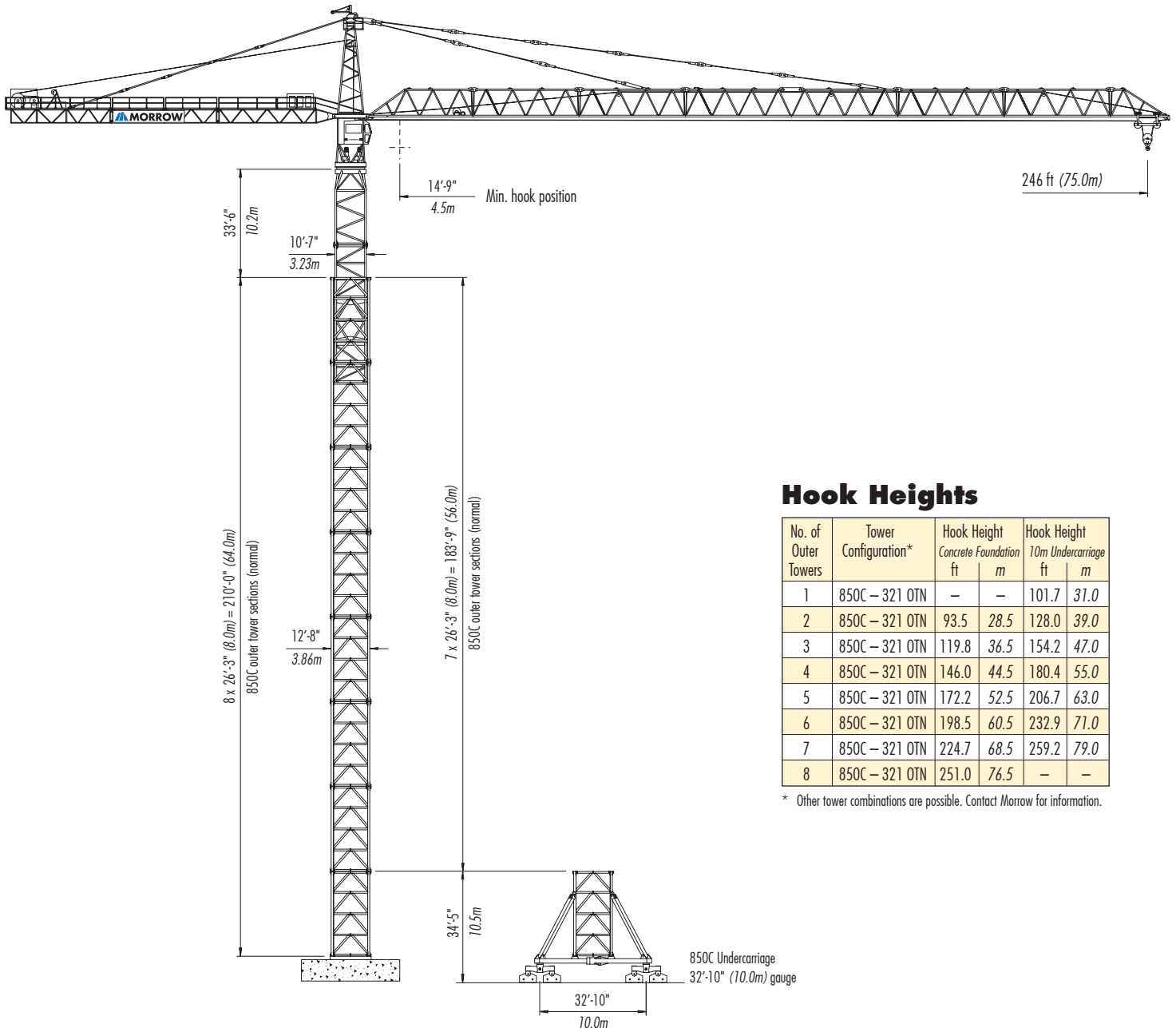


850 C 20

LIEBHERR Hammerhead Tower Crane



Hook Heights

No. of Outer Towers	Tower Configuration*	Hook Height Concrete Foundation		Hook Height 10m Undercarriage	
		ft	m	ft	m
1	850C – 321 OTN	–	–	101.7	31.0
2	850C – 321 OTN	93.5	28.5	128.0	39.0
3	850C – 321 OTN	119.8	36.5	154.2	47.0
4	850C – 321 OTN	146.0	44.5	180.4	55.0
5	850C – 321 OTN	172.2	52.5	206.7	63.0
6	850C – 321 OTN	198.5	60.5	232.9	71.0
7	850C – 321 OTN	224.7	68.5	259.2	79.0
8	850C – 321 OTN	251.0	76.5	–	–

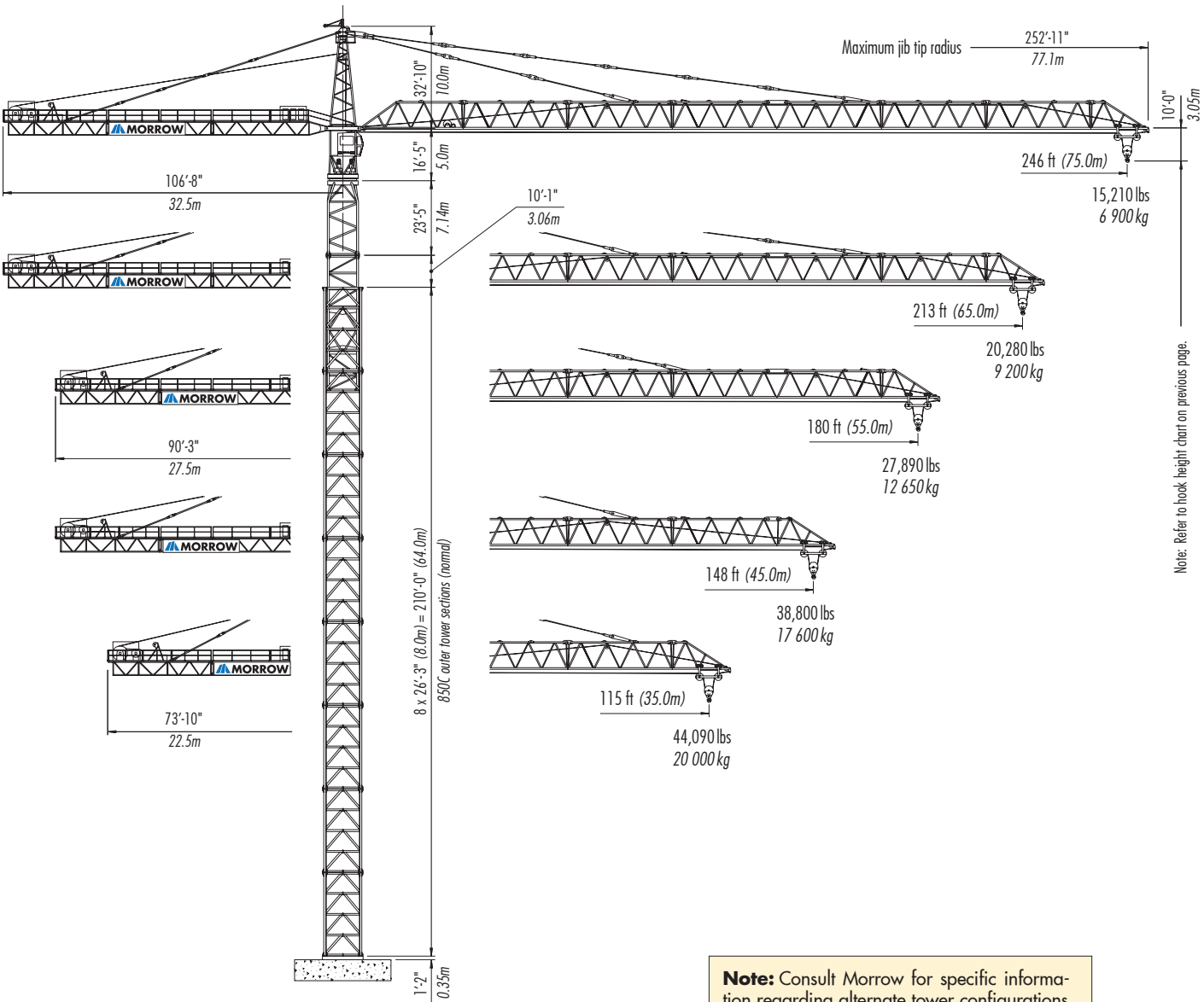
* Other tower combinations are possible. Contact Morrow for information.

Standard Configuration

with 850C Tower

max. 251 ft (76.5m) HUH on concrete foundation
max. 259 ft (79.0m) HUH on undercarriage

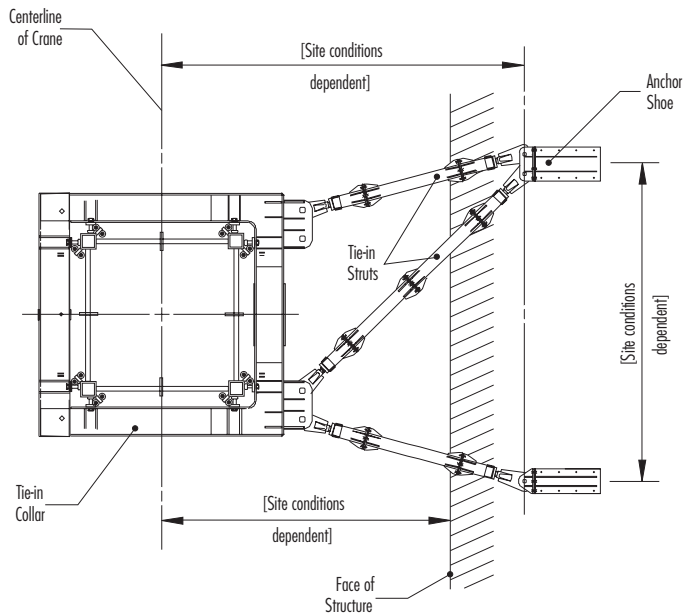
FREESTANDING
Stationary & Travelling



FREESTANDING
with 850C Tower Sections

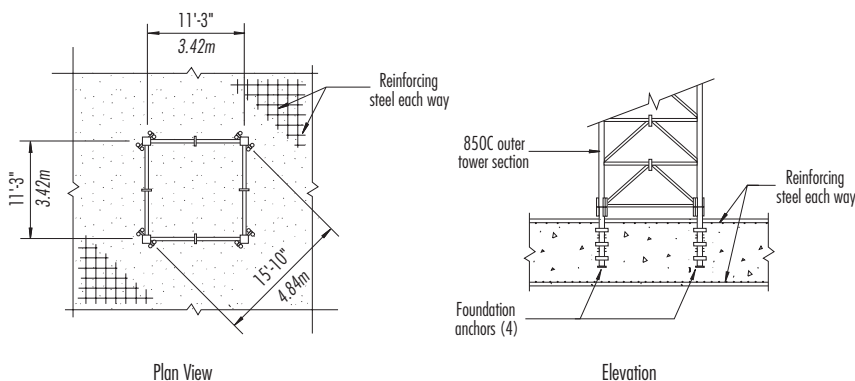
Note: Consult Morrow for specific information regarding alternate tower configurations, alternate foundation details, dimensions, reaction forces and slab opening requirements.

Note: If hook height exceeds 330 ft (100m), the number of tower sections above the uppermost tie-in location **MUST** be reduced by one tower section.

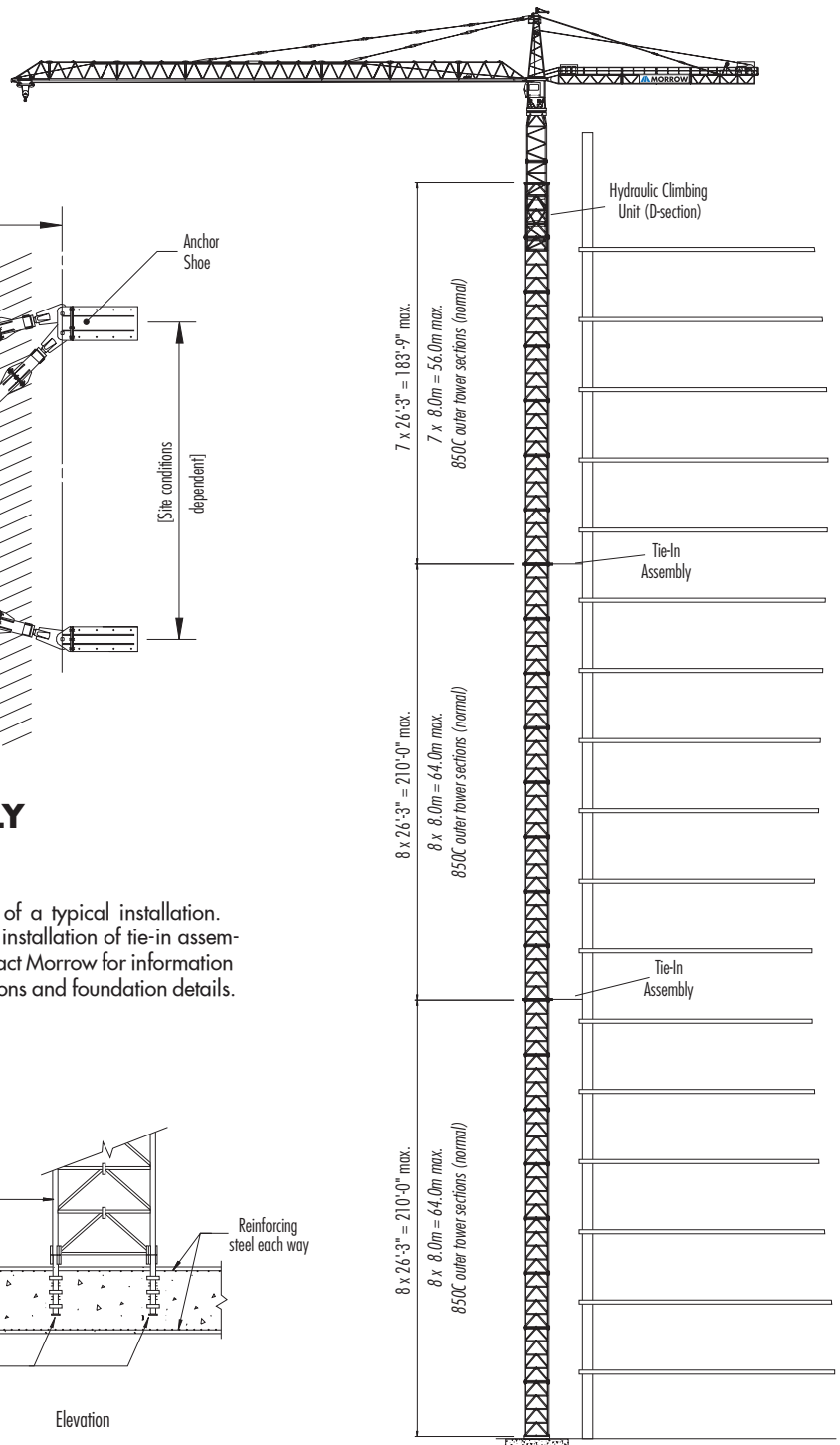


TIE-IN ASSEMBLY (Plan View)

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. Contact Morrow for information regarding dimensions, reaction forces, tie-in locations and foundation details.



FOUNDATION DETAILS with 850C Tower Sections (Concrete Slab)



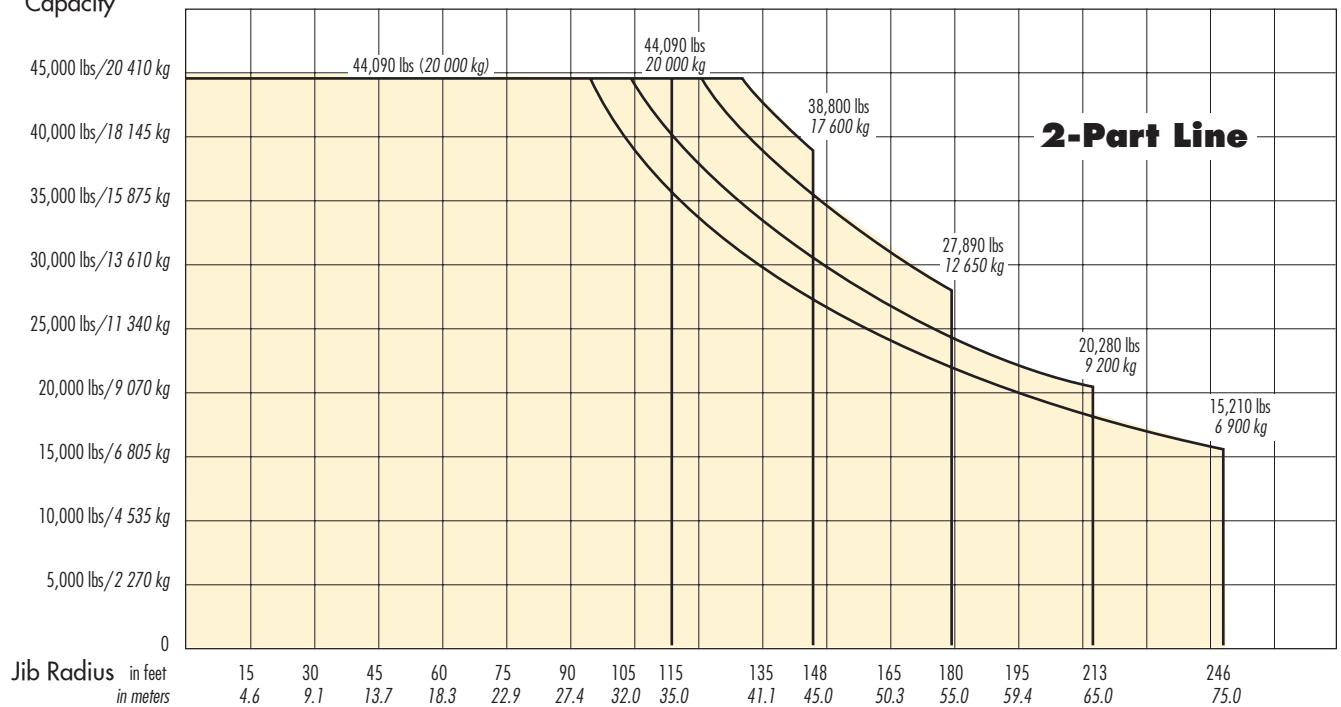
TOP CLIMBING with 850C Tower Sections (Tied to Building)

Radius and Capacities

2-Part Line

Hook Radius	2-Part Line Max Capacity — Radius	ft m	98 30.0	115 35.0	131 40.0	139 42.5	148 45.0	156 47.5	164 50.0	172 52.5	180 55.0	189 57.5	197 60.0	205 62.5	213 65.0	230 70.0	246 75.0
246 ft 75.0m	44,090 lbs — 96 ft 20 000 kg — 29.1m	lbs kg	42,680 19 360	35,870 16 270	30,775 13 960	28,770 13 050	27,095 12 290	25,575 11 600	24,205 10 980	22,950 10 410	21,805 9 890	20,745 9 410	19,775 8 970	18,870 8 560	18,035 8 180	16,535 7 500	15,210 6 900
213 ft 65.0m	44,090 lbs — 105 ft 20 000 kg — 32.0m	lbs kg	44,090 20 000	39,925 18 110	34,325 15 570	32,100 14 560	30,245 13 720	28,595 12 970	27,070 12 280	25,685 11 650	24,425 11 080	23,260 10 550	22,200 10 070	21,210 9 620	20,280 9 200		
180 ft 55.0m	44,090 lbs — 121 ft 20 000 kg — 36.8m	lbs kg	44,090 20 000	44,090 20 000	40,125 18 200	37,480 17 000	35,120 15 930	33,025 14 980	31,150 14 130	29,430 13 350	27,890 12 650						
148 ft 45.0m	44,090 lbs — 132 ft 20 000 kg — 40.1m	lbs kg	44,090 20 000	44,090 20 000	44,090 20 000	41,380 18 770	38,800 17 600										
115 ft 35.0m	44,090 lbs — 115 ft 20 000 kg — 35.0m	lbs kg	44,090 20 000	44,090 20 000													

Capacity



IMPORTANT: This data applies only to crane with serial number #1305

Hoist Speed and Capacity

Hoist Unit	WiW 320 RX 004	2-Part Line (Standard)					
255 hp (190 kW) DC hoist unit Ward Leonard 4-speed gearbox Electromagnetic gear shifting 2L 160		Gear	Capacity	Line Speed	Capacity	Line Speed	
		1	44,090 lbs	@ 150 fpm	20 000 kg	@ 46 m/min	
		2	26,455 lbs	@ 240 fpm	12 000 kg	@ 73 m/min	
		3	13,230 lbs	@ 440 fpm	6 000 kg	@ 134 m/min	
		4	4,410 lbs	@ 1,000 fpm	2 000 kg	@ 305 m/min	

Hoist Unit	WiW 320 RX 004	2-Part Line (High Speed)					
255 hp (190 kW) DC hoist unit Ward Leonard 4-speed gearbox Electromagnetic gear shifting 2L 160		Gear	Capacity	Line Speed	Capacity	Line Speed	
		1	22,045 lbs	@ 195 fpm	10 000 kg	@ 59 m/min	
		2	13,230 lbs	@ 312 fpm	6 000 kg	@ 95 m/min	
		3	6,615 lbs	@ 572 fpm	3 000 kg	@ 174 m/min	
		4	2,205 lbs	@ 1,300 fpm	1 000 kg	@ 396 m/min	

Motor Information

Drive Unit	Horsepower	Kilowatts	Speed	
Swing	5 x 10 hp	5 x 7.5 kW	0.6 rpm	
Trolley	12.3 hp	9.2 kW	65 –131 / 131–262 fpm	20m–40m / 40m–80m / min

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.

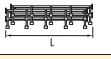
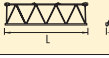
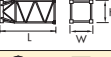
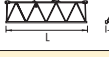
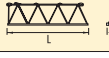
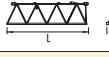
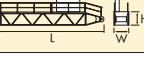
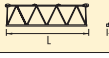
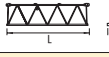
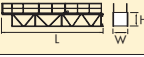
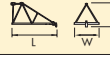
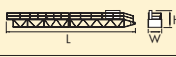
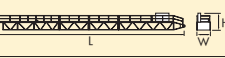
Service size: 400 Amperes

NOTES:

- For electric power provided by an electric utility, do not use open Delta transformers.
- 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 notice. For other configurations and specifications, contact Morrow Equipment.

Component List

Description	Dimensions L x W x H	Weight	Description	Dimensions L x W x H	Weight
Outer Tower Section ¹ 850C #321	 26'-3" x 8'-7" x 9'-0" 8.0m x 2.62m x 2.75m	25,600 lbs 11 610 kg	Jib Section ① #611	 33'-9" x 8'-11" x 9'-10" 10.3m x 2.72m x 3.0m	12,570 lbs 5 700 kg
Bottom Climbing Unit with Hydraulics	 42'-0" x 10'-7" x 10'-7" 12.8m x 3.23m x 2.23m	51,000 lbs 23 130 kg	Jib Section ② #621	 33'-6" x 8'-9" x 9'-2" 10.2m x 2.67m x 2.8m	12,125 lbs 5 500 kg
Inner Tower Section (C-Section) #333	 23'-5" x 10'-7" x 10'-7" 7.14m x 3.23m x 3.23m	22,050 lbs 10 000 kg	Jib Section ③ #622	 33'-6" x 8'-9" x 9'-10" 10.2m x 2.67m x 3.0m	11,800 lbs 5 350 kg
Slewing Assembly ²	 17'-5" x 10'-2" x 11'-3" 5.3m x 3.1m x 3.43m	38,800 lbs 17 600 kg	Jib Section ④ #623	 33'-6" x 8'-9" x 9'-10" 10.2m x 2.67m x 3.0m	11,800 lbs 5 350 kg
Tower Top	 32'-6" x 9'-6" x 9'-6" 10.0m x 2.9m x 2.9m	15,400 lbs 6 980 kg	Jib Section ⑤ #631	 33'-6" x 8'-9" x 9'-10" 10.2m x 2.67m x 3.0m	11,000 lbs 4 990 kg
Counterjib Section 1 (Inner)	 36'-10" x 9'-0" x 6'-0" 11.2m x 2.74m x 1.83m	13,970 lbs 6 335 kg	Jib Section ⑥ #632	 33'-6" x 8'-9" x 9'-2" 10.2m x 2.67m x 2.8m	9,500 lbs 4 310 kg
Counterjib Section 2 (Intermediate)	 17'-0" x 9'-0" x 6'-0" 5.2m x 2.74m x 1.83m	6,610 lbs 3 000 kg	Jib Section ⑦ #633	 33'-6" x 8'-9" x 9'-2" 10.2m x 2.67m x 2.8m	9,500 lbs 4 310 kg
Counterjib Section 3 (Outer)	 32'-0" x 9'-0" x 6'-7" 9.76m x 2.74m x 2.0m	13,330 lbs 6 045 kg	Jib Section ⑧ #641	 19'-5" x 8'-11" x 9'-10" 5.92m x 2.72m x 3.0m	3,375 lbs 1 530 kg
Hoist Unit with Frame ³ (255 hp/190 kW)	 13'-9" x 9'-10" x 4'-4" 4.2m x 3.0m x 1.32m	30,865 lbs 14 000 kg	Jib Assembly (Part 1) ⁵ for Jibs 213 ft to 246 ft	①②③④ 132'-2" x 9'-10" x 14'-9" 40.3m x 3.0m x 4.5m	50,485 lbs 22 900 kg
Counterjib A ⁴ (Complete)	 67'-8" x 9'-0" x 9'-4" 20.6m x 2.74m x 2.85m	27,845 lbs 12 630 kg	Jib Assembly (Part 2) ⁶ for 246-ft (75.0m) jib	⑤⑥⑦⑧ 118'-0" x 8'-11" x 10'-6" 36.0m x 2.72m x 3.2m	34,260 lbs 15 540 kg
Counterjib B ⁴ (Complete)	 83'-10" x 9'-0" x 9'-4" 25.6m x 2.74m x 2.85m	34,590 lbs 15 690 kg	Jib Assembly (Part 2) ⁶ for 213-ft (65.0m) jib	⑤⑥⑧ 85'-4" x 8'-11" x 10'-6" 26.0m x 2.72m x 3.2m	24,755 lbs 11 230 kg
Counterjib C ⁴ (Complete)	 100'-4" x 9'-0" x 9'-4" 30.6m x 2.74m x 2.85m	41,335 lbs 18 750 kg	Jib Assembly (Complete) ⁷ 180-ft (55.0m) jib	①②③④⑤⑧ 184'-0" x 9'-10" x 14'-9" 56.1m x 3.0m x 4.5m	65,035 lbs 29 500 kg
Counterweight (ea.) A Block	 8'-2" x 7.5" x 6'-6" 2.5m x 0.19m x 1.98m	4,960 lbs 2 250 kg	Jib Assembly (Complete) ⁷ 148-ft (45.0m) jib	①②③④⑧ 151'-1" x 9'-10" x 14'-9" 46.1m x 3.0m x 4.5m	53,955 lbs 24 475 kg
Counterweight (ea.) B Block	 8'-2" x 7.5" x 4'-2" 2.5m x 0.19m x 1.27m	3,200 lbs 1 450 kg	Jib Assembly (Complete) ⁷ 115-ft (35.0m) jib	①②③⑧ 118'-5" x 9'-10" x 14'-9" 36.1m x 3.0m x 4.5m	42,085 lbs 19 090 kg
Trolley	 7'-10" x 9'-10" x 5'-1" 2.4m x 3.0m x 1.55m	1,985 lbs 900 kg	Hook Block	 2'-10" x 1'-4" x 4'-6" 0.85m x 0.4m x 1.4m	2,340 lbs 1 060 kg

NOTE: Weights and dimensions are approximate. Scale components before lifting.

¹ Dimensions shown are for a stack of four (4) tower section panels. Four panels are required for each tower section (complete). Dimensions of a completely assembled tower section are 26'-3" x 12'-8" x 12'-8" (8.0m x 3.86m x 3.86m).

² Slewing Assembly includes operator's cab, five (5) swing motors and slewing ring.

³ Weight of the hoist unit does not include hoist wire rope.

⁴ Weights of Counterjibs A, B and C include counterjib sections, connection pins and handrails. Weights do not include electrical panel (3,960 lbs/1 795 kg) or hoist unit (30,865 lbs/14 000 kg).

⁵ Jib Assembly Part 1 includes jib sections ①, ②, ③ and ④, jib pendant bars, trolley wire rope and trolley.

⁶ Jib Assembly Part 2 includes jib sections and pendant bar.

⁷ Jib Assembly (Complete) includes jib sections, jib pendant bars, trolley wire rope and trolley.