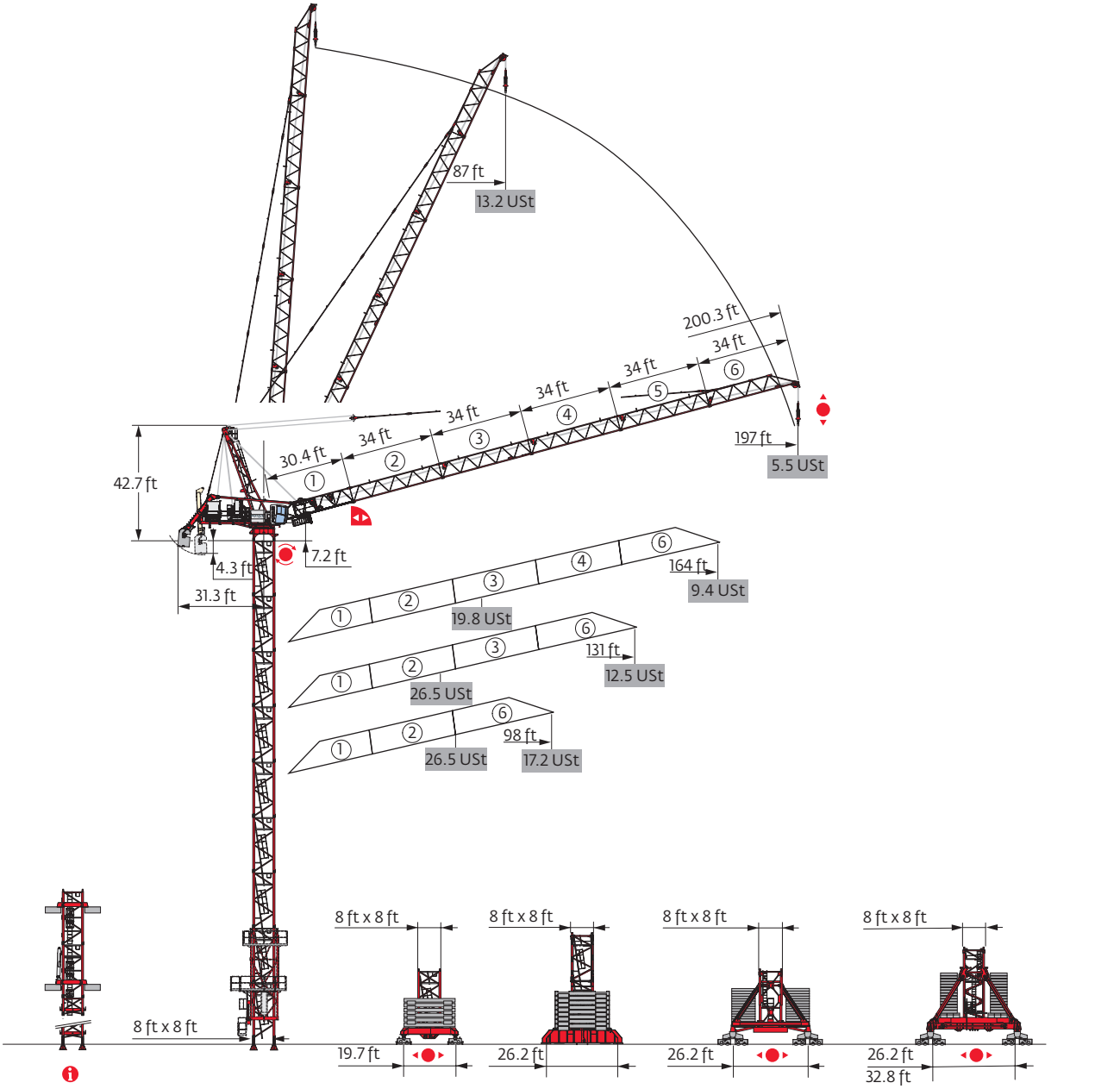
POTAIN® by Manitowoc

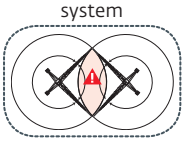
MAXIM 1-877-MAX-LIFT

MR 418



Power Control

Anti-collision system

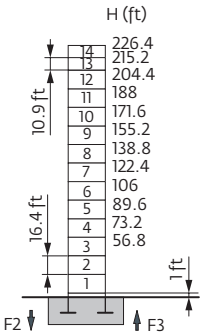


ASCE 7-10

Values have been rounded.

Mast - Reactions

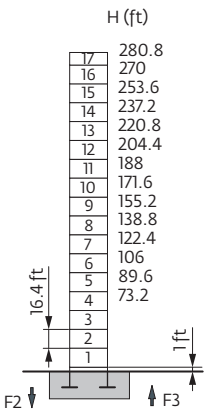
8 ft 98 ft



98 ft	H (ft)	16.4 ft	10.9 ft
131 ft	215.2	12	1
164 ft	204.4	12	-
197 ft	188	11	-

P 802B	
F2	● 251 USt ■ 418 USt
F3	● 155 USt ■ 336 USt

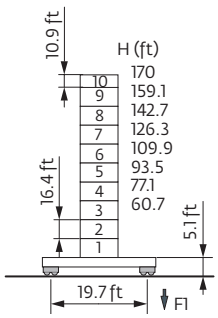
98 ft



98 ft	H (ft)	16.4 ft	10.9 ft
131 ft	270	16	-
164 ft	253.6	15	-
197 ft	237.2	14	-

P 854A	
F2	● 314 USt ■ 624 USt
F3	● 204 USt ■ 527 USt

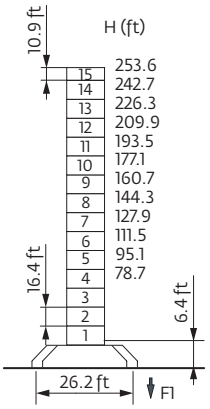
98 ft



98 ft	H (ft)	16.4 ft	10.9 ft
131 ft	159.1	9	-
164 ft	153.5	8	1
197 ft	137.1	7	1

ZX 6830	
F1	● 150 USt ■ 149 USt

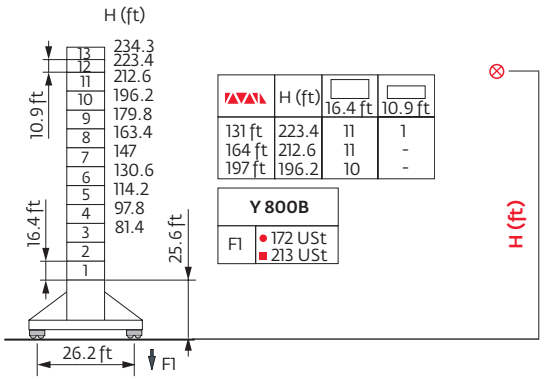
98 ft



98 ft	H (ft)	16.4 ft	10.9 ft
131 ft	242.5	14	-
164 ft	231.6	12	2
197 ft	215.2	11	2

ZY 854	
F1	● 194 USt ■ 264USt

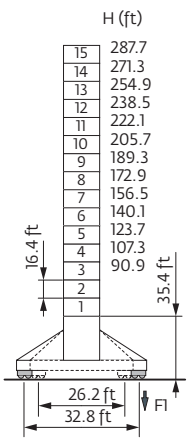
98 ft



98 ft	H (ft)	16.4 ft	10.9 ft
131 ft	223.4	11	1
164 ft	212.6	11	-
197 ft	196.2	10	-

Y 800B	
F1	● 172 USt ■ 213 USt

98 ft



JM 850 (32.8 ft)			
98 ft	H (ft)	16.4 ft	10.9 ft
131 ft	282.5	14	1
164 ft	271.3	14	-
197 ft	254.9	13	-

JM 850 (32.8 ft)	
F1	● 186 USt ■ 252 Ust

YM 850 (26.2 ft)			
98 ft	H (ft)	16.4 ft	10.9 ft
98 ft	260.5	12	2
131 ft	249.7	12	1
164 ft	238.5	12	-
197 ft	216.9	10	1

YM 850 (26.2 ft)	
F1	● 197 USt ■ 268 USt

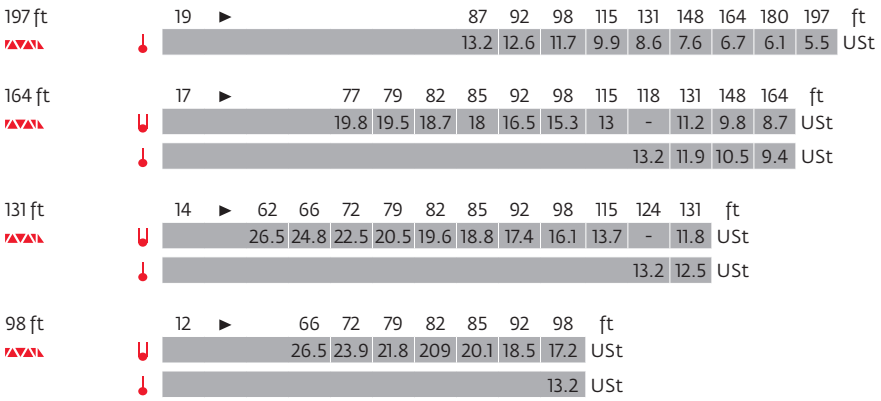
ZX 6830	H1 = H	-	H3 = H - 1 ft	Y 800B	H1 = H	H2 = H - 2.6 ft	H3 = H - 3.9 ft
ZY 854	-	-	-	YM 850 - JM 850	H1 = H	-	H3 = H - 4.6 ft

Note: When "ASCE" is noted in this data sheet it is referring to 115 mph Wind Zone, Exposure B, Design Wind Speed = 98 mph.
See back cover for design wind speed calculations.

Motorized accesses: adapted mast compositions, base ballast and reactions.

Anchorages

Load curves



Base ballast

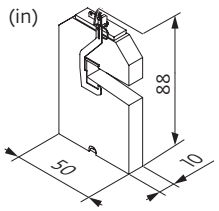
	8 ft									
	ZX 6830		ZY 854		Y 800B		YM 850		JM 850	
	H (ft)	(USt)	H (ft)	(USt)	H (ft)	(USt)	H (ft)	(USt)	H (ft)	(USt)
98 ft	170	144.4	253.6	238.1	234.3	198.4	260.5	238.1	287.7	224.9
131 ft	159.1	133.4	242.5	238.1	223.4	198.4	249.7	238.1	282.5	238.1
164 ft	153.5	155.4	231.6	238.1	212.6	198.4	238.5	238.1	271.3	238.1
197 ft	137.1	166.5	215.2	238.1	196.2	198.4	216.9	238.1	254.9	238.1

Jib weight & counter-jib ballast

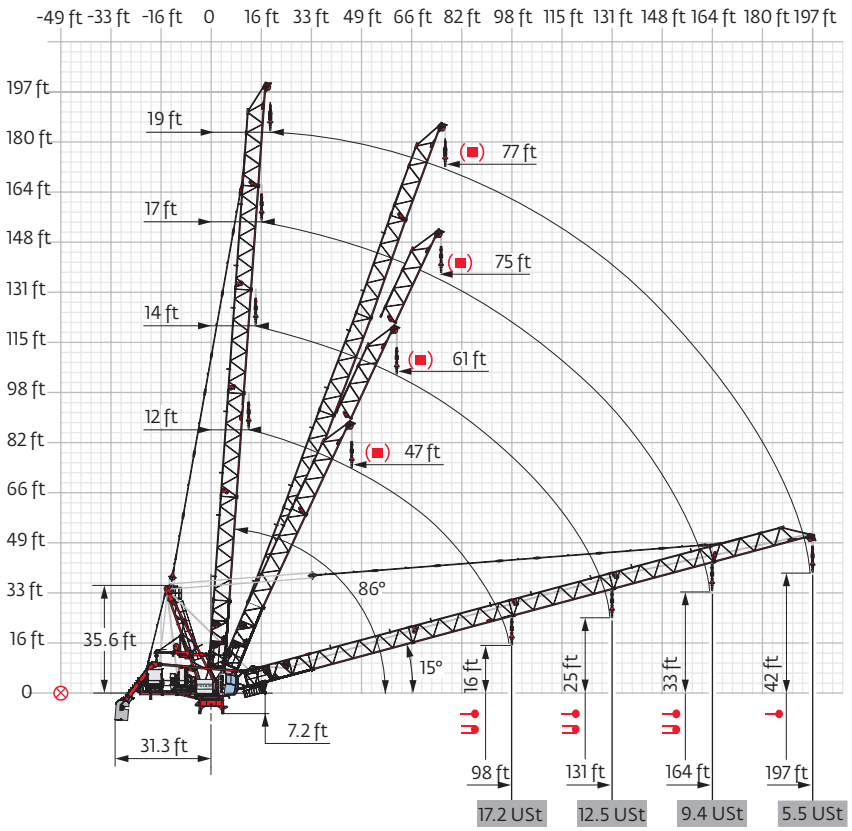
	(lb) (+/- 5%)	9,700 lb	(lb)
98 ft	18,276	7	67,902
131 ft	21,197	8	77,603
164 ft	24,063	9	87,303
197 ft	26,566	9	87,303

9,700 lb

(in)



Luffing jib

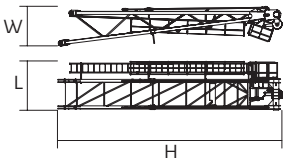
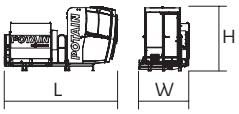
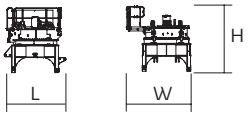
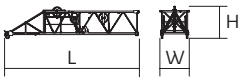
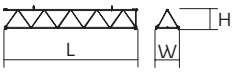
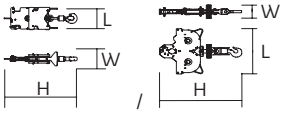
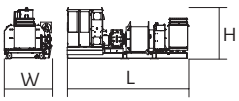
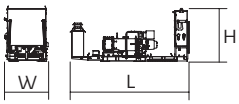
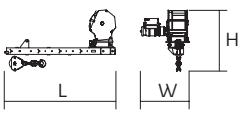
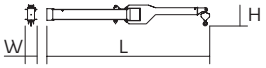
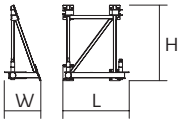


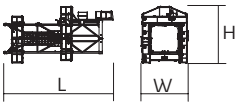
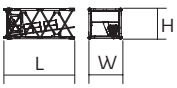
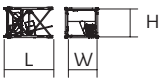
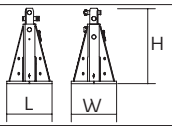
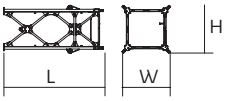
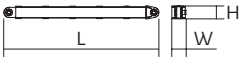
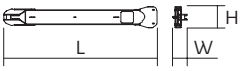
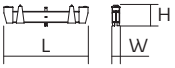
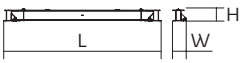
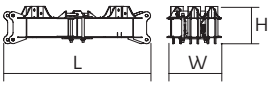
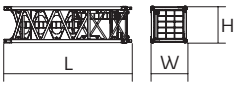
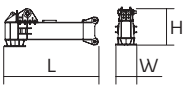
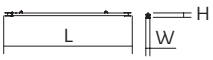
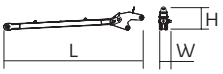
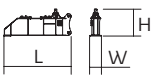
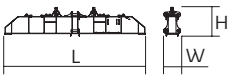
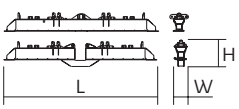
Dimensions and weight

Slewing crane part: 197 ft - - 180 HPL™

x 11

x 10

Slewing crane part			L (ft)	W (ft)	H (ft)	lb (+/- 5%)
Counter-jib (+ Grab rail + Platform)			21.1	20.8	6.9	9,270
Strut			8.4	6.9	38.8	12,236
Cab		Ultra View	14.5	6.5	8.2	3,616
Towerhead		⍁ 8 ft	10.1	10.7	11.1	23,082
Jib section		①	31.2	6.9	7.5	5,864
Jib section		② ③ ④ ⑤ ⑥	34.5 34.5 34.5 34.5 34.4	6.2 6.2 6.2 6.2 6.2	5.8 5.8 5.8 5.8 7.9	2,932 2,855 2,579 2,304 4,431
Pulley block		GH	2.9 5.1	1.8 1.5	8.4 8.2	2,601 1,521
Hoisting winch (+ rope)		180 HPL™ 320 LVF	16.1 18.4	7.5 7.1	6.3 7.8	22,630 31,063
Luffing winch (+ rope)		150 VVF	16	5.6	7.1	10,880
Rear left derrick arm (+ auxiliary winch + pulley block)			7.8	3.4	4.3	1,356
Front left derrick arm LWH			11.5	1.4	1.6	419
Articulated derrick arm			13.8	1	1.8	694
Derrick support			6.5	3.6	7.4	1,477

Crane tower			L (ft)	W (ft)	H (ft)	lb (+/- 5%)
Telescopic cage T 851		⍁8 ft	36.7	15.9	19	34,723
K 850/KR 849B KM 850.10B KM 850.14B K 850/KR 849A KRMT 849A K 849A KR 849A KMT 850.10A KMT 850.14A		⍁8 ft	33.6 33.9 33.9 17.2 17.2 17.2 17.2 17.5 17.5	8.3 8.3 8.3 8.3 8.4 8.3 8.3 8.3 8.3	8.2 8.2 8.2 8.2 8.3 8.2 8.2 8.2 8.2	20,878 22,201 24,670 12,291 9,017 7,496 9,458 12,015 13,206
KRMT 849C		⍁8 ft	11.7	8.4	8.3	7,066
Fixing angles		P 802B P 854A	2.5 3	2.5 3	4. 2 4.9	1,025 2,072
Basic mast unit		Y 800B	19.8	9.6	9.6	19,004
Struts		Y 800B	18.1	1.6	1.5	2,447
1/2 Side member		Y 800B	18.6	4.1	2.4	3,351
Side member		Y 800B	39.4	4.1	2.4	6,724
Ballast support		Y 800B	12.3	1.2	3	2,392
Chassis beam		Y 800B	28.5	2.7	2.4	4,938
Central cross (transport position)		YM 850 JM 850	17.1	5.6	4.9	14,771
Basic mast unit		YM 850 JM 850	28.7	8.2	8.2	32,187
Chassis girder		YM 850 JM 850	12.5 17.1	3 3	5.1 5.1	6,173 7,055
Chassis ties		YM 850 JM 850	23.6	0.8	1.1	551
Struts		YM 850 JM 850	24.6 26.9	2.5 2.5	4.3 4.3	4,630 5,071
1/2 Cross girder		ZY 854	18.6	3.2	7.4	13,095
Cross girder		ZY 854	39	4.7	7.4	29,432
		ZX 6830	29.9 29.9	3.7 2.5	3.6 4.9	11,607 12,004

Mechanisms

480 V - 60 Hz													hp	kW	
	180 HPL™ 120	fpm	184	226	302	476	689	92	113	153	243	344	180	132	1,811 ft
		USt	13.2	9.9	6.6	3.3	1.7	26.5	19.8	13.2	6.6	3.5			
	320 LVF 120 Optima	fpm	331	427	581	797	833	166	213	312	400	417	320	240	2,710 ft
		USt	13.2	9.9	6.6	4.2	3.3	26.5	19.8	13.2	9.9	8.4			
	150 VVF 56		1 min 15 s										150	110	
	RVF 162 Optima +	rpm	0 → 0,9										2 x 7.5	2 x 5.5	

IEC 60204-32	kVA
480 V (+6% -10%) 60 Hz	180 HPL™ + 150 VVF: 278 → 146 kVA 320 LVF + 150 VVF: 390 → 202 kVA

These mast combinations meet the EN 14439 and ASME B30.3-2016 specifications for "out of service" wind conditions, provided the illustrated wind speed matches required design wind speed for the location of the tower crane. The "out of service" design wind speed was determined in accordance with ASCE 7-10, Figure 26.5-1A. The wind velocity, used for this configuration was 98 mph (158 kph), which represents a nominal design 3-second wind gust at 33 ft (10 m) above ground for Exposure B category. A factor of 0.85 was applied to the 700-year ultimate design wind speed of 115 mph (185 kph), per ASCE 37-02, with the assumption that this crane is considered a temporary structure used during a construction period of 2 years or less.

- Standard equipment
- Options
- Reactions in service
- Reactions out of service
- Jib weight
- Total ballast weight
- Jib articulation axis
- Weathervaning position
- Lorry 44 ft
- Container High Cube 40 ft, and/or Flat Rack 20 ft
- Hoisting
- Luffing
- Slewing
- Travelling
- Required power
- Power Control Function: winch speeds adapted to the available power
- Consult us

Ref. 02D_ASCEUSt_MR418_2016_05-5