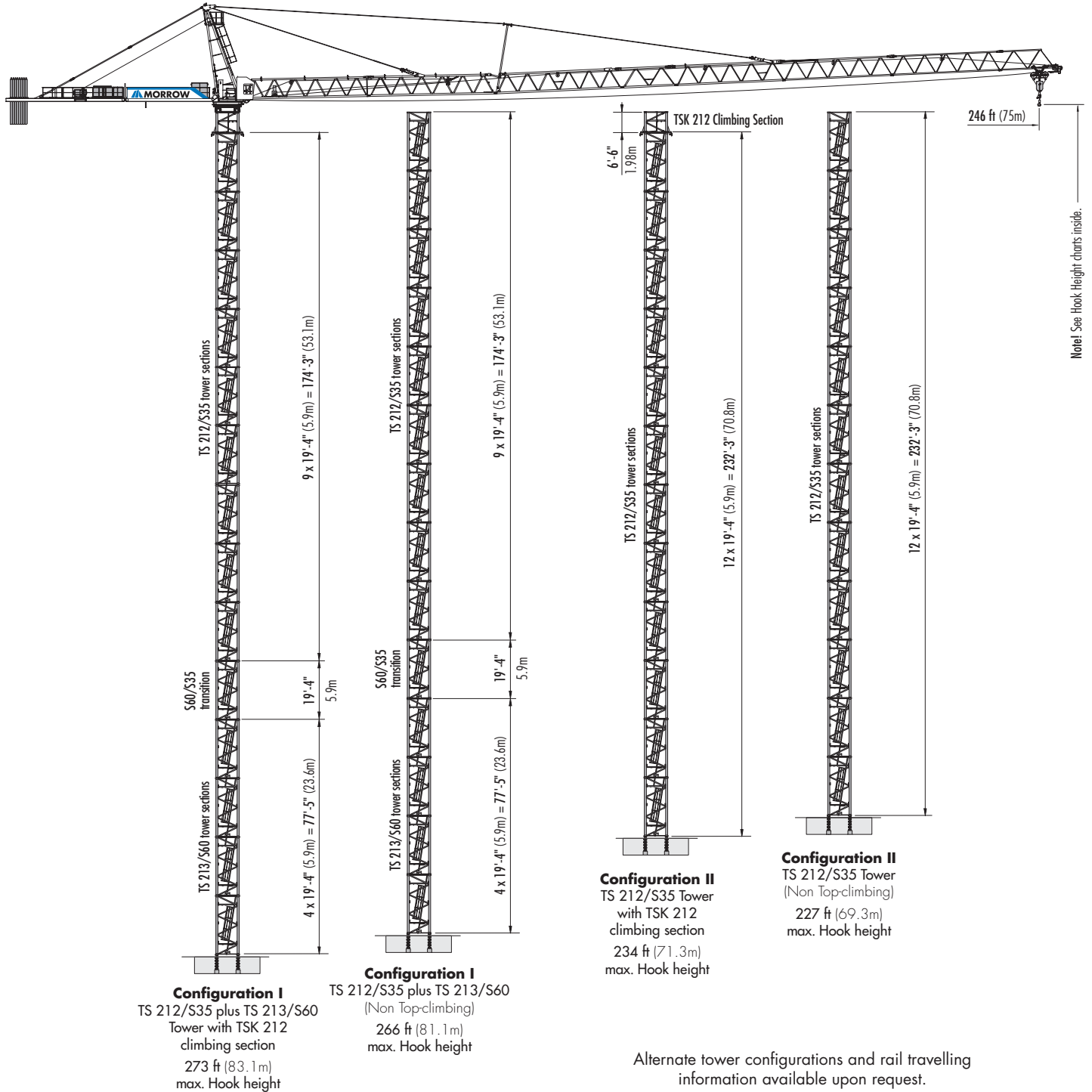


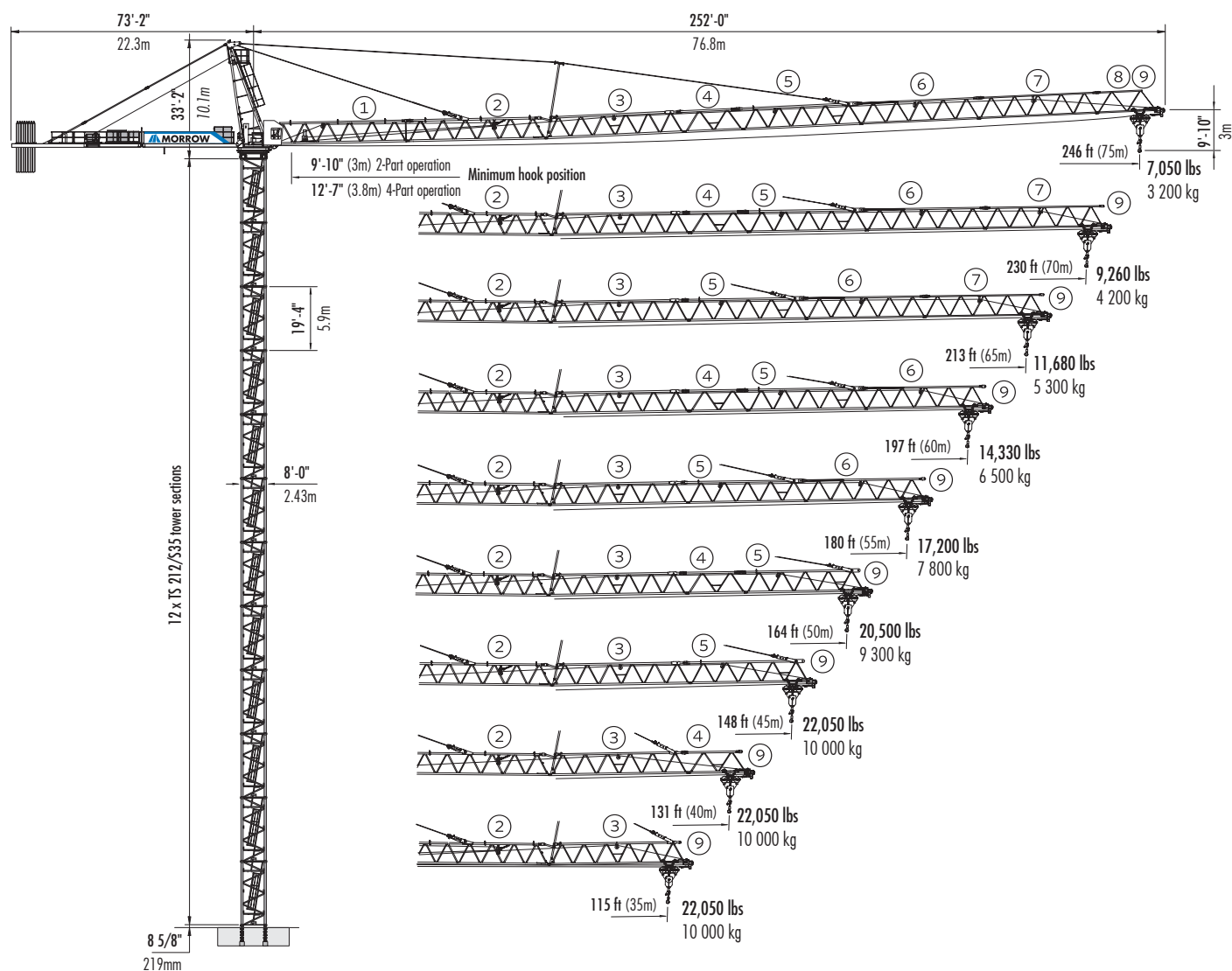
Terex SK 415-20

TOWER CRANE



Terex SK 415-20

Jib Layout



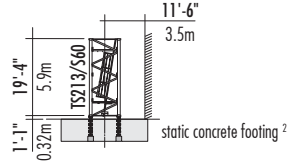
Counterweights

246-ft Jib	230-ft Jib	213-ft Jib	197-ft Jib	180-ft Jib	164-ft Jib	148-ft Jib	131-ft Jib	115-ft Jib
8 A	8 A	8 A	8 A	7 A	7 A	7 A	6 A	6 A
54,675 lbs	54,675 lbs	54,675 lbs	54,675 lbs	47,840 lbs	47,840 lbs	47,840 lbs	41,000 lbs	41,000 lbs
24 800 kg	24 800 kg	24 800 kg	24 800 kg	21 700 kg	21 700 kg	21 700 kg	18 600 kg	18 600 kg

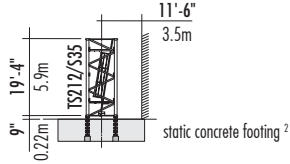
NOTE: Counterweight information above applies to 2-part and 4-part operation. Weight of the A Block is 6,835 lbs (3100 kg). Counterweights must be installed from rear to front, i.e. toward the tower. It is recommended that the weight of each counterweight be verified before installation. Counterweight figures displayed in the chart above are for crane with hoist unit SR VVB 76 - 100/4F. If another hoist unit is installed, refer to the SK 415-20 Operation Manual or contact Morrow Equipment.

Hook Heights

Alternate tower combinations are possible. Refer to Operation manual or contact Morrow for information.

Configuration I ^{3,4}					
SK 415 on TS 212/S35 and TS 213/S60 tower with transition					
No. of Tower Sections	Tower Section Type	Non Top-climbing Configuration without TSK 212 climbing section installed		Top-climbing Configuration TSK 212 climbing section required	
		feet	meters	feet	meters
1	TS 213/S60	14	4.4	21	6.4
2	TS 213/S60	34	10.3	40	12.3
3	TS 213/S60	53	16.2	60	18.2
4	TS 213/S60	73	22.1	79	24.1
5	S60/S35 transition	92	28	98	30
6	TS 212/S35	111	33.9	118	35.9
7	TS 212/S35	131	39.8	137	41.8
8	TS 212/S35	150	45.7	157	47.7
9	TS 212/S35	169	51.6	176	53.6
10	TS 212/S35	189	57.5	195	59.5
11	TS 212/S35	208	63.4	215	65.4
12	TS 212/S35	227	69.3	234	71.3
13 ¹	TS 212/S35	247	75.2	253	77.2
14 ¹	TS 212/S35	266	81.1	273	83.1

Consult crane Operation Manual before erecting, operating, servicing or dismantling crane.

Configuration II ^{3,4}					
SK 415 on TS 212/S35 tower					
No. of Tower Sections	Tower Section Type	Non Top-climbing Configuration without TSK 212 climbing section installed		Top-climbing Configuration TSK 212 climbing section required	
		feet	meters	feet	meters
1	TS 212/S35	14	4.4	21	6.4
2	TS 212/S35	34	10.3	40	12.3
3	TS 212/S35	53	16.2	60	18.2
4	TS 212/S35	73	22.1	79	24.1
5	TS 212/S35	92	28	98	30
6	TS 212/S35	111	33.9	118	35.9
7	TS 212/S35	131	39.8	137	41.8
8	TS 212/S35	150	45.7	157	47.7
9	TS 212/S35	169	51.6	176	53.6
10	TS 212/S35	189	57.5	195	59.5
11 ¹	TS 212/S35	208	63.4	215	65.4
12 ¹	TS 212/S35	227	69.3	234	71.3

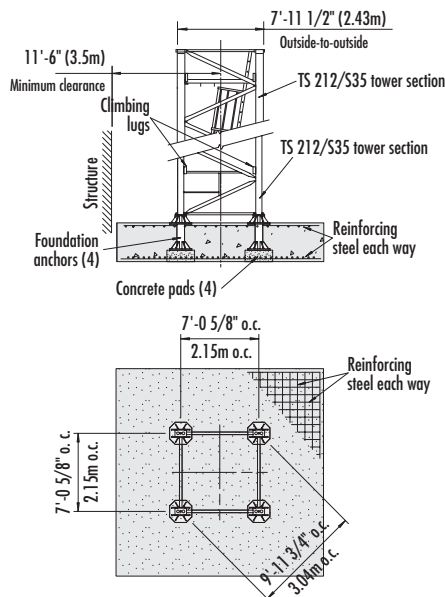
¹ Lower top climbing unit to base of tower prior to operating crane.

² Hook heights for cross base and rail-travelling crane configurations available upon request.

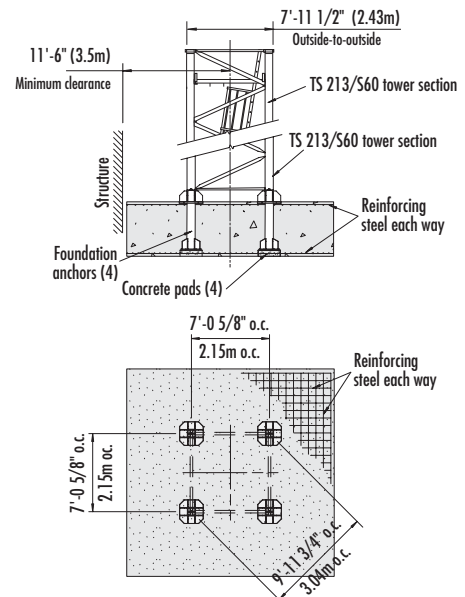
³ Manufacturer tower configurations based on FEM 1.001 standard with maximum OOS wind speed of 94 mph (151 km/h).

⁴ If top climbing is required, a TSK 212 climbing section MUST be installed.

Foundation Details on concrete footing



with TS 212/S35 Tower



with TS 213/S60 Tower

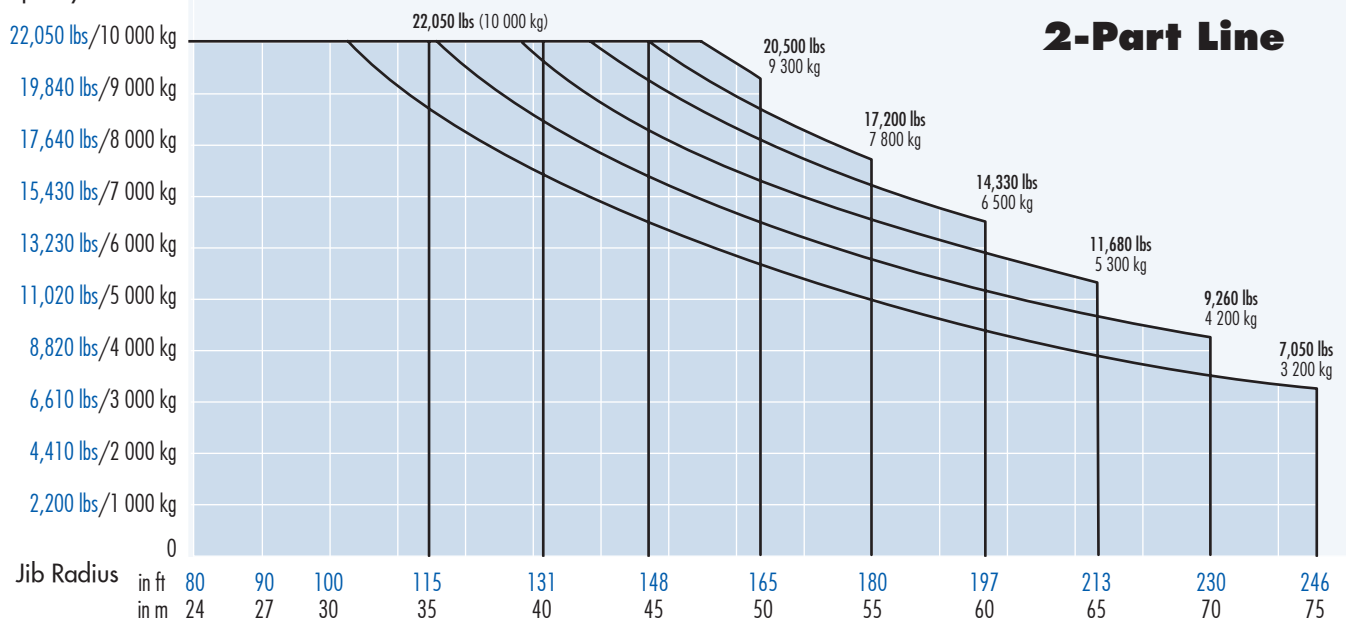
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Radius and Capacities

2-Part Operation	Hook Reach	Jib Tip Radius	Maximum Capacity – Radius	ft m	33 10	49 15	66 20	82 25	98 30	115 35	131 40	148 45	164 50	180 55	197 60	213 65	230 70	246 75
	246 ft 75m	252'-0" 76.8m	22,050 lbs – 104 ft 10 000 kg – 31.6m	lbs kg	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	19,670 8 920	16,670 7 560	14,370 6 520	12,540 5 690	11,050 5 010	9,790 4 440	8,730 3 960	7,830 3 550	7,050 3 200
	230 ft 70m	235'-7" 71.8m	22,050 lbs – 117 ft 10 000 kg – 35.6m	lbs kg	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	19,180 8 700	16,600 7 530	14,530 6 590	12,850 5 830	11,460 5 200	10,270 4 660	9,260 4 200	
	213 ft 65m	219'-2" 66.8m	22,050 lbs – 129 ft 10 000 kg – 39.2m	lbs kg	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	21,500 9 750	18,650 8 460	16,380 7 430	14,530 6 590	12,990 5 890	11,680 5 300		
	197 ft 60m	202'-9" 61.7m	22,050 lbs – 139 ft 10 000 kg – 42.4m	lbs kg	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	20,460 9 280	17,990 8 160	16,000 7 260	14,330 6 500			
	180 ft 55m	186'-0" 56.7m	22,050 lbs – 148 ft 10 000 kg – 45m	lbs kg	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	21,910 9 940	19,310 8 760	17,200 7 800				
	164 ft 50m	169'-7" 51.7m	22,050 lbs – 155 ft 10 000 kg – 47.3m	lbs kg	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	20,500 9 300					
	148 ft 45m	153'-3" 46.7m	22,050 lbs – 148 ft 10 000 kg – 45m	lbs kg	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000						
	131 ft 40m	136'-10" 41.7m	22,050 lbs – 131 ft 10 000 kg – 40m	lbs kg	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000								
	115 ft 35m	120'-5" 36.7m	22,050 lbs – 115 ft 10 000 kg – 35m	lbs kg	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000	22,050 10 000								

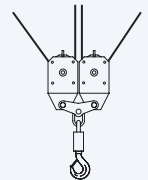


Capacity

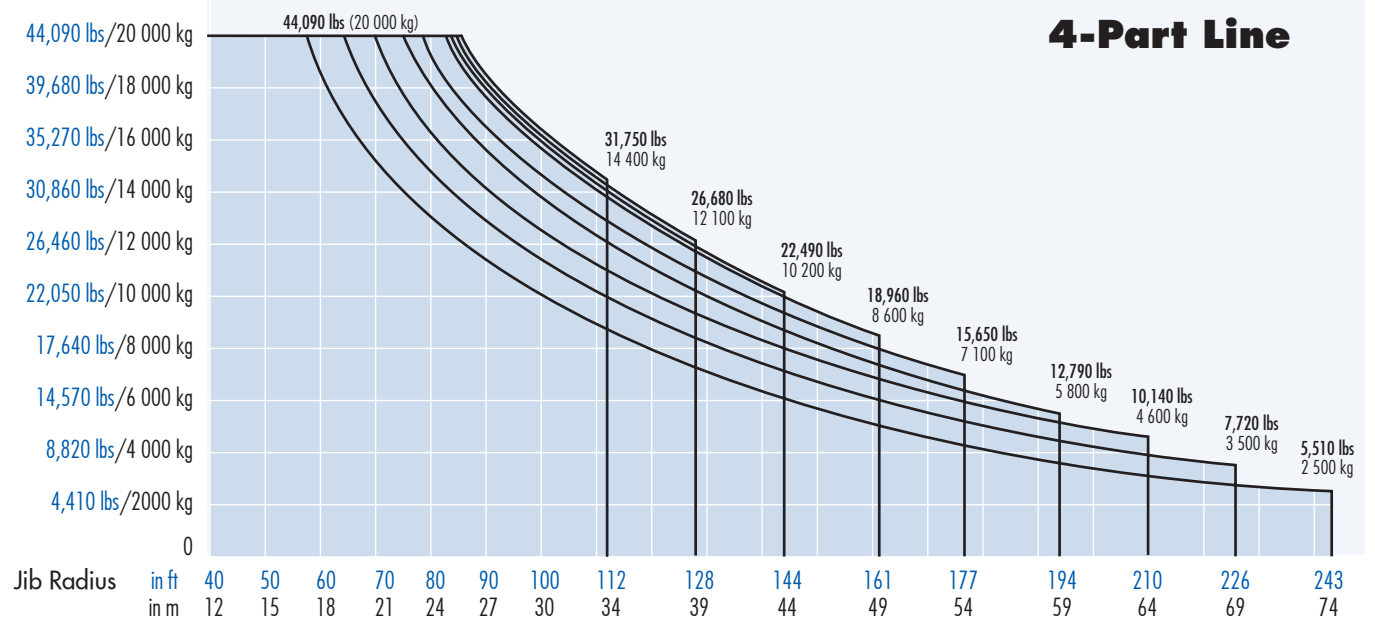


Radius and Capacities

4-Part Operation	Hook Reach	Jib Tip Radius	Maximum Capacity – Radius	ft	33	49	66	82	98	112	128	144	161	177	194	210	226	243
				m	10	15	20	25	30	34	39	44	49	54	59	64	69	74
	243 ft	252'-0"	44,090 lbs – 58 ft	lbs	44,090	44,090	37,480	28,400	22,530	19,110	15,850	13,360	11,380	9,770	8,420	7,300	6,350	5,510
	74m	76.8m	20 000 kg – 17.6m	kg	20 000	20 000	17 000	12 880	10 220	8 670	7 190	6 060	5 160	4 430	3 820	3 310	2 880	2 500
	226 ft	235'-7"	44,090 lbs – 64 ft	lbs	44,090	44,090	42,390	32,280	25,750	21,960	18,320	15,520	13,320	11,530	10,030	8,770	7,720	
	69m	71.8m	20 000 kg – 19.4m	kg	20 000	20 000	19 230	14 640	11 680	9 960	8 310	7 040	6 040	5 230	4 550	3 980	3 500	
	210 ft	219'-2"	44,090 lbs – 70 ft	lbs	44,090	44,090	44,090	35,830	28,680	24,540	20,570	17,500	15,100	13,140	11,510	10,140		
	64m	66.8m	20 000 kg – 21.2m	kg	20 000	20 000	20 000	16 250	13 010	11 130	9 330	7 940	6 850	5 960	5 220	4 600		
	194 ft	202'-9"	44,090 lbs – 74 ft	lbs	44,090	44,090	44,090	38,890	31,240	26,760	22,510	19,220	16,640	14,530	12,790			
	59m	61.7m	20 000 kg – 22.7m	kg	20 000	20 000	20 000	17 640	14 170	12 140	10 210	8 720	7 550	6 590	5 800			
	177 ft	186'-0"	44,090 lbs – 79 ft	lbs	44,090	44,090	44,090	41,360	33,270	28,570	24,070	20,610	17,880	15,650				
	54m	56.7m	20 000 kg – 24m	kg	20 000	20 000	20 000	18 760	15 090	12 960	10 920	9 350	8 110	7 100				
	161 ft	169'-7"	44,090 lbs – 82 ft	lbs	44,090	44,090	44,090	44,090	35,080	30,140	25,440	21,830	18,960					
	49m	51.7m	20 000 kg – 25.1m	kg	20 000	20 000	20 000	20 000	15 910	13 670	11 540	9 900	8 600					
	144 ft	153'-3"	44,090 lbs – 84 ft	lbs	44,090	44,090	44,090	44,090	36,050	31,000	26,190	22,490						
	44m	46.7m	20 000 kg – 25.6m	kg	20 000	20 000	20 000	20 000	16 350	14 060	11 880	10 200						
	128 ft	136'-10"	44,090 lbs – 85 ft	lbs	44,090	44,090	44,090	44,090	36,680	31,370	26,680							
	39m	41.7m	20 000 kg – 26m	kg	20 000	20 000	20 000	20 000	16 640	14 320	12 100							
	112 ft	120'-5"	44,090 lbs – 86 ft	lbs	44,090	44,090	44,090	44,090	36,880	31,750								
	34m	36.7m	20 000 kg – 26.1m	kg	20 000	20 000	20 000	20 000	16 730	14 400								

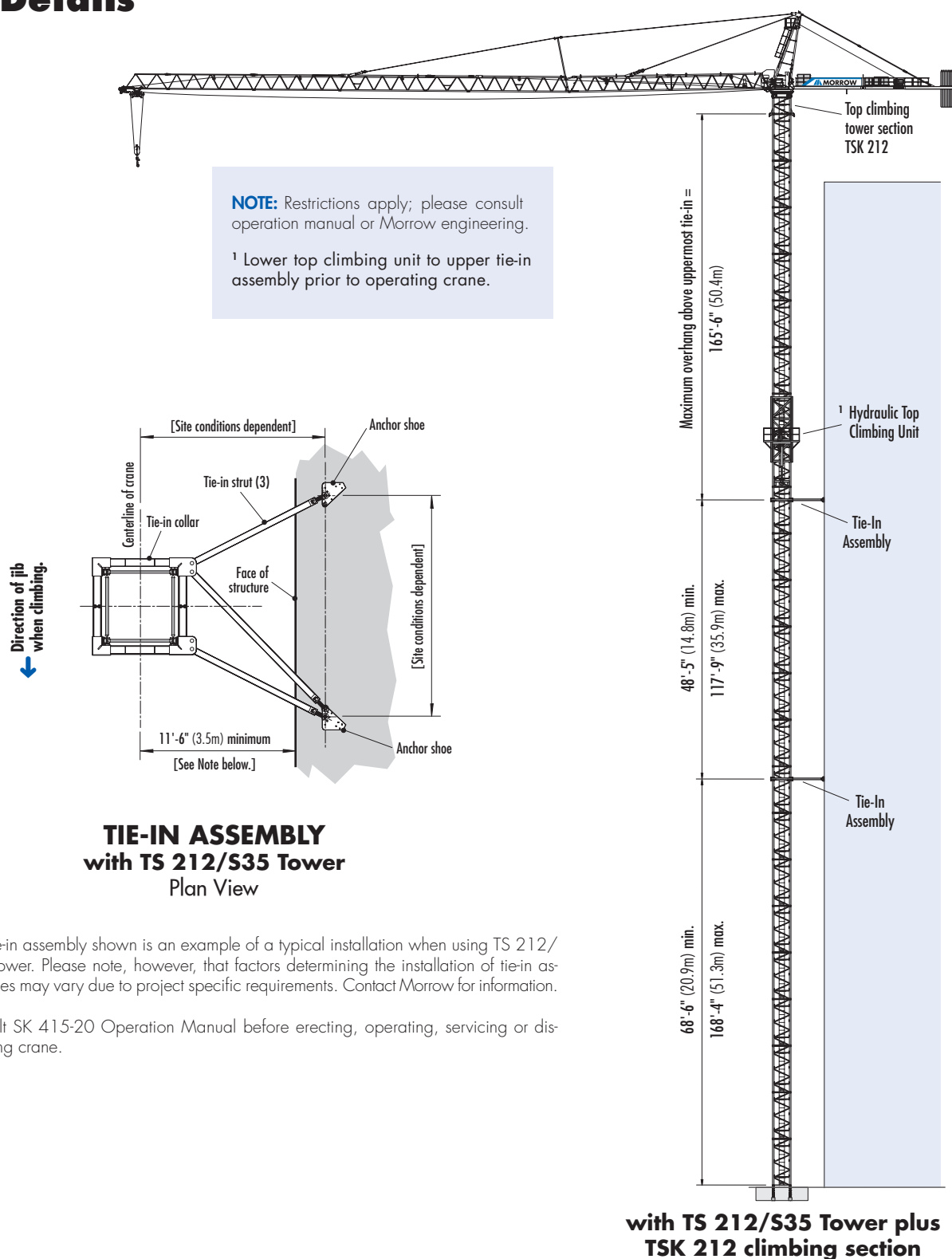


Capacity



Terex SK 415-20

Tie-in Details



NOTE: The tie-in assembly shown is an example of a typical installation when using TS 212/S35 tower. Please note, however, that factors determining the installation of tie-in assemblies may vary due to project specific requirements. Contact Morrow for information.

Consult SK 415-20 Operation Manual before erecting, operating, servicing or dismantling crane.

Hoist Speed and Capacity

Hoist Unit	SR WB 76 - 100/4F	2-Part Line					
108 hp (76 kW) AC hoist unit		Gear	Capacity	Line Speed	Capacity	Line Speed	
4-speed gearbox		1	22,050 lbs	@ 112 fpm	10 000 kg	@ 34 m/min	
Remote-controlled gear shifting		2	15,650 lbs	@ 177 fpm	7 100 kg	@ 54 m/min	
Eddy current brake		3	9,260 lbs	@ 276 fpm	4 200 kg	@ 84 m/min	
		4	5,510 lbs	@ 440 fpm	2 500 kg	@ 134 m/min	
		4-Part Line					
		1	44,090 lbs	@ 56 fpm	20 000 kg	@ 17 m/min	
		2	31,300 lbs	@ 89 fpm	14 200 kg	@ 27 m/min	
		3	18,520 lbs	@ 138 fpm	8 400 kg	@ 42 m/min	
		4	11,020 lbs	@ 220 fpm	5 000 kg	@ 67 m/min	

2P 5L 250
4P 5L 125

IMPORTANT: Capacities and line speeds indicated will vary depending on the amount of hoist rope installed. This crane model may be equipped with a hoist unit other than that specified in the data above. To verify, check the serial number of the crane and refer to the SK 415-20 Operation Manual for additional information.

Motor Information

Drive Unit	Horsepower	Kilowatts	Speed	
Trolley (VFD)	14 hp	10.5 kW	0 - 262 fpm	0 - 80 m/min
Swing (VFD) *	3 x 11 hp	3 x 8.2 kW	1 rpm	
Travelling	Rail-travelling information available upon request.			

* **IMPORTANT:** Three (3) swing drives are required if a 180 ft to 246 ft (55 m to 75 m) jib assembly is installed. Only two (2) swing drives are required if a 115 ft to 165 ft (35 m to 50 m) jib assembly is installed. Refer to the SK 415-20 Operation Manual for information.

Power requirements

Power supply: 3-phase 480 V, 60 Hz; 3-wire plus ground; no Neutral.

480 V phase-phase, 277 V each phase to ground with 120° phase shift between phases.

Service size: 250 Amperes

NOTES:

1. For electric power provided by an electric utility, do not use open Delta transformers.
2. For electric power provided by a generator, the minimum generator size required is 350kW. A properly sized generator is critical to the safe operation of the crane.

Specifications are subject to change without prior notice. Drawings shown in this datasheet are for illustrative purposes only. Refer to the SK 415-20 Instruction Manual. For additional information, contact MORROW. All rights are reserved.

Component List

Description		Dimensions L x W x H	Weight	Description		Dimensions L x W x H	Weight
Tower Top Complete		27'-1" x 6'-7" x 10'-2" 8.26m x 2m x 3.1m	9,610 lbs 4 360 kg	Jib Section ②		40'-6" x 6'-7" x 7'-3" 12.34m x 2m x 2.2m	5,180 lbs 2 350 kg
Turntable 1 Complete		11'-4" x 7'-8" x 8'-6" 3.45m x 2.34m x 2.6m	23,810 lbs 10 800 kg	Jib Section ③		38'-10" x 6'-7" x 7'-7" 11.84m x 2m x 2.31m	4,760 lbs 2 160 kg
Operator Cab with Platform & Panel		8'-2" x 6'-9" x 8'-6" 2.5m x 2.06m x 2.6m	3,085 lbs 1 730 kg	Jib Section ④		18'-8" x 6'-7" x 6'-3" 5.69m x 2m x 1.91m	2,010 lbs 910 kg
Tower Section (Climbing) TSK 212		8'-0" x 9'-10" x 6'-7" 2.44m x 3m x 2.03m	6,170 lbs 2 800 kg	Jib Section ⑤		35'-0" x 6'-7" x 6'-11" 10.67m x 2m x 2.1m	4,010 lbs 1 820 kg
Tower Section TS 212 / S35		19'-5" x 8'-0" x 8'-0" 5.92m x 2.4m x 2.44m	9,300 lbs 4 220 kg	Jib Section ⑥		35'-5" x 6'-7" x 6'-4" 10.8m x 2m x 1.93m	3,000 lbs 1 360 kg
Transition Section S60/S35		19'-5" x 8'-0" x 8'-0" 5.92m x 2.44m x 2.44m	9,920 lbs 4 500 kg	Jib Section ⑦		33'-6" x 6'-7" x 6'-3" 10.21m x 2m x 1.91m	2,160 lbs 980 kg
Tower Section TS 213 / S60		19'-5" x 8'-0" x 8'-0" 5.92m x 2.44m x 2.44m	9,920 lbs 4 500 kg	Jib Section ⑧		18'-8" x 6'-7" x 6'-2" 5.69m x 2m x 1.88m	1,760 lbs 800 kg
Counterjib 2		69'-11" x 9'-2" x 6'-7" 21.31m x 2.8m x 2.01m	26,500 lbs 12 020 kg	Jib Tip ⑨		4'-6" x 6'-8" x 4'-6" 1.37m x 2.03m x 1.37m	860 lbs 390 kg
Counterjib Section Inner		31'-10" x 6'-8" x 5'-7" 9.7m x 2.03m x 1.7m	5,070 lbs 2 300 kg	Jib Assembly Part 1 ⑥ for all Jib Assemblies		75'-0" x 6'-7" x 7'-3" 22.86m x 2m x 2.2m	18,960 lbs 8 600 kg
Counterjib Section Outer 3		38'-1" x 9'-2" x 6'-7" 11.61m x 2.8m x 2.01m	17,500 lbs 7 940 kg	Jib Assembly Part 2 7 246 ft (75m)		180'-0" x 6'-8" x 7'-7" 54.86m x 2.03m x 2.31m	20,720 lbs 9 400 kg
Hoist Unit 4 (108 hp/76 kW)		9'-2" x 8'-5" x 5'-7" 2.8m x 2.57m x 1.7m	7,500 lbs 3 400 kg	Jib Assembly Part 2 7 230 ft (70m)		163'-0" x 6'-8" x 7'-7" 49.68m x 2.03m x 2.31m	19,180 lbs 8 700 kg
Counterweight Block A		14'-8" x 0'-6" x 5'-1" 4.47m x 0.15m x 1.55m	6,810 lbs 3 090 kg	Jib Assembly Part 2 7 218 ft (65m)		145'-0" x 6'-8" x 7'-7" 44.2m x 2.03m x 2.31m	16,530 lbs 7 500 kg
Trolley (Outer) 5 2-part operation		7'-4" x 5'-8" x 6'-0" 2.24m x 1.73m x 1.83m	1,760 lbs 800 kg	Jib Assembly Part 2 7 197 ft (60m)		129'-0" x 6'-8" x 7'-7" 39.32m x 2.03m x 2.31m	17,200 lbs 7 800 kg
Hook Block Single		2'-9" x 1'-0" x 4'-6" 0.84m x 0.31m x 1.37m	1,190 lbs 540 kg	Jib Assembly Part 2 7 180 ft (55m)		111'-0" x 6'-8" x 7'-7" 33.83m x 2.03m x 2.31m	14,550 lbs 6 600 kg
Top Climbing Unit Complete (TS 212/S35)		29'-3" x 11'-6" x 11'-6" 8.92m x 3.5m x 3.5m	25,000 lbs 11 340 kg	Jib Assembly (Complete) 164 ft (50m)		170'-0" x 6'-8" x 7'-7" 51.82m x 2.03m x 2.31m	33,290 lbs 15 100 kg
Tie-in Collar TS 212/S35		12'-2" x 10'-2" x 1'-7" 3.7m x 3.1m x 0.48m	3,200 lbs 1 450 kg	Jib Assembly (Complete) 148 ft (45m)		151'-0" x 6'-8" x 7'-7" 46.02m x 2.03m x 2.31m	31,530 lbs 14 300 kg
Jib A-Frame		21'-7" x 5'-5" x 4'-8" 6.58m x 1.65m x 1.42m	660 lbs 300 kg	Jib Assembly (Complete) 131 ft (40m)		135'-0" x 6'-8" x 7'-7" 41.15m x 2.03m x 2.31m	29,100 lbs 13 200 kg
Jib Section ①		38'-11" x 6'-7" x 7'-3" 11.86m x 2m x 2.2m	6,660 lbs 3 020 kg	Jib Assembly (Complete) 115 ft (35m)		117'-0" x 6'-8" x 7'-7" 35.66m x 2.03m x 2.31m	27,560 lbs 12 500 kg

NOTE: Weights and dimensions are approximate and should field verified. Scale components before installing.

- Turntable (Complete) includes swing motors, slewing ring, slewing ring support. Broken down into two parts: upper at 9,350 lbs (4 240 kg), lower at 14,500 lbs (6 300 kg).
- Includes Counterjib Sections #1 & #2, 108 hp (76 kW) hoist unit with frame, electrical panel and handrails. Does not include wire rope.
- Counterjib Section #2 includes 108 hp (76 kW) hoist unit and handrails. Does not include wire rope.
- Does not include wire rope. 22mm rope weighs 2 lbs/ft (2.7 kg/m).
- Two-part operation requires a single (outer) trolley. Four-part operation requires two (inner and outer) trolleys. Inner and outer trolley dimensions and weights are the same.
- Jib Assembly Part 1 includes jib sections, pendant cables, jib A-frame, trolley drive unit, trolley wire rope, 2-part trolley (outer) and hook block. If 4-part application is used, weight increases by approx. 2,870 lbs (1 300 kg) for additional trolley (inner) and hook block.
- Jib Assembly Part 2 includes jib sections and pendant cables.