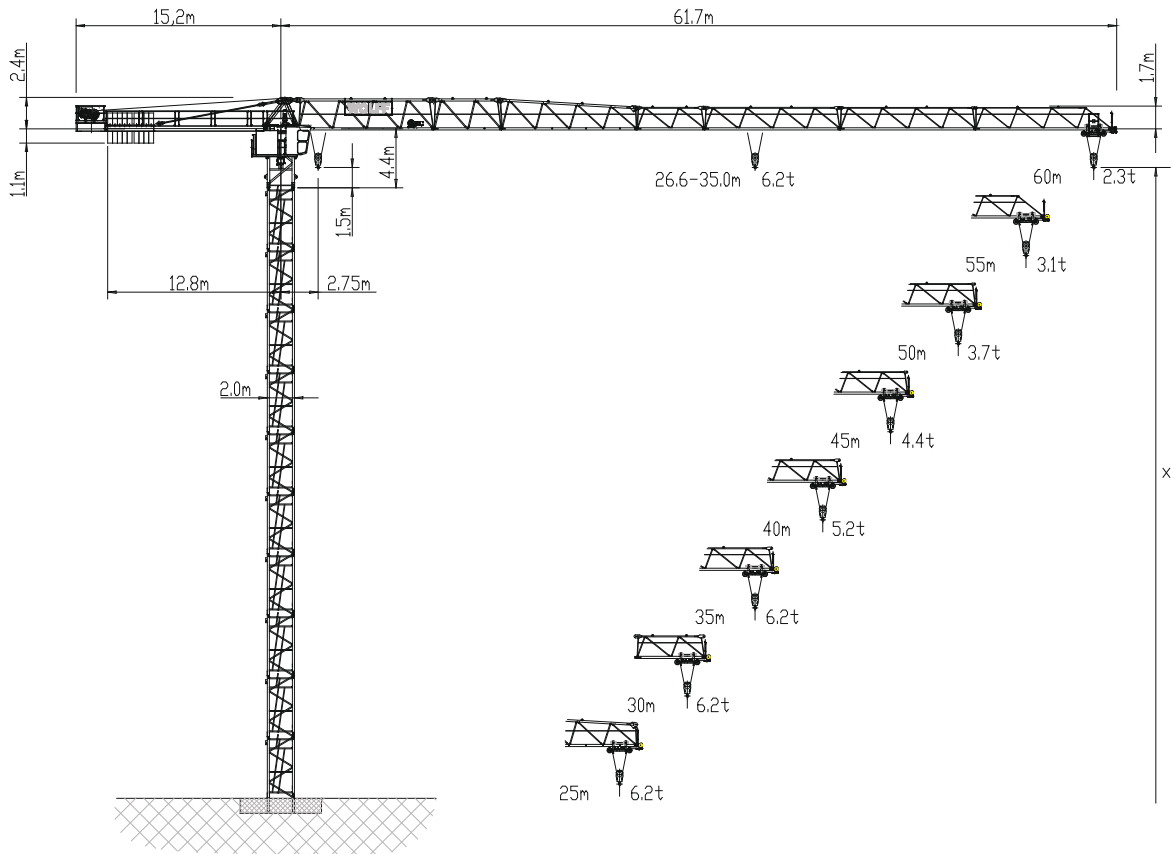


1 Schedule drawing

1.1 Schedule drawing, WOLFF 6023.6clear

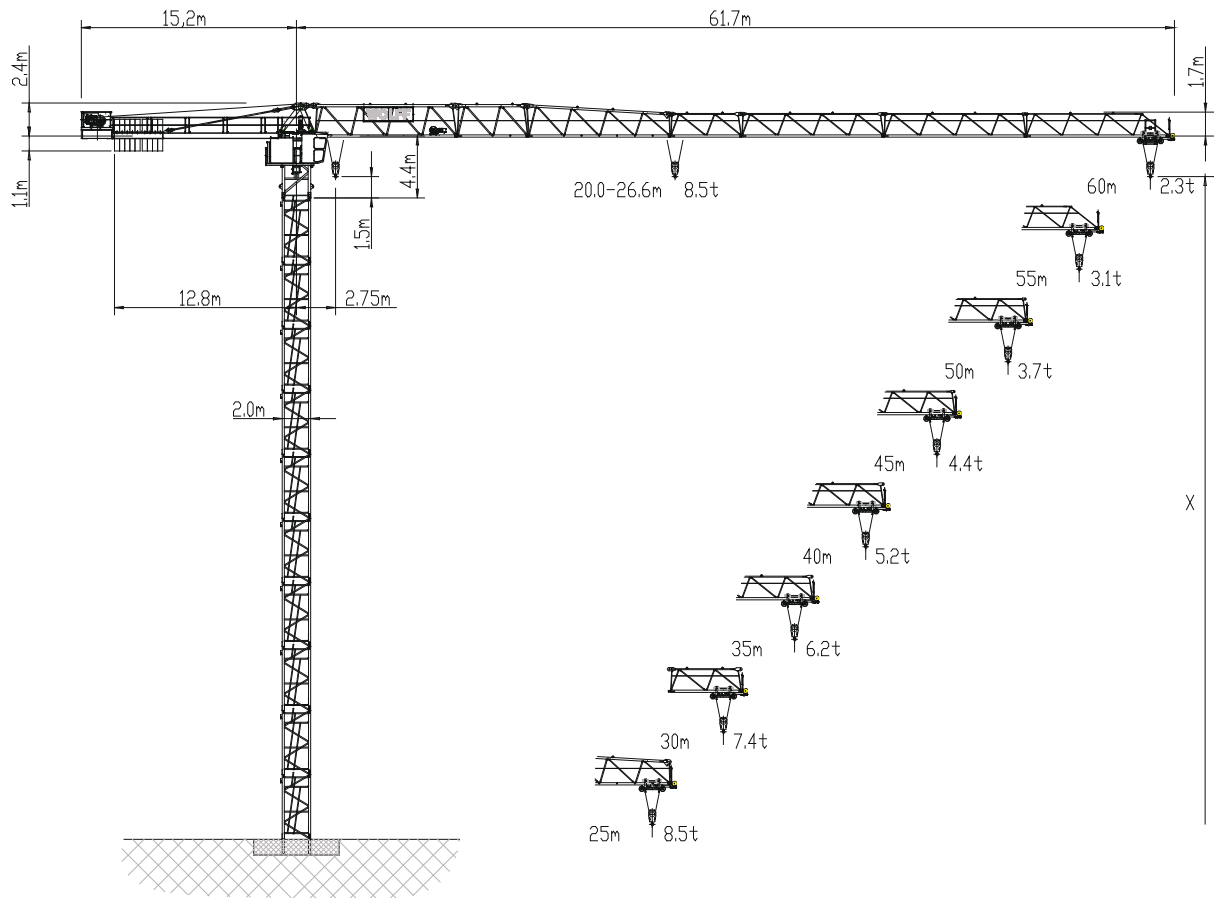


[X]	max. hook height above ground
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Data WOLFF 6023.6clear

Item	Data
Crane type	BGL GROUP C.0.10.0180
Design	Overhead travelling crane with top slewing trolley jib, with climbing feature
Type of setup	Stationary or travelling
Basis of calculation	EN
Payload torque	max. 2170 kN/m
Hoist winch	Hw 628FU

1.2 Schedule drawing, WOLFF 6023.8clear




[X]	max. hook height above ground
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Data WOLFF 6023.6clear

Item	Data
Crane type	BGL GROUP C.0.10.0180
Design	Overhead travelling crane with top slewing trolley jib, with climbing feature
Type of setup	Stationary or travelling
Basis of calculation	EN
Payload torque	max. 2260 kN/m
Hoist winch	Hw 845FU / Hw 875FU

2 Load carrying capacities

2.1 Table of load carrying capacities, WOLFF 6023.6 clear (6.2 t)


 6.2 t		Operating radius [m]																	L-CC [t]	
			20	25	27.5	30	32.5	35	37.5	40	42.5	45	47.5	50	52.5	55	57.5	60		
JL [m]	60	2.75- 26.6	6.2	6.2	6.0	5.4	4.9	4.5	4.2	3.9	3.6	3.3	3.1	2.9	2.7	2.6	2.4	2.3		
	57.5	2.75- 28.8	6.2	6.2	6.2	5.9	5.4	5.0	4.6	4.2	3.9	3.7	3.4	3.2	3.0	2.9	2.7			
	55	2.75- 30.6	6.2	6.2	6.2	6.2	5.8	5.3	4.9	4.6	4.2	4.0	3.7	3.5	3.3	3.1				
	52.5	2.75- 31.5	6.2	6.2	6.2	6.2	6.0	5.5	5.1	4.7	4.4	4.1	3.8	3.6	3.4					
	50	2.75- 32.1	6.2	6.2	6.2	6.2	6.1	5.6	5.2	4.8	4.5	4.2	3.9	3.7						
	47.5	2.75- 32.6	6.2	6.2	6.2	6.2	6.2	5.7	5.3	4.9	4.6	4.3	4.0							
	45	2.75- 33.4	6.2	6.2	6.2	6.2	6.2	5.9	5.4	5.1	4.7	4.4								
	42.5	2.75- 34.0	6.2	6.2	6.2	6.2	6.2	6.0	5.5	5.2	4.8									
	40	2.75- 34.3	6.2	6.2	6.2	6.2	6.2	6.1	5.6	5.2										
	37.5	2.75- 34.8	6.2	6.2	6.2	6.2	6.2	6.2	5.7											
	35	2.75- 35.0	6.2	6.2	6.2	6.2	6.2	6.2												
	32.5	2.75- 32.5	6.2	6.2	6.2	6.2	6.2													
	30	2.75- 30.0	6.2	6.2	6.2	6.2														
	27.5	2.75- 27.5	6.2	6.2	6.2															
	25	2.75- 25.0	6.2	6.2																
JL			Jib length																	
LCC			Load carrying capacity																	

The load carrying capacity is related to a hook range of 42.0 m. Hook ranges greater than that reduce the maximum load carrying capacity by the weight of the additional hoisting ropes (double-reeving mode = 2.5 kg per meter of the hook range).

2.2 Table of load carrying capacities (kg) in meter intervals, WOLFF 6023.6 clear (6.2 t, double reeving mode)

Operating radius [m]	Jib length [m]														
	25	27.5	30	32.5	35	37.5	40	42.5	45	47.5	50	52.5	55	57.5	60
20	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200
21	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200
22	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200
23	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200
24	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200
25	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200
26		6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200
27		6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6090
27.5		6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6000
28			6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	5840
29			6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6140	5610
30			6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	5900	5400
31				6200	6200	6200	6200	6200	6200	6200	6200	6200	6120	5690	5200
32				6200	6200	6200	6200	6200	6200	6200	6200	6090	5900	5490	5010
32.5				6200	6200	6200	6200	6200	6200	6200	6100	6000	5800	5400	4900
33					6200	6200	6200	6200	6200	6110	6020	5880	5700	5300	4840
34					6200	6200	6200	6200	6080	5910	5820	5690	5510	5120	4670
35					6200	6200	6060	6000	5900	5700	5600	5500	5300	5000	4500
36						5970	5870	5810	5700	5450	5450	5330	5160	4790	4370
37						5790	5690	5630	5520	5280	5280	5160	5000	4640	4230
37.5						5700	5600	5500	5400	5200	5200	5100	4900	4600	4200
38							5520	5460	5360	5120	5120	5000	4840	4500	4090
39							5350	5300	5200	4970	4970	4850	4700	4360	3970
40							5200	5200	5100	4900	4800	4700	4600	4200	3900
41								5000	4910	4760	4690	4580	4430	4110	3740
42								4870	4770	4630	4560	4450	4310	3990	3630
42.5								4800	4700	4600	4500	4400	4200	3900	3600
43									4640	4500	4430	4330	4190	3880	3530
44									4520	4380	4310	4210	4080	3770	3430
45									4400	4300	4200	4100	4000	3700	3300
46										4160	4090	3990	3860	3580	3240
47										4050	3990	3890	3760	3480	3160
47.5										4000	3900	3800	3700	3400	3100
48											3890	3790	3670	3390	3080
49											3790	3700	3580	3310	3000
50											3700	3600	3500	3200	2900
51												3520	3410	3150	2850
52												3440	3330	3070	2780
52.5												3400	3300	3000	2750
53													3250	3000	2710
54													3170	2930	2640
55													3100	2900	2600
56														2790	2520
57														2730	2460
57.5														2700	2450
58															2410
59															2350
60															2300

2.3 Load capacity tables WOLFF 6023.8 clear (8.5 t)




 8.5 t		Operating radius [m]	Operating radius [m]																L-CC [t]	
			20	25	27.5	30	32.5	35	37.5	40	42.5	45	47.5	50	52.5	55	57.5	60		
JL [m]	60	2.75-20.0	8.5	6.6	6.0	5.4	4.9	4.5	4.2	3.9	3.6	3.3	3.1	2.9	2.7	2.6	2.4	2.3		
	57.5	2.75-21.6	8.5	7.3	6.5	5.9	5.4	5.0	4.6	4.2	3.9	3.7	3.4	3.2	3.0	2.9	2.7			
	55	2.75-23.1	8.5	7.8	7.0	6.4	5.8	5.3	4.9	4.6	4.2	4.0	3.7	3.5	3.3	3.1				
	52.5	2.75-23.7	8.5	8.0	7.2	6.6	6.0	5.5	5.1	4.7	4.4	4.1	3.8	3.6	3.4					
	50	2.75-24.2	8.5	8.2	7.4	6.7	6.1	5.6	5.2	4.8	4.5	4.2	3.9	3.7						
	47.5	2.75-24.5	8.5	8.3	7.5	6.8	6.2	5.7	5.3	4.9	4.6	4.3	4.0							
	45	2.75-25.2	8.5	8.5	7.7	7.0	6.4	5.9	5.4	5.1	4.7	4.4								
	42.5	2.75-25.6	8.5	8.5	7.9	7.1	6.5	6.0	5.5	5.2	4.8									
	40	2.75-25.8	8.5	8.5	7.9	7.2	6.6	6.1	5.6	5.2										
	37.5	2.75-26.2	8.5	8.5	8.1	7.3	6.7	6.2	5.7											
	35	2.75-26.3	8.5	8.5	8.1	7.4	6.7	6.2												
	32.5	2.75-26.6	8.5	8.5	8.2	7.4	6.8													
	30	2.75-26.5	8.5	8.5	8.2	7.4														
	27.5	2.75-26.3	8.5	8.5	8.1															
	25	2.75-25.0	8.5	8.5																
	JL			Jib length																
LCC			Load carrying capacity																	

The load carrying capacity is related to a hook range of 42.0 m. Hook ranges greater than that reduce the maximum load carrying capacity by the weight of the additional hoisting ropes (double-reeving mode = 2.5 kg per meter of the hook range).

2.4 Table of load carrying capacities (kg) in meter intervals, WOLFF 6023.8 clear (8.5 t, double reeving)

Operating radius [m]	Jib length														
	25	27.5	30	32.5	35	37.5	40	42.5	45	47.5	50	52.5	55	57.5	60
20	8500	8500	8500	8500	8500	8500	8500	8500	8500	8500	8500	8500	8500	8500	8500
21	8500	8500	8500	8500	8500	8500	8500	8500	8500	8500	8500	8500	8500	8500	8060
22	8500	8500	8500	8500	8500	8500	8500	8500	8500	8500	8500	8500	8500	8350	7650
23	8500	8500	8500	8500	8500	8500	8500	8500	8500	8500	8500	8500	8500	7950	7290
24	8500	8500	8500	8500	8500	8500	8500	8500	8500	8500	8500	8390	8140	7590	6950
25	8500	8500	8500	8500	8500	8500	8500	8500	8500	8300	8200	8000	7800	7300	6600
26	8500	8500	8500	8500	8500	8430	8350	8200	7970	7850	7680	7450	6940	6350	
27	8260	8310	8350	8270	8230	8090	8010	7870	7640	7530	7370	7140	6650	6090	
27.5	8100	8200	8200	8100	8100	7900	7900	7700	7500	7400	7200	7000	6500	6000	
28	7990	8020	7950	7910	7770	7700	7560	7340	7240	7080	6860	6390	5840		
29	7680	7720	7650	7610	7480	7410	7270	7060	6960	6800	6600	6140	5610		
30	7400	7400	7400	7300	7200	7100	7000	6800	6700	6600	6400	5900	5400		
31	7170	7100	7060	6940	6880	6750	6550	6460	6310	6120	5690	5200			
32	6920	6860	6820	6700	6640	6510	6330	6230	6090	5900	5490	5010			
32.5	6800	6700	6700	6580	6500	6400	6200	6100	6000	5800	5400	4900			
33	6620	6590	6470	6410	6290	6110	6020	5880	5700	5300	4840				
34	6410	6370	6260	6200	6080	5910	5820	5690	5510	5120	4670				
35	6200	6200	6100	6000	5900	5700	5600	5500	5300	5000	4500				
36	5970	5870	5810	5700	5530	5450	5330	5160	4790	4370					
37	5790	5690	5630	5520	5360	5280	5160	5000	4640	4230					
37.5	5700	5600	5500	5400	5300	5200	5100	4900	4600	4200					
38	5520	5460	5390	5200	5120	5000	4840	4500	4090						
39	5320	5300	5200	5050	4970	4850	4700	4360	3970						
40	5200	5200	5050	4900	4800	4700	4600	4200	3900						
41	5000	4910	4760	4690	4580	4430	4110	3740							
42	4870	4770	4630	4560	4450	4310	3990	3630							
42.5	4800	4700	4600	4500	4400	4200	3900	3600							
43	4640	4500	4430	4330	4190	3880	3530								
44	4520	4380	4310	4210	4080	3770	3430								
45	4400	4300	4200	4100	4000	3700	3300								
46	4160	4090	3990	3860	3580	3240									
47	4050	3990	3890	3760	3480	3160									
47.5	4000	3900	3800	3700	3400	3100									
48	3890	3790	3670	3390	3080										
49	3790	3700	3580	3310	3000										
50	3700	3600	3500	3200	2900										
51	3520	3410	3150	2850											
52	3440	3330	3070	2780											
52.5	3400	3300	3000	2750											
53	3250	3000	2710												
54	3170	2930	2640												
55	3100	2900	2600												
56	3790	2520													
57	2730	2460													
57.5	2700	2450													
58	2410														
59	2350														
60	2300														

3 Tower combinations

	<p>DANGER</p> <p>Usage of incorrect tower combinations. The slewing tower crane may overturn.</p> <ol style="list-style-type: none">1) Use the specified tower combinations.2) If you need another tower combination that is not specified here, please contact WOLFFKRAN to get an approved alternative setup in writing.
	<p>NOTICE</p> <p>All tower combinations apply to free standing slewing tower cranes without climbing gear.</p>
	<p>NOTICE</p> <p>For tower combination with tower element TV 25 and UV 25 please contact WOLFFKRAN.</p>

3.1 Tower combinations on foundation (UV 20/ TV 20 connection)

Jib length	25 m – 60 m				
Item					
1	4.5 m	UV 20.4	UV 20.4	TV 20.4	
2	9.0 m	UV 20.4	UV 20.4	TV 20.4	
3	13.5 m	UV 20.4	UV 20.4	TV 20.4	
4	18.0 m	UV 20.4	UV 20.4	TV 20.4	
5	22.5 m	UV 20.4	UV 20.4	TV 20.4	
6	27.0 m	UV 20.4	UV 20.4	TV 20.4	
7	31.5 m	UV 20.4	UV 20.4	TV 20.4	
8	36.0 m	UV 20.4	UV 20.4	TV 20.4	
9	40.5 m	UV 20.4	UV 20.4	TV 20.4	
10	45.0 m	UV 20.4	UV 20.4	TV 20.4	
11	49.5 m	UV 20.4	UV 20.4	TV 20.4	
12	54.0 m	UV 20.4	TVA 20.4	TV 20.4	
13	58.5 m		TV 20.4	TV 20.4	
14	63.0 m		TV 20.4	TV 20.4	
15	67.5 m		TV 20.4	TV 20.4	
Foundation		FUA 120 type C-120	FUA 140 type D-140	FUA 140 type D-140	
Tower height [m]		54.0	67.5	67.5	
Hook height double reeving [m]		55.0	69.0	69.0	

Jib length	25 m – 60 m			
Item				
1	4.5 m	UV 20.4	UV 20.4	
2	9.0 m	UV 20.4	UV 20.4	
3	13.5 m	UV 20.4	UV 20.4	
4	18.0 m	UV 20.4	UV 20.4	
5	22.5 m	UV 20.4	UV 20.4	
6	27.0 m	UV 20.4	UV 20.4	
7	31.5 m	UV 20.4	UV 20.4	
8	36.0 m	UV 20.4	UV 20.4	
9	40.5 m	UV 20.4	UV 20.4	
10	45.0 m	UV 20.4	UV 20.4	
11	49.5 m	UV 20.4	TVA 20.4	
12	54.0 m	TVA 20.4	TV 20.4	
13	58.5 m	TV 20.4	TV 20.4	
14	63.0 m	TV 20.4	TV 20.4	
15	67.5 m	TV 20.4	TV 20.4	
16	68.5 m	VR 2023	VR 2023	
17	73.0 m	TV 23	TV 23	
18	77.5 m	TV 23	HTA 23	
19	82.0 m		HT 23	
20	86.5 m		HT 23	
Foundation		FUA 140 type D-140	FUA G 160	
Tower height [m]		77.5	86.5	
Hook height double reeving [m]		79.0	88.0	

Jib length	25 m – 60 m			
Item				
1	4.5 m	UV 20.4		
2	9.0 m	UV 20.4		
3	13.5 m	UV 20.4		
4	18.0 m	UV 20.4		
5	22.5 m	UV 20.4		
6	27.0 m	UV 20.4		
7	31.5 m	UV 20.4		
8	36.0 m	UV 20.4		
9	40.5 m	UV 20.4		
10	45.0 m	UV 20.4		
11	49.5 m	TVA 20.4		
12	54.0 m	TV 20.4		
13	58.5 m	TV 20.4		
14	63.0 m	TV 20.4		
15	64.0 m	VR 2023		
16	68.5 m	TV 23		
17	73.0 m	HTA 23		
18	77.5 m	HT 23		
19	82.0 m	HT 23		
20	83.2 m	VR 23/25-29		
21	87.7 m	UV 29		
22	92.2 m	UV 29		
23	102.2 m	BT 29		
Foundation		FUA BT 29		
Tower height [m]		102.2		
Hook height double reeving [m]		103.7		

3.2 Tower combinations on foundation (TFS20 connection)

Jib length	25 m – 60 m				
Item					
1	4.5 m	TFS 20	TFS 20	TFS 20	
2	9.0 m	TFS 20	TFS 20	TFS 20	
3	13.5 m	TFS 20	TFS 20	TFS 20.4	
4	18.0 m	TFS 20.4	TFS 20.4	TFS 20.4	
5	22.5 m	TFS 20.4	TFS 20.4	TFS 20.4	
6	27.0 m	TFS 20.4	TFS 20.4	TFS 20.4	
7	31.5 m	TFS 20.4	TFS 20.4	TFS 20.4	
8	36.0 m	TFS 20.4	TFS 20.4	TFS 20.4	
9	40.5 m	TFS 20.4	TFS 20.4	UVA 20.4	
10	45.0 m		UVA 20.4	UV 20.4	
11	49.5 m		UV 20.4	UV 20.4	
12	54.0 m		UV 20.4	TVA 20.4	
13	58.5 m			TV 20.4	
14	63.0 m			TV 20.4	
15	67.5 m			TV 20.4	
Foundation		FUA B.4 FUA 93	FUA 120 type D-120	FUA 140 type D-140	
Tower height [m]		40.5	54.0	67.5	
Hook height double reeving [m]		42.0	55.5	69.0	

Jib length	25 m – 60 m			
Item				
1	4.5 m	TFS 20		
2	9.0 m	TFS 20		
3	13.5 m	TFS 20.4		
4	18.0 m	TFS 20.4		
5	22.5 m	TFS 20.4		
6	27.0 m	TFS 20.4		
7	31.5 m	TFS 20.4		
8	36.0 m	UVA 20.4		
9	40.5 m	UV 20.4		
10	45.0 m	UV 20.4		
11	49.5 m	UV 20.4		
12	54.0 m	TVA 20.4		
13	58.5 m	TV 20.4		
14	63.0 m	TV 20.4		
15	67.5 m	TV 20.4		
16	68.5 m	VR 2023		
17	73.0 m	TV 23		
18	77.5 m	TV 23		
Foundation		FUA 140 type D-140		
Tower height [m]		77.5		
Hook height double reeving [m]		79.0		

Jib length	25 m – 60 m			
Item				
1	4.5 m	TFS 20		
2	9.0 m	TFS 20		
3	13.5 m	TFS 20.4		
4	18.0 m	TFS 20.4		
5	22.5 m	TFS 20.4		
6	27.0 m	TFS 20.4		
7	31.5 m	UVA 20.4		
8	36.0 m	UV 20.4		
9	40.5 m	UV 20.4		
10	45.0 m	UV 20.4		
11	49.5 m	TVA 20.4		
12	54.0 m	TV 20.4		
13	58.5 m	TV 20.4		
14	63.0 m	TV 20.4		
15	67.5 m	TV 20.4		
16	68.5 m	VR 2023		
17	73.0 m	TV 23		
18	77.5 m	HTA 23		
19	82.0 m	HT 23		
20	86.5 m	HT 23		
21	91.0 m	HT 23		
Foundation		FUA G 160		
Tower height [m]		91.0		
Hook height double reeving [m]		92.5		

3.3 Tower combinations on cross frame (UV 20/ TV 20 connection)

Item						
1	4.5 m	UV 20	UV 20	UV 20	UV 20	UV 20
2	9.0 m	UV 20	UV 20	UV 20	UV 20	UV 20
3	13.5 m	UV 20	UV 20	UV 20	UV 20	UV 20
4	18.0 m	UV 20	UV 20	UV 20	UV 20	UV 20
5	22.5 m	UV 20	UV 20	UV 20	UV 20	UV 20
6	27.0 m	UV 20	UV 20	UV 20	UV 20	UV 20
7	31.5 m		UV 20	UV 20	UV 20	UV 20
8	36.0 m		UV 20	UV 20	UV 20	UV 20
9	40.5 m			UV 20	UV 20	UV 20
10	45.0 m			UV 20	UV 20	TVA 20
11	49.5 m			UV 20	TVA 20	TV 20
12	54.0 m			TVA 20	TV 20	TV 20
13	58.5 m			TV 20	TV 20	TV 20
14	63.0 m			TV 20	TV 20	TVÜ 20
15	67.5 m				TVÜ 20	TV 25
16	72.0 m				TV 25	TV 25
17	76.5 m					UVA 25
18	81.0 m					VR 2529
19	82.2 m					UV 29
20	86.7 m					UV 29
21	91.2 m					UV 29
22	101.2 m					BT 29
Substructure		KR 800-5 KR 800-6	KRV 7-32/46	KR 10-46 KR 10-46/60	KR 1000-8	KR 16-80 KR 16-80/100
[m x m]		5.0 x 5.0 6.0 x 6.0	4.6 x 4.6	4.6 x 4.6 6.0 x 6.0	8.0 x 8.0	8.0 x 8.0 10.0 x 10.0
Substructure height [m]		0.9	0.9	1.2	1.2	1.8
Tower height [m]		27.9	36.9	64.2	73.2	103.0
Hook height above ground [m]		29.4	38.4	65.7	74.7	104.5

3.4 Tower combinations on cross frame (TFS 20 connection)

Item						
1	4.5 m	TFS 20	TFS 20	TFS 20	TFS 20	TFS 20
2	9.0 m	TFS 20	TFS 20	TFS 20	TFS 20	TFS 20
3	13.5 m	TFS 20	TFS 20	TFS 20.4	TFS 20.4	TFS 20.4
4	18.0 m	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4
5	22.5 m	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4
6	27.0 m	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4
7	31.5 m		TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4
8	36.0 m		TFS 20.4	TFS 20.4	TFS 20.4	UVA 20
9	40.5 m			UVA 20	UVA 20	UV 20
10	45.0 m			UV 20	UV 20	TVA 20
11	49.5 m			UV 20	TVA 20	TV 20
12	54.0 m			TVA 20	TV 20	TV 20
13	58.5 m			TV 20	TV 20	TV 20
14	63.0 m			TV 20	TV 20	TVÜ 20
15	67.5 m				TVÜ 20	TV 25
16	72.0 m				TV 25	TV 25
17	76.5 m					UVA 25
18	81.0 m					VR 2529
19	82.2 m					UV 29
20	86.7 m					UV 29
21	91.2 m					UV 29
22	101.2 m					BT 29
Substructure		KR 800-5 KR 800-6	KRV 7-32/46	KR 10-46 KR 10-46/60	KR 1000-8	KR 16-80 KR 16-80/100
[m x m]		5.0 x 5.0 6.0 x 6.0	4.6 x 4.6	4.6 x 4.6 6.0 x 6.0	8.0 x 8.0	8.0 x 8.0 10.0 x 10.0
Substructure height [m]		0.9	0.9	1.2	1.2	1.8
Tower height [m]		27.9	36.9	64.2	73.2	103.0
Hook height above ground [m]		29.4	38.4	65.7	74.7	104.5

3.5 Tower combinations on cross frame element (UV 20/ TV 20 connection)

Item						
1	4.5 m	UV 20	UV 20	UV 20	UV 20	UV 20
2	9.0 m	UV 20	UV 20	UV 20	UV 20	UV 20
3	13.5 m	UV 20	UV 20	UV 20	UV 20	UV 20
4	18.0 m	UV 20	UV 20	UV 20	UV 20	UV 20
5	22.5 m	UV 20	UV 20	UV 20	UV 20	UV 20
6	27.0 m	UV 20	UV 20	UV 20	UV 20	UV 20
7	31.5 m	UV 20	UV 20	UV 20	UV 20	UV 20
8	36.0 m	UV 20	UV 20	UV 20	UV 20	UV 20
9	40.5 m		UV 20	UV 20	UV 20	UV 20
10	45.0 m			UV 20	UV 20	UV 20
11	49.5 m			TVA 20	UV 20	TVA 20
12	54.0 m				TVA 20	TV 20
13	58.5 m					TV 20
14	63.0 m					TV 20
15	67.5 m					TVÜ 20
16	72.0 m					UVA 25
Substructure		KRE 260.1	KRE 260.1	KRE 260.2	KRE 260.2	KRE 480
[m x m]		5.0 x 6.79	6.0 x 6.0	5.0 x 6.79	6.0 x 6.0	8.0 x 8.0
Substructure height [m]		4.0	4.0	4.0	4.0	4.0
Tower height [m]		40.0	44.5	53.5	58.0	76.0
Hook height above ground [m]		41.5	46.0	55.0	59.5	77.5

3.6 Tower combinations on cross frame element (TFS 20 connection)

Item						
1	4.5 m	TFS 20	TFS 20	TFS 20	TFS 20	TFS 20
2	9.0 m	TFS 20	TFS 20	TFS 20	TFS 20	TFS 20
3	13.5 m	TFS 20	TFS 20	TFS 20	TFS 20	TFS 20
4	18.0 m	TFS 20	TFS 20	TFS 20	TFS 20	TFS 20
5	22.5 m	TFS 20	TFS 20	TFS 20	TFS 20	TFS 20
6	27.0 m	TFS 20	TFS 20	TFS 20.4	TFS 20.4	TFS 20.4
7	31.5 m	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4
8	36.0 m	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4
9	40.5 m	UVA 20.4	UVA 20.4	TFS 20.4	TFS 20.4	UVA 20.4
10	45.0 m			UVA 20.4	UVA 20.4	UV 20.4
11	49.5 m			TVA 20.4	UV 20.4	UV 20.4
12	54.0 m				TVA 20.4	TVA 20.4
13	58.5 m					TV 20.4
14	63.0 m					TV 20.4
15	67.5 m					TVÜ 20
16	72.0 m					UVA 25
Substructure		KRE 260.1	KRE 260.1	KRE 260.2	KRE 260.2	KRE 480
[m x m]		5.0 x 6.79	6.0 x 6.0	5.0 x 6.79	6.0 x 6.0	8.0 x 8.0
Substructure height [m]		4.0	4.0	4.0	4.0	4.0
Tower height [m]		44.5	44.5	53.5	58.0	76.0
Hook height above ground [m]		46.0	46.0	55.0	59.5	77.5


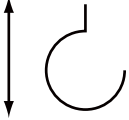
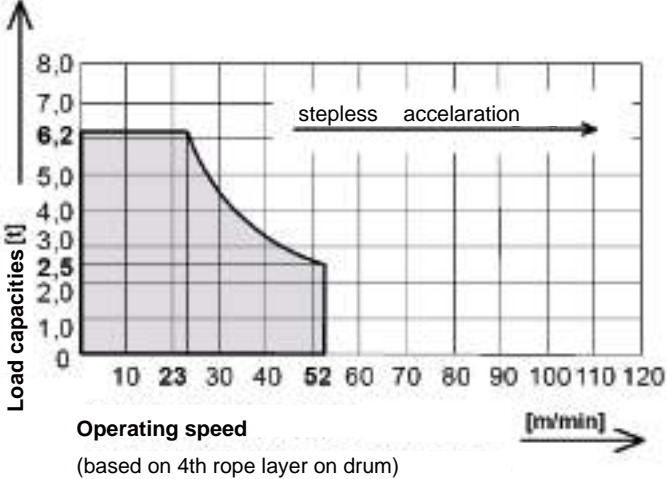
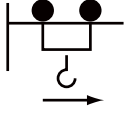
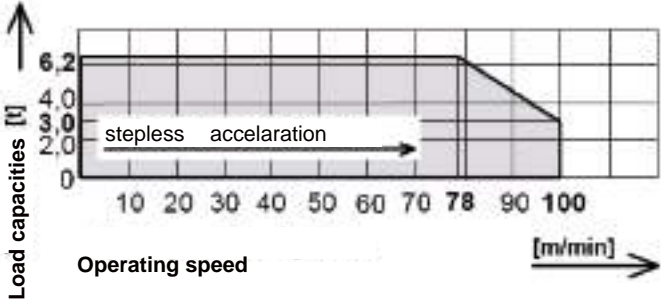

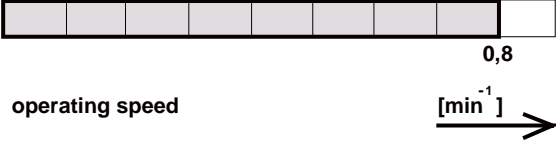
3.7 Tower combinations on bogie truck (UV 20/ TV 20 connection)


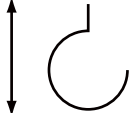
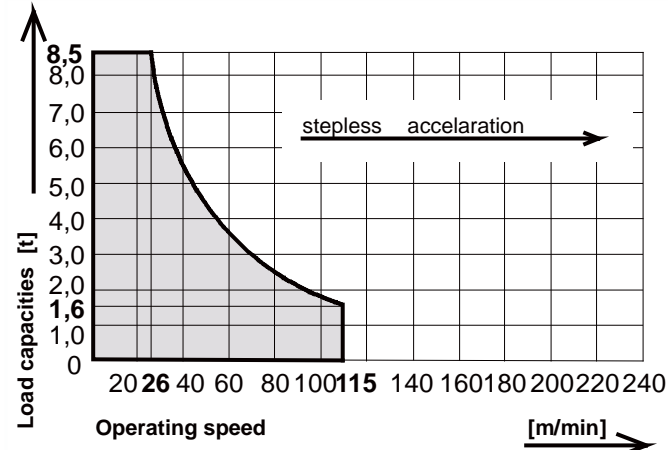
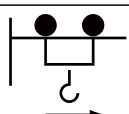
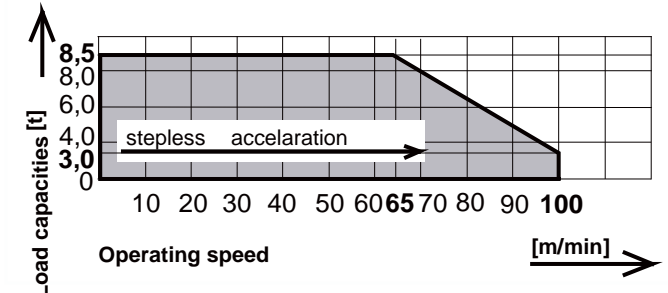

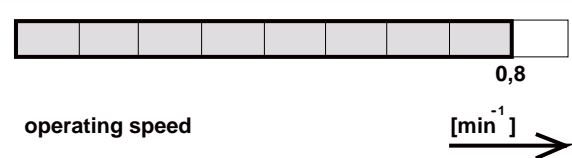
Item								
1	4.5 m	UV 20	UV 20	UV 20	UV 20	UV 20	UV 20	UV 20
2	9.0 m	UV 20	UV 20	UV 20	UV 20	UV 20	UV 20	UV 20
3	13.5 m	UV 20	UV 20	UV 20	UV 20	UV 20	UV 20	UV 20
4	18.0 m	UV 20	UV 20	UV 20	UV 20	UV 20	UV 20	UV 20
5	22.5 m	UV 20	UV 20	UV 20	UV 20	UV 20	UV 20	UV 20
6	27.0 m	UV 20	UV 20	UV 20	UV 20	UV 20	UV 20	UV 20
7	31.5 m	UV 20	UV 20	UV 20	UV 20	UV 20	UV 20	UV 20
8	36.0 m		UV 20	UV 20	UV 20	UV 20	UV 20	UV 20
9	40.5 m			TVA 20	UV 20	UV 20	UV 20	UV 20
10	45.0 m				TVA 20	UV 20	UV 20	UV 20
11	49.5 m					TVA 20	UV 20	TVA 20
12	54.0 m						TVA 20	TV 20
13	58.5 m							TV 20
14	63.0 m							TVÜ 20
15	67.5 m							UVA 25
Substructure		UW 260.1	UW 260.1	UW 260.2	UW 260.2	UW 260.3	UW 260.3	UW 480
[m x m]		5 x 6.79	6 x 6	5 x 6.79	6 x 6	5 x 6.79	6 x 6	8 x 8
Substructure height [m]		4.5	4.5	4.5	4.5	4.5	4.5	5.0
Tower height [m]		36.0	40.5	45.0	49.5	54.0	58.5	72.5
Hook height above ground [m]		37.5	42.0	46.5	51.0	55.5	60.0	74.0

3.8 Tower combinations on bogie truck (TFS 20 connection)


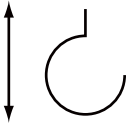
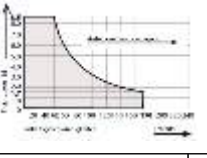
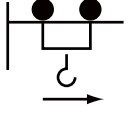
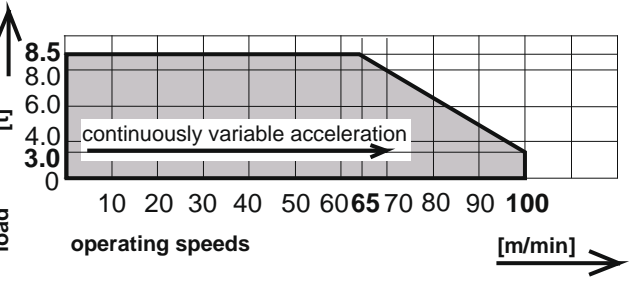


Item								
1	4.5 m	TFS 20	TFS 20	TFS 20	TFS 20	TFS 20	TFS 20	TFS 20
2	9,0 m	TFS 20	TFS 20	TFS 20	TFS 20	TFS 20	TFS 20	TFS 20
3	13.5 m	TFS 20	TFS 20	TFS 20	TFS 20	TFS 20.4	TFS 20.4	TFS 20.4
4	18.0 m	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4
5	22.5 m	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4
6	27.0 m	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4
7	31.5 m	UVA 20	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4
8	36.0 m		UVA 20	UVA 20	UVA 20	UVA 20	UVA 20	UVA 20
9	40.5 m			TVA 20	UV 20	UV 20	UV 20	UV 20
10	45.0 m				TVA 20	UV 20	UV 20	UV 20
11	49.5 m					TVA 20	UV 20	TVA 20
12	54.0 m						TVA 20	TV 20
13	58.5 m							TV 20
14	63.0 m							TVÜ 20
15	67.5 m							UVA 25
Substructure		UW 260.1	UW 260.1	UW 260.2	UW 260.2	UW 260.3	UW 260.3	UW 480
[m x m]		5 x 6.79	6 x 6	5 x 6.79	6 x 6	5 x 6.79	6 x 6	8 x 8
Substructure height [m]		4.5	4.5	4.5	4.5	4.5	4.5	5.0
Tower height [m]		36.0	40.5	45.0	49.5	54.0	58.5	72.5
Hook height above ground [m]		37.5	42.0	46.5	51.0	55.5	60.0	74.0

4 Operating speeds

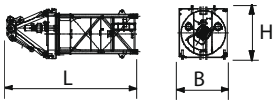
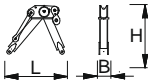
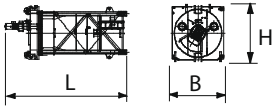

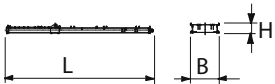

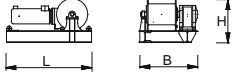



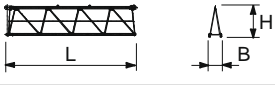
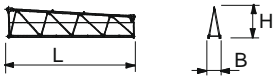

Drive unit [type]	Operating speed Carrying load		Hook travel distance max. [m]	Power [kW]	Total connected wattage [kVA]
Hw628FU	Lifting		190	28	47.0 Total connected load at coincidence factor of 0.7
	 <p>Operating speed (based on 4th rope layer on drum)</p>				
KW	Crab movement			7.5	
	 <p>Operating speed</p>				
SG	Slewing			7.5	
	 <p>operating speed</p>				


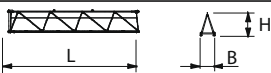
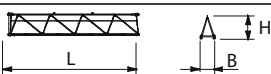
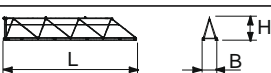




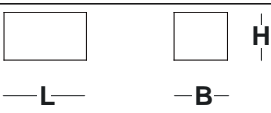
Drive unit [type]	Operating speed Carrying load		Hook travel distance max. [m]	Power [kW]	Total connected wattage [kVA]
Hw845FU	Lifting		190	45	62.0 Total connected load at coincidence factor of 0.7
					
KW	Crab movement			7.5	
					
SG	Slewing			7.5	
					

WOLFFKRAN

Drive unit [type]	Operating speed Carrying load		Hook travel distance max. [m]	Power [kW]	Total connected wattage [kVA]
Hw875FU	Lifting		460	75	90.0 Total connected load at coincidence factor of 0.7
					
KW	Crab movement			7.5	
					
SG	Slewing			7.5	
					


5 Package list 6023

Quantity	Description	Package	L [m]	W [m]	H [m]	Weight [kg]	Volume [m ³]					
1	Tower head section, complete with slewing frame, ball slew bearing, slewing gear and slip ring system		with UV 20 / TV 20 lower part of tower head section					6.67	2.30	2.54	9065	38.97
			with TFS 20 lower part of tower head section					6.67	2.30	2.54	8325	38.97
	Tower head section upper part with stay parts		2.33	0.58	2.81	1300	3.80					
	Tower head section lower part with slewing frame, ball slew bearing, slewing gear and slip ring system		with UV 20 / TV 20 lower part of tower head section					5.97	2.30	2.54	7765	34.88
			with TFS 20 lower part of tower head section					5.97	2.30	2.54	7025	34.88
1	Driver's cab with driver's cab suspension		4.46	1.96	2.55	2390	22.29					
1	Counter jib with stay parts and standard railings		14.04	2.30	0.80	6840	25.84					
	Counter jib without ballast carrier and without loose items		11.87	2.30	0.70	5280	19.11					
1	Hoist winch platform Hw628FU (incl. 200 m hoisting rope)		2.17	1.50	1.12	2175	3.65					
1	Hoist winch platform Hw845FU (incl. 200 m hoisting rope)		2.17	1.57	1.04	2140	3.54					
1	Hoist winch platform Hw875FU (incl. 200 m hoisting rope)		2.17	1.88	1.18	2500	4.82					
1	Jib section 1 with traverse gear		10.32	1.20	2.55	2952	31.64					
1	Jib section 2		5.31	1.20	2.38	1033	15.17					
1	Jib section 3		10.29	1.20	2.34	1600	28.90					
1	Jib section 4		5.27	1.20	1.74	775	11.00					

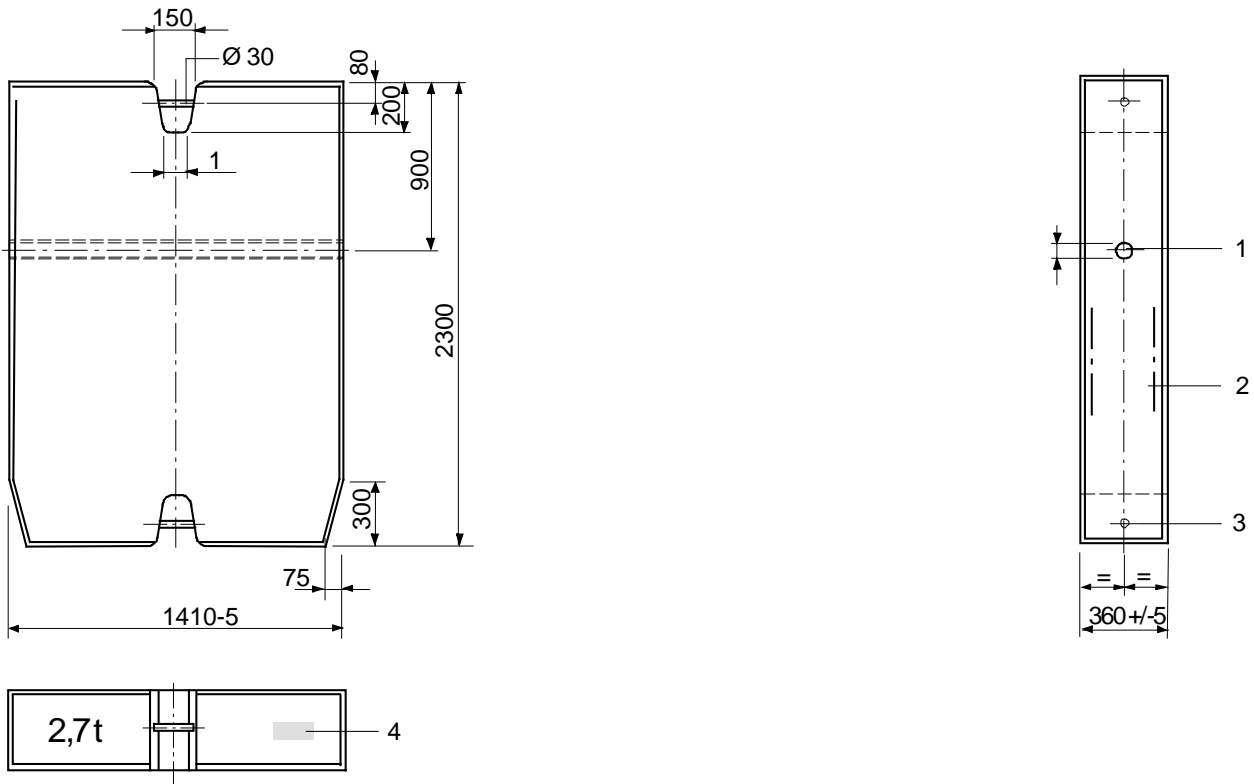
Quantity	Description	Package	L [m]	W [m]	H [m]	Weight [kg]	Volume [m ³]
1	Jib section 5		2.77	1.20	1.74	470	5.78
1	Jib section 6		10.25	1.20	1.72	1365	21.16
1	Jib section 7		10.17	1.20	1.70	1045	20.75
1	Jib section 8		10.17	1.20	1.70	800	20.75
1	Rope swivel cross-beam		0.99	1.09	0.45	126	0.49
1	Trolley LK 8		1.87	1.42	0.95	295	2.52
1	Maintenance cage		0.75	0.58	1.69	55	0.74
1	Snatch block U6 (8)		0.50	0.22	1.11	350	0.12
1	Standard railings		2.60	1.10	0.65	300	1.86
1	Box (small parts)		0.63	0.50	0.38	100	1.12

6 Assembly weights

6.1 Counterweight blocks

	NOTICE
	The described diagrams of the counterweights and central ballast blocks only show sketches. Have them issue the reinforcement charts by experts.

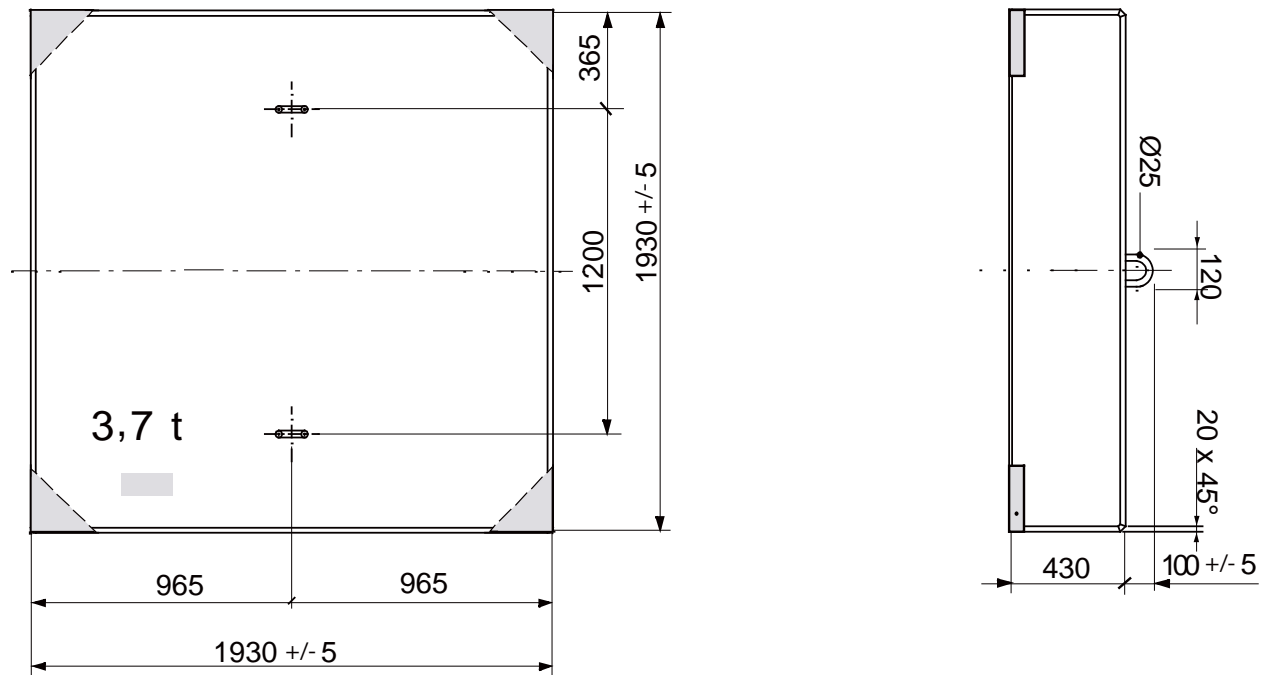
6.1.1 Counterweight block, 2.7 t



Data counterweight block 2.7 t

Item	Data
Material	Concrete, min. C 20/25
Max. permitted weight tolerance	+/- 3 %
Order number	962-2-005966
1	Connection for stub shaft (\varnothing 40/ 78 x 215 962-4-006490)
2	Structural steel reinforcement
3	Suspension
4	Component identifier

6.1.2 Counterweight block, 3.7 t



Data counterweight block 3.7 t

Item	Data
Material	Concrete, min. C 20/25
Max. permitted weight tolerance	+/- 3 %
Order number	962-2-029759
1	Corner guard
2	Suspension
3	Component identifier

6.2 Total weight jib assembly

Trolley jib, complete: Trolley, trolley ropes, snatch block, standard railings and rope swivel crossbeam

Jib length (m)	Weight (kg) WOLFF 6023 clear
60	10400
57.5	10100
55	9620
52.5	9500
50	9600
47.5	9300
45	8820
42.5	8700
40	8550
37.5	8250
35	7770
32.5	7650
30	7170
27.5	6870
25	6390

6.3 Assembly weight slewing gear

Module	Crane parts	Weight [kg]
Tower head section complete – Tower connection UV 20 / TV 20 tower head section lower part		9065
	▪ Tower head section upper part including brace plates	1300
	▪ Tower head section lower part including slewing frame, ball race bearing, slewing gears, standard railings and slip ring system	7765
Tower head section complete – Tower connection TFS 20 Lower part of tower head section		8325
	▪ Tower head section upper part including brace plates	1300
	▪ Tower head section lower part including slewing frame, ball race bearing, slewing gears, standard railings and slip ring system	7025
Operator cabinet platform, complete		2390
	▪ Driver's cab including control cabinet, resistor and driver's cab suspension	
Counter jib with Hw628FU, complete		12300
	▪ Counter jib with brace plates, standard railings and ballast frame	6840
	▪ Hoist winch platform Hw628FU	1760
	▪ Concrete counterweight block 3.7 t (below hoist winch platform)	3700
Counter jib with Hw845FU, complete		12575
	▪ Counter jib with brace plates, standard railings and ballast frame	6840
	▪ Hoist winch platform Hw845FU	2035
	▪ Concrete counterweight block 3.7 t (below hoist winch platform)	3700
Counter jib with Hw875FU, complete		12915
	▪ Counter jib with brace plates, standard railings and ballast frame	6840
	▪ Hoist winch platform Hw875FU	2375
	▪ Concrete counterweight block 3.7 t (below hoist winch platform)	3700

6.4 Assembly weight cross frame

Module	Crane parts	Weight [kg]
Cross frame KR 6-40 (without accessories)		
(4.0 m x 4.0 m)	▪ 4 bolted spigots AZ 93.4	200
	▪ 4 bolted spigots AZ 93.4 E 15	240
Cross frame KR 7- 32 (without accessories)		
(3.2 m x 3.2 m)	▪ 4 bolted spigots AZ 85 E 20.5	210
	▪ 4 bolted spigots AZ 93.4 E 15	240
	▪ 4 bolted spigots AZ 120 M	292
Cross frame KR 7 - 32 (without accessories)		
(3.2 m x 3.2 m)	▪ 4 bolted spigots AZ 85 E 20.5	210
	▪ 4 bolted spigots AZ 93.4 E 15	240
	▪ 4 bolted spigots AZ 120 M	292
Cross frame KR 7 - 32/46 (without accessories)		
(4.6 m x 4.6 m)	▪ 4 bolted spigots AZ 85 E 20.5	210
	▪ 4 bolted spigots AZ 93.4 E 15	240
	▪ 4 bolted spigots AZ 120 M	292
Cross frame KR 8- 46 (without accessories)		
(4.6 m x 4.6 m)	▪ 4 bolted spigots AZ 85 E 20.5	210
	▪ 4 bolted spigots AZ 93.4 E 15	240
	▪ 4 bolted spigots AZ 120 M	292
Cross frame KR 10- 46 (without accessories)		
(4.6 m x 4.6 m)	▪ 4 bolted spigots AZR 120 E 15.5	552
	▪ 4 bolted spigots AZ 140 M	698
Cross frame KR 16 - 46/ 60 (without accessories)		
(6.0 m x 6.0 m)	▪ 4 bolted spigots AZR 120 E 15.5	552
	▪ 4 bolted spigots AZ 140 M	698
Cross frame KR HEB 700 - 4 (without accessories)		
(4.0 m x 4.0 m)	▪ 4 bolted spigots AZ 93.4	240
Cross frame KR HEB 700 - 5 (without accessories)		
(5.0 m x 5.0 m)	▪ 4 bolted spigots AZ 93.4	240
Cross frame KR HEB 800 - 5 (without accessories)		
(5.0 m x 5.0 m)	▪ 4 bolted spigots AZ 120 M	292
Cross frame KR HEB 800 - 6 (without accessories)		
(6.0 m x 6.0 m)	▪ 4 bolted spigots AZ 120 M	292
Supporting frame SR 150 (without accessories)		
(4.0 m x 4.0 m)	▪ 4 bolted spigots AZ 85 E 20.5	210
	▪ 4 bolted spigots AZ 93.4 E 15	240
	▪ 4 bolted spigots AZ 120 M	292
Cross frame KR 1000- 8 (without accessories)		
(8 m x 8 m)	▪ 4 bolted spigots AZ 140 E	684

Module	Crane parts	Weight [kg]	
	▪ 4 bolted spigots AZ 156 M	748	
Cross frame KR 16- 80 (without accessories)			21 450
(8 m x 8 m)	▪ 4 bolted spigots AZ 140 E KR 16-80	620	
	▪ 4 bolted spigots AZ 156 M KR 16-80	680	
	▪ 4 bolted spigots AZ 156S M KR 16-80	675	
Cross frame KR 16 - 80 / 100 (without accessories)			25 400
(10 m x 10 m)	▪ 4 bolted spigots AZ 140 E KR 16-80	620	
	▪ 4 bolted spigots AZ 156 M KR 16-80	680	
	▪ 4 bolted spigots AZ 156S M KR 16-80	675	

6.5 Assembly weight cross frame elements

Module	Crane parts	Weight [kg]	
Cross frame element KRE 138 complete			3 800
	▪ Cross frame platform with lifting beam, corner plates and transport locks	2 100	
	▪ Mast base with diagonal struts	1 700	
Cross frame element KRE 250 complete			5 750
	▪ Cross frame platform with hinged section, corner plates and transport locks	2 730	
	▪ Mast base with diagonal struts and tie rods	3 020	
Cross frame element KRE 260.1, complete			8 100
	▪ Cross frame platform with hinged section, corner plates and transport locks	4 320	
	▪ Mast base with diagonal struts and tie rods	3 780	
Cross frame element KRE 260.2, complete			10 900
	▪ Cross frame platform with hinged section, corner plates and transport locks	5 455	
	▪ Mast base with diagonal struts and tie rods	5 445	
Cross frame element KRE 480 complete			24 250
	▪ Mast base	7 100	
	▪ Hinged sections with corner plates	6 250	
	▪ Diagonal struts and ballast carrier	9 260	
	▪ Assembly platform, ladder, and small parts	1 640	

6.6 Assembly weight bogie truck

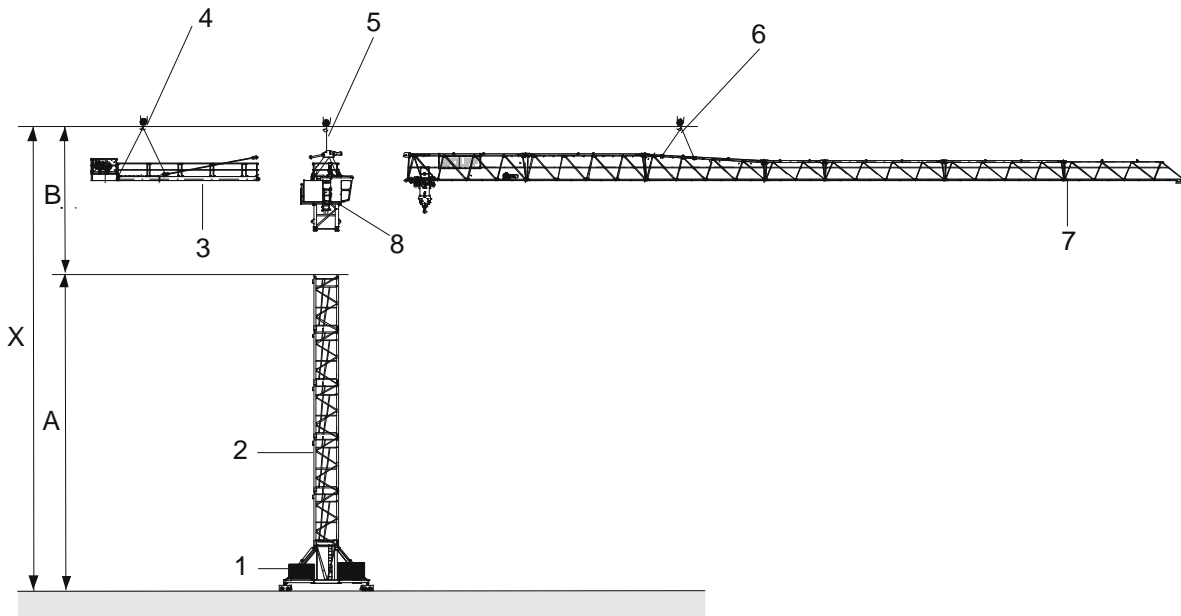
Module	Crane parts	Weight [kg]	
Bogie truck UW 138, complete			
	▪ Bogie truck platform with lifting beam, spacers and subframes	3 970	
	▪ Mast base with diagonal struts	1 780	
Bogie truck UW 250, complete			
	▪ Bogie truck platform with hinged sections, subframes and transport locks	5 600	
	▪ Mast base with diagonal struts and tie rods	3 200	
Bogie truck UW 260.1, complete			
	▪ Bogie truck platform with hinged sections, subframes and transport locks	7 150	
	▪ Mast base with diagonal struts and tie rods	4 250	
Bogie truck UW 260.2, complete			
	▪ Bogie truck platform with hinged sections, subframes and transport locks	9 810	
	▪ Mast base with diagonal struts and tie rods	4 250	
Bogie truck UW 260.3, complete			
	▪ Bogie truck platform with hinged sections, subframes and transport locks	11 300	
	▪ Mast base with diagonal struts and tie rods	5 900	
Bogie truck UW 480, complete			
	▪ Mast base	7 100	
	▪ Hinged sections with lifting beam and subframes	16 000	
	▪ Diagonal struts and ballast carrier	9 260	
	▪ Assembly platform, ladder, and small parts	1 640	

6.7 Hook height above ground required for mobile cranes

For information about the height of the WOLFF slewing tower crane, refer to Tower combinations [7].

NOTICE! During assembly, allowances must be made for level differences (mobile crane to base of the slewing tower crane).

Hook height above ground required for mobile cranes (X) = height of the WOLFF slewing tower crane (A) + clearance of 12 (B).



Exemplary illustration


[A]	Height of the WOLFF slewing tower crane	[B]	Clearance 12 m
[X]	Hook height above ground required for the mobile crane		
1	Undercarriage	5	Single-point lifting tackle (2 m with shackle)
2	Tower element	6	Four-point lifting tackle (4 m with shackle)
3	Counter jib, complete	7	Jib, complete
4	Four-point lifting tackle (with shackle)	8	Tower head section, complete


See also:

- Tower combinations [7]

7 Assembly diagrams

7.1 Jib attachment diagram

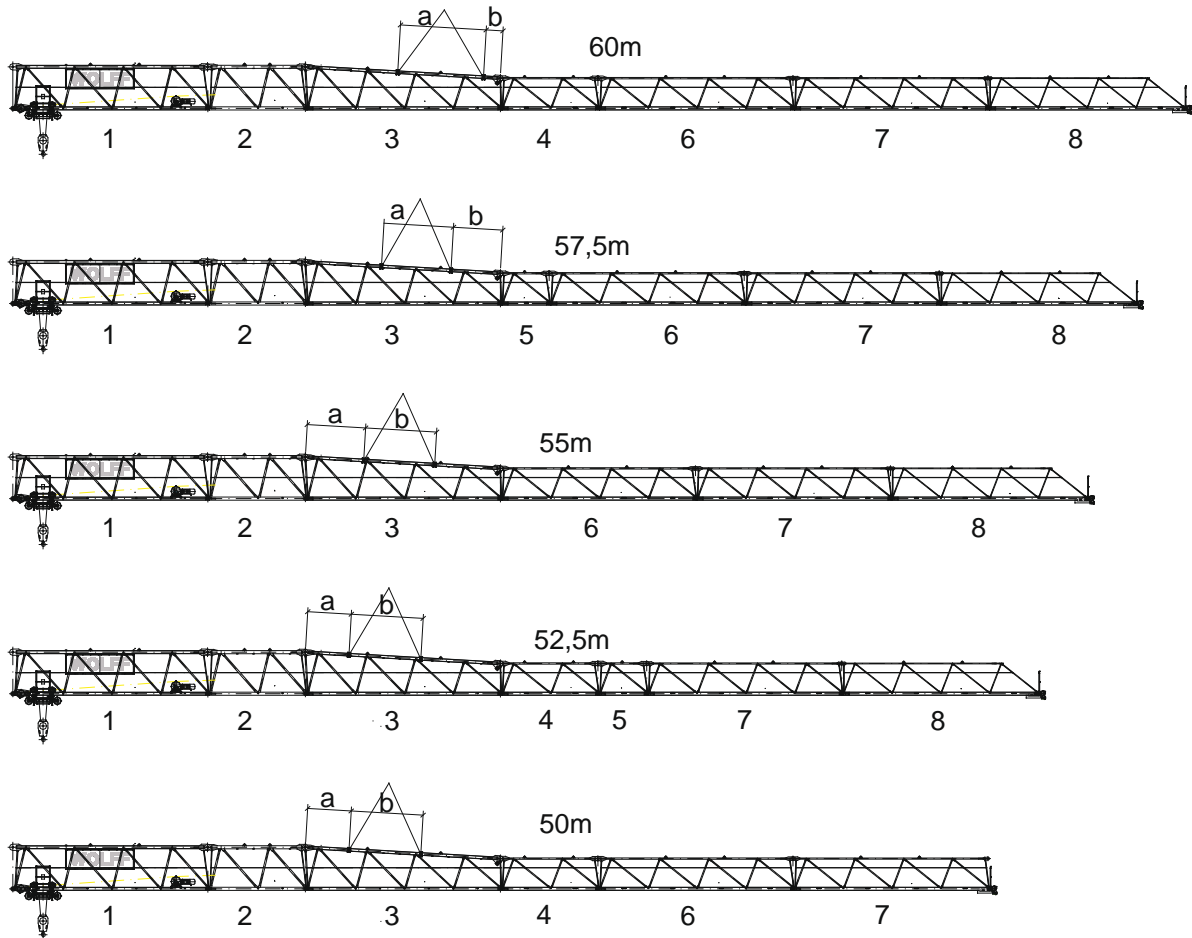
	NOTICE
	For jib assembly, use a Four-point lifting tackle (4 m with shackle).

	NOTICE
	To install the hook block within two sling ropes to DIN 3088 (Ø 8 mm x 1 m with shackle), attach it to the trolley, reeve in the mounting rope (Perlon, Ø 14 mm x 12 m) and secure it on the trolley.

Length of jib elements

Item	in [m]
Trolley jib elements 1, 3, 6, 7 and 8	10.0
Jib element 2, 4	5.0
Trolley jib element 5	2.5
Rope swivel crossbeam	0.51

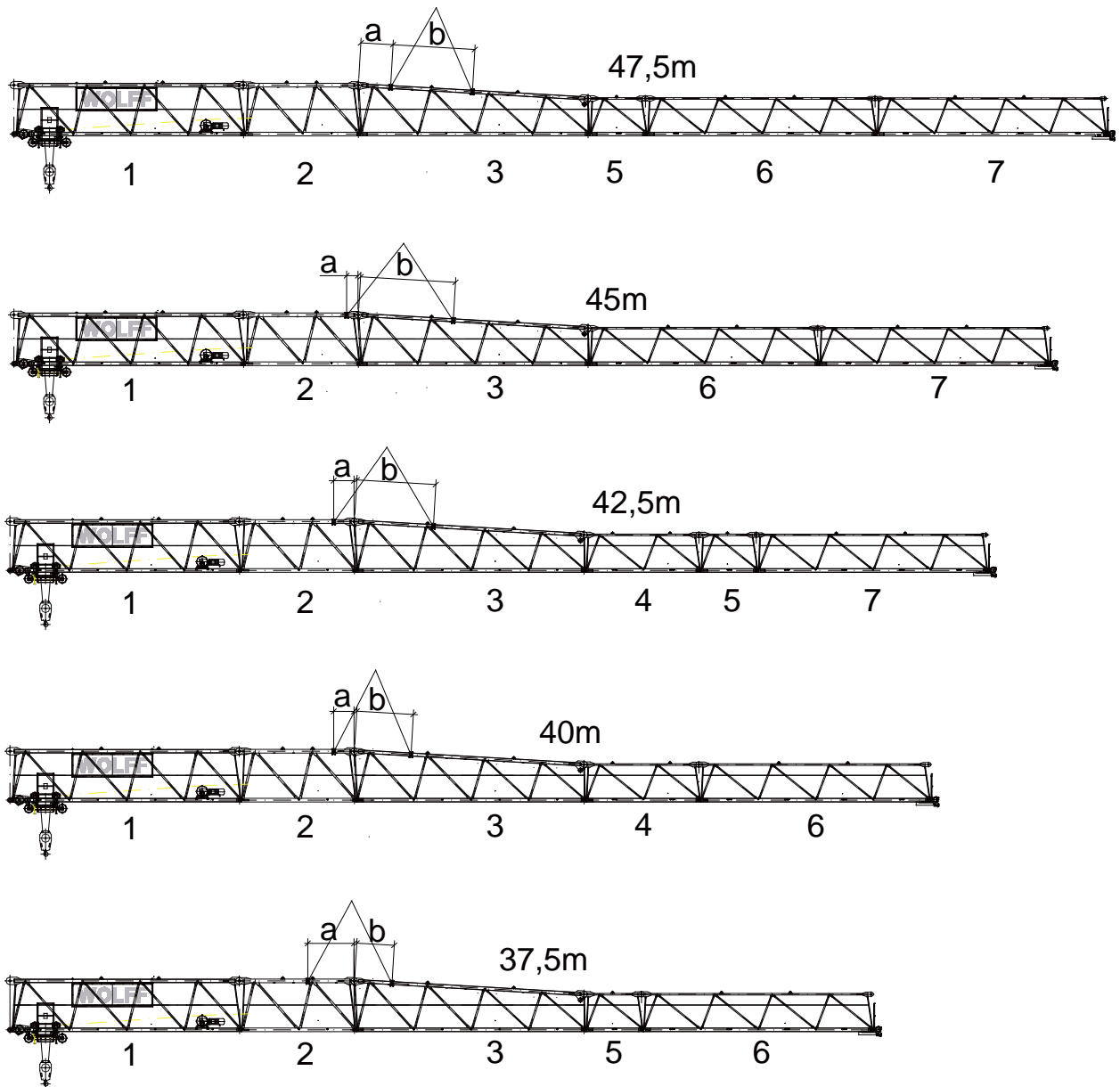
7.1.1 Trolley jib - attachment diagram 60 m to 50 m



a	Dimension a
b	Dimension b

Data	Jib length [m]				
	60	57.5	55	52.5	50
a [mm]	4400	3600	3000	2200	2200
b [mm]	860	2500	3700	3700	3700
Weight [kg] 6023 clear	10400	10100	9620	9500	9600

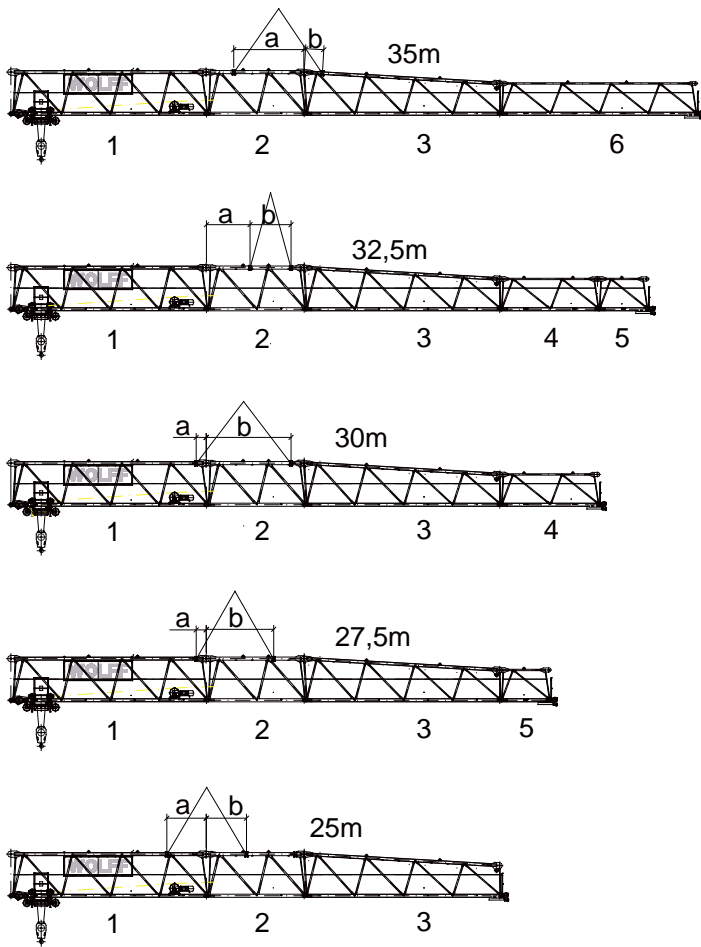
7.1.2 Trolley jib - attachment diagram 47.5 m to 37.5 m



a	Dimension a
b	Dimension b

Data	Jib length [m]				
	47.5	45	42.5	40	37.5
a [mm]	1400	500	900	900	2000
b [mm]	3600	4100	3400	2500	1700
Weight [kg] 6023 clear	9300	8820	8700	8550	8250


7.1.3 Trolley jib - attachment diagram 35 m to 25 m



a	Dimension a
b	Dimension b

Data	Jib length [m]				
	35	32.5	30	27.5	25
a [mm]	3600	2200	500	500	2000
b [mm]	1000	2100	4300	3400	2000
Weight [kg] 6023 clear	7770	7650	7170	6870	6390

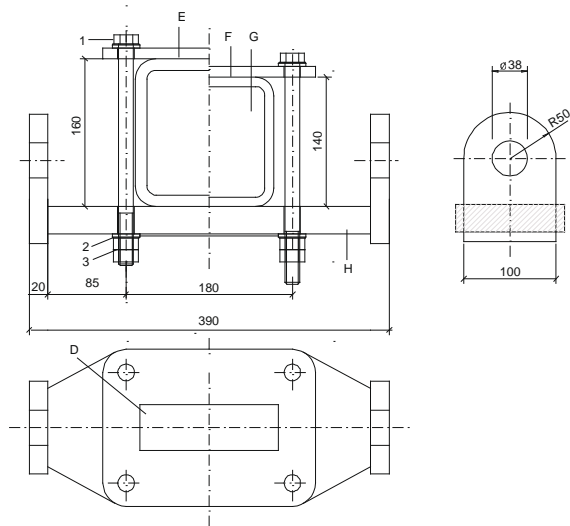
7.2 Trolley jib mounting rig

	NOTICE
	For information on the arrangement of the mounting rig, refer to the attachment diagram.
	Two mounting rigs are required per slewing tower crane.

Elements required for each mounting rig

Quantity	Item	Dimensions	Material
1	Mounting rig		
4	Hexagonal head bolt	M16 x 240	ISO 4017-8.8 galv.
8	HSFG washer	17	EN 14399 galvanized
8	Hexagonal nut	M16	ISO 4032-8 galvanized

Mounting rig







1	Hexagonal head screw	A	Mounting rig
2	HSFG washer	W	Top belt trolley jib
3	Hexagonal nut		

8 Suitable climbing frames



This section contains information on

- Outer climbing units
- Inner climbing units (KSH)


	<p>WARNING</p> <p>Climbing unit attached to the cat head bottom section Increased wind surface. The slewing tower crane may overturn.</p> <ol style="list-style-type: none">1) Lower the climbing unit down on the tower, or2) dismantle the climbing unit.
	<p>NOTICE</p> <p>Clamping forces for the inner climbing unit (KSH) are specified based on a building height of < 250m and wind category C 25</p>
	<p>NOTICE</p> <p>The operating radius specified is measured from the tower center and is to be considered a reference value. Exact balancing can be achieved by moving the trolley with the tower elements specified in the table or a load and can be checked by moving the end stops of the tower apart without offsets.</p>
	<p>NOTICE</p> <p>The data required and the instructions for tower assemblies with inner climbing unit is available in the separate description of the inner climbing unit.</p>

DANGER! Observe the special tower combination for the inner climbing unit.

8.1 Outer climbing units

	<p>NOTICE</p> <p>If feasible, you should preferably operate your climbing frame without balancing weight.</p>
	<p>NOTICE</p> <p>Tower element on the transfer carriage</p> <p>The data on climbing balance was specified under the assumption that a tower element is on the transfer carriage.</p>


8.1.1 Outer climbing unit KWH 20.3/ KWH 20.3.1

	NOTICE
	<p>Minimum height for stationary setup: 3 tower elements = 13.5 m tower height</p> <p>Minimum height for crawling towers: 2 tower elements + bogie truck = approx. 13.5 m tower height</p>

Climbing radius for the balancing weights

6023	Jib length [m]														
	60	57.5	55	52.5	50	47.5	45	42.5	40	37.5	35	32.5	30	27.5	25
UV 20 = 1.95 t	9.6	14.2	15.4	16.6	16.6	19.9	21.0	20.8	21.6	21.0	23.5	25.4	24.7	-	-
TV 20 = 3.05 t	6.1	9.6	10.4	11.4	11.4	13.9	14.7	14.6	15.2	14.8	16.6	18.1	17.6	18.5	16.0

8.1.2 Outer climbing unit KWH 20.6/ KWH 20.6.1

	NOTICE
	<p>Minimum height for stationary setup: 2 tower elements = 9.0 m tower height</p> <p>Minimum height for crawling towers: 2 tower elements + bogie truck = approx. 13.5 m tower height</p>

Climbing radius for the balancing weights

6023	Jib length [m]														
60	57.5	55	52.5	50	47.5	45	42.5	40	37.5	35	32.5	30	27.5	25	
UV 20 = 1.95 t	8.8	13.4	14.5	15.8	15.8	19.1	20.1	20.0	20.8	20.2	22.7	24.6	23.9	-	-
TV 20 = 3.05 t	5.4	9.0	9.8	10.7	10.8	13.2	14.1	14.0	14.6	14.1	16.0	17.4	17.0	17.9	15.4

8.2 Inner climbing units

8.2.1 Inner climbing unit KSH 20 M

Tower combinations for tower cranes with inner climbing unit.

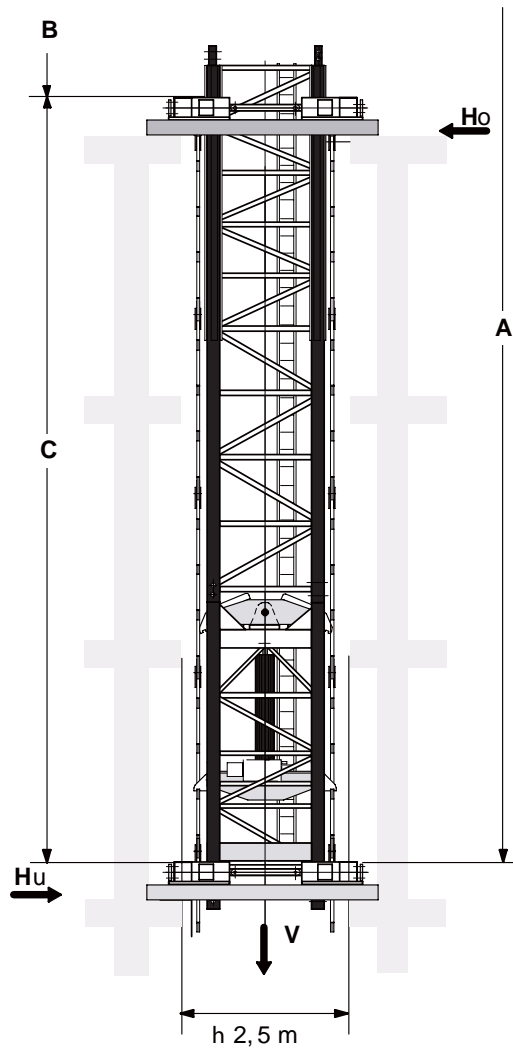
Item		
1	UV 20.4 LC	UV 20.4
2	UV 20.4 LC	UV 20.4 LC
3		UV 20.4 LC
Inner climbing unit	KSH 20 M	KSH 20 M
Foundation	FUA 120	FUA 120
Tower height [m]	37.5	42.0
Hook height above ground [m]	39.0	43.5

Tower combinations for slewing tower cranes with inner climbing unit.

Item			
1	UV 20.4		
2	UV 20.4		
3	UV 20.4		
4	UV 20.4 LC		
Inner climbing frame	KSH 20 M		
Foundation	FUA 120		
Tower height [m]	39.8		

Climbing radius for the balancing weights

	Jib length [m]														
	60	57.5	55	52.5	50	47.5	45	42.5	40	37.5	35	32.5	30	27.5	25
UV 20.4 = 2.05 t	37.3	41.8	41.6	42.7	42.8	-	-	-	-	-	-	-	-	-	-
TV 20.4 = 2.98 t	28.3	31.8	31.6	32.5	32.6	34.9	34.7	34.6	35.2	33.7	-	-	-	-	-
Weight = 5.00 t	18.3	20.5	20.4	21.0	21.0	22.6	22.5	22.4	22.7	21.8	22.9	23.8	22.8	23.4	21.1



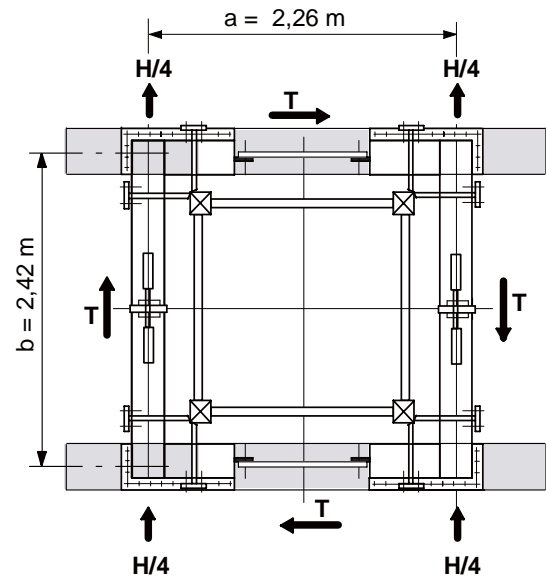
$$C_{\min} = 11,0 \text{ m}$$

$$C_{\max} = 14,0 \text{ m}$$

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

$$H_u = H_o - H$$

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



A	Tower height	C	Distance between guide frames
W	A-C-D	D	0.77 m

Operational clamping forces

Operational clamping forces [kN] inside a building								
A [m]	42.0				37.5			
C [m]	11	12	13	14	11	12	13	14
V	844				830			
Ho	230	210	200	180	220	200	190	170
Hu	200	180	170	150	190	170	160	140
T	44				44			

Non-operational clamping forces

Non-operational clamping forces [kN] inside a building								
A [m]	42.0				37.5			
C [m]	11	12	13	14	11	12	13	14
V	750				736			
Ho	360	330	310	290	300	280	260	240
Hu	210	180	160	140	160	140	120	100
T	0				0			

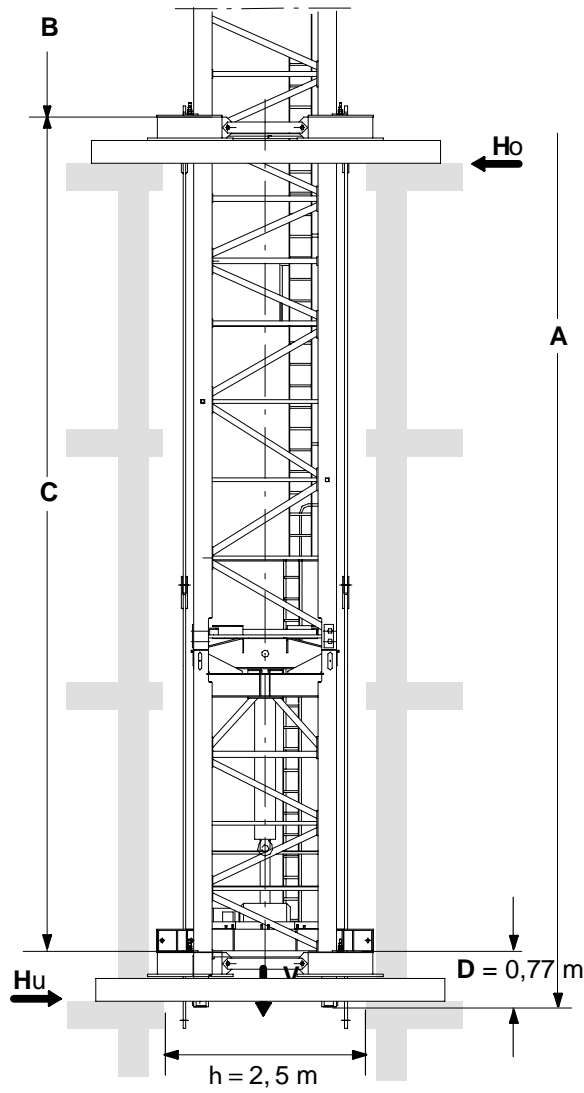
8.2.2 Inner climbing frame KSH 20 SH

Tower combinations for slewing tower cranes with inner climbing unit.

Item				
1	UV 20.4	UV 20.4	UV 20.4	UV 20.4
2	UV 20.4	UV 20.4	UV 20.4	UV 20.4
3	UV 20.4	UV 20.4	UV 20.4	UV 20.4
4	UV 20.4	UV 20.4	UV 20.4	UV 20.4
5	UV 20.4	UV 20.4	UV 20.4	UV 20.4
6	UV 20.4	UV 20.4	UV 20.4	UV 20.4
7	TVA 20.4	UV 20.4	UV 20.4	UV 20.4
8		TVA 20.4	UV 20.4	UV 20.4
9			TVA 20.4	UV 20.4
10				TVA 20.4
Inner climbing unit	KSH 20 SH	KSH 20 SH	KSH 20 SH	KSH 20 SH
Foundation	FUA 156 S	FUA 156 S	FUA 156 S	FUA 156 S
Tower height [m]	46.5	51.0	55.5	60.0
Hook height above ground [m]	48.0	52.5	57.0	61.5

Climbing radius for the balancing weights

	Jib length [m]														
	60	57.5	55	52.5	50	47.5	45	42.5	40	37.5	35	32.5	30	27.5	25
UV 20.4 = 2.05 t	37.3	41.8	41.6	42.7	42.8	-	-	-	-	-	-	-	-	-	-
TV 20.4 = 2.98 t	28.3	31.8	31.6	32.5	32.6	34.9	34.7	34.6	35.2	33.7	-	-	-	-	-
Weight = 5.00 t	18.3	20.5	20.4	21.0	21.0	22.6	22.5	22.4	22.7	21.8	22.9	23.8	22.8	23.4	21.1



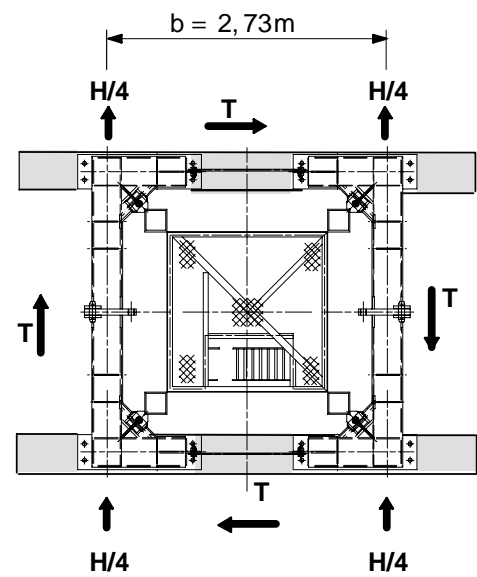
$$C_{\min} = 11,0\text{ m}$$

$$C_{\max} = 14,0\text{ m}$$

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

$$H_u = H_o - H$$

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



A	Tower height	C	Distance between guide frames
W	A-C-D		

Operational clamping forces

Operational clamping forces [kN] inside a building																
A [m]	60				55.5				51				46.5			
C [m]	11	12	13	14	11	12	13	14	11	12	13	14	11	12	13	14
V	959				941				927				913			
H_o	300	280	260	240	280	260	240	220	260	240	220	210	240	220	210	190
H_u	270	240	220	200	250	220	200	180	230	210	190	180	210	190	180	160
T	44				44				44				44			

Non-operational clamping forces

Non-operational clamping forces [kN] inside a building																
A [m]	60				55.5				51				46.5			
C [m]	11	12	13	14	11	12	13	14	11	12	13	14	11	12	13	14
V	866				847				833				819			
H_o	660	610	560	520	580	530	490	450	500	460	420	390	430	390	360	340
H_u	470	420	370	330	400	350	310	270	330	290	250	220	270	230	200	180
T	0				0				0				0			

9 Arrangement of counterweight blocks

L = 60 m	L = 57.5 m	L = 55 m	L = 52.5 m	L = 50 m
7 x 2.7 t	7 x 2.7 t	6 x 2.7 t	6 x 2.7 t	6 x 2.7 t
W = 22.6 t	W = 22.6 t	W = 19.9 t	W = 19.9 t	W = 19.9 t
L = 47.5 m	L = 45 m	L = 42.5 m	L = 40 m	L = 37.5 m
6 x 2.7 t	5 x 2.7 t	5 x 2.7 t	5 x 2.7 t	4 x 2.7 t
W = 19.9 t	W = 17.2 t	W = 17.2 t	W = 17.2 t	W = 14.5 t
L = 35 m	L = 32.5 m	L = 30 m	L = 27.5 m	L = 25 m
4 x 2.7 t	4 x 2.7 t	3 x 2.7 t	3 x 2.7 t	2 x 2.7 t
W = 14.5 t	W = 14.5 t	W = 11.8 t	W = 11.8 t	W = 9.1 t

Additional permanent counterweight for all jib lengths: 3.7 t

L	Jib length [m]	a	To the tower
G	Total weight [t]		Counterweight
	No counterweight		

