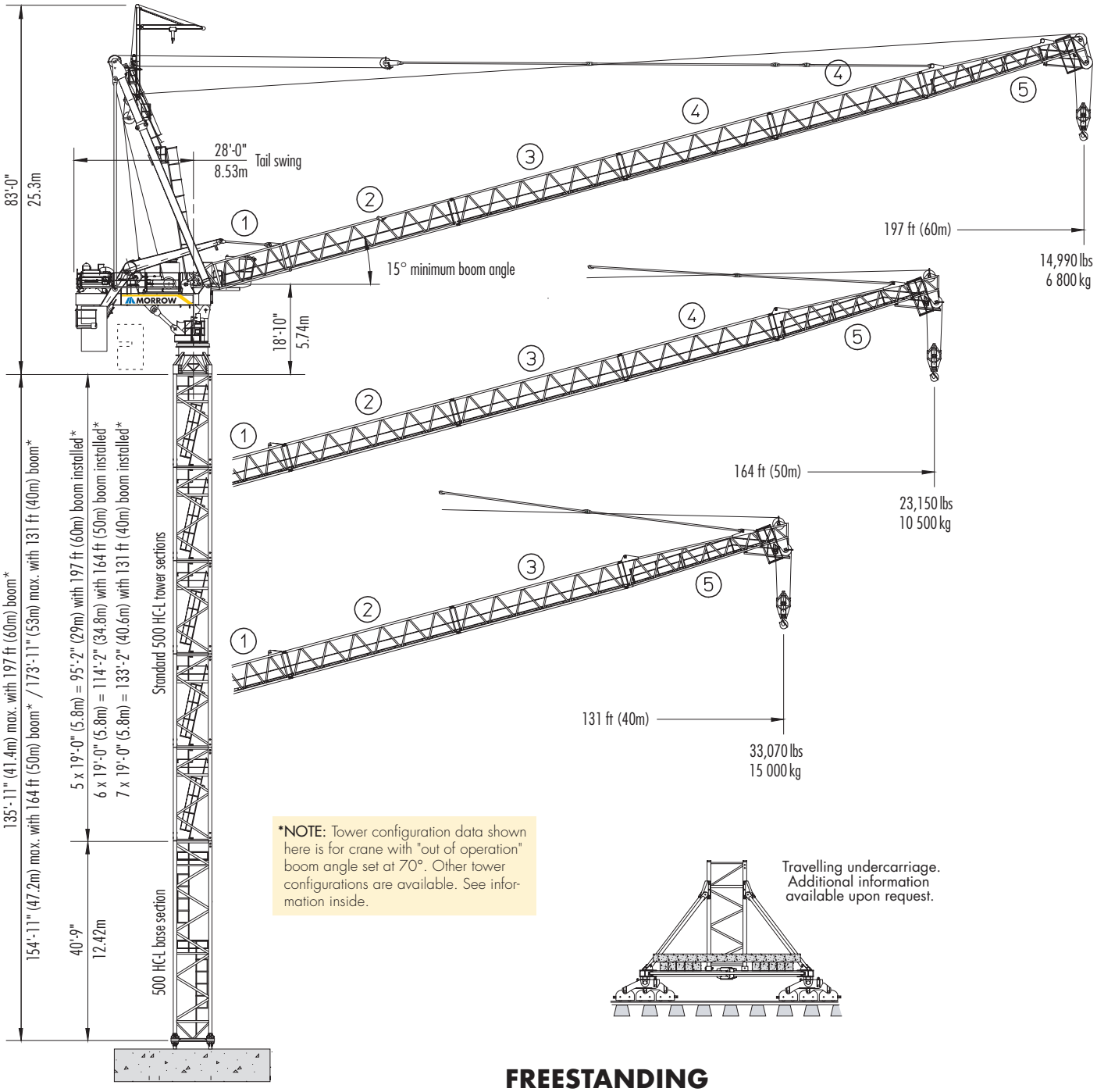
500 HC-L 16

LIEBHERR Luffing Boom Tower Crane

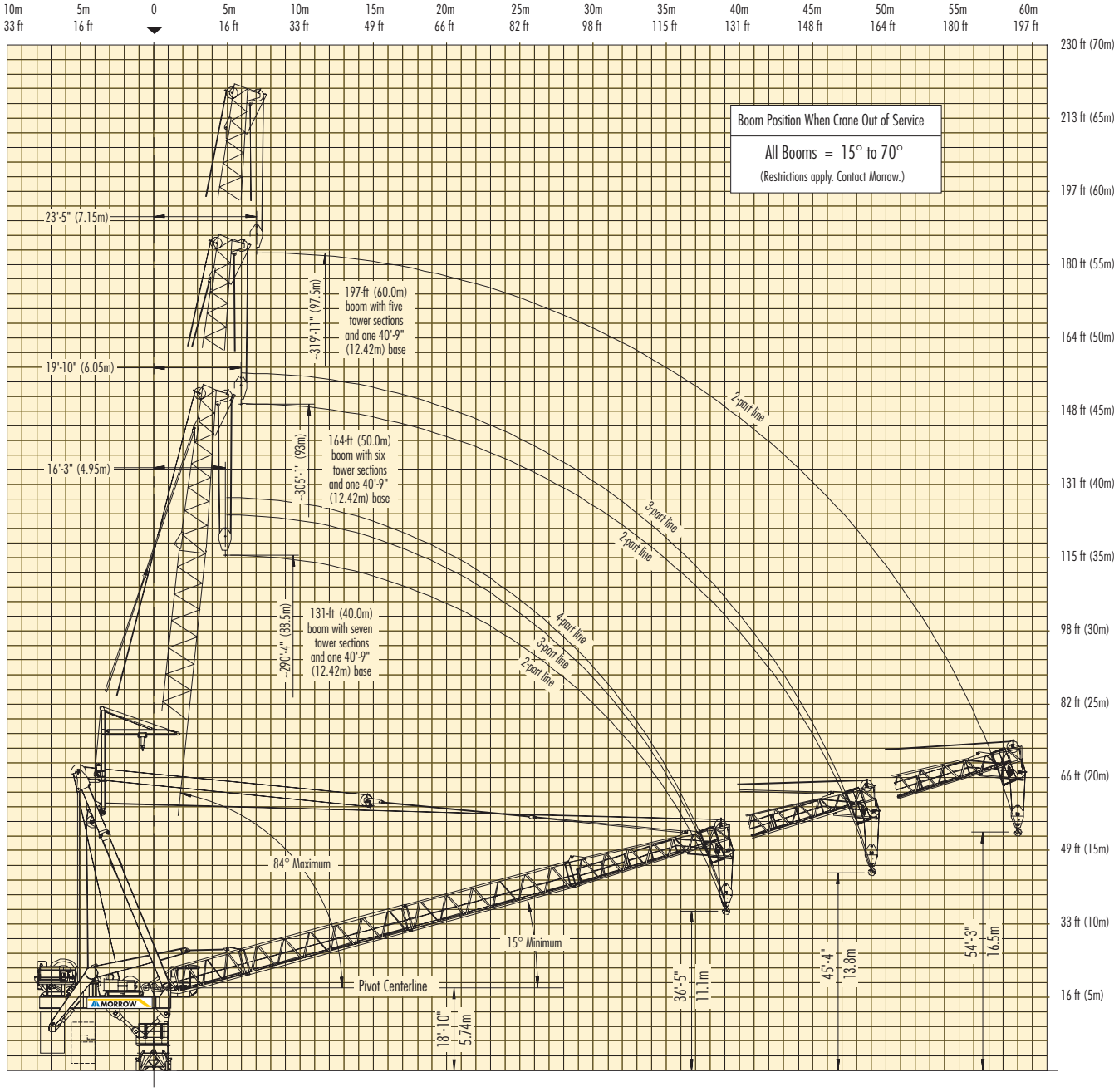


*NOTE: Tower configuration data shown here is for crane with "out of operation" boom angle set at 70°. Other tower configurations are available. See information inside.

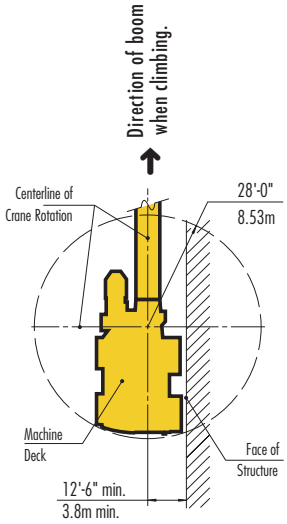
Travelling undercarriage. Additional information available upon request.

FREESTANDING
stationary and travelling

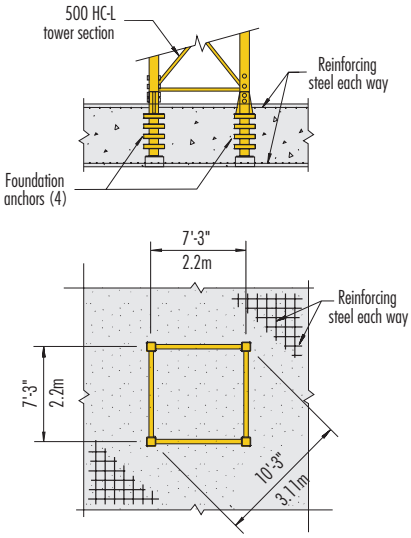
Hook Heights



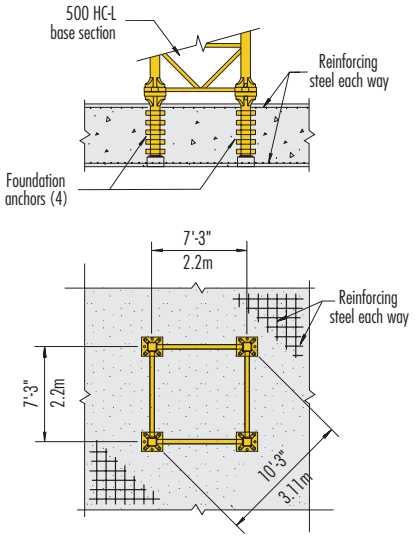
NOTE: By combining information from the graph above with data from the tower height chart on the adjacent page, hook heights can be deter - mined. It will be necessary to select boom length, boom angle and tower configuration. Contact Morrow for additional information.



PLAN VIEW – showing tail swing radius and minimum clearance.

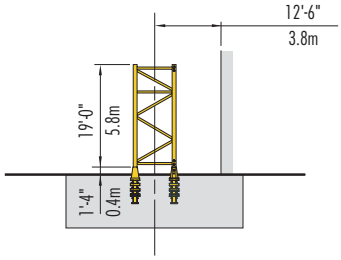
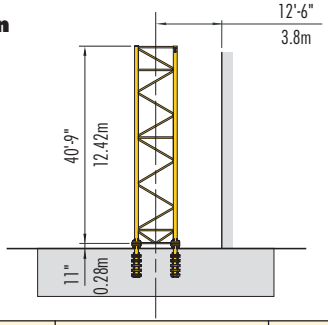


with 500 HC-L Tower Section
on concrete slab



with 500 HC-L Base Section
on concrete slab

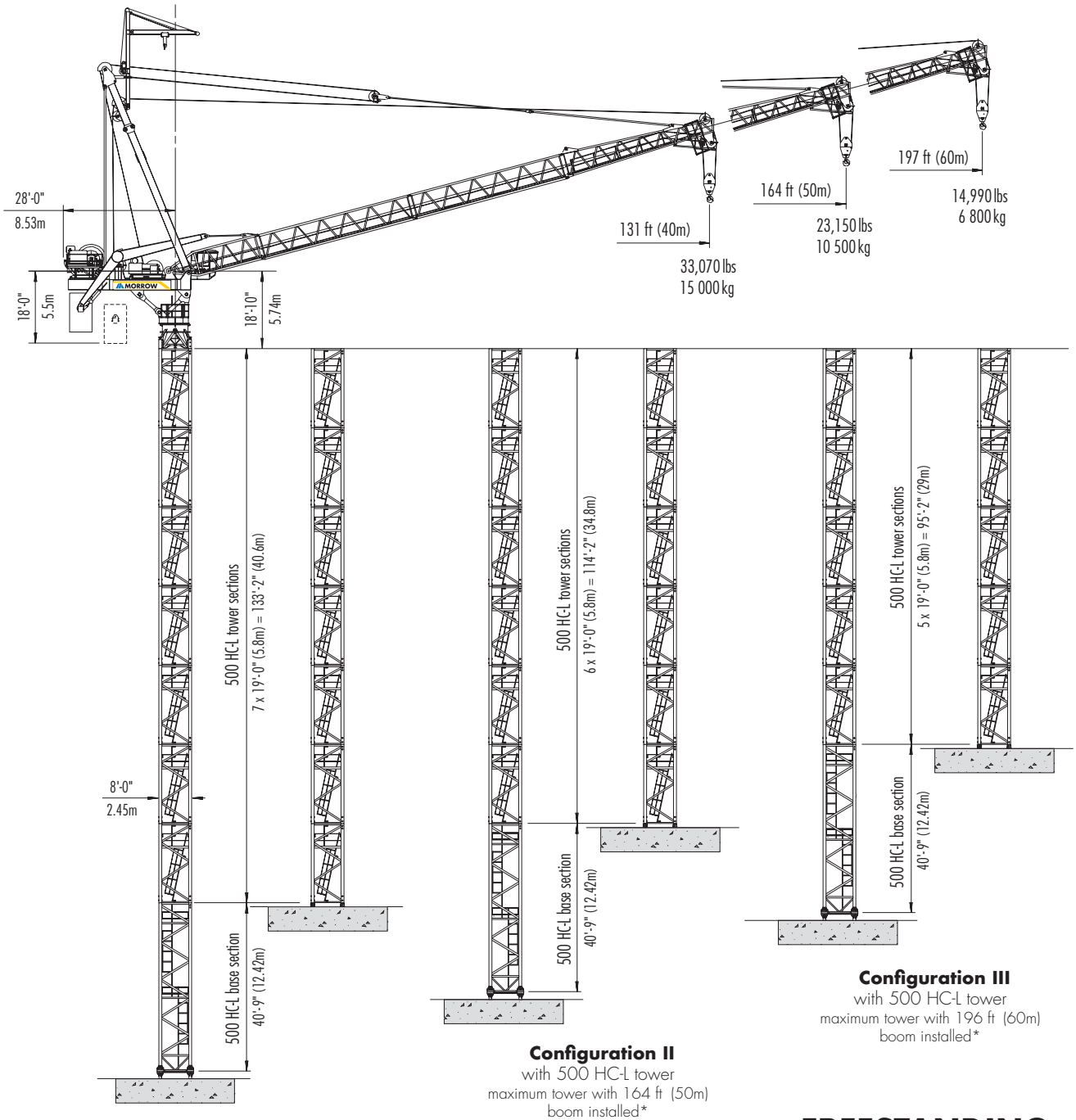
TOWER HEIGHTS*

Tower Base Components	**500 HC-L Tower Section**						**500 HC-L Base Section**					
												
No. of Tower Sections	Boom Length		Boom Length		Boom Length		Boom Length		Boom Length		Boom Length	
	131 ft	40m	164 ft	50m	197 ft	60m	131 ft	40m	164 ft	50m	197 ft	60m
0	—	—	—	—	—	—	42 ft	12.7m	42 ft	12.7m	42 ft	12.7m
1	20 ft	6.2m	20 ft	6.2m	20 ft	6.2m	61 ft	18.5m	61 ft	18.5m	61 ft	18.5m
2	39 ft	12m	39 ft	12m	39 ft	12m	80 ft	24.3m	80 ft	24.3m	80 ft	24.3m
3	58 ft	17.8m	58 ft	17.8m	58 ft	17.8m	99 ft	30.1m	99 ft	30.1m	99 ft	30.1m
4	77 ft	23.6m	77 ft	23.6m	77 ft	23.6m	118 ft	35.9m	118 ft	35.9m	118 ft	35.9m
5	97 ft	29.4m	97 ft	29.4m	97 ft [1]	29.4m [1]	137 ft	41.7m	137 ft	41.7m	137 ft [1]	41.7m [1]
6	116 ft	35.2m	116 ft [1]	35.2m [1]	—	—	156 ft	47.5m	156 ft [1]	47.5m [1]	—	—
7	135 ft [1]	41m [1]	—	—	—	—	175 ft [1]	53.3m [1]	—	—	—	—

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

NOTE: Information regarding crane equipped for rail travelling is available. Consult operation manual or contact Morrow.

LIEBHERR 500 HC-L 16



Configuration I
with 500 HC-L tower
maximum tower with 131 ft (40m)
boom installed*

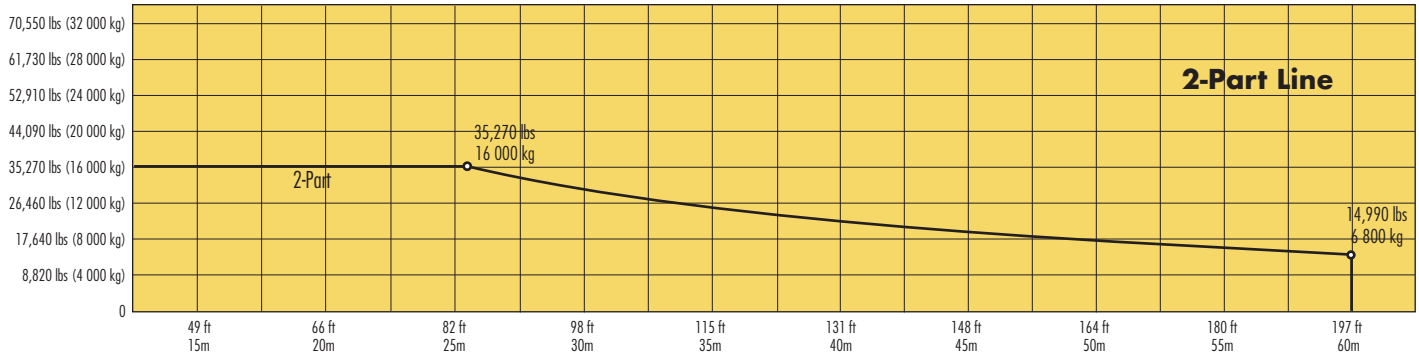
Configuration II
with 500 HC-L tower
maximum tower with 164 ft (50m)
boom installed*

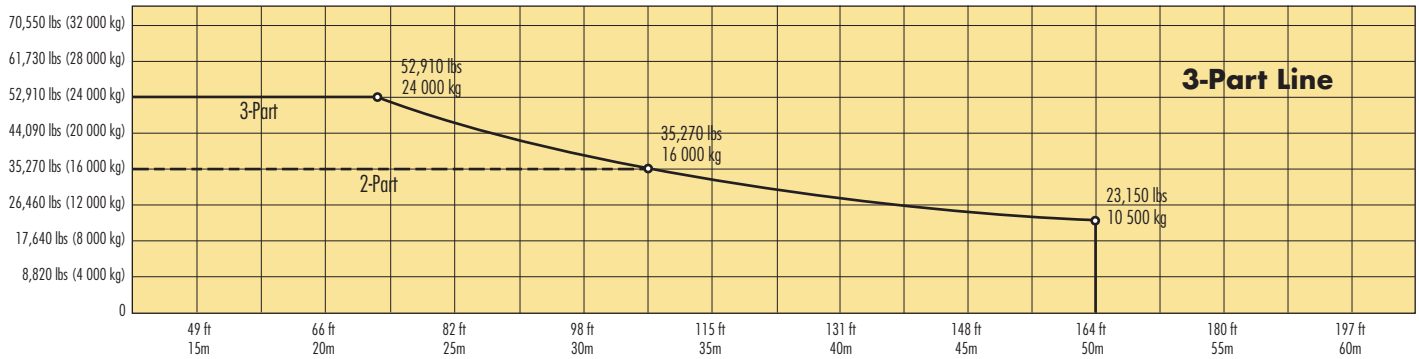
Configuration III
with 500 HC-L tower
maximum tower with 196 ft (60m)
boom installed*

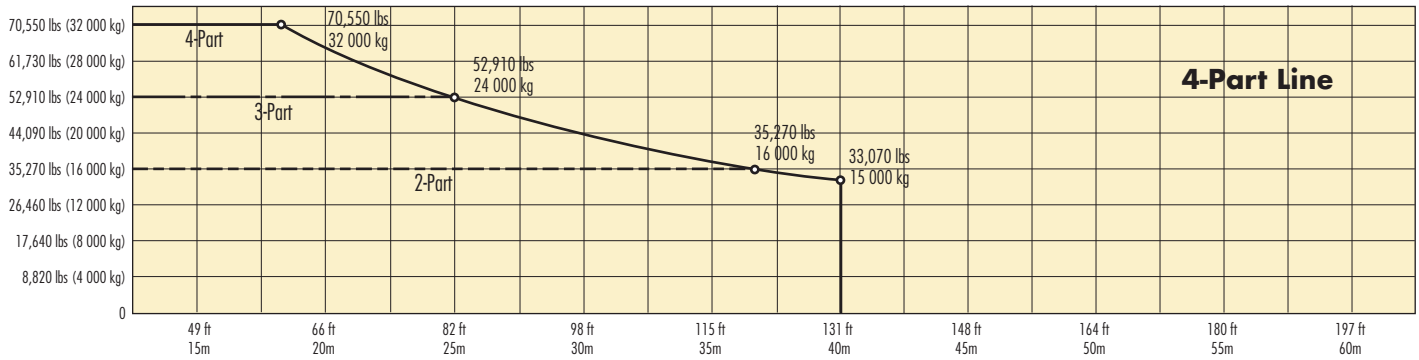
FREESTANDING
stationary

*NOTE: Tower configurations illustrated above apply to cranes in which the "out of operation" boom angle is set at 70°. If the "out of operation" boom position is set at 15°, up to 2 additional tower sections may be added to tower configuration I, II and III. Consult operation manual. Contact Morrow for information regarding alternate tower configurations. Restrictions may apply.

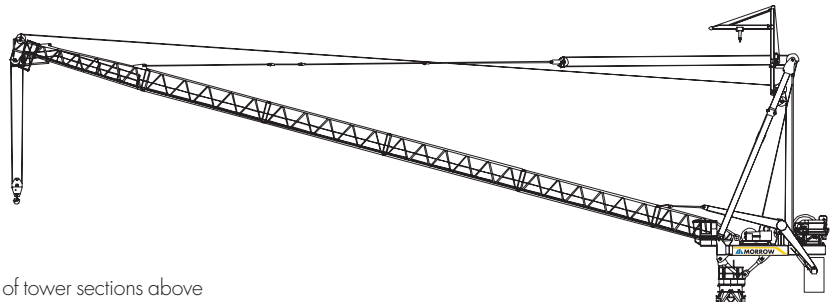
Boom Length	Line Parts	Maximum Capacity – Radius	ft / m	74 / 22.5	82 / 25	90 / 27.5	98 / 30	107 / 32.5	115 / 35	123 / 37.5	131 / 40	139 / 42.5	148 / 45	156 / 47.5	164 / 50	172 / 52.5	180 / 55	189 / 57.5	197 / 60
197 ft 60 m	2-Part Line	35,270 lbs – 84 ft 16 000 kg – 25.5m	lbs	35,270	35,270	32,720	29,980	27,670	25,720	23,990	22,490	21,160	20,000	18,940	17,990	17,130	16,360	15,650	14,990
			kg	16 000	16 000	14 840	13 600	12 550	11 660	10 880	10 200	9 600	9 070	8 590	8 160	7 770	7 420	7 100	6 800
164 ft 50m	2-Part Line	35,270 lbs – 108 ft 16 000 kg – 32.8m	lbs	35,270	35,270	35,270	35,270	35,270	33,070	30,860	28,950	27,230	25,730	24,360	23,150				
			kg	16 000	16 000	16 000	16 000	16 000	15 000	14 000	13 130	12 350	11 670	11 050	10 500				
	3-Part Line	52,910 lbs – 72 ft 24 000 kg – 21.9m	lbs	51,430	46,300	42,090	38,580	35,600	33,070	30,860	28,950	27,230	25,730	24,360	23,150				
			kg	23 330	21 000	19 090	17 500	16 150	15 000	14 000	13 130	12 350	11 670	11 050	10 500				
131 ft 40m	2-Part Line	35,270 lbs – 123 ft 16 000 kg – 37.5m	lbs	35,270	35,270	35,270	35,270	35,270	35,270	35,270	33,070								
			kg	16 000	16 000	16 000	16 000	16 000	16 000	16 000	15 000								
	3-Part Line	52,910 lbs – 82 ft 24 000 kg – 25m	lbs	52,910	52,910	48,100	44,090	40,700	37,790	35,270	33,070								
			kg	24 000	24 000	21 820	20 000	18 460	17 140	16 000	15 000								
	4-Part Line	70,550 lbs – 62 ft 32 000 kg – 18.8m	lbs	58,800	52,910	48,100	44,090	40,700	37,790	35,270	33,070								
			kg	26 670	24 000	21 820	20 000	18 460	17 140	16 000	15 000								





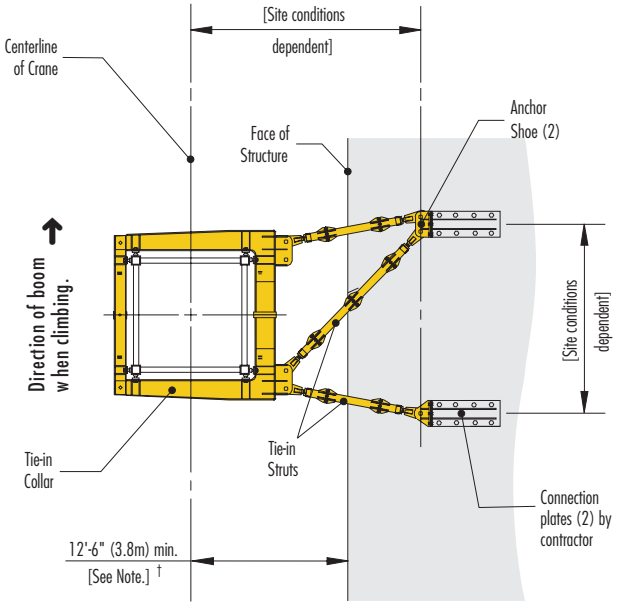


IMPORTANT: Please consult Operations Manual before erecting, operating, servicing or dismantling crane.



NOTE: If hook height exceeds 330 ft (100.0m), the number of tower sections above the uppermost tie-in location MUST be reduced by one (1) tower section.

* Lower the top climbing unit to the uppermost tie-in prior to operating crane at maximum tower configuration.



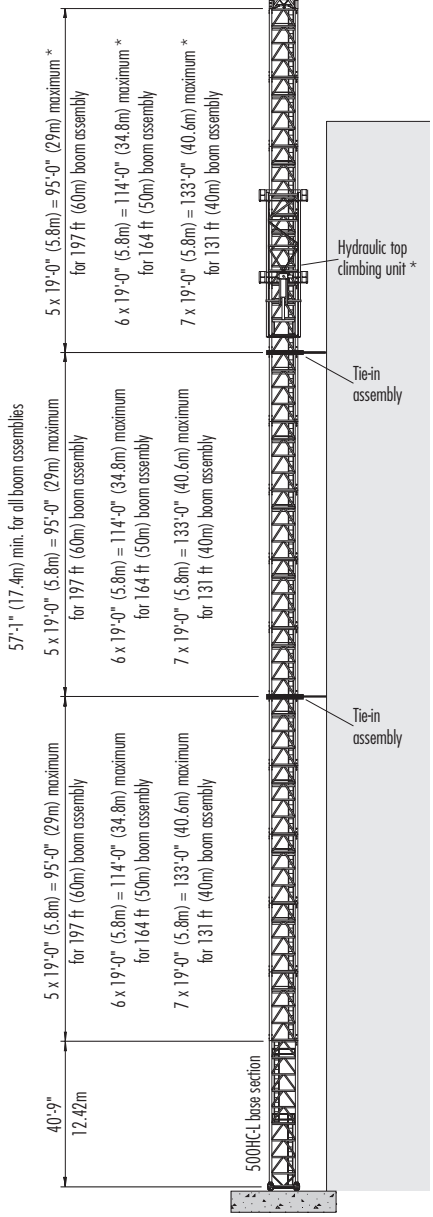
TIE-IN ASSEMBLY
Plan View

NOTE: The tie-in assembly shown is an example of a typical installation. Please note, however, that factors determining the installation of tie-in assemblies may vary due to project specific criteria.

† Minimum clearance beween the face of structure and the center of crane is 12'-6" (3.8m) . The maximum clearance is dependent upon project specific criteria.

Verify all dimensions.

Contact Morrow for additional information regarding dimensions, alternate tower configurations, reactions forces, tie-in installation and slab opening requirements.



TOP CLIMBING
with 500 HC-L Tower
tied to structure

MEC-MKT-1313
1/23/19

MORROW

IMPORTANT: The data below applies only to crane serial no. 29.194

Hoist Speed and Capacity

Hoist Unit WiW 301 RX 045		2-Part Line			
147 hp (110 kW) AC hoist unit 4-speed gearbox Electromagnetic gear shifting Eddy current brake	Gear	Capacity	Line Speed	Capacity	Line Speed
	1	up to 35,270 lbs	@ 82 fpm	up to 16 000 kg	@ 25m/min
	2	up to 19,840 lbs	@ 174 fpm	up to 9 000 kg	@ 53m/min
	3	up to 7,720 lbs	@ 364 fpm	up to 3 500 kg	@ 111m/min
	4	up to 4,410 lbs	@ 505 fpm	up to 2 000 kg	@ 154m/min
	3-Part Line				
	1	up to 52,910 lbs	@ 52 fpm	up to 24 000 kg	@ 16m/min
	2	up to 29,760 lbs	@ 118 fpm	up to 13 500 kg	@ 36m/min
	3	up to 11,570 lbs	@ 243 fpm	up to 5 250 kg	@ 74m/min
	4	up to 6,610 lbs	@ 338 fpm	up to 3 000 kg	@ 103m/min
	4-Part Line				
	1	up to 70,550 lbs	@ 43 fpm	up to 32 000 kg	@ 13m/min
	2	up to 39,680 lbs	@ 89 fpm	up to 18 000 kg	@ 27m/min
	3	up to 15,430 lbs	@ 180 fpm	up to 7 000 kg	@ 55m/min
LS - 300 LS - 200 LS - 100	4	up to 8,820 lbs	@ 253 fpm	up to 4 000 kg	@ 77m/min

NOTE: 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 Liebherr 500 HC-L 16 Operation Manual for additional information. One-part line operation is not available with crane serial number 29.194.

Motor Information

Drive Unit	Horsepower	Kilowatts	Speed
Luffing (AC)	147 hp	110 kW	15° to 84° in 170 sec
Swing	3 x 17.4 hp	3 x 13 kW	0.7 rpm
Travelling	Information available upon request		

NOTE: Luffing speed figure above is for crane without load. Speed varies according to load on hook.

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: 400 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 1200 kW. A properly sized generator is critical to the safe operation of the crane.

Specifications subject to change without prior notice. For more information, contact MORROW.

Component List

Description	Dimensions L x W x H	Weight
Slewing Assembly [1] (Complete)	16'-5" x 11'-4" x 9'-2" 5.0m x 3.46m x 2.8m	46,405 lbs 21 050 kg
Slewing Assembly Upper Part[2]	8'-0" x 11'-4" x 9'-2" 2.45m x 3.46m x 2.8m	27,490 lbs 12 470 kg
Slewing Assembly Lower Part[3]	8'-4" x 7'-11" x 7"-11" 2.55m x 2.42m x 2.42m	18,915 lbs 8 580 kg
Machine Deck [4]	32'-6" x 8'-10" x 8'-2" 9.9m x 2.7m x 2.5m	35,230 lbs 15 980 kg
Operator's Cab with Panels & Platform	14'-9" x 7'-7" x 9'-4" 4.5m x 2.3m x 2.85m	8,685 lbs 3 940 kg
AC Hoist Unit [5] 147 hp (110 kW)	18'-1" x 9'-0" x 7'-3" 5.5m x 2.75m x 2.2m	25,350 lbs 11 500 kg
AC Luffing Unit [5] 147 hp (110 kW)	18'-1" x 8'-6" x 6'-11" 5.5m x 2.6m x 2.1m	22,270 lbs 10 100 kg
A-frame [6] (Complete)	55'-10" x 8'-3" x 8'-2" 17.03m x 2.52m x 2.5m	28,220 lbs 12 800 kg
A-frame Part A	17'-8" x 8'-3" x 4'-7" 5.38m x 2.52m x 1.4m	5,290 lbs 2 400 kg
A-frame Part B (each) (2 per set)	39'-2" x 2'-11" x 5'-6" 11.95m x 0.9m x 1.68m	6,835 lbs 3 100 kg
Ballast Rocker [7] Assembly (Compl.)	36'-5" x 7'-3" x 8'-2" 11.1m x 2.2m x 2.5m	18,740 lbs 8 500 kg
Ballast Rocker Strut (2 per set)	36'-5" x 3'-1" x 8'-2" 11.1m x 0.95m x 2.5m	7,275 lbs 3 300 kg
Standard Tower Section 500 HC-L	20'-8" x 8'-0" x 8'-0" 6.3m x 2.45m x 2.45m	17,500 lbs 7 940 kg
Base Section [8] 500 HC-L (P/B)	40'-9" x 8'-10" x 8'-10" 12.42m x 2.68m x 2.68m	39,880 lbs 18 090 kg

Description	Dimensions L x W x H	Weight
Auxiliary Crane	24'-5" x 20'-0" x 3'-5" 7.45m x 6.1m x 1.05m	3,750 lbs 1 700 kg
Boom Section ① 611	24'-3" x 6'-3" x 7'-5" 7.4m x 1.9m x 2.25m	7,140 lbs 3 240 kg
Boom Sect. ② 621	39'-4" x 6'-3" x 6'-3" 12.0m x 1.9m x 1.9m	8,250 lbs 3 740 kg
Boom Sect. ③ 622	39'-4" x 6'-3" x 6'-3" 12.0m x 1.9m x 1.9m	7,410 lbs 3 360 kg
Boom Sect. ④ 631	35'-1" x 6'-3" x 6'-3" 10.7m x 1.9m x 1.9m	6,200 lbs 2 810 kg
Boom Sect. ⑤ 641	38'-9" x 8'-2" x 8'-6" 11.8m x 2.5m x 2.6m	8,440 lbs 3 830 kg
Boom Assembly Part 1 [9] (All boom assemblies) ①②	63'-4" x 6'-3" x 7'-5" 19.3m x 1.9m x 2.25m	15,650 lbs 7 100 kg
Boom Assembly Part 2 [10] 197-ft (60m) ③④④⑤	147'-4" x 8'-2" x 8'-6" 44.9m x 2.5m x 2.6m	32,405 lbs 14 700 kg
Boom Assembly Part 2 [10] 164-ft (50m) ③④⑤	112'-6" x 8'-2" x 8'-6" 34.3m x 2.5m x 2.6m	24,910 lbs 11 300 kg
Boom Assembly Part 2 [10] 131-ft (40m) ③⑤	77'-9" x 8'-2" x 8'-6" 23.7m x 2.5m x 2.6m	18,300 lbs 8 300 kg
Counterballast Block (each)	10'-8" x 5'-7" x 0'-8" 3.25m x 1.7m x 0.21m	16,360 lbs 7 420 kg
Hook Block	2'-11" x 2'-4" x 6'-11" 0.9m x 0.71m x 2.1m	3,420 lbs 1 550 kg
Top Climbing Unit with Hydraulics	39'-1" x 9'-3" x 11'-2" 11.9m x 2.83m x 3.4m	28,240 lbs 12 810 kg
Bottom Climbing Unit with Hydraulics	20'-8" x 8'-4" x 8'-0" 6.3m x 2.55m x 2.45m	40,940 lbs 18 570 kg

NOTE: Weights and dimensions are approximate. Scale components before lifting. Please consult Operation Manual before erecting, operating, servicing or dismantling crane.

[1] Slewing Assembly (Complete) includes turntable, swing motors, slewing ring and slewing ring support. Climbing shoes are detachable: add 800 lbs (365 kg) each for the two front shoes and 1,000 lbs (454 kg) each for the two back shoes, i. e., 3,600 lbs (1 638 kg) total. Dimensions and weight above do not include climbing shoes.
[2] Slewing Assembly Upper Part includes turntable and swing motors. Does not include slewing ring or slewing ring support.
[3] Slewing Assembly Lower Part includes slewing ring and slewing ring support. Does not include turntable or swing motors. Climbing shoes are detachable: add 800 lbs (365 kg) each for the two front shoes and 1,000 lbs (454 kg) each for the two back shoes, i. e., 3,600 lbs (1 638 kg) total. Dimensions and weight above do not include climbing shoes.
[4] Machine deck can be split into two (2) parts: Inner part at 24,000 lbs (10 880 kg) and Outer part at 11,230 lbs (5 090 kg).
[5] Does not include wire rope.
[6] A-frame (Complete) includes A-frame Part A, A-frame Part B (2 each), back stays (2 each), ladder and platforms.
[7] Ballast Rocker Assembly (Complete) includes Ballast Rocker Strut (2 each), ballast carrier and connecting rods (2 each).
[8] Can be broken down into two panels.
[9] Boom Assembly Part 1 includes Boom Butt Section, one Intermediate Section (621) and erection wire rope.
[10] Boom Assembly Part 2 includes boom sections and pendent bars. Does not include hoist wire rope or hook block.