

TYPE OF CRANE	BGL-GRUPPE 2125-0140
KIND OF CRANE	TOWER CRANE WITH TROLLEY JIB, TOP-SLEWING, SELF CLIMBING
INSTALLATION	STATIONARY OR TRAVELLING
CALCULATION BASE	DIN 15018-H1/B3 DIN 15020-IAM
LOADMOMENT	MAX. 1640 KNM

**PLANING DIAGRAM**  
**WOLFF 6017.6**  
 962-3-022759E



2.2.1.1

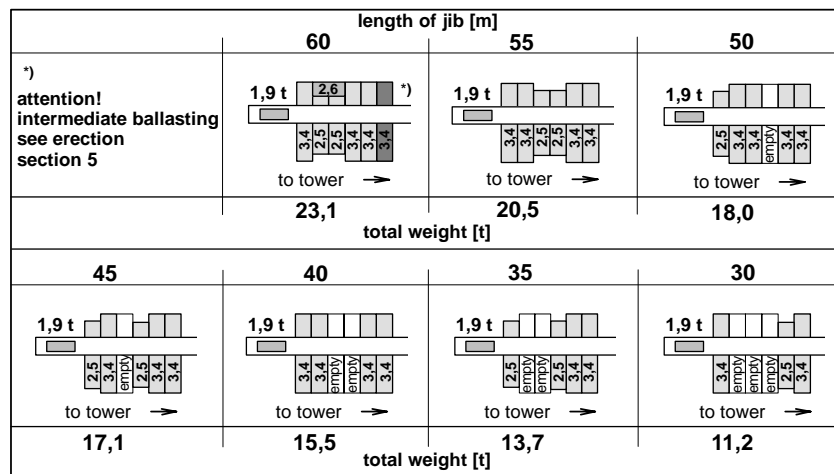
Load capacity table

radius [m]		25	30	35	40	45	50	55	60	load capacity [t]
length of jib [m]	60	2,5 - 21,8	5,1	4,2	3,5	2,9	2,5	2,2	1,9	
	55	2,5 - 23,2	5,5	4,5	3,7	3,2	2,7	2,4	2,1	
	50	2,5 - 25,2	6,0	4,9	4,1	3,5	3,0	2,65		
	45	2,5 - 25,7	6,0	5,0	4,2	3,6	3,1			
	40	2,5 - 27,0	6,0	5,3	4,4	3,8				
	35	2,5 - 27,2	6,0	5,4	4,5					
	30	2,5 - 27,3	6,0	5,4						

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

Arrangement of counterweight

Hw 637 FU



2.2.1.2

Load capacity table

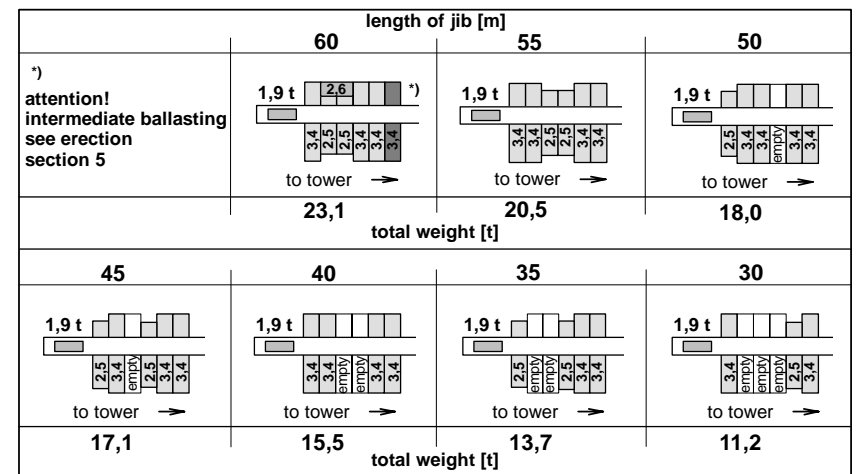
(these load values are switch-off values)

Ausladung [m]		25	30	35	40	45	50	55	60	load capacity [t]
length of jib [m]	60	2,5 - 24,8	5,9	4,8	4,0	3,4	3,0	2,6	2,3	
	55	2,5 - 26,1	6,0	5,1	4,3	3,7	3,2	2,8	2,5	
	50	2,5 - 28,0	6,0	5,5	4,6	4,0	3,4	3,0		
	45	2,5 - 28,3	6,0	5,6	4,7	4,0	3,5			
	40	2,5 - 29,4	6,0	5,9	4,9	4,2				
	35	2,5 - 29,4	6,0	5,9	4,9					
	30	2,5 - 29,4	6,0	5,9						

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

Arrangement of counterweight



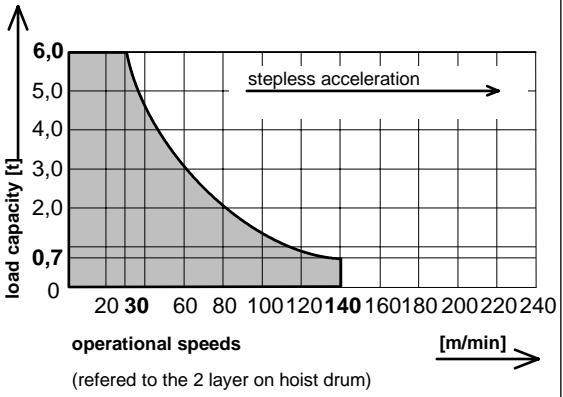

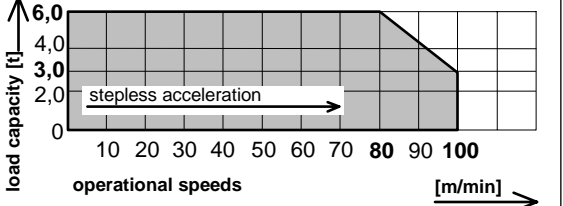

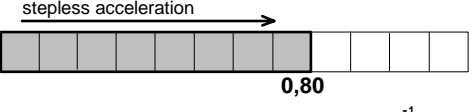
Hw 637 FU



2.2.2.1

Operational speeds

400 V, 50 Hz, 60 % ED

drive [type]	operational speeds load capacity [2-fall operation]	max. lift [m]	output [kW]	total output [kVA]
Hw 637 FU	hoisting 	190	37	58,0 total output for a simultaneity factor 0,8
				
Kw	traversing		7,5	
				
Dw	slewing 0,8 min <sup>-1</sup>		2 x 5,0	
				

2.2.3.1

Load capacity [kg] 2 fall operation

DIN 15018/H1 - B3

radius [m]	length of jib [m]						
	30	35	40	45	50	55	60
20,0	6000	6000	6000	6000	6000	6000	6000
21,0	6000	6000	6000	6000	6000	6000	6000
22,0	6000	6000	6000	6000	6000	6000	5930
23,0	6000	6000	6000	6000	6000	6000	5640
24,0	6000	6000	6000	6000	6000	5780	5380
25,0	6000	6000	6000	6000	6000	5500	5100
26,0	6000	6000	6000	5910	5790	5280	4900
27,0	6000	6000	6000	5670	5550	5060	4690
28,0	5840	5810	5750	5440	5320	4850	4500
29,0	5610	5590	5530	5220	5110	4660	4320
30,0	5400	5400	5300	5000	4900	4500	4200
31,0		5180	5120	4840	4730	4310	3990
32,0		4990	4940	4660	4560	4150	3840
33,0		4820	4770	4500	4400	4000	3710
34,0		4650	4600	4350	4250	3860	3570
35,0		4500	4400	4200	4100	3700	3500
36,0			4310	4060	3970	3600	3330
37,0			4170	3930	3850	3490	3220
38,0			4040	3810	3720	3380	3120
39,0			3920	3690	3610	3270	3020
40,0			3800	3600	3500	3200	2900
41,0				3480	3400	3070	2840
42,0				3380	3300	2980	2750
43,0				3280	3200	2900	2670
44,0				3190	3110	2810	2590
45,0				3100	3000	2700	2500
46,0					2950	2660	2450
47,0					2870	2590	2380
48,0					2790	2520	2310
49,0					2720	2450	2250
50,0					2650	2400	2200
51,0						2320	2130
52,0						2260	2080
53,0						2210	2020
54,0						2150	1970
55,0						2100	1900
56,0							1875
57,0							1830
58,0							1780
59,0							1740
60,0							1700

The load capacities refer to a range of lift of 42,0 m

2.2.3.2 Load capacity [kg] in 2 fall operation

DIN 15018/H1 - B3

radius [m]	length of jib [m]						
	30	35	40	45	50	55	60
20,0	6000	6000	6000	6000	6000	6000	6000
21,0	6000	6000	6000	6000	6000	6000	6000
22,0	6000	6000	6000	6000	6000	6000	6000
23,0	6000	6000	6000	6000	6000	6000	6000
24,0	6000	6000	6000	6000	6000	6000	6000
25,0	6000	6000	6000	6000	6000	6000	5930
26,0	6000	6000	6000	6000	6000	6000	5680
27,0	6000	6000	6000	6000	6000	5780	5440
28,0	6000	6000	6000	6000	6000	5540	5220
29,0	6000	6000	6000	5830	5760	5330	5010
30,0	5900	5870	5900	5600	5500	5100	4800
31,0		5660	5650	5400	5340	4930	4640
32,0		5460	5450	5210	5150	4760	4470
33,0		5270	5260	5030	4970	4590	4310
34,0		5090	5090	4860	4800	4430	4160
35,0		4900	4920	4700	4600	4300	4000
36,0			4760	4550	4490	4140	3890
37,0			4610	4410	4350	4010	3760
38,0			4470	4270	4220	3890	3650
39,0			4340	4140	4090	3770	3530
40,0			4200	4000	4000	3650	3400
41,0				3900	3850	3550	3320
42,0				3790	3740	3440	3230
43,0				3690	3640	3350	3130
44,0				3580	3540	3250	3050
45,0				3500	3400	3160	3000
46,0					3350	3080	2880
47,0					3260	3000	2800
48,0					3180	2920	2730
49,0					3100	2840	2660
50,0					3000	2800	2600
51,0	The load capacities refer to a range of lift of 42,0 m					2700	2520
52,0						2640	2460
53,0						2570	2400
54,0						2510	2340
55,0						2500	2300
56,0							2230
57,0							2180
58,0							2130
59,0							2080
60,0							2000

2.2.6.1 Tower configurations

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

**Slewing part:**

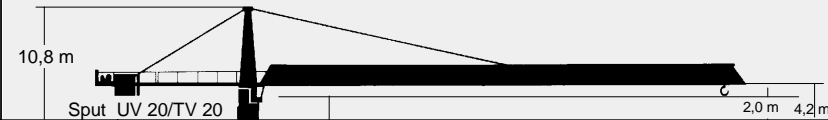
tower element	height of tower [m]
1	4,5
2	9,0
3	13,5
4	18,0
5	22,5
6	27,0
7	31,5
8	36,0
9	40,5
10	45,0
11	49,5
12	54,0
13	58,5
14	63,0
15	67,5
16	72,0
17	76,5
18	81,0

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:



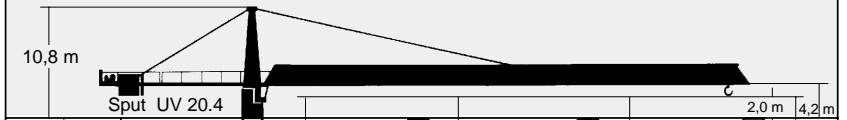
tower elements	height of tower [m]	tower element
1	4,5	UV 20.4
2	9,0	UV 20.4
3	13,5	UV 20.4
4	18,0	UV 20.4
5	22,5	UV 20.4
6	27,0	UV 20.4
7	31,5	UV 20.4
8	36,0	UV 20.4
9	40,5	UV 20.4
10	40,5	TVA 20.4
11	45,0	TV 20.4
12	49,5	TV 20.4
13	54,0	TV 20.4
14	58,5	TVÜ 20.4
15	63,0	TV 25
16	67,5	UVA 25
17	68,7	VR 2529
18	73,2	UV 29
19	77,7	UV 29
20	82,2	UV 29
21	96,7	BT 29
		98,7 m hook height
		foundation anchor type FUA - BT 29

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

2.2.7.1 Tower configurations

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

Slewing part:



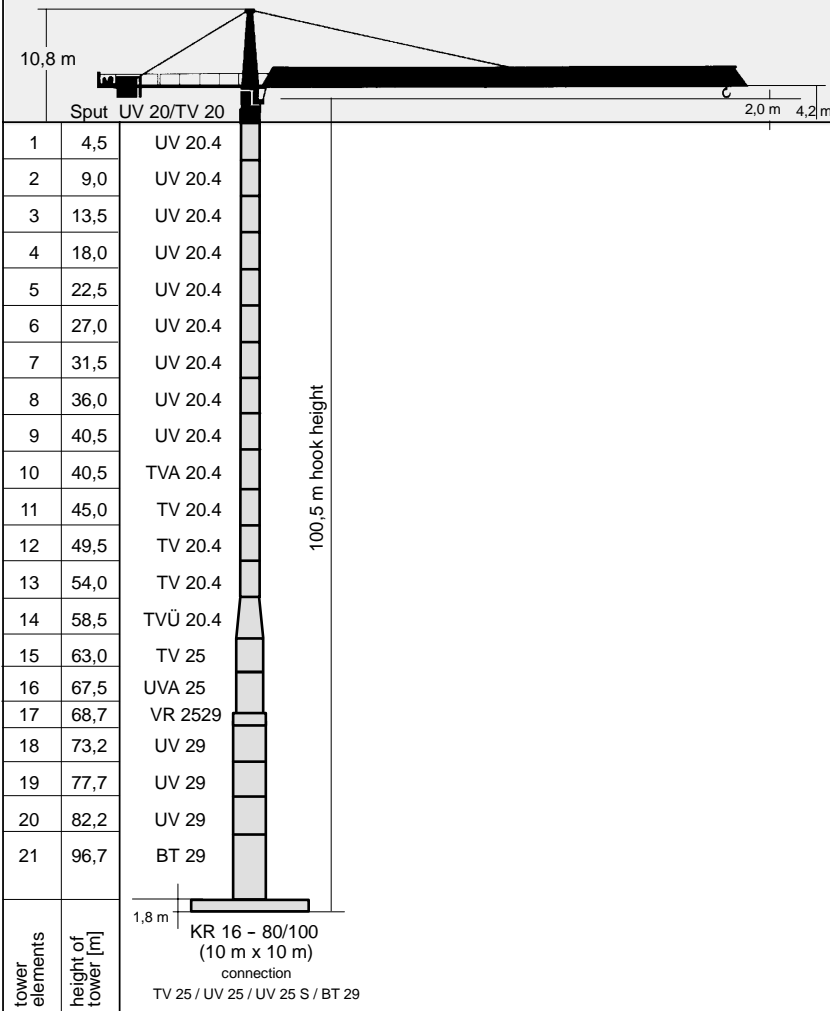
tower element	height of tower [m]	tower element	hook height [m]
1	4,5	UV 20.4	
2	9,0	UV 20.4	
3	13,5	UV 20.4	
4	18,0	UV 20.4	
5	22,5	UV 20.4	
6	27,0	UV 20.4	
7	31,5	UV 20.4	
8	36,0	UV 20.4	
9	40,5	UV 20.4	
10	45,0	UV 20.4	43,4 m hook height
11	49,5	UV 20.4	
12	54,0	UV 20.4	
13	58,5	UV 20.4	
14	63,0	UV 20.4	66,2 m hook height
15	67,5	UV 20.4	
16	72,0	UV 20.4	66,2 m hook height
17	76,5	UV 20.4	
18	81,0	UV 20.4	75,2 m hook height
		0,9 m KRS 8 - 46 connection TFS 20/UV 20	
		1,2 m KR 10 - 46 connection UV 20/TV 20	
		1,2 m KR 10 - 60 connection UV 20/TV 20	
		1,2 m TV 25	
		1,2 m KR 1000 - 8 connection UV 25 / TV 25	

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 crane without climbing device on a cross frame.

Slewing part:



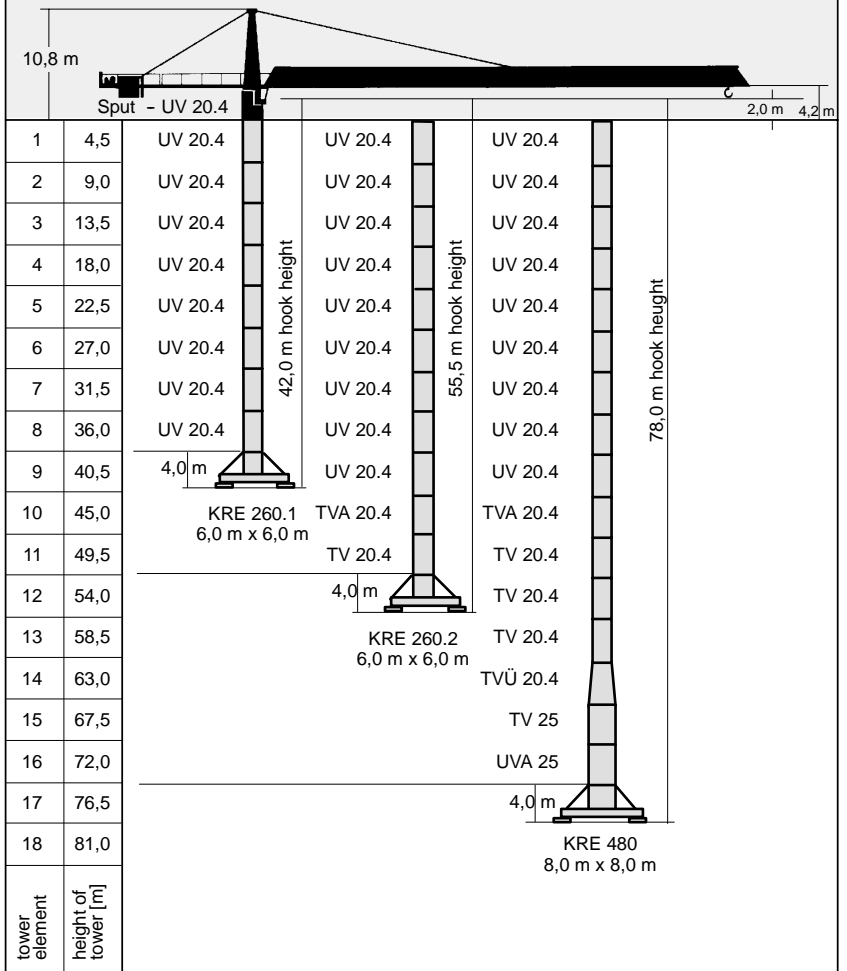
For data regarding cross frames see section 12.

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.

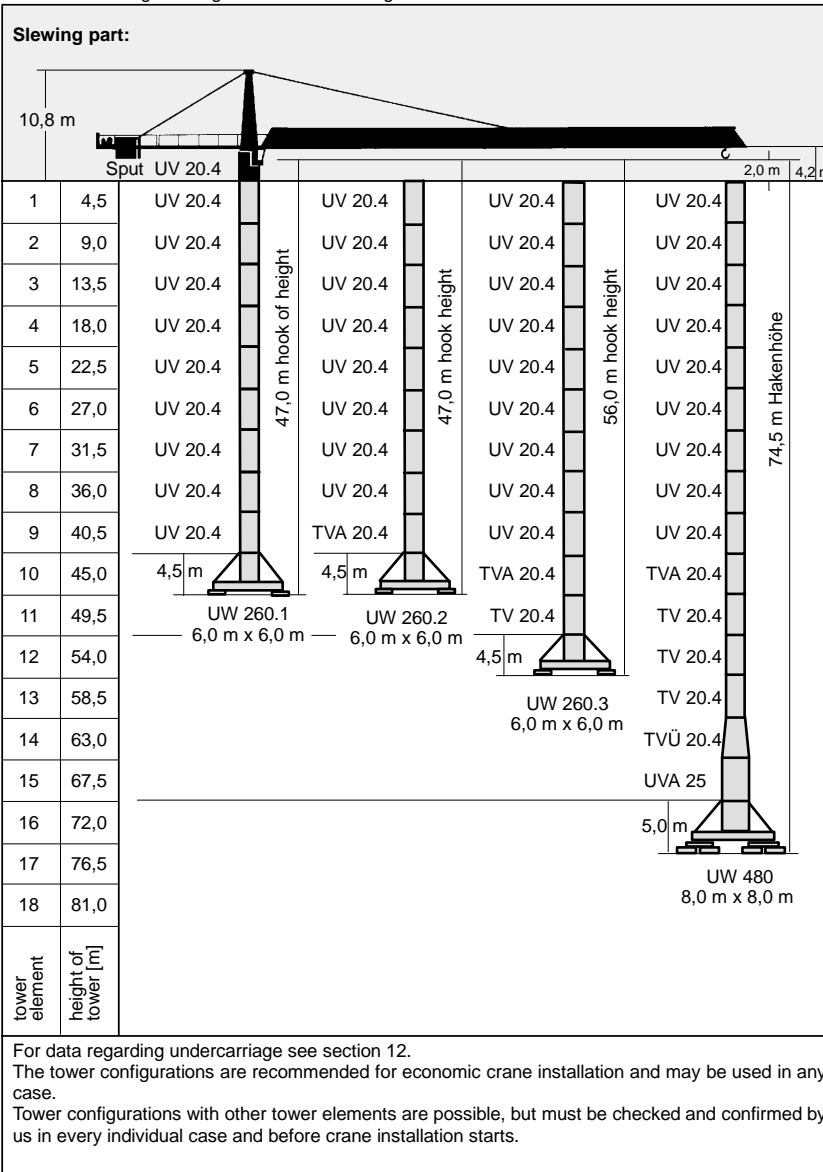
The tower configurations are recommended for economic crane installation and may be used in any case.

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.

2.2.9.1

Tower configuration

for a free standing travelling crane without climbing device.



2.3.1

Colli list

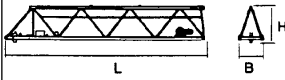
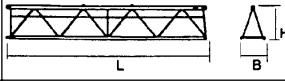
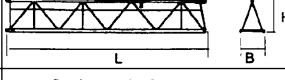
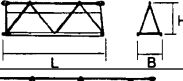
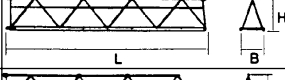
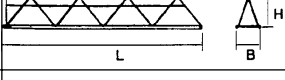
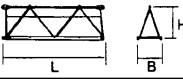
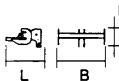
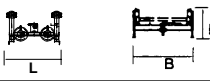
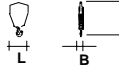
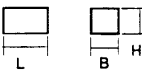
item	psc.	Designation	Colli	L (m)	B (m)	H (m)	weight (kg)	volume (m <sup>3</sup> )
1	1	tower top complete with platforms and diverse bracing parts (Sput - UV 20.4)		10,80	2,17	2,42	7860	56,72
item 1	dassembled	tower top upper part with platforms and div. bracing parts		6,30	1,35	2,10	1720	17,86
		tower top lower part with slewing frame, KDV slewing drives and slip ring system		5,92	2,17	2,42	6140	31,10
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 Hw 637 FU with hoisting rope (ø 16 mm x 175 m)		2,38	2,29	2,17	2740	11,83
6	1	standard handrail (loose part)		2,55	1,1	1,00	320	2,81

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 <sup>3</sup> )
7	1	jib part 1 with trolley drive		10,19	1,26	1,96	1960	25,17
8	1	jib part 2		10,23	1,23	1,96	1470	24,66
9	1	jib part 3 with bracings		10,23	1,23	1,96	2400	24,66
10	1	jib part 4		5,25	1,23	1,76	620	11,37
11	1	jib part 5		10,23	1,23	1,76	1070	22,15
12	1	jib part 6		10,19	1,23	1,75	865	21,93
13	1	jib part 7		5,25	1,23	1,96	650	12,66
14	1	rope swivel traverse		0,91	1,20	0,46	107	0,50
15	1	trolley		1,59	1,50	0,96	300	2,29
16	1	hook block ( loose part )		0,50	0,22	1,11	350	0,12
17	1	box (small part)		1,6	0,9	0,8	370	1,15

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

2.5.1

Assembly weights - slewing part

<p><b>Tower top complete - tower connection UV 20.4</b> <span style="float: right;"><b>8 410 kg</b></span></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"> <li>- upper part of tower top compl. with bracing brackets and platform 1720 kg</li> <li>- driver's cabin with suspension and standard handrail 1230 kg</li> <li>- lower part of top with slewing frame, KDV, slewing drive 5460 kg</li> <li>standard handrail and slip ring system</li> </ul>
<p><b>Counterjib with Hw 637 FU complete</b> <span style="float: right;"><b>7 750 kg</b></span></p> <p>counterweight stone 1,9 t (machinery platform), machinery platform Hw 637 FU with hoist rope (ø 16 mm x 175 m) 2 bracing brackets (2 x 6330 mm) and standard handrail</p> <ul style="list-style-type: none"> <li>- counter jib with 2 bracing brackets and standard handrail 3110 kg</li> <li>- machinery platform Hw 637 FU + hoist rope (ø 16 mm x 175 m) 2740 kg</li> <li>- counterweight stone 1,9 t 1900 kg</li> </ul>
<p><b>60 m Trolley jib complete</b> <span style="float: right;"><b>9 700 kg</b></span></p> <ul style="list-style-type: none"> <li>- bracing brackets, trolley, trolley ropes, hook block and standard handrail</li> </ul>
<p><b>55 m Trolley jib complete</b> <span style="float: right;"><b>8 870 kg</b></span></p> <ul style="list-style-type: none"> <li>- bracing brackets, trolley, trolley ropes, hook block and standard handrail</li> </ul>
<p><b>50 m Trolley jib complete</b> <span style="float: right;"><b>8 270 kg</b></span></p> <ul style="list-style-type: none"> <li>- bracing brackets, trolley, trolley ropes, hook block and standard handrail</li> </ul>
<p><b>45 m Trolley jib complete</b> <span style="float: right;"><b>8 030 kg</b></span></p> <ul style="list-style-type: none"> <li>- bracing brackets, trolley, trolley ropes, hook block and standard handrail</li> </ul>
<p><b>40 m Trolley jib complete</b> <span style="float: right;"><b>7 430 kg</b></span></p> <ul style="list-style-type: none"> <li>- bracing brackets, trolley, trolley ropes, hook block and standard handrail</li> </ul>
<p><b>35 m Trolley jib complete</b> <span style="float: right;"><b>6 970 kg</b></span></p> <ul style="list-style-type: none"> <li>- bracing brackets, trolley, trolley ropes, hook block and standard handrail</li> </ul>
<p><b>30 m Trolley jib complete</b> <span style="float: right;"><b>6 370 kg</b></span></p> <ul style="list-style-type: none"> <li>- bracing brackets, trolley, trolley ropes, hook block and standard handrail</li> </ul>

2.5.2

## Assembly weights - cross frame

<b>Cross frame KR 8 - 46</b>	(without optional features)	<b>5 200 kg</b>
	- 4 spigots AZ 85 E 20.5	192 kg
	- 4 spigots AZ 93,4	200 kg
	- 4 spigots AZ 120 M	272 kg
option	- 4 corner spindle	800 kg
<b>Cross frame KR 10 - 46/60</b> (4,6 m x 4,6 m)	(without optional features)	<b>7 000 kg</b>
	- 4 spigots AZR 120 E 15.5	560 kg
	- 4 spigots AZ 140 M	684 kg
<b>Cross frame KR 10 - 46/60</b> (6,0 m x 6,0 m)	(without optional features)	<b>8 805 kg</b>
	- 4 spigots AZR 120 E 15.5	560 kg
	- 4 spigots AZ 140 M	684 kg
<b>Cross frame KR 1000 - 8</b>		<b>14 630 kg</b>
	- 4 spigots AZ 140 E	684 kg
	- 4 spigots AZ 156 M	748 kg
<b>Cross frame KR 16 - 80/100</b> (8,0 m x 8,0 m)	(without optional features)	<b>21 450 kg</b>
	- 4 spigots AZ 140 E KR16-80	620 kg
	- 4 spigots AZ 156 M KR16-80	680 kg
	- 4 spigots AZS 156 M KR16-80	675 kg
<b>Cross frame KR 16 - 80/100</b> (10,0 m x 10,0 m)	(without optional features)	<b>25 400 kg</b>
	- 4 spigots AZ 140 E KR16-80	620 kg
	- 4 spigots AZ 156 M KR16-80	680 kg
	- 4 spigots AZS 156 M KR16-80	675 kg

2.5.3

## Assembly weights - cross frame element / undercarriage

<b>Cross frame element KRE 260.1 kompl.</b>	<b>8 100 kg</b>
- 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
<b>Cross frame element KRE 260.2 kompl.</b>	<b>10 900 kg</b>
- 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
<b>Cross frame element KRE 480 kompl.</b>	<b>24 250 kg</b>
- base mast part	7 100 kg
- swivel arms with tand corner bearings	6 250 kg
- diagonal struts and ballast suspension means	9 260 kg
- assembly platform, ladder and small parts	1 640 kg
<b>Undercarriage UW 260.1 kompl.</b>	<b>11 400 kg</b>
- undercarriage platform with swivel arms, subframes and transport safety devices	7 150 kg
- subframes and transport safety devices	4 250 kg
<b>Undercarriage UW 260.2 kompl.</b>	<b>13 930 kg</b>
- undercarriage platform with swivel arms, subframes and transport safety devices	8 050 kg
- base mast part with diagonal struts and track rod	5 880 kg
<b>Undercarriage UW 260.3 kompl.</b>	<b>17 200 kg</b>
- undercarriage platform with swivel arms, subframes and transport safety devices	11 300 kg
- base mast part with diagonal struts and track rod	5 900 kg
<b>Undercarriage UW 480 kompl.</b>	<b>34 000 kg</b>
- base mast part	7 100 kg
- swivel arms with traverse and subframes	(2x) 8 000 kg
- diagonal struts and ballast suspension means	(2x) 4 630 kg
- assembly platform, ladder and small parts	1 640 kg

2.5.4

Required height under hook for the mobile crane



**Warning!**

Use suspension ropes with sufficient capacity and observe suspension plan!

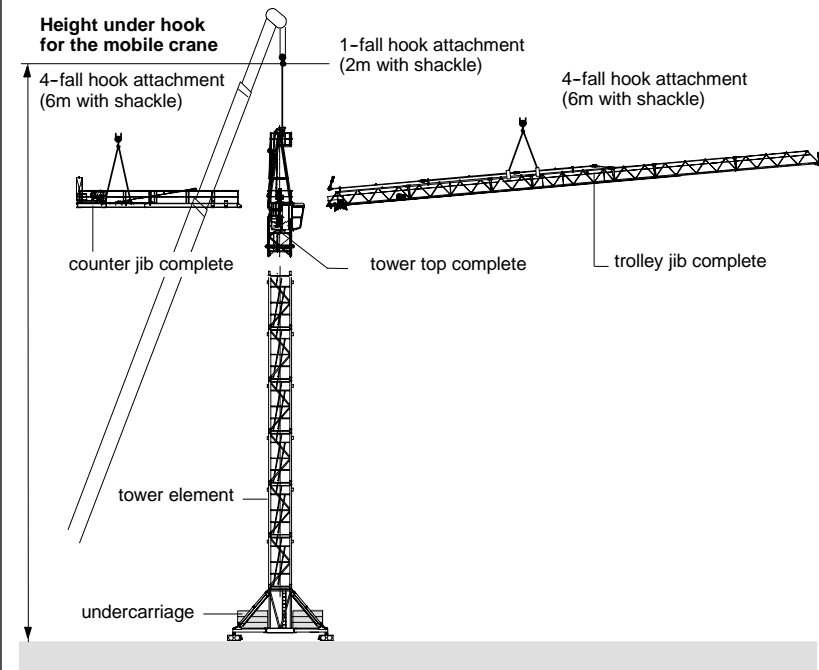
**Required height under hook for mobile crane**

= **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

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.

<b>Lengths:</b>	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 next side.



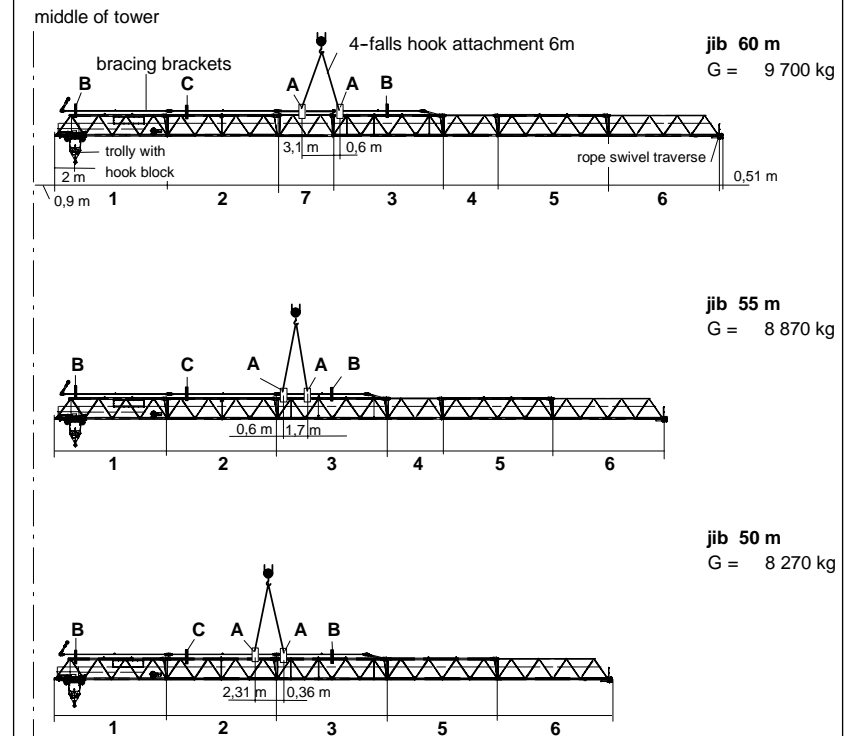
**Attention!**

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.



**Attention!**

Before mounting the 60 m long jib you must insert a temporary counterweight, see pages 2/15 and 2/16.



2.6.2

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.

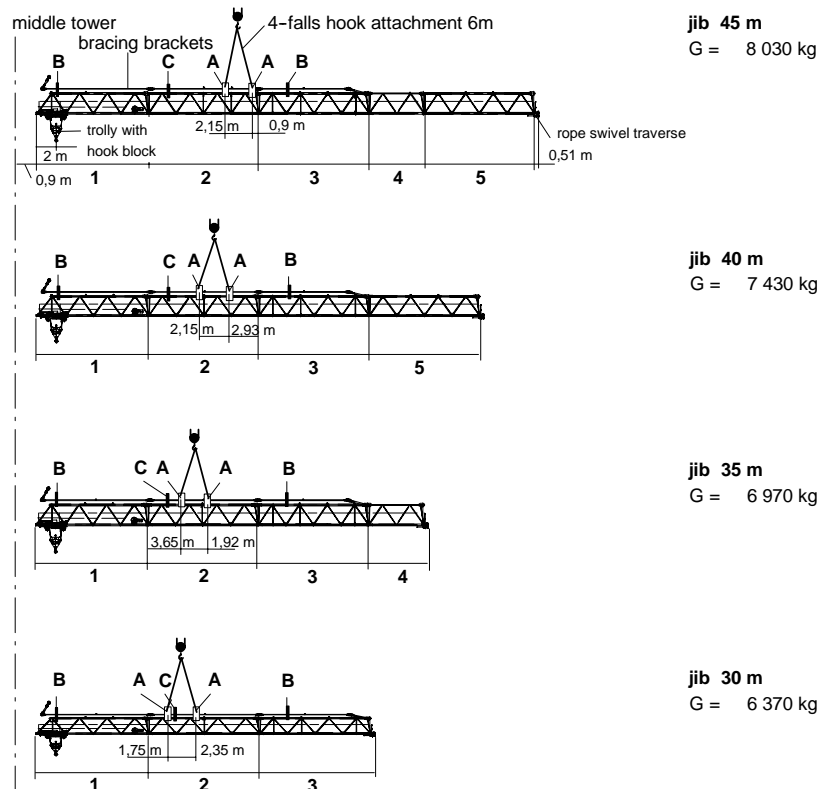
<b>Lengths:</b>	jib part	1/2/3/5	= 10,0 m
	jib part	4	= 5,0 m
	rope swivel traverse		= 0,51 m

More details about suspension **A** and support **B** and support **C** see next side.



**Attention!**

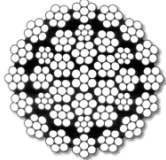
For assembly hang on snatch block with 2 sling ropes DIN 3088 (Ø 8 mm x 1 m with shackle) to the trolley, reeve in assembly rope (perlon rope Ø 14 mm x 12 m) and secure at the trolley.



2.7.1

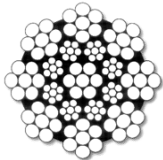
Hoisting rope

for hoisting winch - Hw 637 FU

<p><b>Cable Ø = 16 mm</b> <span style="float: right;">+ 4% + 2%</span></p> <p><b>First equipment</b></p>	<p>design according to DIN 15 020 kind of operation TWG 1 Am</p> <div style="text-align: center;">  </div> <p><b>CASAR STARLIFT</b> - non twisting flexible hoisting rope with compressed cable core</p> <p><b>nominal strength</b> = 1770 N/mm<sup>2</sup> <b>calc. breaking strength</b> = 234,1 kN <b>min. breaking strength</b> = 178,1 kN <b>weight per meter</b> = 1,191 kg</p>			
<p><b>Design</b></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>			
<p><b>Basic equipment</b></p> <table border="1" style="width: 100%;"> <tr> <td style="width: 30%;"><b>cable length</b> 175 m</td> <td style="width: 40%;"><b>for crane with:</b></td> <td style="width: 30%;"><b>cable radius</b> 2 fall 60 m <b>hook path</b> 42 m</td> </tr> </table> <p>By lengthening the hook path by 1 tower element (4,5 m) the necessary cable length increases by <b>9 m for operation in 2 falls</b>.</p>		<b>cable length</b> 175 m	<b>for crane with:</b>	<b>cable radius</b> 2 fall 60 m <b>hook path</b> 42 m
<b>cable length</b> 175 m	<b>for crane with:</b>	<b>cable radius</b> 2 fall 60 m <b>hook path</b> 42 m		
<p><b>Attention!</b> <b>A wire cable is a complex machine element.</b></p> <p>Conventional cable design frequently doesn't meet the requirements of modern rope drives. short service life is the result.</p>				

2.7.2

Traversing rope

<p><b>Cable <math>\varnothing</math> = 8 mm</b>      + 4%    + 2%</p>	<p>design according to DIN 15 020 kind of operation TWG 1 Am</p>	
<p><b>First equipment</b></p>	<p><b>CASAR UNILIFT -</b> cable with 8 strands in non-overlapped double parallel construction made out of uncompressed strands.</p>	
<p><b>Design</b></p>	<p>ordinary lay rope, right handed, surface of wires zinc coated.</p> <p>nominal strength      = 1770 N/mm<sup>2</sup> calc. breaking strength = 57,4 kN min. breaking strength = 49,9 kN weight per meter      = 0,282 kg</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 70 m	for crane with:      radius	60 m
	1 x 118 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

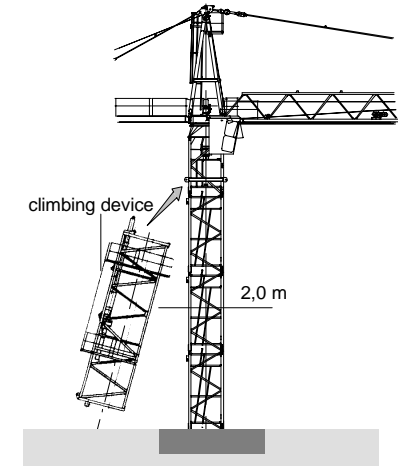
The following removable hydraulic exterior climbing gear can be used with the tower crane WOLFF 6017.6 .

-	<b>KWH 20.3</b>
---	-----------------

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

<b>Min. height with stationary erection:</b>
<b>3 tower elements = 13,5 m tower height</b>

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



2.8.1.1

Balancing weights for climbing

- \* The indicated balancing weights are gross-weights of towersections or a load.
  - \*\* The given (m) data for position of weights along jib are approximate only and refer to center of tower. The exact balance point is arrived at by short moves of trolley and is considered arrived when the towersection concerned lifts out of the resting tower without any friction. Be careful and try repeatedly until best possible balancing is assured.
- balancing not possible

for climbing in UV 20 tower elements	jib						
	30 m	35 m	40 m	45 m	50 m	55 m	60 m
with balancing load * UV 20.4 = 1,95 t	** 11,7	11,1	8,4	---	---	---	---
without balancing load	---	---	---	26,7	23,5	12,8	9,0



**Danger!**  
While climbing, the slewing part of the crane must be locked in the direction of moving towersections in or out the tower. Until tower has been repinned fully and in all holes, the balancing must be kept and the slew part must remain locked. (For details, please see operational manual KWH 20.3). The climbing device is an auxiliary device for assembly and mustn't stay at the tower crane WOLFF under normal working conditions.

**WOLFF 6017.6**

**Crane data**  
**2 / 81**

2.8.1 **Insertable exterior climbing gear**

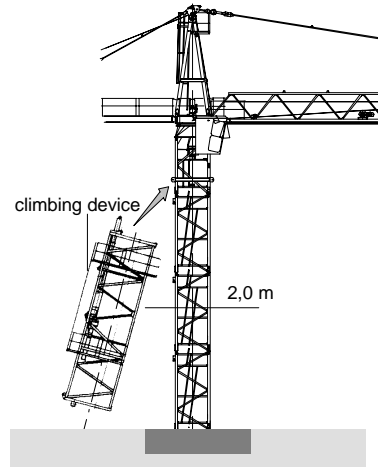
The following removable hydraulic exterior climbing gear can be used with the tower crane WOLFF 6017.6 .

- **KWH 20.4**

KWH 20.4 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 towersections or a load.
- \*\* The given (m) data for position of weights along jib are approximate only and refer to center of tower. The exact balance point is arrived at by short moves of trolley and is considered arrived when the towersection concerned lifts out of the resting tower without any friction. Be careful and try repeatedly until best possible balancing is assured.
- balancing not possible

for climbing in UV 20 tower elements	jib						
	30 m	35 m	40 m	45 m	50 m	55 m	60 m
with balancing load * UV 20.4 = 1,95 t	** 10,0	9,5	---	---	---	---	---
without balancing load	---	---	22,0	17,3	15,0	7,3	5,0



**Danger!**  
While climbing, the slewing part of the crane must be locked in the direction of moving towersections in or out the tower. Until tower has been repinned fully and in all holes, the balancing must be kept and the slew part must remain locked. (For details, please see operational manual KWH 20.4).  
The climbing device is an auxiliary device for assembly and mustn't stay at the tower crane WOLFF under normal working conditions.

**WOLFF 6017**

**Crane data**  
**2 / 87**

2.8.5 **Insertable internal climbing device KSH 20 L**

For use of the WOLFF 6017 in connection with internal climbing device KSH20L, the tower combination has to be observed as shown here.

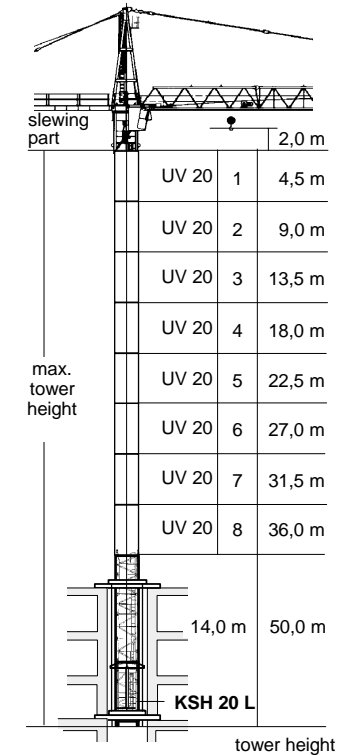
KSH20L informations is given in a separate documentation in section 12, Additional Equipment.

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.

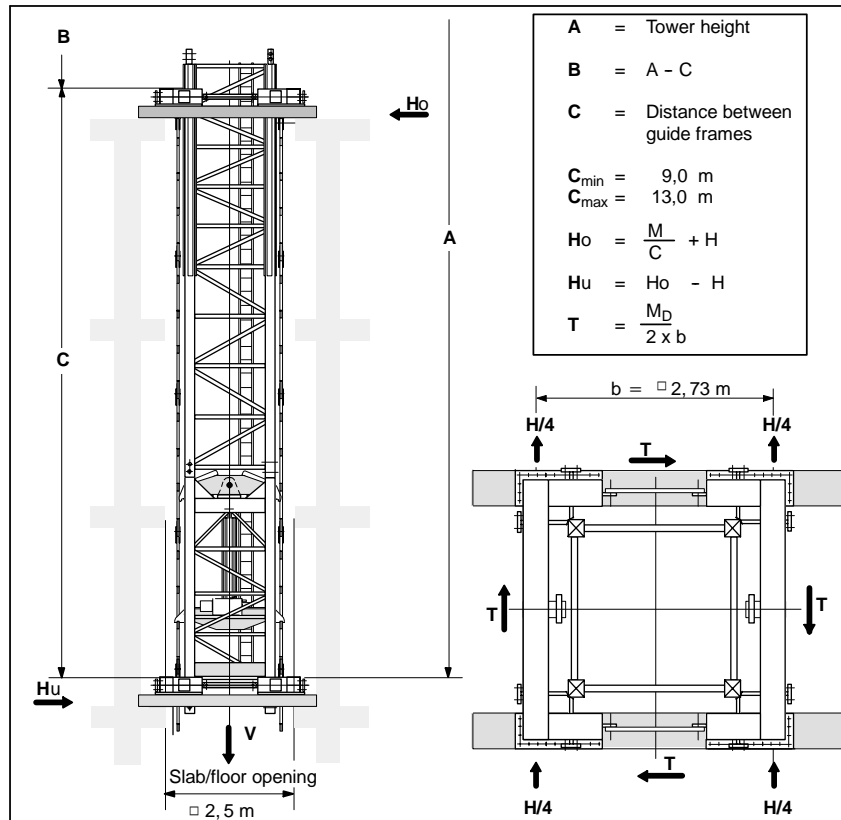
--- balancing not possible



6017.6 balancing weight *	jib						
	30 m	35 m	40 m	45 m	50 m	55 m	60 m
UV 20.4 = 1,95 t	---	---	---	33,9 m	33,0 m	31,6 m	25,8 m**
load = 3,00 t	25,4 m	26,1 m	26,9 m	24,4 m	---	---	---
load = 5,00 t	16,6 m	17,1 m	17,6 m	---	---	---	---

6017.10 balancing weight *	jib						
	30 m	35 m	40 m	45 m	50 m	55 m	60 m
UV 20.4 = 1,95 t	---	---	---	31,1 m	30,2 m	28,9 m	23,6 m**
load = 3,00 t	23,8 m	24,5 m	25,2 m	22,9 m	---	---	---
load = 5,00 t	15,9 m	16,3 m	16,8 m	---	---	---	---

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



Reacting forces to building (kN) in operation																
A(m)	45,5				41,0				36,5				32,0			
C(m)	9	10	11	13	9	10	11	13	9	10	11	13	9	10	11	13
V	830				810				790				770			
Ho	270	250	220	190	255	230	210	175	240	215	195	165	220	200	180	155
Hu	240	210	190	155	225	195	175	145	205	185	165	135	195	170	155	125
T	60				60				60				60			
Reacting forces to building (kN) out of operation																
A(m)	45,5				41,0				36,5				32,0			
C(m)	9	10	11	13	9	10	11	13	9	10	11	13	9	10	11	13
V	750				730				710				690			
Ho	520	470	430	360	455	410	375	315	380	345	315	265	340	305	280	235
Hu	390	340	300	230	330	285	250	190	260	225	190	145	225	190	160	120
T	0				0				0				0			

2.8.6 Insertable internal climbing device KSH 20 M

For use of the WOLFF 6017 in connection with internal climbing device KSH20M, the tower combination has to be observed as shown here.

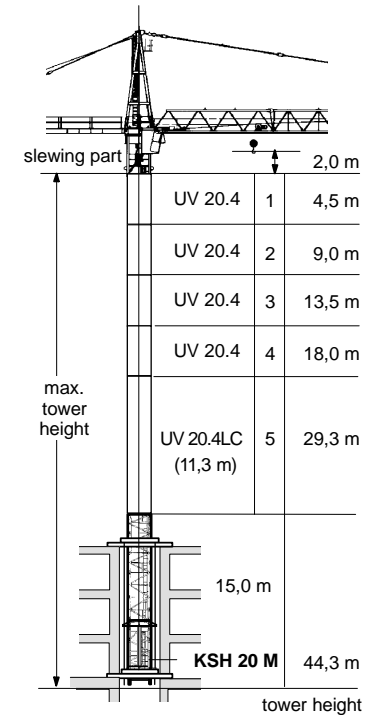
KSH20M informations is given in a separate documentation in section 12, Additional Equipment.

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.

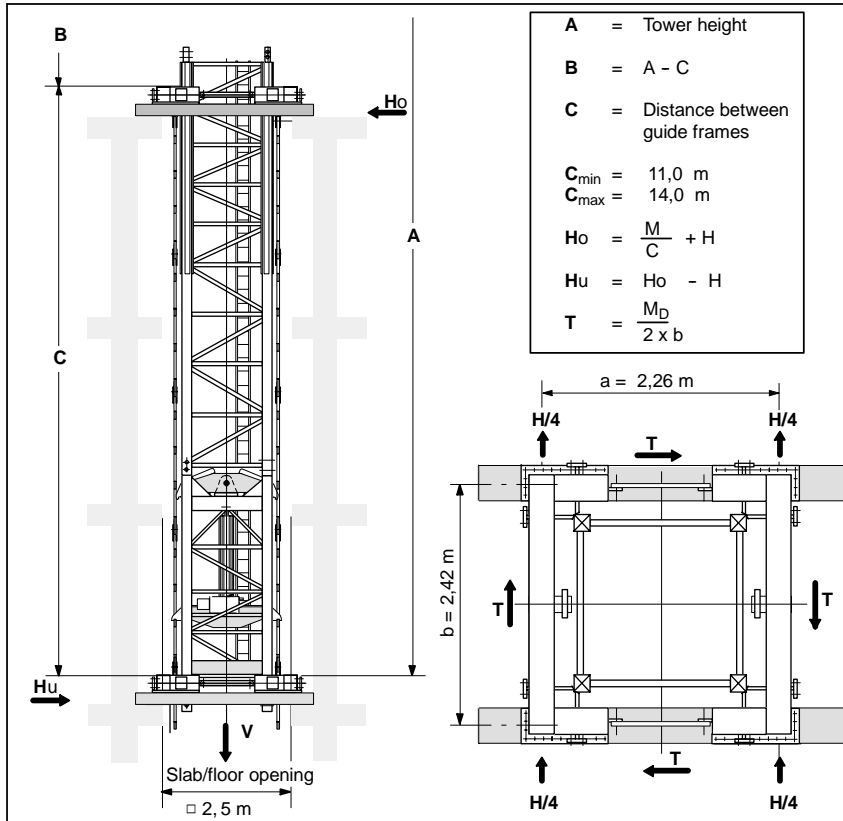
-- balancing not possible



6017.6 balancing weight *	jib						
	30 m	35 m	40 m	45 m	50 m	55 m	60 m
UV 20.4 = 1,95 t	---	---	---	33,9 m	33,0 m	31,6 m	25,8 m
load = 3,00 t	25,4 m	26,1 m	26,9 m	24,4 m	---	---	---
load = 5,00 t	16,6 m	17,1 m	17,6 m	---	---	---	---

6017.10 balancing weight *	jib						
	30 m	35 m	40 m	45 m	50 m	55 m	60 m
UV 20.4 = 1,95 t	---	---	---	31,1 m	30,2 m	28,9 m	23,6 m
load = 3,00 t	23,8 m	24,5 m	25,2 m	22,9 m	---	---	---
load = 5,00 t	15,9 m	16,3 m	16,8 m	---	---	---	---

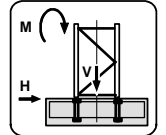
2.8.6.2 Reacting forces to building for internal hydraulic climbing device KSH 20 M



Reacting forces to building (kN) in operation																
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	830				810				790				770			
Ho	220	205	190	175	210	190	175	165	195	180	165	155	180	165	155	145
Hu	190	170	155	140	175	160	145	130	165	150	135	125	155	140	125	115
T	60				60				60				60			
Reacting forces to building (kN) out of operation																
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	750				730				710				690			
Ho	430	390	360	335	375	340	315	295	315	285	265	245	280	255	235	220
Hu	300	260	230	205	250	215	190	170	190	165	145	125	160	140	120	105
T	0				0				0				0			

3.1.1 Foundation loads according to DIN

Inclusive all dynamic factors, theory order II taken into account for stationary tower crane on a concrete foundation according to tower configuration without climbing device  
 Permanent acting moment = 653 kNm  
**M** = moment **H** = horizontal force **V** = vertical load



Foundation loads Jib length 30 - 60 m

height under hook [m]	Crane in service torque moment 240 kNm	Crane out of service			Assembly					
		M [kNm]	H [kN]	V [kN]	M [kNm]	H [kN]	V [kN]			
14,8	15,5	1490	19	575	900	61	531	1421	13	333
19,3	20,0	1600	21	595	1210	68	550	1498	15	351
23,8	24,5	1720	22	615	1560	74	568	1585	16	369
28,3	29,0	1850	24	635	1930	81	586	1681	18	387
32,8	33,5	1980	25	655	2320	86	604	1788	19	405
37,3	38,0	2110	27	675	2740	91	622	1906	21	424
41,8	42,5	2250	28	695	3170	95	640	2036	22	442
46,3	47,0	2390	30	715	3610	100	659	2178	24	460
50,8	51,5	2520	31	735	4060	103	668	2334	25	478
55,3	56,0	2770	34	778	4700	112	730	2477	28	517
59,8	60,5	2950	36	820	5410	121	760	2644	30	555
64,3	65,0	3120	38	851	6040	129	790	2833	32	583
68,8	69,5	3370	41	890	6800	138	825	3005	35	619
73,3	74,0	3600	43	925	7650	150	860	3209	37	651
77,8	78,5	3800	45	961	8490	162	890	3420	39	687

Attention ! Tower configuration with basis tower BT 29

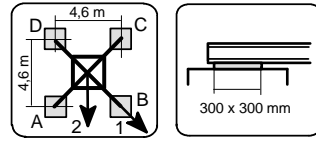
80,0	80,7	3990	46	989	8710	163	943	3650	40	745
84,5	85,2	4280	49	1021	9680	170	975	3880	42	778
89,0	89,7	4570	51	1067	10700	181	1022	4110	45	824
93,5	94,2	4880	54	1113	11710	192	1067	4370	48	871
98,0	98,7	5220	56	1160	13820	211	1114	4640	51	917

Attention!  
 For the WOLFF 6017.6 only the column  $\zeta$  for the hook height is valid.



3.2.1.1 Centralballasts and Cornerloads according to DIN 15019

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

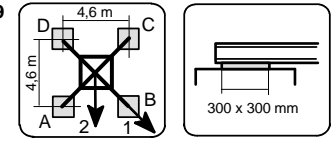


KRS 8 - 46 Corner distance 4,6 m x 4,6 m jib 30 m

Table with columns: Height under hook, Centerballast, Jib position, Crane in service torque moment, Cornerloads (A, B, C, D), Horizontal force, Crane out of service torque moment, Cornerloads (A, B, C, D), Horizontal force.

3.2.1.2 Centralballasts and Cornerloads according to DIN 15019

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

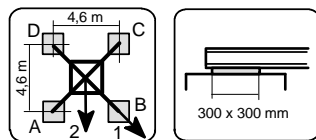


KRS 8 - 46 Corner distance 4,6 m x 4,6 m jib 35 m

Table with columns: Height under hook, Centerballast, Jib position, Crane in service torque moment, Cornerloads (A, B, C, D), Horizontal force, Crane out of service torque moment, Cornerloads (A, B, C, D), Horizontal force.

3.2.1.3 Centralballasts and Cornerloads according to DIN 15019

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

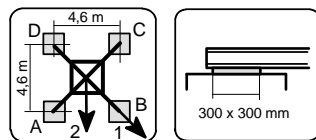


**KRS 8 - 46** Corner distance 4,6 m x 4,6 m **jib 40 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
11,9	40,0	1	227	404	227	50	21	1	157	309	157	5	44
		2	352	352	102	102	2	265	265	81	81		
16,4	40,0	1	231	420	231	43	22	1	161	322	161	1	49
		2	365	365	98	98	2	277	277	78	78		
20,9	40,0	1	236	437	236	34	24	1	162	340	162	0	63
		2	378	378	93	93	2	289	289	75	75		
25,4	40,0	1	240	456	240	24	25	1	160	362	160	0	70
		2	393	393	88	88	2	303	303	71	71		
29,9	40,0	1	245	477	245	13	27	1	157	387	157	0	76
		2	409	409	81	81	2	330	330	129	129		
34,4	50,0	1	275	525	275	24	28	1	260	458	260	61	83
		2	451	451	98	98	2	400	400	119	119		
38,9	62,5	1	310	580	310	40	30	1	295	557	295	34	90
		2	501	501	119	119	2	480	480	110	110		
43,4	77,5	1	352	645	352	60	31	1	337	668	337	7	96
		2	559	559	146	146	2	571	571	104	104		

3.2.1.4 Centralballasts and Cornerloads according to DIN 15019

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

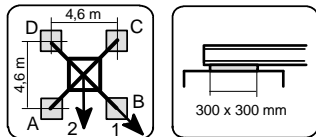


**KRS 8 - 46** Corner distance 4,6 m x 4,6 m **jib 45 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
11,9	37,5	1	226	406	226	46	21	1	165	343	165	0	45
		2	353	353	99	99	2	289	289	47	47		
16,4	37,5	1	231	422	231	39	22	1	164	363	164	0	49
		2	366	366	95	95	2	301	301	45	45		
20,9	37,5	1	235	440	235	30	24	1	162	386	162	0	64
		2	380	380	90	90	2	314	314	41	41		
25,4	37,5	1	240	459	240	20	25	1	158	411	158	0	71
		2	395	395	84	84	2	327	327	37	37		
29,9	37,5	1	244	480	244	8	27	1	153	439	153	0	77
		2	411	411	77	77	2	347	347	111	111		
34,4	42,5	1	261	516	261	7	28	1	246	471	246	21	84
		2	441	441	81	81	2	405	405	87	87		
38,9	57,5	1	303	578	303	29	30	1	288	577	288	0	90
		2	498	498	109	109	2	492	492	84	84		
43,4	72,5	1	345	643	345	48	31	1	302	717	302	0	97
		2	556	556	135	135	2	584	584	77	77		

3.2.1.5 Centralballasts and Cornerloads according to DIN 15019

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

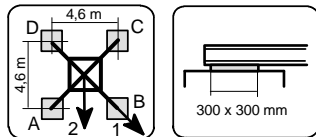


**KRS 8 - 46** Corner distance 4,6 m x 4,6 m **jib 50 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
11,9	37,5	1	229	410	229	48	21	1	147	380	147	0	45
		2	357	357	101	101	2	303	303	34	34		
16,4	37,5	1	233	426	233	41	22	1	146	401	146	0	50
		2	370	370	97	97	2	315	315	32	32		
20,9	37,5	1	238	444	238	32	24	1	144	424	144	0	65
		2	384	384	92	92	2	328	328	28	28		
25,4	37,5	1	242	463	242	21	25	1	140	450	140	0	71
		2	399	399	86	86	2	341	341	23	23		
29,9	37,5	1	247	485	247	9	27	1	135	478	135	0	78
		2	415	415	79	79	2	360	360	104	104		
34,4	40,0	1	258	514	258	2	28	1	141	510	141	0	84
		2	439	439	77	77	2	412	412	74	74		
38,9	55,0	1	300	577	300	23	30	1	266	607	266	0	91
		2	496	496	104	104	2	500	500	70	70		
43,4	72,5	1	348	648	348	49	31	1	292	749	292	0	98
		2	560	560	136	136	2	598	598	68	68		

3.2.1.6 Centralballasts and Cornerloads according to DIN 15019

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

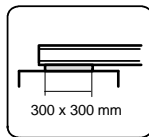
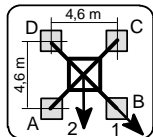


**KRS 8 - 46** Corner distance 4,6 m x 4,6 m **jib 55 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
11,9	42,5	1	249	417	249	81	21	1	128	474	128	0	46
		2	368	368	130	130	2	350	350	15	15		
16,4	42,5	1	254	434	254	74	23	1	127	495	127	0	50
		2	381	381	126	126	2	362	362	12	12		
20,9	45,0	1	264	458	264	71	24	1	137	519	137	0	65
		2	401	401	128	128	2	382	382	15	15		
25,4	47,5	1	275	484	275	67	26	1	145	546	145	0	72
		2	423	423	128	128	2	402	402	16	16		
29,9	50,0	1	286	511	286	61	27	1	152	575	152	0	79
		2	445	445	127	127	2	423	423	16	16		
34,4	52,5	1	297	541	297	53	29	1	157	608	157	0	85
		2	469	469	124	124	2	463	463	100	100		
38,9	57,5	1	314	579	314	49	30	1	275	645	275	0	92
		2	501	501	127	127	2	527	527	71	71		
43,4	75,0	1	362	650	362	74	32	1	300	789	300	0	98
		2	566	566	159	159	2	626	626	68	68		

3.2.1.7 **Centralballasts and Cornerloads according to DIN 15019**

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

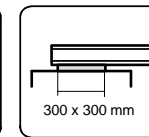
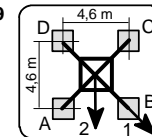


**KRS 8 - 46** Corner distance 4,6 m x 4,6 m **jib 60 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
11,9	42,5	1	257	436	257	79	21	1	135	504	135	0	46
		2	384	384	131	131		2	371	371	15	15	
16,4	42,5	1	262	453	262	71	23	1	133	525	133	0	51
		2	397	397	127	127		2	383	383	12	12	
20,9	45,0	1	273	477	273	69	24	1	142	550	142	0	66
		2	417	417	128	128		2	403	403	14	14	
25,4	47,5	1	284	503	284	64	26	1	150	577	150	0	73
		2	439	439	128	128		2	423	423	15	15	
29,9	50,0	1	294	531	294	58	27	1	157	608	157	0	79
		2	462	462	127	127		2	445	445	15	15	
34,4	55,0	1	311	568	311	55	29	1	174	642	174	0	86
		2	493	493	130	130		2	503	503	90	90	
38,9	60,0	1	329	606	329	51	30	1	267	719	267	0	93
		2	525	525	132	132		2	568	568	59	59	
43,4	82,5	1	389	690	389	88	32	1	315	867	315	0	99
		2	602	602	176	176		2	681	681	68	68	

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

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

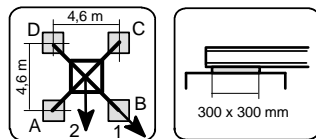


**KR 10 - 46** Corner distance 4,6 m x 4,6 m **jib 30 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
12,2	42,5	1	228	413	228	43	21	1	172	324	172	20	44
		2	359	359	97	97		2	279	279	64	64	
16,7	42,5	1	233	429	233	36	22	1	176	337	176	16	49
		2	372	372	94	94		2	290	290	63	63	
21,2	42,5	1	237	446	237	28	24	1	181	351	181	11	63
		2	385	385	89	89		2	301	301	60	60	
25,7	42,5	1	242	465	242	19	25	1	185	366	185	4	70
		2	400	400	84	84		2	313	313	57	57	
30,2	42,5	1	246	485	246	7	27	1	187	386	187	0	76
		2	415	415	77	77		2	327	327	135	135	
34,7	52,5	1	276	532	276	20	28	1	261	452	261	70	83
		2	457	457	95	95		2	396	396	126	126	
39,2	65,0	1	312	587	312	36	30	1	297	549	297	44	89
		2	506	506	117	117		2	475	475	118	118	
43,7	77,5	1	347	644	347	51	31	1	332	652	332	13	96
		2	557	557	138	138		2	558	558	107	107	
48,2	95,0	1	396	715	396	76	33	1	369	785	369	0	102
		2	622	622	170	170		2	658	658	103	103	
52,7	110,0	1	440	784	440	97	35	1	379	942	379	0	110
		2	683	683	197	197		2	759	759	92	92	
57,2	135,0	1	510	880	510	140	37	1	432	1116	432	0	118
		2	771	771	248	248		2	890	890	100	100	
61,7	165,0	1	592	990	592	194	39	1	501	1305	501	0	126
		2	874	874	310	310		2	1038	1038	115	115	
66,2	197,5	1	680	1110	680	250	41	1	573	1515	573	0	135
		2	984	984	376	376		2	1201	1201	130	130	

3.2.2.2 Centralballasts and Cornerloads according to DIN 15019

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

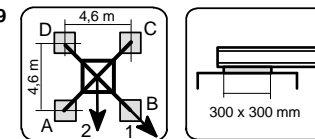


**KR 10 - 46** Corner distance 4,6 m x 4,6 m **jib 35 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
12,2	30,0	1	205	364	205	45	21	1	128	305	128	0	45
		2	317	317	92	92		2	248	248	33	33	
16,7	30,0	1	209	380	209	38	22	1	129	322	129	0	49
		2	330	330	88	88		2	259	259	31	31	
21,2	30,0	1	214	397	214	30	24	1	128	341	128	0	64
		2	343	343	84	84		2	270	270	29	29	
25,7	30,0	1	218	416	218	21	25	1	127	363	127	0	70
		2	358	358	79	79		2	282	282	26	26	
30,2	37,5	1	242	455	242	29	27	1	161	387	161	0	77
		2	392	392	91	91		2	326	326	127	127	
34,7	50,0	1	277	508	277	47	28	1	262	459	262	66	83
		2	440	440	114	114		2	401	401	123	123	
39,2	62,5	1	313	563	313	64	30	1	298	556	298	40	90
		2	490	490	137	137		2	481	481	116	116	
43,7	75,0	1	349	619	349	78	31	1	334	660	334	8	96
		2	540	540	158	158		2	564	564	103	103	
48,2	92,5	1	397	691	397	104	33	1	365	800	365	0	103
		2	605	605	190	190		2	665	665	99	99	
52,7	107,5	1	442	759	442	124	35	1	374	959	374	0	110
		2	666	666	217	217		2	766	766	88	88	
57,2	135,0	1	518	862	518	174	37	1	438	1135	438	0	119
		2	761	761	275	275		2	904	904	101	101	
61,7	165,0	1	600	972	600	227	39	1	506	1327	506	0	127
		2	863	863	336	336		2	1054	1054	116	116	
66,2	197,5	1	688	1092	688	284	41	1	576	1540	576	0	135
		2	974	974	402	402		2	1218	1218	129	129	

3.2.2.3 Centralballasts and Cornerloads according to DIN 15019

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

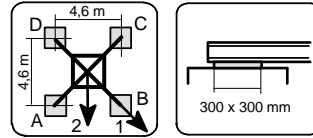


**KR 10 - 46** Corner distance 4,6 m x 4,6 m **jib 40 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
12,2	37,5	1	229	407	229	51	21	1	159	312	159	6	45
		2	355	355	103	103		2	268	268	82	82	
16,7	37,5	1	234	423	234	44	23	1	164	325	164	2	50
		2	368	368	100	100		2	280	280	80	80	
21,2	37,5	1	238	440	238	36	24	1	165	342	165	0	64
		2	381	381	95	95		2	292	292	77	77	
25,7	37,5	1	243	459	243	26	26	1	163	364	163	0	71
		2	396	396	89	89		2	305	305	72	72	
30,2	37,5	1	247	480	247	14	27	1	160	389	160	0	77
		2	412	412	83	83		2	335	335	129	129	
34,7	47,5	1	277	527	277	26	29	1	262	464	262	59	84
		2	454	454	100	100		2	405	405	119	119	
39,2	60,0	1	313	583	313	42	30	1	298	563	298	33	91
		2	504	504	121	121		2	485	485	110	110	
43,7	75,0	1	355	647	355	63	32	1	340	673	340	6	97
		2	561	561	148	148		2	575	575	104	104	
48,2	92,5	1	403	719	403	87	33	1	367	817	367	0	104
		2	626	626	180	180		2	677	677	99	99	
52,7	107,5	1	448	788	448	107	35	1	376	978	376	0	111
		2	688	688	207	207		2	778	778	87	87	
57,2	135,0	1	523	891	523	156	37	1	438	1156	438	0	119
		2	783	783	263	263		2	917	917	99	99	
61,7	167,5	1	612	1009	612	214	39	1	518	1350	518	0	127
		2	893	893	331	331		2	1074	1074	119	119	
66,2	200,0	1	700	1130	700	270	41	1	587	1566	587	0	136
		2	1004	1004	396	396		2	1239	1239	131	131	

3.2.2.4 Centralballasts and Cornerloads according to DIN 15019

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

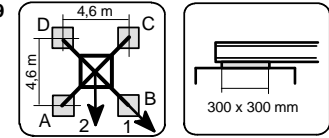


**KR 10 - 46** Corner distance 4,6 m x 4,6 m **jib 45 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Cornerloads						Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
12,2	35,0	1	228	409	228	47	21	1	169	344	169	0	46	
		2	356	356	100	100		2	292	292	49	49		
16,7	35,0	1	233	425	233	40	23	1	168	365	168	0	50	
		2	369	369	97	97		2	304	304	46	46		
21,2	35,0	1	237	443	237	32	24	1	166	387	166	0	65	
		2	383	383	92	92		2	317	317	43	43		
25,7	35,0	1	242	462	242	22	26	1	162	413	162	0	72	
		2	398	398	86	86		2	330	330	38	38		
30,2	35,0	1	247	483	247	10	27	1	157	441	157	0	78	
		2	414	414	79	79		2	352	352	111	111		
34,7	40,0	1	264	518	264	9	29	1	249	477	249	20	85	
		2	444	444	83	83		2	410	410	87	87		
39,2	55,0	1	306	580	306	31	30	1	289	583	289	0	91	
		2	500	500	111	111		2	497	497	84	84		
43,7	67,5	1	341	638	341	44	32	1	291	723	291	0	98	
		2	551	551	131	131		2	582	582	71	71		
48,2	90,0	1	402	724	402	81	33	1	337	876	337	0	105	
		2	629	629	175	175		2	697	697	78	78		
52,7	115,0	1	472	818	472	125	35	1	394	1040	394	0	112	
		2	717	717	227	227		2	824	824	89	89		
57,2	142,5	1	548	922	548	174	37	1	455	1221	455	0	120	
		2	812	812	283	283		2	964	964	101	101		
61,7	175,0	1	636	1040	636	232	39	1	533	1418	533	0	128	
		2	922	922	350	350		2	1122	1122	120	120		
66,2	210,0	1	731	1168	731	293	41	1	612	1638	612	0	137	
		2	1040	1040	421	421		2	1295	1295	136	136		

3.2.2.5 Centralballasts and Cornerloads according to DIN 15019

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

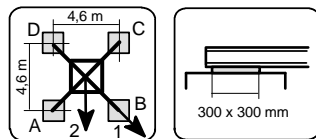


**KR 10 - 46** Corner distance 4,6 m x 4,6 m **jib 50 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Cornerloads						Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
12,2	32,5	1	225	407	225	43	21	1	139	382	139	0	46	
		2	353	353	96	96		2	300	300	30	30		
16,7	32,5	1	229	423	229	36	23	1	137	403	137	0	51	
		2	366	366	92	92		2	312	312	27	27		
21,2	32,5	1	234	441	234	27	24	1	135	426	135	0	66	
		2	380	380	88	88		2	324	324	23	23		
25,7	32,5	1	238	460	238	17	26	1	131	451	131	0	72	
		2	395	395	82	82		2	338	338	19	19		
30,2	32,5	1	243	481	243	5	27	1	126	480	126	0	79	
		2	411	411	75	75		2	358	358	98	98		
34,7	37,5	1	260	517	260	4	29	1	144	511	144	0	86	
		2	441	441	79	79		2	417	417	74	74		
39,2	50,0	1	296	573	296	19	30	1	255	614	255	0	92	
		2	492	492	100	100		2	498	498	64	64		
43,7	70,0	1	350	650	350	51	32	1	293	755	293	0	99	
		2	562	562	139	139		2	602	602	69	69		
48,2	95,0	1	417	741	417	93	33	1	350	910	350	0	105	
		2	647	647	188	188		2	724	724	81	81		
52,7	120,0	1	487	836	487	138	35	1	406	1075	406	0	113	
		2	734	734	240	240		2	852	852	92	92		
57,2	147,5	1	563	940	563	186	37	1	467	1258	467	0	121	
		2	830	830	296	296		2	993	993	103	103		
61,7	180,0	1	651	1059	651	243	39	1	543	1458	543	0	129	
		2	940	940	363	363		2	1152	1152	121	121		
66,2	215,0	1	746	1187	746	304	41	1	621	1680	621	0	137	
		2	1058	1058	434	434		2	1325	1325	137	137		

3.2.2.6 Centralballasts and Cornerloads according to DIN 15019

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

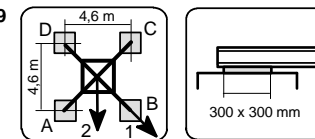


**KR 10 - 46** Corner distance 4,6 m x 4,6 m **jib 55 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
12,2	40,0	1	251	420	251	82	22	1	132	476	132	0	47		
		2	371	371	132	132		2	353	353	17	17			
16,7	40,0	1	256	437	256	75	23	1	131	497	131	0	52		
		2	384	384	128	128		2	365	365	14	14			
21,2	42,5	1	267	461	267	72	25	1	140	521	140	0	67		
		2	404	404	129	129		2	385	385	16	16			
25,7	45,0	1	277	487	277	68	26	1	149	547	149	0	73		
		2	425	425	130	130		2	405	405	18	18			
30,2	47,5	1	288	514	288	63	28	1	156	577	156	0	80		
		2	448	448	129	129		2	426	426	18	18			
34,7	50,0	1	299	543	299	55	29	1	161	609	161	0	86		
		2	472	472	126	126		2	468	468	100	100			
39,2	52,5	1	310	575	310	45	31	1	265	650	265	0	93		
		2	497	497	123	123		2	525	525	65	65			
43,7	72,5	1	364	652	364	77	32	1	302	794	302	0	99		
		2	568	568	161	161		2	630	630	69	69			
48,2	97,5	1	431	744	431	119	34	1	357	952	357	0	106		
		2	652	652	211	211		2	753	753	80	80			
52,7	122,5	1	501	839	501	163	36	1	412	1120	412	0	114		
		2	740	740	262	262		2	882	882	90	90			
57,2	152,5	1	583	949	583	217	38	1	483	1307	483	0	122		
		2	842	842	324	324		2	1030	1030	106	106			
61,7	185,0	1	671	1068	671	274	39	1	558	1510	558	0	130		
		2	952	952	391	391		2	1190	1190	123	123			
66,2	220,0	1	766	1197	766	335	41	1	634	1737	634	0	138		
		2	1071	1071	461	461		2	1365	1365	137	137			

3.2.2.7 Centralballasts and Cornerloads according to DIN 15019

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

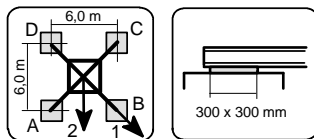


**KR 10 - 46** Corner distance 4,6 m x 4,6 m **jib 60 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
12,2	40,0	1	260	439	260	80	22	1	138	505	138	0	47		
		2	387	387	133	133		2	374	374	17	17			
16,7	40,0	1	264	456	264	73	23	1	137	527	137	0	52		
		2	400	400	129	129		2	386	386	14	14			
21,2	42,5	1	275	480	275	70	25	1	146	551	146	0	67		
		2	420	420	130	130		2	406	406	16	16			
25,7	45,0	1	286	506	286	66	26	1	154	579	154	0	74		
		2	442	442	130	130		2	426	426	17	17			
30,2	47,5	1	297	534	297	59	28	1	160	609	160	0	80		
		2	464	464	129	129		2	448	448	116	116			
34,7	50,0	1	308	564	308	51	29	1	165	642	165	0	87		
		2	489	489	126	126		2	501	501	84	84			
39,2	57,5	1	331	608	331	54	31	1	269	725	269	0	94		
		2	527	527	135	135		2	572	572	60	60			
43,7	80,0	1	392	692	392	91	32	1	317	871	317	0	100		
		2	604	604	179	179		2	685	685	69	69			
48,2	107,5	1	465	791	465	138	34	1	383	1033	383	0	107		
		2	696	696	234	234		2	815	815	85	85			
52,7	132,5	1	534	887	534	182	36	1	437	1205	437	0	114		
		2	784	784	285	285		2	945	945	93	93			
57,2	162,5	1	617	998	617	235	38	1	505	1395	505	0	122		
		2	886	886	347	347		2	1095	1095	108	108			
61,7	195,0	1	705	1119	705	291	40	1	578	1603	578	0	130		
		2	997	997	412	412		2	1257	1257	123	123			
66,2	232,5	1	806	1255	806	357	42	1	664	1836	664	0	139		
		2	1123	1123	488	488		2	1440	1440	142	142			

3.2.3.1 Centralballasts and Cornerloads according to DIN 15019

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

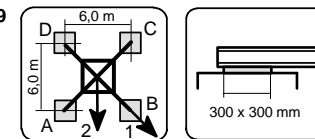


**KR 10 - 46** Corner distance 6,0 m x 6,0 m **jib 30 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
12,2	20,0	1	176	318	176	34	21	1	119	236	119	3	44		
		2	276	276	75	75		2	202	202	37	37			
16,7	20,0	1	180	331	180	30	22	1	124	247	124	1	49		
		2	287	287	74	74		2	211	211	37	37			
21,2	20,0	1	185	345	185	25	24	1	127	261	127	0	63		
		2	298	298	72	72		2	221	221	36	36			
25,7	20,0	1	190	361	190	18	25	1	127	277	127	0	70		
		2	310	310	69	69		2	231	231	35	35			
30,2	20,0	1	194	377	194	11	27	1	127	296	127	0	76		
		2	324	324	65	65		2	253	253	105	105			
34,7	25,0	1	211	407	211	15	28	1	196	343	196	49	83		
		2	350	350	72	72		2	300	300	92	92			
39,2	35,0	1	241	452	241	30	30	1	226	419	226	32	89		
		2	390	390	91	91		2	363	363	89	89			
43,7	45,0	1	270	497	270	43	31	1	255	500	255	10	96		
		2	431	431	110	110		2	428	428	82	82			
48,2	57,5	1	306	551	306	61	33	1	281	602	281	0	102		
		2	479	479	133	133		2	504	504	78	78			
52,7	70,0	1	344	608	344	81	35	1	297	722	297	0	110		
		2	531	531	158	158		2	585	585	74	74			
57,2	87,5	1	395	679	395	112	37	1	332	856	332	0	118		
		2	596	596	195	195		2	683	683	78	78			
61,7	110,0	1	458	764	458	153	39	1	387	1001	387	0	126		
		2	674	674	242	242		2	797	797	90	90			
66,2	132,5	1	522	851	522	192	41	1	433	1162	433	0	135		
		2	755	755	289	289		2	918	918	96	96			

3.2.3.2 Centralballasts and Cornerloads according to DIN 15019

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



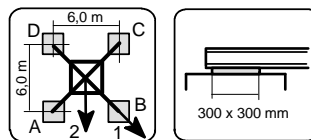
**KR 10 - 46** Corner distance 6,0 m x 6,0 m **jib 35 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
12,2	10,0	1	159	281	159	36	21	1	72	234	72	0	45		
		2	245	245	72	72		2	177	177	12	12			
16,7	10,0	1	163	294	163	32	22	1	74	247	74	0	49		
		2	256	256	71	71		2	186	186	12	12			
21,2	10,0	1	168	308	168	27	24	1	76	261	76	0	64		
		2	267	267	68	68		2	196	196	11	11			
25,7	10,0	1	172	324	172	21	25	1	77	278	77	0	70		
		2	279	279	65	65		2	206	206	10	10			
30,2	15,0	1	189	353	189	26	27	1	102	297	102	0	77		
		2	305	305	74	74		2	250	250	98	98			
34,7	22,5	1	213	389	213	36	28	1	198	348	198	47	83		
		2	338	338	88	88		2	304	304	91	91			
39,2	32,5	1	242	433	242	51	30	1	227	425	227	29	90		
		2	377	377	107	107		2	367	367	87	87			
43,7	42,5	1	272	479	272	64	31	1	257	507	257	7	96		
		2	418	418	125	125		2	433	433	80	80			
48,2	55,0	1	308	533	308	82	33	1	278	613	278	0	103		
		2	467	467	148	148		2	509	509	76	76			
52,7	67,5	1	346	589	346	102	35	1	294	736	294	0	110		
		2	518	518	174	174		2	591	591	71	71			
57,2	87,5	1	403	667	403	139	37	1	341	871	341	0	119		
		2	589	589	216	216		2	696	696	80	80			
61,7	110,0	1	466	752	466	181	39	1	394	1017	394	0	127		
		2	668	668	264	264		2	811	811	92	92			
66,2	135,0	1	536	846	536	226	41	1	451	1181	451	0	135		
		2	755	755	317	317		2	938	938	103	103			



3.2.3.3 Centralballasts and Cornerloads according to DIN 15019

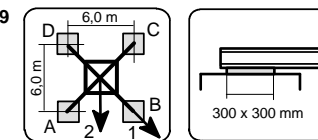
for a standing tower crane on a cross frame without climbing gear



KR 10 - 46		Corner distance 6,0 m x 6,0 m								jib 40 m				
Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Cornerloads						Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
12,2	15,0	1	177	313	177	40	21	1	97	234	97	0	45	
		2	273	273	80	80		2	194	194	52	52		
16,7	15,0	1	181	327	181	36	23	1	99	247	99	0	50	
		2	284	284	79	79		2	204	204	51	51		
21,2	15,0	1	186	341	186	31	24	1	101	262	101	0	64	
		2	296	296	76	76		2	215	215	49	49		
25,7	15,0	1	190	357	190	24	26	1	101	279	101	0	71	
		2	308	308	73	73		2	226	226	124	124		
30,2	15,0	1	195	373	195	17	27	1	101	298	101	0	77	
		2	321	321	69	69		2	259	259	101	101		
34,7	22,5	1	218	410	218	26	29	1	203	358	203	48	84	
		2	354	354	82	82		2	313	313	94	94		
39,2	32,5	1	248	455	248	41	30	1	233	436	233	30	91	
		2	394	394	101	101		2	376	376	89	89		
43,7	42,5	1	277	501	277	54	32	1	262	518	262	7	97	
		2	436	436	119	119		2	443	443	82	82		
48,2	55,0	1	313	555	313	71	33	1	283	626	283	0	104	
		2	484	484	142	142		2	520	520	77	77		
52,7	67,5	1	352	613	352	90	35	1	298	750	298	0	111	
		2	536	536	167	167		2	602	602	71	71		
57,2	87,5	1	409	690	409	127	37	1	344	887	344	0	119	
		2	608	608	209	209		2	707	707	80	80		
61,7	110,0	1	472	776	472	167	39	1	396	1035	396	0	127	
		2	687	687	257	257		2	823	823	91	91		
66,2	135,0	1	541	871	541	212	41	1	453	1201	453	0	136	
		2	774	774	308	308		2	951	951	102	102		

3.2.3.4 Centralballasts and Cornerloads according to DIN 15019

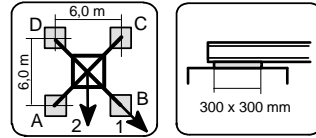
for a standing tower crane on a cross frame without climbing gear



KR 10 - 46		Corner distance 6,0 m x 6,0 m								jib 45 m				
Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Cornerloads						Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
12,2	12,5	1	176	315	176	37	21	1	105	264	105	0	46	
		2	274	274	78	78		2	212	212	25	25		
16,7	12,5	1	181	328	181	33	23	1	106	280	106	0	50	
		2	285	285	76	76		2	222	222	24	24		
21,2	12,5	1	185	343	185	27	24	1	106	297	106	0	65	
		2	297	297	74	74		2	232	232	22	22		
25,7	12,5	1	190	359	190	21	26	1	106	317	106	0	72	
		2	309	309	70	70		2	244	244	20	20		
30,2	12,5	1	194	376	194	13	27	1	104	338	104	0	78	
		2	323	323	66	66		2	272	272	87	87		
34,7	15,0	1	205	400	205	10	29	1	190	365	190	15	85	
		2	343	343	67	67		2	314	314	66	66		
39,2	25,0	1	235	445	235	24	30	1	216	447	216	0	91	
		2	384	384	86	86		2	378	378	61	61		
43,7	37,5	1	270	498	270	43	32	1	234	554	234	0	98	
		2	431	431	109	109		2	451	451	59	59		
48,2	52,5	1	312	559	312	66	33	1	259	671	259	0	105	
		2	487	487	138	138		2	535	535	60	60		
52,7	72,5	1	370	635	370	104	35	1	311	797	311	0	112	
		2	557	557	182	182		2	636	636	73	73		
57,2	92,5	1	427	713	427	140	37	1	355	936	355	0	120	
		2	629	629	224	224		2	742	742	81	81		
61,7	115,0	1	490	800	490	180	39	1	406	1087	406	0	128	
		2	709	709	271	271		2	859	859	91	91		
66,2	140,0	1	560	895	560	224	41	1	461	1256	461	0	137	
		2	797	797	322	322		2	988	988	101	101		

3.2.3.5 Centralballasts and Cornerloads according to DIN 15019

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

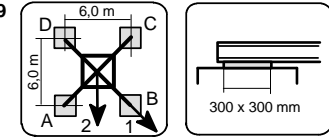


**KR 10 - 46** Corner distance 6,0 m x 6,0 m **jib 50 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
12,2	10,0	1	173	312	173	33	21	1	79	293	79	0	46
		2	271	271	74	74		2	216	216	9	9	
16,7	10,0	1	177	326	177	29	23	1	80	309	80	0	51
		2	282	282	72	72		2	226	226	8	8	
21,2	10,0	1	182	340	182	23	24	1	80	326	80	0	66
		2	294	294	70	70		2	237	237	6	6	
25,7	12,5	1	192	362	192	22	26	1	92	346	92	0	72
		2	313	313	72	72		2	255	255	10	10	
30,2	12,5	1	197	380	197	14	27	1	90	368	90	0	79
		2	326	326	68	68		2	282	282	82	82	
34,7	15,0	1	208	404	208	11	29	1	100	392	100	0	86
		2	347	347	69	69		2	324	324	61	61	
39,2	22,5	1	231	443	231	19	30	1	197	470	197	0	92
		2	381	381	81	81		2	382	382	50	50	
43,7	37,5	1	273	503	273	44	32	1	227	579	227	0	99
		2	435	435	111	111		2	463	463	54	54	
48,2	55,0	1	321	570	321	73	33	1	264	697	264	0	105
		2	497	497	146	146		2	553	553	60	60	
52,7	75,0	1	379	646	379	111	35	1	315	824	315	0	113
		2	568	568	189	189		2	655	655	72	72	
57,2	95,0	1	436	725	436	146	37	1	359	965	359	0	121
		2	640	640	231	231		2	762	762	80	80	
61,7	120,0	1	505	818	505	193	39	1	421	1118	421	0	129
		2	726	726	284	284		2	885	885	95	95	
66,2	145,0	1	575	913	575	236	41	1	475	1288	475	0	137
		2	814	814	335	335		2	1015	1015	104	104	

3.2.3.6 Centralballasts and Cornerloads according to DIN 15019

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

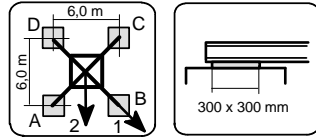


**KR 10 - 46** Corner distance 6,0 m x 6,0 m **jib 55 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
12,2	20,0	1	205	335	205	76	22	1	96	365	96	0	47
		2	297	297	114	114		2	268	268	10	10	
16,7	20,0	1	210	349	210	71	23	1	97	381	97	0	52
		2	308	308	112	112		2	278	278	9	9	
21,2	22,5	1	221	370	221	72	25	1	109	399	109	0	67
		2	326	326	115	115		2	296	296	13	13	
25,7	22,5	1	225	386	225	65	26	1	108	420	108	0	73
		2	339	339	112	112		2	307	307	11	11	
30,2	25,0	1	236	409	236	63	28	1	118	442	118	0	80
		2	358	358	114	114		2	330	330	112	112	
34,7	27,5	1	247	434	247	60	29	1	128	467	128	0	86
		2	379	379	114	114		2	373	373	91	91	
39,2	30,0	1	258	461	258	55	31	1	236	499	236	0	93
		2	401	401	114	114		2	419	419	66	66	
43,7	40,0	1	287	507	287	67	32	1	240	609	240	0	99
		2	443	443	131	131		2	487	487	57	57	
48,2	57,5	1	335	575	335	96	34	1	276	730	276	0	106
		2	505	505	166	166		2	578	578	62	62	
52,7	77,5	1	393	652	393	133	36	1	326	859	326	0	114
		2	576	576	209	209		2	681	681	74	74	
57,2	97,5	1	450	730	450	169	38	1	368	1002	368	0	122
		2	648	648	251	251		2	789	789	80	80	
61,7	122,5	1	519	824	519	215	39	1	430	1158	430	0	130
		2	734	734	304	304		2	913	913	95	95	
66,2	147,5	1	589	919	589	258	41	1	482	1331	482	0	138
		2	822	822	355	355		2	1045	1045	103	103	

3.2.3.7 Centralballasts and Cornerloads according to DIN 15019

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

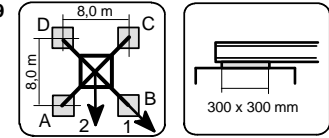


**KR 10 - 46** Corner distance 6,0 m x 6,0 m **jib 60 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
12,2	20,0	1	214	351	214	76	22	1	105	387	105	0	47		
		2	311	311	117	117		2	286	286	13	13			
16,7	20,0	1	218	365	218	72	23	1	106	404	106	0	52		
		2	322	322	115	115		2	297	297	11	11			
21,2	20,0	1	223	380	223	66	25	1	106	423	106	0	67		
		2	334	334	112	112		2	308	308	9	9			
25,7	22,5	1	234	402	234	65	26	1	117	444	117	0	74		
		2	353	353	114	114		2	326	326	13	13			
30,2	25,0	1	244	426	244	63	28	1	127	467	127	0	80		
		2	373	373	116	116		2	357	357	102	102			
34,7	25,0	1	249	445	249	53	29	1	123	493	123	0	87		
		2	388	388	110	110		2	394	394	74	74			
39,2	27,5	1	260	472	260	47	31	1	212	555	212	0	94		
		2	410	410	110	110		2	441	441	48	48			
43,7	45,0	1	308	539	308	78	32	1	252	668	252	0	100		
		2	471	471	145	145		2	529	529	57	57			
48,2	62,5	1	356	607	356	106	34	1	287	792	287	0	107		
		2	533	533	179	179		2	621	621	61	61			
52,7	82,5	1	413	684	413	143	36	1	335	924	335	0	114		
		2	605	605	222	222		2	725	725	72	72			
57,2	105,0	1	477	769	477	184	38	1	389	1070	389	0	122		
		2	684	684	270	270		2	840	840	84	84			
61,7	130,0	1	546	864	546	229	40	1	448	1229	448	0	130		
		2	771	771	322	322		2	966	966	97	97			
66,2	157,5	1	622	966	622	278	42	1	511	1407	511	0	139		
		2	866	866	379	379		2	1105	1105	110	110			

3.2.4.1 Centralballasts and Cornerloads according to DIN 15019

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

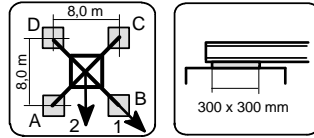


**KR 1000 - 8** Corner distance 8,0 m x 8,0 m **jib 30 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
12,2	0,0	1	142	236	142	47	21	1	83	175	83	0	44		
		2	208	208	75	75		2	147	147	23	23			
16,7	0,0	1	149	250	149	47	23	1	92	185	92	0	50		
		2	220	220	77	77		2	158	158	27	27			
21,2	0,0	1	153	262	153	45	25	1	95	196	95	0	64		
		2	230	230	77	77		2	166	166	27	27			
25,7	0,0	1	158	274	158	41	26	1	98	209	98	0	71		
		2	240	240	75	75		2	178	178	107	107			
30,2	0,0	1	162	287	162	37	28	1	147	226	147	68	78		
		2	251	251	74	74		2	203	203	92	92			
34,7	0,0	1	167	302	167	32	29	1	152	262	152	41	84		
		2	262	262	72	72		2	230	230	74	74			
39,2	5,0	1	184	329	184	38	31	1	169	314	169	23	91		
		2	287	287	81	81		2	272	272	66	66			
43,7	12,5	1	207	364	207	50	32	1	192	376	192	9	97		
		2	318	318	96	96		2	322	322	62	62			
48,2	20,0	1	230	400	230	61	34	1	206	450	206	0	104		
		2	351	351	110	110		2	375	375	56	56			
52,7	30,0	1	260	444	260	76	35	1	220	541	220	0	110		
		2	390	390	130	130		2	436	436	54	54			
57,2	42,5	1	298	497	298	100	37	1	246	640	246	0	119		
		2	439	439	158	158		2	510	510	57	57			
61,7	57,5	1	343	558	343	128	39	1	282	749	282	0	127		
		2	495	495	191	191		2	593	593	63	63			
66,2	77,5	1	400	632	400	168	41	1	336	869	336	0	135		
		2	564	564	236	236		2	692	692	78	78			
70,7	95,0	1	452	702	452	202	43	1	377	994	377	0	144		
		2	629	629	275	275		2	788	788	85	85			
75,2	115,0	1	510	779	510	240	45	1	425	1129	425	0	154		
		2	700	700	319	319		2	894	894	95	95			

3.2.4.2 Centralballasts and Cornerloads according to DIN 15019

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

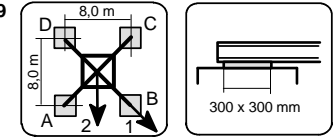


**KR 1000 - 8** Corner distance 8,0 m x 8,0 m **jib 35 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
12,2	0,0	1	149	241	149	58	21	1	82	175	82	0	45
		2	214	214	84	84		2	153	153	115	115	
16,7	0,0	1	156	255	156	58	23	1	91	186	91	0	51
		2	226	226	87	87		2	158	158	26	26	
21,2	0,0	1	161	267	161	55	25	1	95	197	95	0	65
		2	236	236	86	86		2	166	166	27	27	
25,7	0,0	1	165	279	165	52	26	1	98	209	98	0	71
		2	246	246	85	85		2	187	187	114	114	
30,2	0,0	1	170	292	170	48	28	1	155	236	155	74	78
		2	257	257	83	83		2	213	213	97	97	
34,7	0,0	1	175	307	175	42	29	1	160	273	160	46	85
		2	268	268	81	81		2	240	240	79	79	
39,2	2,5	1	185	328	185	42	31	1	170	319	170	22	91
		2	286	286	84	84		2	276	276	65	65	
43,7	10,0	1	209	364	209	54	32	1	194	381	194	6	98
		2	318	318	99	99		2	326	326	61	61	
48,2	17,5	1	232	400	232	64	34	1	205	459	205	0	104
		2	351	351	113	113		2	379	379	55	55	
52,7	27,5	1	262	444	262	79	35	1	218	551	218	0	111
		2	390	390	133	133		2	441	441	52	52	
57,2	42,5	1	306	503	306	109	37	1	257	651	257	0	119
		2	445	445	167	167		2	521	521	61	61	
61,7	57,5	1	351	564	351	137	39	1	291	761	291	0	127
		2	502	502	200	200		2	605	605	67	67	
66,2	75,0	1	402	633	402	170	41	1	332	883	332	0	136
		2	565	565	238	238		2	699	699	74	74	
70,7	95,0	1	460	709	460	210	43	1	384	1009	384	0	145
		2	636	636	283	283		2	801	801	88	88	
75,2	115,0	1	518	786	518	249	45	1	432	1147	432	0	154
		2	708	708	327	327		2	908	908	97	97	

3.2.4.3 Centralballasts and Cornerloads according to DIN 15019

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

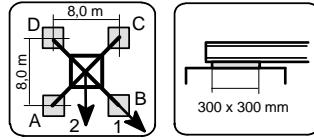


**KR 1000 - 8** Corner distance 8,0 m x 8,0 m **jib 40 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
12,2	0,0	1	155	257	155	53	21	1	101	177	101	26	45
		2	227	227	83	83		2	158	158	122	122	
16,7	0,0	1	162	271	162	53	23	1	108	190	108	27	51
		2	239	239	85	85		2	166	166	51	51	
21,2	0,0	1	167	283	167	50	25	1	113	201	113	25	66
		2	249	249	84	84		2	175	175	51	51	
25,7	0,0	1	171	296	171	46	26	1	117	212	117	22	72
		2	259	259	83	83		2	195	195	117	117	
30,2	0,0	1	176	309	176	42	28	1	161	245	161	76	79
		2	270	270	81	81		2	220	220	101	101	
34,7	0,0	1	180	324	180	36	29	1	165	282	165	48	85
		2	282	282	79	79		2	248	248	83	83	
39,2	0,0	1	185	340	185	30	31	1	170	322	170	17	92
		2	294	294	75	75		2	278	278	62	62	
43,7	7,5	1	208	375	208	41	32	1	193	385	193	2	99
		2	326	326	90	90		2	329	329	58	58	
48,2	17,5	1	238	418	238	57	34	1	211	468	211	0	105
		2	365	365	110	110		2	388	388	57	57	
52,7	27,5	1	267	462	267	72	35	1	224	561	224	0	112
		2	405	405	129	129		2	451	451	54	54	
57,2	42,5	1	312	522	312	101	37	1	262	663	262	0	120
		2	461	461	163	163		2	531	531	62	62	
61,7	57,5	1	356	584	356	129	39	1	296	774	296	0	128
		2	517	517	195	195		2	615	615	68	68	
66,2	75,0	1	407	653	407	161	41	1	336	897	336	0	136
		2	581	581	233	233		2	709	709	75	75	
70,7	95,0	1	465	730	465	201	43	1	388	1025	388	0	146
		2	652	652	278	278		2	813	813	88	88	
75,2	115,0	1	523	807	523	239	46	1	434	1164	434	0	155
		2	724	724	322	322		2	920	920	96	96	

3.2.4.4 Centralballasts and Cornerloads according to DIN 15019

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

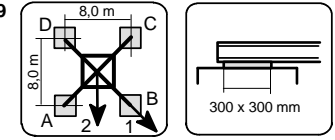


**KR 1000 - 8** Corner distance 8,0 m x 8,0 m **jib 45 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
12,2	0,0	1	160	265	160	56	21	1	103	202	103	4	46		
		2	234	234	87	87		2	173	173	33	33			
16,7	0,0	1	168	279	168	57	23	1	110	215	110	5	52		
		2	246	246	89	89		2	184	184	35	35			
21,2	0,0	1	172	290	172	54	25	1	114	226	114	3	66		
		2	256	256	88	88		2	193	193	35	35			
25,7	0,0	1	177	303	177	50	26	1	119	238	119	0	73		
		2	266	266	87	87		2	210	210	113	113			
30,2	0,0	1	181	317	181	45	28	1	166	265	166	68	80		
		2	277	277	85	85		2	236	236	96	96			
34,7	0,0	1	186	332	186	40	30	1	171	302	171	39	86		
		2	289	289	82	82		2	264	264	78	78			
39,2	0,0	1	190	348	190	33	31	1	175	343	175	7	93		
		2	302	302	79	79		2	294	294	57	57			
43,7	5,0	1	207	377	207	38	33	1	177	415	177	0	99		
		2	327	327	87	87		2	339	339	46	46			
48,2	15,0	1	237	420	237	53	34	1	193	502	193	0	106		
		2	367	367	107	107		2	399	399	45	45			
52,7	30,0	1	279	478	279	80	36	1	230	596	230	0	113		
		2	419	419	139	139		2	475	475	53	53			
57,2	45,0	1	324	538	324	109	37	1	267	700	267	0	121		
		2	475	475	172	172		2	556	556	61	61			
61,7	60,0	1	368	600	368	137	39	1	300	813	300	0	129		
		2	532	532	204	204		2	640	640	66	66			
66,2	80,0	1	425	676	425	175	41	1	351	938	351	0	137		
		2	602	602	248	248		2	742	742	78	78			
70,7	97,5	1	477	746	477	208	44	1	390	1068	390	0	146		
		2	667	667	287	287		2	839	839	84	84			
75,2	120,0	1	541	830	541	252	46	1	448	1209	448	0	156		
		2	746	746	337	337		2	954	954	99	99			

3.2.4.5 Centralballasts and Cornerloads according to DIN 15019

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

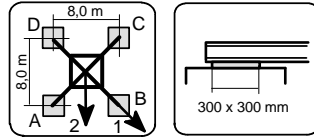


**KR 1000 - 8** Corner distance 8,0 m x 8,0 m **jib 50 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
12,2	0,0	1	163	268	163	59	22	1	97	220	97	0	46		
		2	237	237	89	89		2	181	181	26	26			
16,7	0,0	1	170	282	170	59	24	1	105	232	105	0	52		
		2	249	249	91	91		2	192	192	28	28			
21,2	0,0	1	175	294	175	56	25	1	107	245	107	0	67		
		2	259	259	91	91		2	202	202	28	28			
25,7	0,0	1	179	307	179	52	27	1	109	260	109	0	74		
		2	270	270	89	89		2	218	218	111	111			
30,2	0,0	1	184	321	184	47	28	1	110	276	110	0	80		
		2	281	281	87	87		2	244	244	94	94			
34,7	0,0	1	189	336	189	41	30	1	174	313	174	34	87		
		2	292	292	85	85		2	272	272	75	75			
39,2	0,0	1	193	352	193	35	31	1	178	354	178	2	94		
		2	305	305	81	81		2	303	303	53	53			
43,7	5,0	1	210	381	210	39	33	1	174	433	174	0	100		
		2	331	331	89	89		2	348	348	42	42			
48,2	17,5	1	246	431	246	61	34	1	201	521	201	0	107		
		2	377	377	115	115		2	415	415	47	47			
52,7	32,5	1	288	488	288	88	36	1	238	617	238	0	113		
		2	430	430	146	146		2	491	491	55	55			
57,2	47,5	1	333	549	333	116	38	1	274	721	274	0	121		
		2	485	485	180	180		2	573	573	62	62			
61,7	62,5	1	377	611	377	144	40	1	306	835	306	0	129		
		2	542	542	212	212		2	657	657	67	67			
66,2	82,5	1	434	687	434	182	41	1	357	962	357	0	138		
		2	613	613	256	256		2	759	759	79	79			
70,7	102,5	1	492	764	492	221	44	1	408	1093	408	0	147		
		2	684	684	300	300		2	864	864	91	91			
75,2	122,5	1	550	842	550	258	46	1	452	1236	452	0	156		
		2	757	757	344	344		2	972	972	98	98			

3.2.4.6 Centralballasts and Cornerloads according to DIN 15019

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

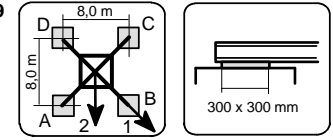


**KR 1000 - 8** Corner distance 8,0 m x 8,0 m **jib 55 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
12,2	0,0	1	171	268	171	74	22	1	73	274	73	0	47
		2	240	240	102	102		2	202	202	8	8	
16,7	0,0	1	178	282	178	74	24	1	80	286	80	0	53
		2	252	252	104	104		2	213	213	11	11	
21,2	0,0	1	183	294	183	71	25	1	83	300	83	0	68
		2	262	262	104	104		2	222	222	10	10	
25,7	0,0	1	187	307	187	67	27	1	84	315	84	0	75
		2	272	272	102	102		2	232	232	10	10	
30,2	0,0	1	192	321	192	62	28	1	85	332	85	0	81
		2	283	283	100	100		2	259	259	95	95	
34,7	0,0	1	196	336	196	56	30	1	85	350	85	0	88
		2	295	295	97	97		2	287	287	75	75	
39,2	2,5	1	207	359	207	56	31	1	192	379	192	5	94
		2	314	314	100	100		2	324	324	60	60	
43,7	5,0	1	218	382	218	54	33	1	178	455	178	0	101
		2	334	334	102	102		2	364	364	42	42	
48,2	17,5	1	254	432	254	75	34	1	205	545	205	0	107
		2	380	380	128	128		2	431	431	46	46	
52,7	32,5	1	296	489	296	102	36	1	240	642	240	0	114
		2	433	433	159	159		2	508	508	54	54	
57,2	47,5	1	340	550	340	131	38	1	276	749	276	0	122
		2	489	489	192	192		2	590	590	61	61	
61,7	65,0	1	391	618	391	164	40	1	320	865	320	0	130
		2	552	552	230	230		2	682	682	70	70	
66,2	85,0	1	448	695	448	202	42	1	369	994	369	0	139
		2	623	623	274	274		2	785	785	82	82	
70,7	102,5	1	500	766	500	234	44	1	406	1127	406	0	148
		2	688	688	312	312		2	884	884	86	86	
75,2	125,0	1	564	851	564	278	46	1	462	1272	462	0	157
		2	767	767	362	362		2	999	999	99	99	

3.2.4.7 Centralballasts and Cornerloads according to DIN 15019

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



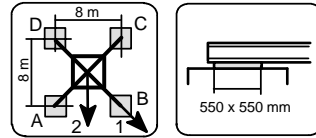
**KR 1000 - 8** Corner distance 8,0 m x 8,0 m **jib 60 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
12,2	0,0	1	179	283	179	76	22	1	85	291	85	0	48
		2	252	252	107	107		2	218	218	12	12	
16,7	0,0	1	187	297	187	76	24	1	93	304	93	0	53
		2	264	264	109	109		2	230	230	15	15	
21,2	0,0	1	191	309	191	73	25	1	95	317	95	0	69
		2	274	274	108	108		2	239	239	15	15	
25,7	0,0	1	196	322	196	69	27	1	96	333	96	0	75
		2	285	285	106	106		2	254	254	107	107	
30,2	0,0	1	200	336	200	64	28	1	97	350	97	0	82
		2	296	296	104	104		2	281	281	89	89	
34,7	0,0	1	205	351	205	58	30	1	96	369	96	0	88
		2	308	308	101	101		2	310	310	70	70	
39,2	0,0	1	209	368	209	51	31	1	181	416	181	0	95
		2	321	321	97	97		2	341	341	47	47	
43,7	7,5	1	233	404	233	61	33	1	186	499	186	0	102
		2	354	354	111	111		2	394	394	41	41	
48,2	22,5	1	275	461	275	89	34	1	224	591	224	0	108
		2	406	406	143	143		2	468	468	51	51	
52,7	37,5	1	317	519	317	115	36	1	258	691	258	0	115
		2	460	460	174	174		2	546	546	57	57	
57,2	52,5	1	361	580	361	143	38	1	293	799	293	0	123
		2	516	516	207	207		2	629	629	64	64	
61,7	70,0	1	412	649	412	175	40	1	335	918	335	0	131
		2	579	579	245	245		2	722	722	72	72	
66,2	90,0	1	469	726	469	212	42	1	383	1051	383	0	139
		2	651	651	288	288		2	826	826	83	83	
70,7	110,0	1	527	803	527	251	44	1	431	1186	431	0	149
		2	722	722	332	332		2	932	932	93	93	
75,2	130,0	1	585	883	585	288	46	1	473	1334	473	0	158
		2	796	796	375	375		2	1042	1042	98	98	

3.2.5.1 Centralballasts and Cornerloads according to DIN 15019

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

**Attention!**  
for the **WOLFF 6017.6** only the section is valid for height under hook.



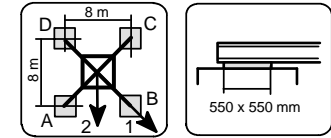
**KR 16 - 80** Corner distance 8,0 m x 8,0 m **jib 30 m**

height under hook [m]	Center ballasts [t]	jib position	Crane in service torque moment: 240 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]		
79,6	80,3	140	1	603	924	603	281	52	1	499	1312	499	0	171
			2	830	830	375	375		2	1042	1042	113	113	
81,8	82,5	140	1	616	945	616	287	54	1	499	1366	499	0	173
			2	849	849	384	384		2	1074	1074	108	108	
86,3	87,0	165	1	687	1039	687	334	56	1	560	1527	560	0	183
			2	936	936	437	437		2	1202	1202	122	122	
90,8	91,5	190	1	761	1138	761	384	58	1	622	1698	623	0	194
			2	1027	1027	494	494		2	1336	1336	135	135	
95,3	96,0	215	1	835	1238	835	432	61	1	676	1886	677	0	206
			2	1120	1120	550	550		2	1477	1477	143	143	
99,8	100,5	270	1	984	1415	984	553	64	1	813	2210	813	0	223
			2	1289	1289	679	679		2	1740	1740	177	177	

3.2.5.2 Centralballasts and Cornerloads according to DIN 15019

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

**Attention!**  
for the **WOLFF 6017.6** only the section is valid for height under hook.



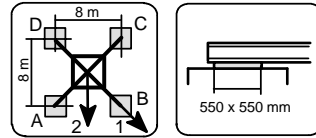
**KR 16 - 80** Corner distance 8,0 m x 8,0 m **jib 35 m**

height under hook [m]	Center ballasts [t]	jib position	Crane in service torque moment: 240 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]		
79,6	80,3	140	1	610	934	610	287	52	1	504	1334	504	0	172
			2	839	839	382	382		2	1057	1057	114	114	
81,8	82,5	140	1	624	954	624	293	54	1	504	1388	504	0	174
			2	857	857	390	390		2	1090	1090	108	108	
86,3	87,0	165	1	694	1049	694	340	56	1	564	1550	564	0	183
			2	945	945	444	444		2	1218	1218	121	121	
90,8	91,5	190	1	768	1148	768	389	59	1	625	1723	626	0	194
			2	1037	1037	500	500		2	1353	1353	134	134	
95,3	96,0	220	1	855	1261	855	449	61	1	703	1914	704	0	206
			2	1142	1142	568	568		2	1507	1507	153	153	
99,8	100,5	270	1	992	1426	992	557	64	1	812	2243	812	0	224
			2	1299	1299	684	684		2	1760	1760	173	173	

3.2.5.3 Centralballasts and Cornerloads according to DIN 15019

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

**Attention!**  
for the **WOLFF 6017.6** only the section is valid for height under hook.



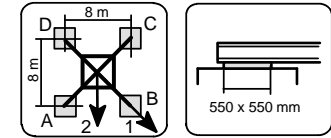
<b>KR 16 - 80</b>	<b>Corner distance 8,0 m x 8,0 m</b>	<b>jib 40 m</b>
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height under hook [m]	Center ballasts [t]	jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Corner loads						Corner loads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
79,6	80,3	140	1	616	940	616	292	52	1	504	1357	504	0	172
			2	845	845	387	387		2	1071	1071	111	111	
81,8	82,5	145	1	642	972	642	312	54	1	529	1410	529	0	174
			2	875	875	409	409		2	1116	1116	118	118	
86,3	87,0	170	1	712	1067	713	358	56	1	588	1575	588	0	184
			2	963	963	462	462		2	1244	1244	131	131	
90,8	91,5	195	1	787	1166	787	407	59	1	649	1749	649	0	195
			2	1055	1055	518	518		2	1380	1380	143	143	
95,3	96,0	220	1	861	1267	861	454	61	1	701	1941	701	0	207
			2	1148	1148	573	573		2	1522	1522	149	149	
99,8	100,5	275	1	1010	1445	1010	574	64	1	831	2277	831	0	225
			2	1318	1318	702	702		2	1790	1790	180	180	

3.2.5.4 Centralballasts and Cornerloads according to DIN 15019

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

**Attention!**  
for the **WOLFF 6017.6** only the section is valid for height under hook.



<b>KR 16 - 80</b>	<b>Corner distance 8,0 m x 8,0 m</b>	<b>jib 45 m</b>
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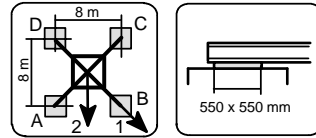
height under hook [m]	Center ballasts [t]	jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Corner loads						Corner loads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
79,6	80,3	145	1	635	965	635	305	53	1	517	1408	517	0	173
			2	869	869	402	402		2	1108	1108	112	112	
81,8	82,5	150	1	661	998	661	325	54	1	543	1460	543	0	175
			2	899	899	423	423		2	1153	1153	120	120	
86,3	87,0	175	1	732	1093	732	370	56	1	600	1627	600	0	185
			2	987	987	476	476		2	1282	1282	131	131	
90,8	91,5	200	1	806	1193	806	419	59	1	660	1804	660	0	196
			2	1080	1080	532	532		2	1419	1419	143	143	
95,3	96,0	225	1	880	1294	880	466	61	1	710	1999	710	0	208
			2	1173	1173	587	587		2	1562	1562	148	148	
99,8	100,5	280	1	1029	1473	1029	585	64	1	837	2341	837	0	225
			2	1343	1343	715	715		2	1832	1832	176	176	



3.2.5.5 Centralballasts and Cornerloads according to DIN 15019

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

**Attention!**  
for the **WOLFF 6017.6** only the section is valid for height under hook.



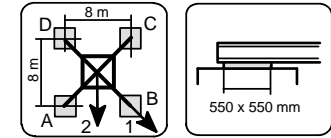
**KR 16 - 80** Corner distance 8,0 m x 8,0 m **jib 50 m**

height under hook [m]	Center ballasts [t]	jib position	Crane in service torque moment: 240 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]		
79,6	80,3	150	1	650	984	651	317	53	1	532	1439	532	0	174
			2	886	886	415	415		2	1135	1135	117	117	
81,8	82,5	150	1	664	1004	664	324	54	1	532	1492	533	0	176
			2	904	904	424	424		2	1167	1167	112	112	
86,3	87,0	175	1	734	1100	735	369	57	1	589	1660	589	0	186
			2	993	993	476	476		2	1297	1297	122	122	
90,8	91,5	205	1	821	1212	821	430	59	1	673	1838	673	0	196
			2	1097	1097	545	545		2	1446	1446	146	146	
95,3	96,0	230	1	895	1314	895	477	62	1	723	2035	723	0	209
			2	1191	1191	599	599		2	1590	1590	151	151	
99,8	100,5	285	1	1044	1492	1044	596	64	1	848	2382	848	0	226
			2	1361	1361	727	727		2	1861	1861	177	177	

3.2.5.6 Centralballasts and Cornerloads according to DIN 15019

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

**Attention!**  
for the **WOLFF 6017.6** only the section is valid for height under hook.



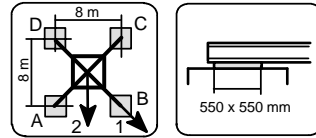
**KR 16 - 80** Corner distance 8,0 m x 8,0 m **jib 55 m**

height under hook [m]	Center ballasts [t]	jib position	Crane in service torque moment: 240 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]		
79,6	80,3	150	1	658	987	658	329	53	1	526	1481	526	0	175
			2	891	891	426	426		2	1157	1157	109	109	
81,8	82,5	155	1	684	1019	684	349	54	1	552	1533	553	0	177
			2	921	921	447	447		2	1201	1201	117	117	
86,3	87,0	180	1	755	1116	755	394	57	1	608	1704	608	0	186
			2	1010	1010	500	500		2	1332	1332	127	127	
90,8	91,5	205	1	829	1216	829	442	59	1	666	1885	666	0	197
			2	1102	1102	555	555		2	1470	1470	137	137	
95,3	96,0	235	1	915	1330	915	501	62	1	739	2084	739	0	209
			2	1209	1209	622	622		2	1627	1627	154	154	
99,8	100,5	290	1	1064	1509	1065	620	64	1	860	2438	860	0	227
			2	1379	1379	750	750		2	1902	1902	177	177	

3.2.5.7 Centralballasts and Cornerloads according to DIN 15019

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

**Attention!**  
for the **WOLFF 6017.6** only the section is valid for height under hook.



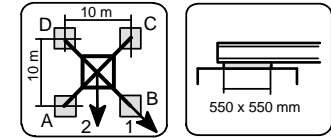
**KR 16 - 80** Corner distance 8,0 m x 8,0 m **jib 60 m**

height under hook [m]	Center ballasts [t]	jib position	Crane in service torque moment: 240 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]		
79,6	80,3	160	1	689	1021	689	358	53	1	562	1543	562	0	175
			2	924	924	455	455		2	1213	1213	121	121	
81,8	82,5	160	1	703	1040	703	365	54	1	564	1594	564	0	177
			2	941	941	464	464		2	1244	1244	117	117	
86,3	87,0	185	1	773	1136	773	410	56	1	618	1768	618	0	187
			2	1030	1030	516	516		2	1376	1376	125	125	
90,8	91,5	215	1	860	1249	860	470	59	1	699	1951	699	0	197
			2	1135	1135	584	584		2	1527	1527	147	147	
95,3	96,0	245	1	946	1364	946	529	62	1	771	2153	771	0	210
			2	1242	1242	651	651		2	1685	1685	162	162	
99,8	100,5	300	1	1095	1543	1095	648	64	1	889	2514	889	0	228
			2	1412	1412	779	779		2	1962	1962	184	184	

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 6017.6** only the section is valid for height under hook.



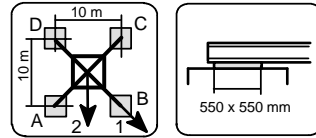
**KR 16 - 100** Corner distance 10,0 m x 10,0 m **jib 30 m**

height under hook [m]	Center ballasts [t]	jib position	Crane in service torque moment: 240 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]		
79,6	80,3	90	1	483	740	483	225	52	1	391	1050	391	0	171
			2	665	665	301	301		2	829	829	86	86	
81,8	82,5	90	1	496	759	496	233	54	1	396	1093	396	0	173
			2	682	682	310	310		2	858	858	84	84	
86,3	87,0	110	1	554	836	554	272	56	1	448	1221	448	0	183
			2	753	753	355	355		2	961	961	97	97	
90,8	91,5	130	1	616	917	616	314	58	1	502	1358	502	0	194
			2	829	829	402	402		2	1071	1071	110	110	
95,3	96,0	150	1	677	1000	677	355	61	1	550	1509	550	0	206
			2	905	905	449	449		2	1186	1186	119	119	
99,8	100,5	190	1	789	1134	789	444	64	1	644	1768	644	0	223
			2	1033	1033	545	545		2	1389	1389	139	139	

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 6017.6** only the section is valid for height under hook.



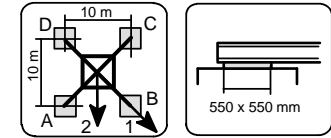
**KR 16 - 100** Corner distance 10,0 m x 10,0 m **jib 35 m**

height under hook [m]	Center ballasts [m]	Center ballasts [t]	jib position	Crane in service torque moment: 240 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]	
79,6	80,3	90	1	490	749	490	231	52	1	397	1067	397	0	172
			2	673	673	307	307		2	843	843	88	88	
81,8	82,5	90	1	504	768	504	240	54	1	403	1110	403	0	174
			2	691	691	317	317		2	871	871	86	86	
86,3	87,0	110	1	562	845	562	278	56	1	454	1240	454	0	183
			2	762	762	361	361		2	975	975	98	98	
90,8	91,5	130	1	623	927	623	320	59	1	508	1378	508	0	194
			2	838	838	409	409		2	1086	1086	111	111	
95,3	96,0	150	1	685	1010	685	360	61	1	555	1531	555	0	206
			2	915	915	455	455		2	1201	1201	119	119	
99,8	100,5	190	1	797	1144	797	449	64	1	646	1794	646	0	224
			2	1042	1042	551	551		2	1406	1406	137	137	

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 6017.6** only the section is valid for height under hook.



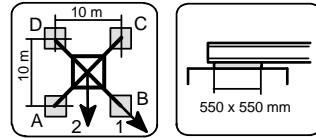
**KR 16 - 100** Corner distance 10,0 m x 10,0 m **jib 40 m**

height under hook [m]	Center ballasts [m]	Center ballasts [t]	jib position	Crane in service torque moment: 240 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]	
79,6	80,3	90	1	496	755	496	237	52	1	400	1085	400	0	172
			2	679	679	313	313		2	855	855	87	87	
81,8	82,5	95	1	522	786	522	258	54	1	430	1128	430	0	174
			2	709	709	335	335		2	896	896	98	98	
86,3	87,0	110	1	567	851	568	284	56	1	455	1260	456	0	184
			2	768	768	367	367		2	988	988	97	97	
90,8	91,5	130	1	629	933	629	325	59	1	509	1399	509	0	195
			2	844	844	414	414		2	1099	1099	109	109	
95,3	96,0	155	1	703	1028	703	378	61	1	580	1553	580	0	207
			2	933	933	473	473		2	1227	1227	129	129	
99,8	100,5	195	1	815	1163	815	466	64	1	669	1821	669	0	225
			2	1061	1061	568	568		2	1434	1434	146	146	

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 6017.6** only the section is valid for height under hook.



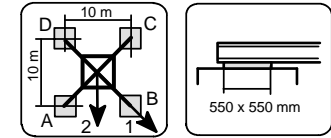
<b>KR 16 - 100</b>		<b>Corner distance 10,0 m x 10,0 m</b>				<b>jib 45 m</b>	
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height under hook [m]	Center ballasts [m]	Center ballasts [t]	jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	jib position	Crane out of service 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]	
79,6	80,3	95	1	515	779	515	251	53	1	418	1126	418	0	173
			2	702	702	329	329		2	889	889	92	92	
81,8	82,5	95	1	529	798	529	259	54	1	424	1168	424	0	175
			2	719	719	338	338		2	917	917	91	91	
86,3	87,0	115	1	587	876	587	297	56	1	473	1302	473	0	185
			2	791	791	382	382		2	1022	1022	101	101	
90,8	91,5	135	1	648	958	648	339	59	1	525	1443	525	0	196
			2	867	867	429	429		2	1134	1134	113	113	
95,3	96,0	155	1	710	1041	710	378	61	1	570	1599	571	0	208
			2	944	944	476	476		2	1250	1250	119	119	
99,8	100,5	200	1	834	1189	834	479	64	1	682	1873	682	0	225
			2	1085	1085	583	583		2	1471	1471	147	147	

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 6017.6** only the section is valid for height under hook.



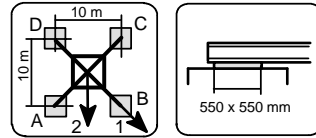
<b>KR 16 - 100</b>		<b>Corner distance 10,0 m x 10,0 m</b>				<b>jib 50 m</b>	
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height under hook [m]	Center ballasts [m]	Center ballasts [t]	jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	jib position	Crane out of service 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]	
79,6	80,3	95	1	518	785	518	251	53	1	411	1151	411	0	174
			2	707	707	329	329		2	900	900	86	86	
81,8	82,5	100	1	544	816	544	272	54	1	442	1193	442	0	176
			2	736	736	352	352		2	941	941	97	97	
86,3	87,0	120	1	602	894	602	310	57	1	490	1328	490	0	186
			2	809	809	395	395		2	1047	1047	107	107	
90,8	91,5	140	1	664	976	664	351	59	1	542	1471	542	0	196
			2	885	885	442	442		2	1159	1159	119	119	
95,3	96,0	160	1	725	1060	725	390	62	1	587	1628	587	0	209
			2	962	962	488	488		2	1276	1276	125	125	
99,8	100,5	205	1	849	1208	849	491	64	1	696	1905	696	0	226
			2	1103	1103	596	596		2	1498	1498	150	150	

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 6017.6** only the section is valid for height under hook.



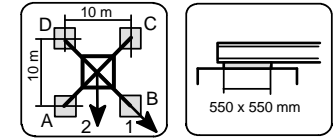
**KR 16 - 100** Corner distance 10,0 m x 10,0 m **jib 55 m**

height under hook [m]	Center ballasts [m]	Center ballasts [t]	jib position	Crane in service torque moment: 240 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]	
79,6	80,3	100	1	538	801	538	275	53	1	434	1185	435	0	175
			2	724	724	352	352		2	932	932	94	94	
81,8	82,5	100	1	552	820	552	284	54	1	441	1226	441	0	177
			2	741	741	362	362		2	960	960	93	93	
86,3	87,0	120	1	610	898	610	321	57	1	488	1363	488	0	186
			2	814	814	406	406		2	1067	1067	103	103	
90,8	91,5	140	1	671	981	671	362	59	1	539	1508	539	0	197
			2	890	890	453	453		2	1180	1180	113	113	
95,3	96,0	165	1	745	1077	745	414	62	1	608	1667	608	0	209
			2	980	980	511	511		2	1310	1310	131	131	
99,8	100,5	205	1	857	1213	857	501	64	1	689	1951	689	0	227
			2	1108	1108	606	606		2	1522	1522	142	142	

3.2.6.7 Centralballasts and Cornerloads according to DIN 15019

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

**Attention!**  
for the **WOLFF 6017.6** only the section is valid for height under hook.

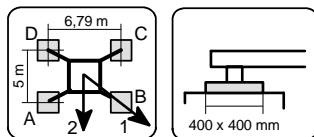


**KR 16 - 100** Corner distance 10,0 m x 10,0 m **jib 60 m**

height under hook [m]	Center ballasts [m]	Center ballasts [t]	jib position	Crane in service torque moment: 240 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]	
79,6	80,3	105	1	557	822	557	292	53	1	451	1235	452	0	175
			2	744	744	369	369		2	971	971	98	98	
81,8	82,5	105	1	570	840	570	300	54	1	458	1275	458	0	177
			2	761	761	379	379		2	999	999	97	97	
86,3	87,0	125	1	628	919	628	338	56	1	504	1414	505	0	187
			2	834	834	423	423		2	1106	1106	106	106	
90,8	91,5	145	1	690	1001	690	378	59	1	554	1561	554	0	197
			2	910	910	470	470		2	1219	1219	115	115	
95,3	96,0	170	1	764	1098	764	430	62	1	622	1723	622	0	210
			2	1000	1000	528	528		2	1351	1351	132	132	
99,8	100,5	215	1	888	1246	888	530	64	1	725	2011	726	0	228
			2	1141	1141	635	635		2	1577	1577	154	154	

3.3.1.1 Centralballasts and Cornerloads according to DIN 15019

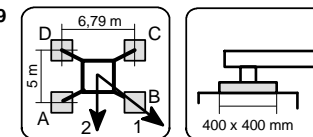
for a standing tower crane on a cross frame element without climbing gear



KRE 260.1 Corner distance 5,0 m x 6,79 m jib 30 m															
Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	35,0	1	256	366	163	53	23	1	191	281	115	25	50		
		2	335	335	83	83	2	256	256	50	50				
19,5	35,0	1	263	380	164	48	25	1	197	293	117	22	64		
		2	347	347	80	80	2	266	266	48	48				
24,0	35,0	1	271	395	166	41	26	1	205	306	119	18	69		
		2	361	361	76	76	2	278	278	46	46				
28,5	35,0	1	279	412	167	34	28	1	212	320	121	13	76		
		2	375	375	71	71	2	290	290	43	43				
33,0	40,0	1	300	442	180	37	29	1	266	362	184	88	82		
		2	403	403	77	77	2	335	335	114	114				
37,5	52,5	1	340	493	211	58	31	1	316	446	206	76	89		
		2	451	451	101	101	2	410	410	112	112				
42,0	65,0	1	381	545	242	78	32	1	367	533	226	60	95		
		2	500	500	123	123	2	487	487	106	106				

3.3.1.2 Centralballasts and Cornerloads according to DIN 15019

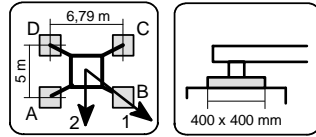
for a standing tower crane on a cross frame element without climbing gear



KRE 260.1 Corner distance 5,0 m x 6,79 m jib 35 m															
Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	25,0	1	232	328	152	56	23	1	165	257	89	0	51		
		2	301	301	83	83	2	231	231	24	24				
19,5	25,0	1	240	342	153	51	25	1	169	272	88	0	65		
		2	314	314	80	80	2	242	242	23	23				
24,0	25,0	1	247	357	155	45	26	1	172	289	87	0	70		
		2	327	327	75	75	2	253	253	21	21				
28,5	27,5	1	262	380	162	44	28	1	187	307	96	0	76		
		2	347	347	76	76	2	276	276	118	118				
33,0	37,5	1	295	423	188	60	29	1	268	368	184	85	83		
		2	388	388	95	95	2	340	340	113	113				
37,5	50,0	1	336	474	219	81	31	1	318	452	206	73	89		
		2	435	435	119	119	2	415	415	110	110				
42,0	62,5	1	376	526	250	100	32	1	370	540	226	56	96		
		2	484	484	142	142	2	493	493	103	103				

3.3.1.3 Centralballasts and Cornerloads according to DIN 15019

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

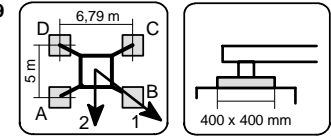


**KRE 260.1** Corner distance 5,0 m x 6,79 m **jib 40 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force			Cornerloads				Horizontal force	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	30,0	1	255	361	165	60	23	1	178	269	102	11	51		
		2	331	331	89	89		2	247	247	66	66			
19,5	30,0	1	262	375	167	54	25	1	197	282	125	40	66		
		2	344	344	85	85		2	258	258	64	64			
24,0	30,0	1	270	391	168	48	26	1	204	296	127	35	70		
		2	357	357	81	81		2	271	271	60	60			
28,5	30,0	1	278	408	169	40	28	1	212	311	128	29	77		
		2	372	372	76	76		2	291	291	127	127			
33,0	37,5	1	306	445	188	49	29	1	275	378	189	86	84		
		2	406	406	88	88		2	350	350	115	115			
37,5	47,5	1	340	490	213	64	31	1	319	456	204	67	90		
		2	448	448	105	105		2	418	418	105	105			
42,0	60,0	1	381	542	244	83	32	1	371	545	224	50	97		
		2	497	497	127	127		2	497	497	98	98			

3.3.1.4 Centralballasts and Cornerloads according to DIN 15019

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

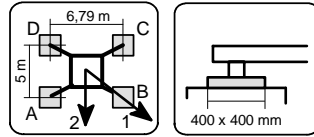


**KRE 260.1** Corner distance 5,0 m x 6,79 m **jib 45 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force			Cornerloads				Horizontal force	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	27,5	1	255	362	164	56	23	1	195	297	109	6	52		
		2	333	333	86	86		2	269	269	35	35			
19,5	27,5	1	262	377	166	51	25	1	202	310	110	2	66		
		2	345	345	83	83		2	280	280	32	32			
24,0	27,5	1	270	393	167	44	26	1	206	328	109	0	71		
		2	359	359	78	78		2	293	293	29	29			
28,5	27,5	1	279	410	168	36	28	1	208	350	104	0	78		
		2	374	374	72	72		2	306	306	25	25			
33,0	30,0	1	294	435	174	33	30	1	268	385	169	53	84		
		2	396	396	72	72		2	353	353	85	85			
37,5	40,0	1	328	480	199	47	31	1	312	464	184	33	91		
		2	438	438	89	89		2	422	422	75	75			
42,0	55,0	1	375	539	236	72	33	1	371	560	210	20	98		
		2	494	494	117	117		2	508	508	73	73			

3.3.1.5 Centralballasts and Cornerloads according to DIN 15019

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

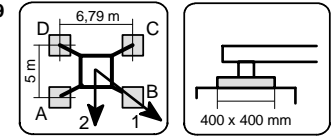


**KRE 260.1** Corner distance 5,0 m x 6,79 m **jib 50 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,0	25,0	1	252	360	160	52	24	1	179	321	84	0	52
		2	330	330	82	82		2	275	275	17	17	
19,5	25,0	1	259	375	162	46	25	1	182	339	81	0	67
		2	343	343	78	78		2	287	287	14	14	
24,0	25,0	1	267	390	163	40	27	1	184	359	77	0	72
		2	356	356	74	74		2	300	300	11	11	
28,5	27,5	1	282	414	170	38	28	1	198	381	85	0	79
		2	377	377	74	74		2	319	319	12	12	
33,0	30,0	1	297	439	177	34	30	1	211	405	90	0	85
		2	400	400	74	74		2	365	365	79	79	
37,5	37,5	1	325	478	195	42	31	1	312	473	177	17	92
		2	435	435	84	84		2	428	428	62	62	
42,0	52,5	1	372	537	232	67	33	1	371	569	203	4	98
		2	491	491	112	112		2	514	514	59	59	

3.3.1.6 Centralballasts and Cornerloads according to DIN 15019

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



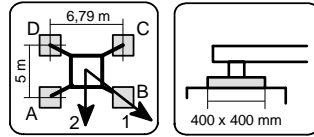
**KRE 260.1** Corner distance 5,0 m x 6,79 m **jib 55 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,0	35,0	1	281	382	196	95	24	1	205	397	87	0	53
		2	354	354	123	123		2	332	332	12	12	
19,5	37,5	1	295	403	204	96	25	1	220	416	97	0	68
		2	373	373	126	126		2	351	351	16	16	
24,0	37,5	1	303	419	205	89	27	1	222	436	93	0	73
		2	387	387	121	121		2	363	363	12	12	
28,5	40,0	1	318	443	212	87	28	1	236	459	100	0	79
		2	408	408	121	121		2	383	383	14	14	
33,0	42,5	1	333	468	219	83	30	1	249	484	105	0	86
		2	431	431	121	121		2	415	415	107	107	
37,5	45,0	1	348	495	225	78	31	1	343	514	200	29	93
		2	454	454	119	119		2	466	466	76	76	
42,0	55,0	1	383	542	249	90	33	1	389	599	213	3	99
		2	498	498	134	134		2	541	541	61	61	



3.3.1.7 Centralballasts and Cornerloads according to DIN 15019

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

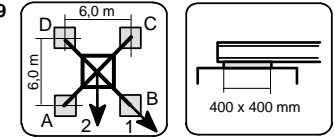


**KRE 260.1** Corner distance 5,0 m x 6,79 m **jib 60 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,0	35,0	1	292	399	202	95	24	1	218	421	93	0	53
		2	369	369	125	125		2	352	352	13	13	
19,5	37,5	1	306	420	210	96	25	1	233	440	102	0	69
		2	389	389	127	127		2	371	371	17	17	
24,0	37,5	1	314	437	211	88	27	1	234	461	98	0	73
		2	403	403	122	122		2	384	384	13	13	
28,5	40,0	1	329	461	218	86	28	1	248	484	104	0	80
		2	424	424	122	122		2	404	404	14	14	
33,0	42,5	1	344	486	224	82	30	1	260	510	109	0	87
		2	447	447	122	122		2	446	446	92	92	
37,5	45,0	1	360	513	230	77	31	1	360	551	199	8	93
		2	470	470	119	119		2	498	498	61	61	
42,0	62,5	1	413	579	273	107	33	1	425	657	230	0	100
		2	533	533	153	153		2	593	593	64	64	

3.3.2.1 Centralballasts and Cornerloads according to DIN 15019

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

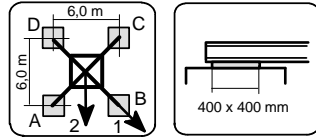


**KRE 260.1** Corner distance 6,0 m x 6,0 m **jib 30 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,0	20,0	1	172	320	172	23	23	1	109	243	109	0	50
		2	277	277	67	67		2	201	201	29	29	
19,5	20,0	1	176	334	176	19	25	1	111	257	111	0	64
		2	288	288	65	65		2	211	211	29	29	
24,0	20,0	1	181	349	181	13	26	1	112	273	112	0	69
		2	300	300	62	62		2	221	221	28	28	
28,5	20,0	1	185	365	185	6	28	1	112	291	112	0	76
		2	312	312	59	59		2	233	233	107	107	
33,0	25,0	1	202	395	202	10	29	1	187	318	187	57	82
		2	338	338	67	67		2	280	280	95	95	
37,5	35,0	1	232	438	232	26	31	1	217	392	217	42	89
		2	378	378	86	86		2	341	341	93	93	
42,0	45,0	1	262	483	262	40	32	1	247	471	247	22	95
		2	418	418	105	105		2	406	406	87	87	
46,5	55,0	1	291	530	291	52	34	1	273	558	273	0	102
		2	460	460	122	122		2	473	473	79	79	

3.3.2.2 Centralballasts and Cornerloads according to DIN 15019

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

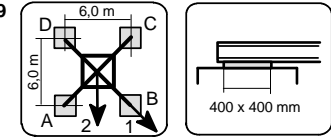


**KRE 260.1** Corner distance 6,0 m x 6,0 m **jib 35 m**

Table with columns for Height under hook [m], Centerballasts [t], Jib position, Crane in service torque moment (240 kNm), Cornerloads (A, B, C, D [kN]), Horizontal force [kN], Crane out of service torque moment (0 kNm), and Horizontal force [kN].

3.3.2.3 Centralballasts and Cornerloads according to DIN 15019

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

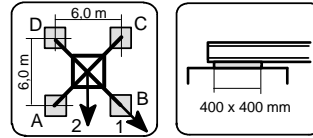


**KRE 260.1** Corner distance 6,0 m x 6,0 m **jib 40 m**

Table with columns for Height under hook [m], Centerballasts [t], Jib position, Crane in service torque moment (240 kNm), Cornerloads (A, B, C, D [kN]), Horizontal force [kN], Crane out of service torque moment (0 kNm), and Horizontal force [kN].

3.3.2.4 Centralballasts and Cornerloads according to DIN 15019

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

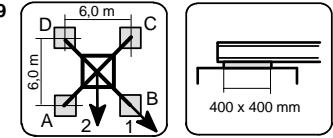


KRE 260.1 Corner distance 6,0 m x 6,0 m **jib 45 m**

Table with 12 columns: Height under hook [m], Centerballasts [t], Jib position, Crane in service torque moment: 240 kNm (Cornerloads A, B, C, D, Horizontal force), Crane out of service torque moment: 0 kNm (Cornerloads A, B, C, D, Horizontal force). Rows include heights from 15.0 to 46.5m and jib positions from 12.5 to 47.5m.

3.3.2.5 Centralballasts and Cornerloads according to DIN 15019

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

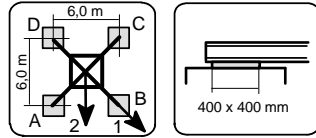


KRE 260.1 Corner distance 6,0 m x 6,0 m **jib 50 m**

Table with 12 columns: Height under hook [m], Centerballasts [t], Jib position, Crane in service torque moment: 240 kNm (Cornerloads A, B, C, D, Horizontal force), Crane out of service torque moment: 0 kNm (Cornerloads A, B, C, D, Horizontal force). Rows include heights from 15.0 to 46.5m and jib positions from 12.5 to 52.5m.

3.3.2.6 Centralballasts and Cornerloads according to DIN 15019

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

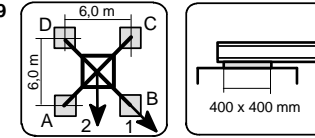


**KRE 260.1** Corner distance 6,0 m x 6,0 m **jib 55 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,0	22,5	1	207	344	207	71	24	1	94	377	94	0	53
		2	304	304	111	111		2	274	274	8	8	
19,5	25,0	1	218	364	218	72	25	1	107	394	107	0	68
		2	321	321	115	115		2	291	291	13	13	
24,0	25,0	1	223	380	223	66	27	1	106	414	106	0	73
		2	334	334	112	112		2	303	303	10	10	
28,5	27,5	1	234	403	234	65	28	1	117	435	117	0	79
		2	353	353	114	114		2	321	321	13	13	
33,0	27,5	1	238	421	238	56	30	1	114	459	114	0	86
		2	367	367	109	109		2	352	352	95	95	
37,5	30,0	1	249	447	249	51	31	1	123	486	123	0	93
		2	389	389	109	109		2	396	396	71	71	
42,0	35,0	1	266	480	266	52	33	1	219	565	219	0	99
		2	417	417	115	115		2	451	451	51	51	
46,5	52,5	1	314	547	314	82	34	1	258	682	258	0	106
		2	479	479	150	150		2	540	540	58	58	

3.3.2.7 Centralballasts and Cornerloads according to DIN 15019

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

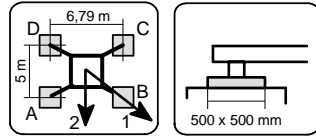


**KRE 260.1** Corner distance 6,0 m x 6,0 m **jib 60 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,0	22,5	1	216	360	216	72	24	1	103	400	103	0	53
		2	318	318	114	114		2	293	293	10	10	
19,5	22,5	1	220	375	220	66	25	1	104	417	104	0	69
		2	329	329	111	111		2	304	304	9	9	
24,0	25,0	1	231	396	231	66	27	1	115	437	115	0	73
		2	348	348	114	114		2	322	322	12	12	
28,5	25,0	1	236	413	236	58	28	1	113	460	113	0	80
		2	361	361	110	110		2	337	337	105	105	
33,0	27,5	1	247	438	247	55	30	1	122	484	122	0	87
		2	382	382	111	111		2	379	379	84	84	
37,5	30,0	1	257	464	257	50	31	1	227	515	227	0	93
		2	404	404	111	111		2	425	425	60	60	
42,0	40,0	1	287	511	287	63	33	1	232	624	232	0	100
		2	445	445	128	128		2	492	492	51	51	
46,5	57,5	1	335	578	335	92	34	1	269	742	269	0	106
		2	507	507	163	163		2	583	583	58	58	

3.3.3.1 Centralballasts and Cornerloads according to DIN 15019

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

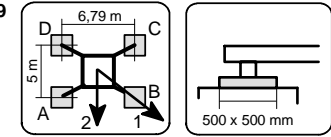


**KRE 260.2** Corner distance 5,0 m x 6,79 m **jib 30 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,0	32,5	1	258	369	165	55	23	1	194	284	117	27	51
		2	338	338	86	86		2	259	259	52	52	
19,5	32,5	1	266	383	167	50	25	1	200	296	120	24	65
		2	350	350	83	83		2	269	269	51	51	
24,0	32,5	1	274	398	169	44	26	1	207	309	122	20	70
		2	364	364	79	79		2	281	281	49	49	
28,5	32,5	1	282	415	170	37	28	1	215	322	124	16	76
		2	378	378	73	73		2	293	293	46	46	
33,0	37,5	1	303	445	183	40	29	1	269	365	187	90	83
		2	405	405	80	80		2	339	339	117	117	
37,5	47,5	1	337	489	208	55	31	1	312	442	202	72	89
		2	447	447	98	98		2	406	406	108	108	
42,0	60,0	1	377	541	239	75	32	1	363	530	223	56	96
		2	496	496	120	120		2	484	484	102	102	
46,5	72,5	1	418	594	269	93	34	1	416	622	242	35	103
		2	546	546	142	142		2	565	565	92	92	
51,0	87,5	1	466	656	306	116	35	1	476	726	265	16	109
		2	603	603	168	168		2	657	657	85	85	
55,5	107,5	1	529	733	357	153	37	1	553	850	303	5	117
		2	677	677	209	209		2	768	768	88	88	

3.3.3.2 Centralballasts and Cornerloads according to DIN 15019

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

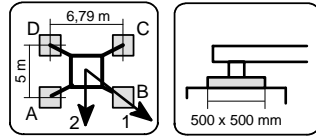


**KRE 260.2** Corner distance 5,0 m x 6,79 m **jib 35 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,0	20,0	1	229	324	148	53	23	1	158	258	81	0	51
		2	298	298	79	79		2	228	228	21	21	
19,5	20,0	1	236	338	150	48	25	1	162	272	81	0	66
		2	310	310	76	76		2	238	238	19	19	
24,0	20,0	1	244	354	151	41	26	1	165	289	79	0	70
		2	323	323	72	72		2	250	250	17	17	
28,5	25,0	1	265	383	165	46	28	1	192	308	101	0	77
		2	350	350	79	79		2	279	279	121	121	
33,0	35,0	1	298	426	190	63	29	1	271	371	187	87	83
		2	390	390	98	98		2	343	343	115	115	
37,5	45,0	1	332	470	216	78	31	1	315	448	202	69	90
		2	432	432	116	116		2	411	411	106	106	
42,0	57,5	1	372	522	247	97	32	1	366	536	223	53	97
		2	480	480	139	139		2	489	489	100	100	
46,5	72,5	1	420	581	283	122	34	1	425	636	248	37	103
		2	537	537	167	167		2	577	577	96	96	
51,0	87,5	1	468	643	320	145	35	1	486	740	271	17	110
		2	594	594	193	193		2	670	670	88	88	
55,5	107,5	1	531	720	371	181	37	1	563	865	308	6	118
		2	668	668	234	234		2	782	782	90	90	

3.3.3.3 Centralballasts and Cornerloads according to DIN 15019

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

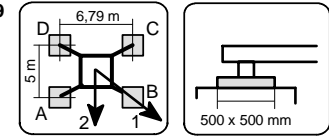


**KRE 260.2** Corner distance 5,0 m x 6,79 m **jib 40 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	25,0	1	251	357	162	56	24	1	175	266	98	8	52		
		2	328	328	85	85		2	244	244	62	62			
19,5	25,0	1	259	372	164	51	25	1	193	279	121	36	66		
		2	340	340	82	82		2	255	255	60	60			
24,0	25,0	1	267	387	165	44	27	1	201	293	123	31	71		
		2	354	354	78	78		2	267	267	57	57			
28,5	25,0	1	275	404	166	36	28	1	192	309	100	0	78		
		2	368	368	72	72		2	288	288	123	123			
33,0	32,5	1	302	441	185	46	30	1	272	375	185	82	84		
		2	403	403	85	85		2	346	346	111	111			
37,5	45,0	1	342	492	216	67	31	1	322	459	207	70	91		
		2	450	450	108	108		2	421	421	108	108			
42,0	57,5	1	383	544	247	86	33	1	374	548	227	53	97		
		2	500	500	131	131		2	500	500	101	101			
46,5	70,0	1	424	598	278	104	34	1	427	641	245	31	104		
		2	550	550	152	152		2	582	582	90	90			
51,0	85,0	1	472	660	314	126	36	1	487	747	269	9	111		
		2	608	608	178	178		2	675	675	81	81			
55,5	107,5	1	542	744	371	168	38	1	571	879	311	4	119		
		2	688	688	224	224		2	794	794	89	89			

3.3.3.4 Centralballasts and Cornerloads according to DIN 15019

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

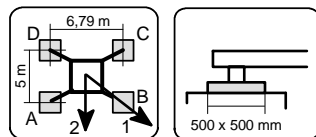


**KRE 260.2** Corner distance 5,0 m x 6,79 m **jib 45 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	22,5	1	251	359	160	53	24	1	191	294	105	3	52		
		2	329	329	82	82		2	265	265	31	31			
19,5	22,5	1	259	374	162	47	25	1	197	309	105	0	67		
		2	342	342	79	79		2	277	277	28	28			
24,0	22,5	1	267	389	163	41	27	1	199	328	102	0	72		
		2	355	355	75	75		2	289	289	25	25			
28,5	22,5	1	275	406	164	33	28	1	201	350	97	0	78		
		2	370	370	69	69		2	303	303	106	106			
33,0	25,0	1	290	431	171	30	30	1	265	382	166	49	85		
		2	392	392	69	69		2	350	350	81	81			
37,5	37,5	1	330	482	202	50	31	1	315	467	187	35	92		
		2	440	440	92	92		2	425	425	77	77			
42,0	50,0	1	371	535	233	69	33	1	367	557	207	17	98		
		2	489	489	115	115		2	504	504	70	70			
46,5	67,5	1	425	602	276	99	34	1	433	664	238	7	105		
		2	553	553	148	148		2	600	600	71	71			
51,0	90,0	1	492	683	330	139	36	1	513	789	279	3	111		
		2	630	630	192	192		2	712	712	80	80			

3.3.3.5 Centralballasts and Cornerloads according to DIN 15019

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

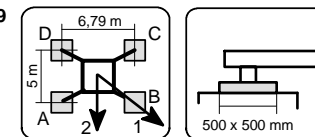


**KRE 260.2** Corner distance 5,0 m x 6,79 m **jib 50 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	22,5	1	254	363	163	55	24	1	184	322	89	0	53		
		2	333	333	85	85		2	278	278	19	19			
19,5	22,5	1	262	377	164	49	25	1	187	339	86	0	68		
		2	345	345	81	81		2	290	290	17	17			
24,0	22,5	1	270	393	166	42	27	1	189	359	83	0	73		
		2	359	359	77	77		2	302	302	13	13			
28,5	22,5	1	278	410	167	34	28	1	191	381	77	0	79		
		2	374	374	71	71		2	316	316	9	9			
33,0	25,0	1	293	435	173	31	30	1	204	405	83	0	86		
		2	396	396	71	71		2	361	361	75	75			
37,5	35,0	1	327	480	198	45	31	1	315	475	180	20	92		
		2	438	438	88	88		2	431	431	64	64			
42,0	50,0	1	374	539	235	70	33	1	373	572	206	8	99		
		2	493	493	116	116		2	517	517	63	63			
46,5	70,0	1	434	612	284	106	34	1	446	686	243	3	105		
		2	563	563	155	155		2	619	619	69	69			
51,0	92,5	1	501	694	339	146	36	1	524	814	283	0	112		
		2	641	641	199	199		2	733	733	77	77			

3.3.3.6 Centralballasts and Cornerloads according to DIN 15019

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

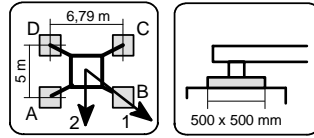


**KRE 260.2** Corner distance 5,0 m x 6,79 m **jib 55 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	32,5	1	284	385	199	98	24	1	210	398	92	0	54		
		2	357	357	126	126		2	335	335	15	15			
19,5	32,5	1	292	400	200	92	26	1	213	416	90	0	69		
		2	370	370	122	122		2	347	347	12	12			
24,0	35,0	1	306	422	208	92	27	1	228	436	98	0	73		
		2	390	390	124	124		2	366	366	15	15			
28,5	37,5	1	320	445	215	90	29	1	241	459	105	0	80		
		2	411	411	124	124		2	386	386	17	17			
33,0	40,0	1	335	470	221	86	30	1	254	484	111	0	87		
		2	433	433	124	124		2	418	418	109	109			
37,5	42,5	1	351	497	228	82	32	1	346	516	202	32	93		
		2	456	456	122	122		2	469	469	79	79			
42,0	50,0	1	379	537	246	88	33	1	386	595	209	0	100		
		2	493	493	132	132		2	537	537	58	58			
46,5	72,5	1	446	617	301	130	35	1	465	716	252	0	106		
		2	569	569	177	177		2	647	647	70	70			
51,0	97,5	1	519	705	362	176	36	1	551	850	299	1	113		
		2	653	653	227	227		2	767	767	84	84			

3.3.3.7 Centralballasts and Cornerloads according to DIN 15019

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

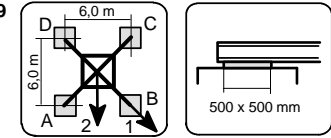


**KRE 260.2** Corner distance 5,0 m x 6,79 m jib 60 m

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,0	32,5	1	295	402	205	98	24	1	223	422	98	0	54
		2	372	372	127	127		2	355	355	16	16	
19,5	32,5	1	303	417	206	92	26	1	226	440	95	0	69
		2	385	385	124	124		2	367	367	13	13	
24,0	35,0	1	317	439	214	91	27	1	240	461	103	0	74
		2	405	405	125	125		2	387	387	15	15	
28,5	37,5	1	331	463	221	89	29	1	253	484	110	0	81
		2	427	427	125	125		2	407	407	17	17	
33,0	40,0	1	347	488	227	85	30	1	266	510	114	0	87
		2	449	449	125	125		2	449	449	95	95	
37,5	42,5	1	362	515	233	80	32	1	363	554	202	11	94
		2	473	473	123	123		2	501	501	64	64	
42,0	57,5	1	409	575	270	105	33	1	419	655	224	0	100
		2	529	529	150	150		2	588	588	61	61	
46,5	80,0	1	476	655	325	146	35	1	497	779	266	0	107
		2	605	605	196	196		2	699	699	72	72	
51,0	105,0	1	549	744	386	191	36	1	583	915	312	0	114
		2	690	690	245	245		2	821	821	84	84	

3.3.4.1 Centralballasts and Cornerloads according to DIN 15019

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



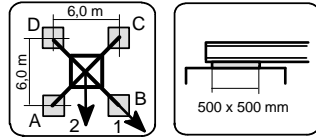
**KRE 260.2** Corner distance 6,0 m x 6,0 m jib 30 m

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,0	17,5	1	174	323	174	26	23	1	114	244	114	0	51
		2	280	280	69	69		2	204	204	32	32	
19,5	17,5	1	179	337	179	21	25	1	116	258	116	0	65
		2	291	291	67	67		2	214	214	31	31	
24,0	17,5	1	184	351	184	16	26	1	117	273	117	0	70
		2	302	302	65	65		2	224	224	30	30	
28,5	17,5	1	188	367	188	9	28	1	118	291	118	0	76
		2	315	315	61	61		2	237	237	110	110	
33,0	22,5	1	205	397	205	13	29	1	190	321	190	59	83
		2	341	341	69	69		2	283	283	98	98	
37,5	30,0	1	228	434	228	23	31	1	213	389	213	38	89
		2	374	374	83	83		2	338	338	89	89	
42,0	40,0	1	258	479	258	37	32	1	243	468	243	18	96
		2	414	414	102	102		2	402	402	84	84	
46,5	52,5	1	294	532	294	56	34	1	279	557	279	0	103
		2	462	462	126	126		2	476	476	82	82	
51,0	65,0	1	330	586	330	73	35	1	292	674	292	0	109
		2	511	511	148	148		2	553	553	76	76	
55,5	80,0	1	374	650	374	99	37	1	317	802	317	0	117
		2	569	569	179	179		2	643	643	76	76	
60,0	100,0	1	431	728	431	135	39	1	362	941	362	0	125
		2	641	641	222	222		2	749	749	84	84	



3.3.4.2 Centralballasts and Cornerloads according to DIN 15019

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

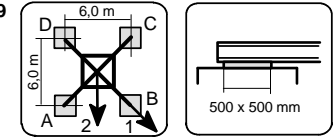


**KRE 260.2** Corner distance 6,0 m x 6,0 m **jib 35 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	7,5	1	157	286	157	28	23	1	64	244	64	0	51		
		2	248	248	66	66		2	179	179	7	7			
19,5	7,5	1	162	300	162	24	25	1	66	258	66	0	66		
		2	259	259	64	64		2	189	189	6	6			
24,0	10,0	1	173	321	173	24	26	1	79	274	79	0	70		
		2	277	277	68	68		2	205	205	11	11			
28,5	12,5	1	183	343	183	24	28	1	92	292	92	0	77		
		2	296	296	71	71		2	234	234	102	102			
33,0	20,0	1	207	379	207	35	29	1	192	326	192	57	83		
		2	328	328	85	85		2	287	287	97	97			
37,5	27,5	1	230	416	230	44	31	1	215	395	215	35	90		
		2	361	361	98	98		2	342	342	88	88			
42,0	37,5	1	260	461	260	58	32	1	245	474	245	15	97		
		2	402	402	117	117		2	407	407	82	82			
46,5	50,0	1	295	513	295	77	34	1	277	568	277	0	103		
		2	449	449	141	141		2	481	481	80	80			
51,0	62,5	1	331	568	331	95	35	1	289	686	289	0	110		
		2	498	498	164	164		2	559	559	74	74			
55,5	77,5	1	376	631	376	120	37	1	314	816	314	0	118		
		2	556	556	195	195		2	649	649	72	72			
60,0	100,0	1	439	716	439	162	39	1	370	956	370	0	126		
		2	635	635	243	243		2	762	762	86	86			

3.3.4.3 Centralballasts and Cornerloads according to DIN 15019

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

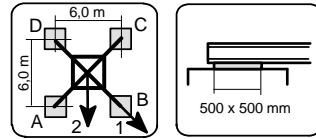


**KRE 260.2** Corner distance 6,0 m x 6,0 m **jib 40 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	12,5	1	175	318	175	32	24	1	88	245	88	0	52		
		2	277	277	74	74		2	197	197	46	46			
19,5	12,5	1	180	332	180	28	25	1	90	259	90	0	66		
		2	288	288	72	72		2	207	207	45	45			
24,0	12,5	1	184	347	184	22	27	1	91	275	91	0	71		
		2	300	300	69	69		2	218	218	43	43			
28,5	12,5	1	189	363	189	15	28	1	92	293	92	0	78		
		2	312	312	66	66		2	243	243	105	105			
33,0	17,5	1	206	393	206	19	30	1	191	330	191	52	84		
		2	339	339	74	74		2	289	289	93	93			
37,5	27,5	1	236	437	236	34	31	1	221	405	221	36	91		
		2	378	378	93	93		2	351	351	90	90			
42,0	37,5	1	265	482	265	48	33	1	250	485	250	15	97		
		2	419	419	112	112		2	416	416	84	84			
46,5	47,5	1	295	529	295	60	34	1	270	580	270	0	104		
		2	461	461	129	129		2	485	485	75	75			
51,0	60,0	1	331	584	331	77	36	1	281	700	281	0	111		
		2	510	510	151	151		2	563	563	68	68			
55,5	77,5	1	381	655	381	108	38	1	317	831	317	0	119		
		2	575	575	188	188		2	660	660	73	73			
60,0	100,0	1	445	740	445	150	40	1	373	973	373	0	127		
		2	653	653	236	236		2	774	774	86	86			

3.3.4.4 Centralballasts and Cornerloads according to DIN 15019

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

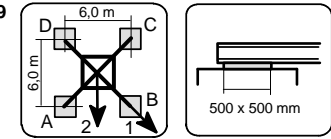


**KRE 260.2** Corner distance 6,0 m x 6,0 m **jib 45 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	10,0	1	175	320	175	29	24	1	96	276	96	0	52		
		2	278	278	72	72		2	215	215	19	19			
19,5	10,0	1	179	334	179	24	25	1	96	293	96	0	67		
		2	289	289	70	70		2	225	225	18	18			
24,0	10,0	1	184	349	184	18	27	1	96	311	96	0	72		
		2	301	301	67	67		2	236	236	16	16			
28,5	10,0	1	188	366	188	11	28	1	95	332	95	0	78		
		2	314	314	63	63		2	255	255	91	91			
33,0	12,5	1	199	389	199	9	30	1	105	355	105	0	85		
		2	334	334	64	64		2	296	296	72	72			
37,5	20,0	1	222	427	222	18	31	1	207	412	207	3	92		
		2	367	367	78	78		2	352	352	63	63			
42,0	30,0	1	252	473	252	31	33	1	218	512	218	0	98		
		2	408	408	96	96		2	418	418	56	56			
46,5	45,0	1	294	532	294	56	34	1	246	623	246	0	105		
		2	463	463	125	125		2	499	499	59	59			
51,0	62,5	1	342	600	342	84	36	1	282	746	282	0	111		
		2	525	525	160	160		2	591	591	64	64			
55,5	82,5	1	399	677	399	121	38	1	329	879	329	0	119		
		2	596	596	203	203		2	695	695	74	74			
60,0	105,0	1	463	763	463	163	40	1	384	1023	384	0	127		
		2	675	675	251	251		2	810	810	86	86			

3.3.4.5 Centralballasts and Cornerloads according to DIN 15019

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

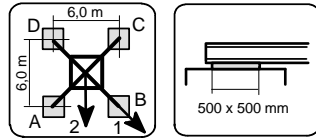


**KRE 260.2** Corner distance 6,0 m x 6,0 m **jib 50 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	10,0	1	177	324	177	31	24	1	82	305	82	0	53		
		2	281	281	74	74		2	225	225	9	9			
19,5	10,0	1	182	338	182	26	25	1	83	322	83	0	68		
		2	292	292	72	72		2	236	236	8	8			
24,0	10,0	1	187	353	187	20	27	1	83	341	83	0	73		
		2	304	304	69	69		2	247	247	6	6			
28,5	12,5	1	197	376	197	19	28	1	94	362	94	0	79		
		2	323	323	71	71		2	271	271	93	93			
33,0	15,0	1	208	400	208	16	30	1	104	385	104	0	86		
		2	344	344	73	73		2	312	312	74	74			
37,5	17,5	1	219	425	219	13	31	1	192	432	192	0	92		
		2	365	365	73	73		2	357	357	51	51			
42,0	30,0	1	255	477	255	32	33	1	212	535	212	0	99		
		2	412	412	97	97		2	429	429	50	50			
46,5	47,5	1	303	543	303	63	34	1	252	648	252	0	105		
		2	473	473	133	133		2	517	517	59	59			
51,0	67,5	1	358	618	358	98	36	1	299	772	299	0	112		
		2	541	541	174	174		2	616	616	70	70			
55,5	87,5	1	415	695	415	134	38	1	346	907	346	0	120		
		2	613	613	216	216		2	720	720	79	79			
60,0	107,5	1	472	774	472	169	40	1	387	1053	387	0	128		
		2	686	686	258	258		2	829	829	84	84			

3.3.4.6 Centralballasts and Cornerloads according to DIN 15019

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

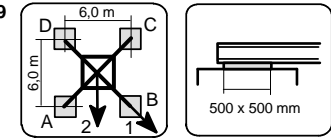


**KRE 260.2** Corner distance 6,0 m x 6,0 m **jib 55 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,0	20,0	1	210	347	210	74	24	1	99	378	99	0	54
		2	307	307	114	114		2	277	277	10	10	
19,5	20,0	1	215	361	215	69	26	1	100	395	100	0	69
		2	318	318	111	111		2	288	288	9	9	
24,0	22,5	1	226	382	226	69	27	1	112	414	112	0	73
		2	336	336	115	115		2	306	306	13	13	
28,5	22,5	1	230	399	230	61	29	1	110	435	110	0	80
		2	349	349	111	111		2	318	318	10	10	
33,0	25,0	1	241	423	241	59	30	1	120	459	120	0	87
		2	370	370	112	112		2	354	354	97	97	
37,5	27,5	1	252	449	252	55	32	1	128	485	128	0	93
		2	391	391	112	112		2	399	399	74	74	
42,0	30,0	1	262	476	262	49	33	1	213	564	213	0	100
		2	413	413	112	112		2	447	447	48	48	
46,5	50,0	1	317	548	317	86	35	1	264	679	264	0	106
		2	481	481	154	154		2	542	542	62	62	
51,0	67,5	1	365	616	365	114	36	1	298	805	298	0	113
		2	543	543	188	188		2	635	635	66	66	
55,5	90,0	1	429	700	429	157	38	1	356	942	356	0	121
		2	621	621	237	237		2	747	747	81	81	

3.3.4.7 Centralballasts and Cornerloads according to DIN 15019

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

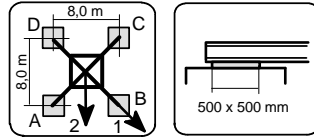


**KRE 260.2** Corner distance 6,0 m x 6,0 m **jib 60 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,0	20,0	1	219	363	219	74	24	1	109	400	109	0	54
		2	321	321	117	117		2	296	296	13	13	
19,5	20,0	1	223	377	223	69	26	1	109	418	109	0	69
		2	332	332	114	114		2	307	307	11	11	
24,0	20,0	1	228	393	228	63	27	1	108	437	108	0	74
		2	344	344	111	111		2	318	318	9	9	
28,5	22,5	1	239	416	239	61	29	1	119	459	119	0	81
		2	364	364	113	113		2	340	340	107	107	
33,0	25,0	1	249	440	249	58	30	1	128	484	128	0	87
		2	384	384	114	114		2	382	382	87	87	
37,5	27,5	1	260	466	260	54	32	1	233	515	233	0	94
		2	406	406	114	114		2	427	427	63	63	
42,0	35,0	1	283	506	283	60	33	1	226	622	226	0	100
		2	441	441	126	126		2	488	488	49	49	
46,5	55,0	1	338	579	338	96	35	1	276	739	276	0	107
		2	509	509	167	167		2	584	584	62	62	
51,0	75,0	1	393	655	393	130	36	1	321	868	321	0	114
		2	578	578	207	207		2	685	685	70	70	
55,5	95,0	1	450	733	450	166	38	1	365	1008	365	0	122
		2	650	650	249	249		2	791	791	78	78	

3.3.5.1 Centralballasts and Cornerloads according to DIN 15019

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

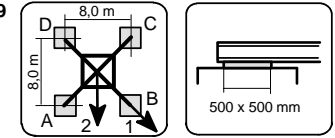


**KRE 480** Corner distance 8,0 m x 8,0 m **jib 30 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
19,5	0,0	1	175	295	175	56	28	1	119	217	119	20	72		
		2	260	260	91	91		2	188	188	49	49			
24,0	0,0	1	180	307	180	53	29	1	123	228	123	19	77		
		2	270	270	90	90		2	197	197	50	50			
28,5	0,0	1	184	320	184	49	31	1	169	242	169	97	83		
		2	280	280	89	89		2	221	221	118	118			
33,0	0,0	1	189	334	189	44	32	1	174	277	174	71	90		
		2	291	291	87	87		2	247	247	101	101			
37,5	0,0	1	194	348	194	39	34	1	179	315	179	42	97		
		2	303	303	84	84		2	275	275	82	82			
42,0	0,0	1	198	364	198	33	35	1	183	356	183	10	103		
		2	315	315	81	81		2	305	305	61	61			
46,5	7,5	1	221	399	221	44	37	1	200	425	200	0	110		
		2	347	347	96	96		2	357	357	56	56			
51,0	17,5	1	251	442	251	60	38	1	217	510	217	0	116		
		2	386	386	116	116		2	416	416	55	55			
55,5	30,0	1	287	492	287	82	40	1	242	603	242	0	123		
		2	432	432	142	142		2	485	485	58	58			
60,0	45,0	1	329	550	329	108	41	1	275	704	275	0	129		
		2	485	485	173	173		2	563	563	65	65			
64,5	60,0	1	373	611	373	136	43	1	309	816	309	0	137		
		2	541	541	205	205		2	647	647	70	70			
69,0	77,5	1	424	680	424	168	45	1	349	940	349	0	146		
		2	605	605	243	243		2	741	741	77	77			
73,5	97,5	1	481	757	481	206	47	1	396	1073	396	0	155		
		2	676	676	286	286		2	846	846	87	87			
78,0	120,0	1	546	841	546	250	49	1	454	1214	454	0	164		
		2	755	755	336	336		2	960	960	101	101			

3.3.5.2 Centralballasts and Cornerloads according to DIN 15019

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

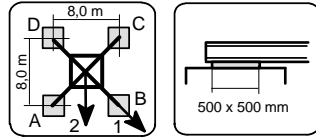


**KRE 480** Corner distance 8,0 m x 8,0 m **jib 35 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
19,5	0,0	1	183	288	183	78	28	1	119	217	119	20	73		
		2	257	257	109	109		2	189	189	49	49			
24,0	0,0	1	188	300	188	75	29	1	123	228	123	19	77		
		2	267	267	108	108		2	206	206	139	139			
28,5	0,0	1	192	313	192	71	31	1	177	252	177	102	84		
		2	278	278	107	107		2	230	230	124	124			
33,0	0,0	1	197	327	197	67	32	1	182	288	182	76	91		
		2	289	289	105	105		2	257	257	107	107			
37,5	0,0	1	201	341	201	61	34	1	186	326	186	47	97		
		2	300	300	102	102		2	285	285	88	88			
42,0	0,0	1	206	357	206	55	35	1	191	367	191	15	104		
		2	312	312	99	99		2	315	315	66	66			
46,5	5,0	1	223	386	223	60	37	1	200	432	200	0	110		
		2	338	338	108	108		2	361	361	55	55			
51,0	15,0	1	252	428	252	76	38	1	215	519	215	0	117		
		2	377	377	128	128		2	421	421	54	54			
55,5	27,5	1	288	479	288	98	40	1	240	613	240	0	123		
		2	423	423	154	154		2	490	490	56	56			
60,0	42,5	1	330	536	330	124	41	1	273	715	273	0	130		
		2	476	476	185	185		2	568	568	62	62			
64,5	60,0	1	381	604	381	158	43	1	318	828	318	0	138		
		2	539	539	224	224		2	659	659	73	73			
69,0	77,5	1	432	673	432	191	45	1	357	954	357	0	147		
		2	602	602	262	262		2	754	754	80	80			
73,5	97,5	1	489	750	489	228	47	1	404	1089	404	0	155		
		2	674	674	305	305		2	859	859	89	89			
78,0	120,0	1	553	834	553	272	49	1	460	1232	460	0	165		
		2	752	752	355	355		2	974	974	103	103			

3.3.5.3 Centralballasts and Cornerloads according to DIN 15019

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

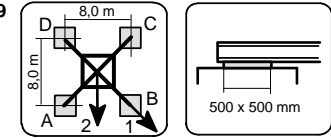


**KRE 480** Corner distance 8,0 m x 8,0 m **jib 40 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
19,5	0,0	1	189	305	189	73	28	1	135	223	135	47	73		
		2	271	271	107	107		2	197	197	73	73			
24,0	0,0	1	193	317	193	70	29	1	140	234	140	45	78		
		2	281	281	106	106		2	213	213	143	143			
28,5	0,0	1	198	330	198	66	31	1	183	261	183	105	85		
		2	291	291	105	105		2	238	238	128	128			
33,0	0,0	1	202	343	202	61	32	1	187	296	187	78	91		
		2	302	302	103	103		2	264	264	110	110			
37,5	0,0	1	207	358	207	56	34	1	192	335	192	49	98		
		2	314	314	100	100		2	293	293	91	91			
42,0	0,0	1	212	374	212	49	35	1	197	377	197	16	104		
		2	326	326	97	97		2	324	324	69	69			
46,5	5,0	1	229	403	229	54	37	1	207	441	207	0	111		
		2	352	352	105	105		2	369	369	58	58			
51,0	12,5	1	252	440	252	63	38	1	209	529	209	0	118		
		2	385	385	119	119		2	424	424	50	50			
55,5	27,5	1	294	497	294	91	40	1	246	624	246	0	124		
		2	438	438	150	150		2	500	500	58	58			
60,0	42,5	1	336	555	336	116	41	1	278	727	278	0	131		
		2	491	491	181	181		2	578	578	64	64			
64,5	60,0	1	387	624	387	150	43	1	323	842	323	0	139		
		2	554	554	219	219		2	669	669	74	74			
69,0	77,5	1	438	693	438	182	45	1	361	969	361	0	147		
		2	618	618	257	257		2	765	765	80	80			
73,5	97,5	1	495	771	495	219	47	1	406	1106	406	0	156		
		2	690	690	299	299		2	871	871	89	89			
78,0	120,0	1	559	856	559	262	49	1	462	1251	462	0	165		
		2	769	769	349	349		2	986	986	102	102			

3.3.5.4 Centralballasts and Cornerloads according to DIN 15019

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

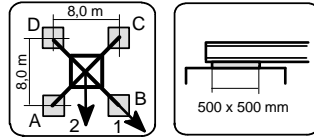


**KRE 480** Corner distance 8,0 m x 8,0 m **jib 45 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
19,5	0,0	1	194	312	194	77	28	1	137	248	137	25	74		
		2	277	277	111	111		2	215	215	58	58			
24,0	0,0	1	199	324	199	74	30	1	141	259	141	23	79		
		2	287	287	110	110		2	229	229	139	139			
28,5	0,0	1	203	337	203	70	31	1	188	280	188	97	85		
		2	298	298	109	109		2	253	253	123	123			
33,0	0,0	1	208	351	208	65	33	1	193	316	193	70	92		
		2	309	309	107	107		2	280	280	106	106			
37,5	0,0	1	212	366	212	59	34	1	197	355	197	40	99		
		2	321	321	104	104		2	309	309	86	86			
42,0	0,0	1	217	382	217	52	36	1	202	398	202	7	105		
		2	334	334	100	100		2	340	340	64	64			
46,5	2,5	1	228	405	228	50	37	1	189	473	189	0	112		
		2	353	353	102	102		2	380	380	46	46			
51,0	15,0	1	264	455	264	72	39	1	216	562	216	0	118		
		2	399	399	128	128		2	447	447	50	50			
55,5	30,0	1	306	512	306	99	40	1	252	659	252	0	125		
		2	452	452	160	160		2	524	524	58	58			
60,0	45,0	1	348	571	348	125	42	1	283	764	283	0	132		
		2	506	506	190	190		2	603	603	63	63			
64,5	62,5	1	399	639	399	158	44	1	327	880	327	0	140		
		2	569	569	228	228		2	695	695	72	72			
69,0	82,5	1	456	716	456	196	45	1	377	1009	377	0	148		
		2	639	639	272	272		2	798	798	84	84			
73,5	102,5	1	513	794	513	232	47	1	421	1149	421	0	157		
		2	711	711	314	314		2	904	904	91	91			
78,0	125,0	1	577	879	577	275	50	1	476	1296	476	0	166		
		2	790	790	363	363		2	1020	1020	104	104			

3.3.5.5 Centralballasts and Cornerloads according to DIN 15019

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

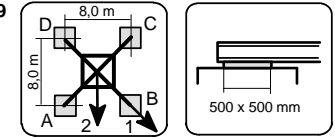


**KRE 480** Corner distance 8,0 m x 8,0 m **jib 50 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
19,5	0,0	1	197	315	197	79	28	1	137	259	137	15	75		
		2	281	281	113	113		2	224	224	50	50			
24,0	0,0	1	202	328	202	76	30	1	142	271	142	12	80		
		2	291	291	112	112		2	236	236	137	137			
28,5	0,0	1	206	341	206	71	31	1	191	291	191	92	86		
		2	301	301	111	111		2	261	261	121	121			
33,0	0,0	1	211	355	211	67	33	1	196	327	196	64	93		
		2	313	313	109	109		2	288	288	103	103			
37,5	0,0	1	215	370	215	61	34	1	200	366	200	34	99		
		2	325	325	106	106		2	318	318	83	83			
42,0	0,0	1	220	386	220	54	36	1	205	409	205	1	106		
		2	337	337	102	102		2	349	349	60	60			
46,5	2,5	1	231	410	231	52	37	1	185	491	185	0	113		
		2	357	357	104	104		2	389	389	42	42			
51,0	17,5	1	273	465	273	80	39	1	225	581	225	0	119		
		2	409	409	136	136		2	463	463	52	52			
55,5	32,5	1	315	523	315	107	40	1	260	679	260	0	126		
		2	462	462	167	167		2	540	540	59	59			
60,0	47,5	1	357	582	357	132	42	1	290	786	290	0	132		
		2	516	516	198	198		2	620	620	64	64			
64,5	65,0	1	408	650	408	165	44	1	333	903	333	0	140		
		2	579	579	236	236		2	712	712	73	73			
69,0	85,0	1	465	727	465	203	46	1	382	1034	382	0	149		
		2	650	650	279	279		2	815	815	84	84			
73,5	105,0	1	522	805	522	238	48	1	426	1175	426	0	157		
		2	722	722	321	321		2	922	922	91	91			
78,0	127,5	1	586	891	586	281	50	1	480	1324	480	0	167		
		2	801	801	371	371		2	1039	1039	103	103			

3.3.5.6 Centralballasts and Cornerloads according to DIN 15019

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

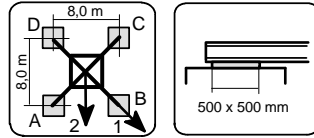


**KRE 480** Corner distance 8,0 m x 8,0 m **jib 55 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
19,5	0,0	1	205	316	205	94	28	1	128	299	128	0	76		
		2	283	283	126	126		2	244	244	33	33			
24,0	0,0	1	209	328	209	91	30	1	130	313	130	0	80		
		2	293	293	125	125		2	254	254	32	32			
28,5	0,0	1	214	341	214	86	31	1	131	329	131	0	87		
		2	304	304	124	124		2	276	276	122	122			
33,0	0,0	1	218	356	218	81	33	1	131	346	131	0	94		
		2	315	315	122	122		2	303	303	104	104			
37,5	0,0	1	223	371	223	75	34	1	208	384	208	32	100		
		2	327	327	119	119		2	333	333	83	83			
42,0	0,0	1	228	387	228	68	36	1	210	430	210	0	107		
		2	340	340	115	115		2	364	364	61	61			
46,5	5,0	1	245	417	245	73	37	1	202	514	202	0	113		
		2	366	366	123	123		2	411	411	48	48			
51,0	17,5	1	280	467	280	94	39	1	228	605	228	0	120		
		2	412	412	149	149		2	479	479	51	51			
55,5	32,5	1	322	524	322	121	40	1	262	705	262	0	126		
		2	465	465	180	180		2	557	557	58	58			
60,0	50,0	1	371	589	371	152	42	1	305	814	305	0	133		
		2	525	525	216	216		2	643	643	68	68			
64,5	67,5	1	422	658	422	185	44	1	347	933	347	0	141		
		2	589	589	254	254		2	737	737	77	77			
69,0	87,5	1	479	735	479	222	46	1	394	1066	394	0	150		
		2	660	660	298	298		2	841	841	87	87			
73,5	107,5	1	536	813	536	258	48	1	436	1210	436	0	158		
		2	732	732	339	339		2	949	949	93	93			
78,0	130,0	1	600	899	600	301	50	1	490	1361	490	0	168		
		2	812	812	388	388		2	1066	1066	104	104			

3.3.5.7 Centralballasts and Cornerloads according to DIN 15019

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

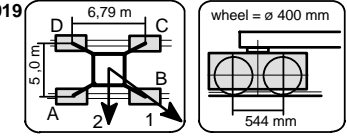


**KRE 480** Corner distance 8,0 m x 8,0 m **jib 60 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
19,5	0,0	1	213	330	213	96	29	1	140	316	140	0	76
		2	296	296	130	130		2	261	261	37	37	
24,0	0,0	1	218	343	218	93	30	1	142	331	142	0	81
		2	306	306	129	129		2	272	272	133	133	
28,5	0,0	1	222	356	222	89	32	1	143	347	143	0	88
		2	317	317	128	128		2	298	298	117	117	
33,0	0,0	1	227	370	227	83	33	1	212	372	212	51	94
		2	328	328	125	125		2	325	325	98	98	
37,5	0,0	1	231	386	231	77	35	1	216	413	216	20	101
		2	341	341	122	122		2	355	355	77	77	
42,0	0,0	1	236	402	236	70	36	1	206	472	206	0	107
		2	354	354	118	118		2	388	388	54	54	
46,5	7,5	1	259	439	259	80	38	1	210	557	210	0	114
		2	386	386	132	132		2	441	441	47	47	
51,0	20,0	1	295	489	295	101	39	1	235	651	235	0	121
		2	432	432	158	158		2	510	510	50	50	
55,5	37,5	1	343	553	343	134	41	1	280	753	280	0	127
		2	492	492	195	195		2	595	595	62	62	
60,0	52,5	1	385	613	385	158	42	1	309	864	309	0	134
		2	546	546	225	225		2	676	676	65	65	
64,5	72,5	1	443	688	443	197	44	1	362	986	362	0	142
		2	616	616	269	269		2	776	776	79	79	
69,0	92,5	1	500	766	500	233	46	1	408	1122	408	0	150
		2	688	688	311	311		2	881	881	88	88	
73,5	115,0	1	563	851	563	275	48	1	461	1270	461	0	159
		2	767	767	359	359		2	997	997	99	99	
78,0	137,5	1	627	938	627	317	50	1	512	1424	512	0	168
		2	847	847	408	408		2	1115	1115	109	109	

3.4.1.1 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage without climbing gear

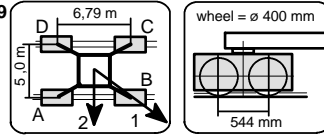


**UW 260.1** Corner distance 5,0 m x 6,79 m **jib 30 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	35,0	1	264	375	170	59	23	1	199	290	122	31	50
		2	344	344	90	90		2	264	264	57	57	
20,0	35,0	1	271	389	172	54	24	1	206	302	124	29	64
		2	356	356	87	87		2	275	275	55	55	
24,5	35,0	1	279	405	173	48	26	1	213	314	127	25	70
		2	370	370	82	82		2	286	286	53	53	
29,0	35,0	1	287	421	174	40	28	1	220	328	128	20	77
		2	384	384	77	77		2	298	298	50	50	
33,5	42,5	1	315	458	193	50	29	1	282	385	195	93	84
		2	418	418	89	89		2	357	357	121	121	
38,0	55,0	1	355	509	225	70	31	1	332	469	217	80	90
		2	466	466	113	113		2	431	431	118	118	
42,5	67,5	1	396	562	255	90	32	1	384	557	237	64	97
		2	516	516	135	135		2	509	509	112	112	

3.4.1.2 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage without climbing gear

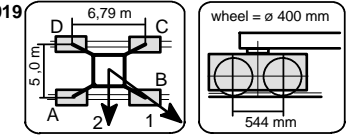


UW 260.1 Corner distance 5,0 m x 6,79 m jib 35 m

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	25,0	1	240	336	159	63	23	1	172	266	95	8	50
		2	310	310	90	90		2	240	240	31	31	
20,0	25,0	1	248	351	161	58	25	1	176	282	95	8	64
		2	322	322	86	86		2	250	250	30	30	
24,5	25,0	1	256	366	162	51	26	1	179	299	93	8	71
		2	336	336	82	82		2	262	262	27	27	
29,0	30,0	1	276	396	175	56	28	1	207	317	115	8	78
		2	363	363	89	89		2	296	296	125	125	
33,5	40,0	1	310	439	201	72	29	1	285	391	196	90	84
		2	403	403	108	108		2	362	362	119	119	
38,0	52,5	1	350	490	232	93	31	1	335	475	217	77	91
		2	451	451	131	131		2	436	436	116	116	
42,5	65,0	1	391	542	263	112	32	1	387	564	237	60	97
		2	500	500	154	154		2	515	515	109	109	

3.4.1.3 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage without climbing gear



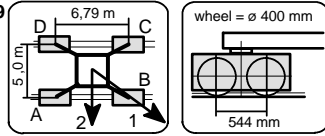
UW 260.1 Corner distance 5,0 m x 6,79 m jib 40 m

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	30,0	1	263	370	173	66	23	1	186	278	109	18	51
		2	340	340	96	96		2	255	255	73	73	
20,0	30,0	1	270	384	174	61	25	1	205	291	132	47	65
		2	353	353	92	92		2	267	267	70	70	
24,5	30,0	1	278	400	176	54	26	1	212	305	134	42	72
		2	366	366	88	88		2	279	279	67	67	
29,0	30,0	1	287	417	176	46	28	1	249	327	184	106	78
		2	381	381	82	82		2	305	305	128	128	
33,5	37,5	1	314	455	196	55	29	1	286	395	194	85	85
		2	416	416	94	94		2	365	365	115	115	
38,0	50,0	1	355	506	227	75	31	1	336	480	215	72	92
		2	464	464	117	117		2	440	440	111	111	
42,5	62,5	1	395	559	258	94	32	1	388	569	235	54	98
		2	513	513	139	139		2	519	519	104	104	



3.4.1.4 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage without climbing gear

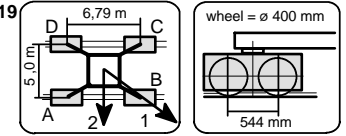


**UW 260.1** Corner distance 5,0 m x 6,79 m **jib 45 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	27,5	1	263	371	171	63	23	1	203	306	116	13	51
		2	341	341	93	93		2	277	277	42	42	
20,0	27,5	1	271	386	173	57	25	1	210	319	118	9	66
		2	354	354	89	89		2	289	289	39	39	
24,5	27,5	1	278	402	174	50	26	1	213	338	115	8	73
		2	368	368	85	85		2	301	301	36	36	
29,0	27,5	1	287	420	175	42	28	1	215	360	110	8	79
		2	383	383	79	79		2	321	321	111	111	
33,5	32,5	1	308	451	188	45	30	1	285	408	181	57	86
		2	411	411	84	84		2	374	374	92	92	
38,0	42,5	1	342	496	213	59	31	1	329	488	196	37	92
		2	454	454	101	101		2	444	444	81	81	
42,5	57,5	1	390	556	249	83	33	1	388	585	221	24	99
		2	510	510	129	129		2	530	530	79	79	

3.4.1.5 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage without climbing gear

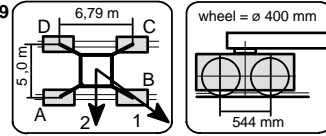


**UW 260.1** Corner distance 5,0 m x 6,79 m **jib 50 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	25,0	1	260	369	168	59	24	1	186	331	90	8	52
		2	339	339	89	89		2	284	284	24	24	
20,0	25,0	1	267	384	169	53	25	1	189	349	87	8	67
		2	351	351	85	85		2	296	296	21	21	
24,5	25,0	1	275	400	170	46	27	1	191	369	83	8	73
		2	365	365	80	80		2	308	308	17	17	
29,0	27,5	1	290	424	177	44	28	1	204	391	91	8	80
		2	387	387	81	81		2	332	332	105	105	
33,5	30,0	1	305	449	184	40	30	1	285	416	174	43	86
		2	409	409	80	80		2	380	380	79	79	
38,0	40,0	1	339	494	209	54	31	1	329	496	188	22	93
		2	451	451	97	97		2	450	450	68	68	
42,5	57,5	1	393	560	252	84	33	1	394	600	220	15	100
		2	514	514	131	131		2	543	543	72	72	

3.4.1.6 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage without climbing gear

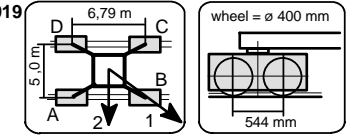


UW 260.1 Corner distance 5,0 m x 6,79 m jib 55 m

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]				
			Cornerloads						Cornerloads								
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]					
15,5	35,0	1	289	391	203	102	24	1	212	407	94	8	52				
		2	363	363	130	130		2	341	341	19	19					
20,0	37,5	1	303	412	211	102	25	1	227	426	103	8	67				
		2	382	382	132	132		2	359	359	23	23					
24,5	37,5	1	311	429	212	95	27	1	229	446	99	8	74				
		2	396	396	127	127		2	372	372	19	19					
29,0	40,0	1	326	453	219	93	28	1	243	469	106	8	81				
		2	417	417	128	128		2	392	392	21	21					
33,5	42,5	1	341	478	226	89	30	1	255	495	111	8	87				
		2	440	440	127	127		2	430	430	107	107					
38,0	47,5	1	363	511	238	90	31	1	360	537	211	34	94				
		2	470	470	131	131		2	488	488	83	83					
42,5	57,5	1	398	558	262	102	33	1	406	624	223	8	100				
		2	514	514	146	146		2	563	563	67	67					

3.4.1.7 Centralballasts and Cornerloads according to DIN 15019

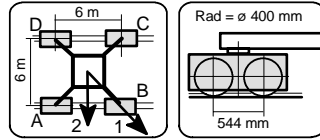
for a travelling tower crane on undercarriage without climbing gear



UW 260.1 Corner distance 5,0 m x 6,79 m jib 60 m

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]				
			Cornerloads						Cornerloads								
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]					
15,5	35,0	1	300	408	209	102	24	1	225	431	99	8	53				
		2	378	378	132	132		2	361	361	20	20					
20,0	37,5	1	314	429	217	102	25	1	240	450	108	8	68				
		2	398	398	134	134		2	379	379	23	23					
24,5	37,5	1	322	446	218	94	27	1	241	471	104	8	75				
		2	412	412	129	129		2	393	393	19	19					
29,0	40,0	1	337	470	225	92	28	1	254	495	110	8	81				
		2	433	433	129	129		2	413	413	21	21					
33,5	42,5	1	352	496	231	88	30	1	267	521	115	8	88				
		2	456	456	128	128		2	461	461	92	92					
38,0	47,5	1	374	529	243	89	32	1	377	575	210	13	95				
		2	486	486	131	131		2	520	520	67	67					
42,5	65,0	1	428	596	286	119	33	1	438	685	237	8	101				
		2	549	549	165	165		2	615	615	69	69					

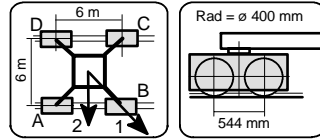
3.4.2.1 **Centralballasts and Cornerloads according to DIN 15019**  
for a standing tower crane on undercarriage without climbing gear



**UW 260.1** Corner distance 6,0 m x 6,0 m **jib 30 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force			Cornerloads				Horizontal force	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,5	20,0	1	179	329	179	30	23	1	116	253	116	8	50		
		2	285	285	74	74		2	210	210	36	36			
20,0	20,0	1	184	343	184	25	24	1	118	267	118	8	64		
		2	296	296	72	72		2	219	219	36	36			
24,5	20,0	1	189	358	189	19	26	1	119	283	119	8	70		
		2	308	308	69	69		2	229	229	35	35			
29,0	20,0	1	193	374	193	12	28	1	119	301	119	8	77		
		2	321	321	65	65		2	247	247	109	109			
33,5	27,5	1	216	410	216	22	29	1	201	340	201	63	84		
		2	354	354	79	79		2	300	300	103	103			
38,0	37,5	1	246	454	246	38	31	1	231	415	231	47	90		
		2	393	393	99	99		2	361	361	101	101			
42,5	47,5	1	276	499	276	52	32	1	261	495	261	26	97		
		2	434	434	117	117		2	426	426	95	95			
47,0	57,5	1	305	546	305	64	34	1	284	585	284	8	103		
		2	476	476	134	134		2	494	494	86	86			

3.4.2.2 **Centralballasts and Cornerloads according to DIN 15019**  
for a standing tower crane on undercarriage without climbing gear

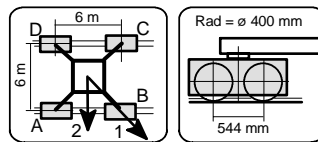


**UW 260.1** Corner distance 6,0 m x 6,0 m **jib 35 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force			Cornerloads				Horizontal force	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,5	12,5	1	168	298	168	39	23	1	78	253	78	8	50		
		2	260	260	77	77		2	191	191	17	17			
20,0	12,5	1	173	312	173	34	25	1	80	268	80	8	64		
		2	271	271	75	75		2	201	201	17	17			
24,5	12,5	1	178	327	178	28	26	1	81	284	81	8	71		
		2	283	283	72	72		2	211	211	16	16			
29,0	17,5	1	195	356	195	33	28	1	106	302	106	8	78		
		2	309	309	81	81		2	251	251	108	108			
33,5	25,0	1	218	392	218	44	29	1	203	346	203	60	84		
		2	341	341	95	95		2	304	304	102	102			
38,0	35,0	1	247	436	247	59	31	1	232	421	232	44	91		
		2	381	381	114	114		2	366	366	99	99			
42,5	45,0	1	277	481	277	73	32	1	262	501	262	23	97		
		2	421	421	133	133		2	431	431	93	93			
47,0	55,0	1	307	528	307	85	34	1	281	596	281	8	104		
		2	463	463	150	150		2	500	500	83	83			

3.4.2.3 **Centralballasts and Cornerloads according to DIN 15019**

for a standing tower crane on undercarriage without climbing gear

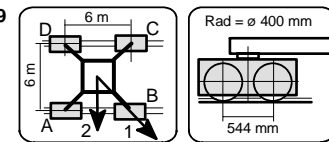


**UW 260.1** Corner distance 6,0 m x 6,0 m **jib 40 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	15,0	1	180	324	180	36	23	1	90	254	90	8	51
		2	282	282	79	79		2	203	203	51	51	
20,0	15,0	1	185	339	185	31	25	1	92	268	92	8	65
		2	294	294	76	76		2	213	213	49	49	
24,5	15,0	1	189	354	189	25	26	1	93	285	93	8	72
		2	306	306	73	73		2	224	224	47	47	
29,0	15,0	1	194	370	194	18	28	1	93	303	93	8	78
		2	319	319	69	69		2	253	253	105	105	
33,5	22,5	1	217	407	217	28	29	1	202	349	202	55	85
		2	351	351	83	83		2	306	306	98	98	
38,0	32,5	1	247	451	247	43	31	1	232	426	232	38	92
		2	391	391	103	103		2	369	369	95	95	
42,5	42,5	1	276	497	276	56	32	1	261	506	261	17	98
		2	432	432	121	121		2	434	434	88	88	
47,0	55,0	1	312	550	312	74	34	1	286	609	286	8	105
		2	481	481	144	144		2	510	510	85	85	

3.4.2.4 **Centralballasts and Cornerloads according to DIN 15019**

for a standing tower crane on undercarriage without climbing gear

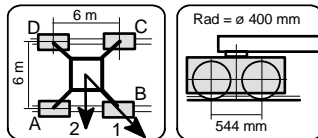


**UW 260.1** Corner distance 6,0 m x 6,0 m **jib 45 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	12,5	1	180	326	180	33	23	1	97	285	97	8	51
		2	283	283	76	76		2	220	220	24	24	
20,0	12,5	1	184	340	184	28	25	1	98	302	98	8	66
		2	295	295	74	74		2	231	231	22	22	
24,5	12,5	1	189	356	189	22	26	1	98	321	98	8	73
		2	307	307	71	71		2	242	242	20	20	
29,0	15,0	1	200	379	200	20	28	1	109	342	109	8	79
		2	326	326	73	73		2	272	272	97	97	
33,5	17,5	1	210	403	210	18	30	1	119	365	119	8	86
		2	347	347	74	74		2	313	313	78	78	
38,0	27,5	1	240	447	240	32	31	1	225	439	225	11	92
		2	387	387	93	93		2	376	376	74	74	
42,5	37,5	1	269	494	269	45	33	1	235	539	235	8	99
		2	428	428	111	111		2	442	442	67	67	
47,0	52,5	1	312	554	312	69	34	1	263	653	263	8	105
		2	483	483	140	140		2	525	525	68	68	

3.4.2.5 Centralballasts and Cornerloads according to DIN 15019

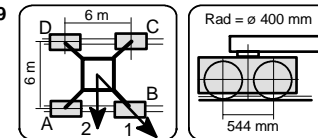
for a standing tower crane on undercarriage without climbing gear



UW 260.1 Corner distance 6,0 m x 6,0 m jib 50 m													
Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	12,5	1	182	330	182	35	24	1	84	314	84	8	52
		2	286	286	78	78		2	231	231	14	14	
20,0	15,0	1	193	350	193	36	25	1	97	332	97	8	67
		2	304	304	82	82		2	248	248	19	19	
24,5	15,0	1	198	366	198	30	27	1	96	351	96	8	73
		2	317	317	79	79		2	259	259	17	17	
29,0	17,5	1	209	389	209	28	28	1	107	372	107	8	80
		2	336	336	81	81		2	288	288	99	99	
33,5	17,5	1	213	407	213	19	30	1	105	395	105	8	86
		2	350	350	76	76		2	323	323	73	73	
38,0	25,0	1	236	445	236	27	31	1	210	458	210	8	93
		2	384	384	89	89		2	381	381	62	62	
42,5	37,5	1	272	498	272	47	33	1	229	563	229	8	100
		2	432	432	113	113		2	454	454	61	61	
47,0	55,0	1	321	565	321	76	34	1	268	678	268	8	106
		2	493	493	148	148		2	543	543	68	68	

3.4.2.6 Centralballasts and Cornerloads according to DIN 15019

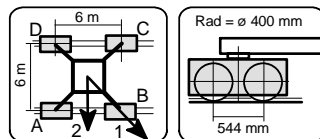
for a standing tower crane on undercarriage without climbing gear



UW 260.1 Corner distance 6,0 m x 6,0 m jib 55 m													
Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	25,0	1	221	359	221	84	24	1	113	387	113	8	52
		2	319	319	124	124		2	289	289	21	21	
20,0	25,0	1	226	373	226	79	25	1	113	404	113	8	67
		2	330	330	122	122		2	300	300	20	20	
24,5	25,0	1	231	389	231	72	27	1	113	424	113	8	74
		2	343	343	119	119		2	311	311	17	17	
29,0	27,5	1	241	412	241	71	28	1	123	446	123	8	81
		2	362	362	121	121		2	330	330	20	20	
33,5	30,0	1	252	437	252	68	30	1	133	470	133	8	87
		2	383	383	122	122		2	372	372	103	103	
38,0	32,5	1	263	463	263	63	31	1	141	496	141	8	94
		2	404	404	122	122		2	417	417	79	79	
42,5	37,5	1	280	497	280	63	33	1	230	593	230	8	100
		2	433	433	127	127		2	472	472	58	58	
47,0	57,5	1	335	570	335	99	34	1	280	710	280	8	107
		2	501	501	168	168		2	568	568	71	71	

3.4.2.7 **Centralballasts and Cornerloads according to DIN 15019**

for a standing tower crane on undercarriage without climbing gear

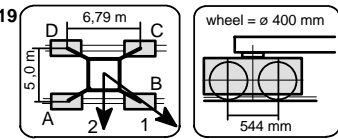


**UW 260.1** Corner distance 6,0 m x 6,0 m **jib 60 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Cornerloads						Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
15,5	22,5	1	224	369	224	78	24	1	110	409	110	8	53	
		2	326	326	121	121		2	301	301	17	17		
20,0	22,5	1	228	384	228	73	25	1	110	427	110	8	68	
		2	338	338	118	118		2	312	312	16	16		
24,5	25,0	1	239	406	239	72	27	1	122	448	122	8	75	
		2	357	357	121	121		2	330	330	19	19		
29,0	27,5	1	250	429	250	70	28	1	132	470	132	8	81	
		2	377	377	123	123		2	357	357	113	113		
33,5	27,5	1	254	448	254	61	30	1	129	495	129	8	88	
		2	391	391	118	118		2	393	393	86	86		
38,0	30,0	1	265	474	265	56	32	1	225	542	225	8	95	
		2	413	413	117	117		2	439	439	61	61		
42,5	42,5	1	301	527	301	74	33	1	243	651	243	8	101	
		2	461	461	141	141		2	513	513	59	59		
47,0	62,5	1	355	601	355	110	35	1	292	771	292	8	108	
		2	529	529	182	182		2	610	610	71	71		

3.4.3.1 **Centralballasts and Cornerloads according to DIN 15019**

for a travelling tower crane on undercarriage without climbing gear

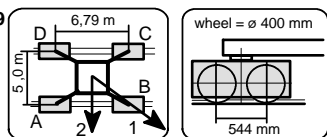


**UW 260.2** Corner distance 5,0 m x 6,79 m **jib 30 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Cornerloads						Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
15,5	32,5	1	267	378	173	62	24	1	202	293	125	34	51	
		2	347	347	93	93		2	267	267	59	59		
20,0	32,5	1	274	392	174	57	25	1	208	305	127	31	65	
		2	359	359	89	89		2	278	278	58	58		
24,5	32,5	1	282	407	176	50	27	1	215	318	129	27	72	
		2	373	373	85	85		2	289	289	55	55		
29,0	32,5	1	290	424	177	43	28	1	223	331	131	22	78	
		2	387	387	80	80		2	302	302	135	135		
33,5	40,0	1	317	461	196	52	30	1	285	389	198	95	85	
		2	421	421	92	92		2	360	360	123	123		
38,0	50,0	1	351	505	221	67	31	1	329	466	213	76	91	
		2	463	463	110	110		2	428	428	114	114		
42,5	62,5	1	392	557	252	87	33	1	380	554	234	60	98	
		2	512	512	132	132		2	506	506	108	108		
47,0	77,5	1	439	617	289	111	34	1	439	653	259	45	104	
		2	568	568	160	160		2	594	594	104	104		
51,5	92,5	1	487	679	325	133	36	1	500	757	282	25	111	
		2	626	626	186	186		2	686	686	96	96		

3.4.3.2 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage without climbing gear

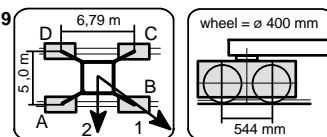


**UW 260.2** Corner distance 5,0 m x 6,79 m **jib 35 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Cornerloads						Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
15,5	20,0	1	237	333	156	59	24	1	165	267	88	8	51	
		2	307	307	86	86		2	236	236	27	27		
20,0	20,0	1	244	348	157	54	25	1	169	282	87	8	66	
		2	319	319	83	83		2	247	247	26	26		
24,5	20,0	1	252	363	158	48	27	1	172	299	85	8	72	
		2	332	332	78	78		2	258	258	24	24		
29,0	27,5	1	279	399	178	59	28	1	245	321	182	107	79	
		2	365	365	92	92		2	300	300	127	127		
33,5	37,5	1	313	442	204	75	30	1	288	394	198	92	85	
		2	406	406	110	110		2	365	365	122	122		
38,0	47,5	1	347	486	229	89	31	1	332	472	214	73	92	
		2	447	447	128	128		2	433	433	112	112		
42,5	60,0	1	387	538	260	109	33	1	383	561	234	56	98	
		2	496	496	151	151		2	512	512	106	106		
47,0	75,0	1	435	598	297	133	34	1	443	660	259	41	105	
		2	553	553	178	178		2	600	600	101	101		
51,5	90,0	1	482	660	333	155	36	1	503	765	282	20	112	
		2	611	611	205	205		2	693	693	93	93		

3.4.3.3 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage without climbing gear

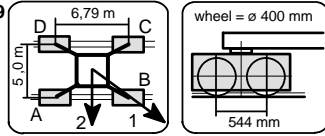


**UW 260.2** Corner distance 5,0 m x 6,79 m **jib 40 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Cornerloads						Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
15,5	25,0	1	260	367	169	62	24	1	183	275	106	14	52	
		2	337	337	92	92		2	252	252	69	69		
20,0	25,0	1	267	381	171	57	25	1	201	287	129	43	66	
		2	349	349	88	88		2	264	264	67	67		
24,5	25,0	1	275	397	172	50	27	1	209	302	131	38	73	
		2	363	363	84	84		2	276	276	63	63		
29,0	25,0	1	283	414	173	42	28	1	246	324	180	102	79	
		2	378	378	79	79		2	302	302	124	124		
33,5	35,0	1	317	457	198	58	30	1	289	398	196	87	86	
		2	418	418	97	97		2	368	368	117	117		
38,0	47,5	1	357	508	230	79	31	1	339	483	218	74	93	
		2	466	466	120	120		2	443	443	114	114		
42,5	60,0	1	398	561	260	98	33	1	391	572	238	56	99	
		2	516	516	143	143		2	522	522	107	107		
47,0	72,5	1	439	615	291	115	35	1	444	666	256	34	106	
		2	566	566	164	164		2	605	605	95	95		
51,5	87,5	1	487	677	327	137	36	1	505	772	279	12	112	
		2	625	625	189	189		2	698	698	86	86		

3.4.3.4 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage without climbing gear

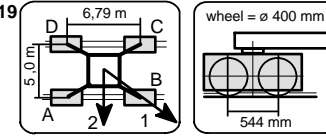


UW 260.2 Corner distance 5,0 m x 6,79 m jib 45 m

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,5	22,5	1	260	368	168	59	24	1	199	303	112	9	52		
		2	338	338	89	89		2	274	274	38	38			
20,0	22,5	1	267	383	169	53	26	1	204	319	111	8	67		
		2	351	351	86	86		2	286	286	35	35			
24,5	22,5	1	275	399	171	47	27	1	206	339	108	8	74		
		2	365	365	81	81		2	298	298	32	32			
29,0	22,5	1	283	416	171	39	29	1	207	360	103	8	80		
		2	379	379	75	75		2	318	318	107	107			
33,5	27,5	1	305	447	184	42	30	1	282	405	177	53	87		
		2	408	408	81	81		2	371	371	88	88			
38,0	40,0	1	345	498	215	62	32	1	332	491	198	40	93		
		2	456	456	104	104		2	447	447	84	84			
42,5	52,5	1	386	551	246	81	33	1	384	581	218	21	100		
		2	505	505	126	126		2	526	526	76	76			
47,0	70,0	1	440	618	289	110	35	1	450	689	249	10	107		
		2	569	569	160	160		2	622	622	76	76			

3.4.3.5 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage without climbing gear



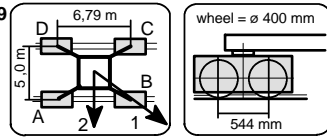
UW 260.2 Corner distance 5,0 m x 6,79 m jib 50 m

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,5	22,5	1	263	372	170	61	24	1	191	332	95	8	53		
		2	342	342	91	91		2	287	287	26	26			
20,0	22,5	1	270	387	172	55	26	1	194	350	92	8	68		
		2	354	354	88	88		2	299	299	23	23			
24,5	22,5	1	278	403	173	48	27	1	196	370	89	8	74		
		2	368	368	83	83		2	311	311	20	20			
29,0	25,0	1	293	426	180	46	29	1	210	392	96	8	81		
		2	389	389	83	83		2	335	335	107	107			
33,5	27,5	1	308	451	187	43	30	1	288	419	177	45	88		
		2	411	411	83	83		2	383	383	81	81			
38,0	37,5	1	342	496	211	57	32	1	332	499	191	24	94		
		2	454	454	100	100		2	453	453	70	70			
42,5	52,5	1	389	556	248	82	33	1	390	596	217	11	101		
		2	510	510	128	128		2	539	539	68	68			
47,0	75,0	1	456	636	304	123	35	1	469	717	260	12	107		
		2	586	586	173	173		2	648	648	81	81			



3.4.3.6 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage without climbing gear

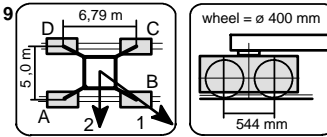


**UW 260.2** Corner distance 5,0 m x 6,79 m **jib 55 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				A [kN]			Cornerloads				A [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				B [kN]	C [kN]	D [kN]			
15,5	32,5	1	292	394	206	104	24	1	217	408	99	8	54		
		2	366	366	132	132		2	344	344	22	22			
20,0	32,5	1	300	409	208	98	26	1	220	426	96	8	69		
		2	379	379	129	129		2	356	356	19	19			
24,5	35,0	1	314	431	215	98	27	1	234	447	104	8	75		
		2	399	399	130	130		2	375	375	22	22			
29,0	37,5	1	329	455	222	96	29	1	248	469	111	8	82		
		2	420	420	131	131		2	395	395	23	23			
33,5	40,0	1	344	480	229	92	30	1	261	495	116	8	88		
		2	442	442	130	130		2	433	433	109	109			
38,0	42,5	1	359	507	235	87	32	1	357	534	207	30	95		
		2	466	466	128	128		2	485	485	79	79			
42,5	55,0	1	400	560	265	105	34	1	409	625	226	10	101		
		2	516	516	150	150		2	566	566	70	70			
47,0	77,5	1	467	640	320	147	35	1	488	747	269	10	108		
		2	592	592	195	195		2	676	676	82	82			

3.4.3.7 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage without climbing gear

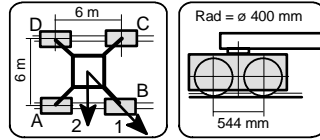


**UW 260.2** Corner distance 5,0 m x 6,79 m **jib 60 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				A [kN]			Cornerloads				A [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				B [kN]	C [kN]	D [kN]			
15,5	32,5	1	303	411	212	104	24	1	230	432	104	8	54		
		2	381	381	134	134		2	364	364	23	23			
20,0	32,5	1	311	426	213	98	26	1	232	450	101	8	69		
		2	394	394	130	130		2	376	376	20	20			
24,5	35,0	1	325	449	221	97	28	1	247	471	109	8	76		
		2	414	414	131	131		2	395	395	22	22			
29,0	37,5	1	340	473	228	95	29	1	260	495	115	8	82		
		2	436	436	132	132		2	416	416	23	23			
33,5	40,0	1	355	498	234	91	31	1	272	521	120	8	89		
		2	458	458	131	131		2	464	464	95	95			
38,0	42,5	1	371	525	240	86	32	1	374	571	207	9	96		
		2	482	482	128	128		2	517	517	64	64			
42,5	62,5	1	430	597	289	122	34	1	444	684	244	8	102		
		2	551	551	169	169		2	617	617	73	73			
47,0	85,0	1	497	678	344	163	35	1	522	809	284	8	109		
		2	628	628	213	213		2	728	728	83	83			

3.4.4.1 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

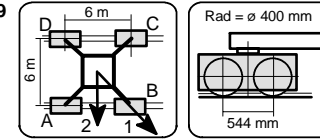


**UW 260.2** Corner distance 6,0 m x 6,0 m **jib 30 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	17,5	1	182	332	182	32	24	1	121	253	121	8	51
		2	288	288	76	76	2	213	213	39	39		
20,0	17,5	1	187	346	187	28	25	1	123	268	123	8	65
		2	299	299	74	74	2	222	222	38	38		
24,5	17,5	1	191	361	191	22	27	1	124	283	124	8	72
		2	311	311	71	71	2	232	232	37	37		
29,0	17,5	1	196	377	196	15	28	1	124	301	124	8	78
		2	324	324	68	68	2	250	250	111	111		
33,5	25,0	1	219	413	219	25	30	1	204	344	204	65	85
		2	356	356	82	82	2	303	303	106	106		
38,0	32,5	1	242	450	242	35	31	1	227	412	227	43	91
		2	389	389	95	95	2	358	358	97	97		
42,5	42,5	1	272	495	272	49	33	1	257	491	257	23	98
		2	430	430	114	114	2	423	423	91	91		
47,0	55,0	1	308	548	308	67	34	1	289	585	289	8	104
		2	478	478	138	138	2	497	497	89	89		
51,5	65,0	1	337	596	337	78	36	1	290	703	290	8	111
		2	521	521	154	154	2	568	568	77	77		

3.4.4.2 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

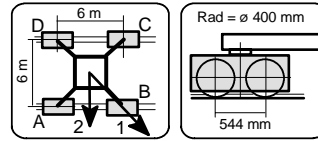


**UW 260.2** Corner distance 6,0 m x 6,0 m **jib 35 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	7,5	1	165	295	165	35	24	1	71	254	71	8	51
		2	257	257	73	73	2	188	188	14	14		
20,0	7,5	1	170	309	170	30	25	1	73	268	73	8	66
		2	268	268	71	71	2	197	197	13	13		
24,5	10,0	1	180	330	180	31	27	1	86	284	86	8	72
		2	286	286	74	74	2	214	214	18	18		
29,0	12,5	1	191	352	191	30	28	1	99	302	99	8	79
		2	305	305	77	77	2	248	248	104	104		
33,5	22,5	1	221	395	221	47	30	1	206	349	206	62	85
		2	344	344	98	98	2	307	307	104	104		
38,0	30,0	1	244	432	244	56	31	1	229	418	229	40	92
		2	377	377	111	111	2	363	363	95	95		
42,5	40,0	1	274	477	274	70	33	1	259	498	259	19	98
		2	418	418	130	130	2	428	428	89	89		
47,0	52,5	1	309	530	309	89	34	1	287	596	287	8	105
		2	465	465	153	153	2	502	502	86	86		
51,5	65,0	1	345	584	345	106	36	1	299	715	299	8	112
		2	514	514	176	176	2	580	580	80	80		

3.4.4.3 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

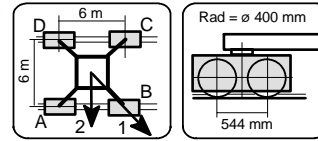


**UW 260.2** Corner distance 6,0 m x 6,0 m **jib 40 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Cornerloads						Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
15,5	12,5	1	183	327	183	39	24	1	95	255	95	8	52	
		2	285	285	81	81		2	206	206	53	53		
20,0	12,5	1	188	341	188	34	25	1	97	269	97	8	66	
		2	296	296	79	79		2	216	216	52	52		
24,5	12,5	1	192	357	192	28	27	1	98	285	98	8	73	
		2	308	308	76	76		2	227	227	50	50		
29,0	12,5	1	197	373	197	21	28	1	98	303	98	8	79	
		2	321	321	72	72		2	256	256	107	107		
33,5	20,0	1	220	409	220	31	30	1	205	353	205	57	86	
		2	354	354	86	86		2	309	309	101	101		
38,0	27,5	1	243	447	243	40	31	1	228	422	228	34	93	
		2	387	387	99	99		2	366	366	91	91		
42,5	40,0	1	279	499	279	59	33	1	264	509	264	20	99	
		2	435	435	124	124		2	437	437	91	91		
47,0	50,0	1	309	546	309	71	35	1	280	608	280	8	106	
		2	476	476	141	141		2	506	506	82	82		
51,5	62,5	1	345	601	345	88	36	1	291	729	291	8	112	
		2	526	526	163	163		2	584	584	75	75		

3.4.4.4 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

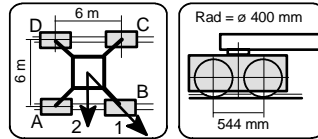


**UW 260.2** Corner distance 6,0 m x 6,0 m **jib 45 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Cornerloads						Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
15,5	10,0	1	182	329	182	36	24	1	102	286	102	8	52	
		2	286	286	79	79		2	223	223	26	26		
20,0	10,0	1	187	343	187	31	26	1	103	303	103	8	67	
		2	297	297	76	76		2	234	234	25	25		
24,5	10,0	1	192	359	192	24	27	1	103	322	103	8	74	
		2	310	310	73	73		2	245	245	23	23		
29,0	10,0	1	196	375	196	17	29	1	102	342	102	8	80	
		2	323	323	69	69		2	269	269	93	93		
33,5	12,5	1	207	399	207	15	30	1	112	365	112	8	87	
		2	343	343	71	71		2	310	310	74	74		
38,0	22,5	1	236	443	236	29	32	1	221	436	221	8	93	
		2	383	383	90	90		2	373	373	70	70		
42,5	32,5	1	266	489	266	43	33	1	229	539	229	8	100	
		2	424	424	108	108		2	439	439	63	63		
47,0	47,5	1	308	549	308	67	35	1	256	652	256	8	107	
		2	479	479	137	137		2	521	521	65	65		
51,5	67,5	1	363	623	363	102	36	1	304	775	304	8	113	
		2	547	547	178	178		2	619	619	76	76		

3.4.4.5 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

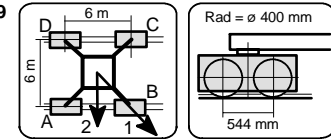


**UW 260.2** Corner distance 6,0 m x 6,0 m **jib 50 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	10,0	1	185	333	185	38	24	1	89	315	89	8	53
		2	289	289	81	81		2	234	234	16	16	
20,0	10,0	1	190	347	190	33	26	1	89	332	89	8	68
		2	301	301	79	79		2	244	244	15	15	
24,5	12,5	1	201	369	201	32	27	1	102	351	102	8	74
		2	319	319	82	82		2	262	262	19	19	
29,0	12,5	1	205	385	205	25	29	1	100	372	100	8	81
		2	332	332	78	78		2	285	285	95	95	
33,5	15,0	1	216	409	216	22	30	1	110	395	110	8	88
		2	353	353	79	79		2	327	327	75	75	
38,0	20,0	1	233	441	233	24	32	1	203	458	203	8	94
		2	380	380	85	85		2	377	377	59	59	
42,5	32,5	1	269	494	269	44	33	1	222	563	222	8	101
		2	428	428	110	110		2	450	450	57	57	
47,0	50,0	1	317	560	317	74	35	1	262	677	262	8	107
		2	489	489	145	145		2	539	539	65	65	
51,5	70,0	1	372	635	372	109	36	1	309	801	309	8	114
		2	557	557	186	186		2	637	637	76	76	

3.4.4.6 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

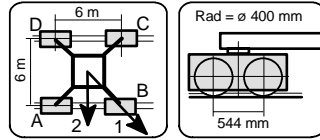


**UW 260.2** Corner distance 6,0 m x 6,0 m **jib 55 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	20,0	1	218	356	218	80	24	1	106	387	106	8	54
		2	315	315	121	121		2	286	286	17	17	
20,0	20,0	1	222	370	222	75	26	1	106	405	106	8	69
		2	327	327	118	118		2	297	297	16	16	
24,5	22,5	1	233	392	233	75	27	1	118	424	118	8	75
		2	345	345	121	121		2	314	314	20	20	
29,0	22,5	1	238	408	238	67	29	1	116	446	116	8	82
		2	358	358	117	117		2	327	327	119	119	
33,5	25,0	1	249	433	249	64	30	1	126	470	126	8	88
		2	379	379	118	118		2	368	368	99	99	
38,0	27,5	1	259	459	259	60	32	1	134	496	134	8	95
		2	400	400	119	119		2	413	413	75	75	
42,5	35,0	1	283	498	283	67	34	1	236	592	236	8	101
		2	435	435	130	130		2	474	474	61	61	
47,0	52,5	1	331	565	331	97	35	1	274	708	274	8	108
		2	496	496	166	166		2	564	564	69	69	

3.4.4.7 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

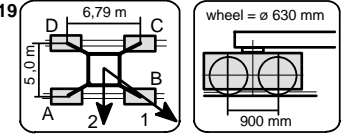


**UW 260.2** Corner distance 6,0 m x 6,0 m **jib 60 m**

Table with columns for Height under hook [m], Centerballasts [t], Jib position, Crane in service torque moment: 240 kNm (Cornerloads A, B, C, D, Horizontal force), Crane out of service torque moment: 0 kNm (Cornerloads A, B, C, D, Horizontal force).

3.4.5.1 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage without climbing gear

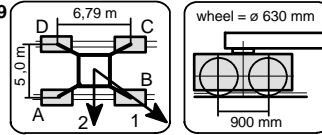


**UW 260.3** Corner distance 5,0 m x 6,79 m **jib 30 m**

Table with columns for Height under hook [m], Centerballasts [t], Jib position, Crane in service torque moment: 240 kNm (Cornerloads A, B, C, D, Horizontal force), Crane out of service torque moment: 0 kNm (Cornerloads A, B, C, D, Horizontal force).

3.4.5.2 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on  
undercarriage without climbing gear

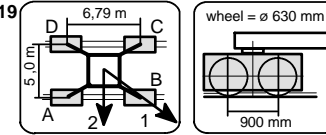


**UW 260.3** Corner distance 5,0 m x 6,79 m **jib 35 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Cornerloads						Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
15,5	20,0	1	245	341	163	67	24	1	173	275	96	16	51	
		2	314	314	94	94		2	244	244	35	35		
20,0	20,0	1	252	355	165	62	25	1	176	290	95	16	66	
		2	327	327	90	90		2	255	255	34	34		
24,5	20,0	1	260	371	166	55	27	1	180	307	93	16	72	
		2	340	340	86	86		2	266	266	31	31		
29,0	27,5	1	287	406	186	66	28	1	253	328	190	114	79	
		2	373	373	100	100		2	308	308	135	135		
33,5	37,5	1	320	449	211	83	30	1	296	402	206	100	85	
		2	414	414	118	118		2	373	373	129	129		
38,0	47,5	1	354	494	237	97	31	1	340	480	221	81	92	
		2	455	455	136	136		2	441	441	120	120		
42,5	60,0	1	395	546	268	117	33	1	391	568	241	64	98	
		2	504	504	159	159		2	519	519	113	113		
47,0	75,0	1	442	606	304	141	34	1	450	668	266	49	105	
		2	561	561	186	186		2	608	608	109	109		
51,5	90,0	1	490	668	341	163	36	1	511	773	290	28	112	
		2	618	618	212	212		2	700	700	100	100		

3.4.5.3 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on  
undercarriage without climbing gear

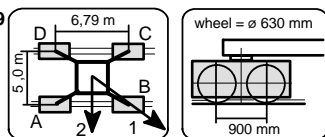


**UW 260.3** Corner distance 5,0 m x 6,79 m **jib 40 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Cornerloads						Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
15,5	25,0	1	267	374	177	70	24	1	191	282	114	22	52	
		2	345	345	100	100		2	260	260	77	77		
20,0	25,0	1	275	389	179	65	25	1	209	295	137	51	66	
		2	357	357	96	96		2	271	271	74	74		
24,5	25,0	1	283	404	180	58	27	1	217	309	138	46	73	
		2	371	371	92	92		2	284	284	71	71		
29,0	25,0	1	291	421	181	50	28	1	254	332	188	110	79	
		2	385	385	86	86		2	310	310	131	131		
33,5	35,0	1	325	465	206	66	30	1	296	406	204	95	86	
		2	426	426	105	105		2	376	376	125	125		
38,0	47,5	1	365	516	237	86	31	1	347	490	225	82	93	
		2	474	474	128	128		2	451	451	122	122		
42,5	60,0	1	406	568	268	105	33	1	398	580	245	64	99	
		2	523	523	151	151		2	530	530	114	114		
47,0	72,5	1	447	623	299	123	35	1	452	674	264	42	106	
		2	574	574	171	171		2	612	612	103	103		
51,5	87,5	1	495	685	335	144	36	1	513	780	287	20	112	
		2	632	632	197	197		2	706	706	94	94		

3.4.5.4 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage without climbing gear

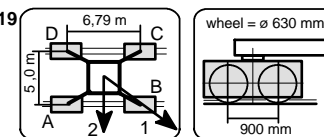


UW 260.3 Corner distance 5,0 m x 6,79 m jib 45 m

Table with columns: Height under hook [m], Centerballasts [t], Jib position, Crane in service torque moment: 240 kNm, Cornerloads (A, B, C, D) [kN], Horizontal force [kN], Crane out of service torque moment: 0 kNm, Cornerloads (A, B, C, D) [kN], Horizontal force [kN].

3.4.5.5 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage without climbing gear

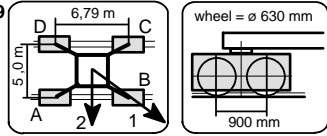


UW 260.3 Corner distance 5,0 m x 6,79 m jib 50 m

Table with columns: Height under hook [m], Centerballasts [t], Jib position, Crane in service torque moment: 240 kNm, Cornerloads (A, B, C, D) [kN], Horizontal force [kN], Crane out of service torque moment: 0 kNm, Cornerloads (A, B, C, D) [kN], Horizontal force [kN].

3.4.5.6 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on  
undercarriage without climbing gear

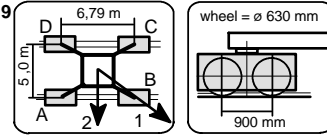


**UW 260.3** Corner distance 5,0 m x 6,79 m **jib 55 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Cornerloads						Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
15,5	32,5	1	300	402	214	112	24	1	225	416	106	16	54	
		2	374	374	140	140		2	352	352	30	30		
20,0	32,5	1	308	417	215	106	26	1	228	434	104	16	69	
		2	387	387	136	136		2	364	364	27	27		
24,5	35,0	1	322	439	223	105	27	1	242	454	112	16	75	
		2	407	407	138	138		2	383	383	29	29		
29,0	37,5	1	336	463	230	103	29	1	256	477	119	16	82	
		2	428	428	138	138		2	403	403	31	31		
33,5	40,0	1	351	488	236	100	30	1	269	502	124	16	88	
		2	450	450	138	138		2	441	441	117	117		
38,0	42,5	1	367	515	242	95	32	1	364	542	215	38	95	
		2	474	474	136	136		2	493	493	87	87		
42,5	55,0	1	408	568	273	113	34	1	417	633	234	18	101	
		2	524	524	157	157		2	573	573	78	78		
47,0	77,5	1	474	648	328	155	35	1	496	755	277	17	108	
		2	600	600	203	203		2	683	683	89	89		
51,5	100,0	1	542	730	383	194	37	1	572	887	314	16	115	
		2	678	678	246	246		2	798	798	96	96		

3.4.5.7 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on  
undercarriage without climbing gear



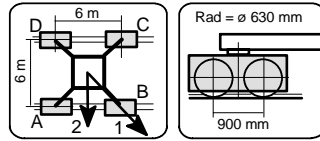
**UW 260.3** Corner distance 5,0 m x 6,79 m **jib 60 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Cornerloads						Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
15,5	32,5	1	311	419	220	112	24	1	238	439	112	16	54	
		2	389	389	142	142		2	372	372	30	30		
20,0	32,5	1	319	434	221	106	26	1	240	458	109	16	69	
		2	402	402	138	138		2	384	384	27	27		
24,5	35,0	1	333	456	229	105	28	1	254	479	117	16	76	
		2	422	422	139	139		2	403	403	30	30		
29,0	37,5	1	348	480	235	103	29	1	268	503	123	16	82	
		2	444	444	139	139		2	423	423	31	31		
33,5	40,0	1	363	506	242	99	31	1	280	529	128	16	89	
		2	466	466	138	138		2	472	472	103	103		
38,0	42,5	1	378	533	248	93	32	1	382	579	215	17	96	
		2	490	490	136	136		2	524	524	72	72		
42,5	62,5	1	438	605	297	130	34	1	452	692	251	16	102	
		2	559	559	176	176		2	625	625	80	80		
47,0	85,0	1	505	686	352	171	35	1	530	817	292	16	109	
		2	636	636	221	221		2	736	736	91	91		



3.3.6.1 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

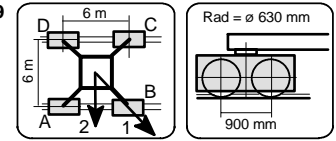


**UW 260.3** Corner distance 6,0 m x 6,0 m **jib 30 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,5	17,5	1	190	340	190	40	24	1	129	261	129	16	51		
		2	296	296	84	84		2	220	220	47	47			
20,0	17,5	1	195	354	195	35	25	1	131	275	131	16	65		
		2	307	307	82	82		2	230	230	46	46			
24,5	17,5	1	199	369	199	30	27	1	132	291	132	16	72		
		2	319	319	79	79		2	240	240	45	45			
29,0	17,5	1	204	385	204	23	28	1	132	309	132	16	78		
		2	332	332	76	76		2	258	258	119	119			
33,5	25,0	1	227	421	227	33	30	1	212	351	212	72	85		
		2	364	364	90	90		2	311	311	113	113			
38,0	32,5	1	250	458	250	42	31	1	235	420	235	50	91		
		2	397	397	103	103		2	366	366	104	104			
42,5	42,5	1	280	503	280	56	33	1	265	499	265	30	98		
		2	438	438	122	122		2	431	431	99	99			
47,0	55,0	1	316	556	316	75	34	1	297	593	297	16	104		
		2	486	486	146	146		2	505	505	97	97			
51,5	65,0	1	345	604	345	86	36	1	297	710	297	16	111		
		2	528	528	162	162		2	576	576	84	84			
56,0	82,5	1	396	675	396	117	38	1	334	839	334	16	119		
		2	593	593	199	199		2	672	672	90	90			
60,5	102,5	1	453	753	453	153	40	1	378	980	378	16	127		
		2	665	665	241	241		2	779	779	97	97			

3.3.6.2 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

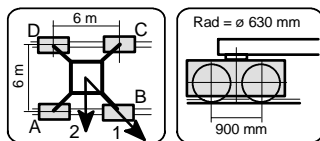


**UW 260.3** Corner distance 6,0 m x 6,0 m **jib 35 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,5	7,5	1	173	303	173	43	24	1	78	262	78	16	51		
		2	265	265	81	81		2	196	196	21	21			
20,0	7,5	1	177	317	177	38	25	1	80	276	80	16	66		
		2	276	276	79	79		2	205	205	21	21			
24,5	10,0	1	188	338	188	38	27	1	94	292	94	16	72		
		2	294	294	82	82		2	222	222	26	26			
29,0	12,5	1	199	360	199	38	28	1	106	310	106	16	79		
		2	313	313	85	85		2	256	256	112	112			
33,5	22,5	1	228	402	228	54	30	1	213	357	213	70	85		
		2	352	352	105	105		2	315	315	112	112			
38,0	30,0	1	252	440	252	64	31	1	237	426	237	48	92		
		2	385	385	119	119		2	370	370	103	103			
42,5	40,0	1	281	485	281	78	33	1	266	506	266	27	98		
		2	425	425	137	137		2	435	435	97	97			
47,0	52,5	1	317	538	317	96	34	1	295	603	295	16	105		
		2	473	473	161	161		2	510	510	94	94			
51,5	65,0	1	353	592	353	114	36	1	307	723	307	16	112		
		2	522	522	184	184		2	588	588	88	88			
56,0	82,5	1	404	663	404	145	38	1	343	853	343	16	120		
		2	587	587	221	221		2	685	685	93	93			
60,5	102,5	1	461	741	461	181	40	1	386	995	386	16	128		
		2	659	659	263	263		2	792	792	99	99			

3.3.6.3 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

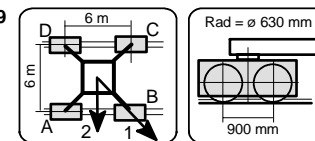


**UW 260.3** Corner distance 6,0 m x 6,0 m **jib 40 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	12,5	1	191	335	191	47	24	1	103	262	103	16	52
		2	293	293	89	89		2	213	213	61	61	
20,0	12,5	1	195	349	195	42	25	1	105	277	105	16	66
		2	304	304	87	87		2	224	224	60	60	
24,5	12,5	1	200	364	200	36	27	1	106	293	106	16	73
		2	316	316	84	84		2	235	235	58	58	
29,0	12,5	1	205	381	205	28	28	1	106	311	106	16	79
		2	329	329	80	80		2	264	264	115	115	
33,5	20,0	1	228	417	228	39	30	1	213	360	213	65	86
		2	362	362	94	94		2	317	317	108	108	
38,0	27,5	1	251	455	251	47	31	1	236	430	236	42	93
		2	395	395	107	107		2	373	373	99	99	
42,5	40,0	1	287	507	287	67	33	1	272	517	272	27	99
		2	442	442	132	132		2	445	445	99	99	
47,0	50,0	1	316	554	316	79	35	1	287	616	287	16	106
		2	484	484	149	149		2	514	514	89	89	
51,5	62,5	1	352	609	352	96	36	1	299	736	299	16	112
		2	534	534	171	171		2	592	592	82	82	
56,0	82,5	1	409	686	409	133	38	1	347	868	347	16	120
		2	605	605	214	214		2	696	696	93	93	
60,5	105,0	1	473	771	473	174	40	1	402	1012	402	16	128
		2	684	684	262	262		2	810	810	105	105	

3.3.6.4 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

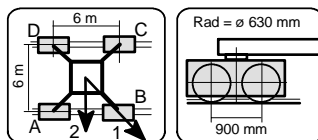


**UW 260.3** Corner distance 6,0 m x 6,0 m **jib 45 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	10,0	1	190	337	190	43	24	1	110	294	110	16	52
		2	294	294	86	86		2	231	231	34	34	
20,0	10,0	1	195	351	195	38	26	1	111	311	111	16	67
		2	305	305	84	84		2	241	241	33	33	
24,5	10,0	1	199	366	199	32	27	1	111	329	111	16	74
		2	317	317	81	81		2	252	252	31	31	
29,0	10,0	1	204	383	204	25	29	1	109	350	109	16	80
		2	330	330	77	77		2	277	277	101	101	
33,5	12,5	1	215	407	215	22	30	1	119	373	119	16	87
		2	351	351	79	79		2	318	318	81	81	
38,0	22,5	1	244	451	244	37	32	1	229	444	229	16	93
		2	391	391	98	98		2	381	381	78	78	
42,5	32,5	1	274	497	274	50	33	1	236	547	236	16	100
		2	432	432	116	116		2	447	447	71	71	
47,0	47,5	1	316	557	316	75	35	1	264	659	264	16	107
		2	486	486	145	145		2	528	528	73	73	
51,5	67,5	1	370	631	370	109	36	1	312	782	312	16	113
		2	555	555	186	186		2	626	626	84	84	
56,0	87,5	1	427	709	427	146	38	1	359	917	359	16	121
		2	626	626	228	228		2	731	731	94	94	

3.3.6.5 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

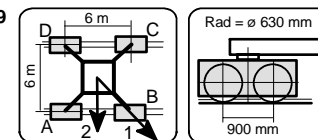


UW 260.3 Corner distance 6,0 m x 6,0 m jib 50 m

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	10,0	1	193	340	193	45	24	1	97	323	97	16	53
		2	297	297	89	89		2	242	242	24	24	
20,0	10,0	1	197	355	197	40	26	1	97	340	97	16	68
		2	309	309	86	86		2	252	252	23	23	
24,5	12,5	1	208	376	208	40	27	1	109	359	109	16	74
		2	327	327	89	89		2	270	270	27	27	
29,0	12,5	1	213	393	213	33	29	1	108	380	108	16	81
		2	340	340	85	85		2	293	293	103	103	
33,5	15,0	1	224	417	224	30	30	1	118	403	118	16	88
		2	361	361	87	87		2	334	334	83	83	
38,0	20,0	1	241	449	241	32	32	1	210	466	210	16	94
		2	388	388	93	93		2	385	385	66	66	
42,5	32,5	1	276	501	276	52	33	1	230	570	230	16	101
		2	435	435	117	117		2	458	458	65	65	
47,0	50,0	1	325	568	325	82	35	1	270	685	270	16	107
		2	497	497	153	153		2	546	546	73	73	
51,5	70,0	1	379	642	379	116	36	1	316	809	316	16	114
		2	565	565	193	193		2	645	645	84	84	
56,0	90,0	1	436	720	436	153	38	1	363	945	363	16	122
		2	637	637	236	236		2	750	750	93	93	

3.3.6.6 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

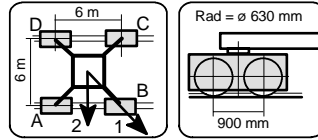


UW 260.3 Corner distance 6,0 m x 6,0 m jib 55 m

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	20,0	1	226	363	226	88	24	1	113	395	113	16	54
		2	323	323	128	128		2	294	294	25	25	
20,0	20,0	1	230	378	230	83	26	1	114	413	114	16	69
		2	335	335	126	126		2	304	304	24	24	
24,5	22,5	1	241	399	241	83	27	1	126	432	126	16	75
		2	353	353	129	129		2	322	322	28	28	
29,0	22,5	1	246	416	246	75	29	1	124	454	124	16	82
		2	366	366	125	125		2	334	334	127	127	
33,5	25,0	1	256	441	256	72	30	1	134	478	134	16	88
		2	387	387	126	126		2	376	376	107	107	
38,0	27,5	1	267	466	267	68	32	1	142	504	142	16	95
		2	408	408	126	126		2	421	421	83	83	
42,5	35,0	1	290	506	290	75	34	1	243	600	243	16	101
		2	443	443	138	138		2	482	482	69	69	
47,0	52,5	1	339	573	339	105	35	1	282	716	282	16	108
		2	504	504	173	173		2	571	571	76	76	
51,5	72,5	1	393	647	393	139	37	1	328	843	328	16	115
		2	573	573	214	214		2	671	671	86	86	
56,0	92,5	1	450	725	450	175	39	1	373	980	373	16	123
		2	645	645	256	256		2	776	776	94	94	

3.3.6.7 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear



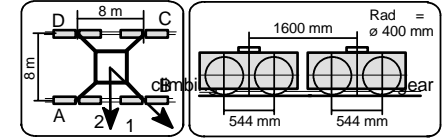
**UW 260.3** Corner distance 6,0 m x 6,0 m **jib 60 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	20,0	1	234	380	234	88	24	1	123	418	123	16	54
		2	337	337	131	131		2	312	312	28	28	
20,0	20,0	1	239	394	239	83	26	1	123	436	123	16	69
		2	349	349	129	129		2	323	323	26	26	
24,5	22,5	1	249	416	249	83	28	1	135	456	135	16	76
		2	367	367	132	132		2	341	341	30	30	
29,0	22,5	1	254	433	254	75	29	1	133	478	133	16	82
		2	381	381	127	127		2	361	361	117	117	
33,5	25,0	1	265	458	265	72	31	1	142	502	142	16	89
		2	401	401	128	128		2	404	404	96	96	
38,0	27,5	1	276	484	276	67	32	1	239	549	239	16	96
		2	423	423	128	128		2	449	449	72	72	
42,5	40,0	1	311	537	311	86	34	1	256	657	256	16	102
		2	471	471	152	152		2	523	523	70	70	
47,0	57,5	1	360	604	360	115	35	1	294	776	294	16	109
		2	532	532	187	187		2	614	614	76	76	
51,5	77,5	1	414	679	414	149	37	1	338	906	338	16	115
		2	602	602	227	227		2	714	714	84	84	
56,0	100,0	1	478	764	478	191	39	1	394	1046	394	16	123
		2	680	680	275	275		2	827	827	98	98	

3.4.7.1 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage

without



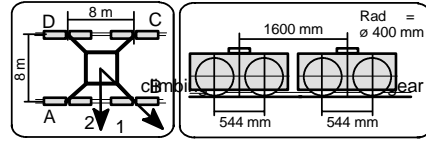
**UW 480** Corner distance 8,0 m x 8,0 m **jib 30 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
20,5	0,0	1	200	322	200	78	28	1	144	244	144	44	72
		2	287	287	114	114		2	215	215	73	73	
25,0	0,0	1	205	335	205	75	30	1	148	254	148	42	79
		2	297	297	113	113		2	228	228	151	151	
29,5	0,0	1	209	348	209	71	31	1	194	277	194	112	85
		2	307	307	112	112		2	253	253	136	136	
34,0	0,0	1	214	361	214	66	33	1	199	313	199	85	92
		2	318	318	110	110		2	279	279	118	118	
38,5	0,0	1	218	376	218	61	34	1	203	351	203	56	98
		2	330	330	107	107		2	308	308	99	99	
43,0	5,0	1	236	405	236	66	36	1	221	405	221	36	105
		2	355	355	116	116		2	351	351	90	90	
47,5	12,5	1	259	440	259	77	37	1	238	475	238	25	112
		2	387	387	131	131		2	403	403	85	85	
52,0	20,0	1	282	477	282	87	39	1	241	562	241	25	118
		2	420	420	144	144		2	457	457	77	77	
56,5	32,5	1	318	527	318	108	40	1	265	657	265	25	125
		2	466	466	170	170		2	526	526	80	80	
61,0	50,0	1	366	592	366	141	42	1	311	759	311	25	131
		2	526	526	207	207		2	611	611	92	92	
65,5	65,0	1	411	654	411	168	44	1	342	875	342	25	140
		2	582	582	239	239		2	696	696	95	95	
70,0	85,0	1	468	729	468	206	46	1	393	1000	393	25	148
		2	653	653	283	283		2	798	798	108	108	
74,5	105,0	1	525	807	525	243	48	1	440	1135	440	25	157
		2	724	724	326	326		2	903	903	117	117	
79,0	125,0	1	583	885	583	281	50	1	484	1279	484	25	166
		2	797	797	369	369		2	1011	1011	125	125	

3.4.7.2 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage

without



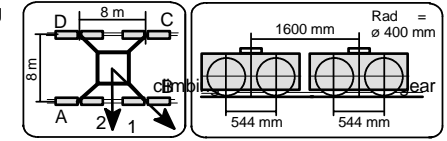
**UW 480** Corner distance 8,0 m x 8,0 m **jib 35 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
20,5	0,0	1	208	315	208	101	28	1	144	244	144	43	73		
		2	284	284	132	132		2	215	215	171	171			
25,0	0,0	1	213	328	213	98	30	1	148	255	148	42	79		
		2	294	294	131	131		2	238	238	158	158			
29,5	0,0	1	217	341	217	94	31	1	202	287	202	117	86		
		2	304	304	130	130		2	262	262	142	142			
34,0	0,0	1	222	355	222	89	33	1	207	323	207	90	92		
		2	316	316	128	128		2	289	289	124	124			
38,5	0,0	1	226	369	226	83	34	1	211	362	211	60	99		
		2	327	327	125	125		2	318	318	105	105			
43,0	0,0	1	231	385	231	76	36	1	216	404	216	27	105		
		2	340	340	122	122		2	349	349	83	83			
47,5	10,0	1	260	427	260	94	37	1	237	483	237	25	112		
		2	378	378	143	143		2	407	407	83	83			
52,0	17,5	1	284	464	284	104	39	1	239	571	239	25	119		
		2	411	411	156	156		2	462	462	76	76			
56,5	32,5	1	326	520	326	131	40	1	276	667	276	25	125		
		2	463	463	188	188		2	538	538	84	84			
61,0	47,5	1	368	579	368	157	42	1	308	770	308	25	132		
		2	517	517	219	219		2	616	616	89	89			
65,5	65,0	1	419	647	419	191	44	1	351	887	351	25	140		
		2	580	580	257	257		2	708	708	99	99			
70,0	85,0	1	476	722	476	229	46	1	402	1014	402	25	149		
		2	650	650	301	301		2	810	810	111	111			
74,5	105,0	1	533	800	533	266	48	1	447	1152	447	25	157		
		2	722	722	344	344		2	916	916	119	119			
79,0	125,0	1	591	879	591	303	50	1	490	1297	490	25	167		
		2	794	794	387	387		2	1025	1025	126	126			

3.4.7.3 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage

without

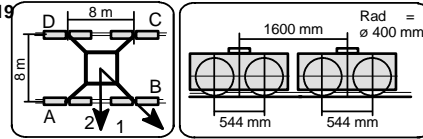


**UW 480** Corner distance 8,0 m x 8,0 m **jib 40 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 240 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
20,5	0,0	1	214	332	214	96	28	1	160	250	160	70	73		
		2	297	297	130	130		2	223	223	96	96			
25,0	0,0	1	218	344	218	92	30	1	203	262	203	144	80		
		2	307	307	129	129		2	245	245	161	161			
29,5	0,0	1	223	357	223	88	31	1	208	296	208	120	86		
		2	318	318	128	128		2	270	270	145	145			
34,0	0,0	1	227	371	227	83	33	1	212	332	212	93	93		
		2	329	329	125	125		2	297	297	128	128			
38,5	0,0	1	232	387	232	77	34	1	217	371	217	62	100		
		2	341	341	123	123		2	326	326	108	108			
43,0	0,0	1	236	403	236	70	36	1	221	414	221	29	106		
		2	354	354	119	119		2	357	357	85	85			
47,5	7,5	1	260	439	260	81	38	1	231	492	231	25	113		
		2	386	386	133	133		2	410	410	80	80			
52,0	17,5	1	289	482	289	97	39	1	246	581	246	25	119		
		2	425	425	153	153		2	471	471	78	78			
56,5	32,5	1	331	539	331	124	41	1	281	678	281	25	126		
		2	478	478	184	184		2	547	547	86	86			
61,0	47,5	1	373	598	373	149	42	1	313	782	313	25	133		
		2	532	532	215	215		2	626	626	91	91			
65,5	65,0	1	424	666	424	182	44	1	355	901	355	25	141		
		2	595	595	253	253		2	719	719	99	99			
70,0	85,0	1	481	743	481	220	46	1	405	1029	405	25	150		
		2	666	666	297	297		2	821	821	111	111			
74,5	105,0	1	538	821	538	256	48	1	450	1169	450	25	158		
		2	738	738	339	339		2	928	928	119	119			
79,0	127,5	1	603	906	603	299	50	1	505	1316	505	25	168		
		2	817	817	388	388		2	1044	1044	131	131			

3.4.7.4 Zentralballaste und Ecklasten nach DIN 15019

für fahrbaren Turmdrehkran auf Unterwagen ohne Kletterwerk

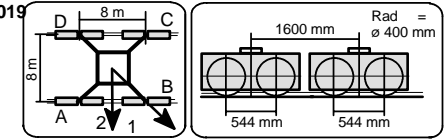


**UW 480** Eckabstand 8,0 m x 8,0 m **Ausleger 45 m**

Hakenhöhe [m]	Zentralballast [t]	Auslegerstellung	Kran in Betrieb Drehmoment: 240 kNm				Horizontalkraft [kN]	Auslegerstellung	Kran außer Betrieb Drehmoment: 0 kNm				Horizontalkraft [kN]
			Ecklasten						Ecklasten				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
20,5	0,0	1	219	339	219	99	29	1	161	275	161	48	74
		2	304	304	134	134		2	242	242	81	81	
25,0	0,0	1	224	352	224	96	30	1	166	286	166	46	81
		2	314	314	133	133		2	260	260	157	157	
29,5	0,0	1	228	365	228	92	32	1	213	315	213	111	87
		2	325	325	132	132		2	286	286	141	141	
34,0	0,0	1	233	379	233	87	33	1	218	352	218	84	94
		2	336	336	129	129		2	313	313	123	123	
38,5	0,0	1	237	394	237	80	35	1	222	392	222	53	100
		2	348	348	126	126		2	342	342	103	103	
43,0	0,0	1	242	411	242	73	36	1	221	441	221	25	107
		2	361	361	123	123		2	374	374	80	80	
47,5	7,5	1	265	447	265	84	38	1	226	524	226	25	114
		2	394	394	137	137		2	427	427	74	74	
52,0	20,0	1	301	497	301	105	39	1	252	614	252	25	120
		2	439	439	163	163		2	495	495	78	78	
56,5	35,0	1	343	554	343	132	41	1	287	713	287	25	127
		2	492	492	194	194		2	571	571	85	85	
61,0	52,5	1	391	619	391	163	42	1	331	820	331	25	133
		2	553	553	230	230		2	657	657	95	95	
65,5	70,0	1	442	688	442	196	44	1	372	940	372	25	142
		2	616	616	268	268		2	751	751	104	104	
70,0	87,5	1	493	759	493	227	46	1	408	1071	408	25	150
		2	681	681	305	305		2	848	848	108	108	
74,5	110,0	1	556	844	556	269	48	1	464	1212	464	25	159
		2	759	759	353	353		2	961	961	122	122	
79,0	132,5	1	621	929	621	312	51	1	518	1362	518	25	168
		2	839	839	402	402		2	1078	1078	133	133	

3.4.7.5 Zentralballaste und Ecklasten nach DIN 15019

für fahrbaren Turmdrehkran auf Unterwagen ohne Kletterwerk

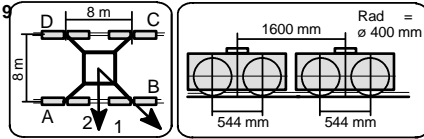


**UW 480** Eckabstand 8,0 m x 8,0 m **Ausleger 50 m**

Hakenhöhe [m]	Zentralballast [t]	Auslegerstellung	Kran in Betrieb Drehmoment: 240 kNm				Horizontalkraft [kN]	Auslegerstellung	Kran außer Betrieb Drehmoment: 0 kNm				Horizontalkraft [kN]
			Ecklasten						Ecklasten				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
20,5	0,0	1	222	343	222	101	29	1	162	286	162	38	75
		2	307	307	137	137		2	250	250	74	74	
25,0	0,0	1	227	355	227	98	30	1	167	298	167	35	81
		2	317	317	136	136		2	268	268	155	155	
29,5	0,0	1	231	369	231	94	32	1	216	326	216	106	88
		2	328	328	134	134		2	294	294	138	138	
34,0	0,0	1	236	383	236	88	33	1	221	363	221	78	95
		2	340	340	132	132		2	321	321	120	120	
38,5	0,0	1	240	398	240	82	35	1	225	403	225	47	101
		2	352	352	128	128		2	351	351	99	99	
43,0	0,0	1	245	415	245	75	36	1	218	458	218	25	108
		2	365	365	125	125		2	383	383	77	77	
47,5	7,5	1	268	451	268	85	38	1	222	542	222	25	114
		2	397	397	139	139		2	436	436	70	70	
52,0	22,5	1	310	507	310	113	39	1	261	634	261	25	121
		2	449	449	171	171		2	510	510	80	80	
56,5	37,5	1	352	565	352	139	41	1	295	733	295	25	127
		2	503	503	202	202		2	588	588	87	87	
61,0	52,5	1	394	624	394	164	42	1	325	842	325	25	134
		2	557	557	232	232		2	668	668	90	90	
65,5	72,5	1	451	699	451	203	44	1	378	963	378	25	143
		2	627	627	276	276		2	768	768	104	104	
70,0	90,0	1	502	770	502	234	46	1	414	1095	414	25	151
		2	692	692	313	313		2	865	865	109	109	
74,5	112,5	1	565	855	565	276	48	1	469	1239	469	25	160
		2	770	770	361	361		2	980	980	121	121	
79,0	135,0	1	630	941	630	318	51	1	522	1389	522	25	169
		2	850	850	409	409		2	1097	1097	132	132	

3.4.7.6 Zentralballaste und Ecklasten nach DIN 15019

für fahrbaren Turmdrehkran auf Unterwagen ohne Kletterwerk

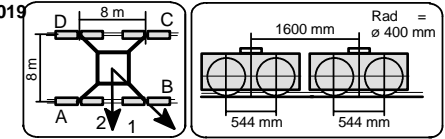


**UW 480** Eckabstand 8,0 m x 8,0 m **Ausleger 55 m**

Hakenhöhe [m]	Zentralballast [t]	Auslegerstellung	Kran in Betrieb Drehmoment: 240 kNm				Horizontalkraft [kN]	Auslegerstellung	Kran außer Betrieb Drehmoment: 0 kNm				Horizontalkraft [kN]
			Ecklasten						Ecklasten				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
20,5	0,0	1	230	343	230	116	29	1	150	328	150	25	76
		2	310	310	150	150		2	271	271	56	56	
25,0	0,0	1	234	356	234	113	30	1	152	343	152	25	82
		2	320	320	148	148		2	282	282	156	156	
29,5	0,0	1	239	369	239	109	32	1	153	359	153	25	89
		2	331	331	147	147		2	308	308	140	140	
34,0	0,0	1	243	384	243	103	33	1	228	380	228	76	95
		2	343	343	144	144		2	336	336	121	121	
38,5	0,0	1	248	399	248	97	35	1	233	421	233	45	102
		2	355	355	141	141		2	366	366	100	100	
43,0	0,0	1	253	415	253	90	37	1	223	479	223	25	109
		2	368	368	137	137		2	398	398	77	77	
47,5	7,5	1	276	452	276	100	38	1	227	565	227	25	115
		2	400	400	151	151		2	452	452	70	70	
52,0	22,5	1	318	508	318	127	40	1	264	658	264	25	122
		2	452	452	183	183		2	527	527	79	79	
56,5	37,5	1	360	566	360	154	41	1	298	759	298	25	128
		2	506	506	214	214		2	605	605	85	85	
61,0	55,0	1	408	632	408	185	43	1	339	870	339	25	135
		2	566	566	250	250		2	692	692	95	95	
65,5	72,5	1	459	701	459	217	45	1	379	993	379	25	143
		2	630	630	288	288		2	786	786	102	102	
70,0	92,5	1	516	778	516	254	47	1	426	1128	426	25	152
		2	701	701	331	331		2	891	891	111	111	
74,5	115,0	1	579	864	579	295	49	1	479	1274	479	25	160
		2	780	780	379	379		2	1006	1006	123	123	
79,0	137,5	1	644	950	644	337	51	1	531	1427	531	25	170
		2	860	860	427	427		2	1124	1124	133	133	

3.4.7.7 Zentralballaste und Ecklasten nach DIN 15019

für fahrbaren Turmdrehkran auf Unterwagen ohne Kletterwerk



**UW 480** Eckabstand 8,0 m x 8,0 m **Ausleger 60 m**

Hakenhöhe [m]	Zentralballast [t]	Auslegerstellung	Kran in Betrieb Drehmoment: 240 kNm				Horizontalkraft [kN]	Auslegerstellung	Kran außer Betrieb Drehmoment: 0 kNm				Horizontalkraft [kN]
			Ecklasten						Ecklasten				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
20,5	0,0	1	238	358	238	119	29	1	163	345	163	25	76
		2	323	323	154	154		2	287	287	61	61	
25,0	0,0	1	243	370	243	115	31	1	164	360	164	25	83
		2	333	333	152	152		2	304	304	151	151	
29,5	0,0	1	247	384	247	111	32	1	165	376	165	25	89
		2	344	344	151	151		2	330	330	134	134	
34,0	0,0	1	252	399	252	105	34	1	237	409	237	65	96
		2	356	356	148	148		2	358	358	115	115	
38,5	0,0	1	256	414	256	99	35	1	241	450	241	33	103
		2	368	368	145	145		2	389	389	94	94	
43,0	0,0	1	261	431	261	91	37	1	218	522	218	25	109
		2	381	381	141	141		2	422	422	70	70	
47,5	12,5	1	297	480	297	113	38	1	246	609	246	25	116
		2	426	426	167	167		2	488	488	75	75	
52,0	25,0	1	333	531	333	134	40	1	271	704	271	25	122
		2	473	473	192	192		2	558	558	77	77	
56,5	42,5	1	381	595	381	166	41	1	315	808	315	25	129
		2	532	532	229	229		2	643	643	89	89	
61,0	60,0	1	429	662	429	197	43	1	356	920	356	25	136
		2	593	593	265	265		2	731	731	98	98	
65,5	77,5	1	480	731	480	229	45	1	394	1047	394	25	144
		2	658	658	302	302		2	826	826	104	104	
70,0	97,5	1	537	809	537	265	47	1	439	1184	439	25	153
		2	729	729	345	345		2	932	932	112	112	
74,5	120,0	1	600	895	600	305	49	1	491	1334	491	25	161
		2	809	809	392	392		2	1048	1048	122	122	