

Type of crane	BGL-Group 2125-0125
Kind of crane	Tower crane with trolley jib, top-slewing, self-climbing
Installation	stationary or travelling
Calculation base	DIN 15018-H1/B3 DIN 15020-1Am
Loadmoment	max. 1603 kNm

PLANING DIAGRAM
WOLFF 5520.10

962-3-021125E

2.2.1.1

Load capacity table

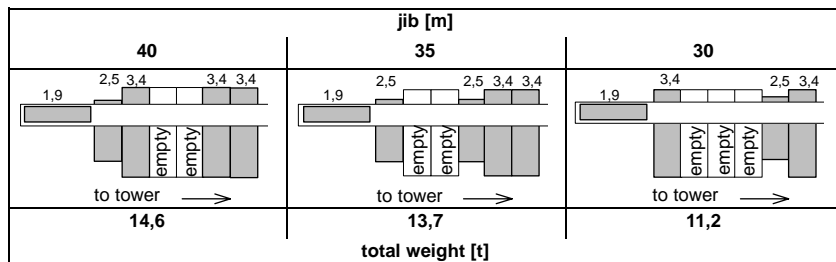
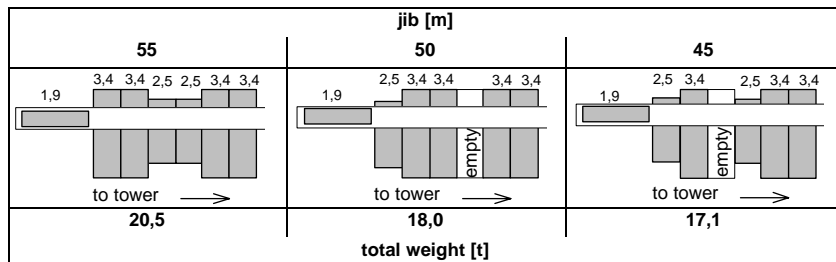
radius [m]		25	30	35	40	45	50	55	load capacity [t]
length of jib [m]	55	2,5 - 14,3	5,0	4,0	3,2	2,7	2,2	1,9	
	50	2,5 - 15,0	5,4	4,3	3,5	2,9	2,4	2,1	
	45	2,5 - 15,1	5,4	4,3	3,5	2,9	2,5		
	40	2,5 - 15,3	5,5	4,4	3,6	3,0			
	35	2,5 - 15,4	5,6	4,4	3,6				
	30	2,5 - 15,9	5,8	4,6					

radius [m]		25	30	35	40	45	50	55	load capacity [t]
length of jib [m]	55	2,5 - 22,0	5,1	4,1	3,3	2,8	2,3	2,0	
	50	2,5 - 23,2	5,5	4,4	3,6	3,0	2,5	2,2	
	45	2,5 - 23,4	5,5	4,4	3,6	3,0	2,6		
	40	2,5 - 23,6	5,6	4,5	3,7	3,1			
	35	2,5 - 23,9	5,7	4,5	3,7				
	30	2,5 - 24,6	5,9	4,7					

The load capacities refer to a hook path of 42,0 m. With greater hook paths the safe working load will be minimized by the additional weight of the hoisting cable (with 2 fall operation = 2,4 kg per meter hook path, with 4 fall operation = 4,8 kg per meter hook path).

Arrangement of counterweights with hoisting winch

Hw 637 FU



2.2.1.2

Load capacity table

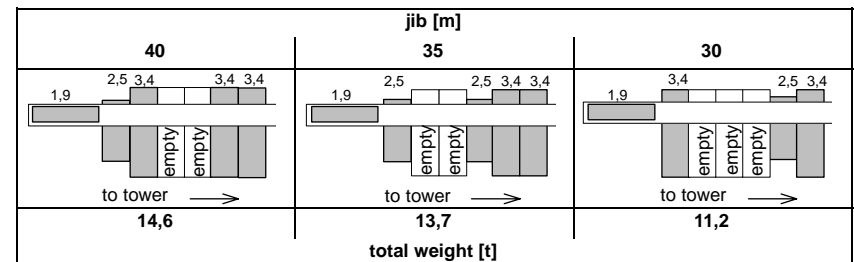
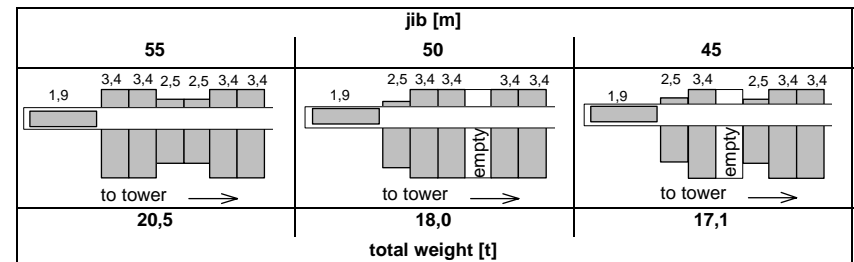
radius [m]		25	30	35	40	45	50	55	load capacity [t]
length of jib [m]	55	2,5 - 15,2	5,7	4,5	3,7	3,1	2,7	2,3	
	50	2,5 - 16,0	6,0	4,8	4,0	3,3	2,9	2,5	
	45	2,5 - 16,2	6,1	4,9	4,1	3,4	2,9		
	40	2,5 - 16,2	6,1	4,9	4,1	3,4			
	35	2,5 - 16,3	6,1	4,9	4,1				
	30	2,5 - 16,8	6,3	5,1					

radius [m]		25	30	35	40	45	50	55	load capacity [t]
length of jib [m]	55	2,5 - 24,2	5,8	4,7	3,9	3,3	2,8	2,4	
	50	2,5 - 25,4	6,0	4,9	4,1	3,5	3,0	2,6	
	45	2,5 - 25,9	6,0	5,0	4,2	3,5	3,0		
	40	2,5 - 25,7	6,0	5,0	4,2	3,5			
	35	2,5 - 25,9	6,0	5,0	4,2				
	30	2,5 - 26,6	6,0	5,2					

The load capacities refer to a hook path of 42,0 m. With greater hook paths the safe working load will be minimized by the additional weight of the hoisting cable (with 2 fall operation = 2,4 kg per meter hook path, with 4 fall operation = 4,8 kg per meter hook path).

Arrangement of counterweights with hoisting winch


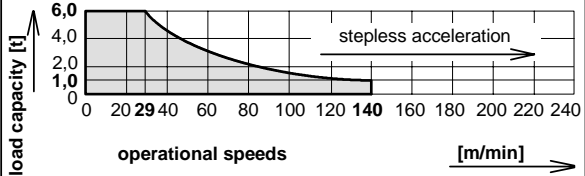
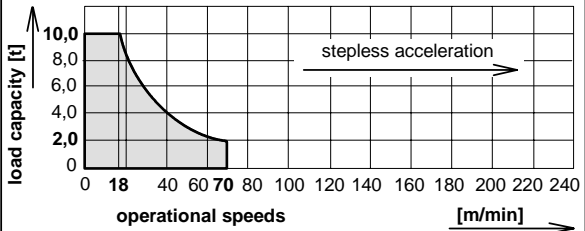
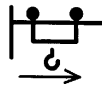
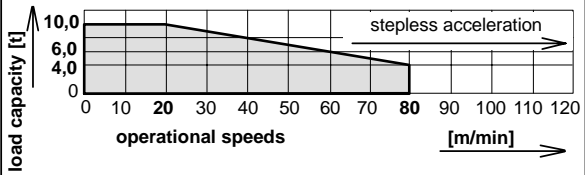

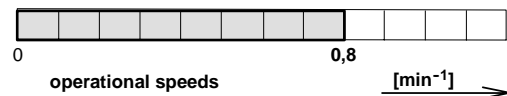
Hw 637 FU



2.2.2.1

Operational speeds

400 V, 50 Hz

drive [model]	operational speed load capacity	max. lift [m]	output [kW]	total-output [kVA]
Hw 637 FU	hoisting 	190	37/45	52,0 total output for a simultaneity factor of 0,8
	 <p>load capacity [t]</p> <p>operational speeds [m/min]</p> <p>(referred to the fourth layer on drum)</p>			
	 <p>load capacity [t]</p> <p>operational speeds [m/min]</p>	95	37/45	
Kw	travelling 		4,0	
	 <p>load capacity [t]</p> <p>operational speeds [m/min]</p>			
Dw	slewing 0,8 min ⁻¹ 		7,5	
	 <p>operational speeds [min⁻¹]</p>			

2.2.3.1

Load capacity [kg] at 2-fall operation

DIN 15018/H1 - B3

radius [m]	length of jib [m]					
	30	35	40	45	50	55
14,0	6000	6000	6000	6000	6000	6000
15,0	6000	6000	6000	6000	6000	6000
16,0	6000	6000	6000	6000	6000	6000
17,0	6000	6000	6000	6000	6000	6000
18,0	6000	6000	6000	6000	6000	6000
19,0	6000	6000	6000	6000	6000	6000
20,0	6000	6000	6000	6000	6000	6000
21,0	6000	6000	6000	6000	6000	6000
22,0	6000	6000	6000	6000	6000	6000
23,0	6000	6000	6000	6000	6000	5680
24,0	6000	5960	5890	5830	5750	5390
25,0	5900	5700	5600	5500	5500	5100
26,0	5620	5400	5340	5280	5210	4880
27,0	5360	5160	5100	5030	4970	4650
28,0	5120	4930	4870	4810	4750	4440
29,0	4900	4710	4660	4600	4540	4250
30,0	4700	4500	4500	4400	4400	4100
31,0		4330	4280	4230	4170	3890
32,0		4160	4110	4060	4000	3740
33,0		4000	3940	3900	3850	3590
34,0		3840	3790	3750	3700	3450
35,0		3700	3700	3600	3600	3300
36,0			3520	3470	3430	3190
37,0			3390	3350	3300	3070
38,0			3270	3230	3190	2960
39,0			3160	3120	3070	2860
40,0			3100	3000	3000	2800
41,0				2910	2870	2660
42,0				2810	2770	2570
43,0				2720	2680	2480
44,0				2630	2600	2400
45,0				2600	2500	2300
46,0					2430	2250
47,0					2360	2180
48,0					2290	2110
49,0					2220	2040
50,0					2200	2000
51,0						1920
52,0						1860
53,0						1810
54,0						1750
55,0						1700

The load capacities refer to a range of lift of 42.0 m

WOLFF 5520.10 **CCplus** **Crane data**
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2.2.3.2 **Load capacity [kg] at 2-fall operation** **DIN 15018/H1 - B3**

radius [m]	length of jib [m]					
	30	35	40	45	50	55
14,0	6000	6000	6000	6000	6000	6000
15,0	6000	6000	6000	6000	6000	6000
16,0	6000	6000	6000	6000	6000	6000
17,0	6000	6000	6000	6000	6000	6000
18,0	6000	6000	6000	6000	6000	6000
19,0	6000	6000	6000	6000	6000	6000
20,0	6000	6000	6000	6000	6000	6000
21,0	6000	6000	6000	6000	6000	6000
22,0	6000	6000	6000	6000	6000	6000
23,0	6000	6000	6000	6000	6000	6000
24,0	6000	6000	6000	6000	6000	6000
25,0	6000	6000	6000	6000	6000	5800
26,0	6000	5960	5930	5960	5850	5530
27,0	5900	5710	5670	5710	5600	5290
28,0	5660	5470	5430	5470	5360	5060
29,0	5430	5250	5210	5250	5140	4850
30,0	5200	5000	5000	5000	4900	4700
31,0		4850	4810	4840	4750	4480
32,0		4670	4630	4660	4570	4310
33,0		4500	4460	4490	4400	4150
34,0		4340	4300	4330	4240	4000
35,0		4200	4200	4200	4100	3900
36,0			4010	4040	3950	3720
37,0			3870	3900	3820	3590
38,0			3750	3770	3690	3470
39,0			3630	3650	3570	3360
40,0			3500	3500	3500	3300
41,0				3430	3350	3150
42,0				3320	3250	3050
43,0				3220	3150	2960
44,0				3130	3060	2870
45,0				3000	3000	2800
46,0					2880	2700
47,0					2800	2620
48,0					2720	2550
49,0					2650	2480
50,0					2600	2400
51,0						2340
52,0						2280
53,0						2220
54,0						2160
55,0						2100

The load capacities refer to a range of lift of 42.0 m

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2.2.3.3 **Load capacity [kg] at 4-fall operation** **DIN 15018/H1 - B3**

radius [m]	length of jib [m]					
	30	35	40	45	50	55
14,0	10000	10000	10000	10000	10000	10000
15,0	10000	10000	10000	10000	10000	9410
16,0	9930	9580	9470	9370	9260	8710
17,0	9240	8910	8810	8710	8610	8100
18,0	8640	8320	8230	8140	8040	7550
19,0	8100	7800	7710	7620	7530	7070
20,0	7600	7300	7200	7200	7100	6600
21,0	7180	6910	6830	6750	6670	6260
22,0	6780	6530	6450	6380	6300	5900
23,0	6420	6180	6110	6040	5960	5580
24,0	6090	5860	5790	5720	5650	5290
25,0	5800	5600	5500	5400	5400	5000
26,0	5520	5300	5240	5180	5110	4780
27,0	5260	5060	4990	4930	4870	4550
28,0	5020	4830	4770	4710	4650	4340
29,0	4800	4610	4560	4500	4440	4150
30,0	4600	4400	4400	4300	4300	4000
31,0		4230	4180	4130	4070	3790
32,0		4060	4010	3960	3900	3640
33,0		3900	3840	3800	3750	3490
34,0		3740	3690	3650	3600	3350
35,0		3600	3600	3500	3500	3200
36,0			3420	3370	3330	3090
37,0			3290	3250	3200	2970
38,0			3170	3130	3090	2860
39,0			3060	3020	2970	2760
40,0			3000	2900	2900	2700
41,0				2800	2770	2560
42,0				2710	2670	2470
43,0				2620	2580	2380
44,0				2530	2500	2300
45,0				2500	2400	2200
46,0					2330	2150
47,0					2260	2080
48,0					2190	2010
49,0					2120	1940
50,0					2100	1900
51,0						1820
52,0						1760
53,0						1710
54,0						1650
55,0						1600

The load capacities refer to a range of lift of 42.0 m

2.2.3.4 Load capacity [kg] at 4-fall operation

DIN 15018/H1 - B3

radius [m]	length of jib [m]					
	30	35	40	45	50	55
14,0	10000	10000	10000	10000	10000	10000
15,0	10000	10000	10000	10000	10000	10000
16,0	10000	10000	10000	10000	10000	9440
17,0	9840	9530	9460	9500	9320	8820
18,0	9230	8940	8870	8910	8740	8270
19,0	8690	8410	8350	8390	8230	7780
20,0	8200	7900	7900	7900	7800	7300
21,0	7760	7510	7450	7490	7340	6930
22,0	7360	7120	7060	7100	6960	6570
23,0	7000	6760	6710	6740	6610	6240
24,0	6650	6440	6380	6420	6290	5930
25,0	6340	6100	6100	6100	6000	5700
26,0	6060	5860	5810	5840	5720	5390
27,0	5790	5600	5560	5580	5470	5150
28,0	5550	5360	5320	5350	5240	4930
29,0	5320	5140	5100	5130	5020	4720
30,0	5100	4900	4900	4900	4800	4500
31,0		4740	4700	4730	4630	4350
32,0		4560	4520	4540	4450	4180
33,0		4390	4350	4370	4280	4020
34,0		4230	4190	4210	4120	3870
35,0		4100	4100	4100	4000	3700
36,0			3900	3920	3830	3600
37,0			3760	3780	3700	3470
38,0			3640	3660	3580	3350
39,0			3520	3540	3460	3240
40,0			3400	3400	3300	3100
41,0				3310	3240	3030
42,0				3210	3130	2930
43,0				3110	3040	2840
44,0				3010	2940	2750
45,0				2900	2900	2700
46,0					2770	2580
47,0					2690	2500
48,0					2610	2430
49,0					2530	2360
50,0					2500	2300
51,0						2220
52,0						2160
53,0						2100
54,0						2040
55,0						2000

The load capacities refer to a range of lift of 42.0 m

2.2.6.1 Tower configurations

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

Slewing part:

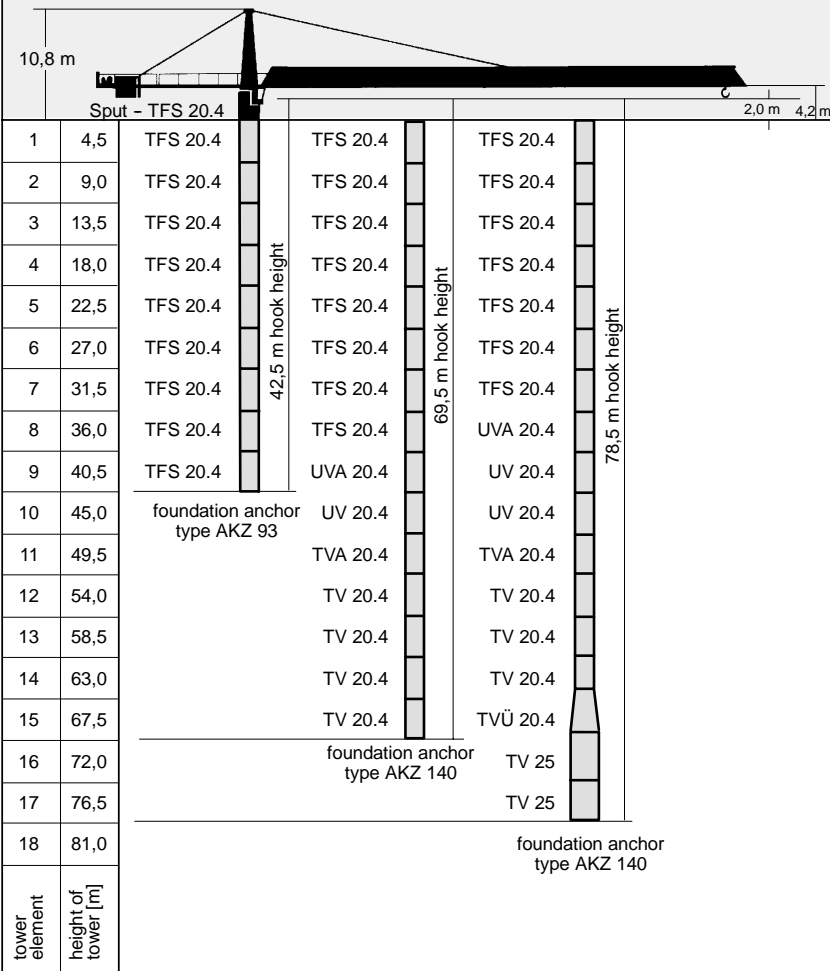
Element	Height of element [m]	Element	Element	Element	Element
1	4,5	UV 15.4	UV 15.4	UV 15.4	UV 15.4
2	9,0	UV 15.4	UV 15.4	UV 15.4	UV 15.4
3	13,5	UV 15.4	UV 15.4	UV 15.4	UV 15.4
4	18,0	UV 15.4	UV 15.4	UV 15.4	UV 15.4
5	22,5	UV 15.4	UV 15.4	UV 15.4	UV 15.4
6	27,0	UV 15.4	UV 15.4	UV 15.4	UV 15.4
7	31,5	UV 15.4	UV 15.4	UVÜ 15.4	UVÜ 15.4
8	36,0	UV 15.4	UVÜ 15.4	UV 20.4	UV 20.4
9	40,5	foundation anchor type AKZ 120	UV 20.4	UV 20.4	UV 20.4
10	45,0		UV 20.4	UV 20.4	UV 20.4
11	49,5		UV 20.4	TVA 20.4	TVA 20.4
12	54,0		foundation anchor type AKZ 120	TV 20.4	TV 20.4
13	58,5			TV 20.4	TV 20.4
14	63,0			TV 20.4	TV 20.4
15	67,5			TV 20.4	TVÜ 20.4
16	72,0			foundation anchor type AKZ 140	TV 25
17	76,5				TV 25
18	81,0				foundation anchor type AKZ 140

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.

2.2.6.2 Tower configurations

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

Slewing part:

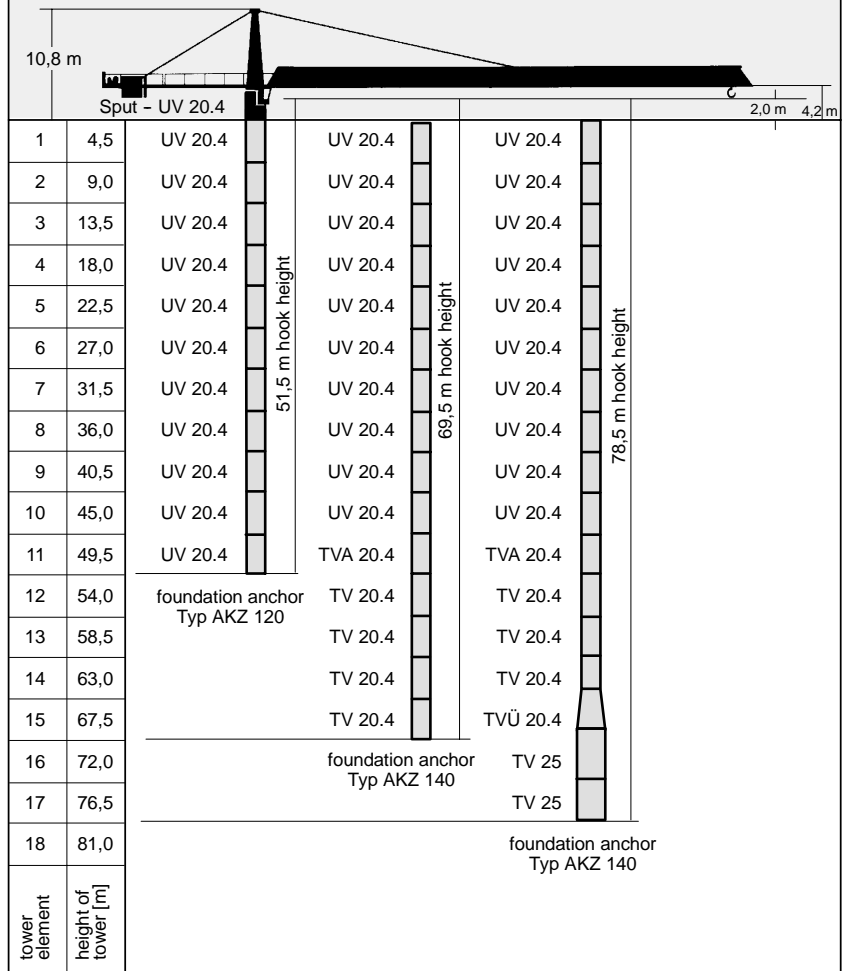


For data regarding foundation anchors see section 12.
 The tower configurations are recommended for economic crane installation and may be used in any case.
 Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane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

2.2.6.3 Tower configurations

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

Slewing part:

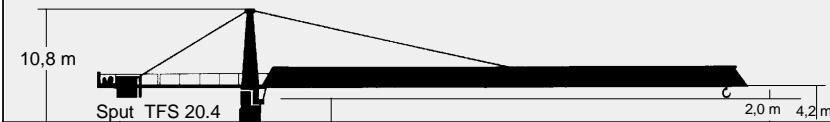


For data regarding foundation anchors see section 12.
 The tower configurations are recommended for economic crane installation and may be used in any case.
 Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane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

2.2.6.4 Tower configurations

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

Slewing part:



tower element	height of tower [m]	component
1	4,5	TFS 20.4
2	9,0	TFS 20.4
3	13,5	TFS 20.4
4	18,0	TFS 20.4
5	22,5	TFS 20.4
6	27,0	TFS 20.4
7	31,5	UVA 20.4
8	36,0	UV 20.4
9	40,5	UV 20.4
10	45,0	TVA 20.4
11	49,5	TV 20.4
12	54,0	TV 20.4
13	58,5	TV 20.4
14	63,0	TVÜ 20.4
15	67,5	TV 25
16	67,5	UVA 25
17	68,7	VR 2529
18	73,2	UV 29
19	77,7	UV 29
20	82,2	UV 29
21	86,7	UV 29
22	96,7	BT 29

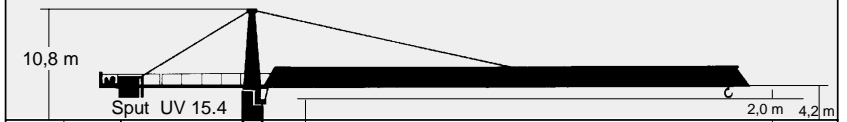
103,2 m hook height

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 configurations

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

Slewing part:



tower element	height of tower [m]	component
1	4,5	UV 15.4
2	9,0	UV 15.4
3	13,5	UV 15.4
4	18,0	UV 15.4
5	22,5	UV 15.4
6	27,0	UV 15.4
7	31,5	UV 15.4
8	36,0	0,8 m KR 7 - 32 connection TFS 15/UV 15
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	

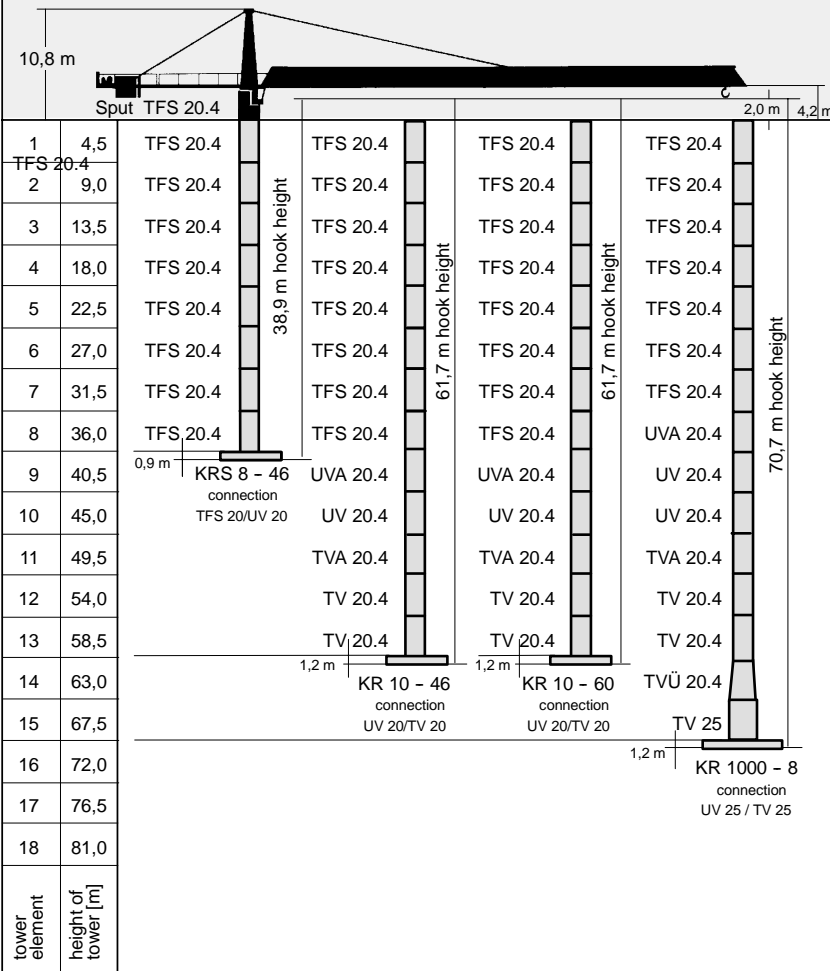
34,3 m hook height

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.

2.2.7.2 Tower configurations

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

Slewing part:



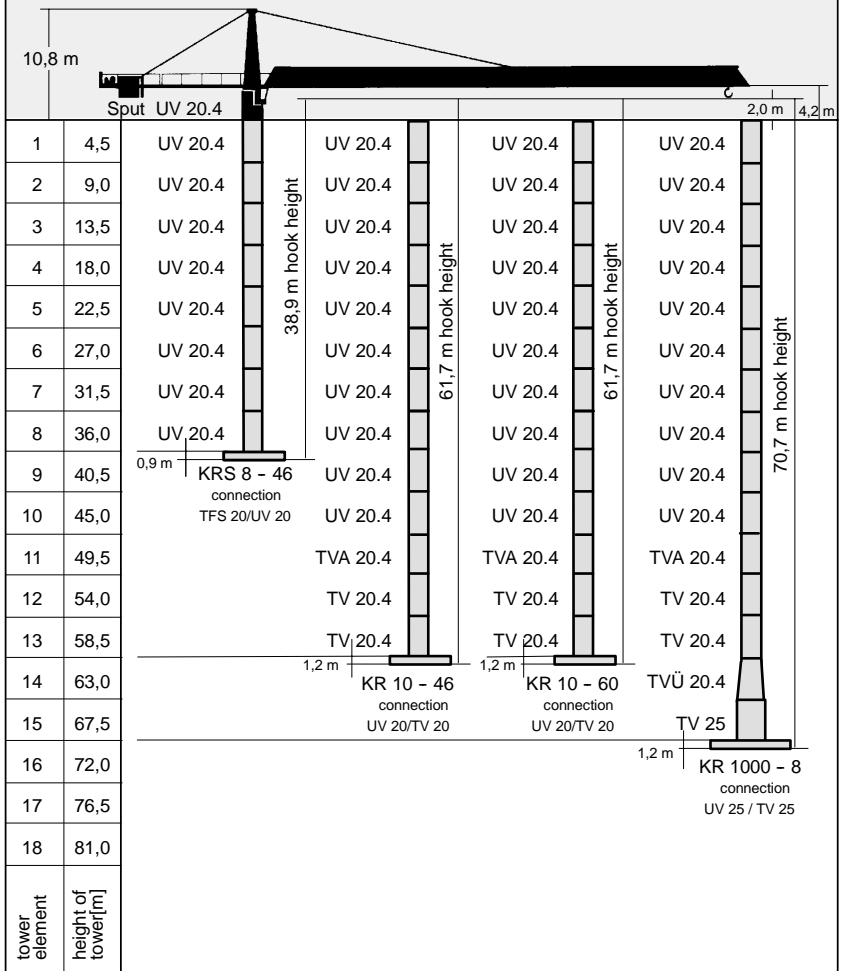
For data regarding foundation anchors see section 12. The tower configurations are recommended for economic crane installation and may be used in any case.

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.

2.2.7.3 Tower configurations

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

Slewing part:



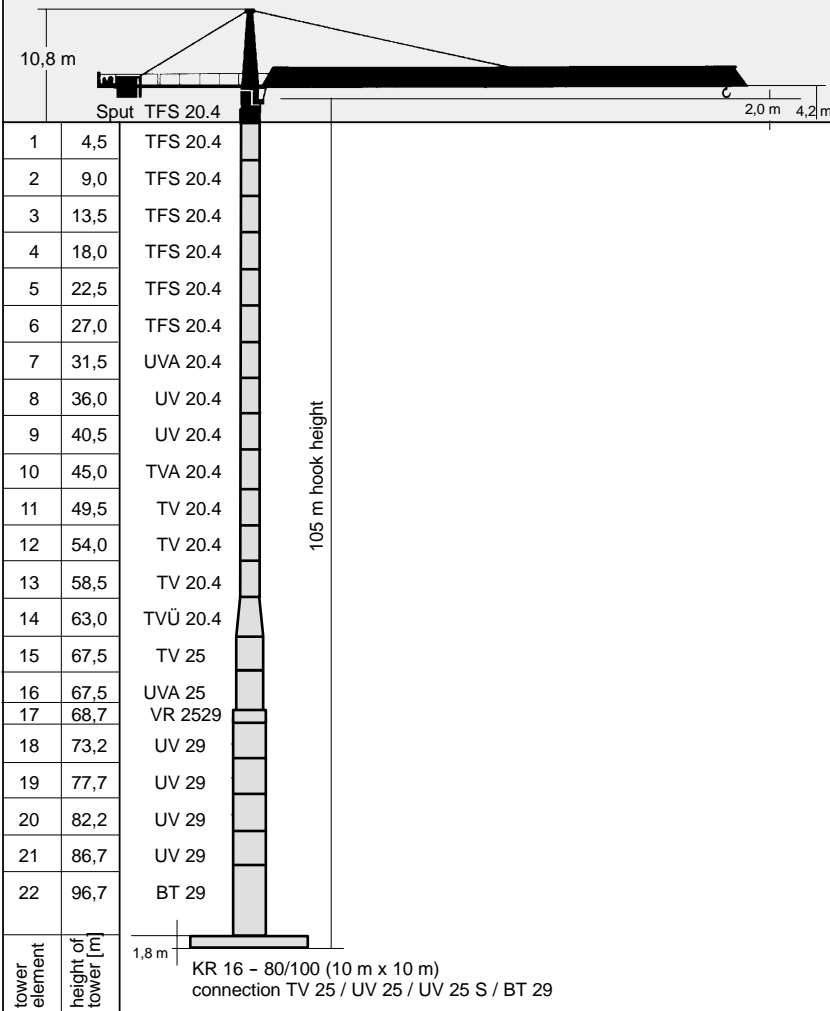
For data regarding foundation anchors see section 12. The tower configurations are recommended for economic crane installation and may be used in any case.

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.

2.2.7.4 Tower configurations

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

Slewing part:

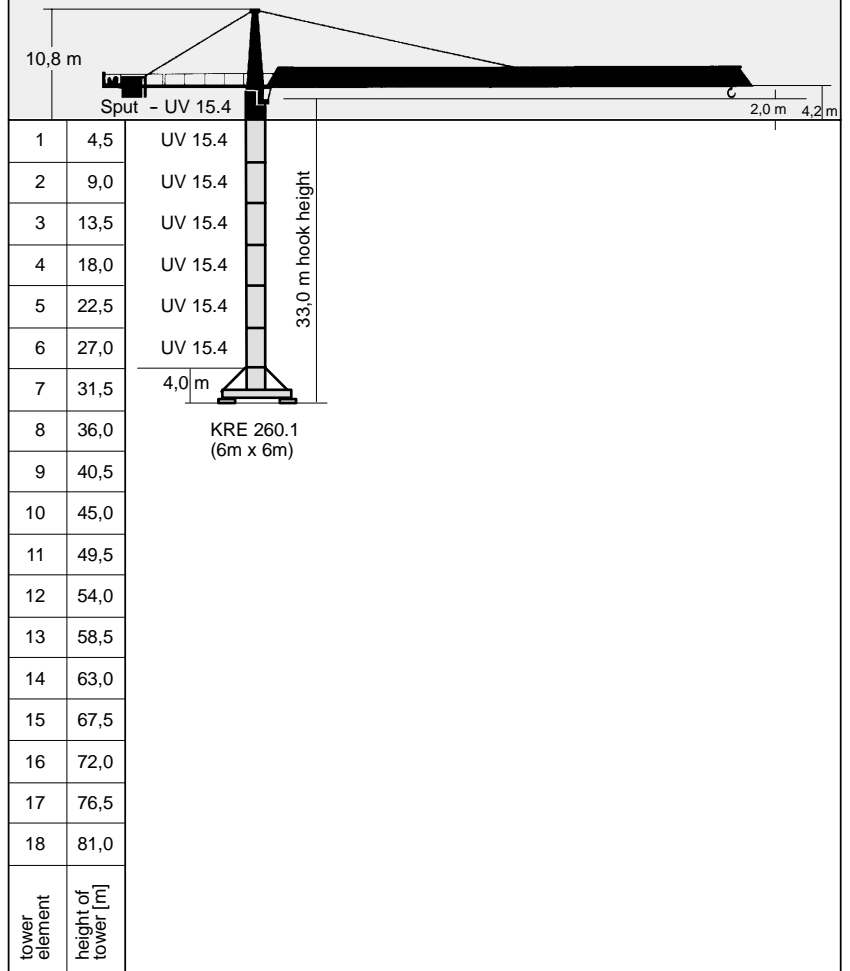


For data regarding cross frames see section 12.
 The tower configurations are recommended for economic crane installation and may be used in any case.
 Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation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

2.2.8.1 Tower configurations

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

Slewing part:

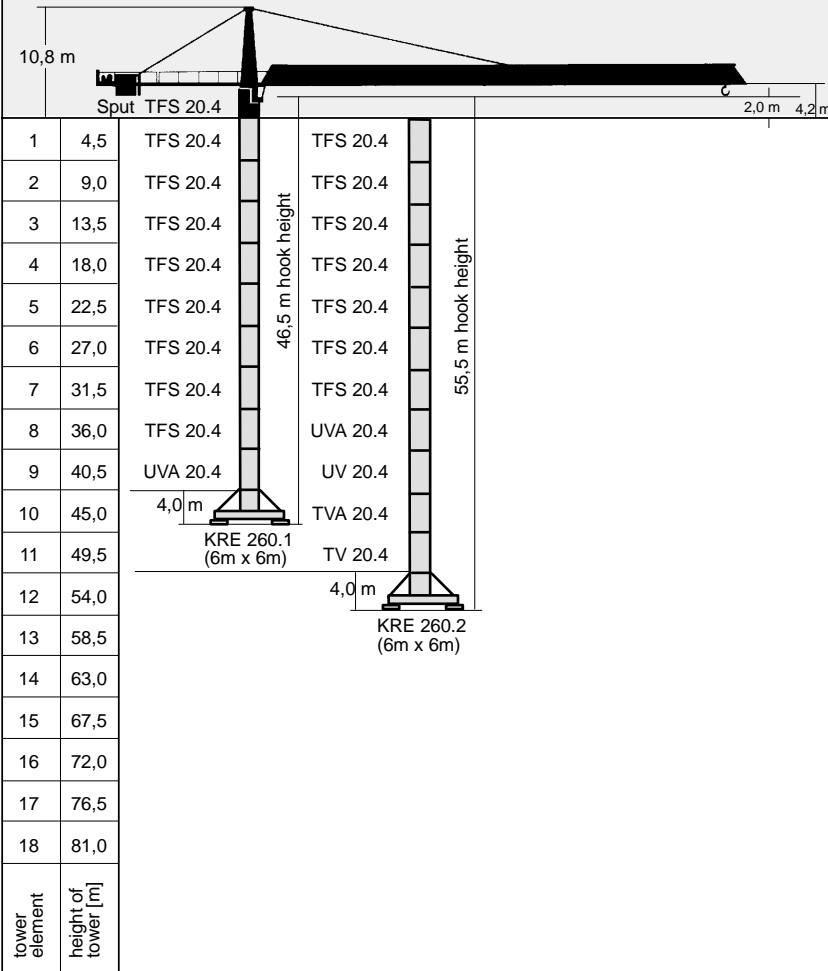


For data regarding cross frame elements see section 12.
 The tower configurations are recommended for economic crane installation and may be used in any case.
 Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane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

2.2.8.2 Tower configurations

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

Slewing part:



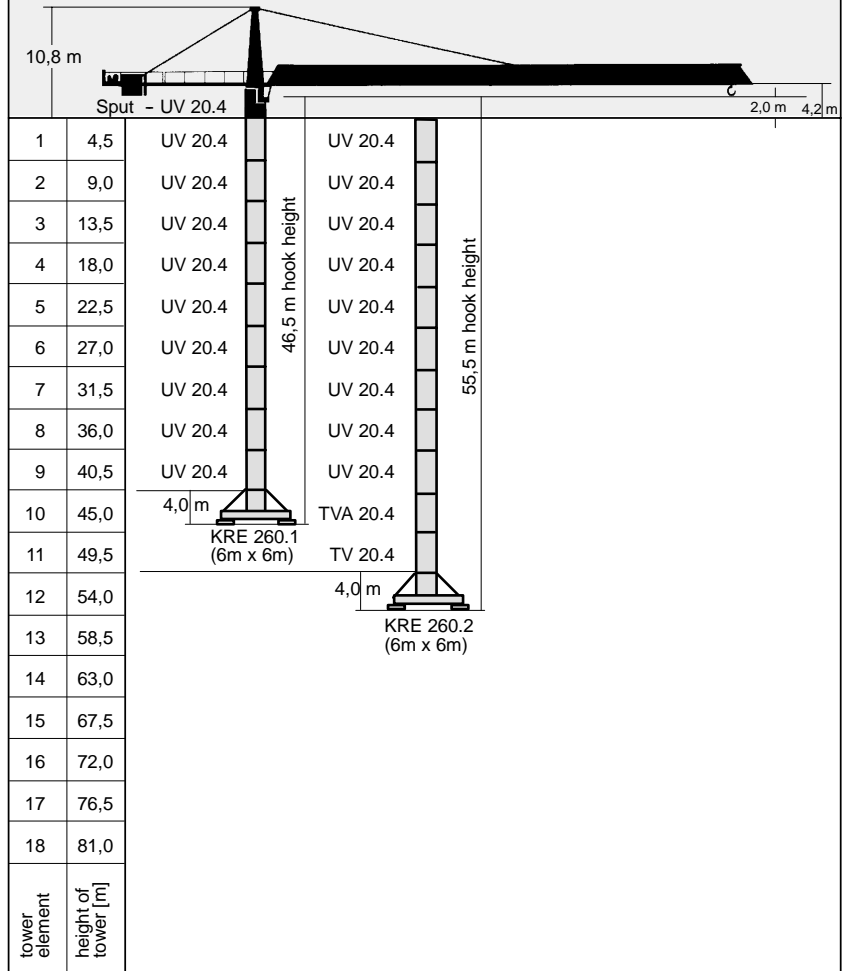
For data regarding foundation anchors see section 12. The tower configurations are recommended for economic crane installation and may be used in any case.

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.

2.2.8.3 Tower configurations

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

Slewing part:



For data regarding foundation anchors see section 12. The tower configurations are recommended for economic crane installation and may be used in any case.

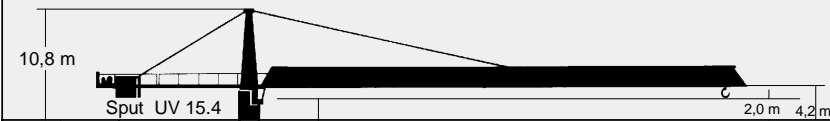
Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

2.2.9.1

Tower configuration

for a free standing travelling crane without climbing device.

Slewing part:



1	4,5	UV 15.4	29,0 m hook height
2	9,0	UV 15.4	
3	13,5	UV 15.4	
4	18,0	UV 15.4	
5	22,5	UV 15.4	
6	27,0	4,5 m	
7	31,5	UW 250 (5m x 5m)	
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		
tower element	height of tower [m]		

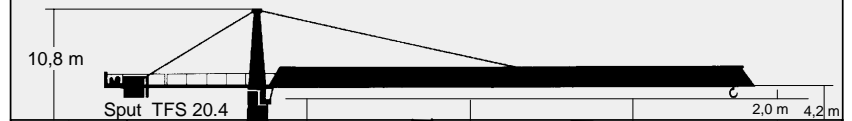
For data regarding undercarriage see section 12. The tower configurations are recommended for economic crane installation and may be used in any case. Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation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

2.2.9.2

Tower configurations

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

Slewing part:



1	4,5	TFS 20.4	TFS 20.4	TFS 20.4	56,0 m hook height
2	9,0	TFS 20.4	TFS 20.4	TFS 20.4	
3	13,5	TFS 20.4	TFS 20.4	TFS 20.4	
4	18,0	TFS 20.4	TFS 20.4	TFS 20.4	
5	22,5	TFS 20.4	TFS 20.4	TFS 20.4	
6	27,0	TFS 20.4	TFS 20.4	TFS 20.4	
7	31,5	TFS 20.4	TFS 20.4	TFS 20.4	
8	36,0	UVA 20.4	UVA 20.4	UVA 20.4	
9	40,5	4,5 m	TVA 20.4	UV 20.4	
10	45,0	UW 260.1 (6m x 6m)	4,5 m	TVA 20.4	
11	49,5		UW 260.2 (6m x 6m)	TV 20	
12	54,0			4,5 m	
13	58,5			UW 260.3 (6m x 6m)	
14	63,0				
15	67,5				
16	72,0				
17	76,5				
18	81,0				
tower element	height of tower [m]				

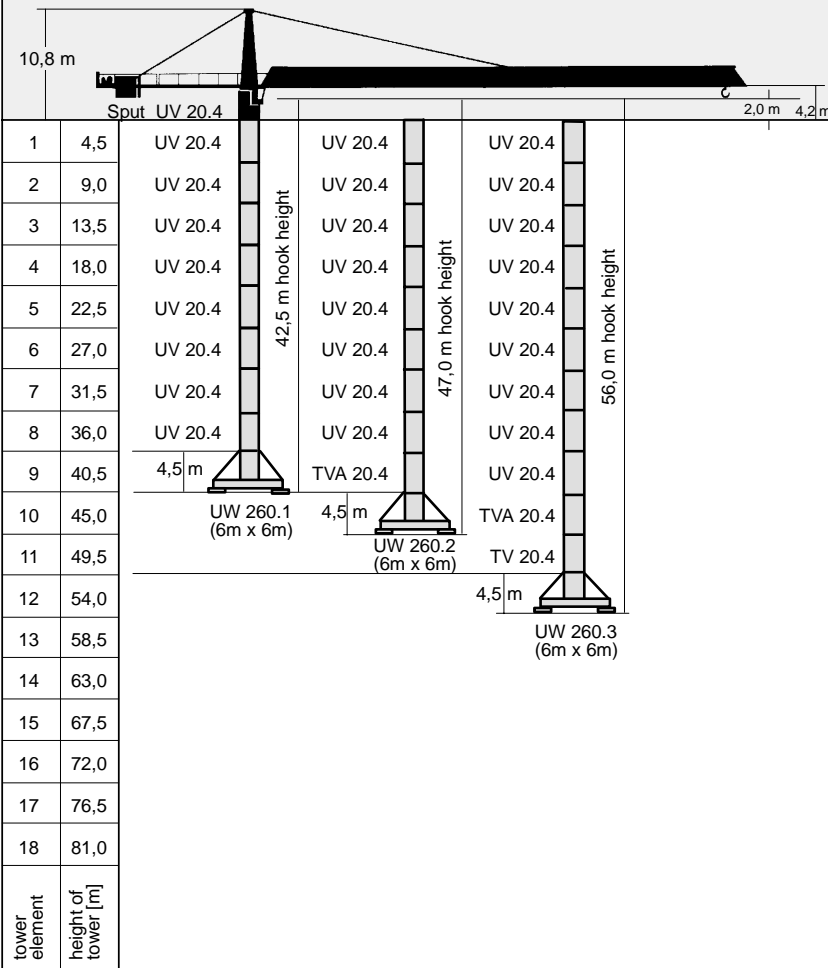
For data regarding foundation anchors see section 12. The tower configurations are recommended for economic crane installation and may be used in any case. Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation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

2.2.9.3

Tower configurations

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

Slewing part:



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.

2.3.1

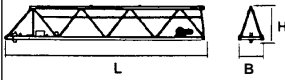
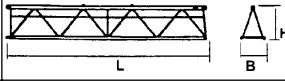
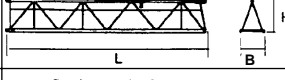
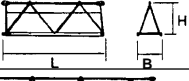
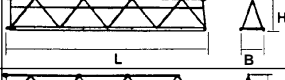
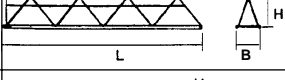
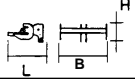
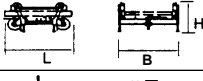
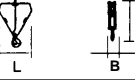
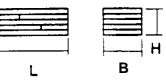
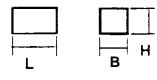
Colli list

item	pcs.	Designation	Colli	L (m)	B (m)	H (m)	weight (kg)	volume (m ³)
1	1	tower top complete div. bracing parts		Sput - UV 15.4				
				10,80	1,95	2,00	6800	42,12
1	1	tower top complete div. bracing parts		Sput - TFS 20.4				
				10,80	2,17	2,42	6700	56,72
1	1	tower top complete div. bracing parts		Sput - UV 20.4				
				10,80	2,17	2,42	6860	56,72
item 1 disassembled	1	tower top lower part with platforms and div. bracing parts		6,30	1,35	2,10	1720	17,86
				Sput - UV 15.4				
				5,62	1,88	2,33	5080	24,62
				Sput - TFS 20.4				
				5,62	2,17	2,42	4980	29,51
				Sput - UV 20.4				
				5,62	2,17	2,42	5140	29,51
2	1	driver's cabin with driver's cabin suspension		2,80	2,15	2,45	1100	14,75
		driver's cabin suspension		1,03	2,01	0,59	230	1,22
4	1	counterjib with bracing parts		13,48	2,38	0,55	2730	17,65
5	1	machinery platform with hoisting rope (ø 16 mm x 170 m)		Hw 637 FU				
				2,38	2,29	2,17	2800	11,83

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

2.3.2

Colli list

Item	pcs.	Designation	Colli	L (m)	B (m)	H (m)	weight (kg)	volume (m ³)
6	1	jib part 1 with trolley drive		10,19	1,26	1,96	2010	25,16
7	1	jib part 2		10,23	1,23	1,96	1470	24,66
8	1	jib part 3 with bracing parts		10,23	1,23	1,79	2400	24,66
9	2	jib part 4		5,25	1,23	1,76	600	11,37
10	1	jib part 5		10,23	1,23	1,76	1070	22,15
11	1	jib part 6		10,19	1,23	1,75	865	21,93
12	1	rope swivel-traverse		0,91	1,20	0,46	107	0,50
13	1	trolley		1,87	1,50	0,96	360	2,69
14	1	hook block (small part)		1,02	0,26	1,70	560	0,45
16	1	standard hand-rail (loose parts)		2,55	1,1	1,00	320	2,81
17	1	box (small parts)		1,6	0,9	0,8	400	1,15

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

2.5.1

Assembly weights - slewing part

<p>Tower top complete - tower connection UV 15.4 8 030 kg</p> <p>bracing brackets (1 x 600 mm, 2 x 5700 mm), drive's cabin driver's cabin suspension, platform with standard handrail</p> <ul style="list-style-type: none"> - upper part of tower top compl. with bracing brackets and platform 1 720 kg - driver's cabin with suspension and standard handrail 1 230 kg - lower part of top with slewing frame, KDV, slewing drive 5 080 kg <p>standard handrail and slip ring system</p>
<p>Tower top complete - tower connection TFS 20.4 7 930 kg</p> <p>bracing brackets (1 x 600 mm, 2 x 5700 mm), drive's cabin driver's cabin suspension, platform with standard handrail</p> <ul style="list-style-type: none"> - upper part of tower top compl. with bracing brackets and platform 1 720 kg - driver's cabin with suspension and standard handrail 1 230 kg - lower part of top with slewing frame, KDV, slewing drive 4 980 kg <p>standard handrail and slip ring system</p>
<p>Tower top complete - tower connection UV 20.4 8 090 kg</p> <p>bracing brackets (1 x 600 mm, 2 x 5700 mm), drive's cabin driver's cabin suspension, platform with standard handrail</p> <ul style="list-style-type: none"> - upper part of tower top compl. with bracing brackets and platform 1 720 kg - driver's cabin with suspension and standard handrail 1 230 kg - lower part of top with slewing frame, KDV, slewing drive 5 140 kg <p>standard handrail and slip ring system</p>
<p>Counterjib with Hw 637 FU complete 7 810 kg</p> <p>counterweight stone 1,9 t (machinery platform), machinery platform Hw 637 FU with hoist rope (ø 16 mm x 260 m) 2 bracing brackets (2 x 6330 mm) and standard handrail</p> <ul style="list-style-type: none"> - counter jib with 2 bracing brackets and standard handrail 3 110 kg - machinery platform Hw 637 FU + hoist rope (ø 16 mm x 260 m) 2 800 kg - counterweight stone 1,9 t 1 900 kg

2.5.2

Assembly weights - slewing parts

55 m	Trolley jib complete	9 470 kg	<ul style="list-style-type: none"> - bracing brackets - trolley, trolley ropes - hook block - standard handrail
50 m	Trolley jib complete	8 850 kg	<ul style="list-style-type: none"> - bracing brackets - trolley, trolley ropes - hook block - standard handrail
45 m	Trolley jib complete	8 605 kg	<ul style="list-style-type: none"> - bracing brackets - trolley, trolley ropes - hook block - standard handrail
40 m	Trolley jib complete	7 985 kg	<ul style="list-style-type: none"> - bracing brackets - trolley, trolley ropes - hook block - standard handrail
35 m	Trolley jib complete	7 535 kg	<ul style="list-style-type: none"> - bracing brackets - trolley, trolley ropes - hook block - standard handrail
30 m	Trolley jib complete	6 915 kg	<ul style="list-style-type: none"> - bracing brackets - trolley, trolley ropes - hook block - standard handrail

2.5.3

Assembly weights - cross frame

Cross frame KR 7 - 32	(without optional features)	3 450 kg	<ul style="list-style-type: none"> - 4 spigots AZ 85 E 20.5 195 kg - 4 spigots AZ 93.4 200 kg - 4 spigots AZ 120 272 kg
Cross frame KRS 8 - 46 (4,6 m x 4,6 m)	(without optional features)	5 200 kg	<ul style="list-style-type: none"> - 4 spigots AZ 85 E 20.5 195 kg - 4 spigots AZ 93.4 200 kg - 4 spigots AZ 120 M 272 kg
Cross frame KR 10 - 46/60 (4,6 m x 4,6 m)	(without optional features)	7 000 kg	<ul style="list-style-type: none"> - 4 spigots AZR 120 E 15.5 560 kg - 4 spigots AZ 140 M 684 kg
Cross frame KR 10 - 46/60 (6,0 m x 6,0 m)	(without optional features)	8 805 kg	<ul style="list-style-type: none"> - 4 spigots AZR 120 E 15.5 560 kg - 4 spigots AZ 140 M 684 kg
Cross frame KR 1000 - 8	(without optional features)	14 630 kg	<ul style="list-style-type: none"> - 4 spigots AZ 140 E 684 kg - 4 spigots AZ 156 M 748 kg
Cross frame KR 16 - 80/100 (8 m x 8 m)	(without optional features)	21 450 kg	<ul style="list-style-type: none"> - 4 spigots AZ 140 E KR16-80 620 kg - 4 spigots AZ 156 M KR16-80 680 kg - 4 spigots AZ 156S M KR16-80 675 kg
Cross frame KR 16 - 80/100 (10 m x 10 m)	(without optional features)	25 400 kg	<ul style="list-style-type: none"> - 4 spigots AZ 140 E KR16-80 620 kg - 4 spigots AZ 156 M KR16-80 680 kg - 4 spigots AZ 156S M KR16-80 675 kg

2.5.4 **Assembly weights - cross frame element and undercarriage**

Cross frame element	KRE 250 complete	5 750 kg
	- cross frame platform with swivel arms, corner bearings and transport safety devices	2 730 kg
	- base mast part with diagonal struts and track rod	3 020 kg
Cross frame element	KRE 260.1 complete	8 100 kg
	- cross frame platform with swivel arms, corner bearings and transport safety devices	4 320 kg
	- base mast part with diagonal struts and track rod	3 780 kg
Cross frame element	KRE 260.2 complete	10 900 kg
	- cross frame platform with swivel arms, corner bearings and transport safety devices	5 455 kg
	- base mast part with diagonal struts and track rod	5 445 kg
Undercarriage	UW 250 complete	8 800 kg
	- undercarriage platform with swivel arms, subframes and transport safety devices	5 600 kg
	- Basismaststück mit Druckstreben und Spurstangen	3 200 kg
Undercarriage	UW 260.1 complete	11 400 kg
	- undercarriage platform with swivel arms, subframes and transport safety devices	7 150 kg
	- Basismaststück mit Druckstreben und Spurstangen	4 250 kg
Undercarriage	UW 260.2 complete	13 930 kg
	- undercarriage platform with swivel arms, subframes and transport safety devices	8 050 kg
	- Basismaststück mit Druckstreben und Spurstangen	5 880 kg
Undercarriage	UW 260.3 complete	17 200 kg
	- undercarriage platform with swivel arms, subframes and transport safety devices	11 300 kg
	- Basismaststück mit Druckstreben und Spurstangen	5 900 kg

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



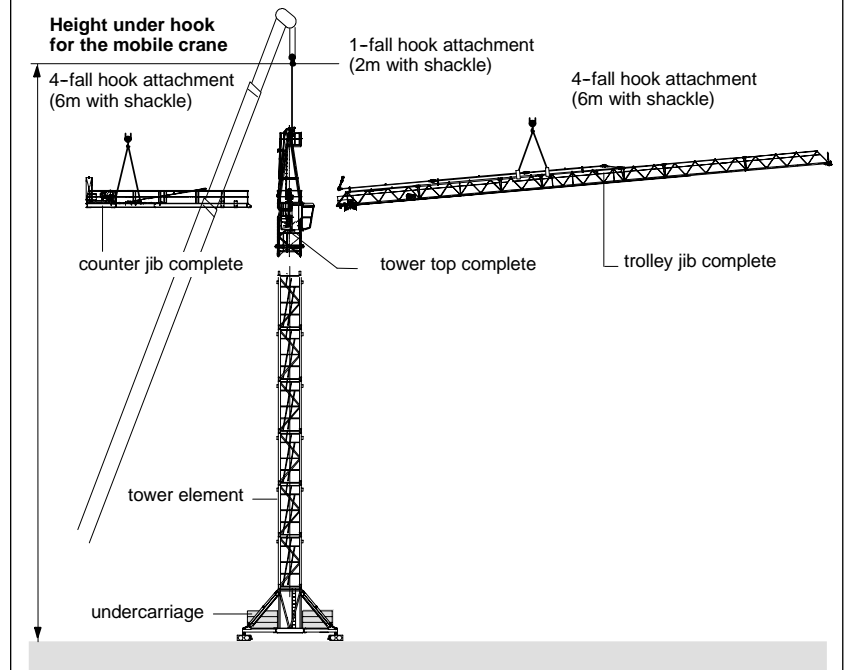
Warning!
Use suspension ropes with sufficient capacity and observe suspension plan!

Required height under hook for mobile crane
= **Height under hook of WOLFF tower crane + min. 15 m.**

For data regarding the height under hook of 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 the substructure.

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



2.6.1.1 Trolley jib - suspension plan - 60 m to 50 m jib



Danger in case of disassembling!

Release fixing bolts at the pivot point of the jib. Jib must be balanced before it can be extended. 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.

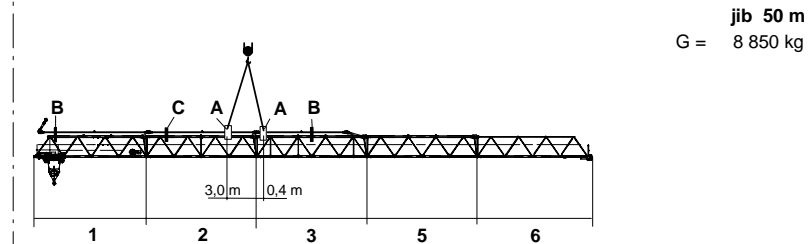
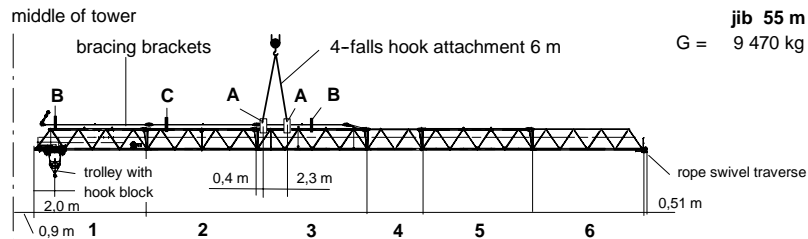
Lengths:	jib part	1/2/3/5/6	= 10,0 m
	jib part	4/7	= 5,0 m
	rope swivel traverse		= 0,51 m

More details about suspension **A** and support **B** and support **C** see section 2.6.2.



Attention!

For assembly hang on snatch block with 2 sling ropes DIN 3088 (Ø 8 mm x 1 m with shackle) to the trolley, reeve in assembly rope (perlon rope Ø 14 mm x 12 m) and secure at the trolley.



2.6.1.2 Trolley jib - suspension plan - 45 m to 30 m jib



Danger in case of disassembling!

Release fixing bolts at the pivot point of the jib. Jib must be balanced before it can be extended. 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.

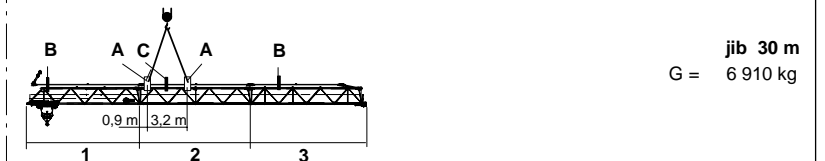
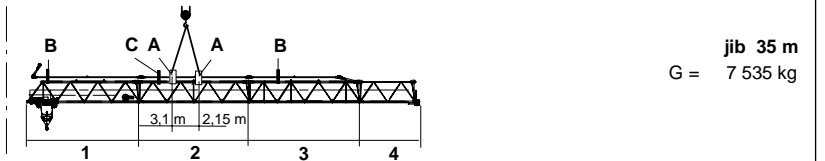
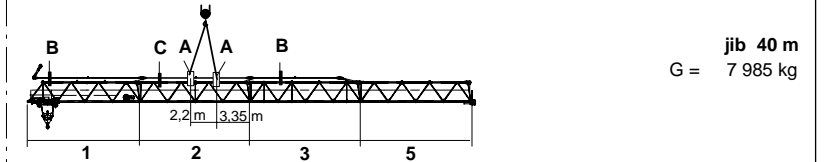
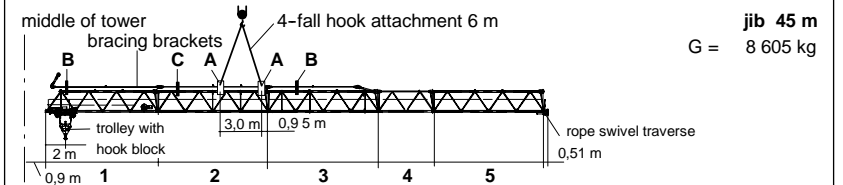
Lengths:	jib part	1/2/3/5	= 10,0 m
	jib part	4	= 5,0 m
	rope swivel traverse		= 0,51 m

More details about suspension **A** and support **B** and support **C** see section 2.6.2.



Attention!

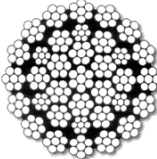
For assembly hang on snatch block with 2 sling ropes DIN 3088 (Ø 8 mm x 1 m with shackle) to the trolley, reeve in assembly rope (perlon rope Ø 14 mm x 12 m) and secure at the trolley.



2.7.1

Hoisting rope

for hoisting winch - Hw 637 FU

<p>Cable Ø = 16 mm +4% +2%</p>	<p>design according to DIN 15 020 kind of operation TWG 1 Am</p>
<p>First equipment</p>	<p>CASAR STARLIFT - non twisting flexible hoisting rope with compressed cable core</p> 
<p>Design</p>	<p>nominal strength = 1770 N/mm² calc. breaking strength = 234,1 kN min. breaking strength = 178,1 kN weight per meter = 1,191 kg</p> <p>langs lay rope, right handed, made from cable wire.</p> <p>middle space factor = 0,654 spinning loss factor = 0,76 weight factor = 0,90 total twist number = 245</p> <p>Number of carryig wires in the outer strands is to be judged by the state of wear according to DIN 15020 Bl. 2 / ISO DIS 4309 = 112</p>

Basic equipment

cable length 260 m	for crane with:	cable radius hook path	4 fall 55 m 42 m
-----------------------	-----------------	------------------------------	------------------------

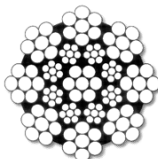
By lengthening the hook path by 1 tower element (4,5 m) the necessary cable length increases by **18,0 m for operation in 4 falls.**

! **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.

2.7.2

Traversing rope

<p>Cable Ø = 8 mm +4% +2%</p>	<p>design according to DIN 15 020 kind of operation TWG 1 Am</p>
<p>First equipment</p>	<p>CASAR UNILIFT - cable with 8 strands in non-overlapped double parallel construction made out of uncompressed strands.</p> 
<p>Design</p>	<p>nominal strength = 1770 N/mm² calc. breaking strength = 57,4 kN min. breaking strength = 49,9 kN weight per meter = 0,282 kg</p> <p>ordinary lay rope, right handed, surface of wires zinc coated.</p> <p>middle space factor = 0,643 spinning loss factor = 0,90 weight factor = 0,87 total twist number = 119</p> <p>Number of carryig wires in the outer strands is to be judged by the state of wear according to DIN 15020 Bl. 2 / ISO DIS 4309 = 56</p>

Basic equipment

cable lengths	1 x 65 m 1 x 108 m	for crane with:	radius 55 m
---------------	-----------------------	-----------------	----------------

! **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.

2.8.1 Insertable exterior climbing gear

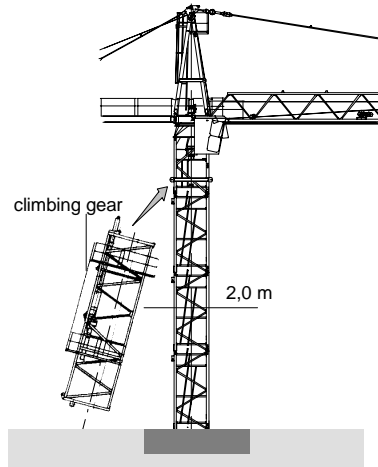
The following removable hydraulic exterior climbing gear can be used with the tower crane WOLFF 5520.10.

- **KWH 20.3**

KWH 20.3 information is given in a separate documentation in section 12, Additional Equipment.

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

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



2.8.1.1 Balancing weights for climbing

- * The indicated balancing weights are gross-weights of tower sections or a load.
- ** The given radius (m) is an approximate value and refers to the center of the tower. The exact balancing position can be reached by carefully moving the trolley and can be checked by a frictionless moving in or out of the concerned tower section.
- balancing not possible

for climbing in UV-20 tower elements	jib					
	30 m	35 m	40 m	45 m	50 m	55 m
with balancing load * UV 20 = 1,95 t	** 10,3	9,9	---	---	---	---
without balancing load	---	---	23,1	18,5	16,3	8,7
for climbing in TFS 20.4 tower elements						
with balancing load * TFS 20.4 = 1,45 t	** 13,5	12,9	9,9	---	---	---
without balancing load	---	---	---	20,4	18,2	10,6



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 20.3).
 The climbing gear is an auxiliary device for assembly and mustn't stay at the tower crane WOLFF under normal working conditions.

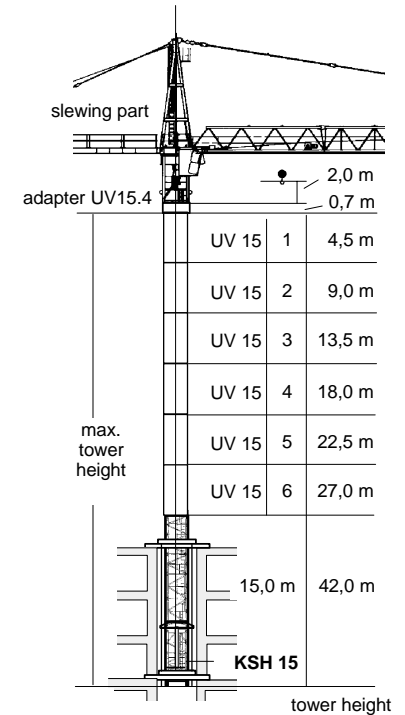
2.8.4 Insertable internal climbing device KSH 15

For use of the WOLFF 5520 in connection with internal climbing device KSH 15, the tower combination has to be observed as shown here.

KSH15 informations is given in a separate documentation in section 12, Additional Equipment.

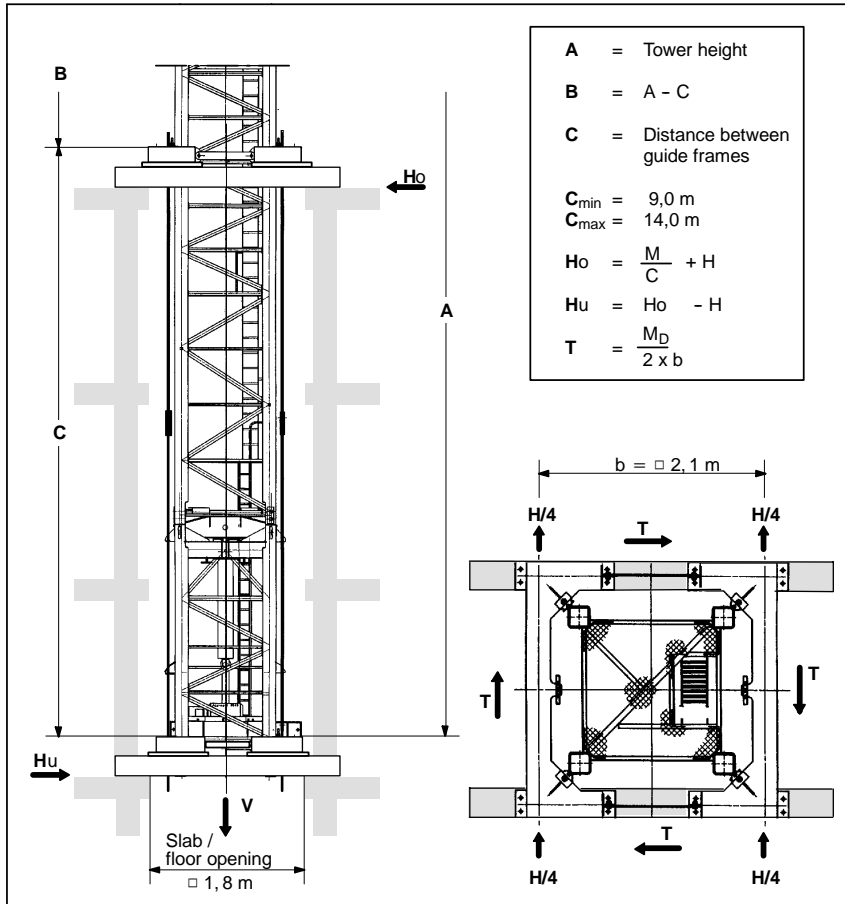
2.8.4.1 Table of balancing weights

- * The indicated balancing weights are gross-weights of tower elements or load.
- ** The indicated radius refers to the centre of the tower and shall be treated as standard value. Exact balancing must achieved by travelling of trolley with tower element or load and can be checked by measuring the distance between corner posts and tensioning brackets. This distance shall be equal at all four corner posts.
- balancing not possible



5520.10 balancing weight *	jib					
	30 m	35 m	40 m	45 m	50 m	55 m
UV 20.4 = 1,95 t	** 27,5	28,3	26,4	26,0	25,7	24,3
TFS 20.4 = 1,45 t	--	33,7	31,4	31,0	30,6	28,9
weight = 5,00 t	13,9	14,3	13,3	13,1	12,9	12,2
5520.6						
UV 20.4 = 1,95 t	--	32,5	30,3	29,9	29,5	27,9
TFS 20.4 = 1,45 t	--	--	37,2	36,7	36,2	34,2
weight = 5,00 t	14,9	15,3	14,2	14,0	13,8	13,1

2.8.4.2 Reacting forces to building for internal hydraulic climbing device KSH 15



Reacting forces to building (kN)

A (m)	42,0				37,5				33,0				28,5			
C (m)	9	10	12	14	9	10	12	14	9	10	12	14	9	10	12	14
V	687	687	687	687	668	668	668	668	650	650	650	650	632	632	632	632
Ho	374	345	302	271	315	292	257	231	262	244	215	195	220	200	177	161
Hu	287	258	215	185	235	212	177	151	211	190	158	136	196	176	147	126
T	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45

2.8.5 Insertable internal climbing device KSH 20 L

For use of the WOLFF 5520 in connection with internal climbing device KSH 20 L, the tower combination has to be observed as shown here.

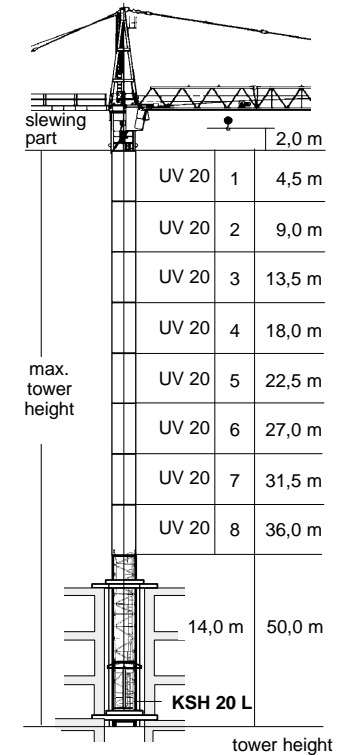
KSH20L informations is given in a separate documentation in section 12, Additional Equipment.

2.8.5.1 Table of balancing weights

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

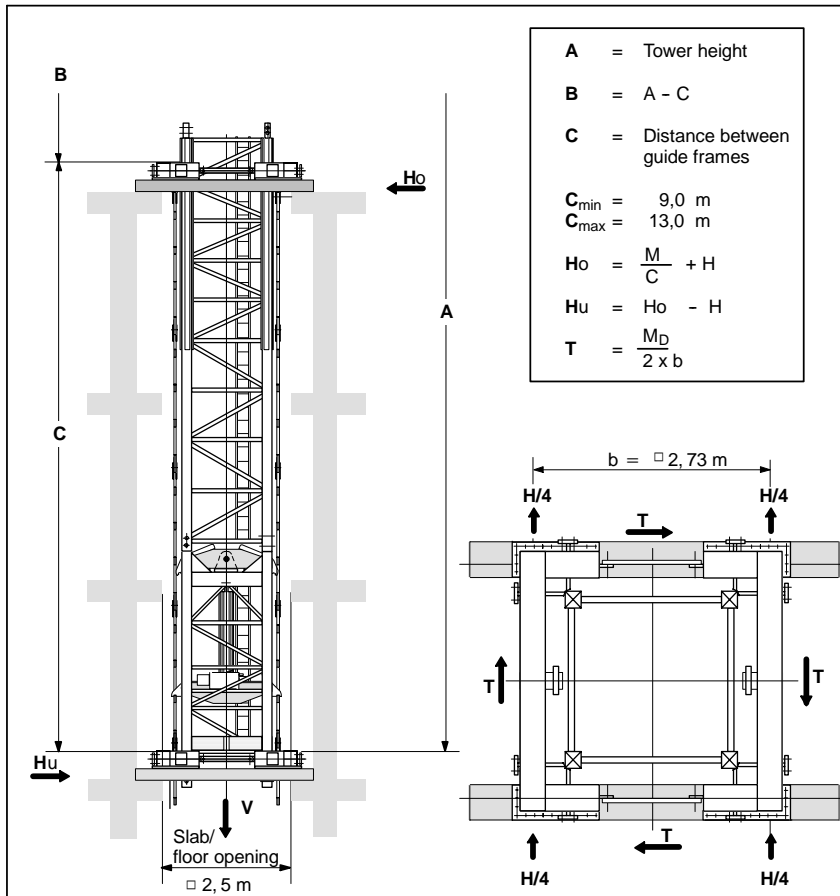
** The indicated radius refers to the centre of the tower and shall be treated as standard value. Exact balancing must achieved by travelling of trolley with tower element or load and can checked by measuring the distance between corner posts and guide plates. This distance shall be equal at all four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

-- balancing not possible



5520.10 balancing weight *	30 m	35 m	40 m	jib		
	45 m	50 m	55 m			
UV 20.4 = 1,95 t	** 27,5	28,3	26,4	26,0	25,7	24,3
TFS 20.4 = 1,45 t	--	33,7	31,4	31,0	30,6	28,9
weight = 5,00 t	13,9	14,3	13,3	13,1	12,9	12,2
5520.6						
UV 20.4 = 1,95 t	--	32,5	30,3	29,9	29,5	27,9
TFS 20.4 = 1,45 t	--	--	37,2	36,7	36,2	34,2
weight = 5,00 t	14,9	15,3	14,2	14,0	13,8	13,1

2.8.5.2 Reacting forces to building for internal hydraulic climbing device KSH 20 L



Reacting forces to building (kN)

A (m)	50,0				45,5				41,0				36,5			
C (m)	9	10	12	13	9	10	12	13	9	10	12	13	9	10	12	13
V	741	741	741	741	722	722	722	722	703	703	703	703	684	684	684	684
Ho	506	466	405	381	437	402	351	331	374	345	302	286	315	292	257	243
Hu	406	366	305	281	344	309	258	238	287	258	215	199	235	212	177	163
T	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35

2.8.6 Insertable internal climbing device KSH 20 M

For use of the WOLFF 5520 in connection with internal climbing device KSH 20 M, the tower combination has to be observed as shown here.

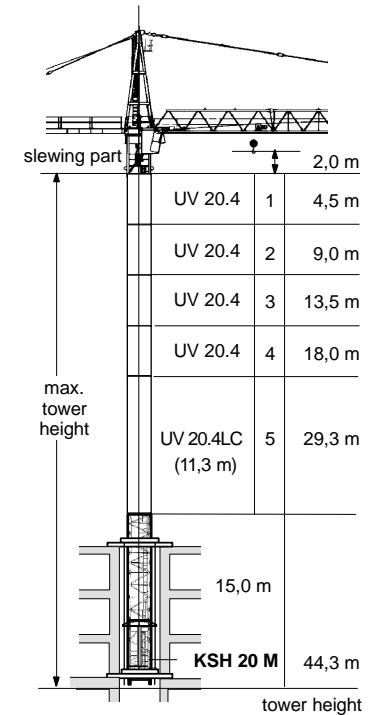
KSH20M informations is given in a separate documentation in section 12, Additional Equipment.

2.8.6.1 Table of balancing weights

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

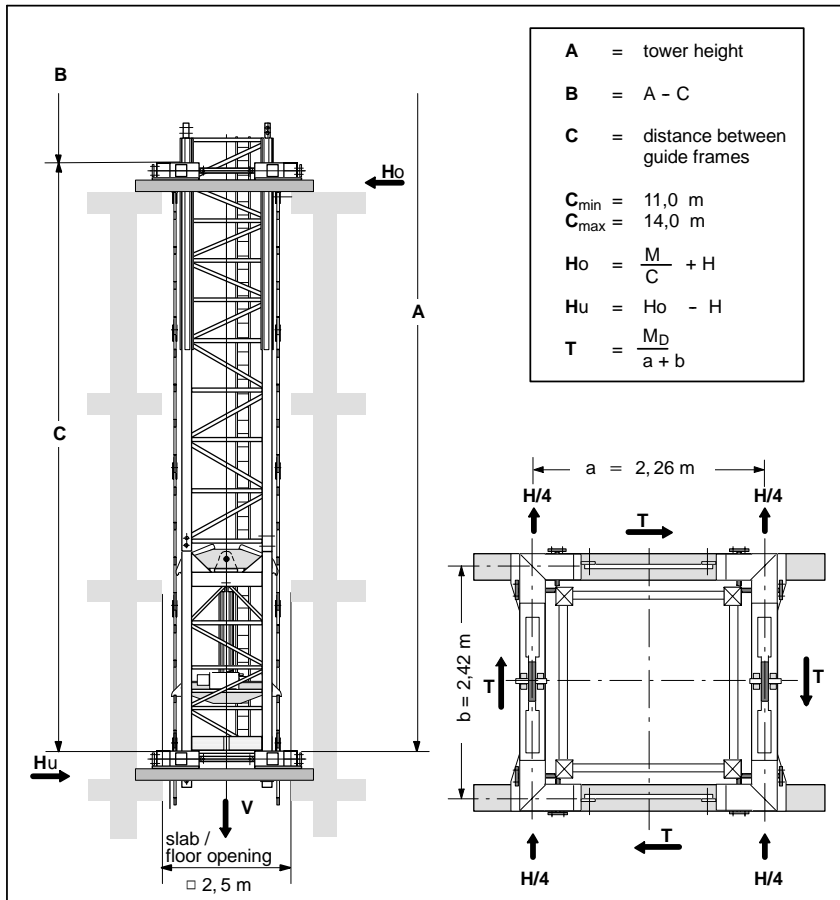
** The indicated radius refers to the centre of the tower and shall be treated as standard value. Exact balancing must achieved by travelling of trolley with tower element or load and can checked by measuring the distance between corner posts and guide plates. This distance shall be equal at all four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

-- balancing not possible



5520.10 balancing weight *	Jib					
	30 m	35 m	40 m	45 m	50 m	55 m
UV 20.4 = 1,95 t	** 27,5	28,3	26,4	26,0	25,7	24,3
TFS 20.4 = 1,45 t	--	33,7	31,4	31,0	30,6	28,9
weight = 5,00 t	13,9	14,3	13,3	13,1	12,9	12,2
5520.6						
UV 20.4 = 1,95 t	--	32,5	30,3	29,9	29,5	27,9
TFS 20.4 = 1,45 t	--	--	37,2	36,7	36,2	34,2
weight = 5,00 t	14,9	15,3	14,2	14,0	13,8	13,1

2.8.6.2 Reacting forces to building for internal hydraulic climbing device KSH 20 M



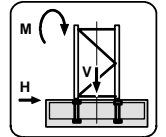
Reacting forces to building (kN)

A (m)	44,3				39,8				35,3				30,8			
C (m)	11	12	13	14	11	12	13	14	11	12	13	14	11	12	13	14
V	720	720	720	720	700	700	700	700	680	680	680	680	660	660	660	660
Ho	379	355	335	224	329	308	291	277	279	262	248	237	234	221	210	200
Hu	285	261	241	130	241	220	203	189	198	181	167	156	178	163	151	140
T	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40

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 device

M = moment H = horizontal force V = vertical load



Foundation loads Jib lengths 30 - 55 m

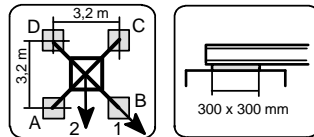
height under hook		Crane in service torque moment 190 kNm			Crane out of service			Assembly		
		M	H	V	M	H	V	M	H	V
[m]	[m]	[kNm]	[kN]	[kN]	[kNm]	[kN]	[kN]	[kNm]	[kN]	[kN]
10,6	11,0	1352	19	453	270	47	454	1318	11	265
15,1	15,5	1449	20	469	493	51	468	1377	13	279
19,6	20,0	1557	22	484	740	56	482	1444	14	293
24,1	24,5	1677	23	499	1031	62	496	1521	16	307
28,6	29,0	1810	25	515	1374	68	510	1608	17	321
33,1	33,5	1958	26	530	1754	75	524	1705	18	335
37,6	38,0	2121	28	546	2177	81	538	1813	20	349
42,1	42,5	2301	29	561	2645	88	552	1932	21	363
46,6	47,0	2472	31	587	3131	94	576	2050	23	387
51,1	51,5	2674	32	607	3681	101	594	2186	24	405
55,6	56,0	2850	35	650	4231	113	632	2316	27	443
60,1	60,5	3065	37	681	4863	121	661	2469	29	472
64,6	65,0	3301	39	712	5556	128	689	2635	31	500
69,1	69,5	3558	41	743	6319	137	717	2817	33	528
73,6	74,0	3777	43	791	7074	147	761	2982	35	568
78,1	78,5	4044	45	827	7922	157	793	3179	38	600

Attention Tower configuration with basis tower element BT 29

84,8	85,2	4220	48	1014	9250	168	905	3460	43	728
89,3	89,7	4500	51	1061	10240	179	951	3690	45	765
93,8	94,2	4810	54	1107	11300	190	997	3930	48	811
98,3	98,7	5140	56	1153	13270	209	1043	4190	50	857
102,8	103,2	5500	54	1200	14540	220	1090	4470	53	903

3.2.1.1 Center ballasts and corner loads acc. to DIN 15019

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

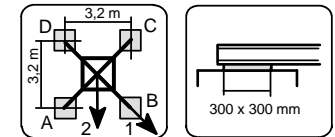


KR 7 - 32 Corner distance 3,2 m x 3,2 m Jib length 30 m

height under hook ☞ [m]	Centerballasts ☞ [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
6,9	7,3	85,0	1	326	570	326	82	19	1	259	456	259	62	40
			2	499	499	154	154		2	398	398	120	120	
11,4	11,8	85,0	1	330	590	330	71	21	1	263	470	263	56	43
			2	514	514	147	147		2	410	410	117	117	
15,9	16,3	85,0	1	335	611	335	58	22	1	267	486	267	48	47
			2	530	530	139	139		2	422	422	113	113	
20,4	20,8	85,0	1	339	636	339	42	23	1	272	504	272	39	60
			2	549	549	129	129		2	436	436	107	107	
24,9	25,3	85,0	1	343	663	343	24	25	1	276	524	276	28	66
			2	569	569	118	118		2	451	451	101	101	
29,4	29,8	85,0	1	348	693	348	3	26	1	323	547	323	98	72
			2	591	591	104	104		2	481	481	164	164	
33,9	34,3	95,0	1	377	751	377	3	27	1	352	654	352	49	78
			2	641	641	112	112		2	566	566	138	138	

3.2.1.2 Center ballasts and corner loads acc. to DIN 15019

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

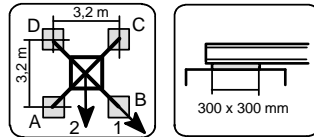


KR 7 - 32 Corner distance 3,2 m x 3,2 m Jib length 35 m

height under hook ☞ [m]	Centerballasts ☞ [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
6,9	7,3	77,5	1	315	543	315	87	19	1	240	437	240	43	40
			2	476	476	154	154		2	379	379	101	101	
11,4	11,8	77,5	1	319	562	319	76	21	1	244	452	244	37	43
			2	491	491	148	148		2	391	391	98	98	
15,9	16,3	77,5	1	324	584	324	63	22	1	249	468	249	29	47
			2	508	508	139	139		2	404	404	93	93	
20,4	20,8	77,5	1	328	609	328	47	23	1	253	486	253	20	61
			2	527	527	130	130		2	418	418	88	88	
24,9	25,3	77,5	1	332	636	332	29	25	1	257	506	257	9	67
			2	547	547	118	118		2	433	433	81	81	
29,4	29,8	77,5	1	337	666	337	7	26	1	312	548	312	75	73
			2	570	570	103	103		2	479	479	144	144	
33,9	34,3	92,5	1	378	737	378	19	28	1	353	669	353	38	79
			2	632	632	124	124		2	577	577	130	130	

3.2.1.3 Center ballasts and corner loads acc. to DIN 15019

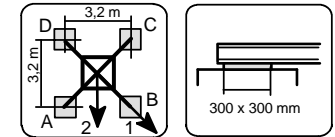
for a stationary tower crane on a cross frame without climbing drive



KR 7 - 32		Corner distance 3,2 m x 3,2 m				Jib length 40 m								
height under hook ☞ [m]	Centerballasts ☞ [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
6,9	7,3	80,0	1	325	563	325	86	20	1	246	444	246	49	41
			2	493	493	156	156		2	386	386	107	107	
11,4	11,8	80,0	1	329	583	329	75	21	1	251	459	251	43	44
			2	509	509	150	150		2	398	398	104	104	
15,9	16,3	80,0	1	333	605	333	61	22	1	255	475	255	35	48
			2	526	526	141	141		2	411	411	99	99	
20,4	20,8	80,0	1	338	630	338	45	24	1	259	493	259	25	62
			2	544	544	131	131		2	425	425	94	94	
24,9	25,3	80,0	1	342	658	342	26	25	1	317	513	317	121	68
			2	565	565	119	119		2	456	456	178	178	
29,4	29,8	80,0	1	346	689	346	4	26	1	321	590	321	52	74
			2	588	588	104	104		2	511	511	131	131	
33,9	34,3	87,5	1	366	746	366	0	28	1	339	699	339	0	79
			2	633	633	106	106		2	591	591	97	97	

3.2.1.4 Center ballasts and corner loads acc. to DIN 15019

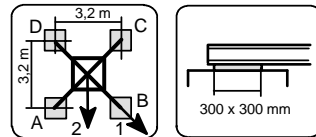
for a stationary tower crane on a cross frame without climbing drive



KR 7 - 32		Corner distance 3,2 m x 3,2 m				Jib length 45 m								
height under hook ☞ [m]	Centerballasts ☞ [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
6,9	7,3	75,0	1	320	563	320	77	20	1	257	449	257	65	41
			2	492	492	148	148		2	393	393	121	121	
11,4	11,8	75,0	1	324	583	324	65	21	1	261	467	261	56	44
			2	507	507	141	141		2	407	407	116	116	
15,9	16,3	75,0	1	329	606	329	51	23	1	266	487	266	44	48
			2	525	525	133	133		2	422	422	109	109	
20,4	20,8	75,0	1	333	631	333	35	24	1	270	509	270	31	63
			2	544	544	122	122		2	439	439	101	101	
24,9	25,3	75,0	1	337	660	337	15	25	1	274	533	274	15	68
			2	565	565	109	109		2	465	465	159	159	
29,4	29,8	75,0	1	333	700	333	0	27	1	316	607	316	26	74
			2	589	589	94	94		2	522	522	111	111	
33,9	34,3	82,5	1	348	762	348	0	28	1	306	746	306	0	80
			2	634	634	95	95		2	603	603	76	76	

3.2.1.5 Center ballasts and corner loads acc. to DIN 15019

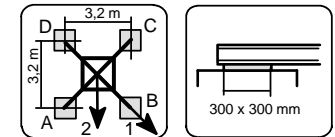
for a stationary tower crane on a cross frame without climbing drive



KR 7 - 32		Corner distance 3,2 m x 3,2 m								Jib length 50 m				
height under hook ☪ [m]	Centerballasts ☪ [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
6,9	7,3	75,0	1	323	562	323	84	20	1	258	476	258	39	42
			2	492	492	154	154		2	412	412	103	103	
11,4	11,8	75,0	1	327	582	327	72	21	1	262	495	262	29	45
			2	508	508	147	147		2	427	427	97	97	
15,9	16,3	75,0	1	331	605	331	58	23	1	266	515	266	17	49
			2	525	525	138	138		2	442	442	90	90	
20,4	20,8	75,0	1	336	631	336	41	24	1	270	537	270	4	63
			2	544	544	127	127		2	459	459	82	82	
24,9	25,3	75,0	1	340	659	340	21	25	1	262	574	262	0	69
			2	566	566	114	114		2	482	482	148	148	
29,4	29,8	75,0	1	342	694	342	0	27	1	319	631	319	8	75
			2	589	589	99	99		2	539	539	99	99	
33,9	34,3	85,0	1	369	757	369	0	28	1	302	791	302	0	81
			2	641	641	106	106		2	628	628	69	69	

3.2.1.6 Center ballasts and corner loads acc. to DIN 15019

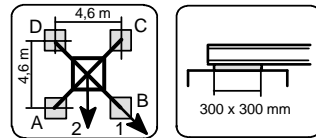
for a stationary tower crane on a cross frame without climbing drive



KR 7 - 32		Corner distance 3,2 m x 3,2 m								Jib length 55 m				
height under hook ☪ [m]	Centerballasts ☪ [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
6,9	7,3	67,5	1	312	542	312	82	20	1	195	572	195	0	43
			2	475	475	149	149		2	443	443	38	38	
11,4	11,8	67,5	1	316	562	316	70	22	1	189	601	189	0	45
			2	490	490	142	142		2	457	457	32	32	
15,9	16,3	67,5	1	320	585	320	55	23	1	181	634	181	0	50
			2	508	508	133	133		2	473	473	25	25	
20,4	20,8	70,0	1	331	618	331	44	24	1	183	672	183	0	64
			2	534	534	128	128		2	497	497	22	22	
24,9	25,3	75,0	1	348	659	348	37	26	1	196	714	196	0	70
			2	568	568	128	128		2	529	529	24	24	
29,4	29,8	80,0	1	365	704	365	25	27	1	206	761	206	0	76
			2	604	604	125	125		2	580	580	99	99	
33,9	34,3	90,0	1	394	765	394	22	28	1	311	854	311	0	82
			2	656	656	131	131		2	671	671	67	67	

3.2.2.1 Center ballasts and corner loads acc. to DIN 15019

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

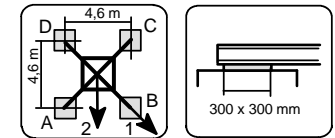


KRS 8 - 46 Corner distance 4,6 m x 4,6 m Jib length 30 m

height under hook ☞ [m]	Centerballasts ☞ [m]	Centerballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
7,0	7,4	45,0	1	229	399	229	59	19	1	162	299	162	25	40
			2	349	349	109	109		2	259	259	65	65	
11,5	11,9	45,0	1	233	413	233	52	21	1	165	310	165	21	43
			2	360	360	105	105		2	267	267	63	63	
16,0	16,4	45,0	1	236	428	236	44	22	1	169	321	169	16	48
			2	372	372	100	100		2	277	277	61	61	
20,5	20,9	45,0	1	240	445	240	34	24	1	172	334	172	10	61
			2	385	385	94	94		2	287	287	58	58	
25,0	25,4	45,0	1	243	464	243	22	25	1	176	348	176	3	68
			2	399	399	87	87		2	298	298	54	54	
29,5	29,9	45,0	1	247	484	247	9	27	1	222	382	222	61	74
			2	415	415	78	78		2	335	335	108	108	
34,0	34,4	50,0	1	263	519	263	6	28	1	238	453	238	22	80
			2	444	444	81	81		2	390	390	85	85	
38,5	38,9	62,5	1	297	575	297	20	29	1	268	552	268	0	86
			2	494	494	101	101		2	467	467	77	77	
43,0	43,4	77,5	1	338	639	338	37	31	1	284	686	284	0	93
			2	551	551	125	125		2	556	556	71	71	

3.2.2.2 Center ballasts and corner loads acc. to DIN 15019

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

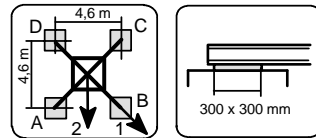


KRS 8 - 46 Corner distance 4,6 m x 4,6 m Jib length 35 m

height under hook ☞ [m]	Centerballasts ☞ [m]	Centerballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
7,0	7,4	37,5	1	218	377	218	59	20	1	143	280	143	6	41
			2	330	330	106	106		2	240	240	46	46	
11,5	11,9	37,5	1	222	391	222	52	21	1	146	291	146	2	43
			2	341	341	102	102		2	249	249	44	44	
16,0	16,4	37,5	1	225	406	225	44	22	1	147	306	147	0	48
			2	353	353	97	97		2	258	258	42	42	
20,5	20,9	37,5	1	229	423	229	34	24	1	144	325	144	0	62
			2	366	366	91	91		2	268	268	38	38	
25,0	25,4	37,5	1	232	442	232	22	25	1	141	347	141	0	68
			2	381	381	84	84		2	291	291	123	123	
29,5	29,9	37,5	1	236	463	236	9	27	1	211	379	211	42	74
			2	396	396	75	75		2	330	330	91	91	
34,0	34,4	45,0	1	258	504	258	12	28	1	233	457	233	9	81
			2	432	432	84	84		2	391	391	74	74	
38,5	38,9	60,0	1	299	566	299	31	30	1	262	572	262	0	87
			2	488	488	110	110		2	476	476	72	72	
43,0	43,4	75,0	1	340	631	340	49	31	1	276	707	276	0	93
			2	546	546	134	134		2	565	565	65	65	

3.2.2.3 Center ballasts and corner loads acc. to DIN 15019

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

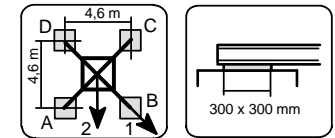


KR 8 - 46 Corner distance 4,6 m x 4,6 m Jib length 40 m

height under hook [m]	Centerballasts [m]	Centerballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
7,0	7,4	37,5	1	221	388	221	55	20	1	143	281	143	5	41
			2	339	339	104	104		2	240	240	46	46	
11,5	11,9	37,5	1	225	402	225	48	21	1	146	291	146	1	44
			2	350	350	100	100		2	249	249	44	44	
16,0	16,4	37,5	1	228	417	228	39	23	1	146	307	146	0	48
			2	362	362	95	95		2	259	259	41	41	
20,5	20,9	37,5	1	232	435	232	29	24	1	144	326	144	0	63
			2	375	375	89	89		2	273	273	141	141	
25,0	25,4	37,5	1	235	454	235	17	25	1	210	350	210	71	69
			2	390	390	81	81		2	309	309	112	112	
29,5	29,9	37,5	1	239	475	239	3	27	1	214	404	214	23	75
			2	406	406	72	72		2	349	349	79	79	
34,0	34,4	40,0	1	242	510	242	0	28	1	200	494	200	0	81
			2	429	429	68	68		2	398	398	49	49	
38,5	38,9	60,0	1	302	579	302	25	30	1	245	620	245	0	88
			2	498	498	106	106		2	496	496	58	58	
43,0	43,4	82,5	1	362	663	362	61	31	1	295	758	295	0	94
			2	575	575	149	149		2	605	605	69	69	

3.2.2.4 Center ballasts and corner loads acc. to DIN 15019

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

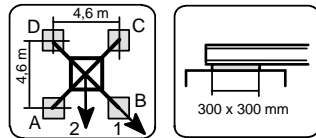


KRS 8 - 46 Corner distance 4,6 m x 4,6 m Jib length 45 m

height under hook [m]	Centerballasts [m]	Centerballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
7,0	7,4	37,5	1	229	399	229	60	20	1	166	300	166	32	42
			2	349	349	109	109		2	261	261	72	72	
11,5	11,9	37,5	1	233	413	233	53	21	1	170	313	170	26	44
			2	360	360	105	105		2	271	271	68	68	
16,0	16,4	37,5	1	236	429	236	44	23	1	173	328	173	19	49
			2	372	372	100	100		2	282	282	64	64	
20,5	20,9	37,5	1	240	446	240	33	24	1	177	343	177	10	63
			2	386	386	94	94		2	294	294	59	59	
25,0	25,4	37,5	1	243	466	243	21	26	1	218	372	218	65	70
			2	401	401	86	86		2	327	327	110	110	
29,5	29,9	37,5	1	247	487	247	6	27	1	222	427	222	16	76
			2	417	417	77	77		2	367	367	76	76	
34,0	34,4	40,0	1	253	521	253	0	28	1	200	526	200	0	82
			2	441	441	72	72		2	417	417	45	45	
38,5	38,9	62,5	1	316	599	316	34	30	1	255	654	255	0	88
			2	516	516	116	116		2	522	522	60	60	
43,0	43,4	85,0	1	376	684	376	68	31	1	304	795	304	0	95
			2	594	594	158	158		2	632	632	70	70	

3.2.2.5 Center ballasts and corner loads acc. to DIN 15019

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

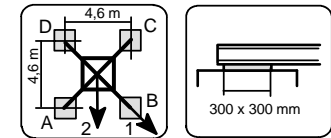


KRS 8 - 46 Corner distance 4,6 m x 4,6 m Jib length 50 m

height under hook ☪ [m]	Centerballasts ☪ [m]	Centerballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
7,0	7,4	35,0	1	226	392	226	59	20	1	160	313	160	8	42
			2	344	344	108	108		2	268	268	53	53	
11,5	11,9	35,0	1	229	407	229	52	21	1	164	326	164	2	45
			2	355	355	104	104		2	279	279	49	49	
16,0	16,4	35,0	1	233	423	233	43	23	1	162	347	162	0	50
			2	367	367	98	98		2	290	290	45	45	
20,5	20,9	35,0	1	236	441	236	32	24	1	156	372	156	0	64
			2	381	381	92	92		2	302	302	40	40	
25,0	25,4	35,0	1	240	460	240	19	26	1	149	399	149	0	70
			2	396	396	84	84		2	333	333	97	97	
29,5	29,9	35,0	1	243	482	243	5	27	1	217	439	217	0	77
			2	412	412	75	75		2	373	373	63	63	
34,0	34,4	45,0	1	272	530	272	13	29	1	215	556	215	0	83
			2	454	454	89	89		2	443	443	50	50	
38,5	38,9	65,0	1	325	606	325	44	30	1	257	686	257	0	89
			2	524	524	127	127		2	543	543	58	58	
43,0	43,4	87,5	1	385	691	385	79	31	1	305	829	305	0	95
			2	602	602	168	168		2	653	653	67	67	

3.2.2.6 Center ballasts and corner loads acc. to DIN 15019

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

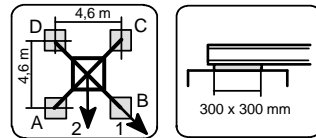


KRS 8 - 46 Corner distance 4,6 m x 4,6 m Jib length 55 m

height under hook ☪ [m]	Centerballasts ☪ [m]	Centerballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
7,0	7,4	30,0	1	221	381	221	61	20	1	100	398	100	0	43
			2	334	334	108	108		2	290	290	9	9	
11,5	11,9	32,5	1	231	402	231	59	22	1	109	419	109	0	46
			2	352	352	110	110		2	307	307	11	11	
16,0	16,4	35,0	1	240	425	240	56	23	1	117	442	117	0	50
			2	371	371	110	110		2	325	325	13	13	
20,5	20,9	37,5	1	250	449	250	52	25	1	124	467	124	0	65
			2	391	391	110	110		2	344	344	14	14	
25,0	25,4	40,0	1	260	475	260	45	26	1	129	496	129	0	71
			2	412	412	108	108		2	366	366	104	104	
29,5	29,9	42,5	1	270	503	270	37	27	1	133	527	133	0	77
			2	434	434	105	105		2	414	414	75	75	
34,0	34,4	47,5	1	286	539	286	32	29	1	222	599	222	0	84
			2	465	465	107	107		2	472	472	49	49	
38,5	38,9	67,5	1	339	616	339	63	30	1	263	731	263	0	90
			2	535	535	144	144		2	573	573	56	56	

3.2.3.1 Center ballasts and corner loads DIN 15019

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

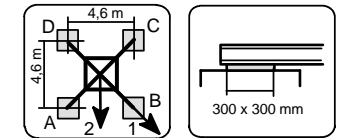


KR 10 - 46 Corner distance 4,6 m x 4,6 m Jib length 30 m

height under hook [m]	Centerballasts [m]	Centerballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
11,8	12,2	40,0	1	230	411	230	48	21	1	162	307	162	17	44
			2	358	358	101	101		2	265	265	60	60	
16,3	16,7	40,0	1	235	427	235	42	23	1	167	321	167	14	49
			2	371	371	98	98		2	276	276	59	59	
20,8	21,2	40,0	1	238	444	238	32	24	1	171	334	171	8	63
			2	384	384	92	92		2	286	286	55	55	
25,3	25,7	40,0	1	242	462	242	21	26	1	174	348	174	1	69
			2	398	398	85	85		2	297	297	136	136	
29,8	30,2	40,0	1	245	482	245	8	27	1	220	384	220	56	75
			2	413	413	77	77		2	336	336	104	104	
34,3	34,7	50,0	1	274	529	274	18	29	1	249	467	249	30	82
			2	454	454	93	93		2	403	403	94	94	
38,8	39,2	62,5	1	308	584	308	33	30	1	283	562	283	5	88
			2	503	503	113	113		2	480	480	86	86	
43,3	43,7	75,0	1	343	641	343	45	32	1	292	688	292	0	94
			2	554	554	132	132		2	561	561	75	75	
47,8	48,2	95,0	1	397	719	397	74	33	1	327	832	327	0	100
			2	625	625	168	168		2	666	666	77	77	
52,3	52,7	117,5	1	457	806	457	109	35	1	370	988	370	0	107
			2	704	704	211	211		2	782	782	83	83	
56,8	57,2	145,0	1	533	908	533	158	36	1	439	1155	439	0	114
			2	798	798	268	268		2	916	916	100	100	
61,3	61,7	172,5	1	609	1013	609	205	38	1	498	1339	498	0	122
			2	895	895	323	323		2	1057	1057	111	111	
65,8	66,2	205,0	1	697	1133	697	262	40	1	575	1538	575	0	130
			2	1005	1005	389	389		2	1216	1216	128	128	

3.2.3.2 Center ballasts and corner loads DIN 15019

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

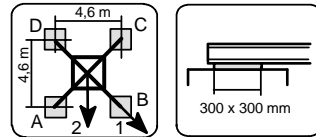


KR 10 - 46 Corner distance 4,6 m x 4,6 m Jib length 35 m

height under hook [m]	Centerballasts [m]	Centerballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
11,8	12,2	35,0	1	225	395	225	55	22	1	150	295	150	4	45
			2	345	345	105	105		2	253	253	47	47	
16,3	16,7	35,0	1	230	412	230	48	23	1	155	309	155	1	49
			2	358	358	101	101		2	264	264	46	46	
20,8	21,2	35,0	1	233	428	233	38	25	1	153	327	153	0	63
			2	371	371	95	95		2	274	274	43	43	
25,3	25,7	35,0	1	237	447	237	27	26	1	149	348	149	0	70
			2	385	385	88	88		2	298	298	126	126	
29,8	30,2	35,0	1	240	467	240	14	27	1	215	387	215	44	76
			2	400	400	80	80		2	337	337	94	94	
34,3	34,7	47,5	1	275	520	275	30	29	1	250	477	250	23	82
			2	448	448	102	102		2	411	411	90	90	
38,8	39,2	60,0	1	310	575	310	45	30	1	282	575	282	0	88
			2	497	497	122	122		2	488	488	81	81	
43,3	43,7	75,0	1	351	639	351	63	32	1	297	709	297	0	95
			2	554	554	147	147		2	576	576	75	75	
47,8	48,2	95,0	1	404	717	404	91	33	1	331	855	331	0	101
			2	626	626	183	183		2	682	682	77	77	
52,3	52,7	120,0	1	471	811	471	132	35	1	386	1014	386	0	107
			2	711	711	231	231		2	805	805	88	88	
56,8	57,2	145,0	1	541	907	541	175	37	1	441	1183	441	0	115
			2	800	800	282	282		2	934	934	98	98	
61,3	61,7	175,0	1	623	1018	623	228	38	1	511	1370	511	0	123
			2	902	902	344	344		2	1082	1082	114	114	
65,8	66,2	205,0	1	705	1132	705	278	40	1	574	1572	574	0	131
			2	1007	1007	403	403		2	1236	1236	124	124	

3.2.3.3 Center ballasts and corner loads DIN 15019

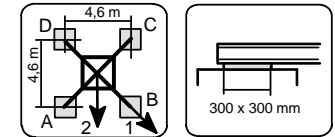
for a stationary tower crane on a cross frame without climbing drive



KR 10 - 46		Corner distance 4,6 m x 4,6 m				Jib length 40 m								
height under hook [m]	Centerballasts [m]	Centerballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
11,8	12,2	35,0	1	228	406	228	51	22	1	150	296	150	4	45
			2	354	354	103	103		2	253	253	47	47	
16,3	16,7	35,0	1	233	423	233	44	23	1	155	309	155	0	50
			2	367	367	99	99		2	264	264	45	45	
20,8	21,2	35,0	1	237	440	237	34		1	152	328	152	0	64
			2	380	380	93	93	25	2	280	280	143	143	
25,3	25,7	35,0	1	240	458	240	22	26	1	215	358	215	73	70
			2	394	394	86	86		2	316	316	114	114	
29,8	30,2	35,0	1	244	479	244	9	28	1	219	412	219	25	77
			2	410	410	78	78		2	356	356	82	82	
34,3	34,7	42,5	1	266	520	266	12	29	1	232	499	232	0	83
			2	445	445	87	87		2	417	417	64	64	
38,8	39,2	55,0	1	301	575	301	26	30	1	240	623	240	0	89
			2	495	495	107	107		2	496	496	56	56	
43,3	43,7	77,5	1	360	658	360	63	32	1	292	758	292	0	95
			2	571	571	150	150		2	604	604	67	67	
47,8	48,2	100,0	1	420	744	420	97	33	1	337	907	337	0	102
			2	649	649	192	192		2	716	716	74	74	
52,3	52,7	127,5	1	493	844	493	143	35	1	403	1069	403	0	108
			2	741	741	246	246		2	846	846	91	91	
56,8	57,2	152,5	1	563	941	563	186	37	1	456	1240	456	0	116
			2	830	830	296	296		2	976	976	100	100	
61,3	61,7	182,5	1	645	1052	645	238	39	1	526	1429	526	0	124
			2	933	933	357	357		2	1125	1125	115	115	
65,8	66,2	215,0	1	733	1174	733	293	41	1	599	1635	599	0	132
			2	1045	1045	422	422		2	1287	1287	130	130	

3.2.3.4 Center ballasts and corner loads DIN 15019

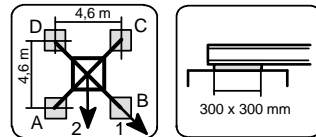
for a stationary tower crane on a cross frame without climbing drive



KR 10 - 46		Corner distance 4,6 m x 4,6 m				Jib length 45 m								
height under hook [m]	Centerballasts [m]	Centerballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
11,8	12,2	32,5	1	230	411	230	49	22	1	167	311	167	22	46
			2	358	358	102	102		2	269	269	65	65	
16,3	16,7	32,5	1	235	428	235	42	24	1	172	327	172	16	51
			2	371	371	98	98		2	282	282	62	62	
20,8	21,2	32,5	1	238	445	238	31	25	1	175	343	175	8	65
			2	384	384	92	92		2	294	294	57	57	
25,3	25,7	32,5	1	242	464	242	20	26	1	217	373	217	60	71
			2	399	399	85	85		2	327	327	106	106	
29,8	30,2	32,5	1	245	485	245	6	28	1	220	428	220	12	77
			2	414	414	76	76		2	367	367	73	73	
34,3	34,7	37,5	1	261	520	261	3	29	1	207	530	207	0	84
			2	444	444	78	78		2	424	424	49	49	
38,8	39,2	57,5	1	315	595	315	35	31	1	251	656	251	0	90
			2	513	513	117	117		2	522	522	58	58	
43,3	43,7	80,0	1	374	678	374	71	32	1	302	794	302	0	96
			2	589	589	160	160		2	630	630	69	69	
47,8	48,2	105,0	1	440	771	440	110	33	1	358	946	358	0	102
			2	674	674	207	207		2	750	750	81	81	
52,3	52,7	130,0	1	508	866	508	149	35	1	410	1111	410	0	109
			2	761	761	254	254		2	875	875	90	90	
56,8	57,2	157,5	1	583	969	583	197	37	1	474	1285	474	0	116
			2	856	856	310	310		2	1013	1013	104	104	
61,3	61,7	187,5	1	665	1082	665	249	39	1	542	1478	542	0	125
			2	960	960	371	371		2	1163	1163	118	118	
65,8	66,2	220,0	1	754	1204	754	304	41	1	613	1688	613	0	132
			2	1072	1072	435	435		2	1326	1326	132	132	

3.2.3.5 Center ballasts and corner loads DIN 15019

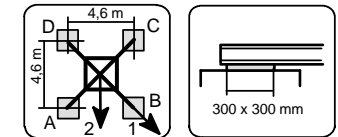
for a stationary tower crane on a cross frame without climbing drive



KR 10 - 46		Corner distance 4,6 m x 4,6 m				Jib length 50 m								
height under hook ☞ [m]	Centerballasts ☞ [m]	Centerballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
11,8	12,2	32,5	1	233	411	233	54	22	1	167	331	167	4	46
			2	359	359	106	106		2	283	283	52	52	
16,3	16,7	32,5	1	237	428	237	47	24	1	170	349	170	0	51
			2	372	372	103	103		2	296	296	49	49	
20,8	21,2	32,5	1	241	445	241	37	25	1	165	373	165	0	66
			2	386	386	96	96		2	308	308	44	44	
25,3	25,7	32,5	1	244	464	244	25	27	1	158	400	158	0	72
			2	400	400	89	89		2	340	340	99	99	
29,8	30,2	32,5	1	248	485	248	11	28	1	223	445	223	1	78
			2	416	416	80	80		2	380	380	66	66	
34,3	34,7	40,0	1	270	527	270	14	29	1	210	560	210	0	84
			2	452	452	89	89		2	443	443	47	47	
38,8	39,2	60,0	1	324	602	324	46	31	1	254	687	254	0	91
			2	520	520	127	127		2	542	542	56	56	
43,3	43,7	82,5	1	383	686	383	81	32	1	303	828	303	0	97
			2	597	597	170	170		2	651	651	66	66	
47,8	48,2	107,5	1	449	778	449	120	34	1	358	982	358	0	103
			2	682	682	217	217		2	772	772	77	77	
52,3	52,7	135,0	1	523	880	523	166	35	1	421	1149	421	0	110
			2	775	775	270	270		2	904	904	92	92	
56,8	57,2	162,5	1	599	984	599	213	37	1	485	1325	485	0	117
			2	871	871	326	326		2	1042	1042	105	105	
61,3	61,7	192,5	1	681	1097	681	265	39	1	551	1521	551	0	125
			2	975	975	386	386		2	1193	1193	118	118	

3.2.3.6 Center ballasts and corner loads DIN 15019

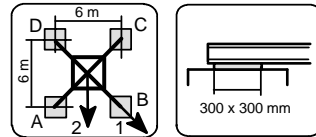
for a stationary tower crane on a cross frame without climbing drive



KR 10 - 46		Corner distance 4,6 m x 4,6 m				Jib length 55 m								
height under hook ☞ [m]	Centerballasts ☞ [m]	Centerballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
11,8	12,2	30,0	1	234	406	234	62	22	1	115	421	115	0	47
			2	356	356	112	112		2	311	311	14	14	
16,3	16,7	30,0	1	239	424	239	54	24	1	113	443	113	0	52
			2	370	370	108	108		2	324	324	11	11	
20,8	21,2	32,5	1	249	447	249	50	25	1	120	468	120	0	67
			2	389	389	108	108		2	343	343	12	12	
25,3	25,7	35,0	1	258	473	258	44	27	1	126	496	126	0	73
			2	410	410	107	107		2	367	367	100	100	
29,8	30,2	40,0	1	274	506	274	43	28	1	142	527	142	0	79
			2	438	438	111	111		2	421	421	78	78	
34,3	34,7	42,5	1	284	536	284	33	30	1	218	602	218	0	85
			2	462	462	106	106		2	472	472	47	47	
38,8	39,2	65,0	1	344	617	344	71	31	1	272	732	272	0	91
			2	537	537	151	151		2	578	578	60	60	
43,3	43,7	87,5	1	404	701	404	106	32	1	320	875	320	0	98
			2	614	614	193	193		2	688	688	69	69	
47,8	48,2	112,5	1	470	795	470	145	34	1	373	1033	373	0	104
			2	700	700	240	240		2	810	810	80	80	
52,3	52,7	140,0	1	543	897	543	189	35	1	434	1204	434	0	111
			2	793	793	293	293		2	944	944	92	92	
56,8	57,2	167,5	1	619	1001	619	237	37	1	496	1383	496	0	118
			2	889	889	349	349		2	1083	1083	105	105	
61,3	61,7	197,5	1	701	1115	701	287	39	1	561	1583	561	0	126
			2	993	993	408	408		2	1236	1236	116	116	

3.2.4.1 Center ballasts and corner loads DIN 15019

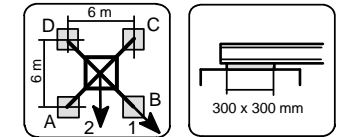
for a stationary tower crane on a cross frame without climbing drive



KR 10 - 60		Corner distance 6 m x 6 m				Jib length 30 m								
height under hook [m]	Centerballasts [m]	Centerballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
11,8	12,2	17,5	1	177	316	177	38	21	1	109	223	109	0	44
			2	276	276	79	79		2	189	189	31	31	
16,3	16,7	17,5	1	182	330	182	34	23	1	112	236	112	0	49
			2	287	287	78	78		2	198	198	32	32	
20,8	21,2	17,5	1	186	344	186	28	24	1	112	250	112	0	63
			2	297	297	74	74		2	207	207	30	30	
25,3	25,7	17,5	1	189	359	189	20	26	1	111	266	111	0	69
			2	309	309	70	70		2	226	226	102	102	
29,8	30,2	17,5	1	193	375	193	11	27	1	168	293	168	42	75
			2	321	321	64	64		2	257	257	79	79	
34,3	34,7	22,5	1	209	405	209	13	29	1	184	351	184	16	82
			2	347	347	70	70		2	302	302	65	65	
38,8	39,2	30,0	1	231	442	231	20	30	1	199	427	199	0	88
			2	380	380	82	82		2	357	357	55	55	
43,3	43,7	42,5	1	266	494	266	37	32	1	218	528	218	0	94
			2	427	427	104	104		2	427	427	54	54	
47,8	48,2	57,5	1	307	554	307	59	33	1	245	638	245	0	100
			2	482	482	132	132		2	507	507	56	56	
52,3	52,7	77,5	1	361	629	361	94	35	1	294	758	294	0	107
			2	550	550	172	172		2	604	604	68	68	
56,8	57,2	95,0	1	412	700	412	124	36	1	332	885	332	0	114
			2	616	616	209	209		2	700	700	74	74	
61,3	61,7	117,5	1	475	785	475	166	38	1	388	1027	388	0	122
			2	695	695	256	256		2	813	813	88	88	
65,8	66,2	140,0	1	539	873	539	205	40	1	438	1180	438	0	130
			2	775	775	303	303		2	931	931	97	97	

3.2.4.2 Center ballasts and corner loads DIN 15019

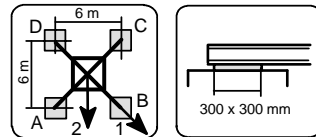
for a stationary tower crane on a cross frame without climbing drive



KR 10 - 60		Corner distance 6 m x 6 m				Jib length 35 m								
height under hook [m]	Centerballasts [m]	Centerballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
11,8	12,2	12,5	1	173	303	173	42	22	1	84	223	84	0	45
			2	265	265	80	80		2	176	176	19	19	
16,3	16,7	12,5	1	178	317	178	38	23	1	87	236	87	0	49
			2	276	276	79	79		2	186	186	19	19	
20,8	21,2	12,5	1	181	331	181	31	25	1	87	251	87	0	63
			2	287	287	75	75		2	198	198	115	115	
25,3	25,7	12,5	1	185	345	185	24	26	1	85	267	85	0	70
			2	298	298	71	71		2	225	225	94	94	
29,8	30,2	12,5	1	188	362	188	14	27	1	163	295	163	31	76
			2	311	311	65	65		2	256	256	70	70	
34,3	34,7	17,5	1	204	392	204	16	29	1	179	353	179	5	82
			2	337	337	71	71		2	302	302	56	56	
39,8	39,2	27,5	1	233	436	233	29	30	1	194	441	194	0	88
			2	376	376	89	89		2	364	364	52	52	
43,3	43,7	40,0	1	267	488	267	47	32	1	213	543	213	0	95
			2	423	423	111	111		2	434	434	50	50	
47,8	48,2	57,5	1	315	555	315	75	33	1	251	656	251	0	101
			2	484	484	145	145		2	521	521	58	58	
52,3	52,7	77,5	1	369	629	369	109	35	1	300	777	300	0	107
			2	553	553	185	185		2	619	619	69	69	
56,8	57,2	95,0	1	420	701	420	139	37	1	337	907	337	0	115
			2	618	618	221	221		2	715	715	74	74	
61,3	61,7	117,5	1	483	786	483	180	39	1	391	1050	391	0	123
			2	698	698	269	269		2	829	829	87	87	
65,8	66,2	140,0	1	547	874	547	219	40	1	440	1205	440	0	131
			2	778	778	315	315		2	948	948	95	95	

3.2.4.3 Center ballasts and corner loads DIN 15019

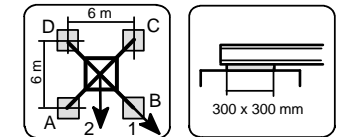
for a stationary tower crane on a cross frame without climbing drive



KR 10 - 60		Corner distance 6 m x 6 m				Jib length 40 m								
height under hook [m]	Centerballasts [m]	Centerballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]		A [kN]	B [kN]	C [kN]	D [kN]		
11,8	12,2	12,5	1	176	312	176	40	22	1	83	224	83	0	45
			2	272	272	80	80		2	177	177	18	18	
16,3	16,7	12,5	1	181	326	181	36	23	1	86	237	86	0	50
			2	284	284	78	78		2	186	186	19	19	
20,8	21,2	12,5	1	184	340	184	29	25	1	86	252	86	0	64
			2	295	295	74	74		2	212	212	107	107	
25,3	25,7	12,5	1	188	355	188	21	26	1	163	272	163	54	70
			2	306	306	70	70		2	240	240	86	86	
29,8	30,2	12,5	1	191	372	191	11	28	1	166	315	166	18	77
			2	319	319	64	64		2	271	271	62	62	
34,3	34,7	15,0	1	201	396	201	7	29	1	161	383	161	0	83
			2	339	339	64	64		2	312	312	41	41	
39,8	39,2	27,5	1	236	446	236	25	30	1	183	477	183	0	89
			2	385	385	87	87		2	380	380	42	42	
43,3	43,7	45,0	1	283	511	283	55	32	1	226	581	226	0	95
			2	445	445	122	122		2	464	464	53	53	
47,8	48,2	62,5	1	330	578	330	82	33	1	263	696	263	0	102
			2	506	506	155	155		2	551	551	59	59	
52,3	52,7	82,5	1	385	654	385	116	35	1	310	819	310	0	108
			2	575	575	195	195		2	650	650	70	70	
56,8	57,2	100,0	1	436	725	436	146	37	1	346	950	346	0	116
			2	641	641	231	231		2	747	747	75	75	
61,3	61,7	122,5	1	499	812	499	187	39	1	400	1096	400	0	124
			2	720	720	278	278		2	862	862	87	87	
65,8	66,2	147,5	1	569	906	569	231	41	1	461	1254	461	0	132
			2	807	807	330	330		2	987	987	101	101	

3.2.4.4 Center ballasts and corner loads DIN 15019

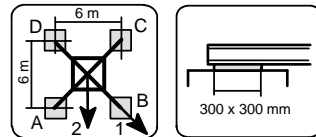
for a stationary tower crane on a cross frame without climbing drive



KR 10 - 60		Corner distance 6 m x 6 m				Jib length 45 m								
height under hook [m]	Centerballasts [m]	Centerballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]		A [kN]	B [kN]	C [kN]	D [kN]		
11,8	12,2	10,0	1	178	316	178	39	22	1	115	225	115	4	46
			2	276	276	79	79		2	193	193	36	36	
16,3	16,7	10,0	1	182	331	182	34	24	1	119	239	119	0	51
			2	287	287	78	78		2	204	204	35	35	
20,8	21,2	10,0	1	186	345	186	27	25	1	118	257	118	0	65
			2	298	298	74	74		2	221	221	101	101	
25,3	25,7	10,0	1	189	360	189	19	26	1	164	284	164	45	71
			2	310	310	69	69		2	249	249	80	80	
29,8	30,2	12,5	1	199	383	199	16	28	1	174	334	174	15	77
			2	329	329	69	69		2	287	287	61	61	
34,3	34,7	15,0	1	209	407	209	11	29	1	165	407	165	0	84
			2	349	349	69	69		2	328	328	40	40	
38,8	39,2	30,0	1	250	465	250	35	31	1	198	503	198	0	90
			2	402	402	98	98		2	403	403	47	47	
43,3	43,7	45,0	1	291	524	291	58	32	1	227	609	227	0	96
			2	456	456	126	126		2	481	481	51	51	
47,8	48,2	65,0	1	344	598	344	91	33	1	276	726	276	0	102
			2	524	524	165	165		2	576	576	63	63	
52,3	52,7	82,5	1	393	667	393	118	35	1	310	852	310	0	109
			2	587	587	199	199		2	669	669	67	67	
56,8	57,2	102,5	1	450	746	450	154	37	1	357	985	357	0	116
			2	659	659	241	241		2	773	773	77	77	
61,3	61,7	125,0	1	513	833	513	194	39	1	410	1133	410	0	125
			2	739	739	287	287		2	889	889	87	87	
65,8	66,2	150,0	1	583	928	583	237	41	1	468	1294	468	0	132
			2	827	827	339	339		2	1015	1015	100	100	

3.2.4.5 Center ballasts and corner loads DIN 15019

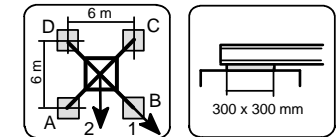
for a stationary tower crane on a cross frame without climbing drive



KR 10 - 60		Corner distance 6 m x 6 m				Jib length 50 m								
height under hook [m]	Centerballasts [m]	Centerballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
11,8	12,2	7,5	1	174	311	174	37	22	1	92	250	92	0	46
			2	271	271	77	77		2	197	197	20	20	
16,3	16,7	7,5	1	179	325	179	33	24	1	94	267	94	0	51
			2	282	282	76	76		2	208	208	19	19	
20,8	21,2	10,0	1	189	345	189	32	25	1	104	286	104	0	66
			2	300	300	78	78		2	230	230	97	97	
25,3	25,7	10,0	1	192	361	192	24	27	1	100	307	100	0	72
			2	311	311	73	73		2	259	259	75	75	
29,8	30,2	12,5	1	202	384	202	20	28	1	177	347	177	7	78
			2	331	331	73	73		2	297	297	57	57	
34,3	34,7	17,5	1	218	415	218	21	29	1	171	429	171	0	84
			2	357	357	79	79		2	345	345	41	41	
38,8	39,2	32,5	1	259	472	259	46	31	1	204	527	204	0	91
			2	410	410	108	108		2	420	420	48	48	
43,3	43,7	47,5	1	300	532	300	68	32	1	233	635	233	0	97
		2	464	464	136	136	2		499	499	51	51		
47,8	48,2	67,5	1	353	606	353	101	34	1	280	753	280	0	103
			2	532	532	175	175		2	595	595	62	62	
52,3	52,7	87,5	1	408	682	408	134	35	1	326	881	326	0	110
			2	602	602	214	214		2	694	694	72	72	
56,8	57,2	107,5	1	465	760	465	170	37	1	372	1016	372	0	117
			2	674	674	256	256		2	799	799	81	81	
61,3	61,7	130,0	1	528	847	528	209	39	1	424	1166	424	0	125
			2	754	754	303	303		2	916	916	91	91	

3.2.4.6 Center ballasts and corner loads DIN 15019

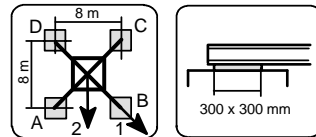
for a stationary tower crane on a cross frame without climbing drive



KR 10 - 60		Corner distance 6 m x 6 m				Jib length 55 m								
height under hook [m]	Centerballasts [m]	Centerballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
11,8	12,2	12,5	1	194	326	194	62	22	1	84	322	84	0	47
			2	288	288	101	101		2	237	237	9	9	
16,3	16,7	12,5	1	199	341	199	58	24	1	86	340	86	0	52
			2	299	299	99	99		2	248	248	8	8	
20,8	21,2	15,0	1	209	361	209	57	25	1	95	359	95	0	67
			2	317	317	101	101		2	264	264	11	11	
25,3	25,7	17,5	1	219	383	219	54	27	1	104	381	104	0	73
			2	335	335	103	103		2	296	296	91	91	
29,8	30,2	17,5	1	222	400	222	45	28	1	99	404	99	0	79
			2	348	348	97	97		2	328	328	66	66	
34,3	34,7	20,0	1	232	425	232	39	30	1	183	461	183	0	85
			2	368	368	96	96		2	370	370	44	44	
38,8	39,2	32,5	1	267	476	267	57	31	1	203	561	203	0	91
			2	415	415	119	119		2	440	440	43	43	
43,3	43,7	50,0	1	314	542	314	86	32	1	243	671	243	0	98
			2	475	475	153	153		2	526	526	52	52	
47,8	48,2	70,0	1	367	617	367	118	34	1	289	792	289	0	104
			2	544	544	191	191		2	622	622	62	62	
52,3	52,7	90,0	1	422	693	422	151	35	1	333	923	333	0	111
			2	614	614	230	230		2	723	723	71	71	
56,8	57,2	110,0	1	479	772	479	186	37	1	378	1060	378	0	118
			2	686	686	272	272		2	829	829	79	79	
61,3	61,7	135,0	1	549	866	549	231	39	1	441	1213	441	0	126
			2	773	773	324	324		2	953	953	95	95	

3.2.5.1 Center ballasts and corner loads DIN 15019

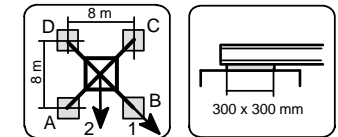
for a stationary tower crane on a cross frame without climbing drive



KR 1000 - 8		Corner distance 8 m x 8 m				Jib length 30 m								
height under hook [m]	Centerballasts [m]	Centerballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
16,3	16,7	0,0	1	158	269	158	46	24	1	90	179	90	2	51
			2	236	236	79	79		2	153	153	28	28	
20,8	21,2	0,0	1	161	280	161	43	25	1	94	188	94	0	65
			2	245	245	77	77		2	165	165	107	107	
25,3	25,7	0,0	1	165	292	165	38	27	1	140	207	140	73	71
			2	255	255	75	75		2	187	187	92	92	
29,8	30,2	0,0	1	168	304	168	32	28	1	143	238	143	48	77
			2	265	265	72	72		2	211	211	76	76	
34,3	34,7	0,0	1	172	318	172	25	30	1	147	273	147	20	83
			2	275	275	68	68		2	236	236	57	57	
38,8	39,2	2,5	1	182	339	182	24	31	1	153	321	153	0	90
			2	293	293	70	70		2	270	270	43	43	
43,3	43,7	10,0	1	204	374	204	34	32	1	160	396	160	0	96
			2	324	324	84	84		2	319	319	39	39	
47,8	48,2	22,5	1	239	422	239	55	34	1	188	477	188	0	102
			2	369	369	109	109		2	382	382	45	45	
52,3	52,7	35,0	1	274	473	274	76	35	1	216	566	216	0	109
			2	415	415	134	134		2	449	449	49	49	
56,8	57,2	50,0	1	316	531	316	102	37	1	251	663	251	0	115
			2	468	468	165	165		2	526	526	57	57	
61,3	61,7	65,0	1	361	592	361	130	39	1	288	769	288	0	123
			2	524	524	198	198		2	608	608	64	64	
65,8	66,2	82,5	1	412	661	412	163	41	1	332	883	332	0	131
			2	588	588	236	236		2	699	699	75	75	
70,3	70,7	100,0	1	463	731	463	194	43	1	370	1010	370	0	140
			2	653	653	273	273		2	795	795	81	81	
74,8	75,2	120,0	1	521	809	521	233	45	1	421	1141	421	0	149
			2	724	724	317	317		2	899	899	92	92	

3.2.5.2 Center ballasts and corner loads DIN 15019

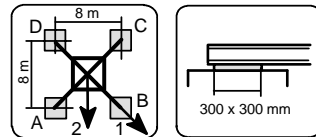
for a stationary tower crane on a cross frame without climbing drive



KR 1000 - 8		Corner distance 8 m x 8 m				Jib length 35 m								
height under hook [m]	Centerballasts [m]	Centerballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
16,3	16,7	0,0	1	166	270	166	61	24	1	90	180	90	1	51
			2	240	240	91	91		2	153	153	27	27	
20,8	21,2	0,0	1	169	281	169	57	25	1	144	189	144	99	65
			2	248	248	90	90		2	176	176	112	112	
25,3	25,7	0,0	1	173	293	173	52	27	1	148	219	148	76	71
			2	258	258	87	87		2	198	198	97	97	
29,8	30,2	0,0	1	176	306	176	46	28	1	151	251	151	51	78
			2	268	268	84	84		2	222	222	81	81	
34,3	34,7	0,0	1	180	320	180	39	30	1	155	286	155	23	84
			2	279	279	80	80		2	247	247	62	62	
38,8	39,2	0,0	1	183	335	183	31	31	1	150	332	150	0	90
			2	290	290	76	76		2	275	275	41	41	
43,3	43,7	7,5	1	205	369	205	41	33	1	157	407	157	0	96
			2	321	321	89	89		2	324	324	36	36	
47,8	48,2	20,0	1	240	418	240	62	34	1	185	490	185	0	103
			2	366	366	114	114		2	388	388	42	42	
52,3	52,7	35,0	1	282	475	282	89	35	1	224	580	224	0	109
			2	418	418	146	146		2	462	462	52	52	
56,8	57,2	50,0	1	324	533	324	115	37	1	259	679	259	0	116
			2	472	472	176	176		2	539	539	59	59	
61,3	61,7	65,0	1	369	595	369	143	39	1	294	786	294	0	124
			2	528	528	209	209		2	622	622	66	66	
65,8	66,2	82,5	1	420	664	420	175	41	1	338	902	338	0	132
			2	592	592	247	247		2	713	713	76	76	
70,3	70,7	100,0	1	470	735	470	206	43	1	375	1031	375	0	140
			2	657	657	284	284		2	810	810	81	81	
74,8	75,2	120,0	1	528	812	528	245	45	1	425	1164	425	0	150
			2	729	729	328	328		2	915	915	92	92	

3.2.5.3 Center ballasts and corner loads DIN 15019

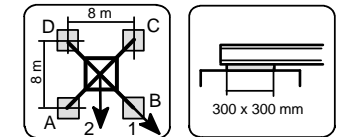
for a stationary tower crane on a cross frame without climbing drive



KR 1000 - 8		Corner distance 8 m x 8 m				Jib length 40 m								
height under hook [m]	Centerballasts [m]	Centerballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
16,3	16,7	0,0	1	169	278	169	60	24	1	90	180	90	1	52
			2	246	246	92	92		2	159	159	65	65	
20,8	21,2	0,0	1	172	289	172	56	26	1	147	204	147	91	66
			2	255	255	90	90		2	188	188	107	107	
25,3	25,7	0,0	1	176	301	176	51	27	1	151	234	151	68	72
			2	265	265	87	87		2	210	210	92	92	
29,8	30,2	0,0	1	179	314	179	45	28	1	154	267	154	42	78
			2	275	275	84	84		2	234	234	75	75	
34,3	34,7	0,0	1	183	328	183	38	30	1	158	302	158	14	85
			2	286	286	80	80		2	260	260	56	56	
38,8	39,2	0,0	1	186	343	186	30	31	1	144	358	144	0	91
			2	297	297	76	76		2	288	288	35	35	
43,3	43,7	12,5	1	221	391	221	52	33	1	175	435	175	0	97
			2	341	341	101	101		2	350	350	42	42	
47,8	48,2	25,0	1	256	440	256	72	34	1	202	519	202	0	103
			2	386	386	126	126		2	415	415	47	47	
52,3	52,7	37,5	1	292	491	292	93	36	1	228	611	228	0	110
			2	432	432	151	151		2	483	483	51	51	
56,8	57,2	52,5	1	334	549	334	118	37	1	262	711	262	0	117
			2	486	486	181	181		2	560	560	57	57	
61,3	61,7	70,0	1	385	617	385	152	39	1	309	820	309	0	125
			2	549	549	220	220		2	649	649	70	70	
65,8	66,2	85,0	1	429	680	429	178	41	1	339	938	339	0	133
			2	607	607	252	252		2	736	736	73	73	
70,3	70,7	105,0	1	486	758	486	215	43	1	388	1069	388	0	141
			2	678	678	294	294		2	839	839	83	83	
74,8	75,2	125,0	1	544	836	544	253	45	1	437	1203	437	0	150
			2	750	750	338	338		2	945	945	94	94	

3.2.5.4 Center ballasts and corner loads DIN 15019

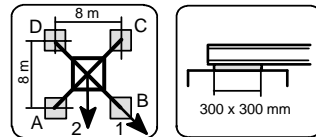
for a stationary tower crane on a cross frame without climbing drive



KR 1000 - 8		Corner distance 8 m x 8 m				Jib length 45 m								
height under hook [m]	Centerballasts [m]	Centerballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
16,3	16,7	0,0	1	177	288	177	65	24	1	114	204	114	24	52
			2	256	256	98	98		2	177	177	50	50	
20,8	21,2	0,0	1	180	299	180	61	26	1	155	220	155	91	67
			2	264	264	96	96		2	201	201	110	110	
25,3	25,7	0,0	1	184	311	184	56	27	1	159	250	159	68	73
			2	274	274	93	93		2	223	223	94	94	
29,8	30,2	0,0	1	187	324	187	50	29	1	162	283	162	42	79
			2	284	284	90	90		2	247	247	77	77	
34,3	34,7	0,0	1	191	339	191	43	30	1	166	319	166	13	85
			2	295	295	86	86		2	274	274	58	58	
38,8	39,2	0,0	1	194	354	194	34	31	1	150	377	150	0	92
			2	307	307	81	81		2	303	303	36	36	
43,3	43,7	10,0	1	223	396	223	50	33	1	168	456	168	0	98
			2	345	345	100	100		2	359	359	37	37	
47,8	48,2	25,0	1	264	451	264	76	34	1	207	541	207	0	104
			2	396	396	131	131		2	430	430	47	47	
52,3	52,7	37,5	1	300	503	300	96	36	1	232	635	232	0	111
			2	443	443	156	156		2	499	499	50	50	
56,8	57,2	55,0	1	348	568	348	128	37	1	277	737	277	0	117
			2	504	504	192	192		2	583	583	62	62	
61,3	61,7	70,0	1	392	630	392	155	39	1	311	848	311	0	125
			2	560	560	224	224		2	667	667	68	68	
65,8	66,2	87,5	1	443	700	443	186	41	1	353	968	353	0	133
			2	625	625	262	262		2	760	760	76	76	
70,3	70,7	107,5	1	500	778	500	222	43	1	400	1101	400	0	142
			2	697	697	304	304		2	865	865	86	86	
74,8	75,2	127,5	1	558	857	558	260	45	1	448	1238	448	0	151
			2	769	769	347	347		2	971	971	96	96	

3.2.5.5 Center ballasts and corner loads DIN 15019

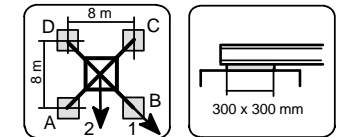
for a stationary tower crane on a cross frame without climbing drive



KR 1000 - 8		Corner distance 8 m x 8 m				Jib length 50 m								
height under hook [m]	Centerballasts [m]	Centerballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
16,3	16,7	0,0	1	179	289	179	69	24	1	114	215	114	13	53
			2	257	257	102	102		2	185	185	43	43	
20,8	21,2	0,0	1	183	301	183	65	26	1	158	230	158	86	67
			2	266	266	100	100		2	209	209	107	107	
25,3	25,7	0,0	1	186	313	186	60	27	1	161	260	161	63	74
			2	276	276	97	97		2	231	231	92	92	
29,8	30,2	0,0	1	190	326	190	54	29	1	165	294	165	36	80
			2	286	286	94	94		2	256	256	74	74	
34,3	34,7	0,0	1	193	340	193	47	30	1	168	330	168	7	86
			2	297	297	90	90		2	283	283	54	54	
38,8	39,2	0,0	1	197	356	197	38	32	1	146	395	146	0	92
			2	309	309	85	85		2	312	312	32	32	
43,3	43,7	12,5	1	232	404	232	60	33	1	176	474	176	0	99
			2	353	353	110	110		2	374	374	39	39	
47,8	48,2	27,5	1	273	460	273	86	34	1	215	561	215	0	105
			2	405	405	141	141		2	446	446	49	49	
52,3	52,7	40,0	1	309	511	309	106	36	1	239	656	239	0	111
			2	452	452	165	165		2	515	515	52	52	
56,8	57,2	57,5	1	357	577	357	137	37	1	284	760	284	0	118
			2	512	512	201	201		2	600	600	63	63	
61,3	61,7	72,5	1	401	639	401	164	39	1	317	871	317	0	126
			2	569	569	234	234		2	685	685	68	68	
65,8	66,2	90,0	1	452	709	452	195	41	1	358	993	358	0	134
			2	634	634	271	271		2	778	778	76	76	
70,3	70,7	110,0	1	509	787	509	231	43	1	405	1128	405	0	143
			2	706	706	313	313		2	883	883	85	85	
74,8	75,2	130,0	1	567	866	567	269	45	1	451	1266	451	0	152
			2	778	778	356	356		2	990	990	95	95	

3.2.5.6 Center ballasts and corner loads DIN 15019

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

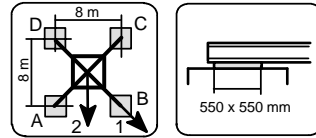


KR 1000 - 8		Corner distance 8 m x 8 m				Jib length 55 m								
height under hook [m]	Centerballasts [m]	Centerballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
16,3	16,7	0,0	1	187	294	187	81	25	1	104	256	104	0	53
			2	263	263	112	112		2	206	206	25	25	
20,8	21,2	0,0	1	191	305	191	76	26	1	103	270	103	0	68
			2	272	272	110	110		2	224	224	108	108	
25,3	25,7	0,0	1	194	317	194	71	27	1	103	286	103	0	74
			2	281	281	107	107		2	247	247	92	92	
29,8	30,2	0,0	1	198	331	198	65	29	1	173	313	173	33	81
			2	292	292	104	104		2	272	272	74	74	
34,3	34,7	0,0	1	201	345	201	57	30	1	176	349	176	3	87
			2	303	303	100	100		2	299	299	54	54	
38,8	39,2	2,5	1	211	367	211	55	32	1	162	420	162	0	93
			2	321	321	101	101		2	334	334	37	37	
43,3	43,7	15,0	1	246	415	246	76	33	1	191	501	191	0	99
			2	366	366	126	126		2	398	398	44	44	
47,8	48,2	27,5	1	280	465	280	96	35	1	216	590	216	0	106
			2	411	411	150	150		2	464	464	47	47	
52,3	52,7	42,5	1	323	523	323	122	36	1	252	686	252	0	112
			2	464	464	181	181		2	540	540	55	55	
56,8	57,2	57,5	1	365	583	365	147	38	1	283	793	283	0	119
			2	519	519	210	210		2	620	620	59	59	
61,3	61,7	75,0	1	415	651	415	179	40	1	328	907	328	0	127
			2	582	582	249	249		2	711	711	70	70	
65,8	66,2	92,5	1	466	722	466	211	41	1	367	1031	367	0	135
			2	647	647	285	285		2	806	806	77	77	
70,3	70,7	115,0	1	530	807	530	252	43	1	425	1169	425	0	143
			2	726	726	333	333		2	918	918	91	91	

3.2.6.1 Centralballasts and Cornerloads according to DIN 15019

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

Attention!
for the **WOLFF 5520.6** only the section is valid for height under hook.



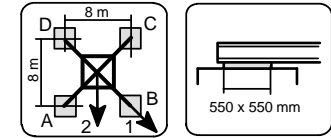
KR 16 - 80	Corner distance 8,0 m x 8,0 m	jib 30 m
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height under hook [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Corner loads						Corner loads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
79,9	80,3	140	1	595	914	595	275	52	1	488	1304	488	0	169
			2	820	820	369	369		2	1031	1031	109	109	
82,1	82,5	145	1	621	947	621	294	53	1	513	1357	513	0	171
			2	851	851	390	390		2	1076	1076	116	116	
86,6	87,0	165	1	679	1028	679	329	56	1	550	1515	550	0	181
			2	926	926	431	431		2	1190	1190	118	118	
91,1	91,5	190	1	753	1126	753	379	58	1	614	1684	614	0	192
			2	1017	1017	488	488		2	1323	1323	132	132	
95,6	96,0	215	1	827	1226	827	427	61	1	669	1870	669	0	204
			2	1109	1109	544	544		2	1463	1463	141	141	
100,1	100,5	265	1	963	1390	963	536	63	1	782	2190	782	0	221
			2	1265	1265	661	661		2	1713	1713	164	164	
104,6	105,0	305	1	1075	1531	1075	619	66	1	886	2427	887	0	233
			2	1398	1398	752	752		2	1908	1908	192	192	

3.2.6.2 Centralballasts and Cornerloads according to DIN 15019

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

Attention!
for the **WOLFF 5520.6** only the section is valid for height under hook.



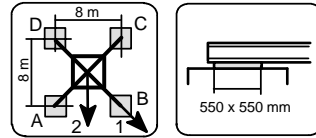
KR 16 - 80	Corner distance 8,0 m x 8,0 m	jib 35 m
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height under hook [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Corner loads						Corner loads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
79,9	80,3	140	1	602	917	602	288	52	1	492	1326	492	0	170
			2	825	825	380	380		2	1047	1047	108	108	
82,1	82,5	145	1	628	950	628	307	53	1	517	1380	517	0	172
			2	856	856	401	401		2	1091	1091	115	115	
86,6	87,0	165	1	686	1032	686	341	56	1	553	1540	553	0	182
			2	930	930	442	442		2	1206	1206	117	117	
91,1	91,5	190	1	760	1130	761	391	58	1	616	1710	616	0	192
			2	1022	1022	499	499		2	1340	1340	131	131	
95,6	96,0	220	1	847	1242	847	452	61	1	695	1898	695	0	204
			2	1127	1127	567	567		2	1493	1493	151	151	
100,1	100,5	270	1	984	1407	984	560	63	1	805	2224	806	0	222
			2	1283	1283	684	684		2	1745	1745	172	172	
104,6	105,0	305	1	1083	1536	1083	630	66	1	884	2464	884	0	234
			2	1403	1403	762	762		2	1929	1929	186	186	

3.2.6.3 Centralballasts and Cornerloads according to DIN 15019

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

Attention!
for the **WOLFF 5520.6** only the section is valid for height under hook.



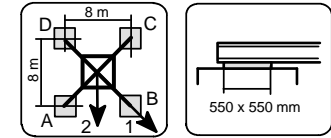
KR 16 - 80	Corner distance 8,0 m x 8,0 m	jib 40 m
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height under hook [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Corner loads						Corner loads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
79,9	80,3	145	1	618	941	618	296	52	1	504	1366	504	0	171
			2	847	847	390	390		2	1076	1076	110	110	
82,1	82,5	150	1	644	974	644	315	54	1	529	1419	530	0	172
			2	877	877	411	411		2	1121	1121	118	118	
86,6	87,0	170	1	702	1056	702	349	56	1	565	1580	565	0	182
			2	952	952	452	452		2	1236	1236	118	118	
91,1	91,5	195	1	776	1154	776	398	58	1	627	1752	627	0	193
			2	1044	1044	509	509		2	1371	1371	132	132	
95,6	96,0	225	1	863	1267	863	459	61	1	705	1942	705	0	205
			2	1149	1149	577	577		2	1525	1525	151	151	
100,1	100,5	275	1	999	1432	1000	567	63	1	813	2273	813	0	223
			2	1305	1305	694	694		2	1778	1778	171	171	

3.2.6.4 Centralballasts and Cornerloads according to DIN 15019

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

Attention!
for the **WOLFF 5520.6** only the section is valid for height under hook.



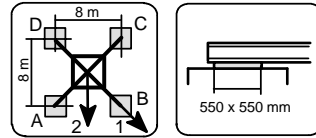
KR 16 - 80	Corner distance 8,0 m x 8,0 m	jib 45 m
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height under hook [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Corner loads						Corner loads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
79,9	80,3	145	1	626	956	626	297	52	1	502	1400	502	0	171
			2	859	859	393	393		2	1096	1096	106	106	
82,1	82,5	150	1	652	988	652	316	54	1	528	1453	528	0	173
			2	890	890	414	414		2	1141	1141	113	113	
86,6	87,0	175	1	723	1083	723	362	56	1	587	1617	587	0	183
			2	977	977	468	468		2	1269	1269	126	126	
91,1	91,5	200	1	797	1182	797	411	59	1	648	1791	648	0	194
			2	1069	1069	524	524		2	1405	1405	138	138	
95,6	96,0	230	1	883	1296	883	471	61	1	725	1983	725	0	206
			2	1175	1175	592	592		2	1559	1559	157	157	
100,1	100,5	280	1	1020	1461	1020	579	64	1	829	2321	829	0	224
			2	1332	1332	708	708		2	1815	1815	174	174	

3.2.6.5 Centralballasts and Cornerloads according to DIN 15019

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

Attention!
for the **WOLFF 5520.6** only the section is valid for height under hook.



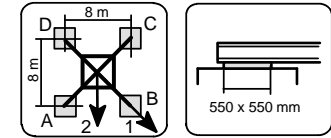
KR 16 - 80	Corner distance 8,0 m x 8,0 m	jib 50 m
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height under hook [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Corner loads						Corner loads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
79,9	80,3	150	1	641	971	641	312	52	1	518	1429	519	0	172
			2	874	874	408	408		2	1122	1122	111	111	
82,1	82,5	155	1	667	1003	667	331	54	1	544	1481	544	0	174
			2	905	905	430	430		2	1166	1166	118	118	
86,6	87,0	180	1	738	1099	738	377	56	1	602	1647	603	0	184
			2	993	993	483	483		2	1295	1295	130	130	
91,1	91,5	205	1	812	1198	812	426	59	1	663	1822	663	0	195
			2	1085	1085	539	539		2	1431	1431	143	143	
95,6	96,0	230	1	886	1299	886	473	61	1	714	2016	715	0	207
			2	1178	1178	594	594		2	1574	1574	148	148	
100,1	100,5	285	1	1035	1477	1035	593	64	1	841	2358	841	0	225
			2	1348	1348	723	723		2	1844	1844	176	176	

3.2.6.6 Centralballasts and Cornerloads according to DIN 15019

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

Attention!
for the **WOLFF 5520.6** only the section is valid for height under hook.



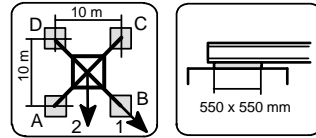
KR 16 - 80	Corner distance 8,0 m x 8,0 m	jib 55 m
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height under hook [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Corner loads						Corner loads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
79,9	80,3	155	1	662	991	662	332	52	1	538	1472	538	0	173
			2	894	894	429	429		2	1157	1157	116	116	
82,1	82,5	155	1	675	1011	675	340	54	1	539	1523	539	0	175
			2	912	912	438	438		2	1189	1189	111	111	
86,6	87,0	180	1	746	1106	746	385	56	1	596	1692	596	0	185
			2	1001	1001	491	491		2	1319	1319	122	122	
91,1	91,5	210	1	832	1218	832	446	59	1	680	1869	680	0	195
			2	1105	1105	559	559		2	1468	1468	146	146	
95,6	96,0	235	1	906	1320	906	493	61	1	730	2065	730	0	208
			2	1199	1199	614	614		2	1612	1612	151	151	
100,1	100,5	290	1	1055	1498	1055	612	64	1	853	2416	853	0	225
			2	1368	1368	742	742		2	1885	1885	176	176	

3.2.7.1 Centralballasts and Cornerloads according to DIN 15019

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

Attention!
for the **WOLFF 5520.6** only the section is valid for height under hook.



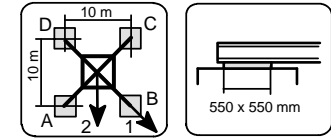
KR 16 - 100 Corner distance 10,0 m x 10,0 m **jib 30 m**

height under hook [m]	Center ballasts [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
79,9	80,3	90	1	475	730	475	219	52	1	378	1043	378	0	169
			2	655	655	294	294		2	818	818	81	81	
82,1	82,5	95	1	501	762	501	240	53	1	409	1086	409	0	171
			2	685	685	316	316		2	860	860	92	92	
86,6	87,0	110	1	546	826	546	266	56	1	436	1212	436	0	181
			2	744	744	348	348		2	950	950	92	92	
91,1	91,5	130	1	608	907	608	309	58	1	492	1347	492	0	192
			2	819	819	396	396		2	1059	1059	106	106	
95,6	96,0	150	1	669	989	669	350	61	1	541	1496	541	0	204
			2	895	895	443	443		2	1173	1173	115	115	
100,1	100,5	190	1	781	1122	781	439	63	1	636	1752	636	0	221
			2	1022	1022	539	539		2	1375	1375	136	136	
104,6	105,0	220	1	867	1232	867	502	66	1	714	1941	714	0	233
			2	1126	1126	609	609		2	1529	1529	156	156	

3.2.7.2 Centralballasts and Cornerloads according to DIN 15019

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

Attention!
for the **WOLFF 5520.6** only the section is valid for height under hook.



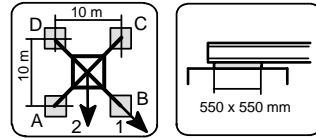
KR 16 - 100 Corner distance 10,0 m x 10,0 m **jib 35 m**

height under hook [m]	Center ballasts [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
79,9	80,3	90	1	482	734	482	231	52	1	384	1061	385	0	170
			2	660	660	304	304		2	833	833	82	82	
82,1	82,5	95	1	508	766	508	251	53	1	415	1104	415	0	172
			2	690	690	327	327		2	874	874	93	93	
86,6	87,0	110	1	554	830	554	278	56	1	442	1232	442	0	182
			2	749	749	359	359		2	965	965	93	93	
91,1	91,5	130	1	615	911	615	320	58	1	497	1368	497	0	192
			2	824	824	406	406		2	1074	1074	107	107	
95,6	96,0	150	1	677	993	677	361	61	1	545	1518	545	0	204
			2	901	901	453	453		2	1189	1189	115	115	
100,1	100,5	190	1	789	1127	789	450	63	1	638	1779	638	0	222
			2	1028	1028	549	549		2	1393	1393	134	134	
104,6	105,0	220	1	875	1238	875	513	66	1	715	1971	715	0	234
			2	1131	1131	619	619		2	1547	1547	153	153	

3.2.7.3 Centralballasts and Cornerloads according to DIN 15019

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

Attention!
for the **WOLFF 5520.6** only the section is valid for height under hook.



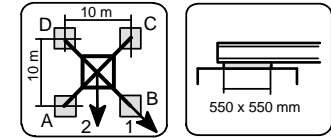
KR 16 - 100 Corner distance 10,0 m x 10,0 m **jib 40 m**

height under hook [m]	Center ballasts [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
79,9	80,3	95	1	498	757	498	240	52	1	401	1092	401	0	171
			2	681	681	316	316		2	860	860	87	87	
82,1	82,5	95	1	512	775	512	248	54	1	406	1135	406	0	172
			2	698	698	325	325		2	888	888	85	85	
86,6	87,0	115	1	570	853	570	287	56	1	458	1264	458	0	182
			2	770	770	370	370		2	992	992	98	98	
91,1	91,5	135	1	631	934	631	329	58	1	512	1402	512	0	193
			2	845	845	418	418		2	1102	1102	111	111	
95,6	96,0	155	1	693	1016	693	369	61	1	559	1553	560	0	205
			2	922	922	464	464		2	1217	1217	119	119	
100,1	100,5	195	1	804	1151	805	458	63	1	650	1818	650	0	223
			2	1049	1049	560	560		2	1422	1422	137	137	
104,6	105,0	225	1	891	1261	891	521	66	1	726	2012	727	0	235
			2	1153	1153	629	629		2	1578	1578	155	155	

3.2.7.4 Centralballasts and Cornerloads according to DIN 15019

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

Attention!
for the **WOLFF 5520.6** only the section is valid for height under hook.



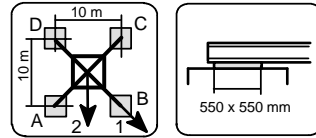
KR 16 - 100 Corner distance 10,0 m x 10,0 m **jib 45 m**

height under hook [m]	Center ballasts [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
79,9	80,3	95	1	506	770	506	242	52	1	402	1120	402	0	171
			2	692	692	320	320		2	877	877	85	85	
82,1	82,5	100	1	532	801	532	263	54	1	433	1162	433	0	173
			2	722	722	342	342		2	918	918	96	96	
86,6	87,0	115	1	578	866	578	289	56	1	459	1293	459	0	183
			2	781	781	374	374		2	1010	1010	95	95	
91,1	91,5	135	1	639	948	639	331	59	1	512	1433	512	0	194
			2	857	857	421	421		2	1121	1121	107	107	
95,6	96,0	160	1	713	1043	713	383	61	1	584	1586	584	0	206
			2	946	946	480	480		2	1249	1249	127	127	
100,1	100,5	200	1	825	1178	825	472	64	1	671	1857	672	0	224
			2	1074	1074	575	575		2	1456	1456	143	143	
104,6	105,0	230	1	911	1289	911	534	66	1	746	2053	746	0	236
			2	1178	1178	644	644		2	1612	1612	160	160	

3.2.6.5 Centralballasts and Cornerloads according to DIN 15019

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

Attention!
for the **WOLFF 5520.6** only the section is valid for height under hook.



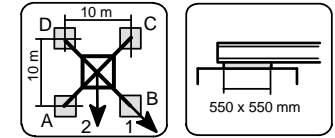
KR 16 - 100 Corner distance 10,0 m x 10,0 m **jib 50 m**

height under hook [m]	Center ballasts [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
79,9	80,3	100	1	521	785	521	258	52	1	421	1143	421	0	172
			2	708	708	335	335		2	901	901	92	92	
82,1	82,5	100	1	535	804	535	266	54	1	427	1185	428	0	174
			2	725	725	345	345		2	929	929	91	91	
86,6	87,0	120	1	593	881	593	304	56	1	477	1317	477	0	184
			2	797	797	389	389		2	1034	1034	102	102	
91,1	91,5	140	1	654	963	654	346	59	1	530	1458	530	0	195
			2	873	873	436	436		2	1145	1145	114	114	
95,6	96,0	160	1	716	1046	716	386	61	1	576	1612	576	0	207
			2	950	950	482	482		2	1261	1261	121	121	
100,1	100,5	205	1	840	1194	840	486	64	1	687	1887	687	0	225
			2	1090	1090	590	590		2	1482	1482	148	148	
104,6	105,0	230	1	914	1292	914	536	66	1	736	2085	736	0	237
			2	1182	1182	647	647		2	1626	1626	152	152	

3.2.7.6 Centralballasts and Cornerloads according to DIN 15019

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

Attention!
for the **WOLFF 5520.6** only the section is valid for height under hook.

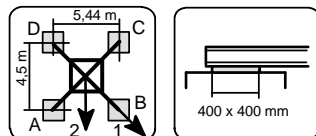


KR 16 - 100 Corner distance 10,0 m x 10,0 m **jib 55 m**

height under hook [m]	Center ballasts [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
79,9	80,3	100	1	529	792	529	266	52	1	420	1177	420	0	173
			2	715	715	343	343		2	920	920	88	88	
82,1	82,5	105	1	555	823	555	287	54	1	451	1218	451	0	175
			2	745	745	365	365		2	961	961	99	99	
86,6	87,0	125	1	613	902	613	325	56	1	500	1353	500	0	185
			2	817	817	409	409		2	1067	1067	110	110	
91,1	91,5	140	1	662	971	662	353	59	1	527	1495	527	0	195
			2	881	881	444	444		2	1166	1166	108	108	
95,6	96,0	165	1	736	1067	736	405	61	1	597	1652	597	0	208
			2	970	970	502	502		2	1296	1296	127	127	
100,1	100,5	205	1	848	1202	848	494	64	1	680	1932	680	0	225
			2	1098	1098	597	597		2	1506	1506	139	139	
104,6	105,0	235	1	934	1314	934	555	66	1	752	2134	752	0	238
			2	1203	1203	666	666		2	1664	1664	155	155	

3.3.1.1 Center ballasts and corner loads DIN 15019

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

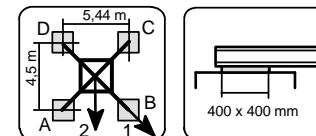


KRE 250 Corner distance 4,5 m x 5,44 m Jib length 30 m

height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
14,6	15,0	45,0	1	268	412	201	57	22	1	194	309	140	25	47
			2	371	371	97	97		2	276	276	58	58	
19,1	19,5	45,0	1	274	428	203	49	23	1	199	321	143	21	60
			2	385	385	92	92		2	287	287	56	56	
23,6	24,0	45,0	1	281	446	205	39	25	1	205	335	146	16	65
			2	400	400	86	86		2	299	299	53	53	
28,1	28,5	45,0	1	288	466	206	28	26	1	247	354	197	90	70
			2	416	416	78	78		2	324	324	120	120	

3.3.1.2 Center ballasts and corner loads DIN 15019

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

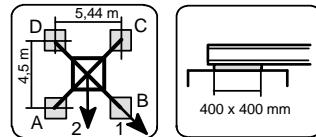


KRE 250 Corner distance 4,5 m x 5,44 m Jib length 35 m

height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
14,6	15,0	40,0	1	261	397	198	62	22	1	181	297	128	12	47
			2	358	358	101	101		2	264	264	45	45	
19,1	19,5	40,0	1	267	413	200	54	23	1	187	309	131	8	61
			2	372	372	96	96		2	275	275	43	43	
23,6	24,0	40,0	1	274	431	202	45	25	1	193	323	133	3	65
			2	387	387	89	89		2	286	286	40	40	
28,1	28,5	40,0	1	282	451	203	34	26	1	244	357	191	78	71
			2	403	403	81	81		2	325	325	110	110	

3.3.1.3 Center ballasts and corner loads DIN 15019

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

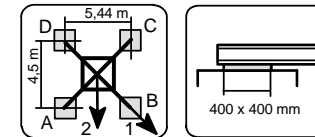


KRE 250 Corner distance 4,5 m x 5,44 m Jib length 40 m

height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☺ [m]	☾ [m]			Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
14,6	15,0	40,0	1	266	407	200	58	22	1	181	297	128	12	48
			2	367	367	99	99		2	264	264	45	45	
19,1	19,5	40,0	1	272	424	202	50	24	1	187	310	130	8	62
			2	381	381	93	93		2	275	275	42	42	
23,6	24,0	40,0	1	279	443	204	41	25	1	238	331	195	102	66
			2	396	396	87	87		2	305	305	128	128	
28,1	28,5	40,0	1	286	463	205	29	26	1	251	381	191	61	72
			2	413	413	79	79		2	344	344	98	98	

3.3.1.4 Center ballasts and corner loads DIN 15019

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

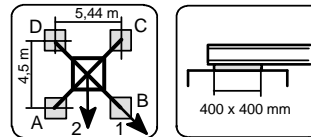


KRE 250 Corner distance 4,5 m x 5,44 m Jib length 45 m

height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☺ [m]	☾ [m]			Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
14,6	15,0	37,5	1	268	412	201	57	22	1	198	314	145	29	48
			2	372	372	98	98		2	281	281	62	62	
19,1	19,5	37,5	1	274	429	203	48	24	1	205	329	147	22	62
			2	386	386	92	92		2	294	294	58	58	
23,6	24,0	37,5	1	281	448	205	38	25	1	211	346	149	14	67
			2	401	401	85	85		2	316	316	120	120	
28,1	28,5	37,5	1	289	469	206	26	26	1	255	396	190	49	73
			2	418	418	77	77		2	356	356	89	89	

3.3.1.5 Center ballasts and corner loads DIN 15019

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

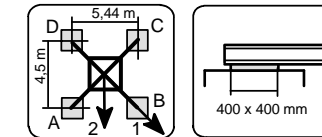


KRE 250 Corner distance 4,5 m x 5,44 m **Jib length 50 m**

height under hook [m]	Center ballasts [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
14,6	15,0	37,5	1	270	413	204	62	23	1	202	332	142	12	49
			2	372	372	102	102		2	296	296	48	48	
19,1	19,5	37,5	1	277	430	206	53	24	1	208	348	144	5	63
			2	387	387	97	97		2	308	308	44	44	
23,6	24,0	37,5	1	284	449	208	43	25	1	212	368	143	0	67
			2	402	402	90	90		2	329	329	113	113	
28,1	28,5	37,5	1	291	469	209	31	27	1	260	412	190	38	73
			2	419	419	81	81		2	369	369	81	81	

3.3.1.6 Center ballasts and corner loads DIN 15019

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

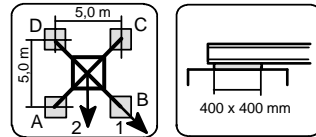


KRE 250 Corner distance 4,5 m x 5,44 m **Jib length 55 m**

height under hook [m]	Center ballasts [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
14,6	15,0	37,5	1	277	415	213	75	23	1	181	409	104	0	49
			2	376	376	114	114		2	331	331	16	16	
19,1	19,5	37,5	1	284	432	215	67	24	1	180	432	99	0	64
			2	390	390	109	109		2	344	344	11	11	
23,6	24,0	40,0	1	297	457	223	62	25	1	191	458	105	0	68
			2	412	412	108	108		2	365	365	12	12	
28,1	28,5	45,0	1	317	491	236	62	27	1	212	487	121	0	74
			2	442	442	112	112		2	410	410	94	94	

3.3.2.1 Center ballasts and corner loads DIN 15019

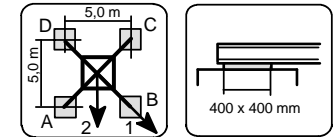
for a stationary tower crane on a cross frame element without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☺ [m]	☾ [m]			Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
14,6	15,0	37,5	1	216	390	216	41	22	1	148	287	148	9	47
			2	339	339	92	92	2	247	247	50	50		
19,1	19,5	37,5	1	220	406	220	34	23	1	153	300	153	5	60
			2	351	351	88	88	2	257	257	48	48		
23,6	24,0	37,5	1	224	424	224	25	25	1	157	313	157	0	65
			2	365	365	83	83	2	268	268	46	46		
28,1	28,5	37,5	1	228	443	228	14	26	1	155	334	155	0	70
			2	380	380	76	76	2	295	295	112	112		
32,6	33,0	40,0	1	239	471	239	7	27	1	214	391	214	37	76
			2	403	403	75	75	2	339	339	89	89		

3.3.2.2 Center ballasts and corner loads DIN 15019

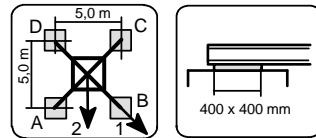
for a stationary tower crane on a cross frame element without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☺ [m]	☾ [m]			Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
14,6	15,0	30,0	1	205	369	205	41	22	1	120	279	120	0	47
			2	321	321	89	89	2	228	228	31	31		
19,1	19,5	30,0	1	209	385	209	33	23	1	120	295	120	0	61
			2	333	333	84	84	2	238	238	29	29		
23,6	24,0	30,0	1	213	403	213	24	25	1	119	314	119	0	65
			2	347	347	79	79	2	254	254	122	122		
28,1	28,5	30,0	1	217	422	217	13	26	1	117	335	117	0	71
			2	362	362	73	73	2	289	289	96	96		
32,6	33,0	37,5	1	240	463	240	18	27	1	215	400	215	30	77
			2	398	398	83	83	2	346	346	85	85		

3.3.2.3 Center ballasts and corner loads DIN 15019

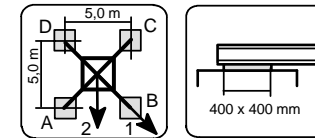
for a stationary tower crane on a cross frame element without climbing drive



height under hook		Center ballasts		Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position		Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☞ [m]	☞ [m]	[t]	Jib position	Corner loads				Jib position		Corner loads						
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]			
14,6	15,0	32,5	1	214	385	214	43	22	1	132	280	132	0	48		
			2	335	335	93	93		2	235	235	37	37			
19,1	19,5	32,5	1	219	402	219	35	24	1	132	296	132	0	62		
			2	348	348	89	89		2	248	248	139	139			
23,6	24,0	32,5	1	223	420	223	26	25	1	131	315	131	0	66		
			2	362	362	83	83		2	277	277	118	118			
28,1	28,5	32,5	1	227	440	227	14	26	1	202	359	202	45	72		
			2	378	378	77	77		2	313	313	91	91			
32,6	33,0	32,5	1	231	462	231	1	28	1	206	412	206	0	78		
			2	394	394	68	68		2	352	352	61	61			

3.3.2.4 Center ballasts and corner loads DIN 15019

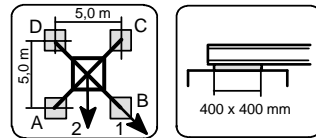
for a stationary tower crane on a cross frame element without climbing drive



height under hook		Center ballasts		Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position		Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☞ [m]	☞ [m]	[t]	Jib position	Corner loads				Jib position		Corner loads						
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]			
14,6	15,0	30,0	1	216	390	216	41	22	1	153	293	153	13	48		
			2	339	339	92	92		2	252	252	54	54			
19,1	19,5	30,0	1	220	407	220	33	24	1	157	308	157	6	62		
			2	352	352	88	88		2	263	263	51	51			
23,6	24,0	30,0	1	224	425	224	23	25	1	160	325	160	0	67		
			2	366	366	82	82		2	288	288	111	111			
28,1	28,5	30,0	1	229	446	229	12	26	1	204	374	204	33	73		
			2	382	382	75	75		2	324	324	83	83			
32,6	33,0	30,0	1	230	471	230	0	28	1	195	441	195	0	78		
			2	399	399	66	66		2	364	364	52	52			

3.3.2.5 Center ballasts and corner loads DIN 15019

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

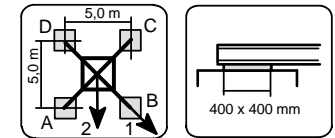


KRE 250 Corner distance 5,0 m x 5,0 m Jib length 50 m

height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
14,6	15,0	27,5	1	212	384	212	40	23	1	137	314	137	0	49
			2	334	334	91	91		2	258	258	36	36	
19,1	19,5	27,5	1	217	401	217	32	24	1	134	336	134	0	63
			2	347	347	86	86		2	270	270	32	32	
23,6	24,0	27,5	1	221	420	221	22	25	1	131	361	131	0	67
			2	361	361	80	80		2	293	293	99	99	
28,1	28,5	27,5	1	225	440	225	10	27	1	126	388	126	0	73
			2	377	377	73	73		2	330	330	71	71	
32,6	33,0	27,5	1	225	467	225	0	28	1	175	468	175	0	79
			2	395	395	64	64		2	370	370	39	39	

3.3.2.6 Center ballasts and corner loads DIN 15019

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

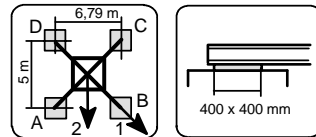


KRE 250 Corner distance 5,0 m x 5,0 m Jib length 55 m

height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
14,6	15,0	30,0	1	226	393	226	60	23	1	109	401	109	0	49
			2	344	344	109	109		2	297	297	13	13	
19,1	19,5	30,0	1	231	410	231	51	24	1	106	424	106	0	64
			2	357	357	104	104		2	309	309	9	9	
23,6	24,0	32,5	1	241	435	241	47	25	1	115	449	115	0	68
			2	378	378	104	104		2	328	328	11	11	
28,1	28,5	35,0	1	252	462	252	42	27	1	122	477	122	0	74
			2	400	400	103	103		2	369	369	84	84	
32,6	33,0	40,0	1	268	497	268	40	28	1	139	509	139	0	80
			2	430	430	107	107		2	423	423	64	64	

3.3.3.1 Center ballasts and corner loads DIN 15019

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

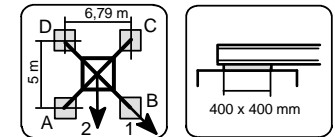


KRE 260.1 Corner distance 5 m x 6,79 m Jib length 30 m

height under hook [m]	Center ballasts [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,1	10,5	35,0	1	255	357	170	68	22	1	180	261	111	29	46
			2	329	329	96	96		2	239	239	52	52	
14,6	15,0	35,0	1	263	371	172	64	24	1	186	273	114	27	50
			2	341	341	94	94		2	249	249	51	51	
19,1	19,5	35,0	1	269	384	172	57	25	1	192	283	115	24	64
			2	352	352	89	89		2	258	258	49	49	
23,6	24,0	35,0	1	276	399	172	49	27	1	198	295	116	19	69
			2	365	365	84	84		2	268	268	46	46	
28,1	28,5	35,0	1	283	415	172	40	28	1	238	320	168	86	75
			2	379	379	77	77		2	297	297	109	109	
32,6	33,0	35,0	1	291	433	171	30	29	1	254	366	159	47	81
			2	394	394	69	69		2	335	335	78	78	
37,1	37,5	45,0	1	324	477	195	42	31	1	296	441	174	29	88
			2	435	435	85	85		2	401	401	69	69	
41,6	42,0	57,5	1	364	529	225	60	32	1	346	527	193	12	94
			2	484	484	106	106		2	477	477	62	62	

3.3.3.2 Center ballasts and corner loads DIN 15019

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

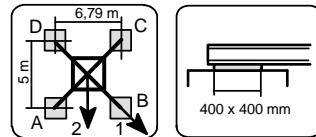


KRE 260.1 Corner distance 5 m x 6,79 m Jib length 35 m

height under hook [m]	Center ballasts [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,1	10,5	27,5	1	242	337	161	66	22	1	161	243	92	10	46
			2	310	310	93	93		2	220	220	33	33	
14,6	15,0	27,5	1	249	351	164	62	24	1	168	254	95	8	51
			2	323	323	90	90		2	230	230	32	32	
19,1	19,5	27,5	1	256	364	164	55	25	1	173	265	96	4	65
			2	334	334	85	85		2	240	240	30	30	
23,6	24,0	27,5	1	263	379	164	47	27	1	179	277	97	0	69
			2	347	347	80	80		2	256	256	120	120	
28,1	28,5	27,5	1	270	396	164	38	28	1	228	315	155	69	76
			2	361	361	73	73		2	291	291	93	93	
32,6	33,0	32,5	1	290	426	176	40	30	1	257	374	159	42	82
			2	388	388	77	77		2	342	342	74	74	
37,1	37,5	42,5	1	323	470	199	52	31	1	300	450	173	23	88
			2	430	430	93	93		2	408	408	64	64	
41,6	42,0	55,0	1	363	523	229	70	32	1	350	537	192	6	94
			2	478	478	114	114		2	485	485	57	57	

3.3.3.3 Center ballasts and corner loads DIN 15019

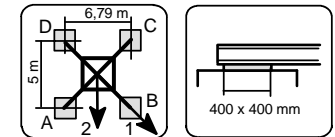
for a stationary tower crane on a cross frame element without climbing drive



KRE 260.1		Corner distance 5 m x 6,79 m				Jib length 40 m								
height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,1	10,5	27,5	1	247	346	163	63	22	1	161	243	92	10	47
			2	319	319	91	91		2	220	220	32	32	
14,6	15,0	27,5	1	254	360	165	59	24	1	168	255	95	8	51
			2	331	331	89	89		2	231	231	32	32	
19,1	19,5	27,5	1	261	374	165	52	25	1	174	266	96	4	66
			2	343	343	84	84		2	244	244	132	132	
23,6	24,0	27,5	1	268	389	166	44	27	1	222	293	162	91	70
			2	356	356	78	78		2	273	273	110	110	
28,1	28,5	27,5	1	275	406	165	35	28	1	237	336	154	55	76
			2	370	370	71	71		2	308	308	82	82	
32,6	33,0	27,5	1	283	424	164	24	30	1	253	383	144	14	83
			2	385	385	63	63		2	347	347	50	50	
37,1	37,5	40,0	1	323	475	194	42	31	1	302	466	165	1	89
			2	433	433	84	84		2	421	421	46	46	
41,6	42,0	60,0	1	382	546	242	78	33	1	372	572	202	2	95
			2	501	501	123	123		2	517	517	57	57	

3.3.3.4 Center ballasts and corner loads DIN 15019

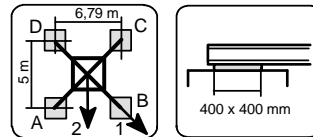
for a stationary tower crane on a cross frame element without climbing drive



KRE 260.1		Corner distance 5 m x 6,79 m				Jib length 45 m								
height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,1	10,5	27,5	1	255	357	170	69	23	1	184	264	116	35	47
			2	329	329	97	97		2	242	242	57	57	
14,6	15,0	27,5	1	263	371	172	64	24	1	191	278	118	31	52
			2	341	341	94	94		2	254	254	55	55	
19,1	19,5	27,5	1	270	385	172	57	26	1	197	291	119	25	66
			2	353	353	89	89		2	265	265	51	51	
23,6	24,0	27,5	1	277	400	172	49	27	1	233	312	166	87	71
			2	366	366	83	83		2	290	290	109	109	
28,1	28,5	27,5	1	284	417	172	39	29	1	248	355	158	51	77
			2	380	380	76	76		2	326	326	81	81	
32,6	33,0	27,5	1	292	435	171	28	30	1	265	403	148	10	83
			2	396	396	67	67		2	365	365	48	48	
37,1	37,5	42,5	1	338	493	207	52	31	1	320	493	175	2	90
			2	450	450	95	95		2	445	445	50	50	
41,6	42,0	62,5	1	397	565	255	87	33	1	390	600	212	2	96
			2	518	518	134	134		2	542	542	60	60	

3.3.3.5 Center ballasts and corner loads DIN 15019

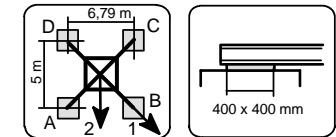
for a stationary tower crane on a cross frame element without climbing drive



KRE 260.1		Corner distance 5 m x 6,79 m				Jib length 50 m								
height under hook [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Corner loads						Corner loads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
10,1	10,5	25,0	1	251	351	167	67	23	1	182	274	105	14	48
			2	323	323	95	95		2	249	249	39	39	
14,6	15,0	25,0	1	259	365	169	63	24	1	190	287	108	10	53
			2	336	336	92	92		2	260	260	37	37	
19,1	19,5	25,0	1	266	379	169	56	26	1	196	300	108	4	67
			2	348	348	87	87		2	272	272	33	33	
23,6	24,0	25,0	1	273	395	169	47	27	1	232	319	160	73	72
			2	361	361	81	81		2	295	295	97	97	
28,1	28,5	25,0	1	280	412	169	37	29	1	248	363	151	36	78
			2	375	375	74	74		2	331	331	68	68	
32,6	33,0	27,5	1	294	437	174	32	30	1	271	418	147	1	84
			2	397	397	71	71		2	377	377	42	42	
37,1	37,5	45,0	1	347	501	217	63	32	1	332	516	179	0	90
			2	458	458	105	105		2	464	464	49	49	
41,6	42,0	65,0	1	406	573	264	97	33	1	400	625	215	0	97
			2	526	526	144	144		2	562	562	58	58	

3.3.3.6 Center ballasts and corner loads DIN 15019

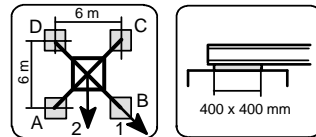
for a stationary tower crane on a cross frame element without climbing drive



KRE 260.1		Corner distance 5 m x 6,79 m				Jib length 55 m								
height under hook [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Corner loads						Corner loads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
10,1	10,5	25,0	1	257	354	176	80	23	1	173	336	73	0	48
			2	327	327	107	107		2	281	281	10	10	
14,6	15,0	25,0	1	265	368	178	75	25	1	176	353	72	0	53
			2	340	340	104	104		2	293	293	8	8	
19,1	19,5	27,5	1	278	389	185	74	26	1	189	373	78	0	68
			2	358	358	105	105		2	310	310	10	10	
23,6	24,0	30,0	1	292	411	191	72	27	1	201	395	84	0	72
			2	378	378	105	105		2	329	329	11	11	
28,1	28,5	32,5	1	305	434	197	68	29	1	212	419	88	0	79
			2	398	398	104	104		2	370	370	82	82	
32,6	33,0	37,5	1	326	465	208	69	30	1	309	467	175	17	85
			2	426	426	108	108		2	423	423	61	61	
37,1	37,5	47,5	1	359	510	232	81	32	1	348	550	184	0	91
			2	469	469	122	122		2	492	492	49	49	
41,6	42,0	67,5	1	418	583	280	115	33	1	415	662	219	0	97
			2	537	537	161	161		2	591	591	58	58	

3.3.4.1 Center ballasts and corner loads DIN 15019

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

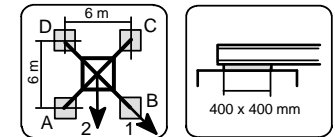


KRE 260.1 Corner distance 6 m x 6 m Jib length 30 m

height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,1	10,5	20,0	1	175	312	175	38	22	1	105	221	105	0	46
			2	272	272	78	78		2	186	186	30	30	
14,6	15,0	20,0	1	180	325	180	34	24	1	109	233	109	0	50
			2	283	283	77	77		2	195	195	30	30	
19,1	19,5	20,0	1	183	338	183	28	25	1	109	247	109	0	64
			2	293	293	74	74		2	203	203	29	29	
23,6	24,0	20,0	1	187	353	187	21	27	1	108	262	108	0	69
			2	304	304	69	69		2	215	215	109	109	
28,1	28,5	20,0	1	190	368	190	12	28	1	106	280	106	0	75
			2	316	316	64	64		2	244	244	87	87	
32,6	33,0	22,5	1	200	391	200	9	29	1	175	326	175	24	81
			2	335	335	65	65		2	282	282	68	68	
37,1	37,5	30,0	1	222	429	222	16	31	1	197	393	197	2	88
			2	368	368	76	76		2	336	336	59	59	
41,6	42,0	40,0	1	251	474	251	28	32	1	207	489	207	0	94
			2	408	408	93	93		2	399	399	53	53	
46,1	46,5	55,0	1	293	533	293	53	34	1	238	595	238	0	100
			2	463	463	123	123		2	478	478	58	58	

3.3.4.2 Center ballasts and corner loads DIN 15019

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

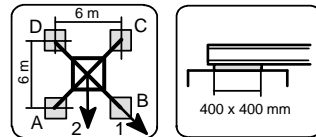


KRE 260.1 Corner distance 6 m x 6 m Jib length 35 m

height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,1	10,5	15,0	1	170	299	170	42	22	1	80	221	80	0	46
			2	261	261	79	79		2	173	173	17	17	
14,6	15,0	15,0	1	175	312	175	38	24	1	83	233	83	0	51
			2	272	272	78	78		2	183	183	18	18	
19,1	19,5	15,0	1	179	325	179	32	25	1	83	247	83	0	65
			2	282	282	75	75		2	191	191	16	16	
23,6	24,0	15,0	1	182	340	182	25	27	1	83	263	83	0	69
			2	293	293	71	71		2	214	214	100	100	
28,1	28,5	15,0	1	186	355	186	16	28	1	81	280	81	0	76
			2	306	306	66	66		2	243	243	78	78	
32,6	33,0	17,5	1	195	379	195	12	30	1	170	328	170	13	82
			2	325	325	66	66		2	282	282	59	59	
37,1	37,5	27,5	1	224	422	224	26	31	1	195	405	195	0	88
			2	364	364	84	84		2	342	342	56	56	
41,6	42,0	37,5	1	252	467	252	37	32	1	203	504	203	0	94
			2	404	404	100	100		2	406	406	49	49	
46,1	46,5	52,5	1	294	527	294	62	34	1	233	612	233	0	101
			2	459	459	130	130		2	486	486	53	53	

3.3.4.3 Center ballasts and corner loads DIN 15019

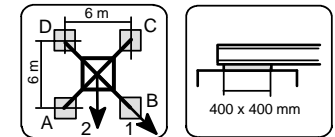
for a stationary tower crane on a cross frame element without climbing drive



KRE 260.1		Corner distance 6 m x 6 m				Jib length 40 m								
height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,1	10,5	15,0	1	174	308	174	39	22	1	79	221	79	0	47
			2	268	268	79	79		2	173	173	17	17	
14,6	15,0	15,0	1	179	321	179	36	24	1	83	234	83	0	51
			2	280	280	77	77		2	183	183	17	17	
19,1	19,5	15,0	1	182	335	182	29	25	1	83	248	83	0	66
			2	290	290	74	74		2	204	204	110	110	
23,6	24,0	15,0	1	186	349	186	22	27	1	82	264	82	0	70
			2	301	301	70	70		2	228	228	93	93	
28,1	28,5	15,0	1	189	365	189	13	28	1	164	297	164	31	76
			2	314	314	64	64		2	258	258	70	70	
32,6	33,0	15,0	1	193	382	193	3	30	1	160	350	160	0	83
			2	327	327	58	58		2	291	291	44	44	
37,1	37,5	25,0	1	221	426	221	16	31	1	172	441	172	0	89
			2	366	366	76	76		2	352	352	40	40	
41,6	42,0	40,0	1	262	484	262	40	33	1	203	541	203	0	95
			2	419	419	105	105		2	428	428	46	46	
46,1	46,5	57,5	1	310	551	310	70	34	1	245	651	245	0	102
			2	480	480	140	140		2	515	515	55	55	

3.3.4.4 Center ballasts and corner loads DIN 15019

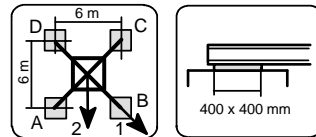
for a stationary tower crane on a cross frame element without climbing drive



KRE 260.1		Corner distance 6 m x 6 m				Jib length 45 m								
height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,1	10,5	12,5	1	175	312	175	38	23	1	67	222	67	0	47
			2	272	272	78	78		2	189	189	35	35	
14,6	15,0	12,5	1	180	326	180	34	24	1	70	235	70	0	52
			2	283	283	77	77		2	200	200	34	34	
19,1	19,5	12,5	1	184	339	184	28	26	1	115	252	115	0	66
			2	294	294	74	74		2	212	212	105	105	
23,6	24,0	12,5	1	187	354	187	20	27	1	112	271	112	0	71
			2	305	305	69	69		2	237	237	87	87	
28,1	28,5	15,0	1	197	376	197	17	29	1	172	316	172	27	77
			2	324	324	70	70		2	274	274	70	70	
32,6	33,0	15,0	1	200	394	200	7	30	1	164	373	164	0	83
			2	337	337	63	63		2	307	307	43	43	
37,1	37,5	25,0	1	229	438	229	20	31	1	175	466	175	0	90
			2	377	377	81	81		2	368	368	39	39	
41,6	42,0	42,5	1	276	503	276	49	33	1	218	568	218	0	96
			2	436	436	116	116		2	452	452	50	50	
46,1	46,5	60,0	1	324	570	324	79	34	1	259	679	259	0	102
			2	498	498	151	151		2	539	539	59	59	

3.3.4.5 Center ballasts and corner loads DIN 15019

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

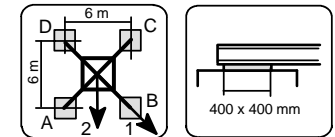


KRE 260.1 Corner distance 6 m x 6 m Jib length 50 m

height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,1	10,5	12,5	1	178	312	178	43	23	1	102	247	102	0	48
			2	273	273	83	83		2	200	200	25	25	
14,6	15,0	12,5	1	183	326	183	39	24	1	104	263	104	0	53
			2	284	284	81	81		2	211	211	25	25	
19,1	19,5	12,5	1	186	340	186	33	26	1	102	281	102	0	67
			2	295	295	78	78		2	222	222	101	101	
23,6	24,0	12,5	1	190	355	190	25	27	1	99	301	99	0	72
			2	306	306	73	73		2	247	247	82	82	
28,1	28,5	15,0	1	200	377	200	22	29	1	175	329	175	20	78
			2	325	325	74	74		2	284	284	65	65	
32,6	33,0	15,0	1	203	395	203	11	30	1	158	395	158	0	84
			2	339	339	67	67		2	318	318	38	38	
37,1	37,5	27,5	1	238	446	238	30	32	1	181	489	181	0	90
			2	385	385	91	91		2	386	386	40	40	
41,6	42,0	45,0	1	285	511	285	60	33	1	224	593	224	0	97
			2	444	444	126	126		2	470	470	50	50	
46,1	46,5	62,5	1	333	577	333	89	34	1	264	706	264	0	103
			2	506	506	161	161		2	558	558	59	59	

3.3.4.6 Center ballasts and corner loads DIN 15019

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

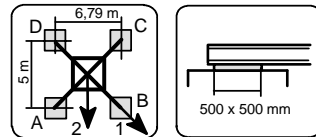


KRE 260.1 Corner distance 6 m x 6 m Jib length 55 m

height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,1	10,5	15,0	1	192	322	192	62	23	1	81	319	81	0	48
			2	284	284	100	100		2	233	233	8	8	
14,6	15,0	15,0	1	197	336	197	58	25	1	83	335	83	0	53
			2	295	295	99	99		2	244	244	7	7	
19,1	19,5	17,5	1	207	356	207	57	26	1	93	354	93	0	68
			2	312	312	101	101		2	260	260	10	10	
23,6	24,0	20,0	1	216	377	216	56	27	1	102	374	102	0	72
			2	330	330	103	103		2	284	284	99	99	
28,1	28,5	20,0	1	220	393	220	46	29	1	98	397	98	0	79
			2	342	342	97	97		2	315	315	75	75	
32,6	33,0	22,5	1	230	417	230	42	30	1	196	426	196	0	85
			2	362	362	97	97		2	355	355	54	54	
36,1	37,5	30,0	1	252	456	252	48	32	1	192	522	192	0	91
			2	396	396	108	108		2	411	411	42	42	
41,6	42,0	47,5	1	299	521	299	77	33	1	234	628	234	0	97
			2	456	456	142	142		2	496	496	52	52	
46,1	46,5	65,0	1	347	588	347	107	35	1	273	743	273	0	104
			2	518	518	177	177		2	585	585	60	60	

3.3.5.1 Center ballasts and corner loads DIN 15019

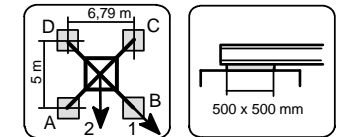
for a stationary tower crane on a cross frame element without climbing drive



KRE 260.2		Corner distance 5 m x 6,79 m				Jib length 30 m								
height under hook [m]	Center ballasts [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
14,6	15,0	27,5	1	253	361	162	54	24	1	176	263	103	17	51
			2	331	331	84	84		2	239	239	41	41	
19,1	19,5	27,5	1	261	376	164	48	26	1	183	275	106	14	65
			2	344	344	80	80		2	250	250	40	40	
23,6	24,0	27,5	1	267	390	164	41	27	1	189	287	107	10	70
			2	356	356	75	75		2	260	260	37	37	
28,1	28,5	27,5	1	275	406	164	32	28	1	229	312	159	76	76
			2	370	370	68	68		2	289	289	99	99	
32,6	33,0	30,0	1	289	430	169	28	30	1	251	364	156	44	82
			2	391	391	67	67		2	333	333	75	75	
37,1	37,5	42,5	1	328	480	199	47	31	1	300	445	177	32	88
			2	438	438	89	89		2	405	405	72	72	
41,6	42,0	55,0	1	368	532	229	65	33	1	350	531	197	16	95
			2	486	486	111	111		2	481	481	66	66	
46,1	46,5	70,0	1	414	591	265	87	34	1	407	627	221	1	101
			2	542	542	136	136		2	566	566	62	62	
50,6	51,0	92,5	1	480	672	318	126	36	1	485	748	263	1	107
			2	619	619	179	179		2	675	675	73	73	

3.3.5.2 Center ballasts and corner loads DIN 15019

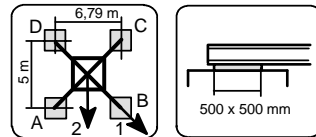
for a stationary tower crane on a cross frame element without climbing drive



KRE 260.2		Corner distance 5 m x 6,79 m				Jib length 35 m								
height under hook [m]	Center ballasts [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
14,6	15,0	22,5	1	245	347	160	58	24	1	164	251	91	4	51
			2	319	319	86	86		2	227	227	28	28	
19,1	19,5	22,5	1	253	362	161	53	26	1	171	263	94	2	66
			2	332	332	83	83		2	238	238	27	27	
23,6	24,0	22,5	1	260	377	162	45	27	1	174	278	91	0	70
			2	344	344	77	77		2	255	255	117	117	
28,1	28,5	22,5	1	267	393	161	36	29	1	226	314	153	65	77
			2	358	358	71	71		2	289	289	89	89	
32,6	33,0	27,5	1	287	423	173	38	30	1	255	372	156	38	83
			2	385	385	75	75		2	340	340	71	71	
37,1	37,5	37,5	1	321	467	197	51	31	1	297	448	170	20	89
			2	426	426	92	92		2	406	406	62	62	
41,6	42,0	50,0	1	360	519	227	69	33	1	347	534	190	3	95
			2	475	475	113	113		2	482	482	55	55	
46,1	46,5	70,0	1	420	591	275	103	34	1	418	644	227	1	102
			2	544	544	151	151		2	581	581	63	63	
50,6	51,0	92,5	1	486	672	328	142	36	1	494	766	267	0	108
			2	620	620	194	194		2	690	690	73	73	

3.3.5.3 Center ballasts and corner loads DIN 15019

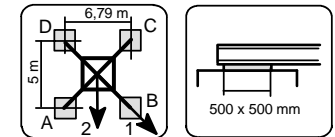
for a stationary tower crane on a cross frame element without climbing drive



KRE 260.2		Corner distance 5 m x 6,79 m				Jib length 40 m								
height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
14,6	15,0	22,5	1	251	357	161	55	24	1	164	251	91	4	52
			2	327	327	85	85		2	227	227	28	28	
19,1	19,5	22,5	1	259	372	163	50	26	1	171	263	93	1	67
			2	340	340	81	81		2	243	243	129	129	
23,6	24,0	22,5	1	265	387	163	42	27	1	220	292	159	87	71
			2	353	353	75	75		2	272	272	107	107	
28,1	28,5	22,5	1	273	403	163	33	29	1	235	334	151	51	77
			2	367	367	69	69		2	307	307	79	79	
32,6	33,0	22,5	1	280	421	162	22	30	1	251	381	141	11	84
			2	382	382	61	61		2	345	345	47	47	
37,1	37,5	37,5	1	326	477	198	47	32	1	306	470	168	5	90
			2	435	435	89	89		2	425	425	50	50	
41,6	42,0	55,0	1	379	542	241	77	33	1	369	570	200	0	96
			2	497	497	122	122		2	514	514	55	55	
46,1	46,5	77,5	1	444	621	295	117	34	1	446	686	243	2	102
			2	572	572	166	166		2	620	620	69	69	
50,6	51,0	100,0	1	510	702	348	156	36	1	524	809	283	0	109
			2	649	649	209	209		2	730	730	78	78	

3.3.5.4 Center ballasts and corner loads DIN 15019

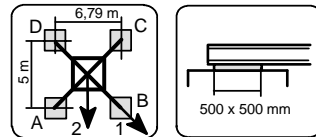
for a stationary tower crane on a cross frame element without climbing drive



KRE 260.2		Corner distance 5 m x 6,79 m				Jib length 45 m								
height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
14,6	15,0	22,5	1	259	367	168	60	24	1	187	274	114	27	52
			2	337	337	90	90		2	250	250	51	51	
19,1	19,5	22,5	1	267	383	170	55	26	1	195	289	116	23	67
			2	351	351	87	87		2	263	263	48	48	
23,6	24,0	22,5	1	274	398	170	46	27	1	231	310	163	84	72
			2	363	363	81	81		2	288	288	106	106	
28,1	28,5	22,5	1	282	414	170	37	29	1	246	354	155	48	78
			2	377	377	74	74		2	324	324	77	77	
32,6	33,0	22,5	1	289	432	169	26	30	1	263	401	146	7	84
			2	393	393	66	66		2	363	363	45	45	
37,1	37,5	37,5	1	335	489	205	51	32	1	318	491	172	0	91
			2	447	447	94	94		2	443	443	47	47	
41,6	42,0	57,5	1	394	561	253	87	33	1	387	597	210	0	97
			2	514	514	133	133		2	539	539	58	58	
46,1	46,5	77,5	1	453	634	301	120	35	1	453	714	241	0	103
			2	584	584	170	170		2	639	639	65	65	
50,6	51,0	102,5	1	526	722	360	164	36	1	540	842	290	0	109
			2	668	668	218	218		2	757	757	79	79	

3.3.5.5 Center ballasts and corner loads DIN 15019

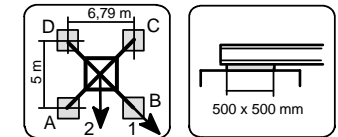
for a stationary tower crane on a cross frame element without climbing drive



KRE 260.2		Corner distance 5 m x 6,79 m				Jib length 50 m								
height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
14,6	15,0	20,0	1	255	362	165	59	25	1	186	284	104	6	53
			2	332	332	88	88		2	257	257	33	33	
19,1	19,5	20,0	1	263	377	167	53	26	1	194	298	106	1	68
			2	346	346	85	85		2	269	269	30	30	
23,6	24,0	20,0	1	270	392	167	45	28	1	195	318	101	0	73
			2	358	358	79	79		2	293	293	94	94	
28,1	28,5	20,0	1	278	409	167	35	29	1	246	361	148	33	79
			2	372	372	72	72		2	329	329	65	65	
32,6	33,0	25,0	1	298	439	178	37	30	1	275	422	151	4	85
			2	400	400	76	76		2	381	381	45	45	
37,1	37,5	42,5	1	350	503	221	68	32	1	337	518	184	3	91
			2	461	461	110	110		2	468	468	53	53	
41,6	42,0	60,0	1	403	568	263	97	33	1	396	623	211	0	98
			2	522	522	143	143		2	558	558	57	57	
46,1	46,5	82,5	1	468	648	316	137	35	1	474	741	254	0	104
			2	598	598	186	186		2	666	666	69	69	
50,6	51,0	105,0	1	535	730	369	174	36	1	548	871	289	0	110
			2	676	676	228	228		2	778	778	76	76	

3.3.5.6 Center ballasts and corner loads DIN 15019

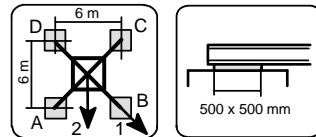
for a stationary tower crane on a cross frame element without climbing drive



KRE 260.2		Corner distance 5 m x 6,79 m				Jib length 55 m								
height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
14,6	15,0	22,5	1	268	371	181	78	25	1	181	354	76	0	54
			2	342	342	106	106		2	295	295	10	10	
19,1	19,5	25,0	1	282	393	189	78	26	1	196	373	86	0	69
			2	362	362	109	109		2	314	314	14	14	
23,6	24,0	27,5	1	295	414	195	76	28	1	208	395	91	0	73
			2	381	381	109	109		2	333	333	15	15	
28,1	28,5	30,0	1	309	437	201	73	29	1	220	418	95	0	80
			2	402	402	108	108		2	374	374	85	85	
32,6	33,0	32,5	1	323	462	206	68	31	1	306	464	173	15	86
			2	423	423	106	106		2	421	421	58	58	
37,1	37,5	45,0	1	363	513	236	86	32	1	355	550	192	0	92
			2	471	471	127	127		2	496	496	53	53	
41,6	42,0	65,0	1	422	585	284	121	33	1	424	660	228	0	98
			2	540	540	166	166		2	593	593	62	62	
46,1	46,5	85,0	1	481	659	331	154	35	1	488	780	257	0	105
			2	609	609	203	203		2	695	695	67	67	
50,6	51,0	110,0	1	554	747	391	197	36	1	574	913	303	0	111
			2	694	694	251	251		2	815	815	80	80	

3.3.6.1 Center ballasts and corner loads DIN 15019

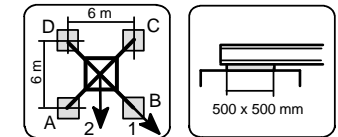
for a stationary tower crane on a cross frame element without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
[m]	[m]			Corner loads						Corner loads				
☞	☜			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
14,6	15,0	15,0	1	176	322	176	30	24	1	101	233	101	0	51
			2	279	279	73	73		2	191	191	26	26	
19,1	19,5	15,0	1	181	336	181	26	26	1	103	247	103	0	65
			2	291	291	71	71		2	201	201	26	26	
23,6	24,0	15,0	1	184	350	184	19	27	1	103	263	103	0	70
			2	302	302	67	67		2	213	213	106	106	
28,1	28,5	15,0	1	188	366	188	10	28	1	101	280	101	0	76
			2	313	313	62	62		2	242	242	84	84	
32,6	33,0	17,5	1	198	388	198	7	30	1	173	325	173	21	82
			2	333	333	63	63		2	280	280	65	65	
37,1	37,5	25,0	1	220	425	220	15	31	1	194	392	194	0	88
			2	365	365	75	75		2	334	334	56	56	
41,6	42,0	35,0	1	248	470	248	27	33	1	202	489	202	0	95
			2	405	405	92	92		2	396	396	51	51	
46,1	46,5	50,0	1	289	529	289	50	34	1	232	594	232	0	101
			2	458	458	120	120		2	474	474	54	54	
50,6	51,0	67,5	1	337	595	337	78	36	1	269	709	269	0	107
			2	520	520	154	154		2	562	562	61	61	
55,1	55,5	87,5	1	391	671	391	112	37	1	316	833	316	0	114
			2	589	589	194	194		2	661	661	72	72	
59,6	60,0	107,5	1	448	749	448	148	39	1	362	968	362	0	122
			2	661	661	236	236		2	766	766	81	81	

3.3.6.2 Center ballasts and corner loads DIN 15019

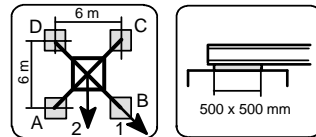
for a stationary tower crane on a cross frame element without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
[m]	[m]			Corner loads						Corner loads				
☞	☜			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
14,6	15,0	10,0	1	171	308	171	34	24	1	75	234	75	0	51
			2	268	268	74	74		2	179	179	13	13	
19,1	19,5	10,0	1	176	323	176	29	26	1	78	248	78	0	66
			2	280	280	72	72		2	189	189	13	13	
23,6	24,0	10,0	1	180	337	180	22	27	1	77	264	77	0	70
			2	291	291	68	68		2	212	212	97	97	
28,1	28,5	10,0	1	183	352	183	14	29	1	76	281	76	0	77
			2	303	303	63	63		2	242	242	75	75	
32,6	33,0	15,0	1	199	382	199	17	30	1	174	333	174	16	83
			2	328	328	70	70		2	286	286	62	62	
37,1	37,5	22,5	1	221	419	221	24	31	1	190	406	190	0	89
			2	361	361	82	82		2	340	340	53	53	
41,6	42,0	32,5	1	250	463	250	36	33	1	198	504	198	0	95
			2	401	401	99	99		2	403	403	47	47	
46,1	46,5	50,0	1	297	529	297	66	34	1	239	610	239	0	102
			2	461	461	133	133		2	488	488	56	56	
50,6	51,0	67,5	1	344	596	344	93	36	1	275	727	275	0	108
			2	522	522	167	167		2	577	577	62	62	
55,1	55,5	87,5	1	399	671	399	127	37	1	321	854	321	0	114
			2	591	591	206	206		2	676	676	72	72	
59,6	60,0	107,5	1	456	750	456	162	39	1	367	990	367	0	122
			2	664	664	248	248		2	781	781	81	81	

3.3.6.3 Center ballasts and corner loads DIN 15019

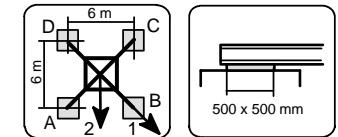
for a stationary tower crane on a cross frame element without climbing drive



KRE 260.2		Corner distance 6 m x 6 m				Jib length 40 m								
height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
14,6	15,0	10,0	1	175	318	175	32	24	1	75	235	75	0	52
			2	276	276	73	73		2	179	179	13	13	
19,1	19,5	10,0	1	180	332	180	27	26	1	78	249	78	0	67
			2	288	288	71	71		2	202	202	107	107	
23,6	24,0	10,0	1	183	347	183	19	27	1	77	265	77	0	71
			2	299	299	67	67		2	227	227	89	89	
28,1	28,5	10,0	1	187	362	187	11	29	1	162	296	162	27	77
			2	311	311	62	62		2	257	257	67	67	
32,6	33,0	12,5	1	196	385	196	7	30	1	167	351	167	0	84
			2	330	330	63	63		2	295	295	47	47	
37,1	37,5	22,5	1	225	429	225	21	32	1	179	441	179	0	90
			2	369	369	80	80		2	356	356	44	44	
41,6	42,0	37,5	1	266	486	266	45	33	1	211	540	211	0	96
			2	422	422	110	110		2	432	432	50	50	
46,1	46,5	55,0	1	313	552	313	74	34	1	252	649	252	0	102
			2	482	482	144	144		2	518	518	59	59	
50,6	51,0	72,5	1	360	620	360	101	36	1	287	768	287	0	109
			2	544	544	177	177		2	607	607	64	64	
55,1	55,5	92,5	1	415	696	415	134	37	1	332	896	332	0	115
			2	613	613	216	216		2	707	707	73	73	

3.3.6.4 Center ballasts and corner loads DIN 15019

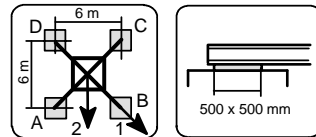
for a stationary tower crane on a cross frame element without climbing drive



KRE 260.2		Corner distance 6 m x 6 m				Jib length 45 m								
height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
14,6	15,0	7,5	1	176	322	176	30	24	1	62	235	62	0	52
			2	279	279	73	73		2	196	196	30	30	
19,1	19,5	7,5	1	181	337	181	25	26	1	110	252	110	0	67
			2	291	291	71	71		2	211	211	101	101	
23,6	24,0	10,0	1	191	357	191	24	27	1	166	273	166	58	72
			2	309	309	73	73		2	242	242	90	90	
28,1	28,5	10,0	1	194	373	194	15	29	1	169	314	169	24	78
			2	321	321	68	68		2	272	272	67	67	
32,6	33,0	12,5	1	204	397	204	11	30	1	171	374	171	0	84
			2	340	340	68	68		2	311	311	47	47	
37,1	37,5	22,5	1	233	441	233	25	32	1	182	466	182	0	91
			2	380	380	86	86		2	372	372	43	43	
41,6	42,0	37,5	1	274	499	274	49	33	1	214	567	214	0	97
			2	433	433	115	115		2	449	449	48	48	
46,1	46,5	55,0	1	321	565	321	77	35	1	253	677	253	0	103
			2	493	493	148	148		2	535	535	56	56	
50,6	51,0	75,0	1	374	639	374	109	36	1	299	799	299	0	109
			2	562	562	187	187		2	632	632	67	67	
55,1	55,5	95,0	1	429	716	429	142	38	1	343	930	343	0	116
			2	632	632	226	226		2	733	733	75	75	

3.3.6.5 Center ballasts and corner loads DIN 15019

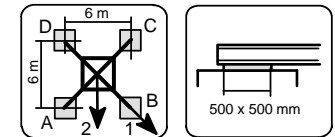
for a stationary tower crane on a cross frame element without climbing drive



height under hook		Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☞ [m]	☜ [m]			Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
14,6	15,0	7,5	1	179	323	179	35	25	1	96	263	96	0	53
			2	281	281	77	77		2	207	207	21	21	
19,1	19,5	7,5	1	184	338	184	30	26	1	96	282	96	0	68
			2	293	293	75	75		2	220	220	97	97	
23,6	24,0	10,0	1	194	358	194	29	28	1	106	301	106	0	73
			2	310	310	77	77		2	252	252	86	86	
28,1	28,5	10,0	1	197	374	197	20	29	1	172	328	172	16	79
			2	322	322	72	72		2	282	282	62	62	
32,6	33,0	12,5	1	207	398	207	16	30	1	166	396	166	0	85
			2	342	342	72	72		2	322	322	42	42	
37,1	37,5	25,0	1	242	448	242	35	32	1	189	489	189	0	91
			2	388	388	96	96		2	389	389	44	44	
41,6	42,0	40,0	1	283	506	283	59	33	1	219	591	219	0	98
			2	441	441	124	124		2	467	467	48	48	
46,1	46,5	57,5	1	330	573	330	87	35	1	258	704	258	0	104
			2	501	501	158	158		2	554	554	56	56	
50,6	51,0	77,5	1	383	647	383	119	36	1	303	827	303	0	110
			2	570	570	197	197		2	651	651	66	66	
55,1	55,5	97,5	1	438	724	438	152	38	1	346	959	346	0	117
			2	640	640	235	235		2	752	752	74	74	

3.3.6.6 Center ballasts and corner loads DIN 15019

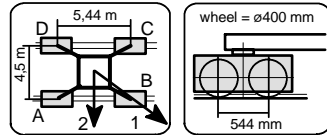
for a stationary tower crane on a cross frame element without climbing drive



height under hook		Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☞ [m]	☜ [m]			Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
14,6	15,0	12,5	1	199	338	199	60	25	1	87	336	87	0	54
			2	297	297	101	101		2	246	246	9	9	
19,1	19,5	12,5	1	204	353	204	55	26	1	88	354	88	0	69
			2	310	310	99	99		2	258	258	7	7	
23,6	24,0	15,0	1	214	374	214	53	28	1	97	375	97	0	73
			2	327	327	100	100		2	282	282	96	96	
28,1	28,5	17,5	1	224	397	224	51	29	1	106	397	106	0	80
			2	346	346	101	101		2	319	319	78	78	
32,6	33,0	20,0	1	233	420	233	46	31	1	203	427	203	0	86
			2	366	366	101	101		2	359	359	57	57	
37,1	37,5	25,0	1	249	452	249	47	32	1	188	522	188	0	92
			2	393	393	106	106		2	409	409	40	40	
41,6	42,0	42,5	1	297	517	297	77	33	1	230	626	230	0	98
			2	452	452	141	141		2	493	493	50	50	
46,1	46,5	60,0	1	344	583	344	104	35	1	267	740	267	0	105
			2	513	513	175	175		2	581	581	57	57	
50,6	51,0	80,0	1	397	658	397	136	36	1	311	866	311	0	111
			2	582	582	213	213		2	679	679	66	66	
55,1	55,5	102,5	1	458	742	458	174	38	1	365	1002	365	0	117
			2	659	659	258	258		2	788	788	79	79	

3.4.1.1 Center ballasts and corner loads DIN 15019

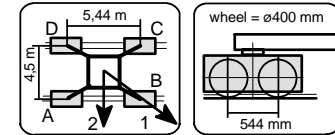
for a travelling tower crane on an undercarriage without climbing drive



UW 250		Corner distance 4,55 m x 5,44 m								Jib length 30 m				
height under hook ☪ [m]	Center ballasts ☪ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	45,0	1	276	421	208	63	22	1	202	318	148	32	47
			2	380	380	104	104		2	285	285	65	65	
19,6	20,0	45,0	1	282	438	210	55	23	1	207	330	151	28	60
			2	394	394	99	99		2	296	296	62	62	
24,1	24,5	45,0	1	289	456	212	45	25	1	213	344	153	22	66
			2	409	409	92	92		2	307	307	59	59	
28,6	29,0	45,0	1	296	476	213	34	26	1	256	371	203	88	72
			2	425	425	85	85		2	339	339	121	121	

3.4.1.2 Center ballasts and corner loads DIN 15019

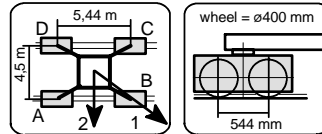
for a travelling tower crane on an undercarriage without climbing drive



UW 250		Corner distance 4,55 m x 5,44 m								Jib length 35 m				
height under hook ☪ [m]	Center ballasts ☪ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	40,0	1	269	406	206	69	22	1	189	305	135	19	47
			2	367	367	107	107		2	273	273	52	52	
19,6	20,0	40,0	1	276	423	208	61	24	1	195	318	138	15	61
			2	381	381	102	102		2	283	283	50	50	
24,1	24,5	40,0	1	282	441	209	51	25	1	201	332	141	9	67
			2	396	396	96	96		2	301	301	141	141	
28,6	29,0	40,0	1	290	461	211	39	26	1	253	374	197	76	73
			2	413	413	88	88		2	340	340	110	110	

3.4.1.3 Center ballasts and corner loads DIN 15019

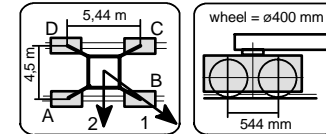
for a travelling tower crane on an undercarriage without climbing drive



UW 250		Corner distance 4,55 m x 5,44 m						Jib length 40 m						
height under hook [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Corner loads						Corner loads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
15,1	15,5	40,0	1	274	417	208	65	22	1	189	306	135	19	48
			2	376	376	105	105		2	273	273	52	52	
19,6	20,0	40,0	1	280	434	210	57	24	1	195	319	138	14	62
			2	390	390	100	100		2	284	284	49	49	
24,1	24,5	40,0	1	287	452	211	46	25	1	247	348	201	101	68
			2	406	406	93	93		2	320	320	129	129	
28,6	29,0	40,0	1	295	473	213	35	26	1	260	398	197	59	73
			2	422	422	85	85		2	359	359	98	98	

3.4.1.4 Center ballasts and corner loads DIN 15019

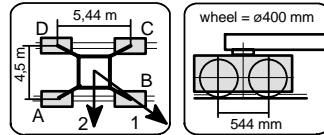
for a travelling tower crane on an undercarriage without climbing drive



UW 250		Corner distance 4,55 m x 5,44 m						Jib length 45 m						
height under hook [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Corner loads						Corner loads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
15,1	15,5	37,5	1	276	422	209	63	23	1	206	323	152	35	48
			2	380	380	104	104		2	290	290	68	68	
19,6	20,0	37,5	1	283	439	211	54	24	1	213	338	155	29	62
			2	395	395	99	99		2	303	303	64	64	
24,1	24,5	37,5	1	290	458	212	44	25	1	251	362	200	89	68
			2	410	410	92	92		2	331	331	121	121	
28,6	29,0	37,5	1	297	478	213	32	27	1	264	413	196	47	74
			2	427	427	83	83		2	371	371	89	89	

3.4.1.5 Center ballasts and corner loads DIN 15019

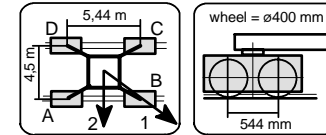
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts	Jib position	Crane in service torque moment: 190 kNm				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force
[m]	[m]			Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	37,5	1	278	422	212	68	23	1	210	341	149	18	49
			2	381	381	109	109		2	304	304	55	55	
19,6	20,0	37,5	1	285	439	214	59	24	1	216	357	152	11	63
			2	396	396	103	103		2	317	317	51	51	
24,1	24,5	37,5	1	292	458	215	49	25	1	218	378	149	8	69
			2	411	411	96	96		2	343	343	114	114	
28,6	29,0	37,5	1	299	479	216	36	27	1	270	429	196	37	75
			2	428	428	87	87		2	384	384	82	82	

3.4.1.6 Center ballasts and corner loads DIN 15019

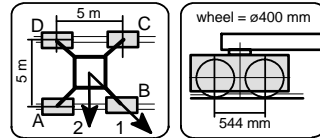
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts	Jib position	Crane in service torque moment: 190 kNm				Horizontal force	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force
[m]	[m]			Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	37,5	1	285	424	221	82	23	1	187	420	110	8	49
			2	385	385	121	121		2	340	340	23	23	
19,6	20,0	40,0	1	298	448	229	79	24	1	199	443	118	8	64
			2	405	405	121	121		2	359	359	24	24	
24,1	24,5	42,5	1	311	473	236	75	26	1	210	469	123	8	70
			2	427	427	120	120		2	380	380	25	25	

3.4.2.1 Center ballasts and corner loads DIN 15019

for a travelling tower crane on an undercarriage without climbing drive

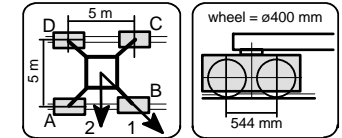


UW 250 Corner distance 5,0 m x 5,0 m **Jib length 30 m**

height under hook [m]	Center ballasts [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	37,5	1	223	399	223	48	22	1	156	296	156	16	47
			2	348	348	99	99		2	255	255	57	57	
19,6	20,0	37,5	1	228	415	228	40	23	1	160	309	160	12	60
			2	360	360	95	95		2	265	265	55	55	
24,1	24,5	37,5	1	232	433	232	31	25	1	164	323	164	8	66
			2	374	374	89	89		2	276	276	53	53	
28,6	29,0	37,5	1	236	453	236	19	26	1	211	350	211	72	72
			2	389	389	83	83		2	309	309	113	113	
33,1	33,5	42,5	1	253	487	253	19	28	1	228	415	228	41	78
			2	419	419	87	87		2	360	360	96	96	

3.4.2.2 Center ballasts and corner loads DIN 15019

for a travelling tower crane on an undercarriage without climbing drive

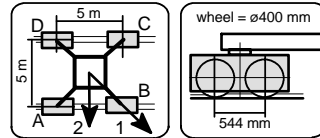


UW 250 Corner distance 5,0 m x 5,0 m **Jib length 35 m**

height under hook [m]	Center ballasts [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	30,0	1	212	378	212	47	22	1	126	289	126	8	47
			2	329	329	95	95		2	237	237	38	38	
19,6	20,0	30,0	1	217	394	217	39	24	1	127	305	127	8	61
			2	342	342	91	91		2	247	247	36	36	
24,1	24,5	30,0	1	221	412	221	30	25	1	126	324	126	8	67
			2	356	356	86	86		2	268	268	124	124	
28,6	29,0	30,0	1	225	432	225	18	26	1	200	346	200	54	73
			2	371	371	79	79		2	303	303	97	97	
33,1	33,5	40,0	1	254	479	254	30	28	1	229	424	229	35	79
			2	413	413	96	96		2	367	367	92	92	

3.4.2.3 Center ballasts and corner loads DIN 15019

for a travelling tower crane on an undercarriage without climbing drive

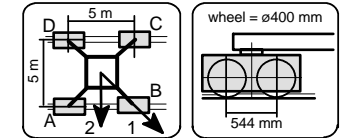


UW 250 Corner distance 5,0 m x 5,0 m Jib length 40 m

height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	32,5	1	222	395	222	49	22	1	138	289	138	8	48
			2	344	344	100	100		2	243	243	44	44	
19,6	20,0	32,5	1	226	411	226	41	24	1	138	306	138	8	62
			2	357	357	96	96		2	259	259	144	144	
24,1	24,5	32,5	1	231	429	231	32	25	1	206	327	206	84	68
			2	371	371	90	90		2	291	291	120	120	
28,6	29,0	32,5	1	235	450	235	20	26	1	210	376	210	44	73
			2	387	387	83	83		2	327	327	92	92	
33,1	33,5	35,0	1	245	478	245	13	28	1	217	439	217	8	79
			2	410	410	81	81		2	373	373	68	68	

3.4.2.4 Center ballasts and corner loads DIN 15019

for a travelling tower crane on an undercarriage without climbing drive

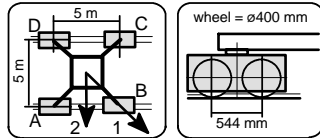


UW 250 Corner distance 5,0 m x 5,0 m Jib length 45 m

height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	30,0	1	224	399	224	48	23	1	161	302	161	19	48
			2	348	348	99	99		2	260	260	61	61	
19,6	20,0	30,0	1	228	416	228	39	24	1	165	317	165	13	62
			2	361	361	95	95		2	272	272	57	57	
24,1	24,5	30,0	1	232	435	232	29	25	1	207	341	207	73	68
			2	375	375	89	89		2	302	302	112	112	
28,6	29,0	30,0	1	236	455	236	17	27	1	211	391	211	32	74
			2	391	391	81	81		2	338	338	84	84	
33,1	33,5	32,5	1	247	484	247	9	28	1	206	468	206	8	80
			2	415	415	79	79		2	385	385	59	59	

3.4.2.5 Center ballasts and corner loads DIN 15019

for a travelling tower crane on an undercarriage without climbing drive

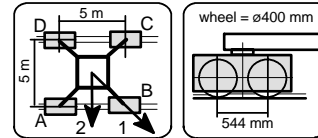


UW 250 Corner distance 5,0 m x 5,0 m Jib length 50 m

height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	27,5	1	220	394	220	47	23	1	143	325	143	8	49
			2	343	343	97	97		2	267	267	43	43	
19,6	20,0	27,5	1	224	410	224	38	24	1	141	347	141	8	63
			2	356	356	93	93		2	279	279	39	39	
24,1	24,5	27,5	1	229	429	229	28	25	1	137	371	137	8	69
			2	370	370	87	87		2	307	307	100	100	
28,6	29,0	27,5	1	233	450	233	16	27	1	208	400	208	15	75
			2	386	386	79	79		2	344	344	72	72	
33,1	33,5	32,5	1	250	485	250	14	28	1	198	495	198	8	81
			2	416	416	83	83		2	397	397	52	52	

3.4.2.6 Center ballasts and corner loads DIN 15019

for a travelling tower crane on an undercarriage without climbing drive

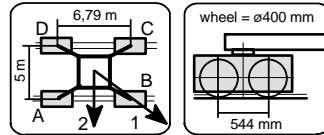


UW 250 Corner distance 5,0 m x 5,0 m Jib length 55 m

height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	30,0	1	234	402	234	66	23	1	115	412	115	8	49
			2	353	353	115	115		2	305	305	20	20	
19,6	20,0	32,5	1	245	425	245	64	24	1	125	434	125	8	64
			2	372	372	117	117		2	324	324	22	22	
24,1	24,5	32,5	1	249	444	249	53	26	1	121	460	121	8	70
			2	387	387	111	111		2	339	339	108	108	
28,6	29,0	37,5	1	266	478	266	53	27	1	140	488	140	8	76
			2	416	416	116	116		2	390	390	92	92	

3.4.3.1 Center ballasts and corner loads DIN 15019

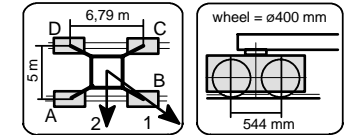
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☺	☹			Corner loads						Corner loads				
[m]	[m]			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,6	11,0	35,0	1	263	366	177	75	22	1	188	270	118	36	45
			2	337	337	103	103		2	247	247	59	59	
15,1	15,5	35,0	1	271	380	179	70	24	1	194	281	121	34	50
			2	350	350	101	101		2	257	257	58	58	
19,6	20,0	35,0	1	278	393	180	64	25	1	200	292	122	30	64
			2	361	361	96	96		2	267	267	56	56	
24,1	24,5	35,0	1	284	408	180	56	27	1	206	304	123	26	70
			2	374	374	90	90		2	277	277	53	53	
28,6	29,0	35,0	1	292	425	179	46	28	1	248	336	173	85	76
			2	388	388	83	83		2	311	311	110	110	
33,1	33,5	37,5	1	306	449	185	42	29	1	270	389	170	52	83
			2	409	409	81	81		2	356	356	85	85	
37,6	38,0	47,5	1	339	493	209	54	31	1	313	464	185	33	89
			2	451	451	97	97		2	422	422	75	75	
42,1	42,5	60,0	1	379	546	238	71	32	1	363	551	204	16	95
			2	499	499	118	118		2	499	499	68	68	

3.4.3.2 Center ballasts and corner loads DIN 15019

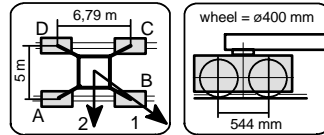
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☺	☹			Corner loads						Corner loads				
[m]	[m]			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,6	11,0	27,5	1	250	346	169	73	22	1	169	251	99	17	46
			2	319	319	99	99		2	228	228	40	40	
15,1	15,5	27,5	1	257	360	171	69	24	1	176	263	102	15	50
			2	331	331	97	97		2	239	239	39	39	
19,6	20,0	27,5	1	264	374	171	62	25	1	181	274	104	11	64
			2	343	343	92	92		2	248	248	37	37	
24,1	24,5	27,5	1	271	389	171	54	27	1	224	288	169	104	71
			2	356	356	86	86		2	270	270	122	122	
28,6	29,0	27,5	1	278	405	171	44	28	1	239	331	161	68	77
			2	370	370	79	79		2	306	306	94	94	
33,1	33,5	32,5	1	298	436	183	46	30	1	268	391	164	41	83
			2	398	398	84	84		2	357	357	75	75	
37,6	38,0	45,0	1	338	486	213	64	31	1	316	473	184	28	89
			2	445	445	105	105		2	430	430	71	71	
42,1	42,5	57,5	1	378	539	242	81	32	1	367	560	203	10	96
			2	494	494	126	126		2	507	507	63	63	

3.4.3.3 Center ballasts and corner loads DIN 15019

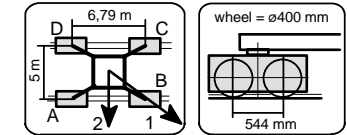
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☺	☹			Corner loads						Corner loads				
[m]	[m]			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,6	11,0	27,5	1	255	355	170	70	22	1	169	252	99	17	46
			2	327	327	98	98		2	229	229	39	39	
15,1	15,5	27,5	1	263	369	172	66	24	1	176	263	102	15	51
			2	340	340	95	95		2	239	239	39	39	
19,6	20,0	27,5	1	269	383	173	59	25	1	182	274	103	11	65
			2	352	352	90	90		2	255	255	137	137	
24,1	24,5	27,5	1	276	399	173	50	27	1	232	309	167	90	71
			2	365	365	84	84		2	287	287	112	112	
28,6	29,0	27,5	1	284	415	172	41	28	1	247	352	159	54	78
			2	379	379	77	77		2	323	323	83	83	
33,1	33,5	27,5	1	291	434	172	29	30	1	264	400	149	13	84
			2	394	394	69	69		2	362	362	51	51	
37,6	38,0	45,0	1	344	497	214	60	31	1	325	495	182	12	90
			2	455	455	103	103		2	448	448	59	59	
42,1	42,5	65,0	1	402	569	262	96	33	1	395	602	220	12	96
			2	523	523	142	142		2	545	545	70	70	

3.4.3.4 Center ballasts and corner loads DIN 15019

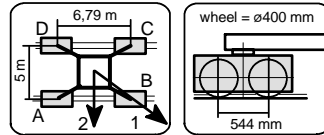
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☺	☹			Corner loads						Corner loads				
[m]	[m]			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,6	11,0	27,5	1	263	365	177	75	23	1	192	273	123	42	47
			2	337	337	103	103		2	251	251	64	64	
15,1	15,5	27,5	1	271	380	179	71	24	1	199	287	125	38	52
			2	350	350	101	101		2	262	262	62	62	
19,6	20,0	27,5	1	278	394	180	63	26	1	206	300	126	32	66
			2	362	362	96	96		2	274	274	58	58	
24,1	24,5	27,5	1	285	410	180	55	27	1	243	327	172	87	72
			2	375	375	89	89		2	304	304	111	111	
28,6	29,0	27,5	1	292	427	179	45	28	1	258	371	163	50	78
			2	389	389	82	82		2	340	340	81	81	
33,1	33,5	27,5	1	300	445	178	33	30	1	275	420	153	9	85
			2	405	405	74	74		2	380	380	49	49	
37,6	38,0	45,0	1	353	509	220	64	31	1	336	517	185	8	91
			2	466	466	107	107		2	467	467	56	56	
42,1	42,5	65,0	1	412	581	268	99	33	1	405	626	222	8	97
			2	534	534	146	146		2	564	564	66	66	

3.4.3.5 Center ballasts and corner loads DIN 15019

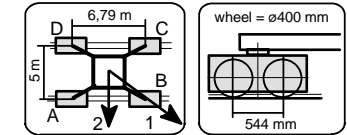
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☺	☹			Corner loads						Corner loads				
[m]	[m]			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,6	11,0	25,0	1	259	360	174	74	23	1	190	283	113	21	47
			2	332	332	102	102		2	257	257	46	46	
15,1	15,5	25,0	1	267	374	176	69	24	1	198	296	115	17	52
			2	345	345	99	99		2	269	269	44	44	
19,6	20,0	25,0	1	274	389	177	62	26	1	204	309	116	11	67
			2	357	357	94	94		2	280	280	40	40	
24,1	24,5	25,0	1	281	404	177	53	27	1	243	335	165	73	73
			2	370	370	87	87		2	309	309	98	98	
28,6	29,0	25,0	1	288	421	176	43	29	1	258	379	156	35	79
			2	385	385	80	80		2	346	346	69	69	
33,1	33,5	30,0	1	309	453	188	44	30	1	286	442	157	8	85
			2	413	413	84	84		2	398	398	48	48	
37,6	38,0	50,0	1	367	523	236	81	32	1	356	544	197	10	92
			2	480	480	124	124		2	492	492	62	62	

3.4.3.6 Center ballasts and corner loads DIN 15019

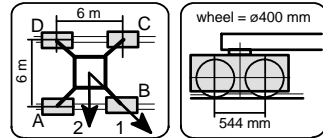
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☺	☹			Corner loads						Corner loads				
[m]	[m]			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,6	11,0	25,0	1	266	363	184	87	23	1	180	346	79	8	48
			2	336	336	114	114		2	289	289	17	17	
15,1	15,5	27,5	1	280	383	192	88	24	1	196	363	90	8	53
			2	355	355	117	117		2	307	307	21	21	
19,6	20,0	27,5	1	286	398	192	81	26	1	196	383	85	8	67
			2	367	367	112	112		2	319	319	17	17	
24,1	24,5	30,0	1	300	420	198	78	27	1	208	405	90	8	74
			2	387	387	112	112		2	341	341	107	107	
28,6	29,0	35,0	1	320	450	210	80	29	1	231	429	106	8	80
			2	414	414	116	116		2	391	391	89	89	
33,1	33,5	37,5	1	334	475	215	75	30	1	319	484	180	16	86
			2	436	436	114	114		2	438	438	62	62	
37,6	38,0	52,5	1	380	533	251	99	32	1	374	577	205	8	92
			2	491	491	141	141		2	520	520	62	62	

3.4.4.1 Center ballasts and corner loads DIN 15019

for a travelling tower crane on an undercarriage without climbing drive

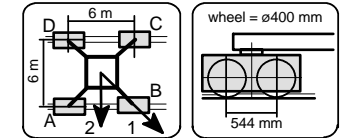


UW 260.1 Corner distance 6 m x 6 m Jib length 30 m

height under hook [m]	Center ballasts [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,6	11,0	20,0	1	183	321	183	45	22	1	112	230	112	8	45
			2	280	280	85	85		2	194	194	37	37	
15,1	15,5	20,0	1	188	334	188	41	24	1	116	242	116	8	50
			2	291	291	84	84		2	203	203	37	37	
19,6	20,0	20,0	1	191	348	191	35	25	1	116	256	116	8	64
			2	302	302	80	80		2	212	212	36	36	
24,1	24,5	20,0	1	195	362	195	27	27	1	115	272	115	8	70
			2	313	313	76	76		2	228	228	112	112	
28,6	29,0	20,0	1	198	378	198	18	28	1	173	292	173	54	76
			2	325	325	71	71		2	257	257	89	89	
33,1	33,5	22,5	1	208	401	208	15	29	1	183	342	183	23	83
			2	344	344	71	71		2	296	296	70	70	
37,6	38,0	32,5	1	236	445	236	28	31	1	211	417	211	8	89
			2	384	384	89	89		2	356	356	67	67	
42,1	42,5	42,5	1	265	490	265	40	32	1	218	515	218	8	95
			2	424	424	106	106		2	419	419	61	61	
46,6	47,0	57,5	1	307	550	307	64	34	1	249	622	249	8	102
			2	478	478	135	135		2	499	499	65	65	

3.4.4.2 Center ballasts and corner loads DIN 15019

for a travelling tower crane on an undercarriage without climbing drive

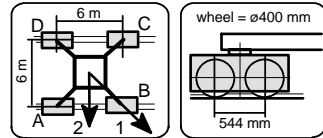


UW 260.1 Corner distance 6 m x 6 m Jib length 35 m

height under hook [m]	Center ballasts [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,6	11,0	15,0	1	178	307	178	49	22	1	87	230	87	8	46
			2	269	269	86	86		2	181	181	24	24	
15,1	15,5	15,0	1	183	321	183	45	24	1	90	243	90	8	50
			2	281	281	85	85		2	191	191	25	25	
19,6	20,0	15,0	1	186	334	186	38	25	1	90	257	90	8	64
			2	291	291	82	82		2	200	200	123	123	
24,1	24,5	15,0	1	190	349	190	31	27	1	89	273	89	8	71
			2	302	302	77	77		2	227	227	103	103	
28,6	29,0	15,0	1	193	365	193	22	28	1	168	293	168	43	77
			2	314	314	72	72		2	257	257	80	80	
33,1	33,5	20,0	1	209	394	209	24	30	1	184	350	184	18	83
			2	340	340	79	79		2	302	302	67	67	
37,6	38,0	30,0	1	238	438	238	38	31	1	207	431	207	8	89
			2	379	379	96	96		2	362	362	63	63	
42,1	42,5	40,0	1	266	483	266	49	32	1	214	530	214	8	96
			2	420	420	113	113		2	426	426	57	57	
46,6	47,0	57,5	1	315	550	315	80	34	1	256	639	256	8	102
			2	481	481	149	149		2	513	513	67	67	

3.4.4.3 Center ballasts and corner loads DIN 15019

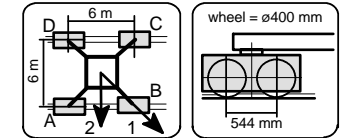
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☞	☜			Corner loads						Corner loads				
[m]	[m]			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,6	11,0	15,0	1	181	317	181	46	22	1	86	231	86	8	46
			2	277	277	86	86	2	182	182	24	24		
15,1	15,5	15,0	1	186	330	186	42	24	1	90	244	90	8	51
			2	288	288	84	84	2	191	191	24	24		
19,6	20,0	15,0	1	190	344	190	36	25	1	90	258	90	8	65
			2	299	299	81	81	2	214	214	116	116		
24,1	24,5	15,0	1	193	358	193	28	27	1	89	274	89	8	71
			2	310	310	76	76	2	241	241	95	95		
28,6	29,0	15,0	1	197	374	197	19	28	1	172	313	172	30	78
			2	322	322	71	71	2	272	272	72	72		
33,1	33,5	15,0	1	200	392	200	9	30	1	160	374	160	8	84
			2	336	336	65	65	2	305	305	46	46		
37,6	38,0	27,5	1	235	442	235	28	31	1	183	466	183	8	90
			2	382	382	88	88	2	372	372	48	48		
42,1	42,5	45,0	1	282	507	282	58	33	1	227	567	227	8	96
			2	441	441	124	124	2	455	455	59	59		
46,6	47,0	60,0	1	324	567	324	82	34	1	256	678	256	8	103
			2	496	496	153	153	2	536	536	62	62		

3.4.4.4 Center ballasts and corner loads DIN 15019

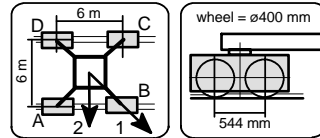
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☞	☜			Corner loads						Corner loads				
[m]	[m]			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,6	11,0	12,5	1	183	321	183	45	23	1	74	231	74	8	47
			2	280	280	85	85	2	198	198	42	42		
15,1	15,5	12,5	1	188	335	188	41	24	1	77	244	77	8	52
			2	292	292	84	84	2	208	208	41	41		
19,6	20,0	12,5	1	191	348	191	34	26	1	122	262	122	8	66
			2	302	302	80	80	2	222	222	110	110		
24,1	24,5	12,5	1	195	363	195	26	27	1	170	284	170	56	72
			2	314	314	76	76	2	250	250	89	89		
28,6	29,0	15,0	1	205	386	205	23	28	1	180	332	180	27	78
			2	333	333	77	77	2	287	287	72	72		
33,1	33,5	15,0	1	208	403	208	13	30	1	163	398	163	8	85
			2	346	346	70	70	2	321	321	45	45		
37,6	38,0	30,0	1	249	460	249	38	31	1	199	491	199	8	91
			2	398	398	100	100	2	395	395	53	53		
42,1	42,5	45,0	1	290	519	290	61	33	1	229	594	229	8	97
			2	452	452	128	128	2	472	472	58	58		
46,6	47,0	62,5	1	338	586	338	91	34	1	270	706	270	8	104
			2	513	513	163	163	2	560	560	66	66		

3.4.4.5 Center ballasts and corner loads DIN 15019

for a travelling tower crane on an undercarriage without climbing drive

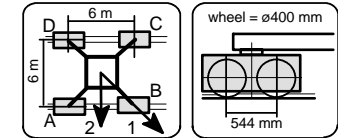


UW 260.1 Corner distance 6 m x 6 m Jib length 50 m

height under hook [m]	Center ballasts [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,6	11,0	12,5	1	186	321	186	50	23	1	109	256	109	8	47
			2	282	282	90	90		2	208	208	32	32	
15,1	15,5	12,5	1	191	335	191	46	24	1	110	273	110	8	52
			2	293	293	88	88		2	219	219	32	32	
19,6	20,0	12,5	1	194	349	194	39	26	1	108	291	108	8	67
			2	304	304	84	84		2	232	232	106	106	
25,1	24,5	12,5	1	198	364	198	31	27	1	105	311	105	8	73
			2	315	315	80	80		2	260	260	85	85	
28,6	29,0	15,0	1	207	387	207	28	29	1	182	345	182	19	79
			2	334	334	80	80		2	298	298	67	67	
33,1	33,5	17,5	1	217	411	217	23	30	1	170	420	170	8	85
			2	354	354	80	80		2	338	338	46	46	
37,6	38,0	32,5	1	258	468	258	48	32	1	205	515	205	8	92
			2	406	406	110	110		2	412	412	54	54	
42,1	42,5	47,5	1	299	527	299	71	33	1	234	619	234	8	98
			2	460	460	138	138		2	490	490	58	58	
46,6	47,0	65,0	1	347	594	347	101	35	1	274	733	274	8	104
			2	522	522	173	173		2	579	579	66	66	

3.4.4.6 Center ballasts and corner loads DIN 15019

for a travelling tower crane on an undercarriage without climbing drive

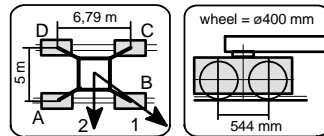


UW 260.1 Corner distance 6 m x 6 m Jib length 55 m

height under hook [m]	Center ballasts [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,6	11,0	15,0	1	200	331	200	69	23	1	88	328	88	8	48
			2	292	292	107	107		2	241	241	15	15	
15,1	15,5	15,0	1	205	345	205	64	24	1	90	345	90	8	53
			2	304	304	105	105		2	252	252	14	14	
19,6	20,0	17,5	1	214	365	214	64	26	1	100	364	100	8	67
			2	321	321	108	108		2	269	269	17	17	
24,1	24,5	20,0	1	224	386	224	62	27	1	109	385	109	8	74
			2	339	339	109	109		2	297	297	101	101	
28,6	29,0	22,5	1	234	409	234	59	29	1	117	408	117	8	80
			2	358	358	110	110		2	335	335	83	83	
33,1	33,5	25,0	1	244	433	244	54	30	1	208	451	208	8	86
			2	378	378	109	109		2	375	375	62	62	
37,6	38,0	32,5	1	266	472	266	60	32	1	204	548	204	8	92
			2	411	411	120	120		2	432	432	50	50	
42,1	42,5	50,0	1	313	537	313	89	33	1	245	655	245	8	99
			2	472	472	155	155		2	517	517	59	59	

3.4.5.1 Center ballasts and corner loads DIN 15019

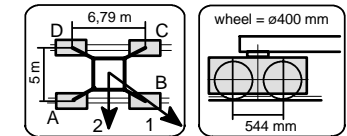
for a travelling tower crane on an undercarriage without climbing drive



UW 260.2		Corner distance 5 m x 6,79 m				Jib length 30 m								
height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	27,5	1	261	370	169	60	24	1	184	272	111	24	51
			2	340	340	90	90		2	247	247	48	48	
19,6	20,0	27,5	1	269	385	171	55	26	1	192	284	114	21	65
			2	353	353	87	87		2	258	258	47	47	
24,1	24,5	27,5	1	276	400	171	47	27	1	197	296	115	16	71
			2	365	365	81	81		2	269	269	128	128	
28,6	29,0	27,5	1	283	416	171	38	29	1	239	328	164	75	78
			2	379	379	75	75		2	304	304	100	100	
33,1	33,5	32,5	1	303	446	183	40	30	1	268	387	168	49	84
			2	406	406	79	79		2	354	354	82	82	
37,6	38,0	45,0	1	342	496	213	59	32	1	317	469	188	37	90
			2	454	454	102	102		2	427	427	79	79	
42,1	42,5	57,5	1	382	548	242	77	33	1	367	555	208	20	96
			2	502	502	123	123		2	503	503	72	72	
46,6	47,0	75,0	1	435	614	284	105	34	1	431	658	239	11	103
			2	565	565	155	155		2	595	595	74	74	
51,1	51,5	97,5	1	501	695	338	144	36	1	508	779	280	10	109
			2	641	641	197	197		2	704	704	85	85	

3.4.5.2 Center ballasts and corner loads DIN 15019

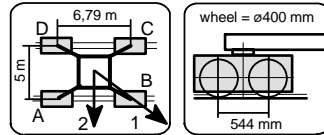
for a travelling tower crane on an undercarriage without climbing drive



UW 260.2		Corner distance 5 m x 6,79 m				Jib length 35 m								
height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	22,5	1	254	356	167	64	24	1	172	259	98	11	51
			2	328	328	93	93		2	235	235	35	35	
19,6	20,0	22,5	1	261	371	169	59	26	1	179	272	101	8	66
			2	341	341	89	89		2	246	246	34	34	
24,1	24,5	22,5	1	268	386	169	51	27	1	181	288	98	8	72
			2	354	354	84	84		2	269	269	118	118	
28,6	29,0	22,5	1	276	402	169	42	29	1	237	330	158	64	78
			2	367	367	77	77		2	304	304	90	90	
33,1	33,5	30,0	1	302	439	187	50	30	1	272	395	167	43	85
			2	401	401	88	88		2	361	361	78	78	
37,6	38,0	40,0	1	335	483	211	63	32	1	314	471	182	25	91
			2	442	442	104	104		2	428	428	68	68	
42,1	42,5	55,0	1	381	541	246	87	33	1	371	564	207	14	97
			2	497	497	131	131		2	510	510	67	67	
46,6	47,0	75,0	1	441	614	294	121	35	1	441	674	244	10	103
			2	566	566	169	169		2	610	610	75	75	
51,1	51,5	97,5	1	507	695	348	159	36	1	519	796	285	8	109
			2	643	643	211	211		2	719	719	85	85	

3.4.5.3 Center ballasts and corner loads DIN 15019

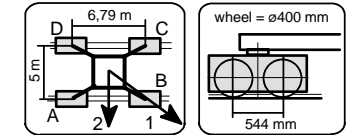
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☞	☜			Corner loads						Corner loads				
[m]	[m]			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	22,5	1	259	366	168	62	25	1	172	260	98	11	52
			2	336	336	91	91		2	235	235	35	35	
19,6	20,0	22,5	1	267	381	170	56	26	1	179	272	101	8	67
			2	349	349	88	88		2	254	254	133	133	
24,1	24,5	22,5	1	274	396	170	48	28	1	230	307	164	87	73
			2	362	362	82	82		2	286	286	108	108	
28,6	29,0	22,5	1	281	413	170	39	29	1	245	351	156	50	79
			2	376	376	75	75		2	321	321	80	80	
33,1	33,5	25,0	1	295	437	176	34	30	1	268	404	153	16	85
			2	397	397	73	73		2	366	366	54	54	
37,6	38,0	40,0	1	341	494	212	59	32	1	323	493	179	9	92
			2	451	451	101	101		2	446	446	56	56	
42,1	42,5	60,0	1	400	565	260	95	33	1	392	599	217	10	98
			2	519	519	141	141		2	542	542	68	68	
46,6	47,0	80,0	1	459	638	308	129	35	1	461	712	252	8	104
			2	588	588	178	178		2	642	642	75	75	

3.4.5.4 Center ballasts and corner loads DIN 15019

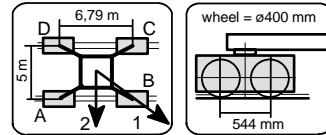
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☞	☜			Corner loads						Corner loads				
[m]	[m]			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	22,5	1	267	376	175	66	25	1	195	283	121	34	52
			2	346	346	97	97		2	259	259	58	58	
19,6	20,0	22,5	1	275	392	177	61	26	1	203	298	123	29	67
			2	360	360	93	93		2	271	271	55	55	
24,1	24,5	22,5	1	282	407	177	53	28	1	241	326	169	83	74
			2	373	373	87	87		2	303	303	107	107	
28,6	29,0	22,5	1	290	424	177	43	29	1	256	370	160	47	80
			2	387	387	80	80		2	338	338	78	78	
33,1	33,5	25,0	1	304	448	182	38	31	1	279	424	157	12	86
			2	408	408	78	78		2	384	384	52	52	
37,6	38,0	42,5	1	356	512	225	69	32	1	341	520	190	10	92
			2	469	469	112	112		2	471	471	60	60	
42,1	42,5	62,5	1	415	583	273	104	34	1	410	627	227	10	99
			2	537	537	151	151		2	567	567	70	70	
46,6	47,0	82,5	1	474	657	320	138	35	1	479	742	261	8	105
			2	606	606	188	188		2	668	668	77	77	

3.4.5.5 Center ballasts and corner loads DIN 15019

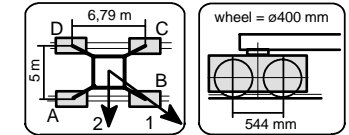
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☞	☜			Corner loads						Corner loads				
[m]	[m]			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	20,0	1	263	371	173	65	25	1	194	293	111	13	53
			2	341	341	95	95		2	265	265	40	40	
19,6	20,0	20,0	1	271	386	174	59	26	1	202	307	113	8	68
			2	355	355	91	91		2	278	278	37	37	
24,1	24,5	20,0	1	278	402	174	51	28	1	240	333	162	69	74
			2	368	368	85	85		2	308	308	95	95	
28,6	29,0	20,0	1	286	418	174	41	29	1	256	378	154	32	81
			2	382	382	78	78		2	344	344	66	66	
33,1	33,5	27,5	1	312	456	192	49	31	1	292	445	162	9	87
			2	416	416	88	88		2	402	402	52	52	
37,6	38,0	45,0	1	365	519	234	79	32	1	353	542	194	8	93
			2	476	476	122	122		2	490	490	59	59	
42,1	42,5	65,0	1	424	591	282	115	34	1	422	651	231	8	99
			2	545	545	161	161		2	587	587	69	69	
46,6	47,0	87,5	1	489	671	336	154	35	1	499	770	273	8	105
			2	621	621	204	204		2	694	694	81	81	

3.4.5.6 Center ballasts and corner loads DIN 15019

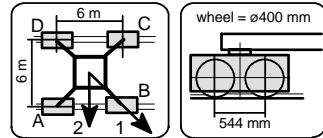
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☞	☜			Corner loads						Corner loads				
[m]	[m]			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	22,5	1	276	380	188	84	25	1	188	364	82	8	54
			2	351	351	113	113		2	304	304	17	17	
19,6	20,0	25,0	1	290	402	196	84	27	1	203	384	92	8	69
			2	371	371	115	115		2	323	323	20	20	
24,1	24,5	27,5	1	304	424	202	82	28	1	215	405	97	8	75
			2	390	390	115	115		2	346	346	110	110	
28,6	29,0	30,0	1	317	447	208	78	30	1	226	429	101	8	81
			2	411	411	114	114		2	389	389	86	86	
33,1	33,5	32,5	1	331	471	213	73	31	1	317	481	178	13	88
			2	433	433	112	112		2	436	436	59	59	
37,6	38,0	47,5	1	377	529	249	98	32	1	369	577	200	8	94
			2	487	487	140	140		2	517	517	59	59	
42,1	42,5	67,5	1	436	601	297	133	34	1	437	687	235	8	100
			2	556	556	178	178		2	616	616	68	68	

3.4.6.1 Center ballasts and corner loads DIN 15019

for a travelling tower crane on an undercarriage without climbing drive

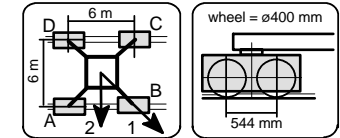


UW 260.2 Corner distance 6 m x 6 m Jib length 30 m

height under hook [m]	Center ballasts [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	15,0	1	184	331	184	37	24	1	107	243	107	8	51
			2	288	288	80	80		2	200	200	33	33	
19,6	20,0	15,0	1	189	345	189	32	26	1	110	257	110	8	65
			2	299	299	78	78		2	209	209	33	33	
24,1	24,5	15,0	1	192	360	192	25	27	1	109	273	109	8	71
			2	311	311	74	74		2	226	226	108	108	
28,6	29,0	15,0	1	196	375	196	16	29	1	171	291	171	51	78
			2	322	322	69	69		2	256	256	86	86	
33,1	33,5	20,0	1	212	404	212	19	30	1	187	347	187	26	84
			2	348	348	75	75		2	300	300	73	73	
37,6	38,0	27,5	1	234	441	234	26	32	1	205	418	205	8	90
			2	381	381	87	87		2	354	354	64	64	
42,1	42,5	37,5	1	262	486	262	39	33	1	213	515	213	8	96
			2	421	421	104	104		2	417	417	58	58	
46,6	47,0	52,5	1	303	545	303	62	34	1	242	621	242	8	103
			2	474	474	132	132		2	495	495	61	61	
51,1	51,5	72,5	1	357	618	357	95	36	1	291	737	291	8	109
			2	542	542	172	172		2	590	590	74	74	

3.4.6.2 Center ballasts and corner loads DIN 15019

for a travelling tower crane on an undercarriage without climbing drive

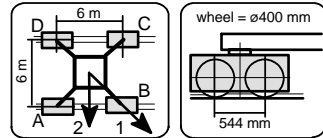


UW 260.2 Corner distance 6 m x 6 m Jib length 35 m

height under hook [m]	Center ballasts [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	10,0	1	179	317	179	41	24	1	82	243	82	8	51
			2	277	277	81	81		2	187	187	21	21	
19,6	20,0	10,0	1	184	332	184	36	26	1	85	258	85	8	66
			2	289	289	79	79		2	198	198	120	120	
24,1	24,5	10,0	1	187	346	187	28	27	1	84	274	84	8	72
			2	300	300	75	75		2	225	225	100	100	
28,6	29,0	10,0	1	191	362	191	20	29	1	166	292	166	40	78
			2	312	312	70	70		2	255	255	77	77	
33,1	33,5	15,0	1	207	391	207	22	30	1	182	349	182	15	85
			2	337	337	76	76		2	300	300	64	64	
37,6	38,0	25,0	1	235	435	235	36	32	1	201	432	201	8	91
			2	376	376	94	94		2	360	360	61	61	
42,1	42,5	35,0	1	264	480	264	48	33	1	209	530	209	8	97
			2	416	416	111	111		2	424	424	54	54	
46,6	47,0	52,5	1	311	545	311	77	35	1	250	638	250	8	103
			2	477	477	146	146		2	509	509	63	63	
51,1	51,5	72,5	1	365	619	365	110	36	1	298	755	298	8	109
			2	544	544	185	185		2	604	604	75	75	

3.4.6.3 Center ballasts and corner loads DIN 15019

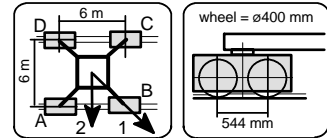
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☞	☜			Corner loads						Corner loads				
[m]	[m]			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	10,0	1	182	327	182	38	25	1	82	244	82	8	52
			2	284	284	80	80		2	187	187	20	20	
19,6	20,0	10,0	1	187	342	187	33	26	1	84	259	84	8	67
			2	296	296	78	78		2	212	212	112	112	
24,1	24,5	10,0	1	191	356	191	26	28	1	83	275	83	8	73
			2	308	308	74	74		2	240	240	92	92	
28,6	29,0	10,0	1	194	372	194	17	29	1	169	312	169	27	79
			2	320	320	69	69		2	270	270	69	69	
33,1	33,5	12,5	1	204	395	204	13	30	1	166	376	166	8	85
			2	339	339	69	69		2	309	309	49	49	
37,6	38,0	25,0	1	239	445	239	33	32	1	190	467	190	8	92
			2	385	385	93	93		2	376	376	51	51	
42,1	42,5	40,0	1	280	503	280	57	33	1	222	567	222	8	98
			2	437	437	122	122		2	453	453	57	57	
46,6	47,0	57,5	1	327	569	327	85	35	1	262	676	262	8	104
			2	498	498	156	156		2	538	538	66	66	
51,1	51,5	77,5	1	381	643	381	118	36	1	309	796	309	8	110
			2	566	566	195	195		2	634	634	77	77	

3.4.6.4 Center ballasts and corner loads DIN 15019

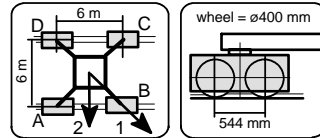
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☞	☜			Corner loads						Corner loads				
[m]	[m]			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	7,5	1	184	331	184	37	25	1	69	245	69	8	52
			2	288	288	80	80		2	205	205	37	37	
19,6	20,0	7,5	1	189	346	189	32	26	1	116	263	116	8	67
			2	300	300	78	78		2	221	221	107	107	
24,1	24,5	10,0	1	199	367	199	30	28	1	174	289	174	58	74
			2	318	318	80	80		2	255	255	92	92	
28,6	29,0	10,0	1	202	383	202	21	29	1	177	330	177	24	80
			2	330	330	74	74		2	286	286	69	69	
33,1	33,5	12,5	1	212	406	212	17	31	1	170	399	170	8	86
			2	349	349	74	74		2	325	325	49	49	
37,6	38,0	25,0	1	247	457	247	36	32	1	193	492	193	8	92
			2	395	395	98	98		2	393	393	50	50	
42,1	42,5	40,0	1	288	515	288	60	34	1	225	593	225	8	99
			2	448	448	127	127		2	470	470	56	56	
46,6	47,0	57,5	1	335	581	335	88	35	1	263	705	263	8	105
			2	509	509	161	161		2	556	556	63	63	

3.4.6.5 Center ballasts and corner loads DIN 15019

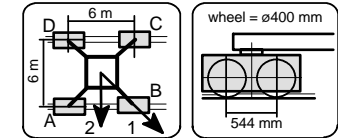
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☞	☝			Corner loads						Corner loads				
[m]	[m]			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	7,5	1	187	332	187	42	25	1	102	273	102	8	53
			2	289	289	84	84		2	215	215	27	27	
19,6	20,0	7,5	1	192	347	192	36	26	1	103	292	103	8	68
			2	301	301	82	82		2	230	230	103	103	
24,1	24,5	10,0	1	201	368	201	35	28	1	112	312	112	8	74
			2	319	319	84	84		2	265	265	88	88	
28,6	29,0	10,0	1	205	384	205	26	29	1	180	344	180	16	81
			2	331	331	78	78		2	296	296	64	64	
33,1	33,5	12,5	1	215	408	215	21	31	1	165	421	165	8	87
			2	351	351	78	78		2	336	336	43	43	
37,6	38,0	27,5	1	256	464	256	47	32	1	200	515	200	8	93
			2	403	403	108	108		2	410	410	51	51	
42,1	42,5	42,5	1	297	523	297	71	34	1	230	618	230	8	99
			2	456	456	137	137		2	487	487	56	56	
46,6	47,0	62,5	1	350	595	350	105	35	1	281	731	281	8	105
			2	524	524	177	177		2	581	581	69	69	

3.4.6.6 Center ballasts and corner loads DIN 15019

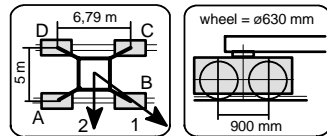
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☞	☝			Corner loads						Corner loads				
[m]	[m]			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	12,5	1	207	347	207	67	25	1	94	346	94	8	54
			2	306	306	108	108		2	255	255	16	16	
19,6	20,0	12,5	1	212	363	212	61	27	1	95	365	95	8	69
			2	318	318	105	105		2	266	266	14	14	
24,1	24,5	15,0	1	222	384	222	60	28	1	104	385	104	8	75
			2	336	336	107	107		2	295	295	98	98	
28,6	29,0	17,5	1	231	406	231	57	30	1	112	408	112	8	81
			2	355	355	108	108		2	333	333	80	80	
33,1	33,5	20,0	1	241	430	241	52	31	1	202	452	202	8	88
			2	375	375	107	107		2	373	373	59	59	
37,6	38,0	30,0	1	270	474	270	65	32	1	211	548	211	8	94
			2	414	414	125	125		2	435	435	54	54	
42,1	42,5	45,0	1	311	533	311	88	34	1	241	653	241	8	100
			2	468	468	153	153		2	514	514	58	58	
46,6	47,0	65,0	1	364	606	364	122	35	1	290	768	290	8	106
			2	535	535	193	193		2	608	608	70	70	

3.4.7.1 Center ballasts and corner loads DIN 15019

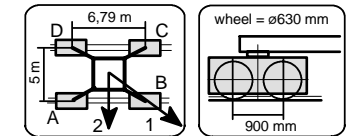
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☞	☜			Corner loads						Corner loads				
[m]	[m]			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	27,5	1	269	378	177	68	24	1	192	279	119	31	51
			2	347	347	98	98		2	255	255	56	56	
19,6	20,0	27,5	1	277	393	179	62	26	1	199	292	121	29	65
			2	361	361	95	95		2	266	266	54	54	
24,1	24,5	27,5	1	283	408	179	55	27	1	205	303	122	24	71
			2	373	373	89	89		2	277	277	135	135	
28,6	29,0	27,5	1	291	424	179	46	29	1	247	336	172	83	78
			2	387	387	82	82		2	312	312	108	108	
33,1	33,5	32,5	1	311	454	190	48	30	1	276	395	175	56	84
			2	414	414	87	87		2	362	362	89	89	
37,6	38,0	45,0	1	350	504	220	67	32	1	324	476	196	44	90
			2	461	461	109	109		2	434	434	86	86	
42,1	42,5	57,5	1	390	556	250	84	33	1	374	562	216	28	96
			2	510	510	130	130		2	510	510	80	80	
46,6	47,0	75,0	1	443	622	292	113	34	1	438	666	246	19	103
			2	572	572	162	162		2	603	603	82	82	
51,1	51,5	97,5	1	509	703	345	151	36	1	516	786	288	18	109
			2	649	649	205	205		2	712	712	93	93	

3.4.7.2 Center ballasts and corner loads DIN 150197

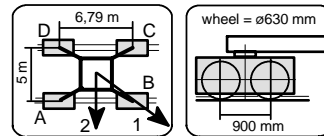
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☞	☜			Corner loads						Corner loads				
[m]	[m]			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	22,5	1	261	364	175	72	24	1	180	267	106	19	51
			2	335	335	101	101		2	243	243	43	43	
19,6	20,0	22,5	1	269	379	177	67	26	1	187	280	109	16	66
			2	349	349	97	97		2	254	254	42	42	
24,1	24,5	22,5	1	276	394	177	59	27	1	189	296	105	16	72
			2	361	361	91	91		2	277	277	126	126	
28,6	29,0	22,5	1	283	410	176	50	29	1	244	338	165	72	78
			2	375	375	85	85		2	312	312	98	98	
33,1	33,5	30,0	1	310	447	194	58	30	1	279	403	175	51	85
			2	409	409	96	96		2	369	369	85	85	
37,6	38,0	40,0	1	343	491	218	71	32	1	322	479	189	32	91
			2	450	450	112	112		2	435	435	76	76	
42,1	42,5	55,0	1	389	549	254	94	33	1	378	572	215	21	97
			2	505	505	139	139		2	518	518	75	75	
46,6	47,0	75,0	1	448	622	302	129	35	1	449	682	252	18	103
			2	574	574	177	177		2	617	617	83	83	
51,1	51,5	97,5	1	514	703	355	167	36	1	527	804	293	16	109
			2	651	651	219	219		2	727	727	93	93	

3.4.7.3 Center ballasts and corner loads DIN 15019

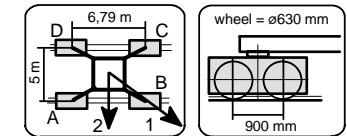
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☞	☜			Corner loads						Corner loads				
[m]	[m]			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	22,5	1	267	373	176	69	25	1	180	267	106	18	52
			2	344	344	99	99		2	243	243	43	43	
19,6	20,0	22,5	1	275	389	178	64	26	1	187	280	109	16	67
			2	357	357	95	95		2	261	261	141	141	
24,1	24,5	22,5	1	281	404	178	56	28	1	238	315	172	94	73
			2	370	370	90	90		2	294	294	116	116	
28,6	29,0	22,5	1	289	420	178	46	29	1	253	358	164	58	79
			2	384	384	83	83		2	329	329	87	87	
33,1	33,5	25,0	1	303	444	183	42	30	1	276	412	160	24	85
			2	405	405	81	81		2	374	374	62	62	
37,6	38,0	40,0	1	349	501	220	67	32	1	331	501	187	17	92
			2	459	459	109	109		2	454	454	64	64	
42,1	42,5	60,0	1	407	573	268	103	33	1	400	607	225	18	98
			2	527	527	148	148		2	550	550	75	75	
46,6	47,0	80,0	1	467	646	315	136	35	1	469	720	260	16	104
			2	596	596	186	186		2	650	650	82	82	
51,1	51,5	102,5	1	533	727	369	174	36	1	544	846	297	16	110
			2	673	673	228	228		2	760	760	91	91	

3.4.7.4 Center ballasts and corner loads DIN 15019

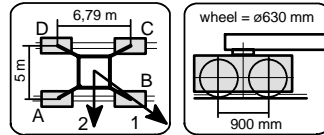
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☞	☜			Corner loads						Corner loads				
[m]	[m]			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	22,5	1	275	384	183	74	25	1	203	291	129	41	52
			2	354	354	104	104		2	267	267	66	66	
19,6	20,0	22,5	1	283	400	185	69	26	1	211	305	131	37	67
			2	367	367	101	101		2	279	279	63	63	
24,1	24,5	22,5	1	290	415	185	60	28	1	249	334	177	91	74
			2	380	380	95	95		2	310	310	115	115	
28,6	29,0	22,5	1	298	431	185	51	29	1	264	378	168	54	80
			2	394	394	88	88		2	346	346	86	86	
33,1	33,5	25,0	1	312	456	190	46	31	1	287	432	165	20	86
			2	416	416	86	86		2	392	392	60	60	
37,6	38,0	42,5	1	364	519	232	77	32	1	349	528	197	18	92
			2	476	476	120	120		2	478	478	68	68	
42,1	42,5	62,5	1	423	591	280	112	34	1	418	635	235	18	99
			2	544	544	159	159		2	575	575	78	78	
46,6	47,0	82,5	1	482	665	328	145	35	1	486	750	268	16	105
			2	614	614	196	196		2	676	676	84	84	
51,1	51,5	107,5	1	555	753	387	189	36	1	573	879	317	16	111
			2	698	698	244	244		2	794	794	98	98	

3.4.7.5 Center ballasts and corner loads DIN 15019

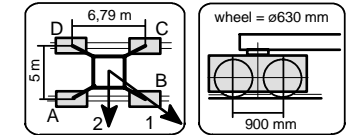
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☞	☜			Corner loads						Corner loads				
[m]	[m]			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	20,0	1	271	378	180	73	25	1	202	300	119	20	53
			2	349	349	103	103		2	273	273	48	48	
19,6	20,0	20,0	1	279	394	182	67	26	1	210	315	121	16	68
			2	362	362	99	99		2	286	286	45	45	
24,1	24,5	20,0	1	286	409	182	59	28	1	248	341	170	77	74
			2	375	375	93	93		2	315	315	103	103	
28,6	29,0	20,0	1	294	426	182	49	29	1	264	385	161	40	81
			2	389	389	86	86		2	352	352	73	73	
33,1	33,5	27,5	1	320	463	199	56	31	1	299	453	170	17	87
			2	424	424	96	96		2	410	410	59	59	
37,6	38,0	45,0	1	372	527	242	87	32	1	361	550	202	16	93
			2	484	484	130	130		2	497	497	67	67	
42,1	42,5	65,0	1	431	599	290	122	34	1	429	659	239	16	99
			2	552	552	169	169		2	595	595	77	77	
46,6	47,0	87,5	1	497	679	344	162	35	1	507	778	281	16	105
			2	628	628	212	212		2	702	702	88	88	
51,1	51,5	110,0	1	564	761	397	199	37	1	581	908	316	16	112
			2	706	706	254	254		2	815	815	96	96	

3.4.7.6 Center ballasts and corner loads DIN 15019

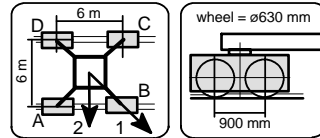
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☞	☜			Corner loads						Corner loads				
[m]	[m]			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	22,5	1	284	388	196	92	25	1	196	372	90	16	54
			2	359	359	121	121		2	312	312	25	25	
19,6	20,0	25,0	1	298	410	204	92	27	1	211	391	99	16	69
			2	379	379	123	123		2	331	331	28	28	
24,1	24,5	27,5	1	311	431	210	90	28	1	223	413	105	16	75
			2	398	398	123	123		2	354	354	117	117	
28,6	29,0	30,0	1	325	454	216	86	30	1	234	437	109	16	81
			2	419	419	122	122		2	397	397	94	94	
33,1	33,5	32,5	1	339	479	221	81	31	1	325	489	186	21	88
			2	440	440	120	120		2	444	444	67	67	
37,6	38,0	47,5	1	385	537	257	105	32	1	377	584	208	16	94
			2	495	495	147	147		2	525	525	67	67	
42,1	42,5	67,5	1	444	609	305	140	34	1	445	695	243	16	100
			2	563	563	186	186		2	623	623	76	76	
46,6	47,0	90,0	1	510	689	359	179	35	1	521	817	284	16	106
			2	640	640	229	229		2	732	732	87	87	

3.4.8.1 Center ballasts and corner loads DIN 15019

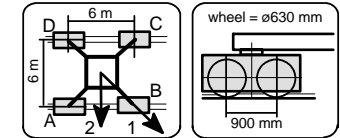
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☞	☝			Corner loads						Corner loads				
[m]	[m]			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	15,0	1	191	338	191	44	24	1	115	251	115	16	51
			2	295	295	88	88		2	207	207	41	41	
19,6	20,0	15,0	1	196	353	196	40	26	1	118	265	118	16	65
			2	307	307	86	86		2	217	217	41	41	
24,1	24,5	15,0	1	200	367	200	32	27	1	117	281	117	16	71
			2	318	318	81	81		2	234	234	116	116	
28,6	29,0	15,0	1	203	383	203	24	29	1	178	298	178	58	78
			2	330	330	77	77		2	263	263	93	93	
33,1	33,5	20,0	1	219	412	219	27	30	1	194	355	194	34	84
			2	356	356	83	83		2	308	308	81	81	
37,6	38,0	27,5	1	242	449	242	34	32	1	213	426	213	16	90
			2	388	388	95	95		2	362	362	72	72	
42,1	42,5	37,5	1	270	494	270	46	33	1	221	523	221	16	96
			2	428	428	112	112		2	424	424	66	66	
46,6	47,0	52,5	1	311	553	311	69	34	1	250	629	250	16	103
			2	482	482	140	140		2	503	503	69	69	
51,1	51,5	72,5	1	365	626	365	103	36	1	299	745	299	16	109
			2	550	550	180	180		2	597	597	82	82	
55,6	56,0	92,5	1	419	702	419	137	37	1	346	870	346	16	115
			2	619	619	219	219		2	696	696	92	92	

3.4.8.2 Center ballasts and corner loads DIN 15019

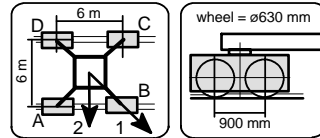
for a travelling tower crane on an undercarriage without climbing drive



height under hook		Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
☞	☝			Corner loads						Corner loads				
[m]	[m]			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	10,0	1	187	325	187	48	24	1	90	251	90	16	51
			2	285	285	89	89		2	195	195	28	28	
19,6	20,0	10,0	1	192	340	192	43	26	1	93	266	93	16	66
			2	296	296	87	87		2	206	206	127	127	
24,1	24,5	10,0	1	195	354	195	36	27	1	92	281	92	16	72
			2	308	308	83	83		2	233	233	107	107	
28,6	29,0	10,0	1	199	370	199	28	29	1	174	300	174	48	78
			2	320	320	78	78		2	263	263	85	85	
33,1	33,5	15,0	1	215	399	215	30	30	1	190	357	190	23	85
			2	345	345	84	84		2	308	308	72	72	
37,6	38,0	25,0	1	243	442	243	44	32	1	209	439	209	16	91
			2	384	384	102	102		2	368	368	68	68	
42,1	42,5	35,0	1	272	487	272	56	33	1	217	538	217	16	97
			2	424	424	119	119		2	431	431	62	62	
46,6	47,0	52,5	1	319	553	319	85	35	1	257	645	257	16	103
			2	484	484	153	153		2	517	517	71	71	
51,1	51,5	72,5	1	372	627	372	118	36	1	305	763	305	16	109
			2	552	552	193	193		2	612	612	83	83	
55,6	56,0	92,5	1	427	702	427	152	38	1	351	890	351	16	116
			2	622	622	232	232		2	711	711	93	93	

3.4.8.3 Center ballasts and corner loads DIN 15019

for a travelling tower crane on an undercarriage without climbing drive

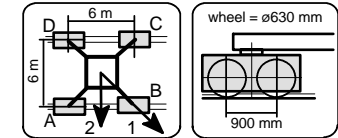


UW 260.3 Corner distance 6 m x 6 m Jib length 40 m

height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	10,0	1	190	334	190	46	25	1	90	252	90	16	52
			2	292	292	88	88		2	195	195	28	28	
19,6	20,0	10,0	1	195	349	195	41	26	1	92	267	92	16	67
			2	304	304	86	86		2	220	220	120	120	
24,1	24,5	10,0	1	199	364	199	33	28	1	91	282	91	16	73
			2	315	315	82	82		2	248	248	99	99	
28,6	29,0	10,0	1	202	380	202	25	29	1	177	320	177	35	79
			2	328	328	77	77		2	278	278	76	76	
33,1	33,5	12,5	1	212	403	212	21	30	1	174	384	174	16	85
			2	347	347	77	77		2	317	317	57	57	
37,6	38,0	25,0	1	247	453	247	40	32	1	198	475	198	16	92
			2	392	392	101	101		2	384	384	59	59	
42,1	42,5	40,0	1	288	511	288	65	33	1	230	575	230	16	98
			2	445	445	130	130		2	460	460	65	65	
46,6	47,0	57,5	1	335	576	335	93	35	1	270	684	270	16	104
			2	506	506	164	164		2	546	546	73	73	
51,1	51,5	77,5	1	388	651	388	126	36	1	317	804	317	16	110
			2	574	574	203	203		2	642	642	85	85	
55,6	56,0	97,5	1	443	727	443	159	38	1	361	933	361	16	117
			2	644	644	242	242		2	742	742	93	93	

3.4.8.4 Center ballasts and corner loads DIN 15019

for a travelling tower crane on an undercarriage without climbing drive

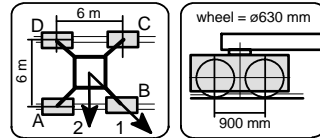


UW 260.3 Corner distance 6 m x 6 m Jib length 45 m

height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	7,5	1	192	339	192	45	25	1	77	253	77	16	52
			2	296	296	88	88		2	212	212	45	45	
19,6	20,0	7,5	1	197	354	197	39	26	1	124	270	124	16	67
			2	308	308	85	85		2	229	229	115	115	
24,1	24,5	10,0	1	206	375	206	38	28	1	181	296	181	66	74
			2	325	325	87	87		2	263	263	100	100	
28,6	29,0	10,0	1	210	391	210	29	29	1	185	338	185	31	80
			2	338	338	82	82		2	293	293	76	76	
33,1	33,5	12,5	1	220	414	220	25	31	1	178	407	178	16	86
			2	357	357	82	82		2	333	333	56	56	
37,6	38,0	25,0	1	254	464	254	44	32	1	201	499	201	16	92
			2	403	403	106	106		2	400	400	58	58	
42,1	42,5	40,0	1	295	523	295	68	34	1	232	601	232	16	99
			2	456	456	135	135		2	477	477	63	63	
46,6	47,0	57,5	1	343	589	343	96	35	1	271	713	271	16	105
			2	517	517	168	168		2	564	564	71	71	
51,1	51,5	77,5	1	396	664	396	128	36	1	317	835	317	16	111
			2	585	585	207	207		2	661	661	81	81	
55,6	56,0	97,5	1	451	741	451	161	38	1	360	967	360	16	117
			2	656	656	246	246		2	762	762	89	89	

3.4.8.5 Center ballasts and corner loads DIN 15019

for a travelling tower crane on an undercarriage without climbing drive

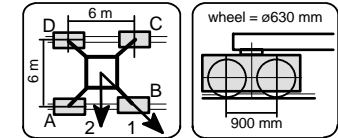


UW 260.3 Corner distance 6 m x 6 m Jib length 50 m

height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	7,5	1	194	339	194	49	25	1	110	281	110	16	53
			2	297	297	92	92		2	223	223	35	35	
19,6	20,0	7,5	1	199	355	199	44	26	1	111	300	111	16	68
			2	309	309	90	90		2	238	238	110	110	
24,1	24,5	10,0	1	209	376	209	43	28	1	120	320	120	16	74
			2	327	327	91	91		2	273	273	96	96	
28,6	29,0	10,0	1	213	392	213	34	29	1	188	352	188	24	81
			2	339	339	86	86		2	304	304	72	72	
33,1	33,5	12,5	1	222	415	222	29	31	1	172	429	172	16	87
			2	359	359	86	86		2	343	343	51	51	
37,6	38,0	27,5	1	263	472	263	55	32	1	207	523	207	16	93
			2	411	411	116	116		2	418	418	59	59	
42,1	42,5	42,5	1	304	530	304	78	34	1	238	626	238	16	99
			2	464	464	144	144		2	495	495	64	64	
46,6	47,0	62,5	1	358	603	358	112	35	1	288	739	288	16	105
			2	531	531	184	184		2	589	589	77	77	
51,1	51,5	80,0	1	405	672	405	138	37	1	321	863	321	16	112
			2	594	594	216	216		2	680	680	80	80	
55,6	56,0	102,5	1	466	755	466	177	38	1	376	997	376	16	118
			2	670	670	261	261		2	788	788	94	94	

3.4.8.6 Center ballasts and corner loads DIN 15019

for a travelling tower crane on an undercarriage without climbing drive



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

height under hook ☞ [m]	Center ballasts ☞ [m]	Center ballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,1	15,5	12,5	1	215	355	215	74	25	1	102	354	102	16	54
			2	314	314	115	115		2	263	263	24	24	
19,6	20,0	12,5	1	220	370	220	69	27	1	102	372	102	16	69
			2	326	326	113	113		2	274	274	22	22	
24,1	24,5	15,0	1	229	391	229	67	28	1	112	393	112	16	75
			2	344	344	115	115		2	303	303	106	106	
28,6	29,0	17,5	1	239	414	239	64	30	1	120	415	120	16	81
			2	363	363	116	116		2	340	340	88	88	
33,1	33,5	20,0	1	249	438	249	60	31	1	210	460	210	16	88
			2	382	382	115	115		2	381	381	67	67	
37,6	38,0	30,0	1	277	482	277	73	32	1	219	555	219	16	94
			2	422	422	133	133		2	443	443	61	61	
42,1	42,5	45,0	1	318	541	318	96	34	1	249	661	249	16	100
			2	476	476	161	161		2	521	521	65	65	
46,6	47,0	65,0	1	372	614	372	130	35	1	298	776	298	16	106
			2	543	543	201	201		2	616	616	78	78	
51,1	51,5	85,0	1	425	689	425	161	37	1	341	903	341	16	113
			2	612	612	239	239		2	714	714	87	87	
55,6	56,0	105,0	1	480	767	480	193	38	1	382	1040	382	16	119
			2	683	683	277	277		2	817	817	93	93	