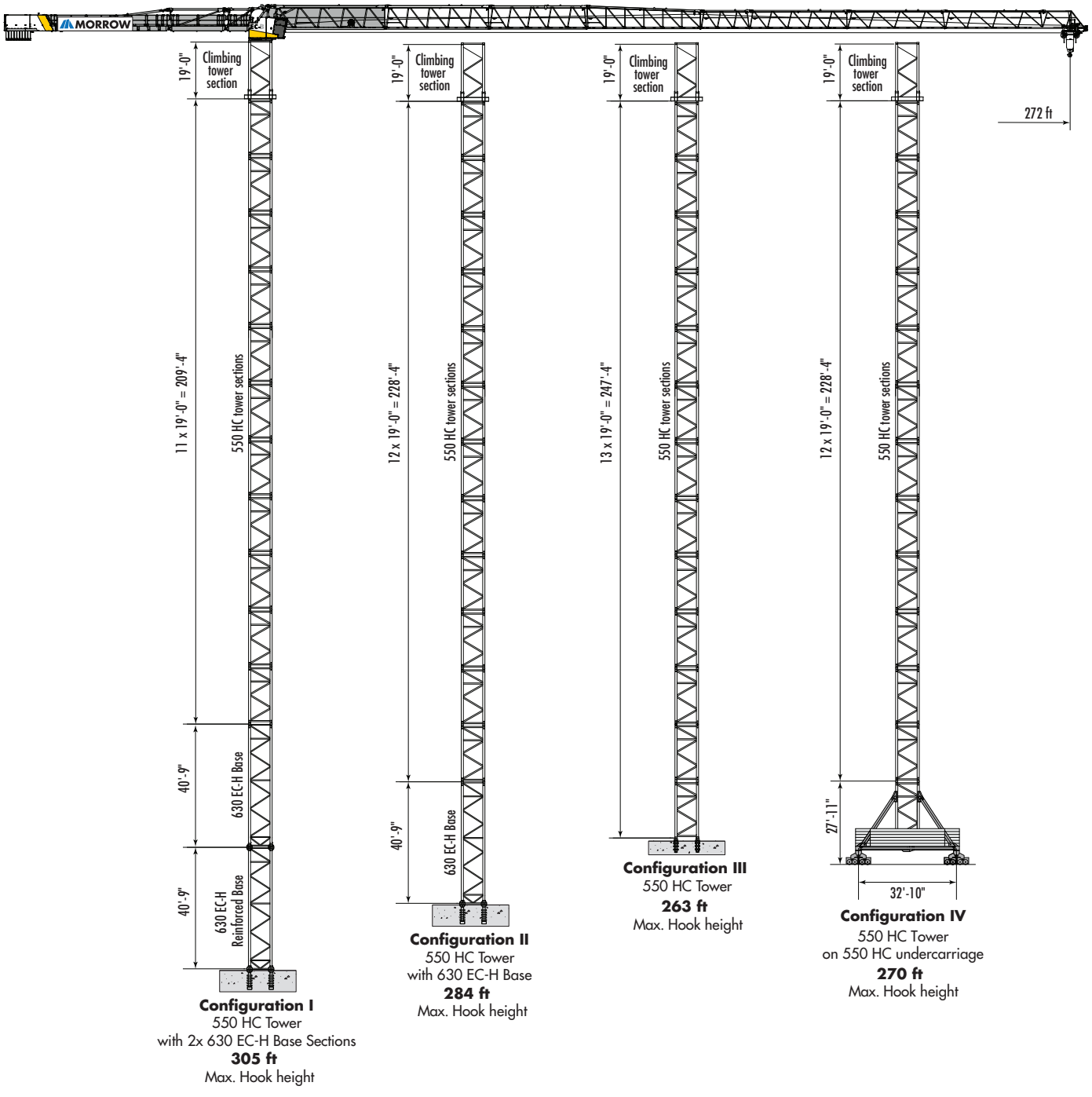
470 EC-B 20 Litronic®

LIEBHERR Flat-Top Tower Crane



Configuration I
550 HC Tower
with 2x 630 EC-H Base Sections
305 ft
Max. Hook height

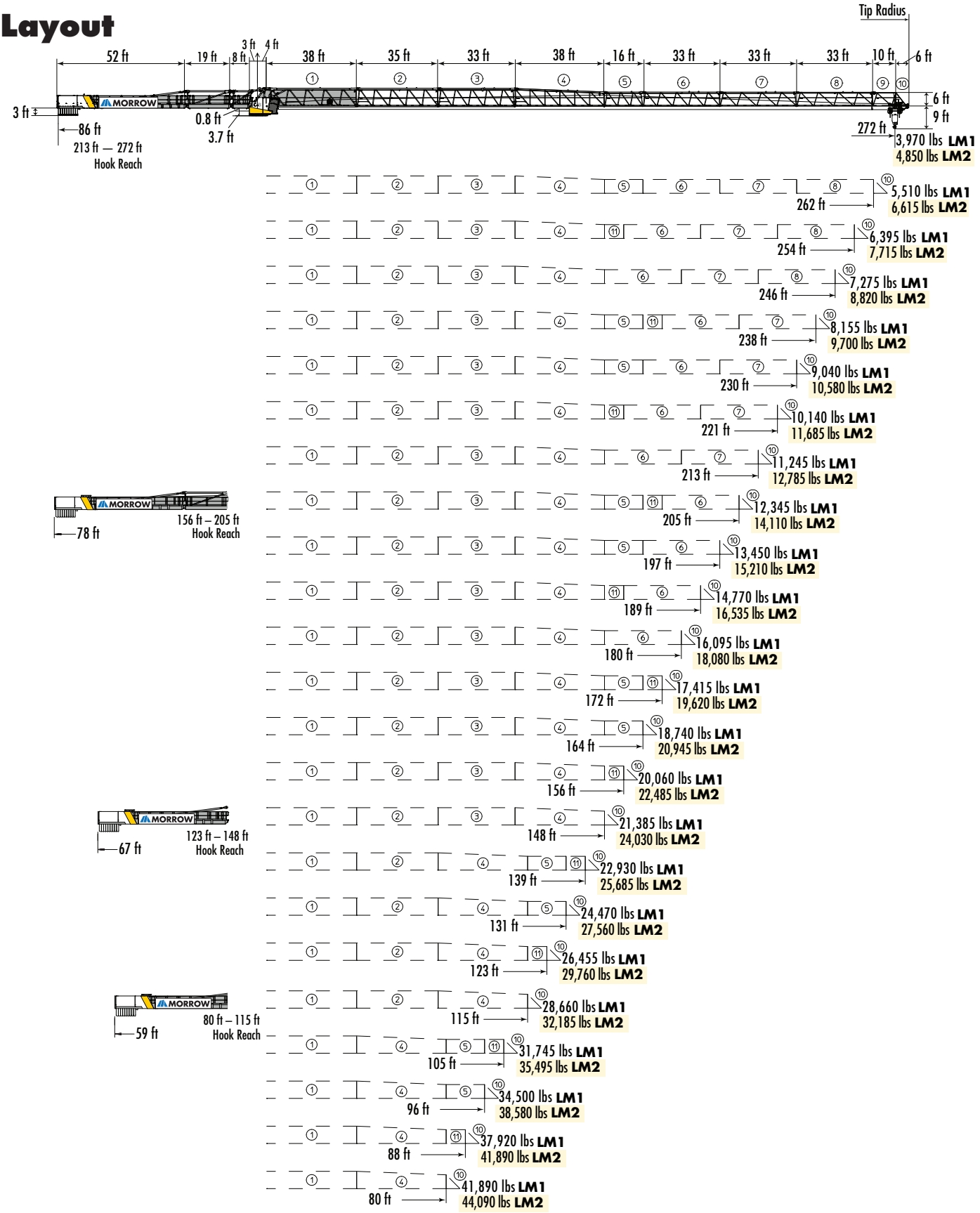
Configuration II
550 HC Tower
with 630 EC-H Base
284 ft
Max. Hook height

Configuration III
550 HC Tower
263 ft
Max. Hook height

Configuration IV
550 HC Tower
on 550 HC undercarriage
270 ft
Max. Hook height

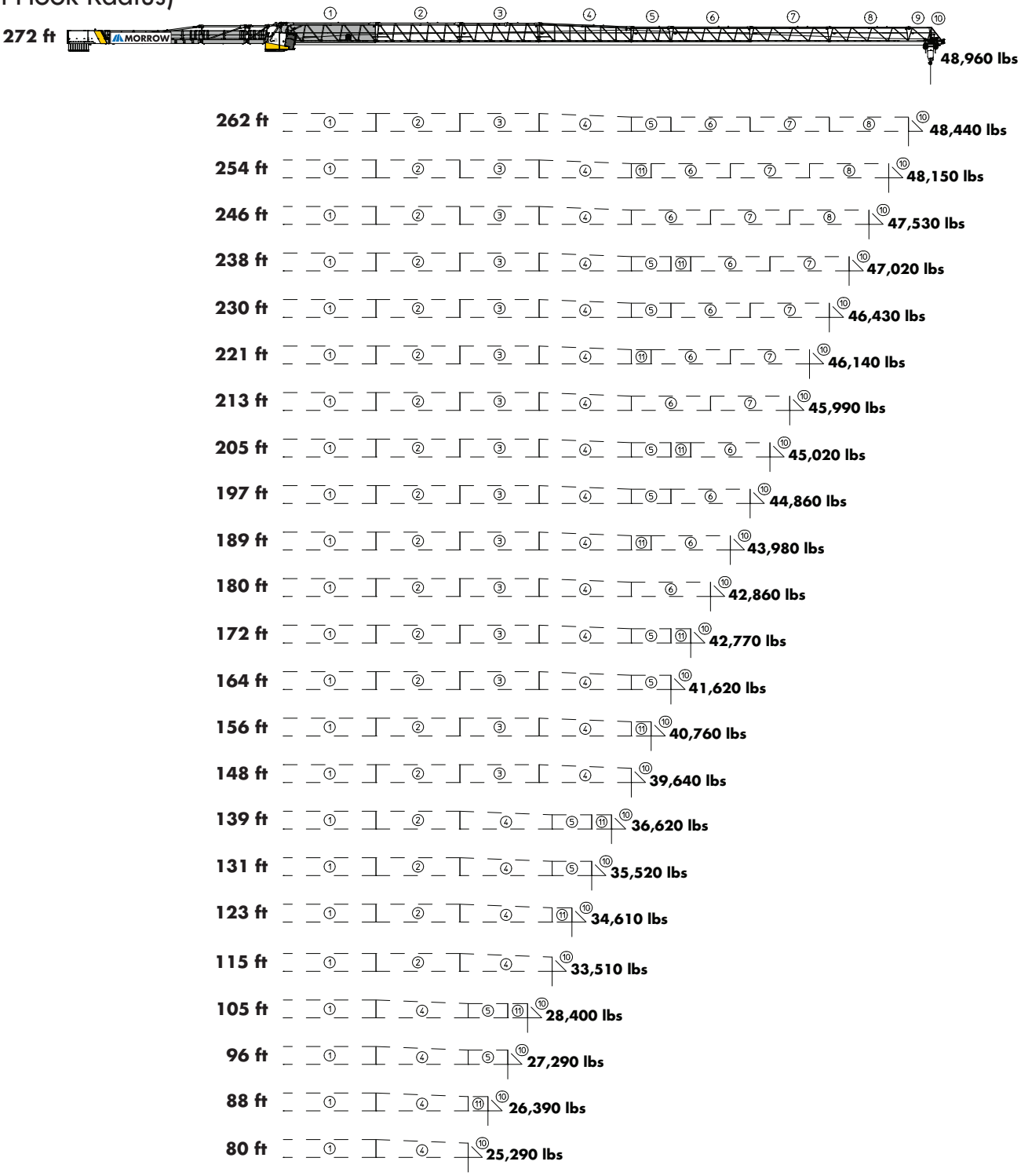
NOTE: Greater hook heights are available. Contact MORROW for more information.

Jib Layout


Tip Radius
52 ft
19 ft
8 ft
3 ft
4 ft
38 ft
35 ft
33 ft
38 ft
16 ft
33 ft
33 ft
33 ft
10 ft
6 ft
3 ft
0.8 ft
3.7 ft
86 ft
213 ft — 272 ft
Hook Reach
6 ft
9 ft
272 ft
3,970 lbs LM1
4,850 lbs LM2
262 ft
5,510 lbs LM1
6,615 lbs LM2
254 ft
6,395 lbs LM1
7,715 lbs LM2
246 ft
7,275 lbs LM1
8,820 lbs LM2
238 ft
8,155 lbs LM1
9,700 lbs LM2
230 ft
9,040 lbs LM1
10,580 lbs LM2
221 ft
10,140 lbs LM1
11,685 lbs LM2
213 ft
11,245 lbs LM1
12,785 lbs LM2
78 ft
156 ft – 205 ft
Hook Reach
205 ft
12,345 lbs LM1
14,110 lbs LM2
197 ft
13,450 lbs LM1
15,210 lbs LM2
189 ft
14,770 lbs LM1
16,535 lbs LM2
180 ft
16,095 lbs LM1
18,080 lbs LM2
172 ft
17,415 lbs LM1
19,620 lbs LM2
164 ft
18,740 lbs LM1
20,945 lbs LM2
156 ft
20,060 lbs LM1
22,485 lbs LM2
67 ft
123 ft – 148 ft
Hook Reach
148 ft
21,385 lbs LM1
24,030 lbs LM2
139 ft
22,930 lbs LM1
25,685 lbs LM2
131 ft
24,470 lbs LM1
27,560 lbs LM2
123 ft
26,455 lbs LM1
29,760 lbs LM2
59 ft
80 ft – 115 ft
Hook Reach
115 ft
28,660 lbs LM1
32,185 lbs LM2
105 ft
31,745 lbs LM1
35,495 lbs LM2
96 ft
34,500 lbs LM1
38,580 lbs LM2
88 ft
37,920 lbs LM1
41,890 lbs LM2
80 ft
41,890 lbs LM1
44,090 lbs LM2

Jib Erection Weights

(Based on Hook Radius)



NOTE: Weights are for complete jib assemblies including jib sections, trolley travel gear with rope, trolley and hook block assembly. Weights are approximate. Scale components before lifting. Jib can be installed in smaller segments. Consult Instruction Manual for specific weights.

Radius and Capacities

LIEBHERR 470 EC-B 20 Litronic®

Minimum Hook Radius for all jib lengths is 9'-10"

Hook Radius	Tip Radius	2-Part Line Max Capacity – Radius	ft	80	88	96	105	115	123	131	139	148	156	164	172	180	189	197	205	213	221	230	238	246	254	262	272
272 ft	278	44,092 lbs – 44 ft	lbs	22,200	19,750	17,725	16,030	14,285	13,070	12,040	11,110	10,295	9,545	8,910	8,310	7,760	7,275	6,835	6,415	6,040	5,665	5,355	5,050	4,760	4,495	4,255	3,970
262 ft	268	44,092 lbs – 51 ft	lbs	26,430	23,565	21,230	19,245	17,195	15,805	14,570	13,490	12,545	11,685	10,935	10,230	9,610	9,040	8,510	8,025	7,585	7,185	6,790	6,435	6,105	5,800	5,510	
254 ft	260	44,092 lbs – 54 ft	lbs	28,395	25,350	22,840	20,720	18,540	17,040	15,740	14,595	13,580	12,675	11,860	11,110	10,450	9,830	9,280	8,775	8,290	7,850	7,450	7,075	6,725	6,390		
246 ft	252	44,092 lbs – 57 ft	lbs	30,050	26,850	24,230	22,000	19,710	18,145	16,775	15,565	14,505	13,535	12,675	11,905	11,200	10,560	9,965	9,435	8,930	8,465	8,045	7,650	7,270			
238 ft	243	44,092 lbs – 60 ft	lbs	31,635	28,285	25,530	23,215	20,790	19,160	17,725	16,445	15,320	14,330	13,425	12,610	11,880	11,200	10,600	10,030	9,500	9,015	8,575	8,155				
230 ft	235	44,092 lbs – 62 ft	lbs	32,890	29,430	26,590	24,185	21,690	19,995	18,520	17,195	16,050	15,010	14,065	13,230	12,480	11,770	11,130	10,540	10,010	9,500	9,040					
221 ft	227	44,092 lbs – 64 ft	lbs	34,415	30,840	27,890	25,420	22,840	21,075	19,530	18,165	16,950	15,870	14,900	14,020	13,230	12,500	11,840	11,220	10,670	10,140						
213 ft	219	44,092 lbs – 66 ft	lbs	35,540	31,920	28,925	26,410	23,765	21,960	20,370	18,980	17,745	16,620	15,630	14,725	13,910	13,140	12,455	11,815	11,240							
205 ft	211	44,092 lbs – 69 ft	lbs	37,370	33,510	30,310	27,645	24,870	22,950	21,295	19,820	18,520	17,350	16,315	15,365	14,505	13,710	13,005	12,345								
197 ft	202	44,092 lbs – 70 ft	lbs	38,360	34,435	31,170	28,440	25,595	23,630	21,935	20,435	19,115	17,900	16,840	15,870	14,990	14,175	13,450									
189 ft	194	44,092 lbs – 72 ft	lbs	39,420	35,450	32,140	29,340	26,455	24,450	22,730	21,185	19,820	18,585	17,505	16,490	15,585	14,770										
180 ft	186	44,092 lbs – 74 ft	lbs	40,410	36,355	32,980	30,160	27,180	25,155	23,370	21,805	20,415	19,160	18,035	17,020	16,095											
172 ft	178	44,092 lbs – 75 ft	lbs	41,380	37,215	33,750	30,840	27,820	25,730	23,920	22,310	20,880	19,600	18,450	17,415												
164 ft	170	44,092 lbs – 75 ft	lbs	41,425	37,345	33,950	31,085	28,065	25,990	24,185	22,595	21,165	19,885	18,740													
156 ft	161	44,092 lbs – 75 ft	lbs	41,470	37,435	34,060	31,215	28,220	26,170	24,360	22,750	21,340	20,060														
148 ft	153	44,092 lbs – 75 ft	lbs	41,470	37,455	34,105	31,240	28,260	26,210	24,405	22,795	21,385															
139 ft	145	44,092 lbs – 75 ft	lbs	41,490	37,520	34,170	31,350	28,370	26,320	24,515	22,930																
131 ft	137	44,092 lbs – 75 ft	lbs	41,490	37,480	34,150	31,305	28,330	26,280	24,470																	
123 ft	129	44,092 lbs – 75 ft	lbs	41,535	37,590	34,260	31,460	28,505	26,455																		
115 ft	120	44,092 lbs – 75 ft	lbs	41,555	37,675	34,390	31,590	28,660																			
105 ft	110	44,092 lbs – 75 ft	lbs	41,600	37,765	34,525	31,745																				
96 ft	102	44,092 lbs – 75 ft	lbs	41,600	37,740	34,500																					
88 ft	94	44,092 lbs – 75 ft	lbs	41,665	37,920																						
80 ft	86	44,092 lbs – 75 ft	lbs	41,890																							

LM 1

Standard mode

Radius and Capacities

LIEBHERR 470 EC-B 20 Litronic®

Minimum Hook Radius for all jib lengths is 9'-10"

Hook Radius	Tip Radius	2-Part Line Max Capacity – Radius	ft	80	88	96	105	115	123	131	139	148	156	164	172	180	189	197	205	213	221	230	238	246	254	262	272
272 ft	278	44,092 lbs – 49 ft	lbs	25,240	22,510	20,240	18,340	16,380	15,035	13,865	12,830	11,925	11,090	10,360	9,700	9,105	8,555	8,045	7,585	7,165	6,770	6,390	6,060	5,730	5,445	5,160	4,850
262 ft	268	44,092 lbs – 57 ft	lbs	30,070	26,875	24,250	22,025	19,730	18,165	16,800	15,585	14,505	13,560	12,700	11,925	11,220	10,580	9,985	9,435	8,950	8,490	8,045	7,650	7,295	6,945	6,615	
254 ft	260	44,092 lbs – 61 ft	lbs	32,650	29,210	26,345	23,965	21,495	19,795	18,320	17,020	15,870	14,835	13,910	13,070	12,325	11,620	11,000	10,405	9,875	9,370	8,930	8,490	8,090	7,715		
246 ft	252	44,092 lbs – 65 ft	lbs	34,875	31,215	28,220	25,685	23,060	21,250	19,685	18,300	17,085	15,980	15,010	14,110	13,315	12,565	11,905	11,290	10,715	10,185	9,700	9,235	8,820			
238 ft	243	44,092 lbs – 67 ft	lbs	36,265	32,495	29,365	26,740	24,010	22,155	20,525	19,090	17,835	16,690	15,675	14,750	13,910	13,160	12,455	11,815	11,220	10,670	10,160	9,700				
230 ft	235	44,092 lbs – 69 ft	lbs	37,325	33,445	30,245	27,580	24,780	22,860	21,210	19,730	18,450	17,285	16,225	15,280	14,440	13,645	12,940	12,280	11,660	11,110	10,580					
221 ft	227	44,092 lbs – 70 ft	lbs	38,425	34,525	31,280	28,550	25,730	23,765	22,070	20,570	19,245	18,035	16,975	16,005	15,125	14,310	13,580	12,895	12,260	11,685						
213 ft	219	44,092 lbs – 72 ft	lbs	39,460	35,515	32,230	29,450	26,565	24,580	22,840	21,295	19,950	18,715	17,615	16,620	15,720	14,880	14,130	13,425	12,785							
205 ft	211	44,092 lbs – 75 ft	lbs	41,380	37,215	33,775	30,865	27,845	25,750	23,940	22,330	20,900	19,620	18,475	17,440	16,490	15,630	14,835	14,110								
197 ft	202	44,092 lbs – 77 ft	lbs	42,350	38,095	34,570	31,590	28,505	26,365	24,515	22,860	21,405	20,105	18,940	17,855	16,910	16,030	15,210									
189 ft	194	44,092 lbs – 79 ft	lbs	43,320	39,020	35,430	32,410	29,255	27,095	25,200	23,520	22,045	20,700	19,510	18,430	17,440	16,535										
180 ft	186	44,092 lbs – 82 ft	lbs	44,090	40,720	36,925	33,750	30,420	28,150	26,170	24,425	22,880	21,470	20,240	19,090	18,080											
172 ft	178	44,092 lbs – 84 ft	lbs	44,090	41,600	37,765	34,525	31,170	28,860	26,830	25,045	23,455	22,045	20,765	19,620												
164 ft	170	44,092 lbs – 84 ft	lbs	44,090	41,645	37,850	34,635	31,305	28,990	26,985	25,200	23,630	22,220	20,940													
156 ft	161	44,092 lbs – 84 ft	lbs	44,090	41,690	37,960	34,810	31,505	29,230	27,250	25,460	23,900	22,485														
148 ft	153	44,092 lbs – 84 ft	lbs	44,090	41,730	38,030	34,900	31,615	29,340	27,360	25,595	24,030															
139 ft	145	44,092 lbs – 84 ft	lbs	44,090	41,730	38,070	34,940	31,680	29,430	27,450	25,680																
131 ft	137	44,092 lbs – 84 ft	lbs	44,090	41,755	38,120	35,030	31,790	29,300	27,560																	
123 ft	129	44,092 lbs – 84 ft	lbs	44,090	41,820	38,250	35,210	31,990	29,760																		
115 ft	120	44,092 lbs – 84 ft	lbs	44,090	41,865	38,360	35,360	32,185																			
105 ft	110	44,092 lbs – 84 ft	lbs	44,090	41,910	38,450	35,495																				
96 ft	102	44,092 lbs – 84 ft	lbs	44,090	41,955	38,580																					
88 ft	94	44,092 lbs – 84 ft	lbs	44,090	41,890																						
80 ft	86	44,092 lbs – 80 ft	lbs	44,090																							

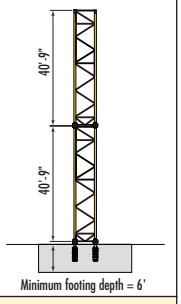
LM2
Load Plus*

*LM2 Load Plus can be used under certain configuration and operating conditions. Consult the Instruction Manual for specific restrictions.

Hook Heights

Configuration I

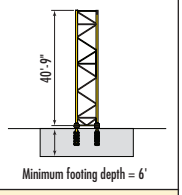
630 EC-H
Reinforced base section



No. of Tower Elements	Tower Element Type	Concrete Footing feet
0 [1]	630ECH BTSr 630ECH BTS	96'-0"
1	550HC STS	115'-0"
2	550HC STS	134'-1"
3	550HC STS	153'-1"
4	550HC STS	172'-2"
5	550HC STS	191'-2"
6	550HC STS	210'-3"
7	550HC STS	229'-3"
8	550HC STS	248'-3"
9	550HC STS	267'-3"
10	550HC STS	286'-4"
11 [3]	550HC STS	305'-4"

Configuration II

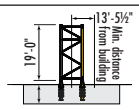
630 EC-H
Base section



No. of Tower Elements	Tower Element Type	Concrete Footing feet
0 [1]	630ECH BTS	55'-5"
1	550HC STS	74'-6"
2	550HC STS	93'-6"
3	550HC STS	112'-6"
4	550HC STS	131'-6"
5	550HC STS	150'-7"
6	550HC STS	169'-7"
7	550HC STS	188'-7"
8	550HC STS	207'-8"
9	550HC STS	226'-8"
10	550HC STS	245'-8"
11	550HC STS	264'-8"
12 [2]	550HC STS	283'-9"

Configuration III

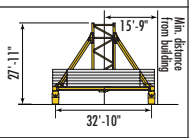
550 HC
Standard tower section



No. of Tower Elements	Tower Element Type	Concrete Footing feet
0 [1]	550HC STS	15'-5"
1	550HC STS	34'-5"
2	550HC STS	53'-6"
3	550HC STS	72'-6"
4	550HC STS	91'-6"
5	550HC STS	110'-6"
6	550HC STS	129'-7"
7	550HC STS	148'-7"
8	550HC STS	167'-7"
9	550HC STS	186'-8"
10	550HC STS	205'-8"
11	550HC STS	224'-8"
12	550HC STS	243'-9"
13 [2]	550HC STS	262'-9"

Configuration IV

550 HC
Rail traveling



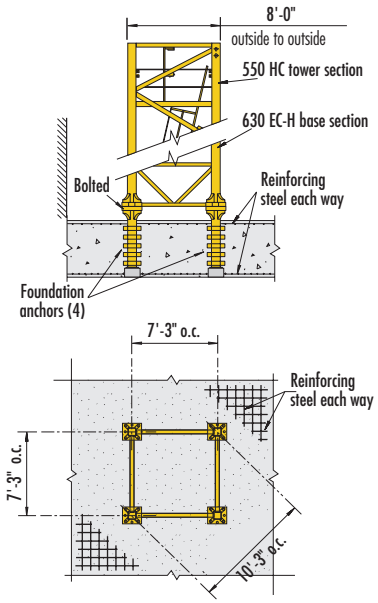
No. of Tower Elements	Tower Element Type	Rail Traveling feet
0 [1]	550HC STS	42'-0"
1	550HC STS	60'-8"
2	550HC STS	80'-0"
3	550HC STS	99'-0"
4	550HC STS	118'-0"
5	550HC STS	137'-1"
6	550HC STS	156'-2"
7	550HC STS	175'-2"
8	550HC STS	194'-2"
9	550HC STS	213'-2"
10	550HC STS	232'-3"
11	550HC STS	251'-3"
12 [2]	550HC STS	270'-3"

NOTES:

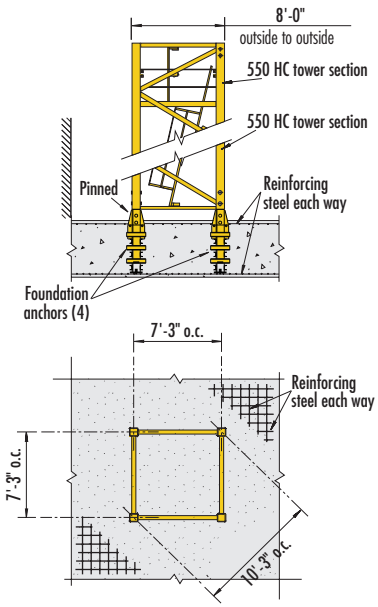
[1] Includes the climbing tower section 24 HC 630 ECTS or one additional 550 HC standard tower section.
[2] Lower or remove top climbing unit.
[3] Top climbing unit must be removed.

Alternate tower combinations are possible. Refer to Instruction manual or contact MORROW for information.
Consult crane Instruction Manual before erecting, operating, servicing, climbing or dismantling crane.

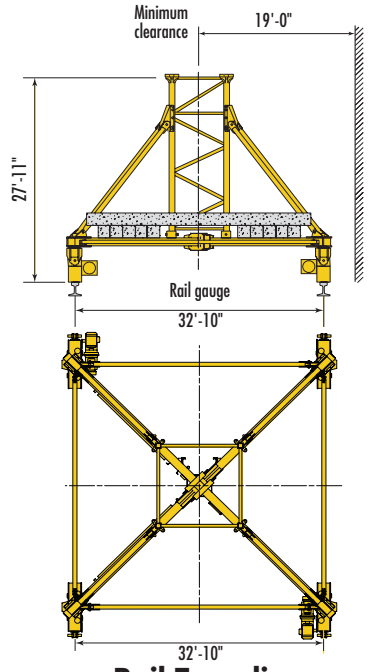
Foundation Details on concrete footing



on 630 EC-H Base Section



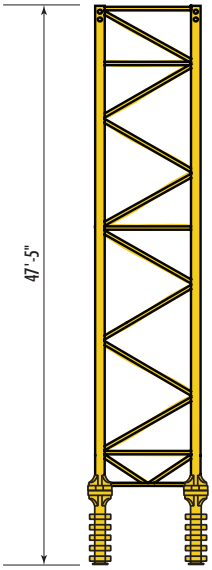
with 550 HC Tower



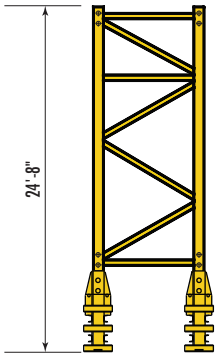
Rail Traveling

NOTE: Minimum recommended opening when tower penetrates slab is 11'-6".

Base Assembly Installation Weights



630 EC-H Base Tower Section
Section plus Anchors (4x)
Total wt: 37,475 lbs

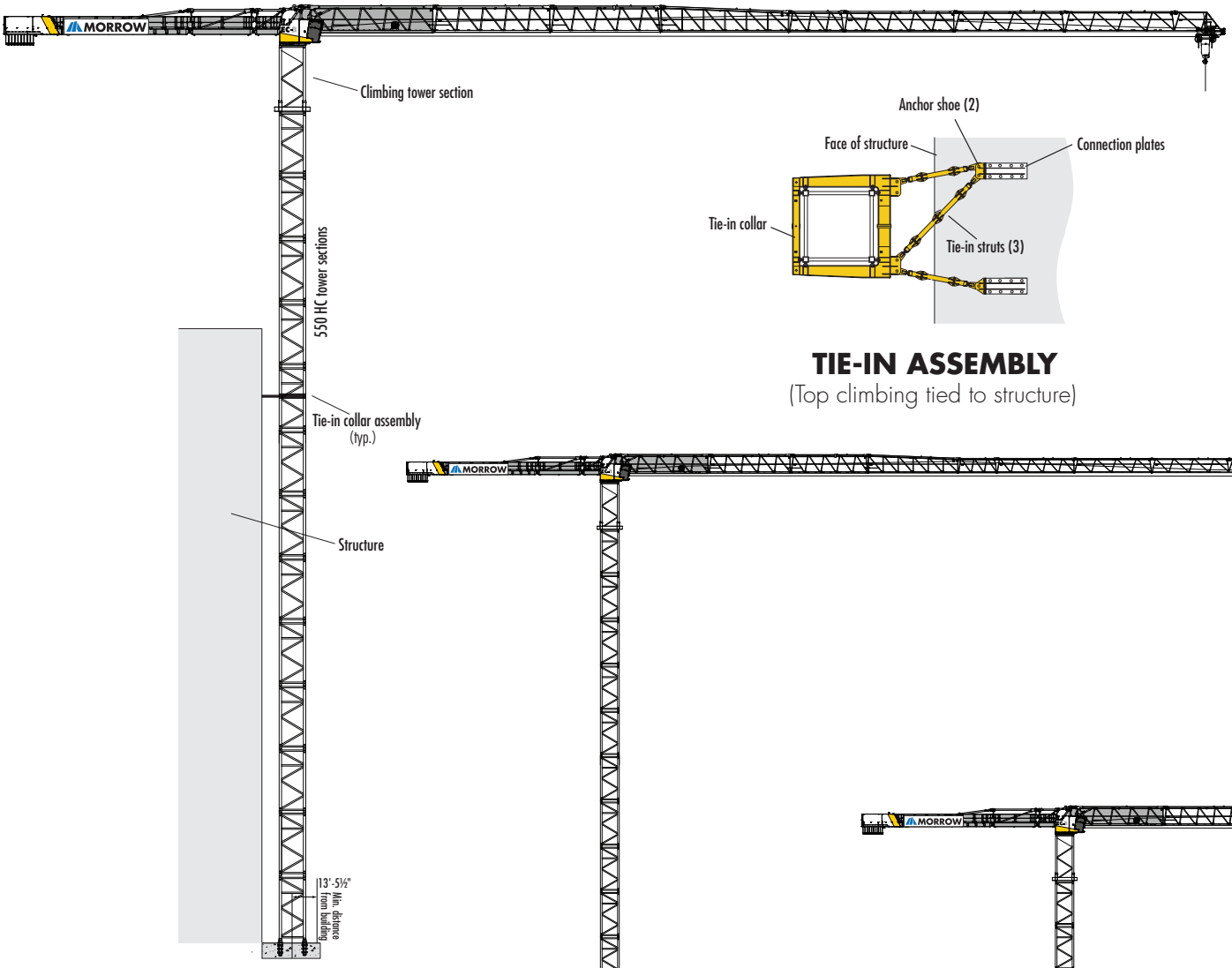


550 HC Standard Tower
Section plus Anchors (4x)
Total wt: 17,960 lbs

NOTE: For information regarding undercarriage details, rail-travelling, static undercarriages and central ballast configurations, see 470 EC-B 20 Litronic Instruction Manual.

Alternate Configurations

IMPORTANT: Configurations shown on this page are for illustrative purposes only. Actual configuration dependent on job site specific criteria. See instruction manual or contact MORROW for information.



TOP CLIMBING

(Climbing tower installed)

Top climbing crane configuration can be used when freestanding crane or when tieing crane to structure.

TIE-IN ASSEMBLY

(Top climbing tied to structure)

RAIL TRAVELING or STATIC

(with undercarriage)

Rail traveling crane configuration offers convenience of greater hook coverage on job site.

BOTTOM CLIMBING

Bottom (internal) climbing configuration is used primarily when crane is situated within a structure. Crane climbs as floors are added to the structure.

Hoist Speed and Capacity

Hoist Drive WiW 300 WZ 403	2-Part Line		
147 hp AC hoist unit 110 kW Variable frequency drive (VFD) 2-speed SD.Shift 6 layers Nominal hook height 2P - 742 ft	Speed	Capacity	Hook Speed
	1	up to 44,092 lbs @ 92 fpm up to 12,350 lbs @ 290 fpm	
	2	up to 21,380 lbs @ 180 fpm up to 5 730 lbs @ 490 fpm	

NOTE: Capacities and line speeds indicated will vary depending on the amount of hoist rope installed. Maximum hook height for this hoist unit is 1,200 ft. This crane model may be equipped with hoist units other than that specified in the data above. To verify, check the serial number of the crane and refer to the Liebherr 470 EC-B 20 Instruction Manual for additional information.

Drive Information

Drive Unit	Horsepower	Kilowatts	Speed
Trolley (VFD)	14.7 hp	11 kW	0 – 290 fpm
Swing (VFD)	2 x 10.0 hp	2 x 7.5 kW	0.7 rpm
Travelling	Information available upon request		

Counterweights

Counterjib	Four Section								Three Section B							Three Section A				Two Section				
Jib length	272 ft	262 ft	254 ft	246 ft	238 ft	230 ft	221 ft	213 ft	205 ft	197 ft	189 ft	180 ft	72 ft	164 ft	156 ft	148 ft	139 ft	131 ft	123 ft	115 ft	105 ft	96 ft	88 ft	80 ft
No. of blocks	9x A	8x A + 1x B	7x A + 2x B	8x A	8x A + 1x B	8x A	7x A + 1x B	7x A	9x A + 1x B	9x A	8x A + 1x B	8x A	8x A	7x A + 1x B	6x A + 2x B	8x A + 2x B	6x A + 3x B	6x A + 2x B	7x A	8x A + 1x B	7x A	6x A + 1x B	6x A	5x A + 1x B
Weight in lbs	44,640	42,880	32,960	39,680	42,880	39,680	38,030	34,720	47,840	44,640	42,880	39,680	39,680	37,920	36,160	46,080	39,350	36,160	34,720	42,880	34,720	42,880	29,760	28,000

NOTE: Weight of the A Block is 4,960 lbs; the B Block is 3,200 lbs. Counterweights must be installed from rear to front, i.e. towards 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 WiW 300 WZ 410 (110 KW) installed. If another hoist unit is installed, refer to the Liebherr 470 EC-B 20 Litronic Instruction Manual or contact MORROW for additional 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: 200 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 200 kW. Verify the generator provided is suitable for use with variable frequency drives (VFDs). 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 470 EC-B 20 Instruction Manual. For additional information, contact MORROW. All rights are reserved.

Component List

Description	Dimensions L x W x H	Weight
Slewing Platform (Complete)[1]	22'-10" x 7'-11" x 9'-10"	31,415 lbs
Switch Gear Cabinet with Platform	7'-7" x 7'-3" x 6'-5"	3,420 lbs
Operator's Cab with Platform	7'-11" x 6'-10" x 8'-2"	3,750 lbs
Folding Jib Head	6'-0" x 4'-10" x 7'-10"	4,190 lbs
Hoist Unit (VFD) 147 hp (110 kW)[2]	10'-10" x 4'-0" x 4'-2"	5,700 lbs
Counterjib Section #1 (Inner)	37'-2" x 7'-0" x 9'-11"	12,790 lbs
Counterjib Section #2 (Outer) with hoist unit	18'-6" x 7'-0" x 8'-9"	19,180 lbs
Counterjib Section #3 (Intermediate) Short	10'-8" x 6'-1" x 8'-1"	4,960 lbs
Counterjib Section #4 (Intermediate) Long	20'-7" x 6'-1" x 8'-1"	7,715 lbs
Counterjib A[3] 2 - Piece	53'-4" x 7'-0" x 9'-11"	31,970 lbs
Counterjib B[4] 3 - Piece (Short)	61'-6" x 7'-0" x 9'-11"	36,820 lbs
Counterjib C[5] 3 - Piece (Long)	72'-4" x 7'-0" x 9'-11"	39,685 lbs
Counterjib D[6] 4 - Piece	80'-7" x 7'-0" x 9'-11"	44,535 lbs
Climbing Tower Section	20'-7" x 8'-0" x 8'-0"	17,640 lbs
Std. Tower Section 550HC	20'-7" x 8'-0" x 8'-0"	14,290 lbs
Base Tower Section 630 EC-H (Bolt/Pin)	40'-9" x 8'-10" x 8'-10"	31,970 lbs

Description	Dimensions L x W x H	Weight
Long Tower Sect. 550HC	39'-8" x 8'-0" x 8'-0"	23,480 lbs
Top Climbing Unit & Hydraulics (550HC)	40'-9" x 9'-1" x 10'-4"	22,420 lbs
Trolley and Hook	7'-0" x 5'-0" x 6'-0"	2,870 lbs
Jib Section ①[7] #611	39'-8" x 4'-3" x 8'-5"	15,430 lbs
Jib Section ②[7] #621	35'-11" x 4'-3" x 8'-3"	8,380 lbs
Jib Section ③[7] #622	34'-0" x 4'-3" x 8'-1"	6,175 lbs
Jib Section ④[7] #623	39'-3" x 4'-3" x 8'-0"	6,175 lbs
Jib Section ⑤[7] #631	17'-4" x 4'-3" x 6'-6"	2,205 lbs
Jib Section ⑥[7] #632	33'-8" x 4'-3" x 6'-6"	3,205 lbs
Jib Section ⑦[7] #633	33'-7" x 4'-3" x 6'-5"	2,205 lbs
Jib Section ⑧[7] #634	33'-7" x 4'-3" x 6'-4"	1,545 lbs
Jib Section ⑨[7] #635	10'-7" x 4'-3" x 6'-3"	660 lbs
Jib Section ⑩[7] #641	6'-11" x 4'-3" x 6'-2"	660 lbs
Jib Section ⑪[7] #639	9'-1" x 4'-3" x 6'-6"	1,215 lbs
Foundation Anchor (each) 550 HC - Pin	5'-8" x 1'-8" x 1'-8"	915 lbs
Foundation Anchor (each) 630 EC-H - Bolt	6'-8" x 1'-9" x 1'-9"	1,390 lbs

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

[1] Slewing Platform Complete includes switch gear cabinet, operator's cab, platforms and folding jib.

[2] Includes 147 hp(110 kW) VFD hoist drive with rope drum and frame, without wire rope.

[3] Counterjib A includes sections #1(inner), #2(outer), hoist unit, pendant bars, handrails, connecting material.

[4] Counterjib B includes sections #1(inner), #2(outer), #3(intermediate - short), hoist unit, pendant bars, handrails, connecting material.

[5] Counterjib C includes sections #1(inner), #2(outer), #3(intermediate - long), hoist unit, pendant bars, handrails, connecting material.

[6] Counterjib D includes sections #1(inner), #2(outer), #3(intermediate - short), #4(intermediate - long), hoist unit, pendant bars, handrails, connecting material.

[7] Jib layout details provided in 470 EC-B 20 Litronic Instruction Manual. **IMPORTANT:** Please verify all jib components PRIOR to assembly and installation.