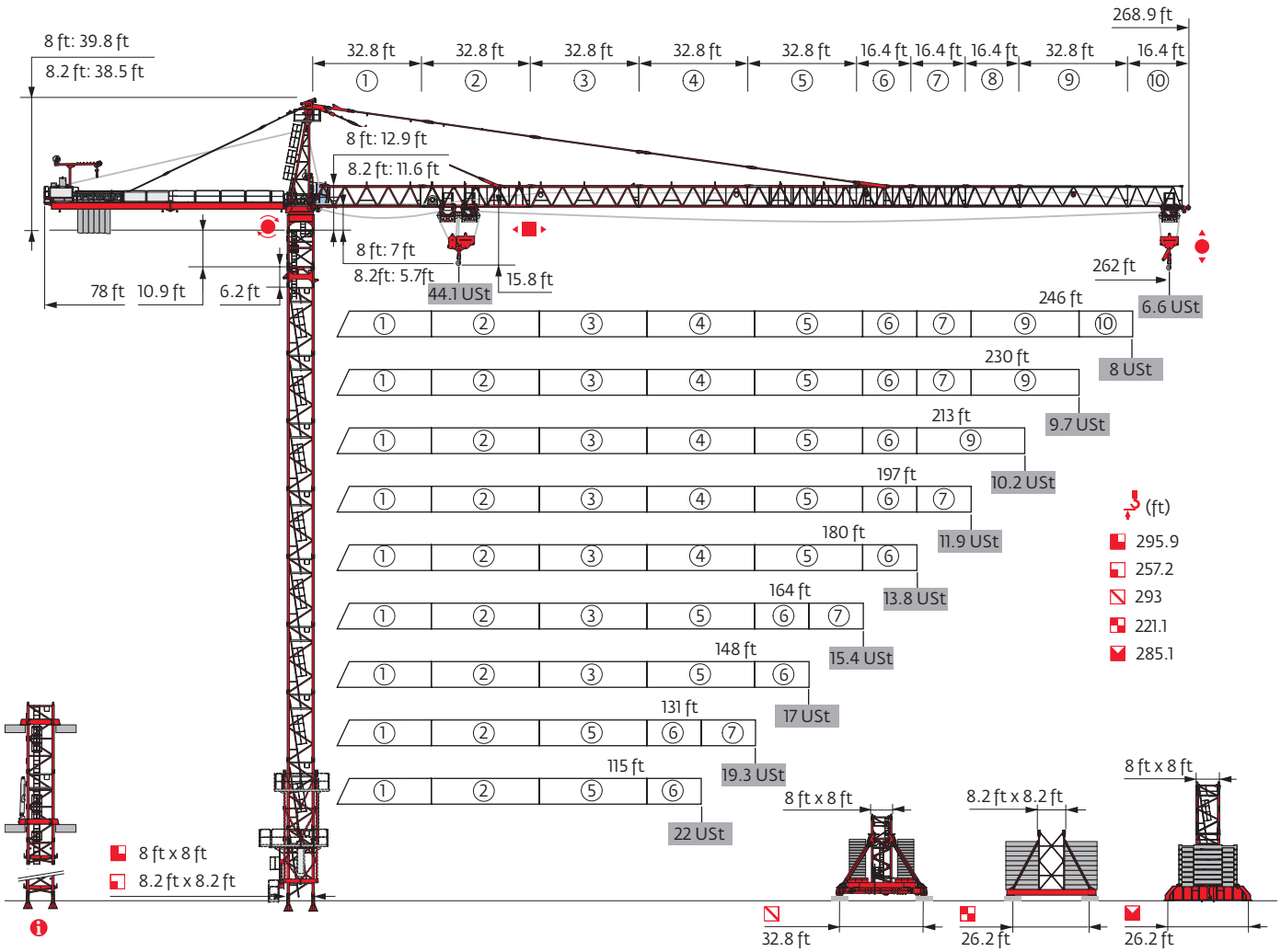
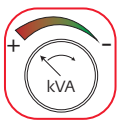
POTAIN®

MD 689 M40



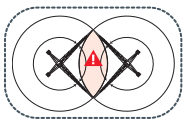
Potain Plus

Power Control



Top Site

Top Tracing 3



ASCE 7-10

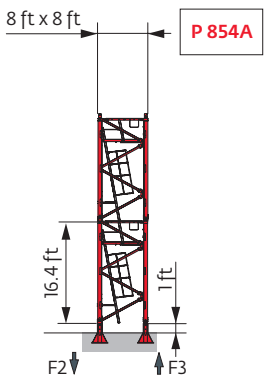
Values have been rounded.

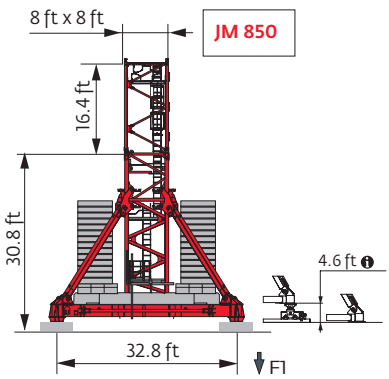
Mast - Reactions

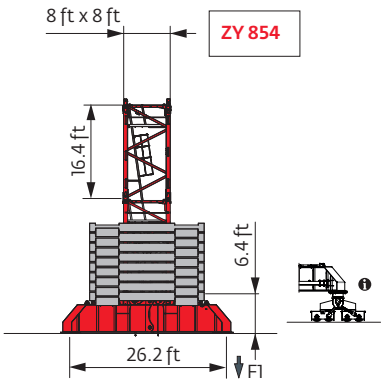
8 ft - P 854A										
(ft)	115	131	148	164	180	197	213	230	246	262
(ft)	295.9	295.9	295.9	295.9	295.9	295.9	290.7	290.7	274.3	285.1
/P+ (ft)	295.9	295.9	295.9	295.9	290.7	290.7	290.7	285.1	274.3	285.1
10.9 ft	1	1	1	1	1	1	1	1	1	1
6.2 ft	1	1	1	1	1	1	1	1	1	1
10.9 ft	2	2	2	2	2	2	0	0	0	1
16.4 ft	16	16	16	16	16	16	17	17	16	16
F2 (USt) ●	408	408	410	410	404	404	407	409	381	407
F2 (USt) ■	613	611	613	610	615	623	587	593	530	611
F3 (USt) ●	281	279	279	276	267	265	267	267	244	264
F3 (USt) ■	509	504	504	499	500	506	470	473	415	490

8 ft - JM 850 -										
(ft)	115	131	148	164	180	197	213	230	246	262
(ft)	282.2	287.7	293	293	282.2	282.2	287.7	265.8	293	276.6
/P+ (ft)	276.6	276.6	271.3	271.3	265.8	265.8	265.8	265.8	282.2	265.8
10.9 ft	1	1	1	1	1	1	1	1	1	1
6.2 ft	1	1	1	1	1	1	1	1	1	1
10.9 ft	1	0	2	2	1	1	0	1	2	2
16.4 ft	14	15	14	14	14	14	15	13	14	13
F1 (USt) ●	170	172	177	178	168	172	173	162	185	175
F1 (USt) ■	209	215	227	225	207	210	215	183	230	218

8 ft - ZY 854 -										
(ft)	115	131	148	164	180	197	213	230	246	262
(ft)	285.1	279.5	285.1	285.1	279.5	279.5	279.5	279.5	268.7	268.7
/P+ (ft)	285.1	279.5	285.1	285.1	279.5	279.5	279.5	279.5	268.7	268.7
10.9 ft	1	1	1	1	1	1	1	1	1	1
6.2 ft	1	1	1	1	1	1	1	1	1	1
10.9 ft	2	0	2	2	0	0	0	0	2	2
16.4 ft	15	16	15	15	16	16	16	16	14	14
F1 (USt) ●	236	231	238	239	237	238	238	241	228	234
F1 (USt) ■	288	269	288	286	271	277	273	277	261	281



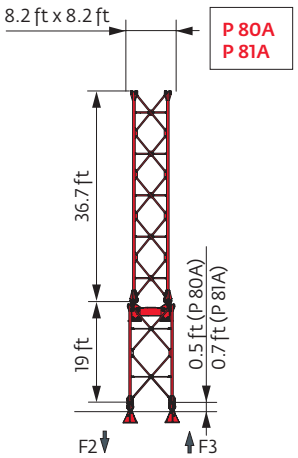


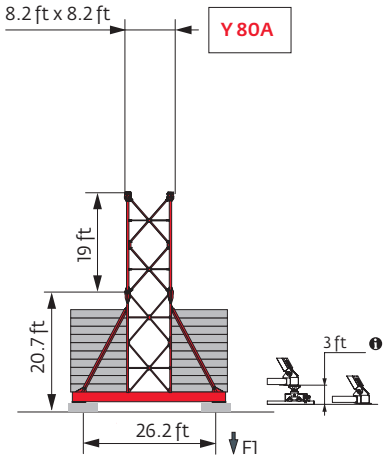


8.2 ft - P 80A										
(ft)	115	131	148	164	180	197	213	230	246	262
(ft)	200.5	200.5	219.5	219.5	200.5	200.5	200.5	181.4	200.5	181.4
/P+ (ft)	-	-	-	-	-	-	181.4	-	200.5	-
36.7 ft	1	1	1	1	1	1	1	1	1	1
19 ft	9	9	10	10	9	9	9	8	9	8
F2 (USt) ●	254	249	259	258	255	255	251	256	258	251
F2 (USt) ■	158	163	180	178	170	166	173	171	170	152
F3 (USt) ●	161	154	159	156	151	149	144	148	146	141
F3 (USt) ■	87	90	103	97	88	82	87	85	80	64

8.2 ft - P 81A										
(ft)	115	131	148	164	180	197	213	230	246	262
(ft)	257.2	257.2	257.2	257.2	257.2	257.2	257.2	238.5	238.5	238.5
/P+ (ft)	-	-	-	-	-	-	257.2	-	238.5	-
36.7 ft	1	1	1	1	1	1	1	1	1	1
19 ft	12	12	12	12	12	12	12	11	11	11
F2 (USt) ●	292	287	284	284	293	294	304	292	283	287
F2 (USt) ■	263	261	261	260	267	274	272	233	235	265
F3 (USt) ●	189	181	178	174	178	176	184	174	163	167
F3 (USt) ■	182	177	177	172	174	179	175	136	138	166

8.2 ft - Y 80A -										
(ft)	115	131	148	164	180	197	213	230	246	262
(ft)	202.1	221.1	221.1	221.1	202.1	202.1	221.1	202.1	183.1	164
/P+ (ft)	-	-	-	-	-	-	202.1	-	183.1	-
36.7 ft	1	1	1	1	1	1	1	1	1	1
19 ft	8	9	9	9	8	8	9	8	7	6
F1 (USt) ●	141	145	142	146	146	146	150	152	145	142
F1 (USt) ■	103	107	104	111	111	110	114	114	112	103





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

Base ballast

(USt) / 8 ft - JM 850 -										
(ft)	115	131	148	164	180	197	213	230	246	262
293			119.1	119.1					119.1	
287.7		105.8	105.8	105.8			92.6		92.6	
282.2	105.8	105.8	92.6	92.6	79.4	92.6	79.4		79.4	
276.6	92.6	92.6	92.6	79.4	66.1	79.4	66.1		66.1	92.6
265.8	79.4	66.1	66.1	52.9	52.9	52.9	52.9	52.9	52.9	66.1
249.3	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9
232.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9
216.5	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9
200.1	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9
183.7	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9
167.3	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9
150.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9
134.5	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9
118.1	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9
101.7	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9
85.3	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9
68.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9

(USt) / 8 ft - ZY 854 -										
(ft)	115	131	148	164	180	197	213	230	246	262
285.1	198.4		185.2	185.2						
279.5	185.2	172	172	158.7	158.7	158.7	158.7	145.5		
268.7	158.7	145.5	145.5	132.3	132.3	132.3	132.3	119.1	132.3	158.7
252.3	132.3	119.1	119.1	119.1	119.1	119.1	119.1	119.1	105.8	105.8
235.9	105.8	105.8	105.8	105.8	105.8	92.6	92.6	92.6	92.6	105.8
219.5	92.6	92.6	92.6	92.6	92.6	79.4	79.4	92.6	92.6	92.6
203.1	79.4	79.4	79.4	79.4	79.4	79.4	79.4	92.6	92.6	92.6
186.7	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	92.6	92.6
170.3	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	92.6
153.9	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	92.6
137.5	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
121.1	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
104.7	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
88.3	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
71.9	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4

(USt) / 8.2 ft - Y 80A -										
(ft)	115	131	148	164	180	197	213	230	246	262
221.1		105.8	92.6	105.8			105.8			
202.1	105.8	92.6	92.6	92.6	105.8	105.8	105.8	105.8		
183.1	105.8	92.6	92.6	92.6	105.8	105.8	105.8	105.8	105.8	
164	92.6	79.4	92.6	92.6	92.6	105.8	105.8	105.8	105.8	105.8
145.3	92.6	79.4	79.4	92.6	92.6	92.6	92.6	105.8	105.8	105.8
126.3	92.6	79.4	79.4	79.4	92.6	92.6	92.6	92.6	92.6	105.8
107.3	92.6	79.4	79.4	79.4	92.6	92.6	92.6	92.6	92.6	92.6
88.3	92.6	79.4	79.4	79.4	79.4	92.6	92.6	92.6	92.6	92.6

Load curves

		(ft)	39	49	72	82	98	115	121	131	148	154	164	180	187	197	213	220	230	236	246	253	262	ft
	44.1 USt	22 USt																						
262	12.8 → 50.8	89 - 97	44.1	44.1	28.7	24.5	21.7	18.1	16.9	15.4	13.3	12.6	11.6	10.3	9.8	9.2	8.2	7.8	7.4	7.1	6.6	6.3	6	USt
	12.8 → 52.6	93.7 - 102.4	44.1	44.1	30.3	26	22	19.3	18.1	16.5	14.4	13.7	12.7	11.3	10.8	10.1	9.1	8.7	8.2	7.8	7.3	7	6.6	USt P+
246	12.8 → 53.2	87.8 - 93.8	44.1	44.1	29.1	24.3	20.7	16.8	15.5	13.9	12.5	12	11.3	10.4	10	9.6	8.7	8.4	7.9	7.7	7.3	USt		
	12.8 → 56.6	93.5 - 100.6	44.1	44.1	32	26.7	22	18.3	16.8	15.3	13.6	13.1	12.5	11.4	11	10.5	9.6	9.2	8.7	8.4	8	USt P+		
230	12.8 → 60	97.8 - 102	44.1	44.1	34.1	28.4	22	19.2	18.1	16.5	14.3	13.6	12.7	11.7	11.3	10.7	9.8	9.4	8.8	USt				
	12.8 → 60.3	104 - 106.5	44.1	44.1	36.3	31.3	24	19.8	18.4	16.7	15	14.5	13.9	12.8	12.4	11.8	10.7	10.3	9.7	USt P+				
213	12.8 → 57.3	100.2 - 107.4	44.1	44.1	33.3	28.4	22.6	20.4	19	17.3	15	14.2	13.1	11.6	11.1	10.4	9.3	USt						
	12.8 → 60.4	107.8 - 112.8	44.1	44.1	36.5	31.3	24.8	21.5	20	18.3	16.4	15.6	14.4	12.8	12.2	11.4	10.2	USt P+						
197	12.8 → 57.1	101.5 - 109	44.1	44.1	33.4	28.7	22.9	20.8	19.4	17.7	15.4	14.6	13.6	12.1	11.5	10.8	USt							
	12.8 → 59.5	109.4 - 115.1	44.1	44.1	35.8	31	25	22	20.5	18.7	16.7	16.1	14.9	13.3	12.7	11.9	USt P+							
180	12.8 → 58.5	105.3 - 113.3	44.1	44.1	34.6	29.8	23.9	21.7	20.4	18.6	16.2	15.4	14.3	12.8	USt									
	12.8 → 60.8	112 - 119.1	44.1	44.1	36.5	31.6	25.6	22	21.6	19.8	17.4	16.5	15.4	13.8	USt P+									
164	12.8 → 57.7	105 - 113.1	44.1	44.1	34.2	29.5	23.8	21.7	20.4	18.7	16.3	15.5	14.4	USt										
	12.8 → 60.7	111.9 - 118.9	44.1	44.1	36.4	31.5	25.6	22	21.6	19.8	17.3	16.5	15.4	USt P+										
148	12.8 → 57	103.8 - 111.8	44.1	44.1	33.7	29.1	23.5	21.4	20.1	18.4	16.1	USt												
	12.8 → 59.8	110.2 - 117.1	44.1	44.1	35.8	31	25.1	22	21.2	19.4	17	USt P+												
131	12.8 → 57.6	104.8 - 113	44.1	44.1	34.1	29.5	23.8	21.6	20.3	18.6	USt													
	12.8 → 59.6	109.8 - 116.6	44.1	44.1	35.6	30.8	25	22	21.1	19.3	USt P+													
115	12.8 → 58.1	106.5 - 114.8	44.1	44.1	34.6	29.9	24.2	22	USt															
	12.8 → 59	108.5 - 114.8	44.1	44.1	35.2	30.5	24.7	22	USt P+															

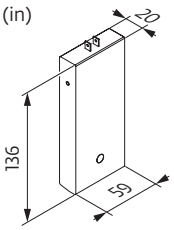
= - 2.34 USt max.

Jib weight & counter-jib ballast

	(lb) (+/- 5%)			
		13,228 lb	8,818 lb	(lb)
262 ft	63,405	6	0	79,366
246 ft	61,189	6	0	79,366
230 ft	59,976	5	1	74,957
213 ft	57,496	5	0	66,139
197 ft	56,901	4	1	61,729
180 ft	54,421	3	2	57,320
164 ft	50,794	2	2	44,092
148 ft	48,325	2	1	35,274
131 ft	44,158	1	2	30,865
115 ft	41,689	1	1	22,046

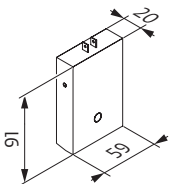
CBC - 13,228 lb

(in)



CBD - 8,818 lb

(in)

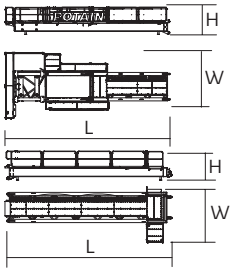
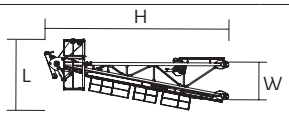
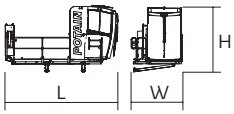
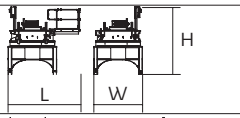
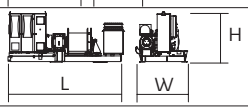
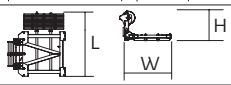
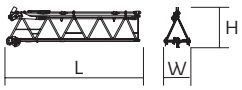
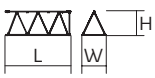
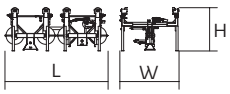
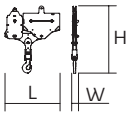
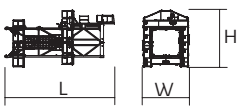


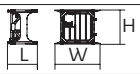
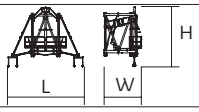
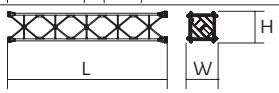
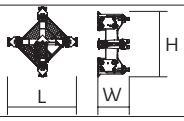
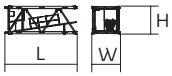
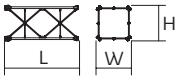
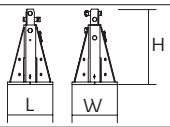
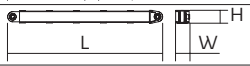
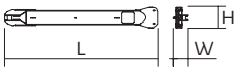
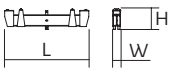
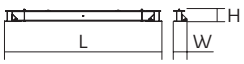
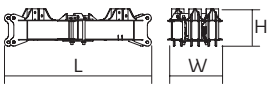
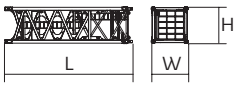
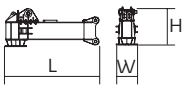
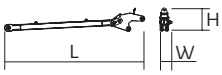
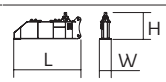
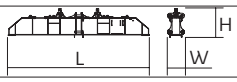
Dimensions and weight

Slewing crane part : 262 ft - - 320 LVF

x 14

x 11

Slewing crane part		L (ft)	W (ft)	H (ft)	lb (+/- 5%)
Counter-jib		38.4	15.4	6.4	14,551
		36.2	12.3	6.8	10,858
Cathead		11.6	6.5	32.3	18,221
Cab	 Ultra View	16.4	8.2	9.1	4,134
Towerhead	 8 ft 8.2 ft	12.1 12.9	9.5 10	12.7 11.5	25,485 25,353
Hoisting winch (+ rope)	 320 LVF	16.7	7.5	7.3	21,793
Intermediate winch frame		10.7	9.5	5.4	12,485
Jib section	 ① ② 15 DVF ③ ④ ⑤ ⑨	34 33.9 33.6 33.6 33.6 33.5	6.2 6.2 6.2 6.2 6.2 6.2	8.3 7.7 7.9 7.6 7.6 6.6	11,241 11,942 6,634 6,105 6,279 3,075
Jib section	 ⑥ ⑦ ⑧ ⑩	17.5 17.2 17.2 17	6.2 6.2 6.2 6.2	7.4 6.7 6.7 6.5	4,222 2,476 2,211 1,215
Trolley	 44.1 USt	13	7.2	5.5	3,131
Pulley block	 44.1 USt	8.1	1.2	9.4	4,050
Crane tower					
Telescopic cage T 851	 8 ft	36.7	15.9	19	34,723

		L (ft)	W (ft)	H (ft)	lb (+/- 5%)
K 85/K 85-2 Telescoping mast	 ⊘8 ft	7.3	10.7	8.2	7,937
Telescopic cage	 ⊘8.2 ft	24.3	12	19.1	13,669
Slider	 ⊘8.2 ft	36.4	6.9	6.9	15,653
Slider base	 ⊘8.2 ft	7.7	5.2	7.7	13,140
KM 850.10B KM 850.14B KMT 850.10A KMT 850.14A KMT 850.10C	 ⊘8 ft	33.9 33.9 17.5 17.5 12	8.3 8.3 8.3 8.3 8.3	8.2 8.2 8.2 8.2 8.2	22,201 24,670 12,015 13,206 9,326
R 86 R 87 R 87B R 88B	 ⊘8.2 ft	21 21 21 21	9.5 9.5 9.5 9.7	9.5 9.5 9.5 9.7	8,422 9,392 9,976 12,787
Fixing angles		P 854A P 80A P 81A ℹ	3 2.6 -	3 2.6 -	4.9 4 -	2,072 4,343 -
Basic mast unit		Y 80A	19.7	9.8	9.8	16,314
Struts		Y 80A	18	1.4	1.2	1,764
1/2 Side member		Y 80A	18.4	3.8	2	2,205
Side member		Y 80A	38.9	3.8	2	4,630
Ballast support		Y 80A	15.3	1	2.2	595
Chassis beam		Y 80A	28.2	2.3	3.8	4,409
Central cross (transport position)		JM 850	17.1	5.6	4.9	14,771
Basic mast unit		JM 850	28.7	8.2	8.2	32,187
Chassis girder		JM 850	17.1	3	5.1	7,055
Chassis ties		JM 850	23.6	0.8	1.1	551
Struts		JM 850	26.9	2.5	4.3	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

Mechanisms

480 V - 60 Hz													hp	kW	
	320 LVF 100 Optima	fpm	220	282	387	486	531	112	141	197	243	266	320	240	1,745 ft
		USt	22	16.5	11	7.5	6.6	44.1	33.1	22	15.7	14			
	15 DVF 16 Optima	fpm	0 → 108 (44.1 USt) 0 → 164 (22 USt) 0 → 220 (11 USt) 0 → 328 (2.8 USt)										15	11	
	RVF 173 Optima+	rpm	0 → 0.8										3 x 10	3 x 7.5	

IEC 60204-32	kVA	
480 V (+6% -10%) 60 Hz	297 → 169 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
- Potain Plus function: Plus load curves
- Hook heights with Plus load curves
- Reactions in service
- Reactions out of service
- Total ballast weight
- Jib weight
- Lorry 44 ft
- Container High Cube 40 ft, and/or Flat Rack 20 ft
- Hoisting
- Trolleying
- Slewing
- Travelling
- Required power
- Power Control Function: winch speeds adapted to the available power
- Consult us

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