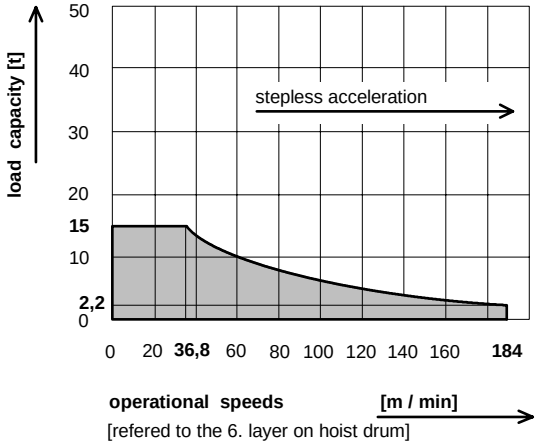
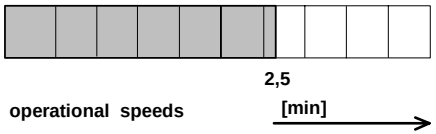
The load capacities refer to a tower height of 45,0 m. With greater tower heights the safe working load will be minimized by the additional weight of the hoisting rope (with 3 fall operation = 15,51 kg per meter hook path, with 2 fall operation = 10,34 kg per meter hook path, with 1 fall operation = 5,17 kg per meter hook path).

Arrangement of counterweights

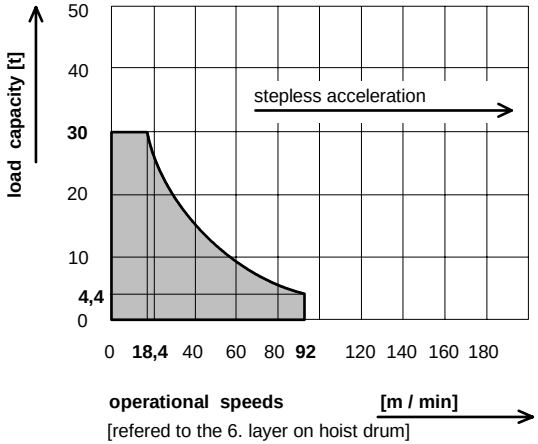
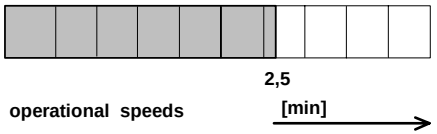


*) Attention: Intermediate ballasting see erection section 5.

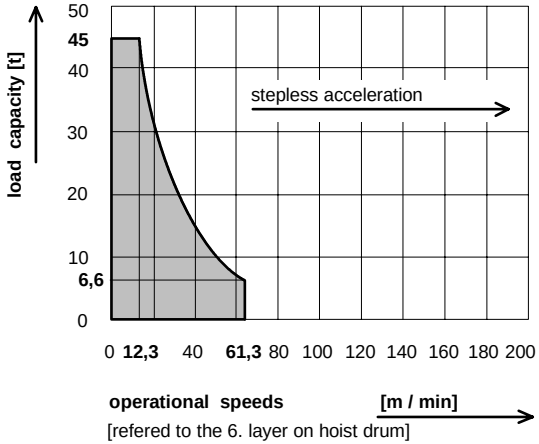
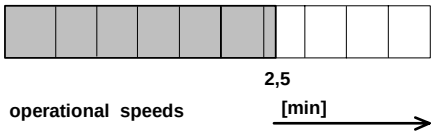
2.2.2.1 **Operational speeds** — 400 V, 50 Hz

drive [model]	operational speeds load capacity [1-fall operation]	max. lift [m]	output [kW]	total output [kVA]
Hw 30110 FU	**hoisting**	**550**	**110**	
				**200** total output for a simmultaneity factor of 0,8
Ew 1875 FU	**jib UP - DOWN**		**75**	
				
Dw	**slewing**	**2 x**	**6,5**	

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

drive [model]	operational speeds load capacity [2-fall operation]	max. lift [m]	output [kW]	total output [kVA]
Hw 30110 FU	**hoisting**	**270**	**110**	
				**200** total output for a simmultaneity factor of 0,8
Ew 1875 FU	**jib UP - DOWN**		**75**	
				
Dw	**slewing**	**2 x**	**6,5**	

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

drive [model]	operational speeds load capacity [3-fall operation]	max. lift [m]	output [kW]	total output [kVA]
Hw 30110 FU	**hoisting**	**180**	**110**	
				**200** total output for a simmultaneity factor of 0,8
Ew 1875 FU	**jib UP - DOWN**		**75**	
				
Dw	**slewing**	**2 x**	**6,5**	

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

radius [m]	length of jib 40 m	50 m	60 m
25,0	15000	15000	15000
26,0	15000	15000	15000
27,0	15000	15000	15000
28,0	15000	15000	15000
29,0	15000	15000	15000
30,0	15000	15000	15000
31,0	15000	15000	15000
32,0	15000	15000	15000
33,0	15000	15000	15000
34,0	15000	15000	14410
35,0	15000	15000	13800
36,0	15000	15000	13320
37,0	15000	14450	12810
38,0	15000	13930	12340
39,0	15000	13430	11890
40,0	15000	13000	11500
41,0		12520	11050
42,0		12090	10670
43,0		11690	10300
44,0		11300	9940
45,0		10900	9600
46,0		10580	9290
47,0		10240	8980
48,0		9910	8680
49,0		9600	8400
50,0		9300	8100
51,0			7860
52,0			7610
53,0			7370
54,0			7140
55,0			6900
56,0			6690
57,0			6490
58,0			6280
59,0			6090
60,0			5900

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

radius	length of jib		
[m]	40 m	50 m	60 m
25,0	15000	15000	15000
26,0	15000	15000	15000
27,0	15000	15000	15000
28,0	15000	15000	15000
29,0	15000	15000	15000
30,0	15000	15000	15000
31,0	15000	15000	15000
32,0	15000	15000	15000
33,0	15000	15000	15000
34,0	15000	15000	15000
35,0	15000	15000	15000
36,0	15000	15000	14460
37,0	15000	15000	13950
38,0	15000	15000	13470
39,0	15000	14510	13010
40,0	15000	14000	12600
41,0		13600	12160
42,0		13180	11760
43,0		12770	11380
44,0		12390	11020
45,0		12000	10700
46,0		11670	10350
47,0		11330	10040
48,0		11010	9740
49,0		10700	9450
50,0		10400	9200
51,0			8900
52,0			8650
53,0			8400
54,0			8160
55,0			7900
56,0			7710
57,0			7500
58,0			7290
59,0			7090
60,0			6900

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

radius	length of jib		
[m]	40 m	50 m	60 m
13,0	30000	30000	30000
14,0	30000	30000	30000
15,0	30000	30000	30000
16,0	30000	30000	30000
17,0	30000	30000	30000
18,0	30000	30000	30000
19,0	30000	30000	28120
20,0	30000	30000	26430
21,0	30000	28290	24900
22,0	28470	26730	23510
23,0	27070	25300	22240
24,0	25790	24000	21070
25,0	24000	22800	20000
26,0	23520	21690	19010
27,0	22520	20670	18100
28,0	21580	19710	17250
29,0	20710	18830	16450
30,0	19900	18000	15700
31,0	19130	17230	15020
32,0	18420	16500	14380
33,0	17750	15820	13770
34,0	17120	15180	13190
35,0	16500	14600	12700
36,0	15970	14000	12140
37,0	15430	13460	11660
38,0	14930	12950	11200
39,0	14450	12460	10770
40,0	14000	12000	10400
41,0		11560	9970
42,0		11140	9590
43,0		10740	9240
44,0		10360	8900
45,0		10000	8600
46,0		9650	8260
47,0		9320	7960
48,0		9000	7680
49,0		8690	7410
50,0		8400	7100
51,0			6890
52,0			6650
53,0			6420
54,0			6190
55,0			6000
56,0			5770
57,0			5560
58,0			5370
59,0			5180
60,0			5000

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

radius [m]	length of jib 40 m	50 m	60 m
13,0	30000	30000	30000
14,0	30000	30000	30000
15,0	30000	30000	30000
16,0	30000	30000	30000
17,0	30000	30000	30000
18,0	30000	30000	30000
19,0	30000	30000	30000
20,0	30000	30000	28240
21,0	30000	30000	26660
22,0	30000	28390	25210
23,0	28570	26930	23890
24,0	27260	25580	22680
25,0	26050	24350	21570
26,0	24940	23200	20540
27,0	23910	22150	19590
28,0	22950	21160	18710
29,0	22060	20250	17890
30,0	21200	19400	17100
31,0	20450	18600	16400
32,0	19720	17850	15730
33,0	19040	17150	15100
34,0	18390	16490	14510
35,0	17800	15900	13900
36,0	17210	15270	13420
37,0	16670	14720	12910
38,0	16150	14190	12440
39,0	15660	13690	11990
40,0	15200	13200	11600
41,0		12760	11150
42,0		12330	10770
43,0		11920	10400
44,0		11520	10040
45,0		11100	9700
46,0		10790	9390
47,0		10450	9080
48,0		10120	8780
49,0		9800	8500
50,0		9500	8200
51,0			7960
52,0			7710
53,0			7470
54,0			7240
55,0			7000
56,0			6790
57,0			6590
58,0			6380
59,0			6190
60,0			6000

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

radius [m]	length of jib 40 m	50 m	60 m
13,0	45000	45000	
14,0	45000	41380	
15,0	41730	38240	
16,0	38870	35500	
17,0	36340	33080	
18,0	34090	30920	
19,0	32090	29000	
20,0	30280	27260	
21,0	28640	25700	
22,0	27150	24270	
23,0	25800	22970	
24,0	24550	21770	
25,0	23410	20680	
26,0	22350	19660	
27,0	21370	18720	
28,0	20460	17850	
29,0	19620	17040	
30,0	18800	16300	
31,0	18090	15580	
32,0	17390	14910	
33,0	16740	14290	
34,0	16130	13700	
35,0	15600	13100	
36,0	15010	12620	
37,0	14490	12130	
38,0	14000	11660	
39,0	13540	11220	
40,0	13100	10800	
41,0		10390	
42,0		10010	
43,0		9650	
44,0		9300	
45,0		8960	
46,0		8650	
47,0		8340	
48,0		8050	
49,0		7770	
50,0		7500	

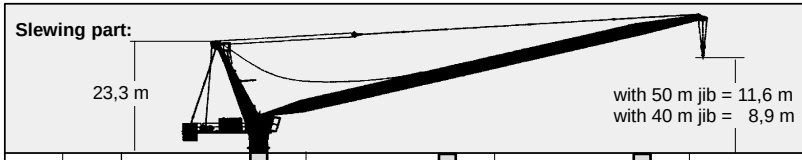
2.2.3.6 **Load capacity [kg] for 3 fall operation** **DIN 15018 / H1 - B3**

radius [m]	length of jib 40 m	50 m	60 m
13,0	45000	45000	
14,0	45000	43220	
15,0	43400	40010	
16,0	40490	37210	
17,0	37920	34730	
18,0	35640	32530	
19,0	33590	30570	
20,0	31760	28800	
21,0	30090	27190	
22,0	28580	25740	
23,0	27200	24400	
24,0	25940	23190	
25,0	24770	22060	
26,0	23700	21030	
27,0	22710	20070	
28,0	21780	19180	
29,0	20920	18350	
30,0	20120	17600	
31,0	19370	16850	
32,0	18660	16170	
33,0	18000	15540	
34,0	17380	14940	
35,0	16800	14400	
36,0	16240	13840	
37,0	15720	13330	
38,0	15220	12850	
39,0	14750	12400	
40,0	14300	12000	
41,0		11560	
42,0		11160	
43,0		10790	
44,0		10440	
45,0		10100	
46,0		9770	
47,0		9460	
48,0		9160	
49,0		8880	
50,0		8600	

2.2.7.1 **Tower configurations** **40 m - 50 m jib**

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

Slewing part:



tower elements	height of tower [m]	40,5 m height of tower	45,0 m height of tower	49,5 m height of tower
1	4,5	TV 25	TV 25	TV 25
2	9,0	TV 25	TV 25	TV 25
3	13,5	TV 25	TV 25	TV 25
4	18,0	TV 25	TV 25	TV 25
5	22,5	TV 25	TV 25	TV 25
6	27,0	TV 25	TV 25	TV 25
7	31,5	TV 25	TV 25	TV 25
8	36,0	TV 25	TV 25	TV 25
9	40,5	TV 25	TV 25	UVA 25
10	45,0	foundation anchor type AKZ 140	UVA 25	UV 25
11	49,5		foundation anchor type AKZ 140	UV 25S
				foundation anchor type FS

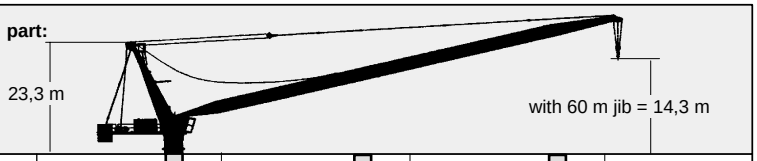
For data regarding foundation anchors see section 12.
The tower configurations are recommended for economic crane installation.

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.

2.2.7.2 Tower configurations 60 m jib

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

Slewing part:



tower elements	height of tower [m]			
1	4,5	TV 25	TV 25	TV 25
2	9,0	TV 25	TV 25	TV 25
3	13,5	TV 25	TV 25	TV 25
4	18,0	TV 25	TV 25	TV 25
5	22,5	TV 25	TV 25	TV 25
6	27,0	TV 25	TV 25	TV 25
7	31,5	TV 25	TV 25	TV 25
8	36,0	TV 25	TV 25	UVA 25
9	40,5	TV 25	UVA 25	UV 25
10	45,0		UV 25	UV 25
11	49,5			UV 25S
		40,5 m height of tower	45,0 m height of tower	49,5 m height of tower
		foundation anchor type AKZ 140	foundation anchor type AKZ 140	foundation anchor type FS

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

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 configurations 40 m jib

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

Slewing part:

tower elements	height of tower [m]	
1	4,5	TV 25
2	9,0	TV 25
3	13,5	TV 25
4	18,0	TV 25
5	22,5	TV 25
6	27,0	TV 25
7	31,5	UVA 25
8	36,0	UV 25
9	37,2	VR 2529
10	41,7	UV 29
11	46,2	UV 29
12	50,7	UV 29
13	55,2	UV 29
14	59,7	UV 29
15	64,2	UV 29
16	74,2	BT 29
		74,2 m height of tower
		foundation anchor type FUA – BT 29

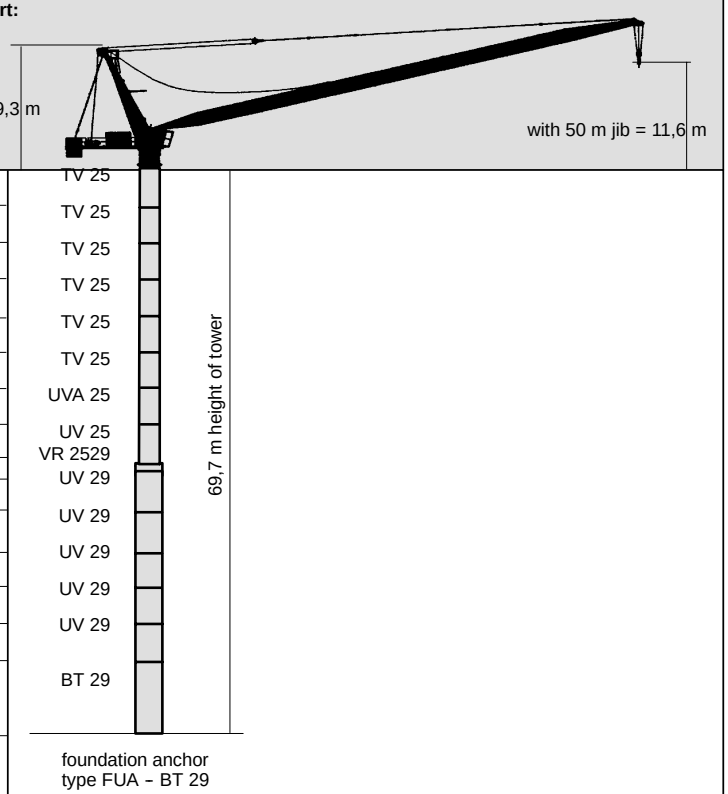
For data regarding foundation anchors see section 12.
The tower configurations are recommended for economic crane installation.

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 configurations** **50 m jib**

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

Slewing part:



tower elements	height of tower [m]	
1	4,5	TV 25
2	9,0	TV 25
3	13,5	TV 25
4	18,0	TV 25
5	22,5	TV 25
6	27,0	TV 25
7	31,5	UVA 25
8	36,0	UV 25
9	37,2	VR 2529
10	41,7	UV 29
11	46,2	UV 29
12	50,7	UV 29
13	55,2	UV 29
14	59,7	UV 29
15	69,7	BT 29

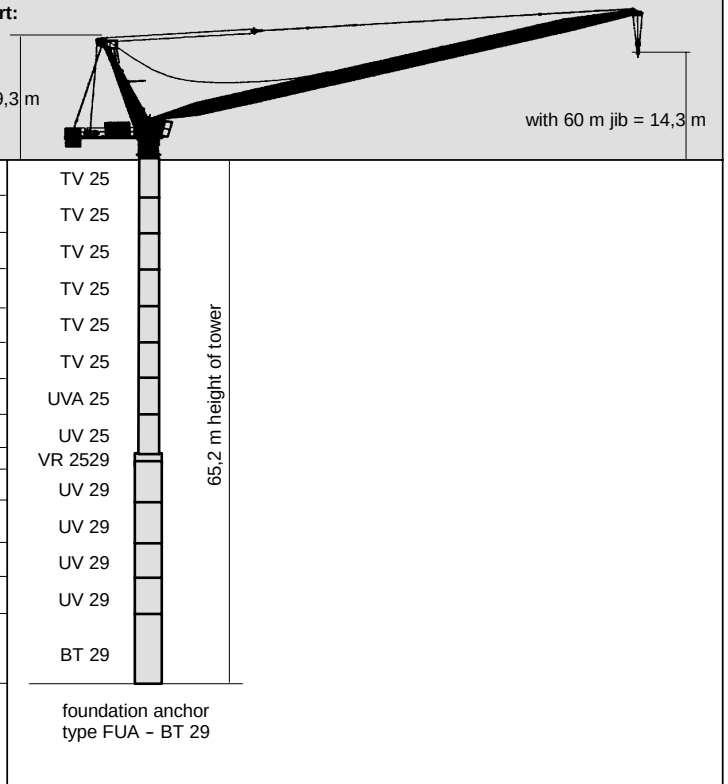
For data regarding foundation anchors see section 12.
The tower configurations are recommended for economic crane installation.

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 configurations** **60 m jib**

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

Slewing part:



tower elements	height of tower [m]	
1	4,5	TV 25
2	9,0	TV 25
3	13,5	TV 25
4	18,0	TV 25
5	22,5	TV 25
6	27,0	TV 25
7	31,5	UVA 25
8	36,0	UV 25
9	37,2	VR 2529
10	41,7	UV 29
11	46,2	UV 29
12	50,7	UV 29
13	55,2	UV 29
14	65,2	BT 29

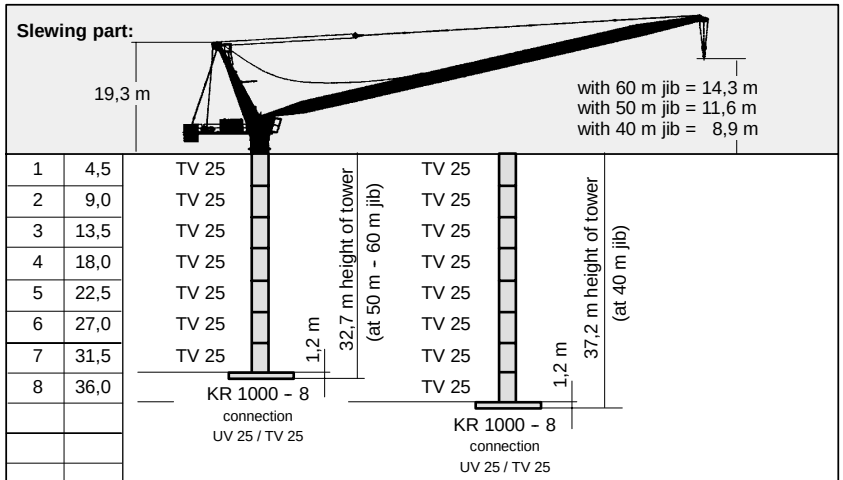
For data regarding foundation anchors see section 12.
The tower configurations are recommended for economic crane installation.

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 configurations

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

Slewing part:



tower elements	height of tower [m]	
1	4,5	TV 25
2	9,0	TV 25
3	13,5	TV 25
4	18,0	TV 25
5	22,5	TV 25
6	27,0	TV 25
7	31,5	TV 25
8	36,0	TV 25

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

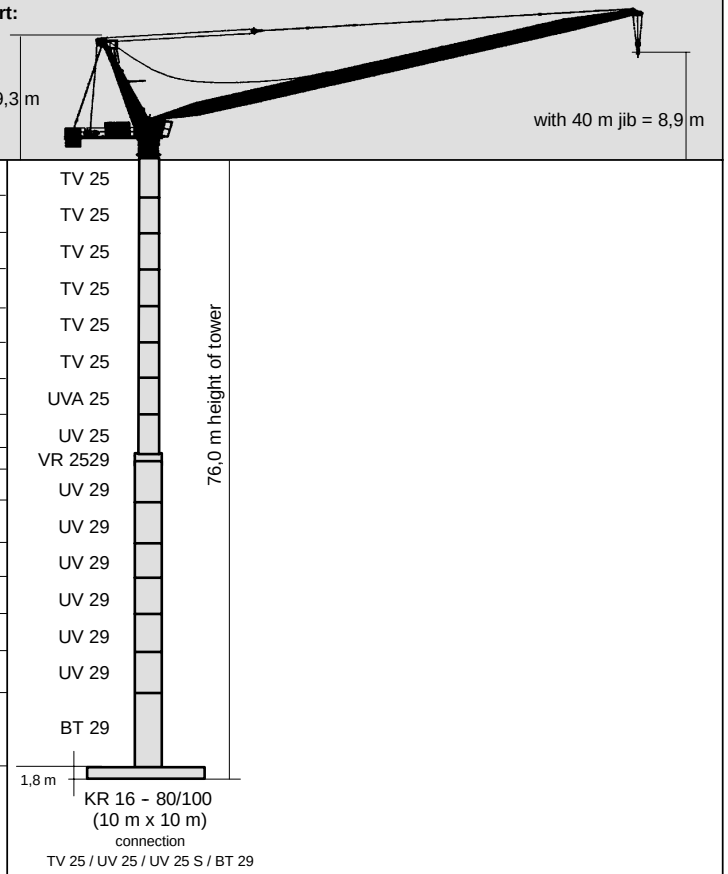
Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

962-4-027994E

2.2.8.2 Tower configurations 40 m jib

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

Slewing part:



tower elements	height of tower [m]	
1	4,5	TV 25
2	9,0	TV 25
3	13,5	TV 25
4	18,0	TV 25
5	22,5	TV 25
6	27,0	TV 25
7	31,5	UVA 25
8	36,0	UV 25
9	37,2	VR 2529
10	41,7	UV 29
11	46,2	UV 29
12	50,7	UV 29
13	55,2	UV 29
14	59,7	UV 29
15	64,2	UV 29
16	74,2	BT 29

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

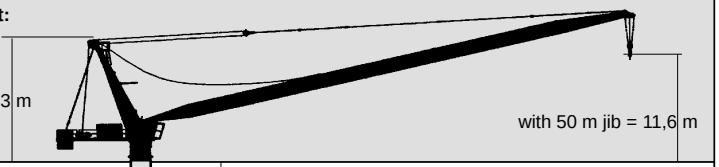
Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

962-4-027030E

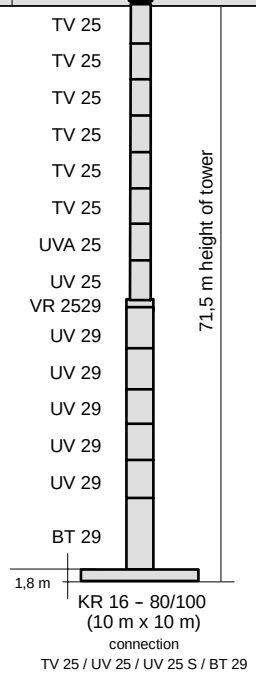
2.2.8.3 **Tower configurations** **50 m jib**

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

Slewing part:



tower elements	height of tower [m]	
1	4,5	TV 25
2	9,0	TV 25
3	13,5	TV 25
4	18,0	TV 25
5	22,5	TV 25
6	27,0	TV 25
7	31,5	UVA 25
8	36,0	UV 25
9	37,2	VR 2529
10	41,7	UV 29
11	46,2	UV 29
12	50,7	UV 29
13	55,2	UV 29
14	59,7	UV 29
15	69,7	BT 29



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

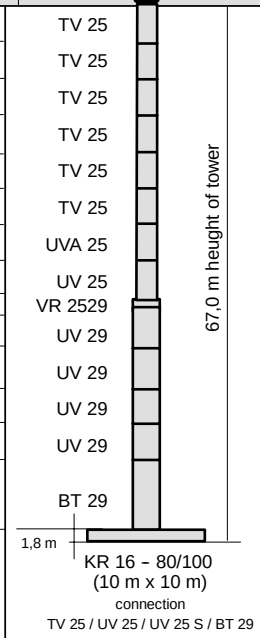
Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

2.2.8.4 **Tower configurations** **jib 60 m**

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

Slewing part:

tower elements	heuight of tower [m]	
1	4,5	TV 25
2	9,0	TV 25
3	13,5	TV 25
4	18,0	TV 25
5	22,5	TV 25
6	27,0	TV 25
7	31,5	UVA 25
8	36,0	UV 25
9	37,2	VR 2529
10	41,7	UV 29
11	46,2	UV 29
12	50,7	UV 29
13	55,2	UV 29
14	65,2	BT 29



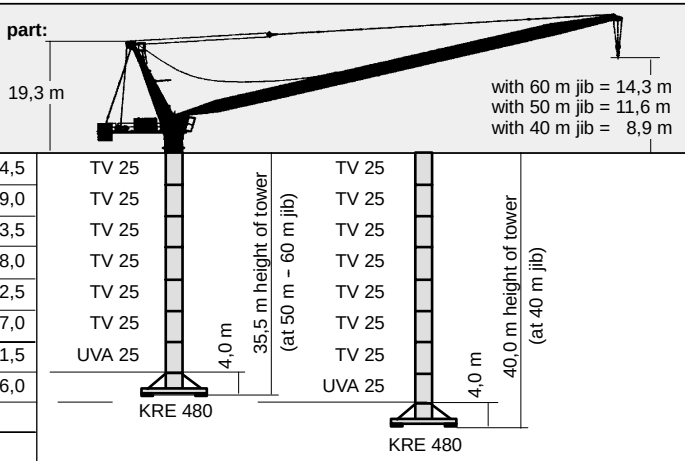
For data regarding cross frames see section 12.
The tower configurations are recommended for economic crane installation.

Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

2.2.9.1 **Tower configuratins**

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

Slewing part:



tower elements	height of tower [m]		
1	4,5	TV 25	TV 25
2	9,0	TV 25	TV 25
3	13,5	TV 25	TV 25
4	18,0	TV 25	TV 25
5	22,5	TV 25	TV 25
6	27,0	TV 25	TV 25
7	31,5	UVA 25	TV 25
8	36,0		UVA 25

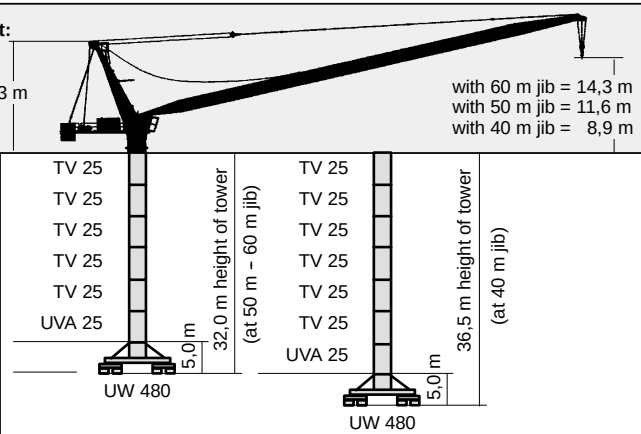
For data regarding cross frame elements see section 12.
The tower configurations are recommended for economic crane installation.

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.

2.2.10.1 **Tower configurations**

for a travelling crane without climbing device

Slewing part:



tower elements	height of tower [m]		
1	4,5	TV 25	TV 25
2	9,0	TV 25	TV 25
3	13,5	TV 25	TV 25
4	18,0	TV 25	TV 25
5	22,5	TV 25	TV 25
6	27,0	UVA 25	TV 25
7	31,5		UVA 25

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

Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

2.3.1 **Colli list**

Item	pcs.	Designation	Colli	L (m)	B (m)	H (m)	weight (kg)	volume (m^3)
1	1	tower top with platform and assembly rod		20,10	3,00	1,40	12300	84,42
2	1	support		2,54	2,40	1,15	400	7,01
3	1	slewing frame with slewing drive		3,13	3,00	1,56	8050	14,65
4	1	tower top lower part with slewing bearing		2,90	2,90	2,70	6800	22,71
5	1	driver's cabin		1,90	1,44	2,34	750	6,40
	1	driver's cabin suspension		2,28	1,87	0,54	320	2,30
6	1	counterjib complete *(unassembled)*		7,25 *7,25*	3,0 *3,0*	3,30 *1,5*	19700 *9200*	71,78
				hoisting drive with rope = 6,5 t *luffing drive with rope = 3 t* *switch cabinet = 1 t*				
7	1	jib part **1** with pin		10,55	3,10	2,20	2790	71,95
8	2	jib part **2** with pin		10,60	2,20	2,20	2280	51,30
9	1	jib part **3** with pin and WOLFF-signbord		10,60	2,20	2,30	2350	53,64

2.3.2 **Colli liste**

Item	pcs.	Designation	Colli	L (m)	B (m)	H (m)	weight (kg)	volume (m^3)
10	1	jib part **4** with pin,platform mount and bracings 2,25 m		10,40	2,20	2,60	3820	59.49
11	1	assembly platform for jib part 4 with fixing		2,70	1,0	1,90	216	5,13
12	1	assembly platform for jib bracing		2,55	2,6	1,55	315	10,28
13	1	hook block **15 t**		0,97	0,45	0,45	600	0,20
14	1	hook block **30 t**		0,90	0,30	1,96	1200	0,53
15	1	hook block **45 t**		0,90	0,40	1,96	1800	0,71
16	1	jib bracing 10 m (small parts)		10,30	0,38	0,33	445	1,30
17	1	assembly platform tower top lower part		2,80	1,80	1,72	340	8,67
18	1	standard handrail (small parts)		2,55	1,11	1,80	320	5,10
19	1	box (small parts)		1,60	0,90	0,80	600	1,15

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

2.5.1 **Assembly weights**

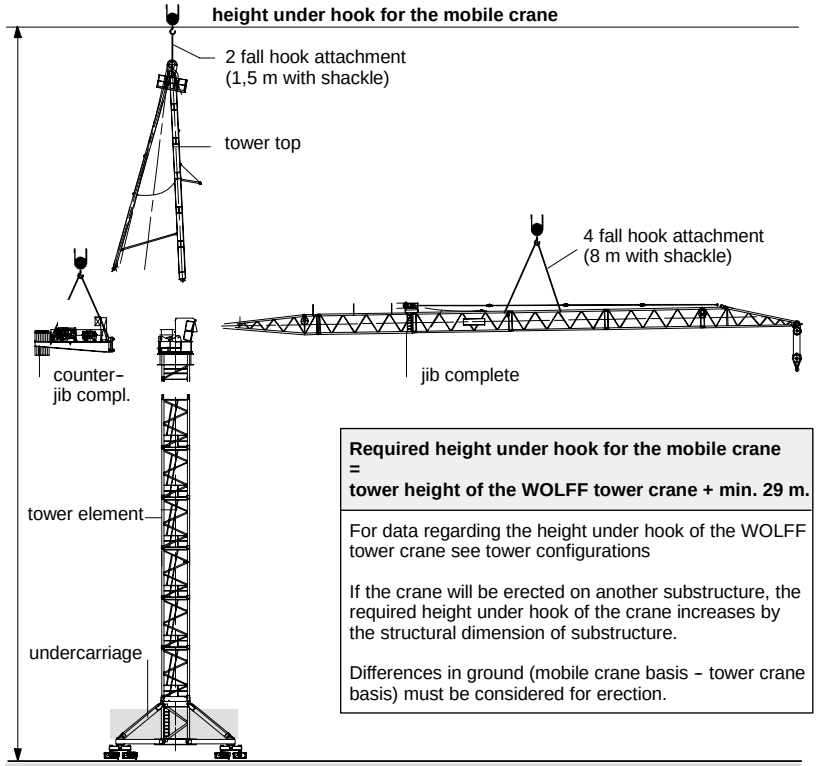
Tower top with support, assembly rod and platform			**12 300 kg**
Tower top – lower part slewing frame and lower part of tower top connected by ball race bearing, with 2 slewing drives, mechanical parts and standard posts			**16 800 kg**
Driver's cabin with driver's cabin suspension and standard handrails			**1 500 kg**
Counterjib with hoisting drive, derricking drive switch cabinet, resistors, platforms and standard handrails			**19 700 Kg**
Jib 60,0 m (consisting of jib parts 1/2/3/2/2/4) with mechanical parts, bracing brackets,pigeon trestles, assembly trestles – bracing brackets, assembly bracing ropes, assembly rope guidance and assembly platforms – jib part 4.			**18 350 kg**
Jib 50,0 m (consisting of jib parts 1/2/3/2/4) with mechanical parts, bracing brackets,pigeon trestles, assembly trestles – bracing brackets, assembly bracing ropes, assembly rope guidance and assembly platforms – jib part 4.			**15 550 kg**
Jib 40,0 m (consisting of jib parts 1/2/3/4) with mechanical parts, bracing brackets,pigeon trestles, assembly trestles – bracing brackets, assembly bracing ropes, assembly rope guidance and assembly platforms – jib part 4.			**12 750 kg**
Hook block	45 t	1 800 kg	
	30 t		**1 200 kg**
	15 t	600 kg	
Counterweights	8 x 6,875 t		**55 000 kg**
Assembly platform for assembly of the tower elements TV 25			**150 kg**
Assembly platform for assembly of the tower elements TV 33 – 5			**1 600 kg**

2.5.2 **Assembly weights**

Cross frame KR 1000 – 8 (without optional features)		**14 000 kg**
– 4 spigots TV 25		684 kg
Cross frame element KRE 480 compl.		**23 500 kg**
– base mast part	7 000 kg	
– swivel arms with corner bearings	6 200 kg	
– central ballast support with diagonal struts	9 260 kg	
– assembly platform, ladder and small parts	1 040 kg	
Cross frame element KRE 4120 compl.		**58 200 kg**
– cross frame base with pressure plate	19 220 kg	
– base mast part with switch cabinet	18 290 kg	
– diagonal struts	8 040 kg	
– central ballast support, long	7 040 kg	
– central ballast support, short	4 760 kg	
– box with small parts	330 kg	
– assembly platforms and ladder	520 kg	
Undercarriage UW 480 compl.		**34 000 kg**
– base mast part with switch cabinet	7 100 kg	
– swivel arms with traverse and subframe	16 000 kg	
– central ballast support with diagonal struts	9 260 kg	
– assembly platform, ladder and small parts	1 640 kg	
Undercarriage UW 4120 compl.		**74 900 kg**
– undercarriage base with pressure plate	34 500 kg	
– base mast part with switch cabinet	18 290 kg	
– diagonal struts	8 040 kg	
– central ballast support, long	7 040 kg	
– central ballast support, short	4 760 kg	
– fixing device for motor cable drum	385 kg	
– box with small parts	1 365 kg	
– assembly platforms and ladder	520 kg	

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

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



Required height under hook for the mobile crane
=
tower height of the WOLFF tower crane + min. 29 m.

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

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

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

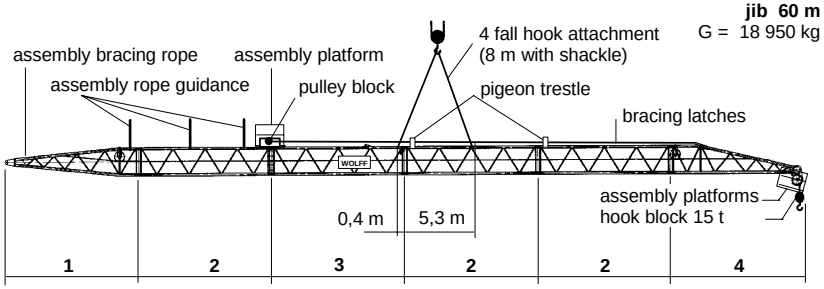
2.6.1.1 **Jib - suspension plan 60 m up to 40 m jib** **1 fall operation**

Danger!
The jib must be balanced and safely hang in horizontal position. The suspension points are to be labeled, old labels have to be removed. There mustn't be any loose parts on the jib.

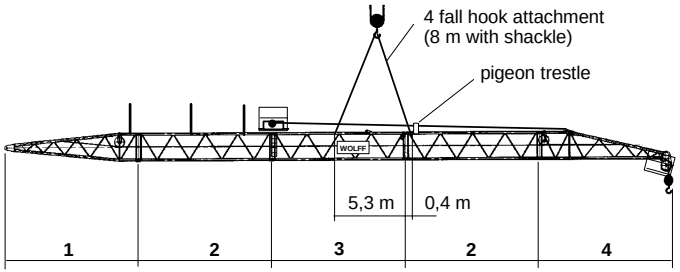
The parts of the jib are labeled with a building part identification at the top chord.

Lengths: jib part **1/2/3/4** = 10,0 m

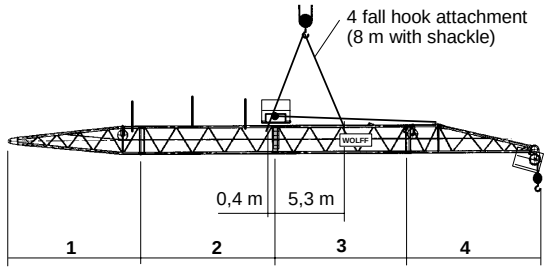
jib 60 m
G = 18 950 kg



jib 50 m
G = 16 150 kg



jib 40 m
G = 13 350 kg



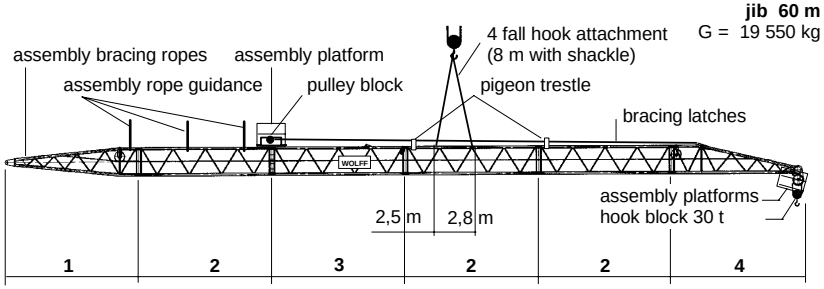
2.6.1.2 **Jib - suspension plan 60 m up to 40 m jib** **2 fall operation**

Danger!
The jib must be balanced and safely hang in horizontal position. The suspension points are to be labeled, old labels have to be removed. There mustn't be any loose parts on the jib.

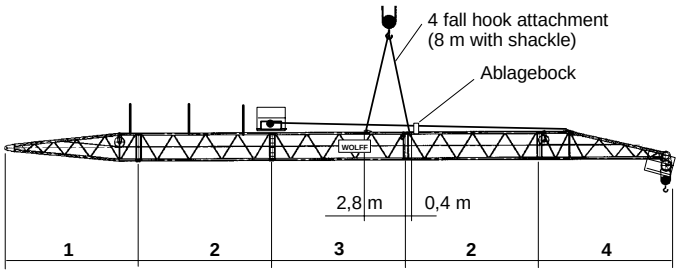
The parts of the jib are labeled with a building part identification at the top chord.

Lengths: jib part **1/2/3/4** = 10,0 m

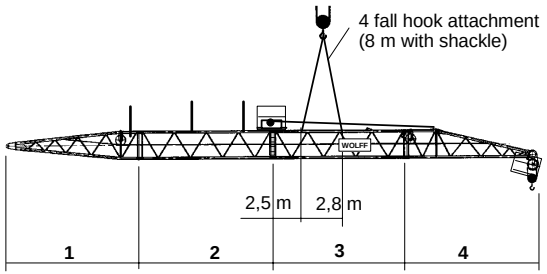
jib 60 m
G = 19 550 kg



jib 50 m
G = 16 750 kg



jib 40 m
G = 13 950 kg



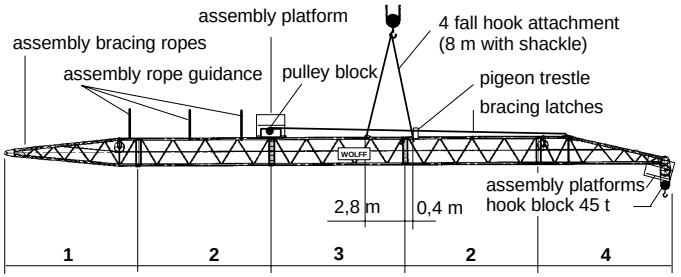
2.6.1.3 **Jib - suspension plan 50 m up to 40 m jib** **3 fall operation**

Danger!
The jib must be balanced and safely hang in horizontal position. The suspension points are to be labeled, old labels have to be removed. There mustn't be any loose parts on the jib.

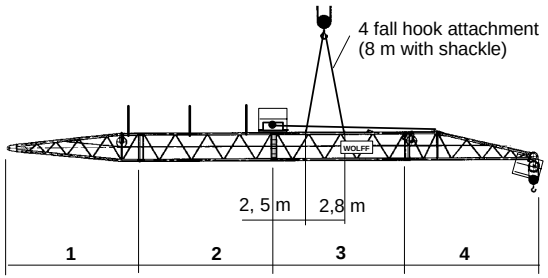
The parts of the jib are labeled with a building part identification at the top chord.

Lengths: jib part **1/2/3/4** = 10,0 m

jib 50 m
G = 17 350 kg



jib 40 m
G = 14 550 kg



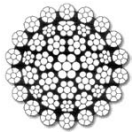
2.7.1.1 **Hoisting rope**

Cable Ø = 32 mm + 4% + 2%

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

First equipment

CASAR EUROLIFT -
non-twisting,
flexible hoisting rope
with compressed outer strands
with compressed steel cable core



nominal strength	**=**	**1770,0**	**N/mm²**
calc. breaking strength	**=**	**1025,5**	**N**
min. breaking strength	**=**	**843,4**	**kN**
weight per meter	**=**	**5,04**	**kg**

Design

langs-lay rope, left handed,
made from blank cable wire.

middle space factor	=	0,720
middle spinning loss factor	=	0,79
middle weight factor	=	0,86
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 320 m	**for crane with: operation .... 2 fall radius ..... 60 m tower height 40,5 m**

By lengthening the hook path by 1 tower element TV 25 the necessary cable length increases by **4,5 m** for **operation in 1 fall**, by **9,0 m** for **operation in 2 falls** and by **13,5 m** for **operation in 3 falls**.

!

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.

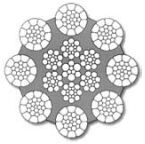
2.7.1.2 **Luffing rope**

Rope Ø = 22 mm + 4% + 2%

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

Factory equipment

CASAR TURBOPLAST -
cable with 8 strands
made out of compressed
strands (cable core)



nominal strength	**=**	**1770,0**	**N/mm²**
calc. breaking strength	**=**	**445,8**	**kN**
min. breaking strength	**=**	**384,0**	**kN**
weight per meter	**=**	**2,19**	**kg**

Design

langs-lay rope, right handed,
made from blank cable wire.

middle space factor	=	0,665
middle spinning loss factor	=	0,85
middle weight factor	=	0,87
total twist number	=	327

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 230 m	**for crane with: 40 m - 60 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.

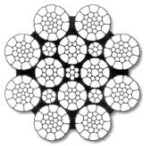
2.7.1.3 Assembly bracing rope

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
out of 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, Ø 50,5 mm

middle space factor	=	0,734
spinning loss factor	=	0,83
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 34,1 m	**for crane with: 40 m - 60 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 = 34,1 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.

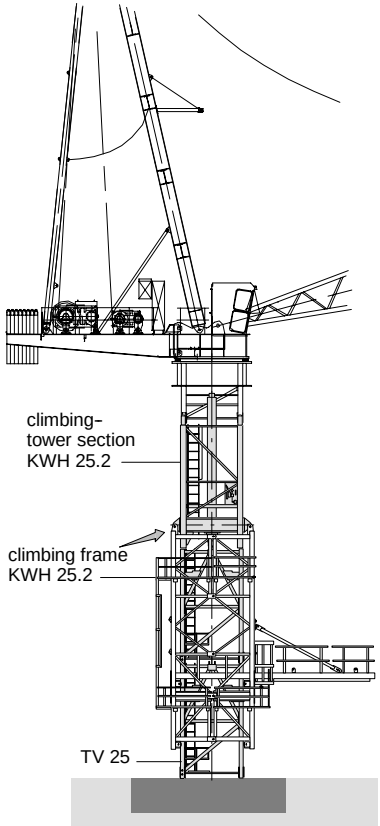
2.8.1 Insertable exterior climbing gear KWH 25.2

! **Attention!**
The erection of the climbing frame with the WOLFF - tower crane 500 B is possible with operation in 2-falls.

Details about climbing drive KWH 25.2 see additional equipment, section 12.

Min. height with stationary erection:
1 x climbing tower section
2 x tower elements TV 25
= 13,5 m tower height

Min. height with travelling erection:
1 x climbing tower section
2 x tower elements TV 25 + undercarriage
= ca. 18,5 m tower height



2.8.1.1 Table of balancing weights

WOLFF 500 B	**jib** 40 m	50 m	60 m
balancing weight load = 7,0 t *	35 m**	--	--
balancing weight TV 25 = 3,02	--	41 m	--
without balancing weight	--	--	47 m

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

** The indicated radius refers to the centre of the tower and shall be treated as standard value. Exact balancing will be achieved by travelling of trolley with tower element or load and may be checked by travelling apart free of mismatch at the joints of the tower.

-- balancing not possible.

⚠ **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 25.2).
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 internal climbing gear KSH 25**

For use of the WOLFF 500 B together with an internal climbing gear KSH 25 pay attention to the following tower configuration.

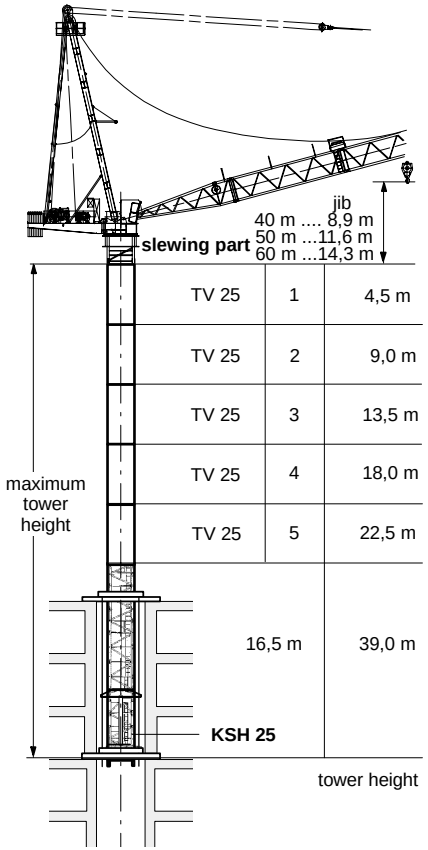
Informations about KSH 25 are given in a separate documentation in section 12, Additional Equipment.

! **Attention!**
The radii in the balancing weight table are given for operation in 2-falls with a hook block with a load capacity of 30 tons.

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

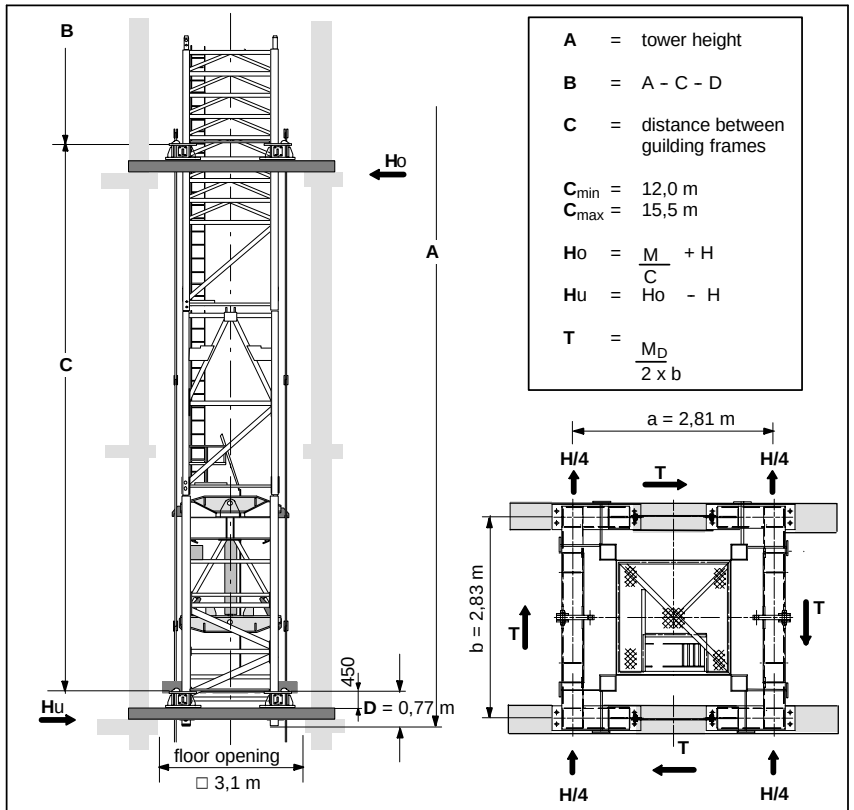
** The indicated radius refers to the centre of the tower and shall be treated as standard value. Exact balancing must achieved by travelling of jib with tower element or load and can checked by measuring the distance between corner posts and guide plates. This distance shall be equal at all four corner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

-- balancing not possible.



500 B	jib							
balancing load *	40 m **	50 m	60 m					
load = 7,00 t	36,0 m	--	--					
TV 25 = 3,02 t	--	42,5 m	--					
witout load	--	--	49,0 m					

2.8.2.2 **Fixed end forces in the building** **for hydraulic interior climbing drive KSH 25**



A = tower height

B = A - C - D

C = distance between guilding frames

C_{min} = 12,0 m
C_{max} = 15,5 m

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

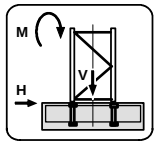
Hu = Ho - H

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

Fixed end forces in the building (kN) in sevice																
A(m)	38,5				34,0				29,5							
C(m)	12	13	14	15,5	12	13	14	15,5	12	13	14	15,5				
V	2079				2047				2015							
Ho	640	590	550	500	620	570	530	480	600	560	520	470				
Hu	580	530	490	440	560	510	470	420	550	500	460	410				
T	70				70				70							
Fixed end forces in the building (kN) out of service																
A(m)	38,5				34,0				29,5							
C(m)	12	13	14	15,5	12	13	14	15,5	12	13	14	15,5				
V	1620				1587				1555							
Ho	700	640	600	540	630	580	540	490	570	530	490	440				
Hu	480	420	380	320	420	380	330	280	370	330	290	240				
T	0				0				0							

3.1.1 **Foundation loads according 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 load **V** = vertical load
Permanent acting moment = **2840 kNm**

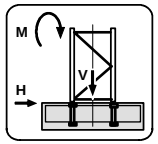


Foundation loads — Jib length 40 m

height under hook	Crane in service torque moment **440** 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	5780	37	1215	940	92	1215	2410	18	743
9,0	5930	39	1247	550	101	1247	2500	20	776
13,5	6100	42	1280	159	108	1280	2600	23	808
18,0	6300	44	1312	530	116	1312	2710	25	840
22,5	6520	46	1343	1150	125	1343	2840	27	872
27,0	6770	48	1376	1830	135	1376	2990	29	904
31,5	7040	50	1408	2560	145	1408	3150	32	936
36,0	7350	53	1440	3350	155	1440	3330	34	967
40,5	7690	55	1472	4220	165	1472	3520	36	1000
45,0	8040	57	1507	5140	175	1507	3730	38	1036
49,5	8410	60	1548	6120	185	1548	3950	41	1076
Attention! Tower configuration with basis tower BT 29									
51,7	8400	62	1616	6510	191	1616	4010	43	1144
56,2	8790	64	1662	7600	202	1662	4250	45	1190
60,7	9210	66	1709	8810	214	1709	4510	48	1236
65,2	9680	69	1755	10080	225	1755	4790	50	1290
69,7	10180	72	1802	11450	236	1802	5100	53	1330
74,2	10740	75	1848	12930	247	1848	5430	55	1375

3.1.2 **Foundation loads according 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 load **V** = vertical load
Permanent acting moment = **2840 kNm**

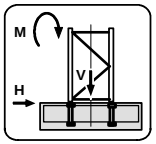


Foundation loads — Jib length 50 m

height under hook	Crane in service torque moment **440** 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	5820	41	1255	780	110	1255	4090	19	771
9,0	5980	43	1286	1150	117	1286	4180	21	803
13,5	6165	45	1318	1560	124	1318	4300	23	835
18,0	6375	47	1350	2000	131	1350	4420	25	867
22,5	6610	50	1382	2540	141	1382	4560	27	899
27,0	6870	52	1414	3140	151	1414	4730	30	931
31,5	7160	54	1446	3805	161	1446	4910	32	963
36,0	7490	56	1478	4670	171	1478	5110	34	995
40,5	7850	59	1510	5605	181	1510	5330	36	1027
45,0	8210	61	1546	6600	191	1546	5560	39	1063
49,5	8590	63	1587	7660	201	1587	5800	41	1104
Attention ! Tower configurration woth basis tower BT 29									
51,7	8600	65	1644	8010	202	1644	5840	43	1172
56,2	9000	68	1690	9190	212	1690	6110	45	1219
60,7	9450	70	1737	10470	224	1737	6400	48	1265
65,2	9970	73	1782	11830	236	1782	6710	51	1311
69,7	10600	75	1830	13290	247	1830	7050	53	1357

3.1.3 **Foundation loads according 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 load **V** = vertical load
Permanent acting moment = **2840 kNm**

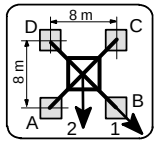


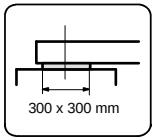
Foundation loads — Jib length 60 m

height under hook	Crane in service torque moment **440** 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	6060	44	1282	2650	120	1282	5470	19	791
9,0	6190	46	1314	3040	127	1314	5570	21	823
13,5	6350	48	1346	3465	134	1346	5680	24	855
18,0	6530	50	1378	3935	142	1378	5820	26	887
22,5	6735	52	1410	4500	152	1410	5970	28	919
27,0	7000	55	1442	5130	161	1442	6150	30	951
31,5	7310	57	1474	5830	171	1474	6340	33	983
36,0	7650	59	1506	6595	181	1506	6560	35	1015
40,5	8030	61	1538	7440	191	1538	6800	37	1047
45,0	8390	64	1578	8315	201	1578	7040	40	1087
49,5	8795	66	1618	9365	212	1618	7310	42	1127
Attention! Tower configuration with basis tower BT 29									
51,7	8820	68	1672	9730	213	1672	7340	44	1191
56,2	9250	71	1718	10980	222	1718	7630	46	1237
60,7	9710	73	1765	12350	235	1765	7940	48	1283
65,2	10220	76	1811	13810	245	1811	8280	51	1329

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

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



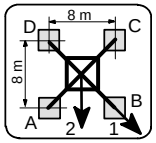


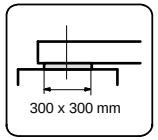
KR 1000 - 8 **Corner distance 8,0 m x 8,0 m** **Jib 40 m**

Tower height [m]	Centerballasts [t]	Jib position	Crane in service torque moment: **440** 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	404	1027	404	0	48	1	345	546	345	145	119
		2	822	822	96	96		2	513	513	414	414	
10,2	50	1	407	1054	407	0	50	1	353	557	353	150	126
		2	840	840	94	94		2	498	498	209	209	
14,7	50	1	407	1085	407	0	52	1	361	569	361	154	133
		2	861	861	327	327		2	508	508	214	214	
19,2	50	1	406	1120	406	0	55	1	369	582	369	157	140
		2	885	885	319	319		2	532	532	443	443	
23,7	50	1	402	1159	402	0	57	1	495	614	495	377	150
		2	911	911	309	309		2	579	579	411	411	
28,2	50	1	396	1204	396	0	59	1	503	683	503	324	160
		2	939	939	298	298		2	630	630	377	377	
32,7	50	1	387	1253	387	0	61	1	511	757	511	266	170
		2	968	968	284	284		2	685	685	338	338	
37,2	55	1	401	1307	401	0	64	1	532	848	532	215	179
		2	1013	1013	281	281		2	756	756	308	308	

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

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



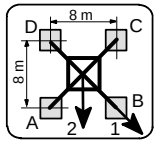


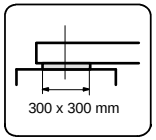
KR 1000 - 8 **Corner distance 8,0 m x 8,0 m** **Jib 50 m**

Tower height [m]	Centerballasts [t]	Jib position	Crane in service torque moment: **440** 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	45	1	389	1035	389	0	51	1	332	696	332	0	129
		2	819	819	87	87		2	586	586	94	94	
10,2	45	1	391	1064	391	0	54	1	344	704	344	0	136
		2	838	838	85	85		2	597	597	99	99	
14,7	45	1	390	1097	390	0	56	1	356	713	356	0	143
		2	857	857	81	81		2	608	608	104	104	
19,2	45	1	387	1135	387	0	58	1	364	726	364	2	150
		2	881	881	312	312		2	620	620	108	108	
23,7	45	1	382	1177	382	0	60	1	372	740	372	3	160
		2	908	908	301	301		2	658	658	322	322	
28,2	45	1	375	1224	375	0	63	1	498	789	498	207	170
		2	937	937	289	289		2	704	704	292	292	
32,7	45	1	365	1276	365	0	65	1	506	860	506	151	180
		2	968	968	274	274		2	757	757	255	255	

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

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



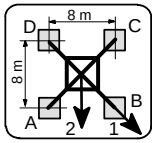


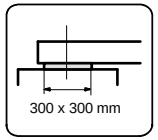
KR 1000 - 8 **Corner distance 8,0 m x 8,0 m** **Jib 60 m**

Tower height [m]	Centerballasts [t]	Jib position	Crane in service torque moment: **440** 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	55	1	448	1046	448	0	49	1	270	939	270	0	139
		2	855	855	115	115		2	702	702	38	38	
10,2	55	1	448	1078	448	0	51	1	282	947	282	0	147
		2	875	875	112	112		2	713	713	43	43	
14,7	55	1	446	1114	446	0	53	1	293	957	293	0	154
		2	895	895	107	107		2	730	730	282	282	
19,2	55	1	442	1154	442	0	56	1	303	969	303	0	161
		2	917	917	101	101		2	768	768	260	260	
23,7	55	1	436	1198	436	0	58	1	312	984	312	0	171
		2	941	941	93	93		2	812	812	231	231	
28,2	55	1	427	1248	427	0	60	1	319	1000	319	0	181
		2	967	967	84	84		2	861	861	199	199	
32,7	55	1	416	1303	416	0	62	1	538	1068	538	8	190
		2	994	994	73	73		2	913	913	163	163	

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

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



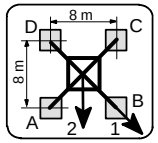


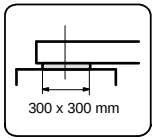
KR 16 - 80/100 **Corner distance 8,0 m x 8,0 m** **Jib 40 m**

Tower height [m]	Centerballasts [t]	Jib position	Crane in service torque moment: **440** 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]
42,3	65	1	473	1365	474	0	69	1	578	978	578	178	185
		2	1084	1084	302	302		2	861	861	295	295	
44,5	65	1	493	1376	493	0	70	1	590	1022	590	159	186
		2	1102	1102	309	309		2	896	896	285	285	
49,0	85	1	580	1438	580	0	73	1	649	1166	650	133	197
		2	1187	1187	341	341		2	1014	1014	285	285	
53,5	100	1	646	1502	646	0	75	1	698	1306	699	91	207
		2	1264	1264	363	363		2	1128	1128	269	269	
58,0	120	1	734	1572	734	0	78	1	760	1468	760	52	220
		2	1356	1356	394	394		2	1261	1261	260	260	
62,5	145	1	949	1675	949	223	80	1	834	1648	834	20	231
		2	1462	1462	436	436		2	1410	1410	258	258	
67,0	170	1	1023	1800	1023	247	83	1	888	1857	889	0	242
		2	1572	1572	474	474		2	1565	1565	252	252	
71,5	195	1	1097	1929	1097	265	85	1	913	2103	914	0	253
		2	1685	1685	509	509		2	1726	1726	239	239	
76,0	225	1	1184	2077	1184	291	88	1	953	2369	954	0	264
		2	1815	1815	552	552		2	1907	1907	231	231	

3.2.2.2 **Centerballasts and Cornerloads acc. to DIN 15019**

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



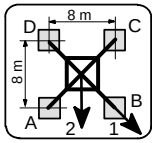


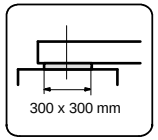
KR 16 - 80/100 **Corner distance 8,0 m x 8,0 m** **Jib 50 m**

Tower height [m]	Centerballasts [t]	Jib position	Crane in service torque moment: **440** 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]
42,3	75	1	523	1395	523	0	72	1	610	1132	610	88	195
		2	1123	1123	327	327		2	979	979	241	241	
44,5	75	1	542	1406	542	0	74	1	622	1177	622	68	197
		2	1141	1141	333	333		2	1014	1014	230	230	
49,0	95	1	627	1471	628	0	76	1	681	1326	682	37	207
		2	1228	1228	365	365		2	1137	1137	225	225	
53,5	115	1	717	1539	717	0	79	1	743	1485	743	1	218
		2	1319	1319	397	397		2	1268	1268	218	218	
58,0	135	1	919	1615	920	223	81	1	760	1699	760	0	230
		2	1412	1412	427	427		2	1405	1405	204	204	
62,5	160	1	993	1738	994	249	84	1	795	1926	795	0	241
		2	1520	1520	467	467		2	1560	1560	198	198	
67,0	190	1	1080	1877	1080	283	86	1	846	2170	846	0	252
		2	1644	1644	516	516		2	1733	1733	198	198	
71,5	230	1	1192	2047	1192	336	89	1	937	2433	938	0	263
		2	1796	1796	587	587		2	1937	1937	217	217	

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

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



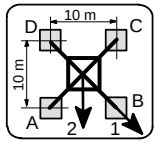


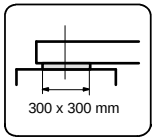
KR 16 - 80/100 **Corner distance 8,0 m x 8,0 m** **Jib 60 m**

Tower height [m]	Centerballasts [t]	Jib position	Crane in service torque moment: **440** 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]
42,3	85	1	570	1428	570	0	70	1	607	1355	607	0	206
		2	1147	1147	137	137		2	1121	1121	163	163	
44,5	85	1	589	1440	589	0	71	1	606	1406	606	0	207
		2	1164	1164	145	145		2	1152	1152	157	157	
49,0	105	1	673	1508	673	0	73	1	636	1583	636	0	217
		2	1247	1247	180	180		2	1273	1273	154	154	
53,5	135	1	800	1590	800	10	76	1	705	1791	705	0	228
		2	1358	1358	242	242		2	1433	1433	167	167	
58,0	170	1	899	1727	899	71	79	1	788	2020	789	0	240
		2	1485	1485	463	463		2	1613	1613	185	185	
62,5	205	1	998	1868	998	128	81	1	865	2262	866	0	252
		2	1617	1617	530	530		2	1798	1798	198	198	
67,0	245	1	1110	2025	1110	195	84	1	958	2523	958	0	263
		2	1764	1764	605	605		2	2002	2002	218	218	

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

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



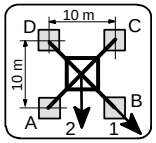


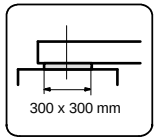
KR 16 - 80/100 **Corner distance 10,0 m x 10,0 m** **Jib 40 m**

Tower height [m]	Centerballasts [t]	Jib position	Crane in service torque moment: **440** 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]
42,3	15	1	370	1092	370	0	69	1	458	778	458	138	185
		2	886	886	260	260		2	684	684	231	231	
44,5	15	1	391	1101	391	0	70	1	470	816	470	125	186
		2	902	902	268	268		2	715	715	226	226	
49,0	30	1	459	1151	459	0	73	1	517	930	517	104	197
		2	970	970	293	293		2	809	809	225	225	
53,5	45	1	531	1202	531	0	75	1	566	1052	566	80	207
		2	1041	1041	320	320		2	910	910	222	222	
58,0	60	1	730	1274	730	186	78	1	615	1181	615	49	220
		2	1114	1114	346	346		2	1016	1016	215	215	
62,5	75	1	779	1360	779	198	80	1	664	1316	664	13	231
		2	1190	1190	368	368		2	1125	1125	204	204	
67,0	95	1	841	1462	841	219	83	1	709	1485	709	0	242
		2	1280	1280	401	401		2	1251	1251	201	201	
71,5	115	1	902	1568	902	237	85	1	734	1682	734	0	253
		2	1373	1373	432	432		2	1382	1382	192	192	
76,0	140	1	976	1691	976	262	88	1	775	1895	776	0	264
		2	1481	1481	471	471		2	1532	1532	191	191	

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

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



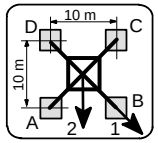


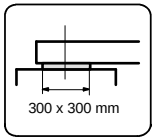
KR 16 - 80/100 **Corner distance 10,0 m x 10,0 m** **Jib 50 m**

Tower height [m]	Centerballasts [t]	Jib position	Crane in service torque moment: **440** 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]
42,3	25	1	422	1116	422	0	72	1	490	907	490	73	195
		2	923	923	286	286		2	785	785	195	195	
44,5	25	1	443	1125	443	0	74	1	502	946	502	59	197
		2	940	940	294	294		2	816	816	189	189	
49,0	40	1	510	1177	510	0	76	1	549	1065	549	33	207
		2	1009	1009	318	318		2	914	914	184	184	
53,5	55	1	713	1234	713	192	79	1	598	1192	598	4	218
		2	1081	1081	344	344		2	1018	1018	178	178	
58,0	70	1	762	1319	762	205	81	1	615	1359	615	0	230
		2	1156	1156	368	368		2	1128	1128	166	166	
62,5	90	1	823	1419	824	228	84	1	647	1541	647	0	241
		2	1245	1245	402	402		2	1253	1253	164	164	
67,0	110	1	885	1523	885	247	86	1	673	1736	673	0	252
		2	1336	1336	434	434		2	1384	1384	156	156	
71,5	140	1	972	1656	972	288	89	1	741	1946	741	0	263
		2	1455	1455	488	488		2	1545	1545	169	169	

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

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



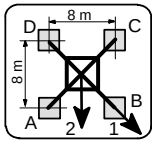


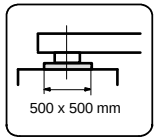
KR 16 - 80/100 **Corner distance 10,0 m x 10,0 m** **Jib 60 m**

Tower height [m]	Centerballasts [t]	Jib position	Crane in service torque moment: **440** 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]
42,3	30	1	448	1142	448	0	70	1	477	1084	477	0	206
		2	920	920	249	249		2	893	893	126	126	
44,5	30	1	468	1152	468	0	71	1	482	1125	482	0	207
		2	937	937	256	256		2	920	920	124	124	
49,0	45	1	534	1206	534	0	73	1	504	1266	504	0	217
		2	1005	1005	281	281		2	1016	1016	121	121	
53,5	70	1	642	1274	643	11	76	1	569	1433	569	0	228
		2	1102	1102	333	333		2	1149	1149	136	136	
58,0	95	1	717	1379	717	54	79	1	625	1616	626	0	240
		2	1200	1200	383	383		2	1288	1288	145	145	
62,5	125	1	803	1499	803	107	81	1	702	1810	702	0	252
		2	1313	1313	443	443		2	1443	1443	163	163	
67,0	155	1	890	1622	890	158	84	1	771	2018	771	0	263
		2	1428	1428	501	501		2	1603	1603	176	176	

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

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



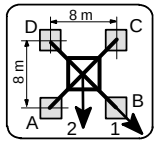


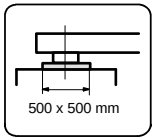
KRE 480 **Corner distance 8,0 m x 8,0 m** **Jib 40 m**

Tower height [m]	Centerballasts [t]	Jib position	Crane in service torque moment: **440** 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	390	1045	390	0	52	1	343	546	343	140	131
		2	826	826	86	86		2	492	492	429	429	
13,0	40	1	391	1075	391	0	54	1	351	557	351	144	138
		2	845	845	322	322		2	497	497	205	205	
17,5	40	1	390	1108	390	0	56	1	359	570	359	148	145
		2	869	869	314	314		2	511	511	443	443	
22,0	40	1	388	1145	388	0	58	1	367	583	367	151	152
		2	894	894	305	305		2	554	554	416	416	
26,5	40	1	383	1187	383	0	61	1	493	649	493	336	162
		2	921	921	294	294		2	603	603	382	382	
31,0	40	1	375	1234	375	0	63	1	501	721	501	281	172
		2	950	950	281	281		2	656	656	345	345	
35,5	40	1	365	1287	365	0	65	1	509	798	509	220	182
		2	980	980	267	267		2	713	713	304	304	
40,0	55	1	427	1345	427	0	67	1	554	918	554	190	191
		2	1051	1051	287	287		2	811	811	297	297	

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

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



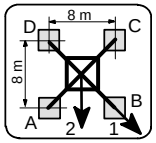


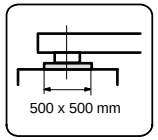
KRE 480 **Corner distance 8,0 m x 8,0 m** **Jib 50 m**

Tower height [m]	Centerballasts [t]	Jib position	Crane in service torque moment: **440** 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	374	1055	374	0	55	1	324	701	324	0	141
		2	824	824	77	77		2	585	585	89	89	
13,0	35	1	374	1086	374	0	57	1	336	710	336	0	148
		2	843	843	74	74		2	596	596	94	94	
17,5	35	1	372	1122	372	0	60	1	347	720	347	0	155
		2	864	864	308	308		2	608	608	98	98	
22,0	35	1	368	1162	368	0	62	1	357	732	357	0	162
		2	891	891	297	297		2	634	634	325	325	
26,5	35	1	362	1207	362	0	64	1	487	758	487	217	172
		2	918	918	286	286		2	678	678	296	296	
31,0	35	1	353	1256	353	0	66	1	495	823	495	168	182
		2	948	948	272	272		2	727	727	264	264	
35,5	50	1	417	1311	417	0	69	1	541	943	541	139	192
		2	1018	1018	293	293		2	825	825	256	256	

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

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



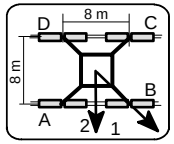


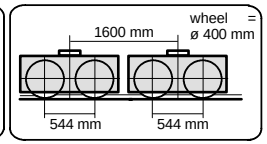
KRE 480 **Corner distance 8,0 m x 8,0 m** **Jib 60 m**

Tower height [m]	Centerballasts [t]	Jib position	Crane in service torque moment: **440** 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	45	1	431	1068	431	0	53	1	262	944	262	0	151
		2	860	860	105	105		2	701	701	33	33	
13,0	45	1	431	1102	431	0	55	1	273	954	273	0	159
		2	880	880	101	101		2	712	712	37	37	
17,5	45	1	427	1140	427	0	57	1	283	965	283	0	166
		2	902	902	95	95		2	748	748	258	258	
22,0	45	1	422	1182	422	0	59	1	293	978	293	0	173
		2	925	925	88	88		2	788	788	235	235	
26,5	45	1	415	1230	415	0	62	1	301	994	301	0	183
		2	949	949	80	80		2	834	834	204	204	
31,0	45	1	404	1282	404	0	64	1	527	1033	527	21	193
		2	976	976	69	69		2	885	885	169	169	
35,5	55	1	441	1340	441	0	66	1	549	1144	549	0	202
		2	1030	1030	82	82		2	965	965	156	156	

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

for a travelling tower crane on undercarriage without climbing gear



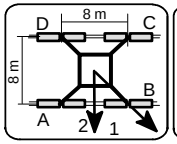


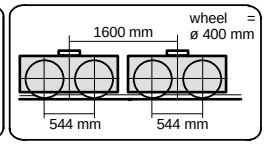
UW 480 **Corner distance 8,0 m x 8,0 m** **Jib 40 m**

Tower height [m]	Centerballasts [t]	Jib position	Crane in service torque moment: **440** 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	40	1	393	1114	393	24	71	1	368	571	368	164	131
		2	866	866	96	96		2	512	512	460	460	
14,0	40	1	389	1154	389	24	73	1	376	583	376	168	138
		2	888	888	90	90		2	523	523	229	229	
18,5	40	1	382	1199	382	24	76	1	384	596	384	171	145
		2	915	915	318	318		2	544	544	460	460	
23,0	40	1	374	1248	374	24	78	1	510	624	510	395	155
		2	946	946	303	303		2	591	591	429	429	
27,5	45	1	387	1303	387	24	81	1	530	705	530	356	165
		2	991	991	299	299		2	653	653	407	407	
32,0	50	1	398	1363	398	24	84	1	551	790	551	311	174
		2	1038	1038	293	293		2	720	720	381	381	
36,5	60	1	431	1429	431	24	86	1	584	893	584	274	184
		2	1100	1100	297	297		2	802	802	365	365	

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

for a travelling tower crane on undercarriage without climbing gear



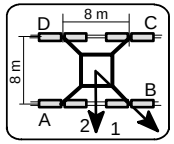


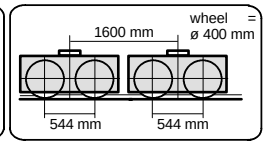
UW 480 **Corner distance 8,0 m x 8,0 m** **Jib 50 m**

Tower height [m]	Centerballasts [t]	Jib position	Crane in service torque moment: **440** 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	35	1	350	1128	350	24	75	1	323	728	323	24	141
		2	853	853	73	73		2	598	598	101	101	
14,0	35	1	345	1170	345	24	77	1	335	737	335	24	148
		2	876	876	66	66		2	610	610	106	106	
18,5	35	1	362	1218	362	24	80	1	370	748	370	24	155
		2	916	916	306	306		2	634	634	123	123	
23,0	40	1	377	1270	377	24	82	1	399	766	399	31	165
		2	960	960	303	303		2	682	682	351	351	
27,5	50	1	414	1327	414	24	85	1	550	837	550	262	175
		2	1019	1019	310	310		2	753	753	347	347	
32,0	55	1	424	1390	424	24	87	1	570	918	570	223	185
		2	1068	1068	302	302		2	816	816	324	324	

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

for a travelling tower crane on undercarriage without climbing gear





UW 480 **Corner distance 8,0 m x 8,0 m** **Jib 60 m**

Tower height [m]	Centerballasts [t]	Jib position	Crane in service torque moment: **440** kNm Cornerloads **A** [kN]	**B** [kN]	**C** [kN]	**D** [kN]	Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm Cornerloads **A** [kN]	**B** [kN]	**C** [kN]	**D** [kN]	Horizontal force [kN]
9,5	45	1	430	1146	430	24	71	1	286	971	286	24	151
		2	904	904	111	111		2	727	727	57	57	
14,0	45	1	423	1191	423	24	73	1	297	981	297	24	159
		2	928	928	103	103		2	743	743	297	297	
18,5	45	1	414	1241	414	24	76	1	307	993	307	24	166
		2	954	954	93	93		2	780	780	276	276	
23,0	45	1	403	1296	403	24	78	1	316	1006	316	24	176
		2	981	981	82	82		2	824	824	248	248	
27,5	45	1	389	1356	389	24	81	1	324	1023	324	24	185
		2	1010	1010	69	69		2	871	871	217	217	
32,0	55	1	422	1422	422	24	83	1	577	1101	577	53	195
		2	1067	1067	78	78		2	948	948	206	206	