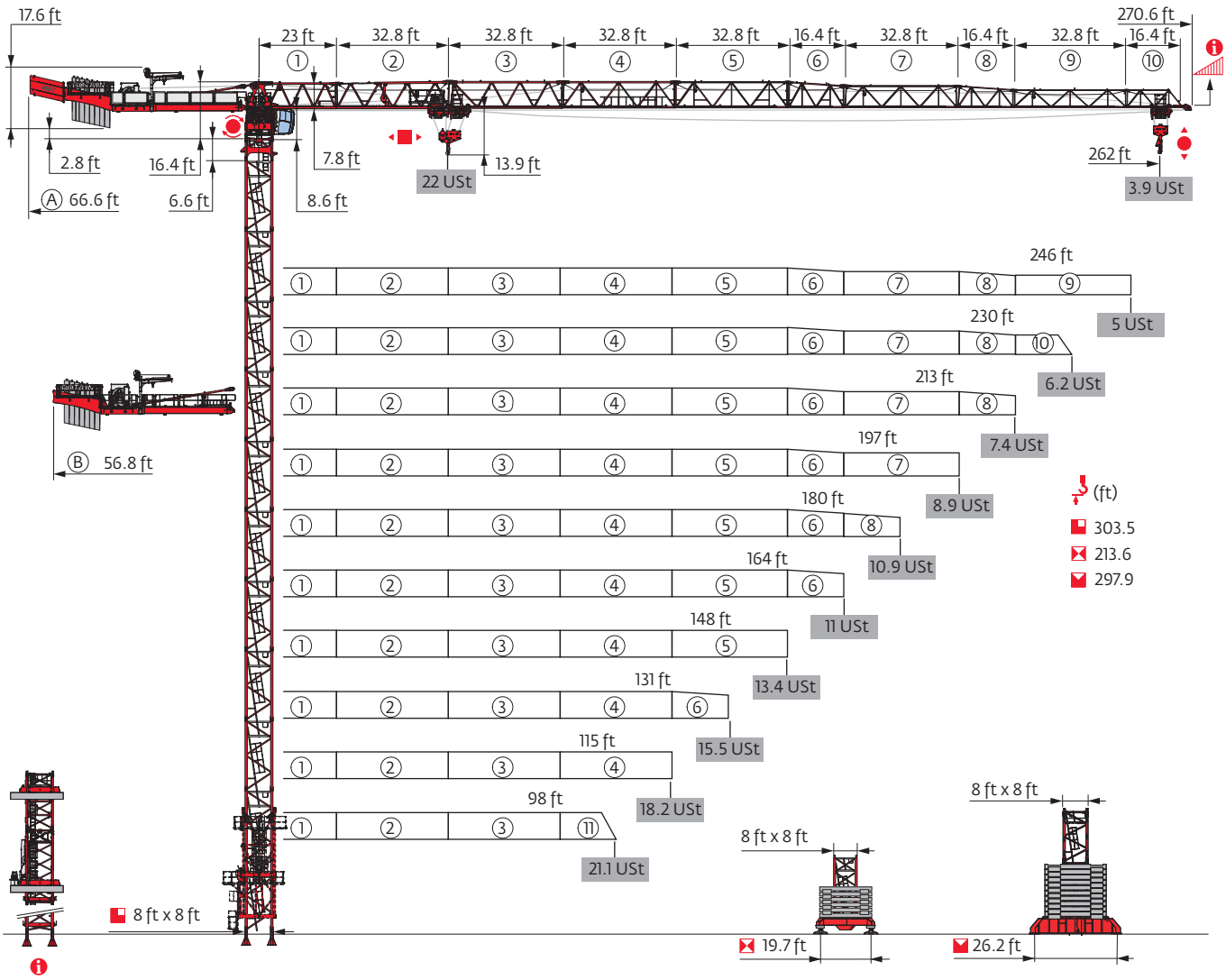
POTAIN®

MDT 489 M20



Potain Plus

Power Control

Top Site

Top Tracing 3

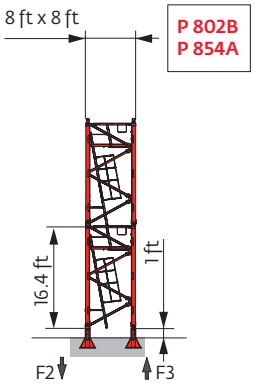
ASCE 7-10

Values have been rounded.

Mast - Reactions

8 ft - P 802B											
(ft)	98	115	131	148	164	180	197	213	230	246	262
ft)	243.1	237.9	237.9	237.9	232.3	232.3	232.3	226.7	221.5	215.9	205.1
/P+ (ft)	243.1	237.9	237.9	237.9	232.3	232.3	232.3	226.7	221.5	215.9	205.1
6.6 ft	1	1	1	1	1	1	1	1	1	1	1
10.9 ft	1	2	2	2	0	0	0	1	2	0	2
16.4 ft	14	13	13	13	14	14	14	13	12	13	11
F2 (USt) ●	268	264	267	266	250	265	262	256	255	248	235
F2 (USt) ■	377	360	366	371	348	352	355	348	345	338	317
F3 (USt) ●	182	175	175	171	166	167	164	156	155	150	136
F3 (USt) ■	299	280	284	286	263	265	266	258	255	251	229

8 ft - P 854A											
(ft)	98	115	131	148	164	180	197	213	230	246	262
(ft)	303.5	303.5	303.5	297.9	297.9	297.9	297.9	297.9	292.3	287.1	287.1
/P+ (ft)	303.5	303.5	303.5	297.9	297.9	297.9	297.9	297.9	292.3	287.1	287.1
6.6 ft	1	1	1	1	1	1	1	1	1	1	1
10.9 ft	2	2	2	0	0	0	0	0	1	2	2
16.4 ft	17	17	17	18	18	18	18	18	17	16	16
F2 (USt) ●	333	331	335	327	316	331	334	335	339	334	336
F2 (USt) ■	613	610	616	592	584	589	596	602	596	592	598
F3 (USt) ●	229	225	225	216	206	216	217	217	221	219	220
F3 (USt) ■	518	511	516	491	484	485	489	494	489	488	493



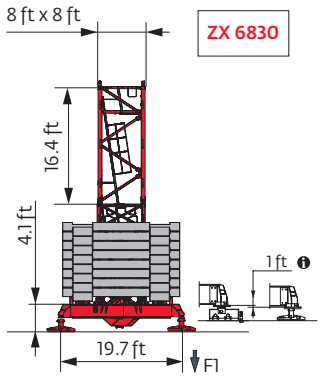
Motorized accesses: adapted mast compositions, base ballast and reactions.

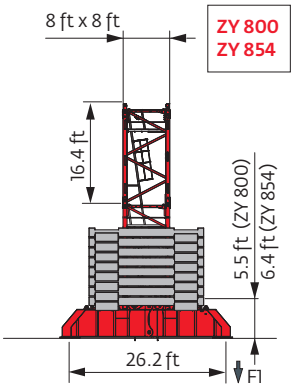
Note: When "ASCE" is noted in this data sheet it is referring to 115 mph Wind Zone, Exposure B, Design Wind Speed = 98 mph.
See back cover for design wind speed calculations.

8 ft - ZX 6830 -											
(ft)	98	115	131	148	164	180	197	213	230	246	262
(ft)	191.6	197.2	191.6	191.6	213.6	202.4	208	208	202.4	202.4	197.2
/P+ (ft)	186	191.6	186	186	213.6	186	186	202.4	191.6	197.2	197.2
6.6 ft	1	1	1	1	1	1	1	1	1	1	1
10.9 ft	2	1	2	2	1	0	2	2	0	0	1
16.4 ft	10	11	10	10	12	12	11	11	12	12	11
F1 (USt) ●	154	156	157	155	156	157	156	157	157	156	156
F1 (USt) ■	144	148	147	146	174	157	170	173	167	179	172

8 ft - ZY 800 -											
(ft)	98	115	131	148	164	180	197	213	230	246	262
(ft)	242.1	236.9	236.9	236.9	225.7	225.7	225.7	225.7	220.5	214.9	204.1
/P+ (ft)	242.1	236.9	236.9	220.5	225.7	225.7	225.7	225.7	220.5	214.9	204.1
6.6 ft	1	1	1	1	1	1	1	1	1	1	1
10.9 ft	2	0	0	0	2	2	2	2	0	1	0
16.4 ft	13	14	14	14	12	12	12	12	13	12	12
F1 (USt) ●	157	151	153	153	143	150	149	147	143	140	138
F1 (USt) ■	187	170	174	176	162	163	165	169	162	166	151

8 ft - ZY 854 -											
(ft)	98	115	131	148	164	180	197	213	230	246	262
(ft)	297.9	297.9	297.9	292.3	292.3	292.3	292.3	286.8	286.8	281.5	270.3
/P+ (ft)	297.9	297.9	297.9	292.3	292.3	292.3	292.3	286.8	286.8	281.5	270.3
6.6 ft	1	1	1	1	1	1	1	1	1	1	1
10.9 ft	1	1	1	2	2	2	2	0	0	1	0
16.4 ft	17	17	17	16	16	16	16	17	17	16	16
F1 (USt) ●	216	213	216	215	211	221	220	209	216	214	202
F1 (USt) ■	306	304	310	303	304	308	311	295	304	305	279





Anchorages

Base ballast

(USt) / 8 ft - ZX 6830 -											
(ft)	98	115	131	148	164	180	197	213	230	246	262
213.6					144.4						
208					144.4		133.4	133.4			
202.4					133.4	144.4	133.4	133.4	144.4	144.4	
197.2		155.4			133.4	133.4	122.4	133.4	144.4	144.4	144.4
191.6	155.4	155.4	155.4	144.4	122.4	133.4	122.4	133.4	144.4	144.4	144.4
175.2	155.4	155.4	144.4	144.4	111.3	133.4	122.4	122.4	133.4	133.4	133.4
158.8	144.4	144.4	144.4	133.4	100.3	122.4	111.3	122.4	133.4	133.4	133.4
142.4	133.4	133.4	122.4	122.4	100.3	111.3	100.3	122.4	133.4	122.4	133.4
126	122.4	122.4	122.4	111.3	89.3	111.3	89.3	111.3	122.4	122.4	122.4
109.6	122.4	122.4	111.3	111.3	89.3	111.3	89.3	111.3	122.4	122.4	122.4
93.2	122.4	122.4	111.3	111.3	89.3	111.3	89.3	111.3	122.4	111.3	122.4
76.8	122.4	122.4	111.3	111.3	89.3	100.3	89.3	111.3	122.4	111.3	122.4

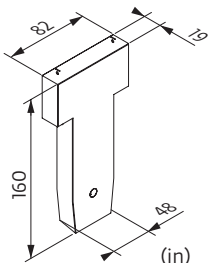
(USt) / 8 ft - ZY 800 -											
(ft)	98	115	131	148	164	180	197	213	230	246	262
242.1	105.8										
236.9	92.6	92.6	92.6	79.4							
225.7	92.6	92.6	79.4	79.4	66.1	66.1	66.1	66.1			
220.5	92.6	79.4	79.4	79.4	66.1	66.1	66.1	66.1	66.1		
214.9	92.6	79.4	79.4	79.4	66.1	66.1	66.1	52.9	66.1	66.1	
204.1	79.4	79.4	79.4	66.1	52.9	52.9	52.9	52.9	66.1	66.1	79.4
187.7	79.4	66.1	66.1	66.1	39.7	52.9	39.7	52.9	66.1	66.1	66.1
171.3	66.1	66.1	66.1	52.9	39.7	52.9	39.7	52.9	66.1	66.1	66.1
154.9	66.1	52.9	52.9	52.9	39.7	52.9	39.7	52.9	66.1	66.1	66.1
138.5	52.9	52.9	52.9	39.7	39.7	52.9	39.7	52.9	52.9	66.1	66.1
122.1	52.9	39.7	39.7	39.7	39.7	52.9	39.7	52.9	52.9	52.9	66.1
105.6	52.9	39.7	39.7	39.7	39.7	52.9	39.7	52.9	52.9	52.9	52.9
89.2	52.9	39.7	39.7	39.7	39.7	52.9	39.7	52.9	52.9	52.9	52.9
72.8	52.9	39.7	39.7	39.7	39.7	52.9	39.7	52.9	52.9	52.9	52.9

(USt) / 8 ft - ZY 854 -											
(ft)	98	115	131	148	164	180	197	213	230	246	262
297.9	238.1	224.9	224.9								
292.3	224.9	211.6	211.6	224.9	224.9	224.9	224.9				
286.8	198.4	185.2	198.4	198.4	198.4	198.4	198.4	198.4	211.6		
281.5	185.2	185.2	185.2	185.2	185.2	185.2	185.2	185.2	198.4	211.6	
270.3	158.7	145.5	145.5	145.5	145.5	145.5	145.5	145.5	158.7	185.2	185.2
253.9	132.3	119.1	119.1	119.1	105.8	105.8	105.8	105.8	119.1	132.3	145.5
237.5	92.6	79.4	79.4	79.4	79.4	79.4	66.1	79.4	79.4	92.6	105.8
221.1	79.4	79.4	79.4	66.1	52.9	66.1	52.9	52.9	52.9	66.1	79.4
204.7	66.1	66.1	66.1	66.1	39.7	52.9	39.7	52.9	52.9	66.1	66.1
188.3	66.1	66.1	52.9	52.9	39.7	39.7	39.7	39.7	52.9	66.1	66.1
171.9	52.9	52.9	52.9	52.9	26.5	39.7	26.5	39.7	52.9	52.9	52.9
155.5	52.9	39.7	39.7	39.7	26.5	39.7	26.5	39.7	52.9	52.9	52.9
139.1	39.7	39.7	39.7	26.5	26.5	39.7	26.5	39.7	52.9	52.9	52.9
122.7	39.7	39.7	39.7	26.5	26.5	39.7	26.5	39.7	52.9	52.9	52.9
106.3	39.7	39.7	39.7	26.5	26.5	39.7	26.5	39.7	52.9	39.7	52.9
89.9	39.7	39.7	39.7	26.5	26.5	39.7	26.5	39.7	52.9	39.7	39.7
73.5	39.7	39.7	39.7	26.5	26.5	39.7	26.5	39.7	52.9	39.7	39.7

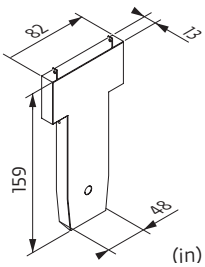
Counter-jib ballast

	132 HPL™			180 HPL™ GH		
	14,551 lb	10,362 lb	(lb)	14,551 lb	10,362 lb	(lb)
262 ft	6	2	108,027	7	0	101,854
246 ft	7	0	101,854	6	1	97,665
230 ft	7	0	101,854	6	1	97,665
213 ft	7	0	101,854	6	1	97,665
197 ft	6	1	97,665	5	2	93,476
180 ft	5	2	93,476	6	0	87,303
164 ft	6	0	87,303	5	1	83,114
148 ft	4	2	78,925	3	3	74,737
131 ft	5	0	72,753	4	1	68,564
115 ft	4	1	68,564	3	2	64,375
98 ft	4	0	58,202	3	1	54,013

CCP - 14,551 lb



CCQ - 10,362 lb



Load curves

(ft)			56	66	82	98	115	131	138	148	154	164	171	180	187	197	203	213	220	230	236	246	253	262	ft
	22 USt	11 USt																							
262	14.8 → 56.6	98.9 - 109.8	22	18.5	14	11.1	10.5	8.9	8.4	7.7	7.3	6.7	6.4	6	5.7	5.3	5.1	4.8	4.6	4.3	4.1	3.9	3.7	3.5	USt
	14.8 → 61.2	106.3 - 118.1	22	20.3	15.4	12.2	11	9.8	9.2	8.5	8	7.4	7.1	6.6	6.3	5.8	5.6	5.2	5	4.7	4.5	4.3	4.1	3.9	USt P+
246	14.8 → 66.1	113.5 - 125.1	22	22	16.9	13.3	11	10.4	9.8	9	8.5	7.8	7.5	6.9	6.6	6.2	5.9	5.5	5.3	5	4.8	4.5	USt		
	14.8 → 71.4	121.7 - 134.5	22	22	18.5	14.7	11.9	11	10.8	9.9	9.3	8.6	8.2	7.6	7.3	6.8	6.5	6.1	5.8	5.5	5.3	5	USt P+		
230	14.8 → 78.1	130.2 - 142.2	22	22	20.7	16.2	13.2	11	11	10.5	9.9	9.1	8.7	8	7.7	7.1	6.8	6.4	6.1	5.7	USt				
	14.8 → 82.2	137.4 - 150.1	22	22	22	17.4	14.2	11.8	11	11	10.6	9.8	9.3	8.7	8.3	7.7	7.4	6.9	6.6	6.2	USt P+				
213	14.8 → 82.9	138.4 - 151.1	22	22	22	17.6	14.3	11.9	11.1	11	10.7	9.9	9.4	8.7	8.3	7.8	7.4	6.9	USt						
	14.8 → 85.5	143.8 - 157.5	22	22	22	18.4	15	12.5	11.7	11	11	10.4	9.9	9.2	8.8	8.2	7.9	7.4	USt P+						
197	14.8 → 84.4	144.4 - 158.3	22	22	22	18.2	14.9	12.5	11.7	11	11	10.5	10	9.4	8.9	8.4	USt								
	14.8 → 88.8	151.6 - 166.2	22	22	22	19.4	15.9	13.4	12.5	11.4	11	11	10.7	9.9	9.5	8.9	USt P+								
180	14.8 → 87.6	156.2 - 172.6	22	22	22	19.3	16.1	13.7	12.9	11.8	11.2	11	11	10.5	USt										
	14.8 → 91.9	161.8 - 178.3	22	22	22	20.3	16.9	14.4	13.5	12.4	11.7	11	11	10.9	USt P+										
164	14.8 → 83.3	148.5 - 164	22	22	22	18.2	15.1	12.9	12.1	11.1	11	11	USt												
	14.8 → 83.2		22	22	22	18.3	15.3	13.1	12.4	11.4	11	11	USt P+												
148	14.8 → 89.9		22	22	22	19.9	16.6	14.1	13.3	12.2	USt														
	14.8 → 89.9		22	22	22	20	16.9	14.6	13.8	12.8	USt P+														
131	14.8 → 90.9		22	22	22	20.1	16.8	14.3	USt																
	14.8 → 91.9		22	22	22	20.5	17.3	14.8	USt P+																
115	14.8 → 91.9		22	22	22	20.3	17	USt																	
	14.8 → 91.9		22	22	22	20.6	17.6	USt P+																	
98	14.8 → 89.8		22	22	22	19.8	USt																		
	14.8 → 91.2		22	22	22	20.4	USt P+																		

= - 1.58 USt max.

(ft)			56	66	82	98	115	131	138	148	154	164	171	180	187	197	203	213	220	230	236	246	253	262	ft
	22 USt	11 USt																							
262	13.1 → 57.7	102.5 - 104.9	22	19	14.5	11.6	9.8	8.3	7.8	7.1	6.7	6.1	5.8	5.3	5.1	4.7	4.5	4.1	3.9	3.7	3.5	3.3	3.1	2.9	USt
	13.1 → 62.4	110.1 - 112.8	22	20.8	15.9	12.7	10.4	9.2	8.6	7.9	7.4	6.8	6.4	5.9	5.6	5.2	5	4.6	4.4	4.1	3.9	3.7	3.5	3.3	USt P+
246	13.1 → 67.4	117.5 - 119.9	22	22	17.4	13.8	11.4	9.8	9.2	8.4	7.9	7.3	6.9	6.4	6.1	5.6	5.3	5	4.7	4.4	4.2	4	USt		
	13.1 → 72.8	125.9 - 129	22	22	19.1	15.2	12.4	10.4	10.2	9.3	8.8	8.1	7.6	7.1	6.7	6.2	5.9	5.5	5.3	4.9	4.7	4.4	USt P+		
230	13.1 → 79.8	135.1 - 137.4	22	22	21.2	16.8	13.7	11.5	10.7	10	9.5	8.7	8.2	7.6	7.2	6.7	6.4	5.9	5.7	5.3	USt				
	13.1 → 84	142.5 - 145.1	22	22	22	18	14.7	12.3	11.5	10.6	10.2	9.4	8.9	8.2	7.8	7.2	6.9	6.4	6.2	5.8	USt P+				
213	13.1 → 84.9	144 - 146.6	22	22	22	18.2	14.9	12.5	11.7	10.7	10.3	9.5	9	8.3	7.9	7.4	7	6.5	USt						
	13.1 → 87.5	149.7 - 152.6	22	22	22	19	15.6	13.1	12.3	11.2	10.6	10	9.5	8.8	8.4	7.8	7.5	7	USt P+						
197	13.1 → 86.4	150.6 - 153.6	22	22	22	18.8	15.6	13.2	12.4	11.3	10.7	10.2	9.6	9	8.5	8	USt								
	13.1 → 91	158.1 - 161.3	22	22	22	20	16.6	14	13.2	12	11.4	10.6	10.3	9.5	9.1	8.5	USt P+								
180	13.1 → 89.7	163.5 - 167.5	22	22	22	19.9	16.7	14.3	13.5	12.5	11.8	11	10.6	10.1	USt										
	13.1 → 94.1	169.1 - 173	22	22	22	21	17.5	15	14.1	13	12.3	11.4	11	10.5	USt P+										
164	13.1 → 85.3	155.4 - 159.2	22	22	22	18.8	15.8	13.5	12.7	11.7	11.1	10.6	USt												
	13.1 → 85.3	159 - 164	22	22	22	18.9	16	13.7	13	12	11.4	11	USt P+												
148	13.1 → 92.1		22	22	22	20.5	17.2	14.8	13.9	12.9	USt														
	13.1 → 92.1		22	22	22	20.6	17.5	15.2	14.4	13.4	USt P+														
131	13.1 → 93.1		22	22	22	20.7	17.4	14.9	USt																
	13.1 → 94.2		22	22	22	21.1	17.9	15.5	USt P+																
115	13.1 → 93.9		22	22	22	20.9	17.6	USt																	
	13.1 → 94.1		22	22	22	21.2	18.2	USt P+																	
98	13.1 → 92		22	22	22	20.5	USt																		
	13.1 → 93.4		22	22	22	21.1	USt P+																		

= - 0.45 USt max.

Dimensions and weight

Slewing crane part: 262 ft - 132 HPL™

x 9
x 8

Slewing crane part			L (ft)	W (ft)	H (ft)	lb (+/- 5%)
Counter-jib		Ⓐ Ⓑ	39 39	7.2 7.2	8.3 8.3	29,983 29,101
		Ⓐ Ⓑ 132 HPL™	62.9 53	18.7 18.7	12.9 12.9	33,290 32,408
		Ⓐ Ⓑ 132 HPL™	62.9 53	18.7 18.7	12.9 12.9	46,213 45,331
		Ⓐ Ⓑ 180 HPL™ GH	62.9 53	22 22	12.9 12.9	34,392 33,290
Hoisting winch (+ rope)		132 HPL™ 180 HPL™ GH	12.4 15.8	6.1 6.3	6.2 6.5	12,923 19,282
Cab		Ultra View	11	7.5	8.2	6,614
Towerhead		⊿2,45 m	9.1	8.1	9.5	24,912
			23.1	8.1	9.5	31,526
Jib section		①	27.8	5.2	8.1	14,771
		②	34	7.3	8.2	14,330
		③	34	4.5	8.2	7,937
		④	33.7	4.5	8	6,790
		⑤	33.6	4.5	8	4,960
		⑦	33.7	4.5	6.7	3,329
		⑨	33.4	4.5	5.7	2,293
		⑥	17.4	4.5	7.8	2,425
		⑧	17.1	4.5	6.5	1,455
		⑩	16.7	4.5	5.3	992
		⑪	17	4.5	8	3,660
			5.5	5.2	1.9	575

		L (ft)	W (ft)	H (ft)	lb (+/- 5%)
Trolley	22 USt	7.3	5.7	4.7	1,676
Pulley block	22 USt	5.1	1.9	8	1,874
Trolley	22 USt	12.5	5.6	4.1	2,469
Pulley block	22 USt	6.3	1.1	7.7	2,028
Trolley	11 USt	6.6	5.6	4.1	1,323
Pulley block	11 USt	4.1	1.1	8.5	1,345
Trolley inspection platform		3.1	3.4	7	125
Crane tower					
T 851	⊘8 ft	36.7	15.9	19	34,723
K 84/K 84-2	⊘8 ft	7.3	10.6	8.2	6,724
K 85/KR 84B2 KM 850.10B KM 850.14B K 85/KR 84A2 KMT 850.10A KMT 850.14A K 849A KMT 849A KR 849A KRMT 849A KRMT 849C KMT 850.10C	⊘8 ft	33.6 33.9 33.9 17.2 17.5 17.5 17.2 17.2 17.2 17.2 11.7 12	8.3 8.3 8.3 8.3 8.3 8.3 8.3 8.4 8.3 8.4 8.4 8.3	8.2 8.2 8.2 8.2 8.2 8.2 8.2 8.3 8.2 8.3 8.3 8.2	21,242 22,201 24,670 12,236 12,015 13,206 7,496 6,945 9,458 9,017 7,066 9,326
Fixing angles	P 802B P 854A	2.5 3	2.5 3	4.2 4.9	1,025 2,072
Cross girder	ZX 6830	29.9 29.9	3.7 2.5	3.6 4.9	11,607 12,004
1/2 Cross girder	ZY 800 ZY 854	18.6 18.6	3.2 3.2	6.3 7.4	10,406 13,095
Cross girder	ZY 800 ZY 854	39.2 39	4.6 4.7	6.3 7.4	22,212 29,432

Mechanisms

480 V - 60 Hz													ch - PS hp	kW	
	132 HPL™ 50	fpm	164	213	299	449	612	82	108	153	230	305	132	98	3,507 ft
		USt	11	8.3	5.5	2.8	0.7	22	16.5	11	5.5	2.1			
	180 HPL™ 50 GH	fpm	210	256	333	494	640	107	131	174	271	320	180	132	3,937 ft
		USt	11	8.3	5.5	2.8	0.9	22	16.5	11	5.5	3.3			
	10 DVF 10 Optima	fpm	0 → 262 (22 USt) 0 → 328 (13.8 USt) 0 → 361 (6.9 USt)										10	7.4	
	RVF 173 Optima+	rpm	0 → 0.7										3 x 10	3 x 7.5	

IEC 60204-32	kVA	
480 V (+6% -10%) 60 Hz	132 HPL™ : 142 → 90 kVA 180 HPL™ GH : 181 → 109 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.

- Jib elevation
- 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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