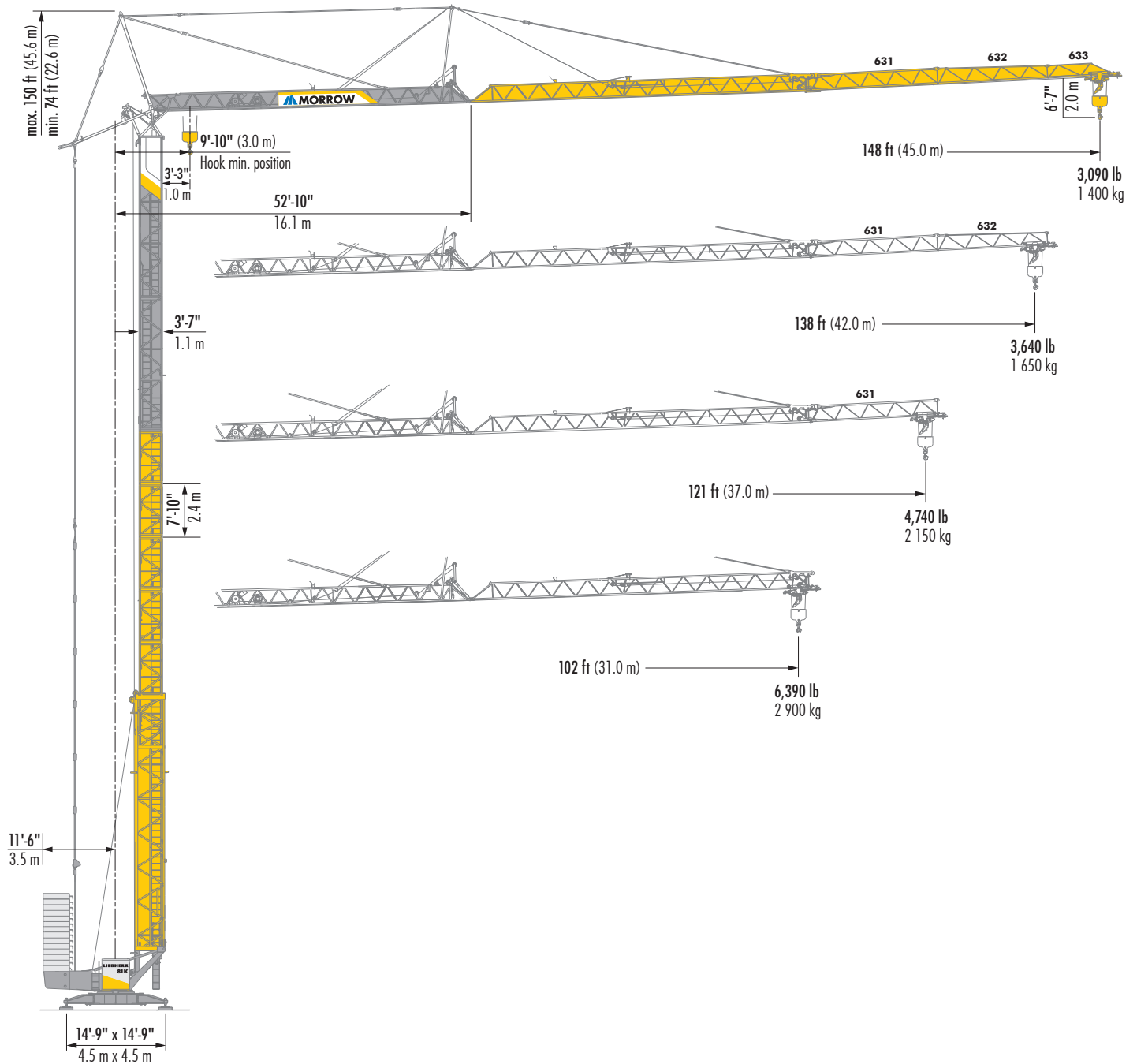


# 81 K

6t

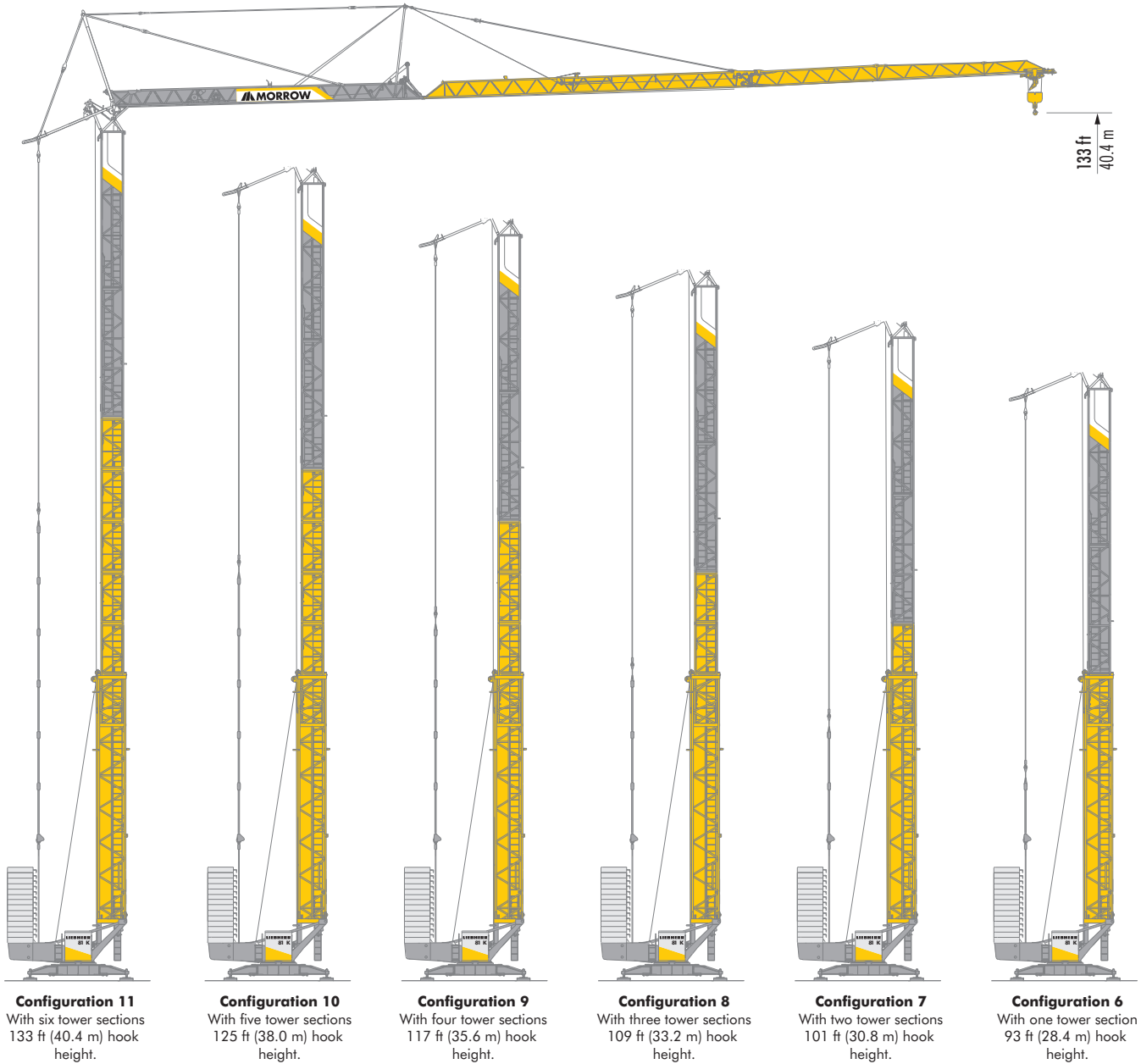
# LIEBHERR Fast-Erecting Tower Crane

## Configurations



**IMPORTANT:** Consult 81 K Instruction Manual before erecting, operating, servicing and dismantling crane.

## Tower Configurations

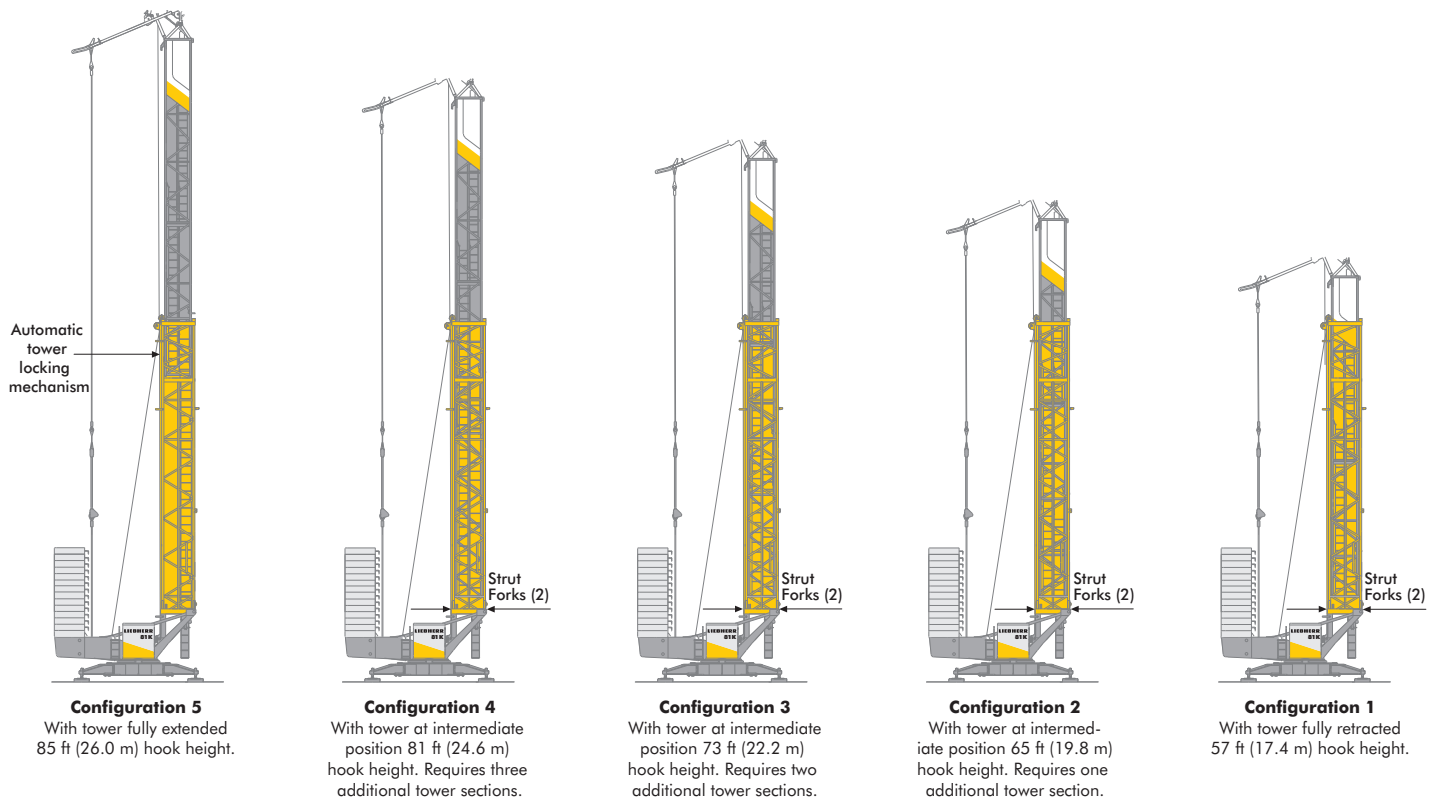


**NOTE:** Guying shown is for illustrative purposes only and may not indicate actual connections required. See 81 K Instruction Manual for more information.

## Tower Configurations

The highly adaptable **81 K fast-erecting crane**, with 11 hook heights for added flexibility and functionality. The graphic on this and the adjoining page illustrates the 11 tower configurations, starting with tower fully retracted and supported by the strut forks (**Configuration 1**), three intermediate positions supported by the strut forks (**Configurations 2-4**) and with tower completely extended, supported by the automatic tower locking mechanism (**Configuration 5**).

With tower completely extended, the crane user can add up to 6 tower sections (some restrictions exist). Eleven tower configurations provide a hook height range of 57 ft (17.4 m) to 133 ft (40.4 m).



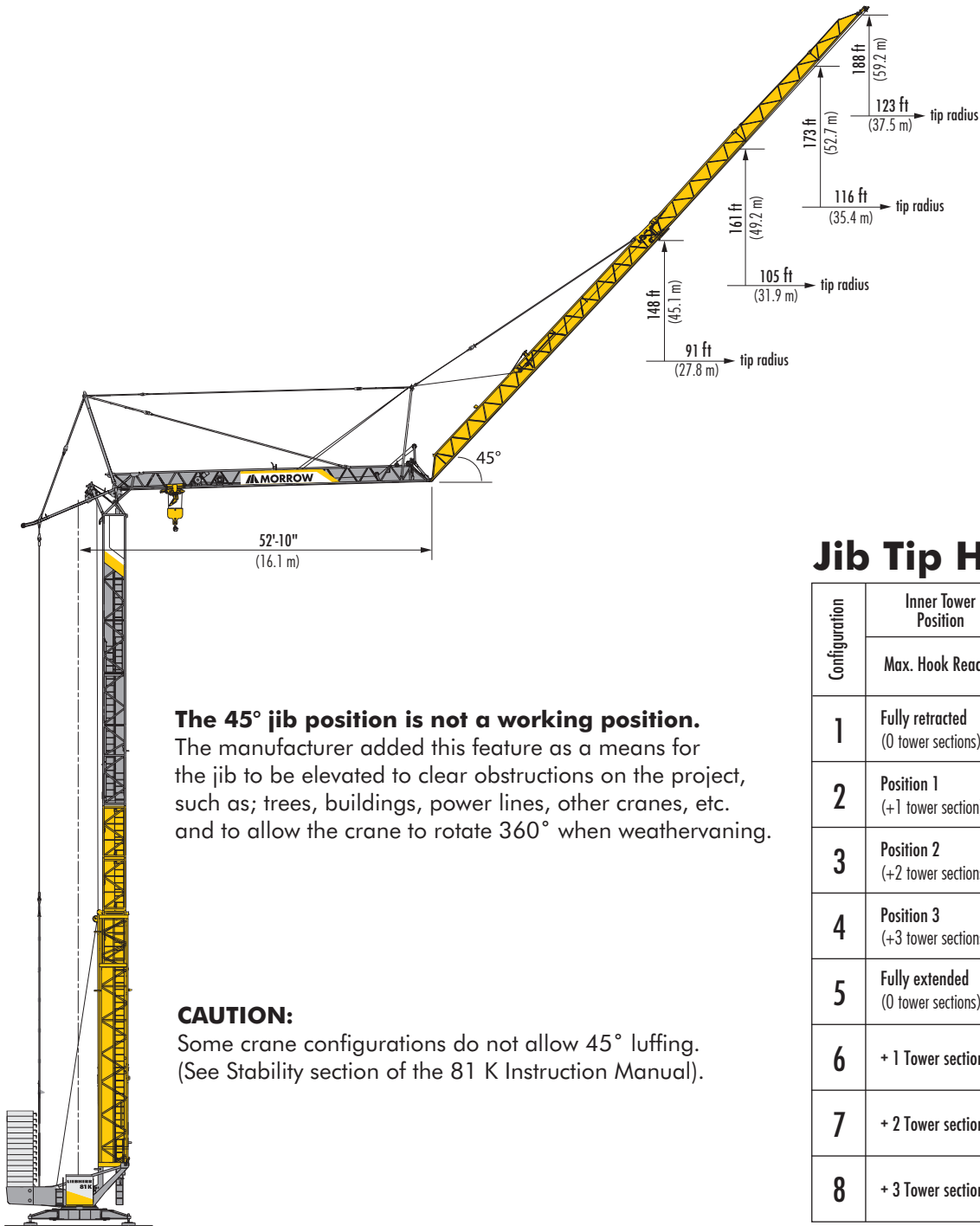
**NOTE:** Guying shown is for illustrative purposes only and may not indicate actual connections required. See 81 K Instruction Manual for more information.

## Radius and Capacities

		Crane configured with maximum of 6 tower sections.																	
Hook Radius	Maximum Capacity - Radius	ft m	42 13.0	49 15.0	59 18.0	69 21.0	79 24.0	89 27.0	95 29.0	102 31.0	108 33.0	115 35.0	121 37.0	128 39.0	135 41.0	138 42.0	144 44.0	148 45.0	
148 ft 45.0 m	13,230 lb - 29 ft 6 000 kg - 9.0 m	lb kg	10,100 4 580	8,990 4 080	7,720 3 500	6,720 3 050	5,930 2 690	5,290 2 400	4,940 2 240	4,610 2 090	4,320 1 960	4,080 1 850	3,840 1 740	3,620 1 640	3,440 1 560	3,330 1 510	3,170 1 440	3,090 1 400	
138 ft 42.0 m	13,230 lb - 33 ft 6 000 kg - 10.0 m	lb kg	10,870 4 930	9,700 4 400	8,330 3 780	7,250 3 290	6,420 2 910	5,730 2 600	5,360 2 430	5,000 2 270	4,700 2 130	4,430 2 010	4,170 1 890	3,950 1 790	3,730 1 690	3,640 1 650			
121 ft 37.0 m	13,230 lb - 38 ft 6 000 kg - 11.7 m	lb kg	12,210 5 540	10,890 4 940	9,370 4 250	8,180 3 710	7,250 3 290	6,480 2 940	6,060 2 750	5,670 2 570	5,340 2 420	5,030 2 280	4,740 2 150						
102 ft 31.0 m	13,230 lb - 44 ft 6 000 kg - 13.5 m	lb kg	13,230 6 000	12,190 5 530	10,490 4 760	9,190 4 170	8,140 3 690	7,300 3 310	6,810 3 090	6,390 2 900									

		Crane configured with maximum of 5 tower sections.																	
Hook Radius	Maximum Capacity - Radius	ft m	42 13.0	49 15.0	59 18.0	69 21.0	79 24.0	89 27.0	95 29.0	102 31.0	108 33.0	115 35.0	121 37.0	128 39.0	135 41.0	138 42.0	144 44.0	148 45.0	
148 ft 45.0 m	13,230 lb - 43 ft 6 000 kg - 13.3 m	lb kg	13,230 6 000	11,510 5 220	9,330 4 230	7,800 3 540	6,680 3 030	5,820 2 640	5,340 2 420	4,920 2 230	4,560 2 070	4,230 1 920	3,970 1 800	3,700 1 680	3,480 1 580	3,370 1 530	3,170 1 440	3,090 1 400	
138 ft 42.0 m	13,230 lb - 46 ft 6 000 kg - 14.1 m	lb kg	13,230 6 000	12,280 5 570	9,960 4 520	8,360 3 790	7,140 3 240	6,220 2 820	5,710 2 590	5,290 2 400	4,890 2 220	4,560 2 070	4,250 1 930	3,990 1 810	3,750 1 700	3,640 1 650			
121 ft 37.0 m	13,230 lb - 49 ft 6 000 kg - 15.1 m	lb kg	13,230 6 000	13,230 6 000	10,870 4 930	9,150 4 150	7,850 3 560	6,860 3 110	6,330 2 870	5,840 2 650	5,420 2 460	5,070 2 300	4,740 2 150						
102 ft 31.0 m	13,230 lb - 53 ft 6 000 kg - 16.3 m	lb kg	13,230 6 000	13,230 6 000	11,840 5 370	9,960 4 520	8,580 3 890	7,500 3 400	6,900 3 130	6,390 2 900									

## Jib Tip Heights



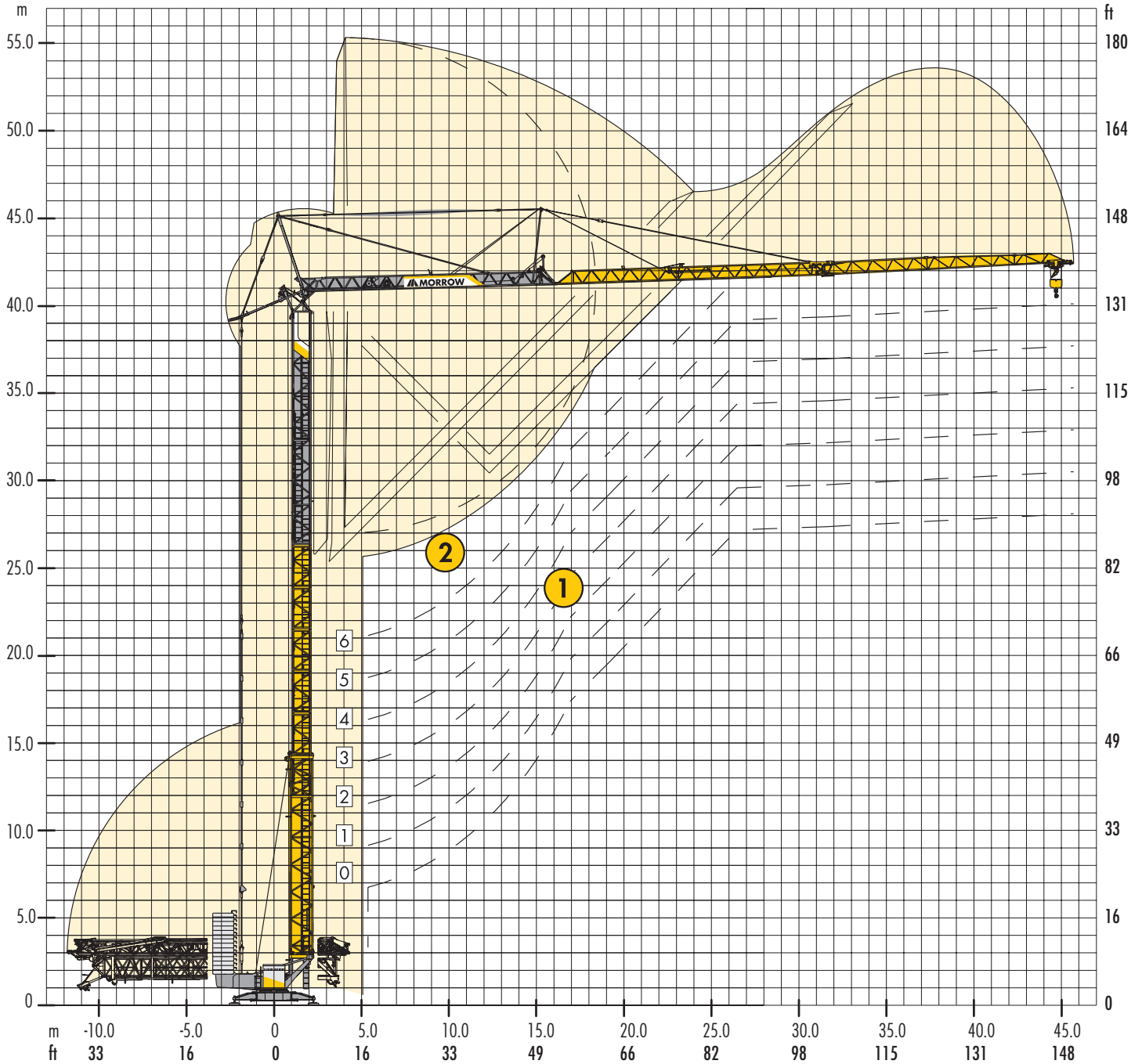
**The 45° jib position is not a working position.**  
The manufacturer added this feature as a means for the jib to be elevated to clear obstructions on the project, such as; trees, buildings, power lines, other cranes, etc. and to allow the crane to rotate 360° when weathervaning.

**CAUTION:**  
Some crane configurations do not allow 45° luffing.  
(See Stability section of the 81 K Instruction Manual).

## Jib Tip Heights

Configuration	Inner Tower Position	Jib Luffed at 45°			
		102 ft 31.0 m	121 ft 37.0 m	138 ft 42.0 m	148 ft 45.0 m
1	Fully retracted (0 tower sections)	96 ft 29.3 m	110 ft 33.4 m	121 ft 36.9 m	128 ft 39.0 m
	2	Position 1 (+1 tower section)	104 ft 31.7 m	117 ft 35.8 m	129 ft 39.3 m
3	Position 2 (+2 tower sections)	112 ft 34.1 m	125 ft 38.2 m	137 ft 41.7 m	144 ft 43.8 m
	4	Position 3 (+3 tower sections)	120 ft 36.5 m	133 ft 40.6 m	144 ft 44.1 m
5	Fully extended (0 tower sections)	124 ft 37.9 m	138 ft 42.0 m	149 ft 45.5 m	156 ft 47.6 m
	6	+ 1 Tower section	132 ft 40.3 m	146 ft 44.4 m	157 ft 47.9 m
7	+ 2 Tower sections	140 ft 42.7 m	154 ft 46.8 m	165 ft 50.3 m	172 ft 52.4 m
	8	+ 3 Tower sections	148 ft 45.1 m	161 ft 49.2 m	173 ft 52.7 m

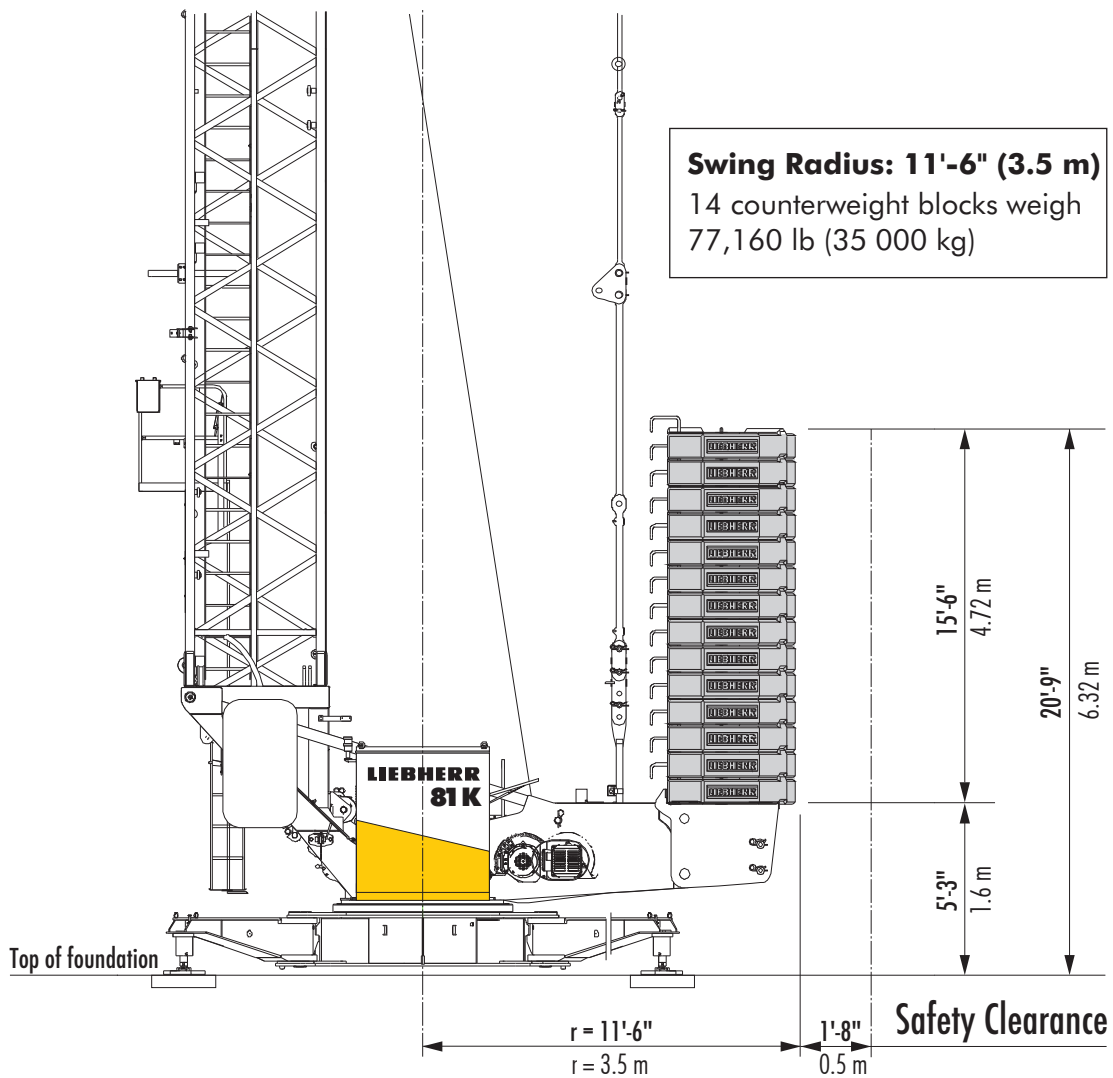
## Erecting Clearances



- ① Standard erecting curves from 0 to 6 tower sections.
- ② Elevated erecting curve (+14'-8") using the example of 6 tower sections.

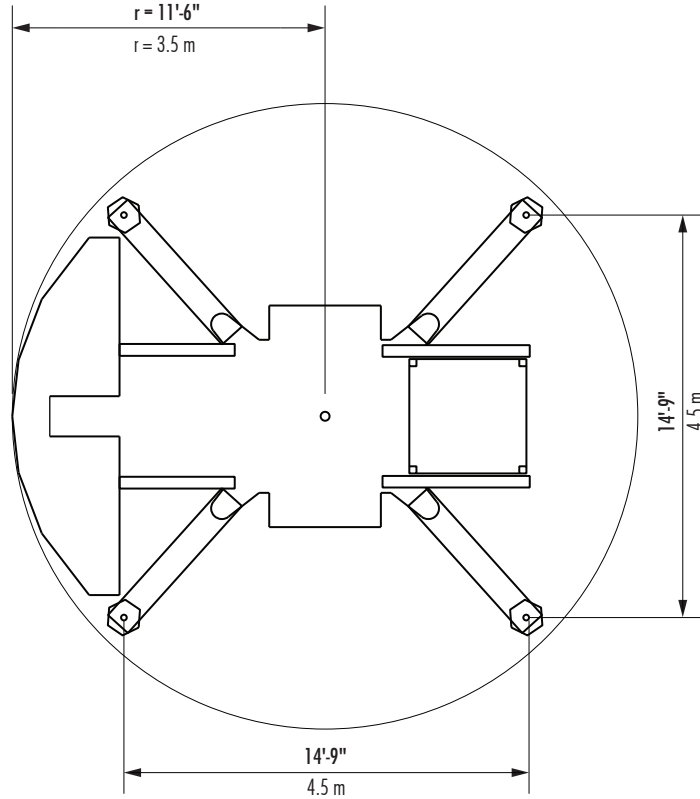
**IMPORTANT:** Consult 81 K Instruction Manual before erecting, operating, servicing and dismantling crane.

## Counterweight

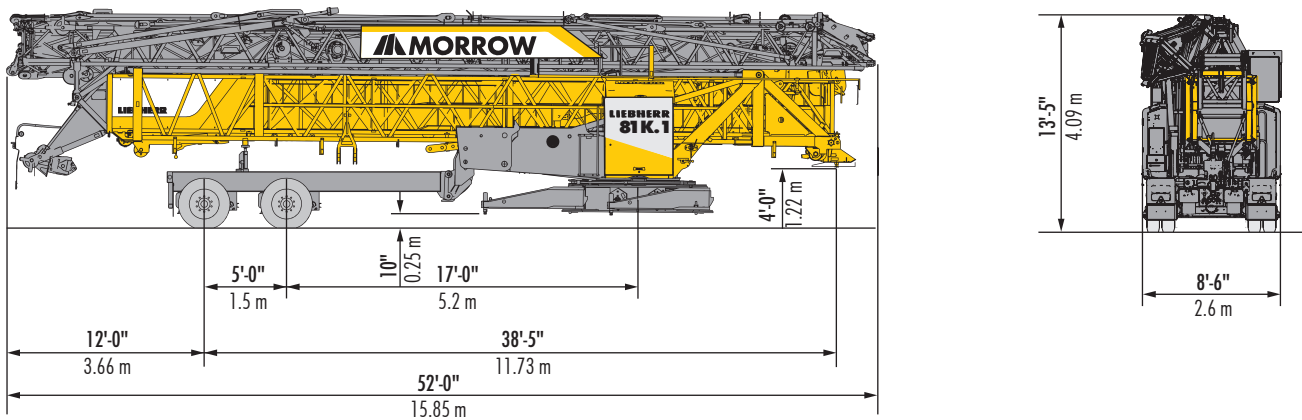


Counterweight Type	Counterweight Weight	Swing Radius	Quantity + Total Weight
Concrete Block	5,512 lb (2 500kg)	11'-6" (3.5 m)	14 blocks = 77,160 lb (35 000 kg)

## Swing Radius



## Transporter



King pin towing assembly - double axle  
 52,840 lb (23,960 kg)



## Hoist Speed and Capacity

Hoist Drive	WiW 210 MZ 404	2-Part Line				
		Speed	Capacity	Hook Speed	Capacity	Hook Speed
20 hp (15 kW) AC hoist unit Variable frequency drive (VFD) Single-speed gearbox		1	13,230 lb @ 39 ft/min	6 000 kg @ 12 m/min		
			880 lb @ 230 ft/min	400 kg @ 70 m/min		

## Drive Information

Drive Unit (VFD)	Horsepower	Kilowatts	Speed	
Trolley	4	3	0 - 197 ft/min	0 - 60 m/min
Swing	6.7	5	0.8 rpm	
Luffing	4	3	0° - 45° in 110 secs.	

## 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;

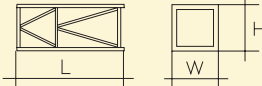
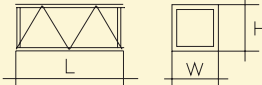
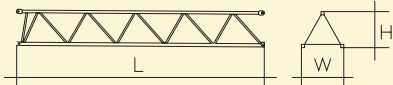
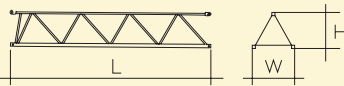
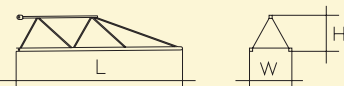
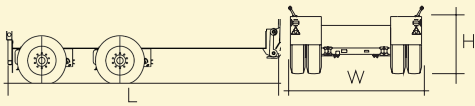
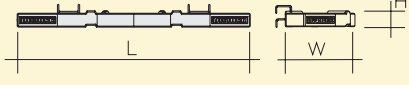
**Service size:** 60 Amperes

### 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 50kW. 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 subject to change without prior notice. For additional information, contact MORROW.

## Components

Description		Dimensions L x W x H	Wt.
Tower Section with support		8'-2" x 3'-7" x 3'-7" 2.5 m x 1.1 m x 1.1 m	1,320 lb 600 kg
Tower Section without support		8'-2" x 3'-7" x 3'-7" 2.5 m x 1.1 m x 1.1 m	1,100 lb 500 kg
Jib Extension 631 102 ft to 121 ft radius		20'-4" x 2'-10" x 2'-9" 6.2 m x 0.87 m x 0.84 m	700 lb 320 kg
Jib Extension 632 121 ft to 138 ft radius		17'-1" x 2'-10" x 2'-6" 5.2 m x 0.87 m x 0.76 m	350 lb 160 kg
Jib Extension 633 138 ft to 148 ft radius		10'-2" x 2'-10" x 2'-0" 3.10 m x 0.87 m x 0.61 m	175 lb 80 kg
Road Axle Tandem Axle		17'-4" x 8'-6" x 3'-3" 5.28 m x 2.59 m x 0.99 m	6,100 lb 2 770 kg
Counterweight each		13'-2" x 4'-6" x 1'-7" 4.0 m x 1.36 m x 0.48 m	5,510 lb 2 500 kg

**NOTE:** Weights and dimensions are approximate. Scale components before lifting. Consult 81 K Instruction Manual before erecting, operating, servicing and dismantling crane.

Specifications are subject to change without prior notice. Drawings shown in this datasheet are for illustrative purposes only. Refer to the 81 K Instruction Manual. For additional information, contact MORROW. All rights reserved.