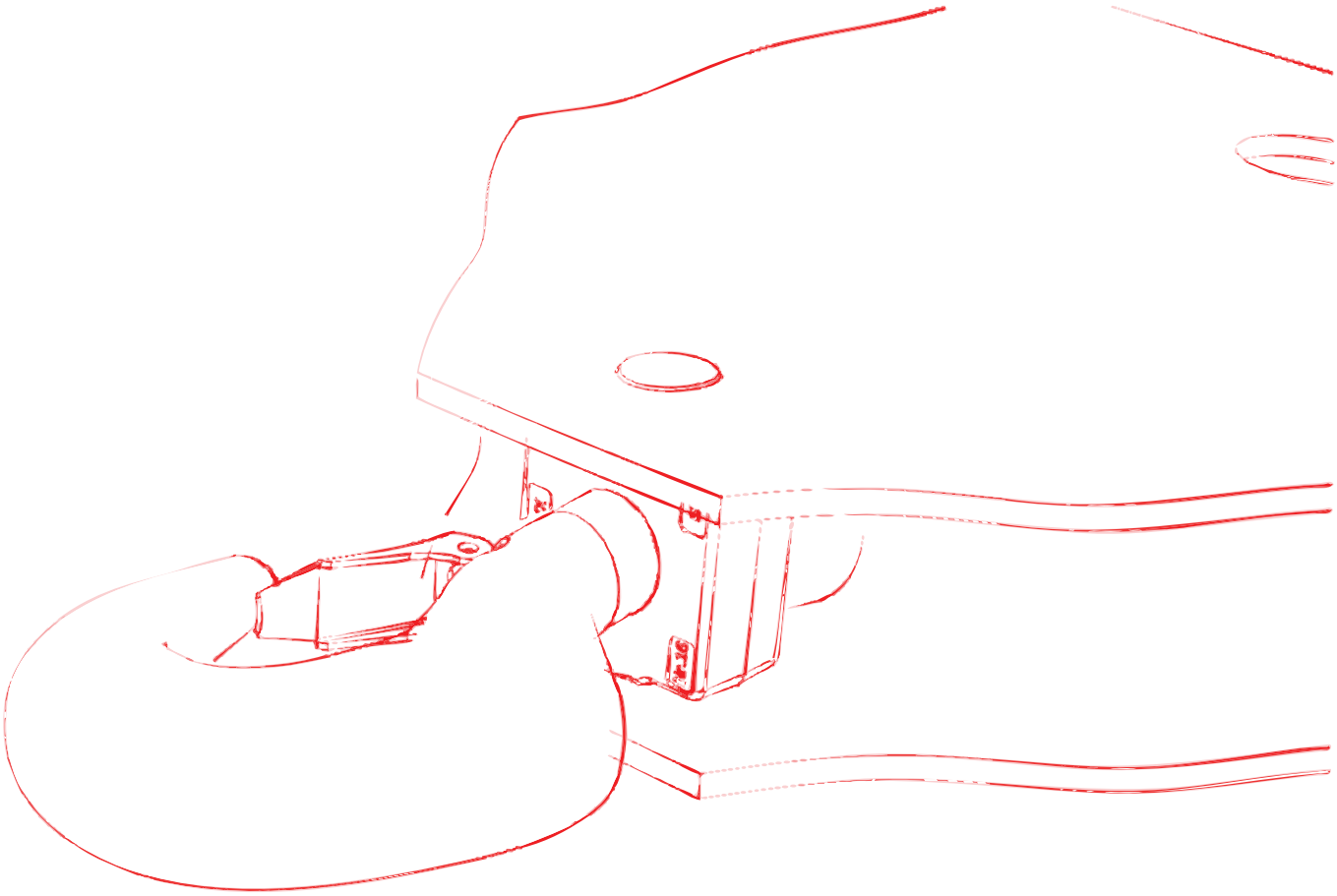
WOLFFKRAN

TI_2017-3

Slewing tower crane

WOLFF 6015 clear

Technical information



English

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At the time of printing, the information, data, illustrations and notes comprised in this manual were up-to-date.

Subject to change of design, error and typos.

Stand: 03/2017

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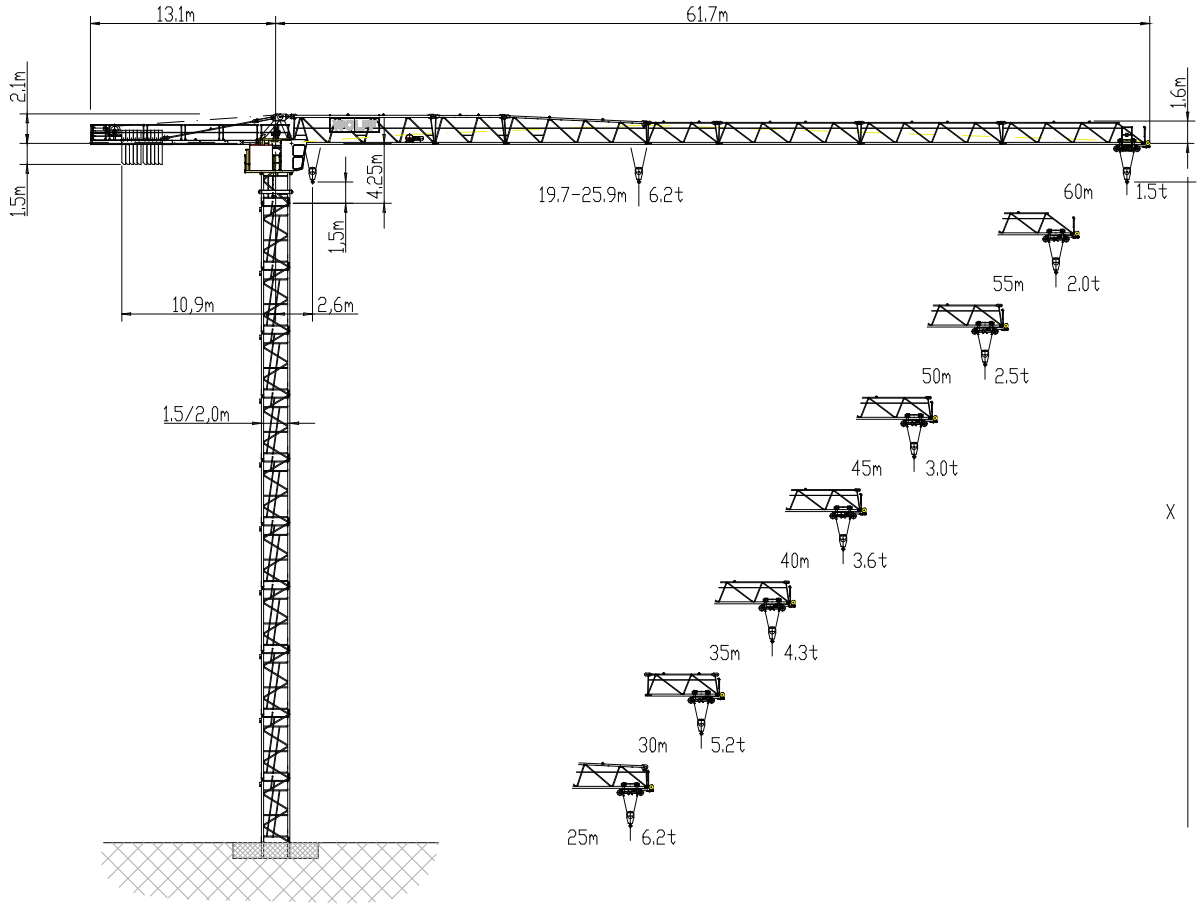
1 Schedule drawing

1.1 Schedule drawing WOLFF 6015.6clear

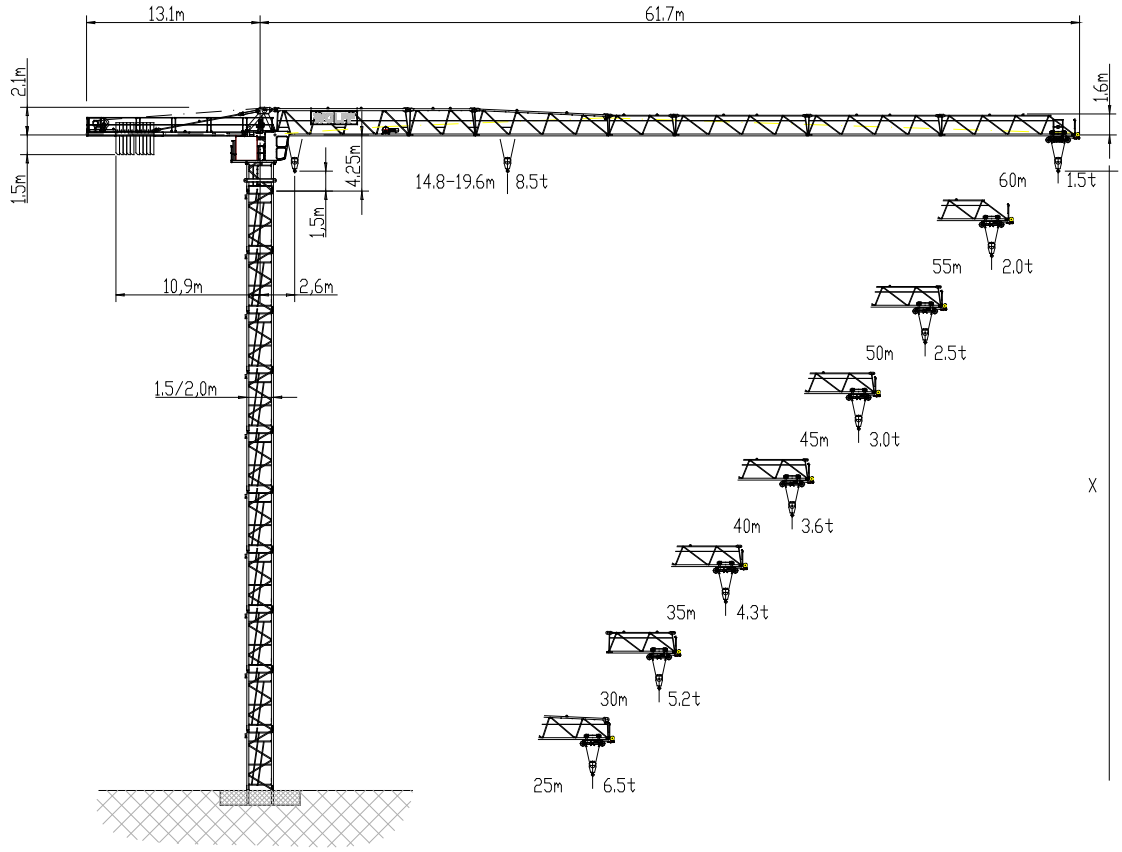


[X]	max. hook height above ground

Data WOLFF 6015.6clear

Item	Data
Crane type	BGL GROUP C.0.10.0140
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. 1610 kN/m
Hoist winch	Hw 628FU

1.2 Schedule drawing WOLFF 6015.8clear



[X]	max. hook height above ground

Data WOLFF 6015.8clear

Item	Data
Crane type	BGL GROUP C.0.10.0140
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. 1670 kNm
Hoist winch	Hw 845FU

2 Load carrying capacities

NOTICE

WOLFF-Boost

With the WOLFF-Boost function, the load is allowed to exceed the load torque range specified for the lifting capacities by up to 10%. This is, however, subject to the restriction that hoisting gear and trolley drive (trolley crane) respectively hoisting gear and derricking gear (luffing crane) must only be moved alternatingly.

2 Load carrying capacities

2.1 Table of load carrying capacities, WOLFF 6015.6 clear (6.2 t)

 6.2 t		Operating radius [m]		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	2.6 – 19.7		6.2	4.7	4.2	3.8	3.4	3.1	2.9	2.7	2.4	2.3	2.1	2.0	1.8	1.7	1.6	1.5	L-CC [t]
	57.5	2.6 – 21.4		6.2	5.2	4.6	4.2	3.8	3.5	3.2	2.9	2.7	2.5	2.3	2.2	2.0	1.9	1.8		
	55	2.6 – 22.0		6.2	5.4	4.8	4.3	3.9	3.6	3.3	3.1	2.8	2.6	2.4	2.3	2.1	2.0			
	52.5	2.6 – 22.5		6.2	5.5	4.9	4.5	4.0	3.7	3.4	3.1	2.9	2.7	2.5	2.4	2.2				
	50	2.6 – 23.6		6.2	5.8	5.2	4.7	4.3	3.9	3.6	3.3	3.1	2.9	2.7	2.5					
	47.5	2.6 – 23.8		6.2	5.9	5.2	4.7	4.3	4.0	3.6	3.4	3.1	2.9	2.7						
	45	2.6 – 24.4		6.2	6.0	5.4	4.9	4.5	4.1	3.8	3.5	3.2	3.0							
	42.5	2.6 – 24.9		6.2	6.2	5.5	5.0	4.6	4.2	3.8	3.6	3.3								
	40	2.6 – 25.1		6.2	6.2	5.6	5.1	4.6	4.2	3.9	3.6									
	37.5	2.6 – 25.2		6.2	6.2	5.6	5.1	4.6	4.2	3.9										
	35	2.6 – 25.5		6.2	6.2	5.7	5.2	4.7	4.3											
	32.5	2.6 – 25.5		6.2	6.2	5.7	5.2	4.7												
	30	2.6 – 25.7		6.2	6.2	5.7	5.2													
	27.5	2.6 – 25.9		6.2	6.2	5.8														
	25	2.6 – 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 (2 fall operation = 2.5 kg per meter of the hook range).

2.2 Table of load carrying capacities (kg) in meter intervals, WOLFF 6015.6 clear (6.2 t, 2 fall operation)

Operating radius	Jib length [m]														
[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	6100
21	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	5770
22	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6000	5470
23	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6200	6050	5900	5700	5200
24	6200	6200	6200	6200	6200	6200	6200	6200	6200	6130	6080	5760	5620	5430	4950
25	**6200**	**6200**	**6200**	**6200**	**6200**	**6200**	**6200**	**6170**	**6040**	**5850**	**5800**	**5500**	**5360**	**5180**	**4720**
26		6180	6120	6080	6070	5980	5970	5900	5780	5590	5550	5260	5120	4950	4510
27		5920	5870	5820	5810	5730	5720	5650	5530	5360	5310	5030	4900	4740	4310
27.5		**5800**	**5750**	**5700**	**5690**	**5610**	**5600**	**5540**	**5420**	**5250**	**5200**	**4930**	**4800**	**4640**	**4220**
28			5630	5580	5580	5490	5490	5420	5310	5140	5090	4830	4700	4540	4130
29			5410	5360	5360	5280	5270	5210	5100	4930	4890	4630	4510	4360	3960
30			**5200**	**5160**	**5150**	**5080**	**5070**	**5010**	**4900**	**4740**	**4700**	**4450**	**4330**	**4180**	**3800**
31				4970	4960	4890	4880	4820	4720	4560	4520	4280	4170	4020	3650
32				4790	4780	4710	4700	4650	4540	4400	4360	4120	4010	3870	3510
32.5				**4700**	**4690**	**4620**	**4620**	**4560**	**4460**	**4320**	**4280**	**4050**	**3940**	**3800**	**3450**
33					4610	4540	4530	4480	4380	4240	4200	3970	3870	3730	3380
34					4450	4380	4380	4330	4230	4090	4050	3830	3730	3600	3260
35					**4300**	**4240**	**4230**	**4180**	**4090**	**3950**	**3910**	**3700**	**3600**	**3470**	**3140**
36						4100	4090	4040	3950	3820	3780	3580	3480	3350	3030
37						3960	3960	3910	3820	3690	3660	3460	3360	3240	2930
37.5						**3900**	**3890**	**3850**	**3760**	**3630**	**3600**	**3400**	**3310**	**3190**	**2880**
38							3830	3790	3700	3580	3540	3340	3250	3130	2830
39							3710	3670	3580	3460	3430	3240	3150	3030	2740
40							**3600**	**3560**	**3480**	**3360**	**3330**	**3140**	**3050**	**2940**	**2650**
41								3450	3370	3250	3220	3040	2960	2850	2570
42								3350	3270	3160	3130	2950	2870	2760	2490
42.5								**3300**	**3220**	**3110**	**3080**	**2910**	**2820**	**2720**	**2450**
43									3180	3070	3040	2860	2780	2680	2410
44									3090	2980	2950	2780	2700	2600	2340
45									**3000**	**2890**	**2870**	**2700**	**2620**	**2520**	**2270**
46										2810	2790	2620	2550	2450	2200
47										2740	2710	2550	2480	2380	2140
47.5										**2700**	**2670**	**2520**	**2440**	**2350**	**2110**
48											2640	2480	2410	2310	2080
49											2570	2410	2340	2250	2020
50											**2500**	**2350**	**2280**	**2190**	**1960**
51												2290	2220	2130	1910
52												2230	2160	2080	1850
52.5												**2200**	**2130**	**2050**	**1830**
53													2110	2020	1800
54													2050	1970	1760
55													**2000**	**1920**	**1710**
56														1870	1660
57														1820	1620
57.5														**1800**	**1600**
58															1580
59															1540
60															**1500**

2.3 Table of load carrying capacities, WOLFF 6015.8 clear (8.5 t)

 8.5 t		Operating radius [m]		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	2.6 – 14.8		6.1	4.7	4.2	3.8	3.4	3.1	2.9	2.7	2.4	2.3	2.1	2.0	1.8	1.7	1.6	1.5	L-C-C [t]
	57.5	2.6 – 16.1		6.7	5.2	4.6	4.2	3.8	3.5	3.2	2.9	2.7	2.5	2.3	2.2	2.0	1.9	1.8		
	55	2.6 – 16.6		6.9	5.4	4.8	4.3	3.9	3.6	3.3	3.1	2.8	2.6	2.4	2.3	2.1	2.0			
	52.5	2.6 – 16.9		7.1	5.5	4.9	4.5	4.0	3.7	3.4	3.1	2.9	2.7	2.5	2.4	2.2				
	50	2.6 – 17.7		7.5	5.8	5.2	4.7	4.3	3.9	3.6	3.3	3.1	2.9	2.7	2.5					
	47.5	2.6 – 17.9		7.5	5.9	5.2	4.7	4.3	4.0	3.6	3.4	3.1	2.9	2.7						
	45	2.6 – 18.4		7.8	6.0	5.4	4.9	4.5	4.1	3.8	3.5	3.2	3.0							
	42.5	2.6 – 18.7		7.9	6.2	5.5	5.0	4.6	4.2	3.8	3.6	3.3								
	40	2.6 – 18.9		8.0	6.2	5.6	5.1	4.6	4.2	3.9	3.6									
	37.5	2.6 – 19.0		8.0	6.3	5.6	5.1	4.6	4.2	3.9										
	35	2.6 – 19.2		8.1	6.3	5.7	5.2	4.7	4.3											
	32.5	2.6 – 19.2		8.1	6.4	5.7	5.2	4.7												
	30	2.6 – 19.4		8.2	6.4	5.7	5.2													
	27.5	2.6 – 19.5		8.3	6.5	5.8														
	25	2.6 – 19.6		8.3	6.5															

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 (2 fall operation = 2.5 kg per meter of the hook range).

2.4 Table of load carrying capacities (kg) in meter intervals, WOLFF 6015.8 clear (8.5 t, 2 fall operation)

Operating radius	Jib length [m]														
[m]	25	27.5	30	32.5	35	37.5	40	42.5	45	47.5	50	52.5	55	57.5	60
17	8500	8500	8500	8500	8500	8500	8500	8500	8500	8500	8500	8460	8260	7990	7320
18	8500	8500	8500	8500	8500	8500	8500	8500	8500	8440	8370	7950	7760	7510	6870
19	8500	8500	8500	8500	8500	8480	8460	8370	8200	7950	7880	7490	7310	7070	6460
20	8330	8280	8200	8140	8130	8010	8000	7910	7750	7510	7450	7080	6900	6680	6100
21	7890	7840	7770	7710	7700	7590	7580	7500	7340	7120	7060	6700	6530	6320	5770
22	7500	7450	7380	7330	7310	7210	7200	7120	6970	6760	6700	6360	6200	6000	5470
23	7130	7090	7030	6970	6960	6860	6850	6780	6630	6430	6370	6050	5900	5700	5200
24	6800	6760	6700	6650	6640	6540	6530	6460	6330	6130	6080	5760	5620	5430	4950
25	**6500**	**6460**	**6400**	**6350**	**6340**	**6250**	**6240**	**6170**	**6040**	**5850**	**5800**	**5500**	**5360**	**5180**	**4720**
26		6180	6120	6080	6070	5980	5970	5900	5780	5590	5550	5260	5120	4950	4510
27		5920	5870	5820	5810	5730	5720	5650	5530	5360	5310	5030	4900	4740	4310
27.5		**5800**	**5750**	**5700**	**5690**	**5610**	**5600**	**5540**	**5420**	**5250**	**5200**	**4930**	**4800**	**4640**	**4220**
28			5630	5580	5580	5490	5490	5420	5310	5140	5090	4830	4700	4540	4130
29			5410	5360	5360	5280	5270	5210	5100	4930	4890	4630	4510	4360	3960
30			**5200**	**5160**	**5150**	**5080**	**5070**	**5010**	**4900**	**4740**	**4700**	**4450**	**4330**	**4180**	**3800**
31				4970	4960	4890	4880	4820	4720	4560	4520	4280	4170	4020	3650
32				4790	4780	4710	4700	4650	4540	4400	4360	4120	4010	3870	3510
32.5				**4700**	**4690**	**4620**	**4620**	**4560**	**4460**	**4320**	**4280**	**4050**	**3940**	**3800**	**3450**
33					4610	4540	4530	4480	4380	4240	4200	3970	3870	3730	3380
34					4450	4380	4380	4330	4230	4090	4050	3830	3730	3600	3260
35					**4300**	**4240**	**4230**	**4180**	**4090**	**3950**	**3910**	**3700**	**3600**	**3470**	**3140**
36						4100	4090	4040	3950	3820	3780	3580	3480	3350	3030
37						3960	3960	3910	3820	3690	3660	3460	3360	3240	2930
37.5						**3900**	**3890**	**3850**	**3760**	**3630**	**3600**	**3400**	**3310**	**3190**	**2880**
38							3830	3790	3700	3580	3540	3340	3250	3130	2830
39							3710	3670	3580	3460	3430	3240	3150	3030	2740
40							**3600**	**3560**	**3480**	**3360**	**3330**	**3140**	**3050**	**2940**	**2650**
41								3450	3370	3250	3220	3040	2960	2850	2570
42								3350	3270	3160	3130	2950	2870	2760	2490
42.5								**3300**	**3220**	**3110**	**3080**	**2910**	**2820**	**2720**	**2450**
43									3180	3070	3040	2860	2780	2680	2410
44									3090	2980	2950	2780	2700	2600	2340
45									**3000**	**2890**	**2870**	**2700**	**2620**	**2520**	**2270**
46										2810	2790	2620	2550	2450	2200
47										2740	2710	2550	2480	2380	2140
47.5										**2700**	**2670**	**2520**	**2440**	**2350**	**2110**
48											2640	2480	2410	2310	2080
49											2570	2410	2340	2250	2020
50											**2500**	**2350**	**2280**	**2190**	**1960**
51												2290	2220	2130	1910
52												2230	2160	2080	1850
52.5												**2200**	**2130**	**2050**	**1830**
53													2110	2020	1800
54													2050	1970	1760
55													**2000**	**1920**	**1710**
56														1870	1660
57														1820	1620
57.5														**1800**	**1600**
58															1580
59															1540
60															**1500**

3 Tower combinations

⚠ DANGER

Usage of incorrect tower combinations.

The slewing tower crane may overturn.

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.

NOTICE

All tower combinations apply to free standing slewing tower cranes without climbing gear.

NOTICE

The slewing tower crane with TFS 20 tower top lower part is without climbing feature.

NOTICE

For tower combination with tower element TV 25 and UV 25 please contact WOLFFKRAN.

3.1 Tower combinations on foundation (slewing section with UV 15.4 - connection)

Jib length		25 m – 60 m			
Item					
1	4.5 m	UV 15.4	UV 15.4	UV 15.4	
2	9.0 m	UV 15.4	UV 15.4	UV 15.4	
3	13.5 m	UV 15.4	UV 15.4	UV 15.4	
4	18.0 m	UV 15.4	UV 15.4	UV 15.4	
5	22.5 m	UV 15.4	UV 15.4	UV 15.4	
6	27.0 m	UV 15.4	UV 15.4	UV 15.4	
7	31.5 m	UV 15.4	UV 15.4	UV 15.4	
8	36.0 m	UV 15.4	UV 15.4	UV 15.4	
9	40.5 m	UV 15.4	UV 15.4	UVÜ 15.4	
10	45.0 m	UV 15.4	UVÜ 15.4	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	
16	72.0 m			TV 20.4	
Foundation anchors		FUA 120 Type C-120	FUA 120 Type C-120	FUA 140 Type D-140	
Tower height [m]		45.0	54.0	72.0	
Hook height above ground [m]		46.5	55.5	73.5	
Wind category		C25			

3 Tower combinations

Jib length		25 m – 60 m			
Item					
1	4.5 m	UV 15.4			
2	9.0 m	UV 15.4			
3	13.5 m	UV 15.4			
4	18.0 m	UV 15.4			
5	22.5 m	UV 15.4			
6	27.0 m	UV 15.4			
7	31.5 m	UV 15.4			
8	36.0 m	UV 15.4			
9	40.5 m	UVÜ 15.4			
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	72.0 m	TV 20.4			
17	73.0 m	VR 2023			
18	77.5 m	TV 23			
Foundation anchors		FUA 140 Type D-140			
Tower height [m]		77.5			
Hook height above ground [m]		79.0			
Wind category		C25			

Jib length		25 m – 60 m			
Item					
1	4.5 m	UV 15.4			
2	9.0 m	UV 15.4			
3	13.5 m	UV 15.4			
4	18.0 m	UV 15.4			
5	22.5 m	UV 15.4			
6	27.0 m	UV 15.4			
7	31.5 m	UV 15.4			
8	36.0 m	UV 15.4			
9	40.5 m	UVÜ 15.4			
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 anchors		FUA G 160			
Tower height [m]		91.0			
Hook height above ground [m]		92.5			
Wind category		C25			

3 Tower combinations

Jib length		25 m – 60 m			
Item					
1	4.5 m	UV 15.4			
2	9.0 m	UV 15.4			
3	13.5 m	UV 15.4			
4	18.0 m	UV 15.4			
5	22.5 m	UV 15.4			
6	27.0 m	UV 15.4			
7	31.5 m	UV 15.4			
8	36.0 m	UV 15.4			
9	40.5 m	UVÜ 15.4			
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	TV 23			
18	77.5 m	HTA 23			
19	82.0 m	HT 23			
20	86.5 m	HT 23			
21	97.8 m	BT 23			
Foundation anchors		FUA 210 G			
Tower height [m]		97.8			
Hook height above ground [m]		99.3			
Wind category		C25			

Jib length		25 m – 60 m			
Item					
1	4.5 m	UV 15.4			
2	9.0 m	UV 15.4			
3	13.5 m	UV 15.4			
4	18.0 m	UV 15.4			
5	22.5 m	UV 15.4			
6	27.0 m	UV 15.4			
7	31.5 m	UV 15.4			
8	36.0 m	UVÜ 15.4			
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	86.5 m	HT 23			
21	87.7 m	VR 23/25-29			
22	92.2 m	UV 29			
23	96.7 m	UV 29			
24	106.7 m	BT 29			
Foundation anchors		FUA BT 29			
Tower height [m]		106.7			
Hook height above ground [m]		108.2			
Wind category		C25			

3.2 Tower combinations on foundation (slewing section with TFS 20 - 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	18.0 m	TFS 20	TFS 20	TFS 20	
5	22.5 m	TFS 20	TFS 20	TFS 20	
6	27.0 m	TFS 20	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	TFS 20.4	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	
16	72.0 m			TV 20.4	
Foundation anchors		FUA B.4 FUA 93	FUA 120 Type C-120	FUA 140 Type D-140	
Tower height [m]		45.0	54.0	72.0	
Hook height above ground [m]		46.5	55.5	73.5	
Wind category		C25			

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	18.0 m	TFS 20			
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	TFS 20.4			
9	40.5 m	UVA 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	72.0 m	TV 20.4			
17	73.0 m	VR 2023			
18	77.5 m	TV 23			
Foundation anchors		FUA 140 Type D-140			
Tower height [m]		77.5			
Hook height above ground [m]		79.0			
Wind category		C25			

3 Tower combinations

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	18.0 m	TFS 20			
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	TFS 20.4			
9	40.5 m	UVA 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 anchors		FUA G 160			
Tower height [m]		91.0			
Hook height above ground [m]		92.5			
Wind category		C25			

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	18.0 m	TFS 20			
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	TFS 20.4			
9	40.5 m	UVA 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	86.5 m	HT 23			
21	97.8 m	BT 23			
Foundation anchors		FUA 210 G			
Tower height [m]		97.8			
Hook height above ground [m]		99.3			
Wind category		C25			

3 Tower combinations

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	18.0 m	TFS 20			
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	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	86.5 m	HT 23			
21	87.7 m	VR 23/25-29			
22	92.2 m	UV 29			
23	96.7 m	UV 29			
24	106.7 m	BT 29			
Foundation anchors		FUA BT 29			
Tower height [m]		106.7			
Hook height above ground [m]		108.2			
Wind category		C25			

3.3 Tower combinations on foundation (slewing section with UV 20 - connection)

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	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		
16	72.0 m		TV 20.4		
Foundation anchors		FUA 120 Type C-120	FUA 140 Type D-140		
Tower height [m]		54.0	72.0		
Hook height above ground [m]		55.0	73.5		
Wind category		C25			

3 Tower combinations

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	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	72.0 m	TV 20.4			
17	73.0 m	VR 2023			
18	77.5 m	TV 23			
Foundation anchors		FUA 140 Type D-140			
Tower height [m]		77.5			
Hook height above ground [m]		79.0			
Wind category		C25			

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	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 anchors		FUA G 160			
Tower height [m]		91.0			
Hook height above ground [m]		92.5			
Wind category		C25			

3 Tower combinations

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	86.5 m	HT 23			
21	97.8 m	BT 23			
Foundation anchors		FUA 210 G			
Tower height [m]		97.8			
Hook height above ground [m]		99.3			
Wind category		C25			

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 anchors		FUA BT 29			
Tower height [m]		102.2			
Hook height above ground [m]		103.7			
Wind category		C25			

3.4 Tower combinations on cross frame (slewing section with UV 15.4 - connection)

Jib length		25 m – 60 m			
Item					
1	4.5 m	UV 15.4	UV 15.4	UV 15.4	UV 15.4
2	9.0 m	UV 15.4	UV 15.4	UV 15.4	UV 15.4
3	13.5 m	UV 15.4	UV 15.4	UV 15.4	UV 15.4
4	18.0 m	UV 15.4	UV 15.4	UV 15.4	UV 15.4
5	22.5 m	UV 15.4	UV 15.4	UV 15.4	UV 15.4
6	27.0 m	UV 15.4	UV 15.4	UV 15.4	UV 15.4
7	31.5 m	UV 15.4	UV 15.4	UV 15.4	UV 15.4
8	36.0 m	UV 15.4	UV 15.4	UV 15.4	UV 15.4
9	40.5 m	UV 15.4	UV 15.4	UVÜ 15.4	UVÜ 15.4
10	45.0 m			UV 20.4	UV 20.4
11	49.5 m			UV 20.4	UV 20.4
12	54.0 m			TVA 20.4	TVA 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
16	72.0 m				TV 20.4
Substructure		KRV 7-32	KRV 7-32/46 KR 8-46	KR 10-46 KR10-46/60	KRV 10-60
Corner distance [m x m]		3.2 x 3.2	4.6 x 4.6	4.6 x 4.6 6.0 x 6.0	5.0 x 5.0 6.0 x 6.0
Substructure height [m]		0.8	0.9	1.2	1.2
Tower height [m]		41.3	41.4	64.2	73.2
Hook height above ground [m]		42.8	42.9	65.7	74.7
Wind category		C25			

Jib length		25 m – 60 m			
Item					
1	4.5 m	UV 15.4			
2	9.0 m	UV 15.4			
3	13.5 m	UV 15.4			
4	18.0 m	UV 15.4			
5	22.5 m	UV 15.4			
6	27.0 m	UV 15.4			
7	31.5 m	UV 15.4			
8	36.0 m	UV 15.4			
9	40.5 m	UVÜ 15.4			
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	72.0 m	TV 20.4			
17	73.0 m	VR 2023			
18	77.5 m	TV 23			
Substructure		KRV 10-60			
Corner distance [m x m]		6.0 x 6.0			
Substructure height [m]		1.2			
Tower height [m]		78.7			
Hook height above ground [m]		80.2			
Wind category		C25			

3 Tower combinations

Jib length		25 m – 60 m			
Item					
1	4.5 m	UV 15.4	UV 15.4		
2	9.0 m	UV 15.4	UV 15.4		
3	13.5 m	UV 15.4	UV 15.4		
4	18.0 m	UV 15.4	UV 15.4		
5	22.5 m	UV 15.4	UV 15.4		
6	27.0 m	UV 15.4	UV 15.4		
7	31.5 m	UV 15.4	UV 15.4		
8	36.0 m	UV 15.4	UV 15.4		
9	40.5 m	UVÜ 15.4	UVÜ 15.4		
10	45.0 m	UV 20.4	UV 20.4		
11	49.5 m	UV 20.4	UV 20.4		
12	54.0 m	TVA 20.4	TVA 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	72.0 m	TVÜ 20.4	TV 20.4		
Substructure		KR 1000-8	KR 12-60 KR 12-60/80		
Corner distance [m x m]		8.0 x 8.0	6.0 x 6.0 8.0 x 8.0		
Substructure height [m]		1.2	1.4		
Tower height [m]		73.2	73.4		
Hook height above ground [m]		74.7	74.9		
Wind category		C25			

Jib length		25 m – 60 m			
Item					
1	4.5 m	UV 15.4	UV 15.4	UV 15.4	
2	9.0 m	UV 15.4	UV 15.4	UV 15.4	
3	13.5 m	UV 15.4	UV 15.4	UV 15.4	
4	18.0 m	UV 15.4	UV 15.4	UV 15.4	
5	22.5 m	UV 15.4	UV 15.4	UV 15.4	
6	27.0 m	UV 15.4	UV 15.4	UV 15.4	
7	31.5 m	UV 15.4	UV 15.4	UV 15.4	
8	36.0 m	UV 15.4	UV 15.4	UV 15.4	
9	40.5 m	UVÜ 15.4	UVÜ 15.4	UVÜ 15.4	
10	45.0 m	UV 20.4	UV 20.4	UV 20.4	
11	49.5 m	UV 20.4	TVA 20.4	TVA 20.4	
12	54.0 m	TVA 20.4	TV 20.4	TV 20.4	
13	58.5 m	TV 20.4	TV 20.4	TV 20.4	
14	63.0 m	TV 20.4	TV 20.4	TV 20.4	
15	67.5 m	TV 20.4	TV 20.4	TV 20.4	
16	68.5 m	VR 2023	VR 2023	VR 2023	
17	73.0 m	TV 23	TV 23	TV 23	
18	77.5 m	HTA 23	HTA 23	HTA 23	
19	82.0 m	HT 23	HT 23	HT 23	
20	86.5 m		HT 23	HT 23	
21	91.0 m			HT 23	
Substructure		KR 12-60	KR 12-60/80	KR 16-80 KR 16-80/100	
Corner distance [m x m]		6.0 x 6.0	8.0 x 8.0	8.0 x 8.0 10.0 x 10.0	
Substructure height [m]		1.4	1.4	1.8	
Tower height [m]		83.4	87.9	92.8	
Hook height above ground [m]		84.9	89.4	94.3	
Wind category		C25			

3 Tower combinations

Jib length		25 m – 60 m			
Item					
1	4.5 m	UV 15.4			
2	9.0 m	UV 15.4			
3	13.5 m	UV 15.4			
4	18.0 m	UV 15.4			
5	22.5 m	UV 15.4			
6	27.0 m	UV 15.4			
7	31.5 m	UV 15.4			
8	36.0 m	UVÜ 15.4			
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	86.5 m	HT 23			
21	87.7 m	VR 23/25-29			
22	97.7 m	BT 29			
Substructure		KR 16-80			
Corner distance [m x m]		8.0 x 8.0			
Substructure height [m]		1.8			
Tower height [m]		99.5			
Hook height above ground [m]		101.0			
Wind category		C25			

Jib length		25 m – 60 m			
Item					
1	4.5 m	UV 15.4			
2	9.0 m	UV 15.4			
3	13.5 m	UV 15.4			
4	18.0 m	UV 15.4			
5	22.5 m	UV 15.4			
6	27.0 m	UV 15.4			
7	31.5 m	UV 15.4			
8	36.0 m	UVÜ 15.4			
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	86.5 m	HT 23			
21	87.7 m	VR 23/25-29			
22	92.2 m	UV 29			
23	102.2 m	BT 29			
Substructure		KR 16-80/100			
Corner distance [m x m]		10.0 x 10.0			
Substructure height [m]		1.8			
Tower height [m]		104.0			
Hook height above ground [m]		105.5			
Wind category		C25			

3.5 Tower combinations on cross frame (slewing section with TFS 20 - connection)

Jib length		25 m – 60 m			
Item					
1	4.5 m	TFS 20	TFS 20	TFS 20	TFS 20
2	9.0 m	TFS 20	TFS 20	TFS 20	TFS 20
3	13.5 m	TFS 20	TFS 20	TFS 20	TFS 20
4	18.0 m	TFS 20	TFS 20	TFS 20	TFS 20
5	22.5 m	TFS 20	TFS 20	TFS 20	TFS 20
6	27.0 m	TFS 20	TFS 20	TFS 20.4	TFS 20.4
7	31.5 m	TFS 20	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	UVA 20.4	UVA 20.4
10	45.0 m			UV 20.4	UV 20.4
11	49.5 m			UV 20.4	UV 20.4
12	54.0 m			TVA 20.4	TVA 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
16	72.0 m				TV 20.4
Substructure		KR 800-5 KR 800-6	KRV 7-32/46 KR 8-46	KR 10-46 KR 10-46/60	KRV 10-60
Corner distance [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	5.0 x 5.0 6.0 x 6.0
Substructure height [m]		0.9	0.9	1.2	1.2
Tower height [m]		32.4	41.4	64.2	73.2
Hook height above ground [m]		33.9	42.9	65.7	74.7
Wind category		C25			

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	18.0 m	TFS 20			
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	TFS 20.4			
9	40.5 m	UVA 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	72.0 m	TV 20.4			
17	73.0 m	VR 2023			
18	77.5 m	TV 23			
Substructure		KRV 10-60			
Corner distance [m x m]		6.0 x 6.0			
Substructure height [m]		1.2			
Tower height [m]		78.7			
Hook height above ground [m]		80.2			
Wind category		C25			

3 Tower combinations

Jib length		25 m – 60 m			
Item					
1	4.5 m	TFS 20	TFS 20		
2	9.0 m	TFS 20	TFS 20		
3	13.5 m	TFS 20	TFS 20		
4	18.0 m	TFS 20	TFS 20		
5	22.5 m	TFS 20	TFS 20		
6	27.0 m	TFS 20.4	TFS 20.4		
7	31.5 m	TFS 20.4	TFS 20.4		
8	36.0 m	TFS 20.4	TFS 20.4		
9	40.5 m	UVA 20.4	UVA 20.4		
10	45.0 m	UV 20.4	UV 20.4		
11	49.5 m	UV 20.4	UV 20.4		
12	54.0 m	TVA 20.4	TVA 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	72.0 m	TVÜ 20.4	TV 20.4		
Substructure		KR 1000-8	KR 12-60 KR 12-60/80		
Corner distance [m x m]		8.0 x 8.0	6.0 x 6.0 8.0 x 8.0		
Substructure height [m]		1.2	1.4		
Tower height [m]		73.2	73.4		
Hook height above ground [m]		74.7	74.9		
Wind category		C25			

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	18.0 m	TFS 20	TFS 20	TFS 20	
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	UVA 20.4	UVA 20.4	UVA 20.4	
10	45.0 m	UV 20.4	UV 20.4	UV 20.4	
11	49.5 m	UV 20.4	TVA 20.4	TVA 20.4	
12	54.0 m	TVA 20.4	TV 20.4	TV 20.4	
13	58.5 m	TV 20.4	TV 20.4	TV 20.4	
14	63.0 m	TV 20.4	TV 20.4	TV 20.4	
15	67.5 m	TV 20.4	TV 20.4	TV 20.4	
16	68.5 m	VR 2023	VR 2023	VR 2023	
17	73.0 m	TV 23	TV 23	TV 23	
18	77.5 m	HTA 23	HTA 23	HTA 23	
19	82.0 m	HT 23	HT 23	HT 23	
20	86.5 m		HT 23	HT 23	
21	91.0 m			HT 23	
Substructure		KR 12-60	KR 12-60/80	KR 16-80 KR 16-80/100	
Corner distance [m x m]		6.0 x 6.0	8.0 x 8.0	8.0 x 8.0 10.0 x 10.0	
Substructure height [m]		1.4	1.4	1.8	
Tower height [m]		83.4	87.9	92.8	
Hook height above ground [m]		84.9	89.4	94.3	
Wind category		C25			

3 Tower combinations

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	18.0 m	TFS 20			
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	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	86.5 m	HT 23			
21	87.7 m	VR 23/25-29			
22	97.7 m	BT 29			
Substructure		KR 16-80			
Corner distance [m x m]		8.0 x 8.0			
Substructure height [m]		1.8			
Tower height [m]		99.5			
Hook height above ground [m]		101.0			
Wind category		C25			

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	18.0 m	TFS 20			
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	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	86.5 m	HT 23			
21	87.7 m	VR 23/25-29			
22	92.2 m	UV 29			
23	102.2 m	BT 29			
Substructure		KR 16-80/100			
Corner distance [m x m]		10.0 x 10.0			
Substructure height [m]		1.8			
Tower height [m]		104.0			
Hook height above ground [m]		105.5			
Wind category		C25			

3.6 Tower combinations on cross frame (slewing section with UV 20 - connection)

Jib length		25 m – 60 m			
Item					
1	4.5 m	UV 20.4	UV 20.4	UV 20.4	UV 20.4
2	9.0 m	UV 20.4	UV 20.4	UV 20.4	UV 20.4
3	13.5 m	UV 20.4	UV 20.4	UV 20.4	UV 20.4
4	18.0 m	UV 20.4	UV 20.4	UV 20.4	UV 20.4
5	22.5 m	UV 20.4	UV 20.4	UV 20.4	UV 20.4
6	27.0 m	UV 20.4	UV 20.4	UV 20.4	UV 20.4
7	31.5 m	UV 20.4	UV 20.4	UV 20.4	UV 20.4
8	36.0 m		UV 20.4	UV 20.4	UV 20.4
9	40.5 m		UV 20.4	UV 20.4	UV 20.4
10	45.0 m			UV 20.4	UV 20.4
11	49.5 m			UV 20.4	UV 20.4
12	54.0 m			TVA 20.4	TVA 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
16	72.0 m				TV 20.4
Substructure		KR 800-5 KR 800-6	KRV 7-32/46 KR 8-46	KR 10-46 KR 10-46/60	KRV 10-60
Corner distance [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	5.0 x 5.0
Substructure height [m]		0.9	0.9	1.2	1.2
Tower height [m]		32.4	41.4	64.2	73.2
Hook height above ground [m]		33.9	42.9	65.7	74.7
Wind category		C25			

Jib length		25 m – 60 m			
Item					
1	4.5 m	UV 20.4	UV 20.4	UV 20.4	
2	9.0 m	UV 20.4	UV 20.4	UV 20.4	
3	13.5 m	UV 20.4	UV 20.4	UV 20.4	
4	18.0 m	UV 20.4	UV 20.4	UV 20.4	
5	22.5 m	UV 20.4	UV 20.4	UV 20.4	
6	27.0 m	UV 20.4	UV 20.4	UV 20.4	
7	31.5 m	UV 20.4	UV 20.4	UV 20.4	
8	36.0 m	UV 20.4	UV 20.4	UV 20.4	
9	40.5 m	UV 20.4	UV 20.4	UV 20.4	
10	45.0 m	UV 20.4	UV 20.4	UV 20.4	
11	49.5 m	UV 20.4	UV 20.4	UV 20.4	
12	54.0 m	TVA 20.4	TVA 20.4	TVA 20.4	
13	58.5 m	TV 20.4	TV 20.4	TV 20.4	
14	63.0 m	TV 20.4	TV 20.4	TV 20.4	
15	67.5 m	TV 20.4	TV 20.4	TV 20.4	
16	72.0 m		TVÜ 20.4	TV 20.4	
Substructure		KRV 10-60	KR 1000-8	KR 12-60 KR 12-60/80	
Corner distance [m x m]		6.0 x 6.0	8.0 x 8.0	6.0 x 6.0 8.0 x 8.0	
Substructure height [m]		1.2	1.2	1.4	
Tower height [m]		68.7	73.2	73.4	
Hook height above ground [m]		70.2	74.7	74.9	
Wind category		C25			

3 Tower combinations

Jib length		25 m – 60 m			
Item					
1	4.5 m	UV 20.4	UV 20.4	UV 20.4	
2	9.0 m	UV 20.4	UV 20.4	UV 20.4	
3	13.5 m	UV 20.4	UV 20.4	UV 20.4	
4	18.0 m	UV 20.4	UV 20.4	UV 20.4	
5	22.5 m	UV 20.4	UV 20.4	UV 20.4	
6	27.0 m	UV 20.4	UV 20.4	UV 20.4	
7	31.5 m	UV 20.4	UV 20.4	UV 20.4	
8	36.0 m	UV 20.4	UV 20.4	UV 20.4	
9	40.5 m	UV 20.4	UV 20.4	UV 20.4	
10	45.0 m	UV 20.4	UV 20.4	UV 20.4	
11	49.5 m	UV 20.4	TVA 20.4	TVA 20.4	
12	54.0 m	TVA 20.4	TV 20.4	TV 20.4	
13	58.5 m	TV 20.4	TV 20.4	TV 20.4	
14	63.0 m	TV 20.4	TV 20.4	TV 20.4	
15	67.5 m	TV 20.4	TV 20.4	TV 20.4	
16	68.5 m	VR 2023	VR 2023	VR 2023	
17	73.0 m	TV 23	TV 23	TV 23	
18	77.5 m	HTA 23	HTA 23	HTA 23	
19	82.0 m	HT 23	HT 23	HT 23	
20	86.5 m		HT 23	HT 23	
21	91.0 m			HT 23	
Substructure		KR 12-60	KR 12-60/80	KR 16-80 KR 16-80/100	
Corner distance [m x m]		6.0 x 6.0	8.0 x 8.0	8.0 x 8.0 10.0 x 10.0	
Substructure height [m]		1.4	1.4	1.8	
Tower height [m]		83.4	87.9	92.8	
Hook height above ground [m]		84.9	89.4	94.3	
Wind category		C25			

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	86.5 m	HT 23			
21	87.7 m	VR 23/25-29			
22	97.7 m	BT 29			
Substructure		KR 16-80			
Corner distance [m x m]		8.0 x 8.0			
Substructure height [m]		1.8			
Tower height [m]		99.5			
Hook height above ground [m]		101.0			
Wind category		C25			

3 Tower combinations

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	86.5 m	HT 23			
21	87.7 m	VR 23/25-29			
22	92.2 m	UV 29			
23	102.2 m	BT 29			
Substructure		KR 16-80/100			
Corner distance [m x m]		10.0 x 10.0			
Substructure height [m]		1.8			
Tower height [m]		104.0			
Hook height above ground [m]		105.5			
Wind category		C25			

3.7 Tower combinations on cross frame element (slewing section with UV 15.4 - connection)

Jib length		25 m – 60 m			
Item					
1	4.5 m	UV 15.4	UV 15.4	UV 15.4	UV 15.4
2	9.0 m	UV 15.4	UV 15.4	UV 15.4	UV 15.4
3	13.5 m	UV 15.4	UV 15.4	UV 15.4	UV 15.4
4	18.0 m	UV 15.4	UV 15.4	UV 15.4	UV 15.4
5	22.5 m		UV 15.4	UV 15.4	UV 15.4
6	27.0 m			UV 15.4	UV 15.4
7	31.5 m			UV 15.4	UV 15.4
8	36.0 m			UV 15.4	UV 15.4
9	40.5 m			UVÜ 15.4	UV 15.4
10	45.0 m				UVÜ 15.4
11	49.5 m				TVA 20.4
Substructure		KRE 250	KRE 250	KRE 260.1	KRE 260.2
Corner distance [m x m]		4.5 x 5.44	5.0 x 5.0	5.0 x 6.79 6.0 x 6.0	5.0 x 6.79
Substructure height [m]		4.0	4.0	4.0	4.0
Tower height [m]		22.0	26.5	44.5	53.5
Hook height above ground [m]		23.5	28.0	46.0	55.0
Wind category		C25			

3 Tower combinations

Jib length		25 m – 60 m			
Item					
1	4.5 m	UV 15.4	UV 15.4		
2	9.0 m	UV 15.4	UV 15.4		
3	13.5 m	UV 15.4	UV 15.4		
4	18.0 m	UV 15.4	UV 15.4		
5	22.5 m	UV 15.4	UV 15.4		
6	27.0 m	UV 15.4	UV 15.4		
7	31.5 m	UV 15.4	UV 15.4		
8	36.0 m	UV 15.4	UV 15.4		
9	40.5 m	UV 15.4	UVÜ 15.4		
10	45.0 m	UVÜ 15.4	UV 20.4		
11	49.5 m	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 20.4		
16	72.0 m		UVA 25		
Substructure		KRE 260.2	KRE 480		
Corner distance [m x m]		6.0 x 6.0	8.0 x 8.0		
Substructure height [m]		4.0	4.0		
Tower height [m]		58.0	76.0		
Hook height above ground [m]		59.5	77.5		
Wind category		C25			

3.8 Tower combinations on cross frame element (slewing section with TFS 20 - connection)

Jib length		25 m – 60 m			
Item					
1	4.5 m	TFS 20	TFS 20	TFS 20	TFS 20
2	9.0 m	TFS 20	TFS 20	TFS 20	TFS 20
3	13.5 m	TFS 20	TFS 20	TFS 20	TFS 20
4	18.0 m	TFS 20	TFS 20	TFS 20	TFS 20
5	22.5 m	TFS 20	TFS 20	TFS 20	TFS 20
6	27.0 m	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
8	36.0 m	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4
9	40.5 m	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 20.4
16	72.0 m				UVA 25
Substructure		KRE 260.1	KRE 260.2	KRE 260.2	KRE 480
Corner distance [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
Tower height [m]		44.5	53.5	58.0	76.0
Hook height above ground [m]		46.0	55.0	59.5	77.5
Wind category		C25			

3.9 Tower combinations on cross frame element (slewing section with UV 20 - connection)

Jib length		25 m – 60 m			
Item					
1	4.5 m	UV 20.4	UV 20.4	UV 20.4	UV 20.4
2	9.0 m	UV 20.4	UV 20.4	UV 20.4	UV 20.4
3	13.5 m	UV 20.4	UV 20.4	UV 20.4	UV 20.4
4	18.0 m	UV 20.4	UV 20.4	UV 20.4	UV 20.4
5	22.5 m	UV 20.4	UV 20.4	UV 20.4	UV 20.4
6	27.0 m	UV 20.4	UV 20.4	UV 20.4	UV 20.4
7	31.5 m	UV 20.4	UV 20.4	UV 20.4	UV 20.4
8	36.0 m	UV 20.4	UV 20.4	UV 20.4	UV 20.4
9	40.5 m	UV 20.4	UV 20.4	UV 20.4	UV 20.4
10	45.0 m		UV 20.4	UV 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 20.4
16	72.0 m				UVA 25
Substructure		KRE 260.1	KRE 260.2	KRE 260.2	KRE 480
Corner distance [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
Tower height [m]		44.5	53.5	58.0	76.0
Hook height above ground [m]		46.0	55.0	59.5	77.5
Wind category		C25			

3.10 Tower combinations on mobile cross frame (slewing section with UV 15.4 - connection)

Jib length		25 m – 60 m			
Item					
1	4.5 m	UV 15.4	UV 15.4	UV 15.4	
2	9.0 m	UV 15.4	UV 15.4	UV 15.4	
3	13.5 m	UV 15.4	UV 15.4	UV 15.4	
4	18.0 m	UV 15.4	UV 15.4	UV 15.4	
5	22.5 m	UV 15.4	UV 15.4	UV 15.4	
6	27.0 m	UV 15.4	UV 15.4	UV 15.4	
7	31.5 m	UV 15.4	UV 15.4	UV 15.4	
8	36.0 m	UV 15.4	UV 15.4	UV 15.4	
9	40.5 m	UV 15.4	UVÜ 15.4	UVÜ 15.4	
10	45.0 m	UVÜ 15.4	UV 20.4	UV 20.4	
11	49.5 m	UV 20.4	UV 20.4	UV 20.4	
12	54.0 m	UV 20.4	TVA 20.4	TVA 20.4	
13	58.5 m	TVA 20.4	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	72.0 m		TV 20.4	TV 20.4	
Substructure		KRF 10-46/60	KRF4 12-60/80	KRF6 12-60/80	
Corner distance [m x m]		6.0 x 6.0	8.0 x 8.0	8.0 x 8.0	
Substructure height [m]		2.0	2.5	2.9	
Tower height [m]		60.5	74.5	74.9	
Hook height above ground [m]		62.0	76.0	76.4	
Wind category		C25			

3 Tower combinations

Jib length		25 m – 60 m			
Item					
1	4.5 m	UV 15.4	UV 15.4		
2	9.0 m	UV 15.4	UV 15.4		
3	13.5 m	UV 15.4	UV 15.4		
4	18.0 m	UV 15.4	UV 15.4		
5	22.5 m	UV 15.4	UV 15.4		
6	27.0 m	UV 15.4	UV 15.4		
7	31.5 m	UV 15.4	UV 15.4		
8	36.0 m	UV 15.4	UV 15.4		
9	40.5 m	UVÜ 15.4	UVÜ 15.4		
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	HTA 23	HTA 23		
19	82.0 m	HT 23	HT 23		
20	86.5 m		HT 23		
21	91.0 m		HT 23		
Substructure		KRF6 12-60/80	KRF 16-80/100		
Corner distance [m x m]		8.0 x 8.0	10.0 x 10.0		
Substructure height [m]		2.9	3.3		
Tower height [m]		84.9	94.3		
Hook height above ground [m]		86.4	95.8		
Wind category		C25			

Jib length		25 m – 60 m			
Item					
1	4.5 m	UV 15.4			
2	9.0 m	UV 15.4			
3	13.5 m	UV 15.4			
4	18.0 m	UV 15.4			
5	22.5 m	UV 15.4			
6	27.0 m	UV 15.4			
7	31.5 m	UV 15.4			
8	36.0 m	UVÜ 15.4			
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	86.5 m	HT 23			
21	87.7 m	VR 23/25-29			
22	97.7 m	BT 29			
Substructure		KRF 16-80/100			
Corner distance [m x m]		10.0 x 10.0			
Substructure height [m]		3.3			
Tower height [m]		101.0			
Hook height above ground [m]		102.5			
Wind category		C25			

3.11 Tower combinations on mobile cross frame (slewing section with TFS 20 - 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	18.0 m	TFS 20	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	UVA 20.4	UVA 20.4	
10	45.0 m	UVA 20.4	UV 20.4	UV 20.4	
11	49.5 m	UV 20.4	UV 20.4	UV 20.4	
12	54.0 m	UV 20.4	TVA 20.4	TVA 20.4	
13	58.5 m	TVA 20.4	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	72.0 m		TV 20.4	TV 20.4	
Substructure		KRF 10-46/60	KRF4 12-60/80	KRF6 12-60/80	
Corner distance [m x m]		6.0 x 6.0	8.0 x 8.0	8.0 x 8.0	
Substructure height [m]		2.0	2.5	2.9	
Tower height [m]		60.5	74.5	74.9	
Hook height above ground [m]		62.0	76.0	76.4	
Wind category		C25			

Jib length		25 m – 60 m			
Item					
1	4.5 m	TFS 20	TFS 20		
2	9.0 m	TFS 20	TFS 20		
3	13.5 m	TFS 20	TFS 20		
4	18.0 m	TFS 20.4	TFS 20.4		
5	22.5 m	TFS 20.4	TFS 20.4		
6	27.0 m	TFS 20.4	TFS 20.4		
7	31.5 m	TFS 20.4	TFS 20.4		
8	36.0 m	TFS 20.4	TFS 20.4		
9	40.5 m	UVA 20.4	UVA 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	HTA 23	HTA 23		
19	82.0 m	HT 23	HT 23		
20	86.5 m		HT 23		
21	91.0 m		HT 23		
Substructure		KRF6 12-60/80	KRF 16-80/100		
Corner distance [m x m]		8.0 x 8.0	10.0 x 10.0		
Substructure height [m]		2.9	3.3		
Tower height [m]		84.9	94.3		
Hook height above ground [m]		86.4	95.8		
Wind category		C25			

3 Tower combinations

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	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	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	86.5 m	HT 23			
21	87.7 m	VR 23/25-29			
22	97.7 m	BT 29			
Substructure		KRF 16-80/100			
Corner distance [m x m]		10.0 x 10.0			
Substructure height [m]		3.3			
Tower height [m]		101.0			
Hook height above ground [m]		102.5			
Wind category		C25			

3.12 Tower combinations on mobile cross frame (slewing section with UV 20 - connection)

Jib length		25 m – 60 m			
Item					
1	4.5 m	UV 20.4	UV 20.4	UV 20.4	
2	9.0 m	UV 20.4	UV 20.4	UV 20.4	
3	13.5 m	UV 20.4	UV 20.4	UV 20.4	
4	18.0 m	UV 20.4	UV 20.4	UV 20.4	
5	22.5 m	UV 20.4	UV 20.4	UV 20.4	
6	27.0 m	UV 20.4	UV 20.4	UV 20.4	
7	31.5 m	UV 20.4	UV 20.4	UV 20.4	
8	36.0 m	UV 20.4	UV 20.4	UV 20.4	
9	40.5 m	UV 20.4	UV 20.4	UV 20.4	
10	45.0 m	UV 20.4	UV 20.4	UV 20.4	
11	49.5 m	UV 20.4	UV 20.4	UV 20.4	
12	54.0 m	UV 20.4	TVA 20.4	TVA 20.4	
13	58.5 m	TVA 20.4	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	72.0 m		TV 20.4	TV 20.4	
Substructure		KRF 10-46/60	KRF4 12-60/80	KRF6 12-60/80	
Corner distance [m x m]		6.0 x 6.0	8.0 x 8.0	8.0 x 8.0	
Substructure height [m]		2.0	2.5	2.9	
Tower height [m]		60.5	74.5	74.9	
Hook height above ground [m]		62.0	76.0	76.4	
Wind category		C25			

3 Tower combinations

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	HTA 23	HTA 23		
19	82.0 m	HT 23	HT 23		
20	86.5 m		HT 23		
21	91.0 m		HT 23		
Substructure		KRF6 12-60/80	KRF 16-80/100		
Corner distance [m x m]		8.0 x 8.0	10.0 x 10.0		
Substructure height [m]		2.9	3.3		
Tower height [m]		84.9	94.3		
Hook height above ground [m]		86.4	95.8		
Wind category		C25			

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	86.5 m	HT 23			
21	87.7 m	VR 23/25-29			
22	97.7 m	BT 29			
Substructure		KRF 16-80/100			
Corner distance [m x m]		10.0 x 10.0			
Substructure height [m]		3.3			
Tower height [m]		101.0			
Hook height above ground [m]		102.5			
Wind category		C25			

3.13 Tower combinations on undercarriage (slewing section with UV 15.4 - connection)

Jib length		25 m – 60 m			
Item					
1	4.5 m	UV 15.4	UV 15.4	UV 15.4	UV 15.4
2	9.0 m	UV 15.4	UV 15.4	UV 15.4	UV 15.4
3	13.5 m	UV 15.4	UV 15.4	UV 15.4	UV 15.4
4	18.0 m	UV 15.4	UV 15.4	UV 15.4	UV 15.4
5	22.5 m	UV 15.4	UV 15.4	UV 15.4	UV 15.4
6	27.0 m	UV 15.4	UV 15.4	UV 15.4	UV 15.4
7	31.5 m	UV 15.4	UV 15.4	UV 15.4	UV 15.4
8	36.0 m	UVÜ 15.4	UV 15.4	UVÜ 15.4	UV 15.4
9	40.5 m		UVÜ 15.4	TVA 20.4	UVÜ 15.4
10	45.0 m				TVA 20.4
Substructure		UW 260.1	UW 260.1	UW 260.2	UW 260.2
Corner distance [m x m]		5.0 x 6.79	6.0 x 6.0	5.0 x 6.79	6.0 x 6.0
Substructure height [m]		4.5	4.5	4.5	4.5
Tower height [m]		40.5	45.0	45.0	49.5
Hook height above ground [m]		42.0	46.5	46.5	51.0
Wind category		C25			

Jib length		25 m – 60 m			
Item					
1	4.5 m	UV 15.4	UV 15.4	UV 15.4	
2	9.0 m	UV 15.4	UV 15.4	UV 15.4	
3	13.5 m	UV 15.4	UV 15.4	UV 15.4	
4	18.0 m	UV 15.4	UV 15.4	UV 15.4	
5	22.5 m	UV 15.4	UV 15.4	UV 15.4	
6	27.0 m	UV 15.4	UV 15.4	UV 15.4	
7	31.5 m	UV 15.4	UV 15.4	UV 15.4	
8	36.0 m	UV 15.4	UV 15.4	UV 15.4	
9	40.5 m	UV 15.4	UV 15.4	UVÜ 15.4	
10	45.0 m	UVÜ 15.4	UVÜ 15.4	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 20.4	
16	72.0 m			UVA 25	
Substructure		UW 260.3	UW 260.3	UW 480	
Corner distance [m x m]		5.0 x 6.79	6.0 x 6.0	8.0 x 8.0	
Substructure height [m]		4.5	4.5	5.0	
Tower height [m]		54.0	58.5	77.0	
Hook height above ground [m]		55.5	60.0	78.5	
Wind category		C25			

3.14 Tower combinations on undercarriage (slewing section with TFS 20 - connection)

Jib length		25 m – 60 m			
Item					
1	4.5 m	TFS 20	TFS 20	TFS 20	TFS 20
2	9.0 m	TFS 20	TFS 20	TFS 20	TFS 20
3	13.5 m	TFS 20	TFS 20	TFS 20	TFS 20
4	18.0 m	TFS 20	TFS 20	TFS 20	TFS 20
5	22.5 m	TFS 20	TFS 20	TFS 20	TFS 20
6	27.0 m	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	UVA 20.4	TFS 20.4	UVA 20.4	TFS 20.4
9	40.5 m		UVA 20.4	TVA 20.4	UVA 20.4
10	45.0 m				TVA 20.4
Substructure		UW 260.1	UW 260.1	UW 260.2	UW 260.2
Corner distance [m x m]		5.0 x 6.79	6.0 x 6.0	5.0 x 6.79	6.0 x 6.0
Substructure height [m]		4.5	4.5	4.5	4.5
Tower height [m]		40.5	45.0	45.0	49.5
Hook height above ground [m]		42.0	46.5	46.5	51.0
Wind category		C25			

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	18.0 m	TFS 20	TFS 20	TFS 20	
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	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 20.4	
16	72.0 m			UVA 25	
Substructure		UW 260.3	UW 260.3	UW 480	
Corner distance [m x m]		5.0 x 6.79	6.0 x 6.0	8.0 x 8.0	
Substructure height [m]		4.5	4.5	5.0	
Tower height [m]		54.0	58.5	77.0	
Hook height above ground [m]		55.5	60.0	78.5	
Wind category		C25			

3.15 Tower combinations on undercarriage (slewing section with UV 20 - connection)

Jib length		25 m – 60 m			
Item					
1	4.5 m	UV 20.4	UV 20.4	UV 20.4	UV 20.4
2	9.0 m	UV 20.4	UV 20.4	UV 20.4	UV 20.4
3	13.5 m	UV 20.4	UV 20.4	UV 20.4	UV 20.4
4	18.0 m	UV 20.4	UV 20.4	UV 20.4	UV 20.4
5	22.5 m	UV 20.4	UV 20.4	UV 20.4	UV 20.4
6	27.0 m	UV 20.4	UV 20.4	UV 20.4	UV 20.4
7	31.5 m	UV 20.4	UV 20.4	UV 20.4	UV 20.4
8	36.0 m	UV 20.4	UV 20.4	UV 20.4	UV 20.4
9	40.5 m		UV 20.4	TVA 20.4	UV 20.4
10	45.0 m				TVA 20.4
Substructure		UW 260.1	UW 260.1	UW 260.2	UW 260.2
Corner distance [m x m]		5.0 x 6.79	6.0 x 6.0	5.0 x 6.79	6.0 x 6.0
Substructure height [m]		4.5	4.5	4.5	4.5
Tower height [m]		40.5	45.0	45.0	49.5
Hook height above ground [m]		42.0	46.5	46.5	51.0
Wind category		C25			

Jib length		25 m – 60 m			
Item					
1	4.5 m	UV 20.4	UV 20.4	UV 20.4	
2	9.0 m	UV 20.4	UV 20.4	UV 20.4	
3	13.5 m	UV 20.4	UV 20.4	UV 20.4	
4	18.0 m	UV 20.4	UV 20.4	UV 20.4	
5	22.5 m	UV 20.4	UV 20.4	UV 20.4	
6	27.0 m	UV 20.4	UV 20.4	UV 20.4	
7	31.5 m	UV 20.4	UV 20.4	UV 20.4	
8	36.0 m	UV 20.4	UV 20.4	UV 20.4	
9	40.5 m	UV 20.4	UV 20.4	UV 20.4	
10	45.0 m	UV 20.4	UV 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 20.4	
16	72.0 m			UVA 25	
Substructure		UW 260.3	UW 260.3	UW 480	
[m x m]		5.0 x 6.79	6.0 x 6.0	8.0 x 8.0	
Substructure height [m]		4.5	4.5	5.0	
Tower height [m]		54.0	58.5	77.0	
Hook height above ground [m]		55.5	60.0	78.5	
Wind category		C25			

4 Foundation loads / central ballast weights / corner loads in compliance with EN 14439 / EN 13001

⚠ DANGER

Usage of incorrect tower combinations.

The slewing tower crane may overturn.

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.

NOTICE

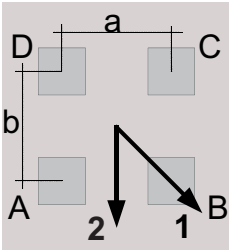
If you need foundation loads for tower combination with tower element TV 25 and UV 25, please contact WOLFFKRAN to get an approved alternative setup.

Jib positions

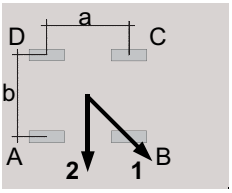
The corner loads are given for two jib positions with the maximum corner load resulting from jib position 1.

For square setup, the following equation is true: a = b

For rectangular setup, the following equation is true: a > b



Cross frame or cross frame element



Undercarriage

NOTICE! For undercarriage details, please refer to the relevant operating manual.

Wind load with crane out of service

The stability for stormy weather is calculated on the basis of wind region C (EN 13001-2). The reference wind speed for zone C is 28 m/s (10 m above ground, averaged over 10 minutes).As a basis, a recurrence interval of 25 years is used. As a basis, a recurrence interval of 25 years is used.

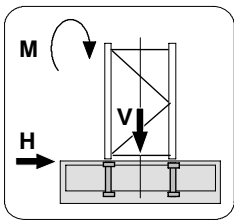
4 Foundation loads / central ballast weights / corner loads in compliance with EN 14439 / EN 13001

Please contact WOLFFKRAN for stability calculations in other wind regions.

For information on the different substructures, refer to Section 5 of the Operating Manual.

4.1 Foundation loads jib 25 m - 60 m

Slewing section 6015 *clear* with 25 m – 60 m jib on foundation.
Slewing tower crane without climbing device.



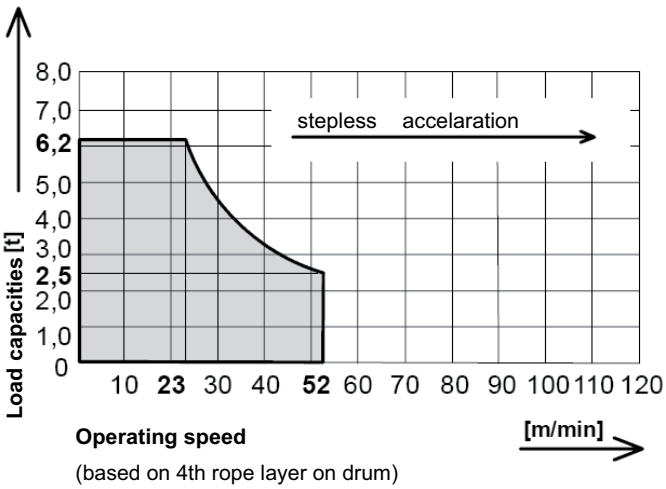
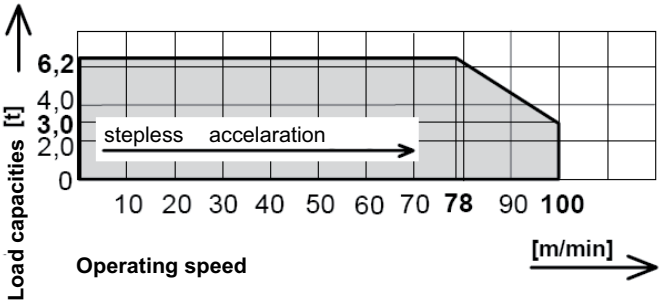
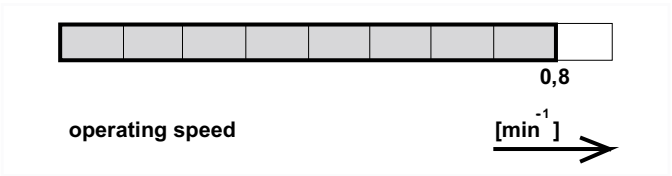
Foundation load in compliance with EN 14439 / EN 13001 – typical loads

Includes all dynamical factors under consideration of second-order theory for stationary slewing tower cranes on concrete foundation in compliance with a tower combination without climbing device.

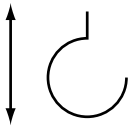
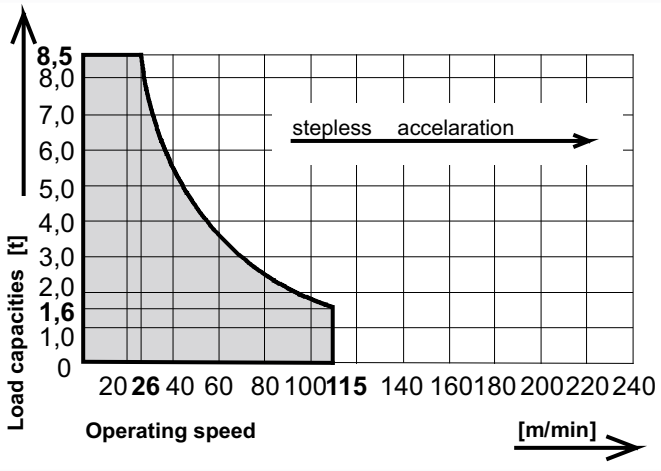
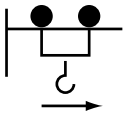
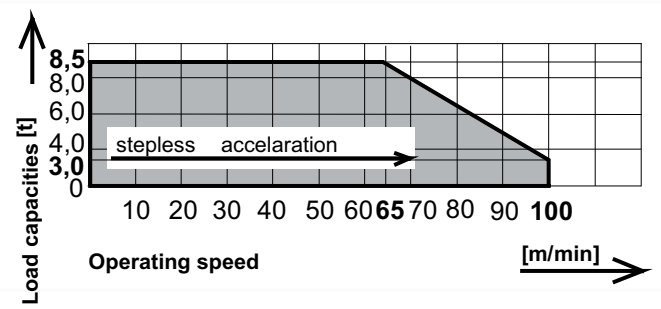
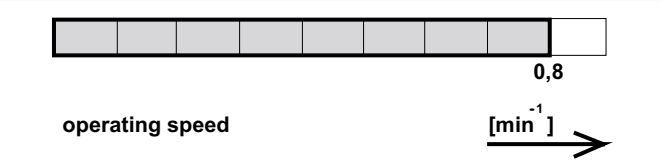
HH		Crane in service			Crane out of service			Assembly		
4	2	Slewing torque: 200 kNm			Wind category: C25					
STR	STR	M	V	H	M	V	H	M	V	H
[m]	[m]	[kNm]	[kN]	[kN]	[kNm]	[kN]	[kN]	[kNm]	[kN]	[kN]
-	6.0	1120	443	15	970	369	25	1350	293	5
-	10.5	1200	508	18	1100	383	30	1370	307	6
-	15.0	1290	522	19	1250	398	35	1410	321	7
-	19.5	1390	536	21	1430	411	39	1450	335	7
-	24.0	1510	550	22	1630	425	44	1490	349	8
-	28.5	1640	564	24	1850	440	48	1540	363	9
-	33.0	1780	578	25	2110	453	53	1600	377	10
-	37.5	1930	592	26	2390	467	57	1670	391	11
-	42.0	2100	606	28	2710	481	62	1750	405	12
-	46.5	2300	620	29	3060	496	66	1830	419	13
-	51.0	2480	644	31	3670	685	102	1910	443	13
-	55.5	2690	662	32	4370	704	110	2000	461	14
-	60.0	2930	729	34	5060	742	120	2070	504	16
-	64.5	3160	758	36	5870	770	130	2170	532	17
-	69.0	3410	786	38	6780	799	140	2280	560	18
-	73.5	3680	814	40	7790	827	150	2400	589	19
-	74.5	3730	839	41	7980	852	153	2420	614	19
-	79.0	4010	870	43	9060	882	164	2550	644	21
-	83.5	4230	936	46	10130	948	179	2660	710	22
-	88.0	4540	975	48	11390	988	190	2790	750	23
-	92.5	4890	1014	51	12760	1027	202	2940	789	25
-	94.8	4980	1052	52	13320	1073	211	2990	835	26
-	99.3	5350	1091	54	14870	1113	223	3160	874	27
Tower combination with base tower element BT 29										
-	103.7	5560	1161	58	16130	1179	238	3280	938	28
-	108.2	5930	1207	60	17510	1191	248	3460	984	30

Caption					
HH:	Hook height	V:	Vertical load	STR:	Number of falls
H:	Horizontal load	M:	Torque		

5 Operating speeds

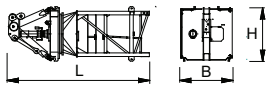
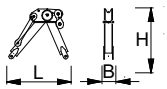
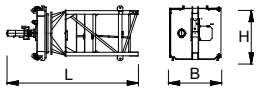
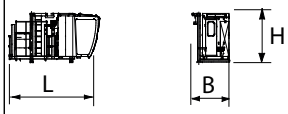
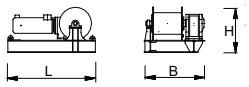
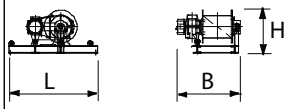
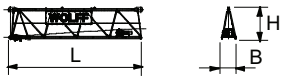
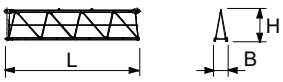
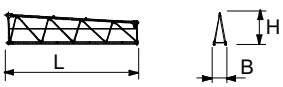
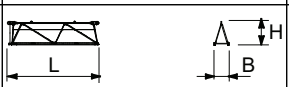
Drive unit [type]	Operating speed Carrying load		Hook travel distance max. [m]	Power [kW]	Total connected load [kVA]
Hw628FU	**Lifting**		**190**	**28**	47.0 Total connected load at coincidence factor of 0.7
	 (based on 4th rope layer on drum)				
KW	**Trolley movement**			**7.5**	
					
SG	**Slewing**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

5 Operating speeds

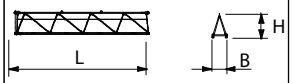
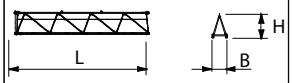
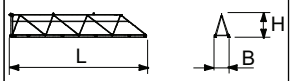
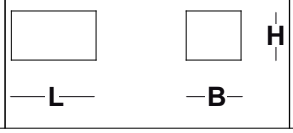
Drive unit [type]	Operating speed Carrying load		Hook travel distance max. [m]	Power [kW]	Total connected load [kVA]
Hw845FU	**Lifting**		**190**	**45**	62.0 Total connected load at coincidence factor of 0.7
					
KW	**Trolley movement**			**7.5**	
					
SG	**Slewing**			**7.5**	
					

6 Package list

6.1 Package list 6015

Quantity	Description	Package	L [m]	W [m]	H [m]	Weight [kg]	Volume [m³]
1	Tower head section, complete with slewing frame, ball race bearing, slewing gear and slip ring system		with UV 20 lower part of tower head section				
			6.30	2.30	2.42	7335	35.07
			with TFS 20 lower part of tower head section				
			6.30	2.30	2.42	6810	35.07
			with UV 15 lower part of tower head section				
			6.30	2.30	2.42	7265	35.07
	Tower head section upper part with stay parts		2.19	0.40	1.84	935	1.61
	Tower head section lower part with slewing frame, ball race bearing, slewing gear and slip ring system		with UV 20 lower part of tower head section				
			5.80	2.30	2.42	6400	32.28
			with TFS 20 lower part of tower head section				
			5.80	2.30	2.42	5875	32.28
			with UV 15 lower part of tower head section				
			5.80	2.30	2.42	6330	32.28
1	Driver's cab with driver's cab suspension		4.82	1.96	2.55	2580	24.10
1	Counterjib with stay parts and standard railings		12.00	2.30	0.64	4740	17.66
1	Hoist winch platform Hw628FU (incl. 170 m hoisting rope)		2.17	1.50	1.12	2165	3.65
1	Hoist winch platform Hw845FU (incl. 170 m hoisting rope)		2.17	1.57	1.04	2130	3.54
1	Jib element 1 with traverse gear		10.29	1.19	2.32	2670	28.41
1	Jib element 2		5.27	1.19	2.14	865	13.42
1	Jib element 3		10.27	1.19	2.08	1310	25.42
1	Jib element 4		5.25	1.19	1.65	645	10.31

6 Package list

Quantity	Description	Package	L [m]	W [m]	H [m]	Weight [kg]	Volume [m³]
1	Jib element 5		2.75	1.19	1.65	395	5.40
1	Jib element 6		10.23	1.19	1.65	1010	20.08
1	Jib element 7		10.21	1.19	1.64	810	20.05
1	Jib element 8		10.18	1.19	1.64	705	19.87
1	Rope swivel cross-beam		0.89	1.10	0.45	110	0.44
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	Hook 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

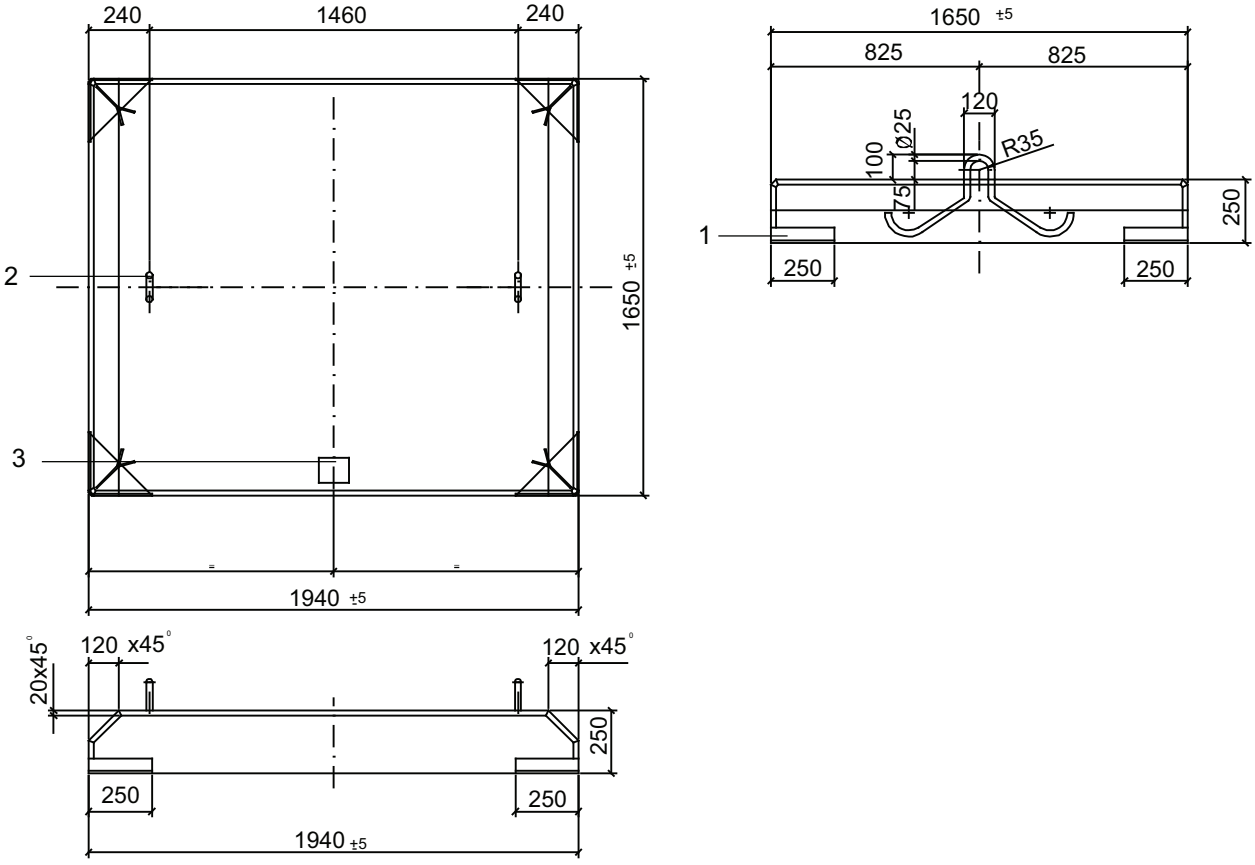
7 Assembly weights

7.1 Counterweight blocks

NOTICE

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

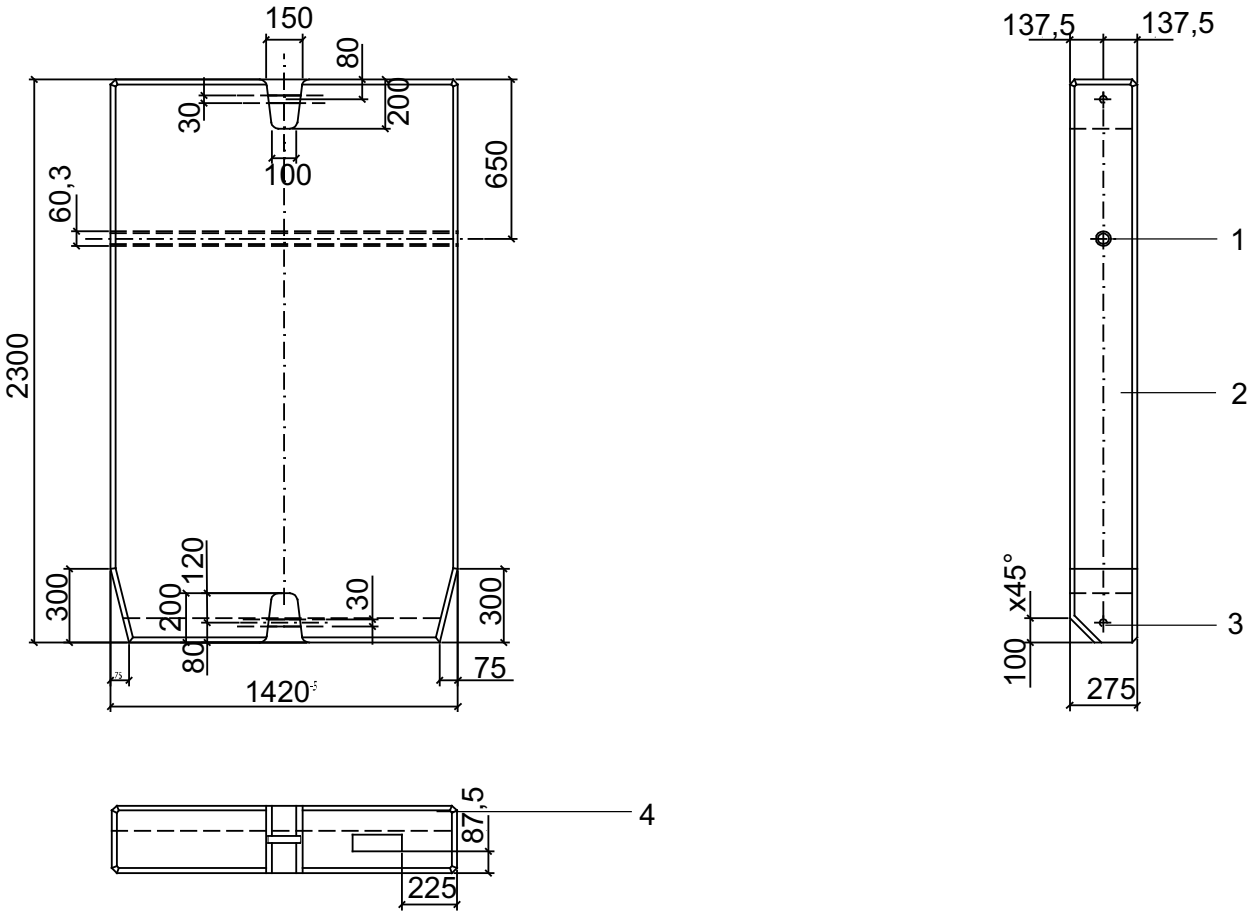
7.1.1 Counterweight block, 1.8 t



Data counterweight block 1.8 t

Item	Data
Material	Concrete, min. C 20/25
Max. permitted weight tolerance	+/- 3 %
Order number	962-2-031261
1	Corner guard
2	Suspension
3	Component identifier

7.1.2 Counterweight block, 2.05 t



Data counterweight block 2.05t

Item	Data
Material	Concrete, min. C 20/25
Max. permitted weight tolerance	+/- 3 %
Order number	30045226
1	Connection for stub shaft
2	Structural steel reinforcement
3	Suspension
4	Component identifier

7.2 Total weight jib assembly

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

Jib length (m)	Weight (kg) WOLFF 6015 clear
60.0	8700
57.5	8400
55.0	8000
52.5	8000
50.0	8000
47.5	7700
45.0	7300
42.5	7400
40.0	7200
37.5	7000
35.0	6600
32.5	6600
30.0	6200
27.5	5900
25.0	5600

7.3 Assembly weight slewing section

Module	Crane parts	Weight [kg]	
Tower head section, complete – tower connection UV 20 lower part of tower head section			7335
	▪ Tower head section upper part including brace plates	935	
	▪ Tower head section lower part including slewing frame, ball race bearing, slewing gears, standard railings and slip ring system	6400	
Tower head section complete – Tower connection TFS 20 Lower part of tower head section			6810
	▪ Tower head section upper part including brace plates	935	
	▪ Tower head section lower part including slewing frame, ball race bearing, slewing gears, standard railings and slip ring system	5875	
Tower head section, complete – tower connection UV 15 lower part of tower head section			7265
	▪ Tower head section upper part including brace plates	935	
	▪ Tower head section lower part including slewing frame, ball race bearing, slewing gears, standard railings and slip ring system	6330	
Operator cabinet platform, complete			2580
	▪ Driver's cab including control cabinet, resistor and driver's cab suspension		
Counterjib with Hw628FU, complete			8705
	▪ Counterjib with brace plates and standard railings	4740	
	▪ Hoist winch platform Hw628FU (incl. 170-m hoisting cable)	2165	
	▪ Concrete counterweight block 1.8 t (below hoist winch platform)	1800	
Counter jib with Hw845FU, complete			8670
	▪ Counterjib with brace plates and standard railings	4740	
	▪ Hoist winch platform Hw845FU (incl. 170m hoising cable)	2130	
	▪ Concrete counterweight block 1.8 t (below hoist winch platform)	1800	

7.4 Assembly weight cross frame

Module	Crane parts	Weight [kg]	
Cross frame KR 6-40 (without accessories)			3 450
(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)			3 350
(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)			3 680
(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)			5 090
(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)			5 250
(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)			7 020
(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)			8 875
(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 KRV 10-60 (without accessories)			9990
(6.0 m x 6.0 m)	▪ 4 bolted spigots AZ 120 E 15,5 KRV 10-60	730	
	▪ 4 bolted spigots AZ 140 M KRV 10-60	790	
	▪ 4 bolted spigots AZ 140 E 10 KRV 10-60	790	
	▪ 4 bolted spigots AZ 140 M KRV 10-60	715	
Cross frame KR 12-60 (without accessories)			15650
(6.0 m x 6.0 m)	▪ 4 bolted spigots AZ 120 E 15,5 KR 12-60	730	
	▪ 4 bolted spigots AZ 140 M KR 12-60	790	
	▪ 4 bolted spigots AZ 140 E10 KR 12-60	790	

Module	Crane parts	Weight [kg]	
	▪ 4 bolted spigots AZ 156 M KR 12-60	845	
	▪ 4 bolted spigots AZ 140 E17 KR 12-60	875	
	▪ 4 bolted spigots AZ 160 M KR 12-60	905	
Cross frame KR 12-60/ 80 (without accessories)			19260
(8.0 m x 8.0 m)	▪ 4 bolted spigots AZ 120 E 15,5 KR 12-60	730	
	▪ 4 bolted spigots AZ 140 M KR 12-60	790	
	▪ 4 bolted spigots AZ 140 E10 KR 12-60	790	
	▪ 4 bolted spigots AZ 156 M KR 12-60	845	
	▪ 4 bolted spigots AZ 140 E17 KR 12-60	875	
	▪ 4 bolted spigots AZ 160 M KR 12-60	905	
Cross frame KR HEB 700 - 4 (without accessories)			4 450
(4.0 m x 4.0 m)	▪ 4 bolted spigots AZ 93.4	240	
Cross frame KR HEB 700 - 5 (without accessories)			5 410
(5.0 m x 5.0 m)	▪ 4 bolted spigots AZ 93.4	240	
Cross frame KR HEB 800 - 5 (without accessories)			5 860
(5.0 m x 5.0 m)	▪ 4 bolted spigots AZ 120 M	292	
Cross frame KR HEB 800 - 6 (without accessories)			6 600
(6.0 m x 6.0 m)	▪ 4 bolted spigots AZ 120 M	292	
Supporting frame SR 150 (without accessories)			5 460
(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)			14 630
(8 m x 8 m)	▪ 4 bolted spigots AZ 140 E	684	
	▪ 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	

7.5 Assembly weights traveling cross frame

Module	Crane parts	Weight [kg]	
Mobile cross frame KRF 10 – 46/60 complete			17500
(6.0 m x 6.0 m)	▪ Cross frame	7000	
	▪ Drive gear corners	2385	
	▪ Backing braces	1510	
	▪ Subframe	5645	
	▪ Platforms + ladders	510	
	▪ Control cabinet	130	
	▪ small items	320	
	▪ Set of bolted spigots AZR 120 E 15,5	552	
	▪ Set of bolted spigots AZ 140 M	698	
Traveling cross frame KRF4 12-60/80 complete			32300
(8.0 m x 8.0 m)	▪ Cross frame	14170	
	▪ Backing braces	2875	
	▪ Drive gear corners	4560	
	▪ Subframe	9380	
	▪ Platforms and ladders	255	
	▪ Control cabinet	130	
	▪ small items	930	
	▪ 4 bolted spigots AZ 120 E 15,5 KR 12-60	730	
	▪ 4 bolted spigots AZ 140 M KR 12-60	790	
	▪ 4 bolted spigots AZ 140 E10 KR 12-60	790	
	▪ 4 bolted spigots AZ 156 M KR 12-60	845	
	▪ 4 bolted spigots AZ 140 E17 KR 12-60	875	
	▪ 4 bolted spigots AZ 160 M KR 12-60	905	

Module	Crane parts	Weight [kg]	
Traveling cross frame KRF6 12-60/80 complete			41200
(8.0 m x 8.0 m)	▪ Cross frame	14170	
	▪ Backing braces	2875	
	▪ Drive gear corners	4560	
	▪ Subframe	18270	
	▪ Platforms and ladders	255	
	▪ Control cabinet	130	
	▪ small items	940	
	▪ 4 bolted spigots AZ 120 E 15,5 KR 12-60	730	
	▪ 4 bolted spigots AZ 140 M KR 12-60	790	
	▪ 4 bolted spigots AZ 140 E10 KR 12-60	790	
	▪ 4 bolted spigots AZ 156 M KR 12-60	845	
	▪ 4 bolted spigots AZ 140 E17 KR 12-60	875	
	▪ 4 bolted spigots AZ 160 M KR 12-60	905	

7.6 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	

7.7 Assembly weight undercarriage

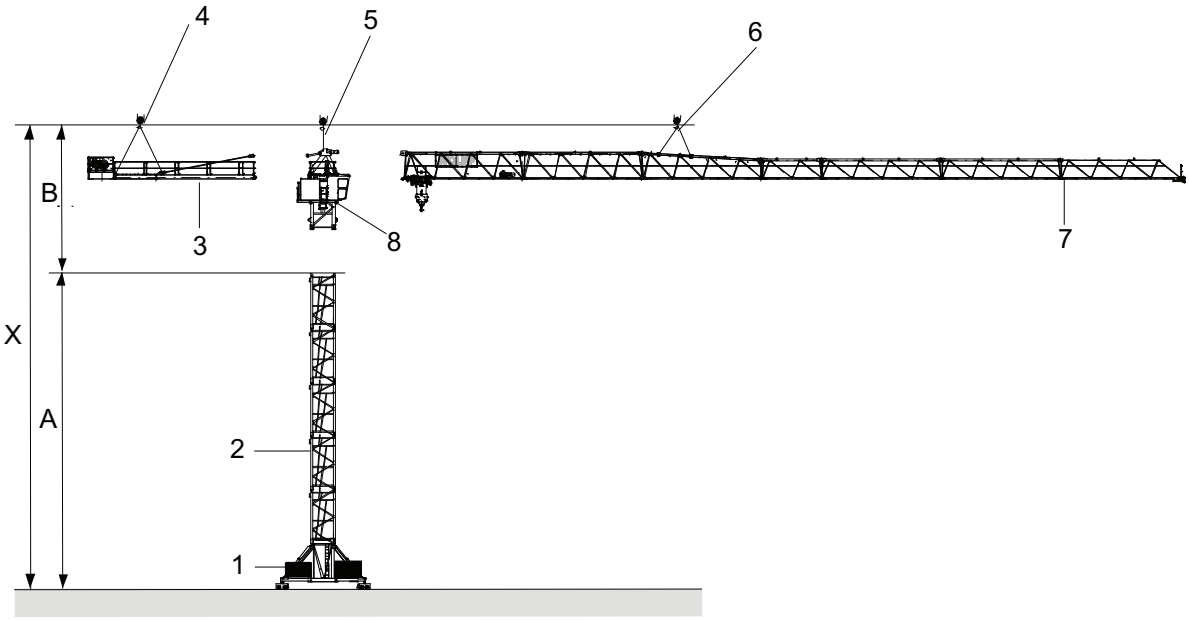
Module	Crane parts	Weight [kg]	
Bogie truck UW 138, complete			5 750
	▪ Undercarriage platform with mounting device, spacers and subframes	3 970	
	▪ Mast base with diagonal struts	1 780	
Undercarriage UW 260.1, complete			11 400
	▪ Undercarriage platform with hinged sections, subframes and transport locks	7 150	
	▪ Mast base with diagonal struts and tie rods	4 250	
Undercarriage UW 260.2, complete			14 060
	▪ Undercarriage platform with hinged sections, subframes and transport locks	9 810	
	▪ Mast base with diagonal struts and tie rods	4 250	
Undercarriage UW 260.3, complete			17 200
	▪ Undercarriage platform with hinged sections, subframes and transport locks	11 300	
	▪ Mast base with diagonal struts and tie rods	5 900	
Undercarriage UW 480, complete			34 000
	▪ Mast base	7 100	
	▪ Hinged sections with mounting device and subframes	16 000	
	▪ Diagonal struts and ballast carrier	9 260	
	▪ Assembly platform, ladder, and small parts	1 640	

7.8 Required hook height for mobile cranes

For information about the height of the WOLFF slewing tower crane, refer to Tower combinations [12].

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 m (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	4-fall attachment (4 m with shackle)
3	Counterjib, complete	7	Jib, complete
4	Four-point lifting tackle (with shackle)	8	Tower head section, complete

(see also):

- Tower combinations [12]

8 Assembly diagrams

8.1 Jib attachment diagram

NOTICE

For jib assembly, use a 4-fall attachment (4 m with shackle).

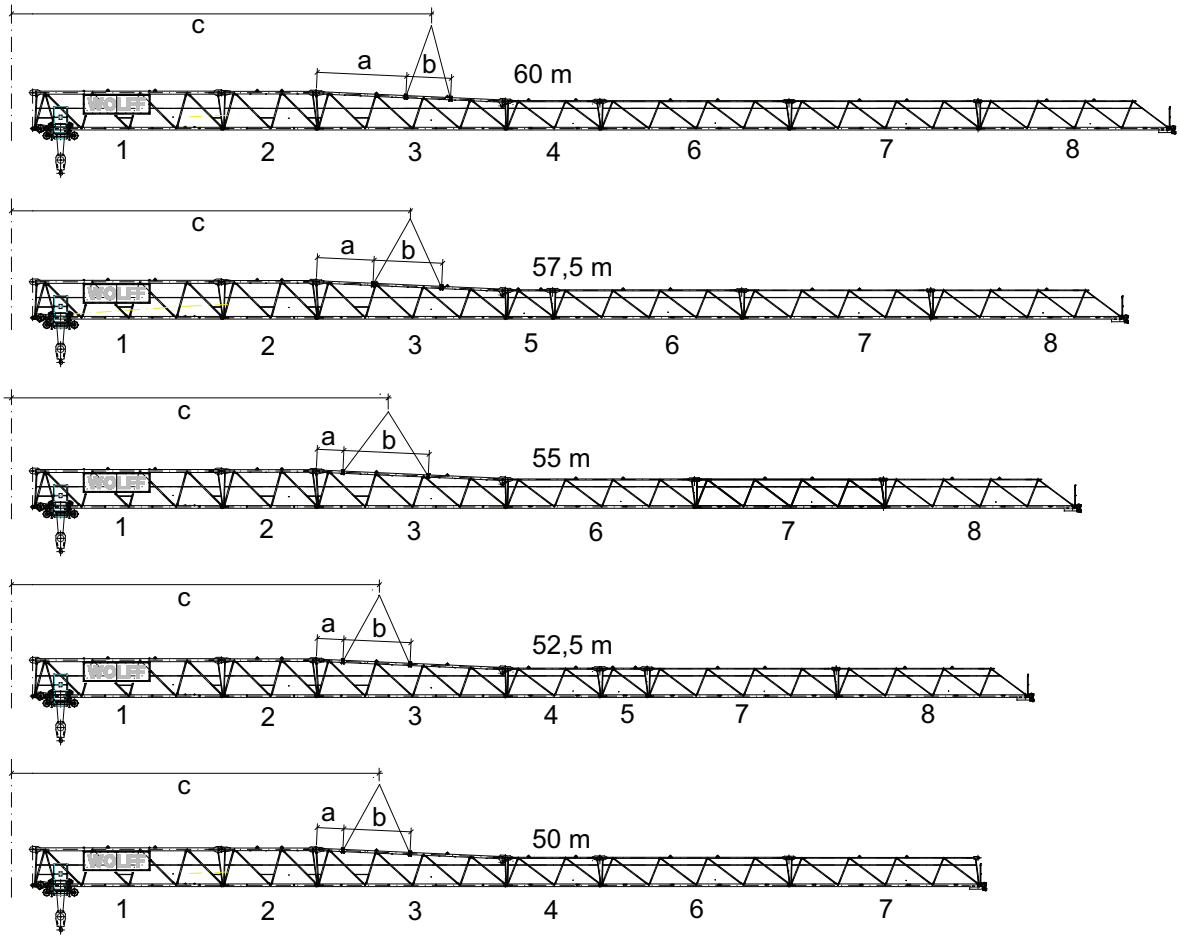
NOTICE

To install the snatch 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	Length [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

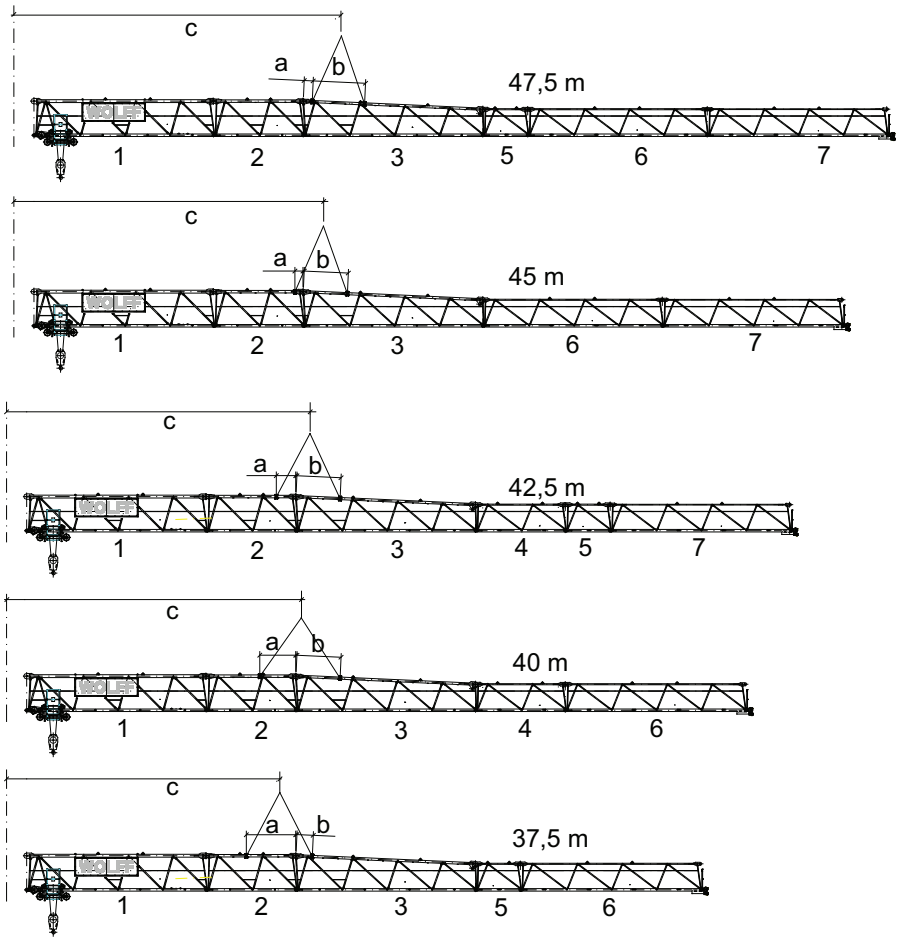
8.1.1 Trolley jib - attachment diagram 60 m to 50 m



a	Dimension a	c	Dimension c
b	Dimension b		

	Jib length [m]				
Data	**60**	**57.5**	**55**	**52.5**	**50**
a [mm]	4743	3002	1408	1408	1408
b [mm]	2366	3632	4520	3555	3555
c [mm]	22200	21170	20080	19490	19240
Weight [kg] 6015 clear	8700	8400	8000	8000	8000

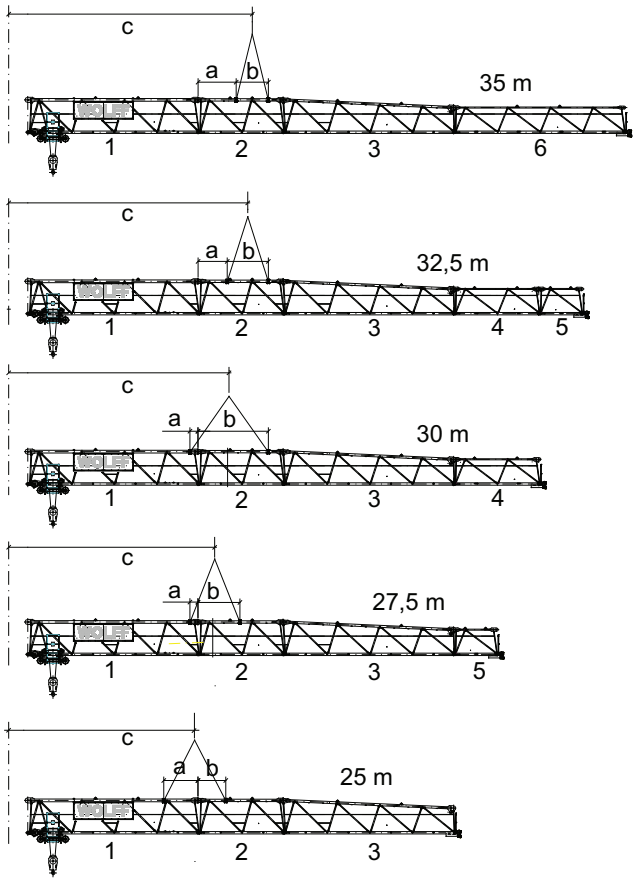
8.1.2 Trolley jib - attachment diagram 47.5 m to 37.5 m



a	Dimension a	c	Dimension c
b	Dimension b		

	Jib length [m]				
Data	**47.5**	**45**	**42.5**	**40**	**37.5**
a [mm]	502	450	1080	2000	2750
b [mm]	2918	2461	2461	2461	911
c [mm]	18220	17110	16690	16270	15300
Weight [kg] 6015 clear	7700	7300	7400	7200	7000

8.1.3 Trolley jib - attachment diagram 35 m to 25 m



a	Dimension a	c	Dimension c
b	Dimension b		

	Jib length [m]				
Data	**35**	**32.5**	**30**	**27.5**	**25**
a [mm]	2235	1710	465	465	2001
b [mm]	1890	2415	4125	2455	1625
c [mm]	14180	14010	12850	11980	10880
Weight [kg] 6015 clear	6600	6600	6200	5900	5600

8.2 Trolley jib mounting rig

NOTICE

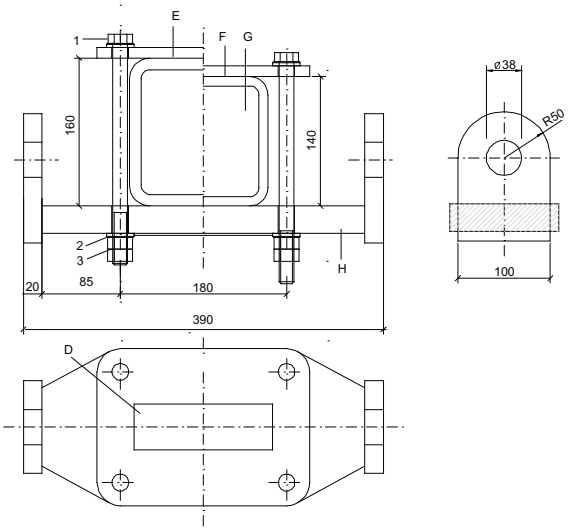
For information on the arrangement of the mounting rig, refer to the attachment diagram.

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	B	Top chord trolley jib
3	Hexagonal nut		

8.3 Arrangement of standard railings

8.3.1 Standard railings (NG) and accessories

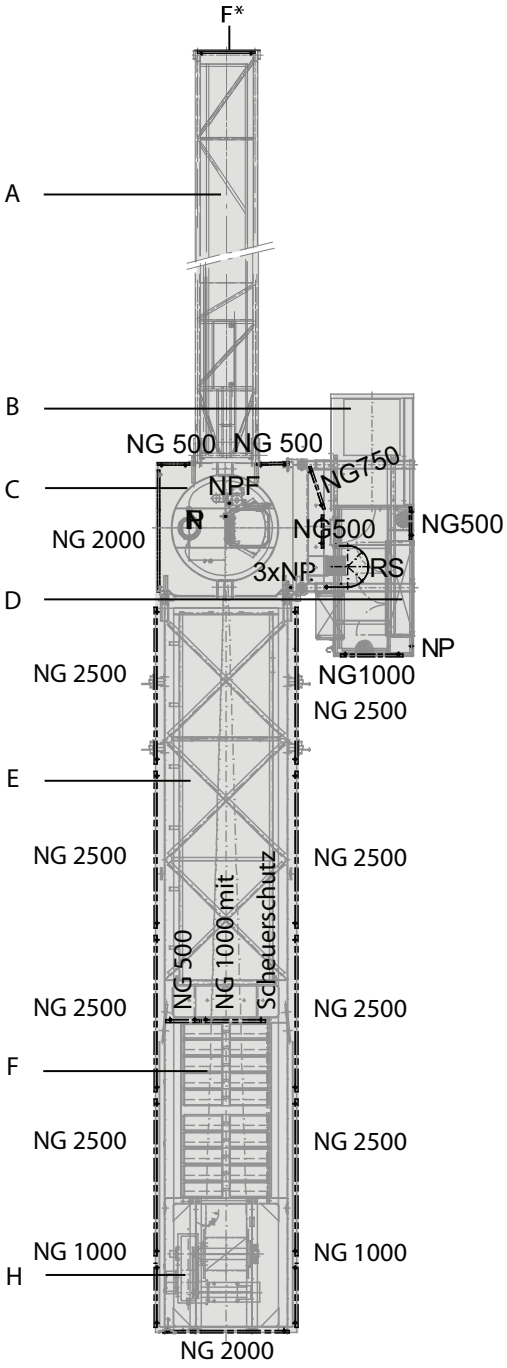
Quantity *	Standard railings (NG)
5	Standard post (NP)
1	NPF (standard posts with mount)
1	F * (flag pole mount)
5	Standard railing 500
1	Standard railing 750
3	Standard railing 1000
1	NG 1000 with chafe guard
2	Standard railing 2000
8	Standard railing 2500
1	RS (hoop guard)

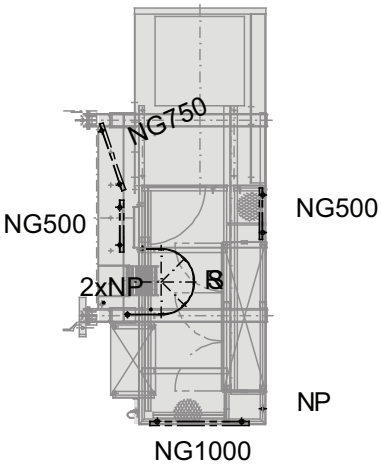
8.3.2 Arrangement of standard railings

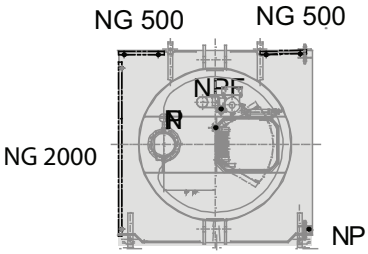
NOTICE

The railing arrangement for Hw628FU is identical to that for Hw845FU.

8 Assembly diagrams







Arrangement of standard railings

A	Trolley jib	E	Counterjib
B	Driver's cab	F	Counterweights
C	Cat head pedestal	H	Hoist winch Hw845/628FU
D	Control cabinet	F *	Flag pole mount

9 Suitable climbing devices

This section contains information on

- Outer climbing devices (KWH)
- Inner climbing devices (KSH)

NOTICE

Details on the climbing device

Always refer to the details in the documentation of the climbing device.

NOTICE

The operating radius specified is measured from the tower center and is to be considered a reference value. Exact balancing can be achieved by changing the operating radius with the tower elements or loads specified in the table.

NOTICE

Details for climbing balancing

The climbing balancing details apply to the snatch block in maximum hook position.

NOTICE

If feasible, preferably operate your climbing device without balancing weight.

9.1 Outer climbing devices

⚠ DANGER

Climbing device attached to the lower part of the tower head section lower part.

Increased wind surface. The slewing tower crane may overturn.

► Dismantle the climbing device after the climbing procedure is finished or lower the climbing device down on the ground or lower the climbing device down to the uppermost tower brace.

NOTICE

Tower element on the transfer carriage

The data on climbing balance was specified under the assumption that a tower element is on the transfer carriage.

9.1.1 Outer climbing device KWH 15.2

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**
no weight	34.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
UV 15 = 1.73 t	10.1	16.0	16.1	17.5	18.5	17.6	17.4	18.5	19.0	19.0	20.4	20.7	21.5	22.6	23.3

9.1.2 Outer climbing device KWH 20.3 / KWH 20.3.1

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**
no weight	11.7	30.7	31.8	36.1	39.4	37.6	-	-	-	-	-	-	-	-	-
UV20= 2,05 t	-	7.8	8.1	9.3	10.2	9.7	9.8	10.7	11.2	11.4	12.7	13.0	13.9	15.0	15.8

9.1.3 Außenkletterwerk KWH 20.6 / KWH 20.6.1 / KWH 20.6.2

⚠ WARNING

Climbing procedures with the 6015.6clear

The slewing tower crane may overturn.

► Use the KWH 20.6 only with the 6015.8clear.

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**
no weight	8.8	27.8	28.9	33.2	36.5	34.7	35.0	-	-	-	-	-	-	-	-
UV 20 = 2.05 t	-	6.9	7.2	8.5	9.4	8.9	9.0	9.9	10.3	10.6	11.9	12.1	13.1	14.1	15.0

9.2 Inner climbing devices

NOTICE

The data required and the instructions for tower assemblies with inner climbing device is available in the separate description of the inner climbing device.

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

NOTICE

Clamping forces for the inner climbing device (KSH) are specified based on a building height of < 250m and wind category C 25.

9.2.1 Inner climbing device KSH 15

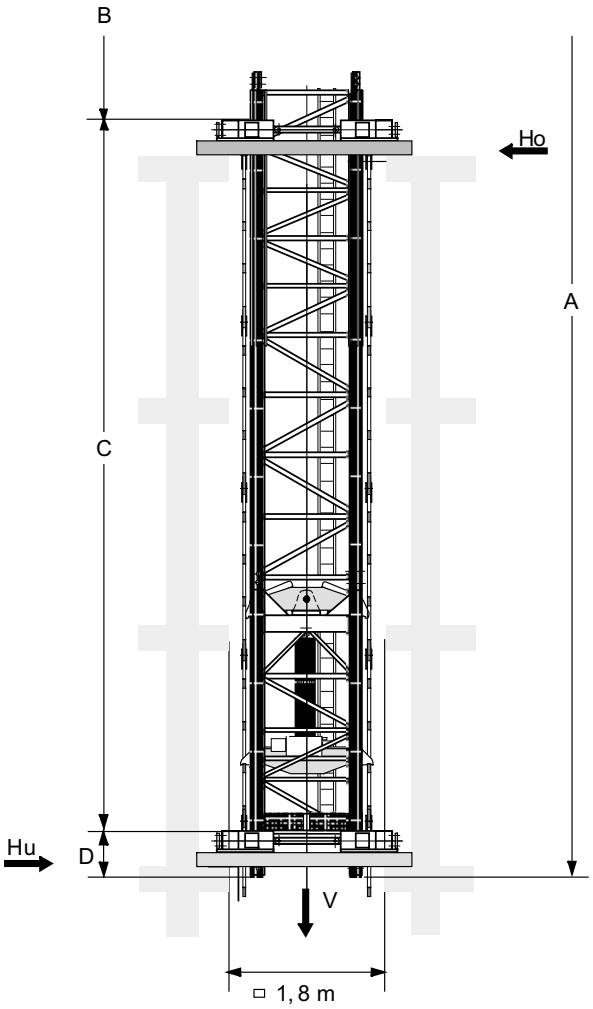
Tower combinations for slewing tower cranes with inner climbing device.

Item			
1	UV 15.4	UV 15.4	UV 15.4
2	UV 15.4	UV 15.4	UV 15.4
3	UV 15.4	UV 15.4	UV 15.4
4	UV 15.4	UV 15.4	UV 15.4
5		UV 15.4	UV 15.4
6			UV 15.4
inner climbing device	KSH 15	KSH 15	KSH 15
Foundation	FUA 120	FUA 120	FUA 120
Tower height [m]	32.9	37.4	41.9
Hook height above ground [m]	34.5	39.0	43.5

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 15.4 = 1.75 t	31.4	37.2	36.4	37.8	38.8	37.1	36.1	-	-	-	-	-	-	-	-
Weight = 5.00 t	13.8	16.4	16.0	16.6	17.1	16.3	15.9	16.3	16.5	16.2	16.7	16.9	16.8	17.3	17.2

9 Suitable climbing devices

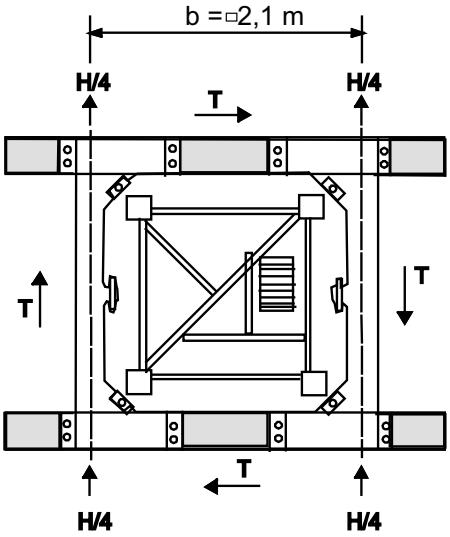


C_{min} = 9,0 m
C_{max} = 14,0 m

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

$Hu = Ho - H$

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



A	= Tower height	C	= Distance between guide frames
B	= A-C-D		

Einspannkräfte im Gebäude [kN] im Betrieb																		
A [m]	41,9						37,4						32,9					
C [m]	9	10	11	12	13	14	9	10	11	12	13	14	9	10	11	12	13	14
V	782						766						749					
Ho	230	210	190	170	160	150	210	190	180	160	150	140	200	180	160	150	140	130
Hu	200	180	160	140	130	120	190	170	150	130	120	110	170	150	140	120	110	100
T	50						50						50					

Einspannkräfte im Gebäude [kN] außer Betrieb																		
A [m]	41,9						37,4						32,9					
C [m]	9	10	11	12	13	14	9	10	11	12	13	14	9	10	11	12	13	14
V	689						672						655					
Ho	430	390	350	330	300	280	360	330	300	270	250	230	300	270	250	220	210	200
Hu	290	250	220	190	160	140	230	200	170	140	120	100	180	150	130	100	90	80
T	0						0						0					

9.2.2 Inner climbing device KSH 20 M

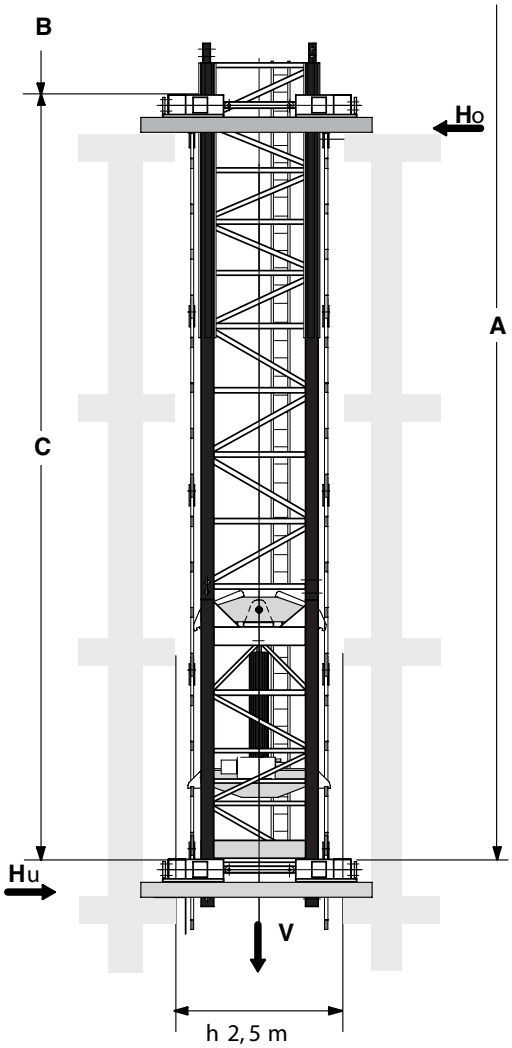
Tower combinations for slewing tower cranes with inner climbing device.

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 device	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

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	28.1	33.3	32.6	33.8	34.7	33.2	32.3	33.2	33.6	-	-	-	-	-	-
TV 20.4 = 2.98 t	21.4	25.3	24.8	25.7	26.4	25.3	24.5	25.3	25.6	25.0	25.9	26.1	26.0	-	-
Weight = 5.00 t	13.8	16.4	16.0	16.6	17.1	16.3	15.9	16.3	16.5	16.2	16.7	16.9	16.8	17.3	17.2

9 Suitable climbing devices

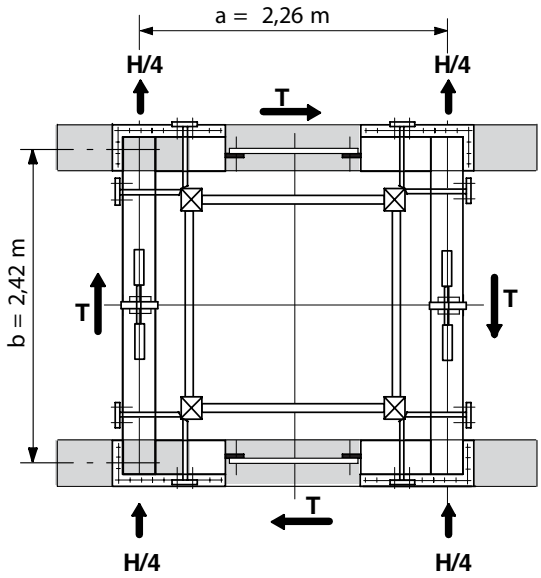


C_{min} = 11,0 m
C_{max} = 14,0 m

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

$Hu = Ho - H$

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



A	tower height	C	Distance between guide frames
B	A-C-D	D	0.77 m

In service clamping forces

In service clamping forces [kN] inside a building								
A [m]	42.0				37.5			
C [m]	11	12	13	14	11	12	13	14
V	817				799			
Ho	190	170	160	150	180	160	150	140
Hu	160	140	130	120	150	130	120	110
T	40				40			

Out of service clamping forces

Out of service clamping forces [kN] inside a building								
A [m]	42.0				37.5			
C [m]	11	12	13	14	11	12	13	14
V	723				705			
Ho	370	340	310	290	310	280	260	240
Hu	220	190	170	150	180	150	130	110
T	0				0			

9.2.3 Inner climbing device KSH 20 L

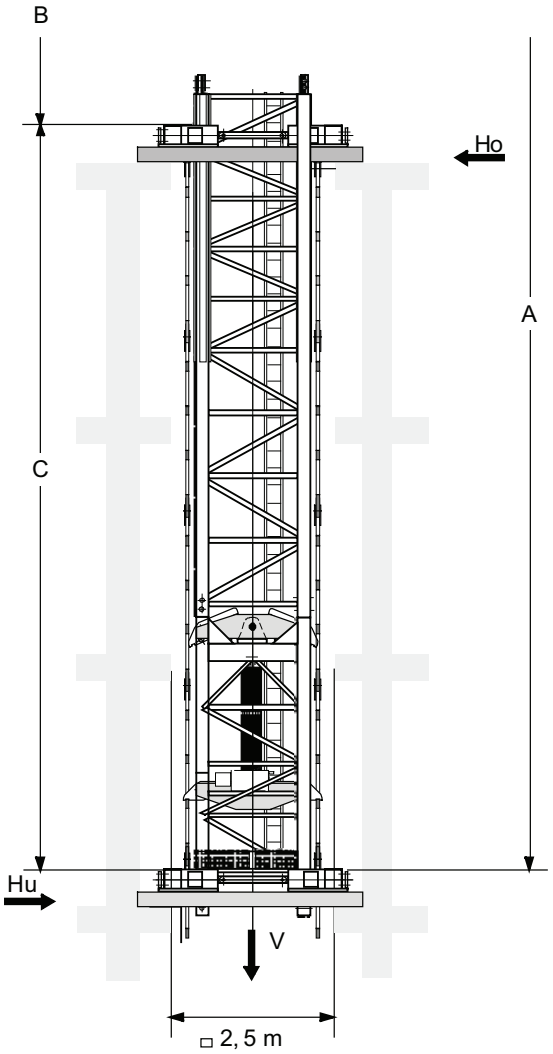
Tower combinations for slewing tower cranes with inner climbing device.

Item			
1	UV 20.4	UV 20.4	UV 20.4
2	UV 20.4	UV 20.4	UV 20.4
3	UV 20.4	UV 20.4	UV 20.4
4	UV 20.4	UV 20.4	UV 20.4
5	UV 20.4	UV 20.4	UV 20.4
6		UV 20.4	UV 20.4
7			UV 20.4
8			
inner climbing device	KSH 20 L	KSH 20 L	KSH 20 L
Foundation	FUA 120	FUA 120	FUA 120
Tower height [m]	36.5	41.0	45.5
Hook height above ground [m]	38.0	42.5	47.0

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	28.1	33.3	32.6	33.8	34.7	33.2	32.3	33.2	33.6	-	-	-	-	-	-
TV 20.4 = 2.98 t	21.4	25.3	24.8	25.7	26.4	25.3	24.5	25.3	25.6	25.0	25.9	26.1	26.0	-	-
Weight = 5.00 t	13.8	16.4	16.0	16.6	17.1	16.3	15.9	16.3	16.5	16.2	16.7	16.9	16.8	17.3	17.2

9 Suitable climbing devices

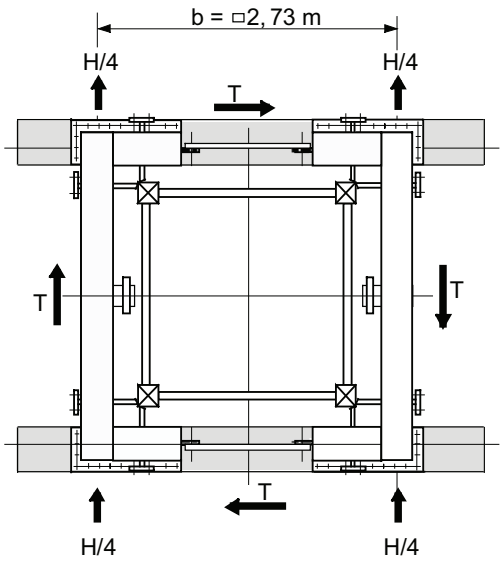


C_{min} = 9,0 m
C_{max} = 13,0 m

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

$Hu = Ho - H$

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



A	= Tower height	C	= Distance between guide frames
B	= A-C-D		

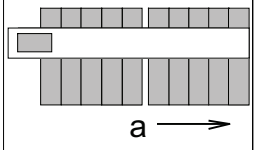
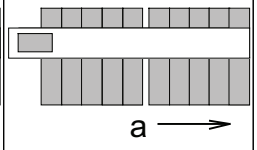
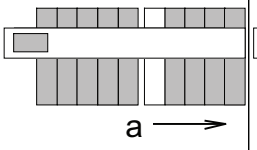
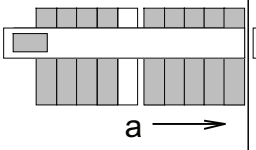
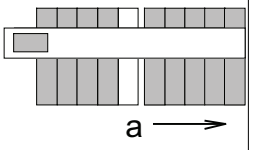
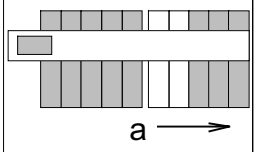
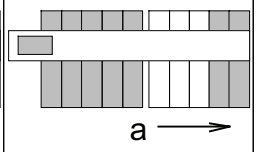
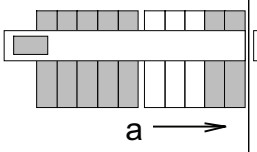
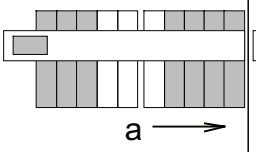
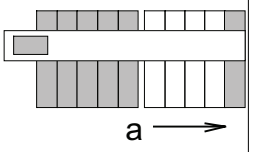
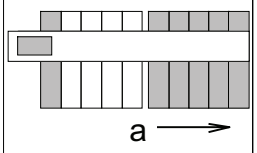
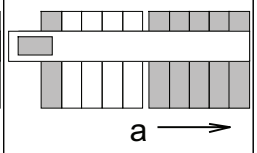
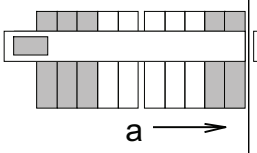
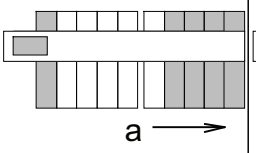
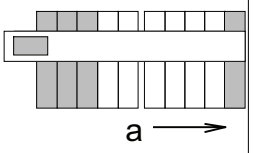
In service clamping forces

In service clamping forces [kN] inside a building																				
A [m]	45.5						41.0						36.5							
C [m]	9	10	11	12	13		9	10	11	12	13		9	10	11	12	13			
V	825						806						788							
Ho	240	220	200	180	170		230	200	180	170	160		210	190	170	160	150			
Hu	210	190	170	150	140		200	170	150	140	130		180	160	140	130	120			
T	40						40						40							

Out of service clamping forces

Out of service clamping forces [kN] inside a building																				
A [m]	45.5						41.0						36.5							
C [m]	9	10	11	12	13		9	10	11	12	13		9	10	11	12	13			
V	731						712						684							
Ho	510	460	420	380	350		430	390	350	320	300		360	320	290	270	250			
Hu	360	310	270	230	200		290	250	210	180	160		230	190	160	140	120			
T	0						0						0							

10 Arrangement of counterweight blocks

L = 60 m	L = 57.5 m	L = 55 m	L = 52.5 m	L = 50 m
10 x 2.05 t	10 x 2.05 t	9 x 2.05 t	9 x 2.05 t	9 x 2.05 t
				
W = 22.3 t	W = 22.3 t	W = 20.3 t	W = 20.3 t	W = 20.3 t
L = 47.5 m	**L = 45 m**	**L = 42.5 m**	**L = 40 m**	**L = 37.5 m**
8 x 2.05 t	7 x 2.05 t	7 x 2.05 t	7 x 2.05 t	6 x 2.05 t
				
W = 18.2 t	W = 16.2 t	W = 16.2 t	W = 16.2 t	W = 14.1 t
L = 35 m	**L = 32.5 m**	**L = 30 m**	**L = 27.5 m**	**L = 25 m**
6 x 2.05 t	6 x 2.05 t	5 x 2.05 t	5 x 2.05 t	4 x 2.05 t
				
W = 14.1 t	W = 14.1 t	W = 12.1 t	W = 12.1 t	W = 10.0 t

Additional permanent counterweight for all jib lengths: 1.8 t

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

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