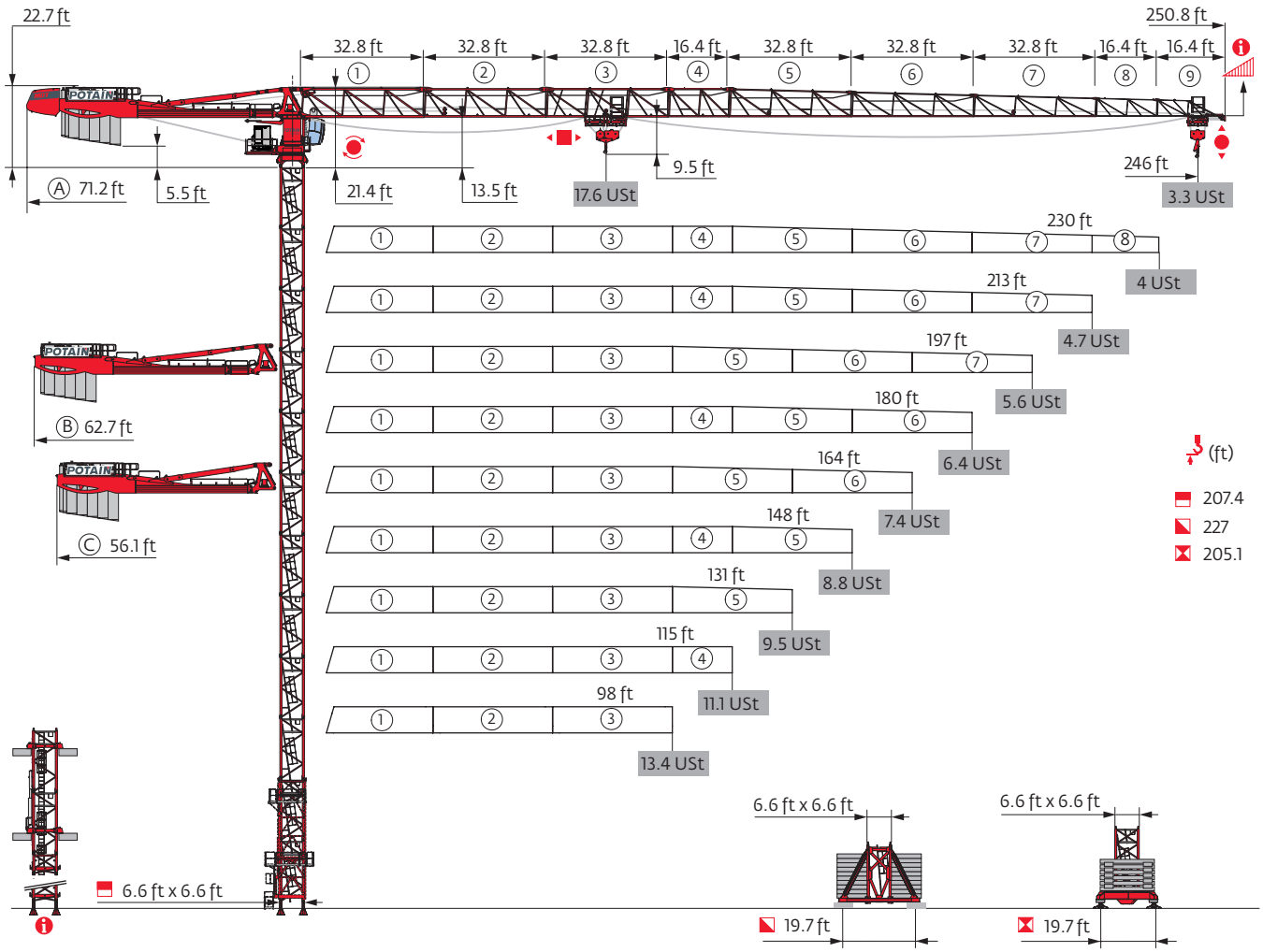
POTAIN®
by Manitowoc

MDT 349 L16



Potain Plus

Power Control

Top Site

Top Tracing 3

ASCE 7-10

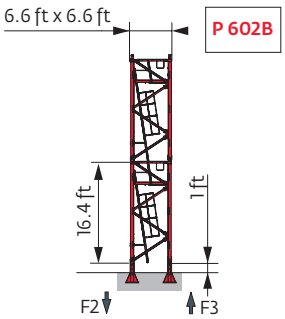
Values have been rounded.

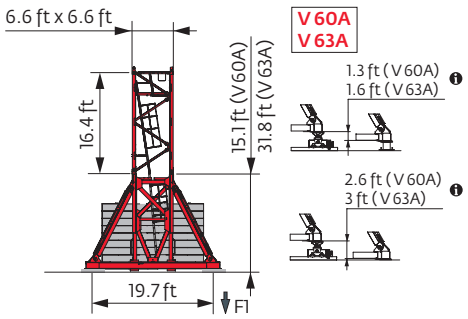
Mast - Reactions

6.6 ft - P 602B											
(ft)		98	115	131	148	164	180	197	213	230	246
(ft)		207.4	207.4	207.4	207.4	207.4	207.4	207.4	202.1	202.1	202.1
/P+ (ft)		207.4	207.4	207.4	207.4	207.4	207.4	207.4	202.1	202.1	202.1
10.9 ft		2	2	2	2	2	2	2	0	0	0
16.4 ft		11	11	11	11	11	11	11	12	12	12
F2 (USt)	●	215	215	215	211	213	210	209	213	216	217
	■	242	246	247	243	250	251	255	248	259	266
F3 (USt)	●	150	149	148	142	144	140	139	143	145	146
	■	186	189	188	182	190	191	194	187	197	205

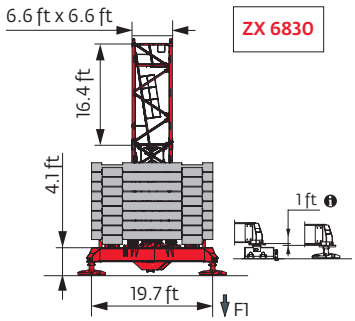
6.6 ft - V 60A -											
(ft)		98	115	131	148	164	180	197	213	230	246
(ft)		216.2	216.2	216.2	210.6	210.6	210.6	210.6	199.8	205.1	199.8
/P+ (ft)		216.2	216.2	216.2	210.6	210.6	210.6	210.6	199.8	205.1	199.8
10.9 ft		0	0	0	1	1	1	1	0	2	0
16.4 ft		12	12	12	11	11	11	11	11	10	11
F1 (USt)	●	127	127	128	122	123	122	121	121	124	123
	■	130	132	132	123	126	127	129	122	133	129

6.6 ft - V 63A -											
(ft)		98	115	131	148	164	180	197	213	230	246
(ft)		227	227	227	221.8	221.8	221.8	221.8	210.6	216.2	216.2
/P+ (ft)		227	227	227	221.8	221.8	221.8	221.8	210.6	216.2	216.2
10.9 ft		1	1	1	2	2	2	2	1	0	0
16.4 ft		11	11	11	10	10	10	10	10	11	11
F1 (USt)	●	134	135	136	130	130	129	129	129	132	132
	■	150	152	151	140	145	146	148	137	150	155





6.6 ft - ZX 6830 -										
(ft)	98	115	131	148	164	180	197	213	230	246
(ft)	205.1	205.1	205.1	205.1	205.1	205.1	205.1	194.2	194.2	194.2
/P+ (ft)	205.1	205.1	205.1	205.1	205.1	205.1	205.1	194.2	194.2	194.2
10.9 ft	0	0	0	0	0	0	0	2	2	2
16.4 ft	12	12	12	12	12	12	12	10	10	10
Fl (USt) ●	121	119	120	119	120	119	118	116	117	117
Fl (USt) ■	118	117	118	117	119	120	121	114	117	122



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) / 6.6 ft - V 60A -

(ft)	98	115	131	148	164	180	197	213	230	246
216.2	132.3	132.3	132.3							
210.6	132.3	119.1	119.1	119.1	119.1	119.1	119.1			
205.1	119.1	119.1	119.1	119.1	119.1	105.8	105.8		119.1	
199.8	119.1	119.1	105.8	105.8	105.8	105.8	105.8	119.1	119.1	119.1
183.4	105.8	92.6	92.6	92.6	92.6	92.6	92.6	92.6	92.6	92.6
167	79.4	79.4	79.4	79.4	79.4	79.4	66.1	79.4	79.4	79.4
150.6	66.1	66.1	66.1	66.1	66.1	52.9	52.9	66.1	66.1	66.1
134.2	66.1	66.1	66.1	52.9	52.9	52.9	52.9	52.9	52.9	66.1
117.8	66.1	66.1	66.1	52.9	52.9	52.9	52.9	52.9	52.9	66.1
101.4	66.1	66.1	66.1	52.9	52.9	39.7	39.7	52.9	52.9	66.1
85	66.1	66.1	66.1	52.9	52.9	39.7	39.7	39.7	52.9	66.1
68.6	66.1	66.1	66.1	52.9	52.9	39.7	39.7	39.7	52.9	66.1

(USt) / 6.6 ft - V 63A -

(ft)	98	115	131	148	164	180	197	213	230	246
227	145.5	145.5	145.5							
221.8	145.5	132.3	132.3	132.3	132.3	132.3	132.3			
216.2	132.3	132.3	132.3	132.3	132.3	119.1	119.1		132.3	132.3
210.6	132.3	132.3	119.1	119.1	119.1	119.1	119.1	132.3	132.3	132.3
194.2	119.1	105.8	105.8	105.8	105.8	105.8	105.8	105.8	105.8	105.8
177.8	92.6	92.6	92.6	92.6	92.6	79.4	79.4	92.6	92.6	92.6
161.4	79.4	79.4	79.4	79.4	66.1	66.1	66.1	79.4	79.4	79.4
145	66.1	66.1	66.1	66.1	52.9	52.9	52.9	66.1	66.1	66.1
128.6	66.1	66.1	66.1	52.9	52.9	52.9	52.9	52.9	52.9	66.1
112.2	66.1	66.1	66.1	52.9	52.9	39.7	39.7	52.9	52.9	66.1
95.8	66.1	66.1	66.1	52.9	52.9	39.7	39.7	39.7	52.9	66.1
79.4	66.1	66.1	66.1	52.9	52.9	39.7	39.7	39.7	52.9	66.1
63	66.1	66.1	66.1	52.9	52.9	39.7	39.7	39.7	52.9	66.1

(USt) / 6.6 ft - ZX 6830 -

(ft)	98	115	131	148	164	180	197	213	230	246
205.1	122.4	111.3	111.3	111.3	111.3	111.3	111.3			
194.2	111.3	100.3	100.3	100.3	100.3	100.3	89.3	100.3	100.3	100.3
177.8	89.3	89.3	89.3	78.3	78.3	78.3	78.3	89.3	89.3	89.3
161.4	78.3	67.2	67.2	67.2	67.2	67.2	67.2	67.2	67.2	67.2
145	67.2	67.2	56.2	56.2	45.2	45.2	45.2	56.2	56.2	67.2
128.6	67.2	67.2	56.2	56.2	45.2	45.2	45.2	45.2	56.2	56.2
112.2	67.2	67.2	56.2	56.2	45.2	45.2	45.2	45.2	56.2	56.2
95.8	67.2	67.2	56.2	56.2	45.2	45.2	34.2	45.2	56.2	56.2
79.4	67.2	67.2	56.2	56.2	45.2	45.2	34.2	45.2	56.2	56.2
63	67.2	67.2	56.2	56.2	45.2	45.2	34.2	45.2	56.2	56.2

Load curves

(ft)			56	66	82	89	98	105	115	121	131	138	148	154	164	180	187	197	213	220	230	236	246	ft
	17.6 USt	8.8 USt																						
246	10.8 → 56.8	101.7 - 110.1	17.6	14.9	11.4	10.4	9.2	8.8	8.4	7.8	7.1	6.7	6.2	5.8	5.4	4.8	4.6	4.3	3.8	3.6	3.3	3.1	2.9	USt
	10.8 → 58.5	104 - 112.6	17.6	15.4	11.8	10.8	9.4	8.8	8.6	8.1	7.4	7	6.4	6.1	5.6	5	4.8	4.5	4	3.9	3.7	3.5	3.3	USt P+
230	10.8 → 60.6	108.1 - 117.2	17.6	16.1	12.3	11.2	9.9	9.1	8.8	8.4	7.7	7.2	6.7	6.3	5.8	5.1	4.8	4.5	4	3.9	3.8	USt		
	10.8 → 62.1	110.6 - 119.5	17.6	16.5	12.7	11.6	10.2	9.4	8.8	8.7	7.9	7.5	6.9	6.5	6.1	5.4	5.2	4.8	4.4	4.2	4	USt P+		
213	10.8 → 63.5	114.1 - 123	17.6	17	13.2	12	10.6	9.8	8.8	8.8	8.2	7.7	7	6.7	6.2	5.5	5.2	4.9	4.4	USt				
	10.8 → 65.4	117 - 126.2	17.6	17.5	13.5	12.4	10.9	10.1	9	8.8	8.4	8	7.4	7	6.5	5.8	5.5	5.2	4.7	USt P+				
197	10.8 → 66.7	118.6 - 128	17.6	17.6	13.9	12.6	11.1	10.2	9.2	8.8	8.5	8	7.3	6.9	6.5	5.8	5.6	5.3	USt					
	10.8 → 68.7	123.4 - 132.8	17.6	17.6	14.4	13.1	11.6	10.7	9.6	9	8.8	8.5	7.8	7.4	6.9	6.2	5.9	5.6	USt P+					
180	10.8 → 69.1	124.3 - 133.8	17.6	17.6	14.5	13.2	11.7	10.8	9.7	9.1	8.8	8.5	7.9	7.5	7	6.2	USt							
	10.8 → 71.1	127.9 - 137.8	17.6	17.6	15	13.7	12.1	11.2	10.1	9.4	8.8	8.8	8.1	7.7	7.2	6.4	USt P+							
164	10.8 → 71.6	128.4 - 136.3	17.6	17.6	15.1	13.7	12.1	11.2	10.1	9.5	8.8	8.8	8.1	7.7	7.2	USt								
	10.8 → 73	131.4 - 141.5	17.6	17.6	15.4	14.1	12.5	11.6	10.4	9.7	8.8	8.8	8.4	8	7.4	USt P+								
148	10.8 → 73.6	133.5 - 143.1	17.6	17.6	15.6	14.2	12.6	11.7	10.5	9.9	9	8.8	8.4	USt										
	10.8 → 75.7	136.4 - 147.6	17.6	17.6	16.1	14.7	13	12.1	10.9	10.2	9.2	8.8	8.8	USt P+										
131	10.8 → 73.6		17.6	17.6	15.6	14.1	12.4	11.5	10.4	9.8	8.9	USt												
	10.8 → 76.3		17.6	17.6	16.2	14.9	13.1	12.2	11	10.2	9.3	USt P+												
115	10.8 → 72.9		17.6	17.6	15.5	14.2	12.6	11.7	10.5	USt														
	10.8 → 75.8		17.6	17.6	16.1	14.8	13.1	12.2	11	USt P+														
98	10.8 → 73.9		17.6	17.6	15.3	14.1	12.7	USt																
	10.8 → 76.7		17.6	17.6	16.3	15	13.3	USt P+																

= - 0.85 USt max.

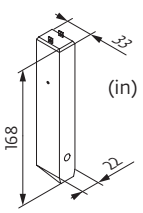
(ft)			56	66	82	89	98	105	115	121	131	138	148	154	164	180	187	197	213	220	230	236	246	ft
	17.6 USt	8.8 USt																						
246	8.2 → 57.3	103.2 - 105.3	17.6	15.1	11.6	10.6	9.3	8.8	7.9	7.4	6.7	6.3	5.7	5.4	4.9	4.3	4.1	3.8	3.3	3.1	2.85	2.65	2.45	USt
	8.2 → 59.1	105.4 - 107.7	17.6	15.6	12	10.9	9.6	8.9	8.2	7.6	6.9	6.5	5.9	5.6	5.2	4.5	4.3	4	3.6	3.4	3.2	3.1	2.85	USt P+
230	8.2 → 61	109.6 - 112.2	17.6	16.2	12.5	11.4	10	9.3	8.6	8	7.2	6.8	6.2	5.8	5.3	4.6	4.4	4	3.6	3.5	3.3	USt		
	8.2 → 62.5	112 - 114.8	17.6	16.7	12.8	11.7	10.3	9.6	8.8	8.2	7.5	7	6.4	6.1	5.6	4.9	4.7	4.4	3.9	3.8	3.5	USt P+		
213	8.2 → 64	115.7 - 118.1	17.6	17.2	13.3	12.1	10.7	9.9	8.9	8.5	7.7	7.3	6.6	6.2	5.7	5	4.8	4.5	4	USt				
	8.2 → 65.8	118.6 - 121.4	17.6	17.6	13.7	12.5	11	10.2	9.2	8.8	8	7.5	6.9	6.6	6.1	5.4	5.1	4.8	4.3	USt P+				
197	8.2 → 67.3	120.2 - 122.7	17.6	17.6	14	12.8	11.2	10.4	9.3	8.8	8.1	7.6	6.9	6.5	6.1	5.5	5.2	5	USt					
	8.2 → 69.2	125.2 - 128	17.6	17.6	14.5	13.3	11.7	10.9	9.8	9.2	8.6	8.1	7.4	7	6.5	5.8	5.5	5.2	USt P+					
180	8.2 → 69.7	126 - 128.8	17.6	17.6	14.6	13.4	11.8	11	9.9	9.2	8.6	8.1	7.5	7.1	6.6	5.8	USt							
	8.2 → 71.7	129.8 - 132.6	17.6	17.6	15.1	13.8	12.2	11.4	10.2	9.6	8.8	8.4	7.8	7.4	6.8	6.1	USt P+							
164	8.2 → 72.2	129.9 - 131.2	17.6	17.6	15.2	13.9	12.3	11.4	10.3	9.6	8.8	8.4	7.7	7.3	6.8	USt								
	8.2 → 73.6	133.3 - 136.3	17.6	17.6	15.6	14.3	12.6	11.7	10.5	9.9	9	8.7	8	7.6	7.1	USt P+								
148	8.2 → 74.1	135.2 - 137.8	17.6	17.6	15.8	14.4	12.7	11.8	10.7	10	9.2	8.8	8	USt										
	8.2 → 76.3	138.3 - 141.4	17.6	17.6	16.3	14.9	13.2	12.2	11	10.3	9.4	8.9	8.4	USt P+										
131	8.2 → 74.1		17.6	17.6	15.7	14.3	12.6	11.7	10.6	9.9	9	USt												
	8.2 → 76.9		17.6	17.6	16.4	15	13.3	12.3	11.1	10.4	9.5	USt P+												
115	8.2 → 73.5		17.6	17.6	15.6	14.3	12.7	11.8	10.7	USt														
	8.2 → 76.4		17.6	17.6	16.3	15	13.3	12.3	11.1	USt P+														
98	8.2 → 74.5		17.6	17.6	15.5	14.3	12.9	USt																
	8.2 → 77.3		17.6	17.6	16.5	15.1	13.4	USt P+																

= - 0.25 USt max.

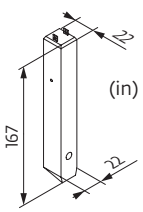
Jib weight & counter-jib ballast

	(lb) (+/- 5%)								
				10,141 lb	3,373 lb	(lb)	6,768 lb	3,373 lb	(lb)
246 ft	39,904	38,790	40,212	5	2	57,452	8	1	57,519
230 ft	39,330	38,250	39,639	5	2	57,452	8	1	57,519
213 ft	38,471	37,457	38,779	5	2	57,452	8	1	57,519
197 ft	36,200	35,252	36,509	5	1	54,079	8	0	54,146
180 ft	36,200	35,252	36,509	5	1	54,079	8	0	54,146
164 ft	34,106	33,158	34,414	5	2	57,452	8	1	57,519
148 ft	33,775	32,827	34,083	5	2	57,452	8	1	57,519
131 ft	31,945	30,997	32,254	5	0	50,706	7	1	50,750
115 ft	30,600	29,652	30,909	4	2	47,311	7	0	47,377
98 ft	28,770	27,822	29,079	4	1	43,938	6	1	43,982

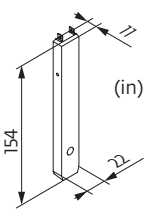
CBS - 10,141 lb



CBU - 6,768 lb



CBY - 3,373 lb

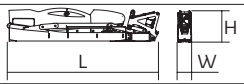
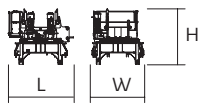
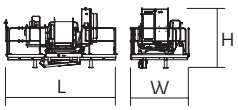
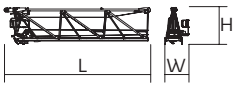
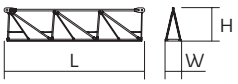
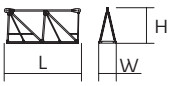
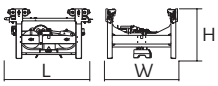
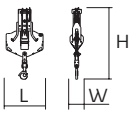
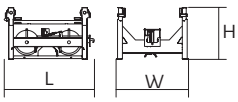
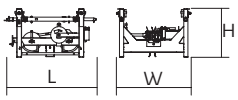
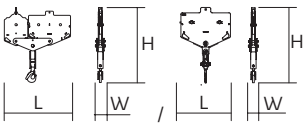


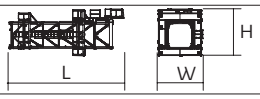
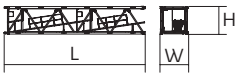
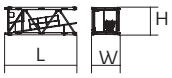
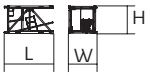
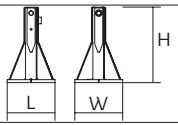
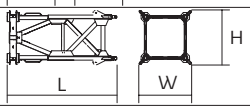
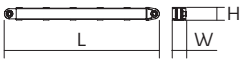
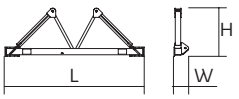
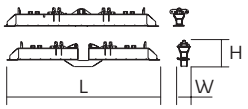
Dimensions and weight

Slewing crane part: 246 ft - - 90 HPL™

x 6

x 5

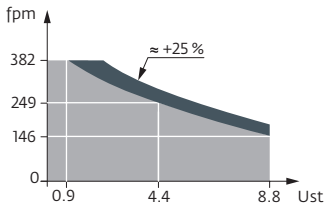
Slewing crane part			L (ft)	W (ft)	H (ft)	lb (+/- 5%)
Counter-jib		Ⓐ Ⓑ Ⓒ	39.4 39.4 39.4	4.1 4.1 4.1	8.2 8.2 8.2	31,107 29,983 25,441
Cab mast + cab		Ultra View	16.5	7.3	8.2	14,815
Towerhead		6.6 ft	9.7	8.1	8.2	16,799
Hoisting winch (+ rope)		90 HPL™ 132 HPL™ 100 LVF	14 15.9 14	7.5 7.5 7.5	7.6 8.3 7.6	9,017 15,146 12,588
Jib section		① 6 DVF	35.3	5.9	9	12,125
Jib section		② ③ ⑤ ⑥ ⑦	33.5 33.8 33.5 33.6 33.4	3.9 3.9 3.9 3.9 3.9	8.2 7.9 7.8 6.9 6	6,934 5,335 3,439 2,723 2,094
Jib section		④ ⑧ ⑨	17.3 16.7 16.7	3.9 3.9 3.9	7.8 5 4.6	2,116 683 485
Trolley		17.6 USt	6.7	5	3.6	1,063
Pulley block		17.6 USt	4.6	1.5	7.3	1,301
Trolley		17.6 USt	5.8	5	3.4	551
Trolley		17.6 USt 8.8 USt	5.8 6	5 5	3.4 3.4	668 668
Pulley block		17.6 USt 8.8 USt	6 3.8	0.9 0.7	6.2 5.2	1,863 816

Crane tower			L (ft)	W (ft)	H (ft)	lb (+/- 5%)
Telescopic cage T 61		☐6.6 ft	35.5	13.6	14.7	21,385
K 649B KM 649E		☐6.6 ft ☐6.6 ft	33.6 33.8	6.8 6.7	6.7 6.7	11,663 10,692
K 649A KMT 649A KR 649A KRMT 649A		☐6.6 ft ☐6.6 ft ☐6.6 ft ☐6.6 ft	17.2 17.2 17.2 17.2	6.8 6.8 6.9 6.9	6.7 6.7 6.8 6.8	6,184 5,666 7,165 6,724
K 649C KMT 649C KRMT 649C		☐6.6 ft ☐6.6 ft ☐6.6 ft	11.7 11.7 11.7	6.8 6.8 6.9	6.7 6.7 6.8	4,376 4,542 5,401
Fixing angles		P 602B	2.1	2.1	4.2	650
Basic mast unit		V 60A V 63A	16.4 32.9	7.9 7.9	7.9 7.9	9,674 16,502
Struts		V 60A V 63A	14.8 14.8	1 1.1	1 1.1	919 1,135
Half-bearer		V 60A V 63A	22 22	2.3 2.3	7.6 7.6	3,519 4,079
Cross girder		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	
	90 HPL™ 40	fpm	133	174	249	366	548	69	90	130	190	274	90	66	1,768 ft
		USt	8.8	6.6	4.4	2.2	0.6	17.6	13.2	8.8	4.4	1.5			
	132 HPL™ 40	fpm	198	259	363	525	671	102	135	189	269	336	132	98	3,740 ft
		USt	8.8	6.6	4.4	2.2	0.8	17.6	13.2	8.8	4.4	2			
	100 LVF 40 Optima	fpm	146	187	249	325	382	76	98	131	171	192	100	75	3,727 ft
		USt	8.8	6.6	4.4	2.2	0.9	17.6	13.2	8.8	3.9	3			
	6 DVF 6 Optima	fpm	0 → 138 (17.6 USt) 0 → 276 (8.8 USt) 0 → 328 (4.4 USt)										5.5	4	
	RVF 172 Optima+	rpm	0 → 0.9										2 x 10	2 x 7.5	

100 LVF 40 Optima



IEC 60204-32	kVA	
480 V (+6% -10%) 60 Hz	90 HPL™ : 96→ 60 kVA 132 HPL™ : 130→ 77 kVA 100 LVF: 104 → 64 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
- P+ 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
- kVA Required power
- Power Control Function: winch speeds adapted to the available power
- Consult us