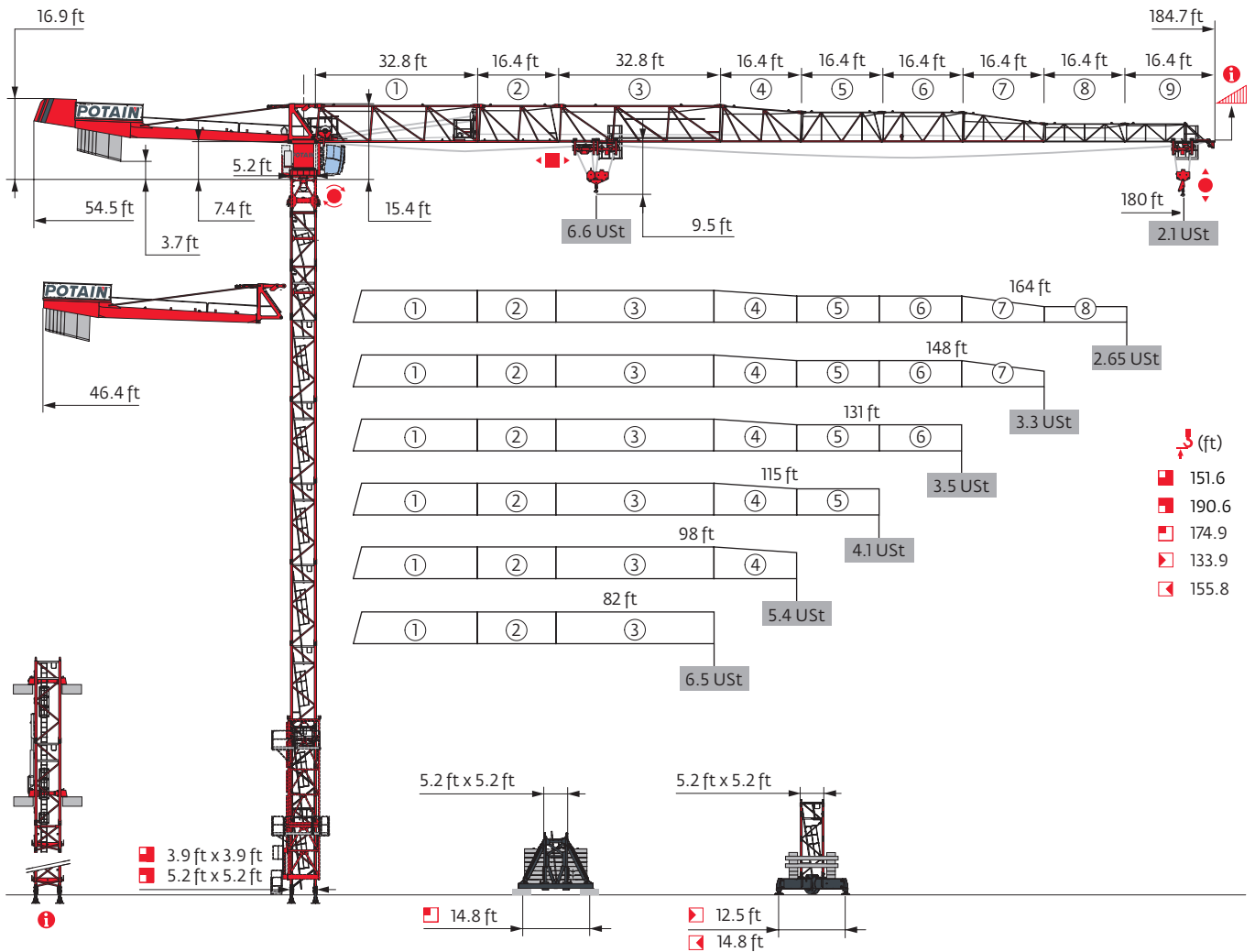






## MDT 139





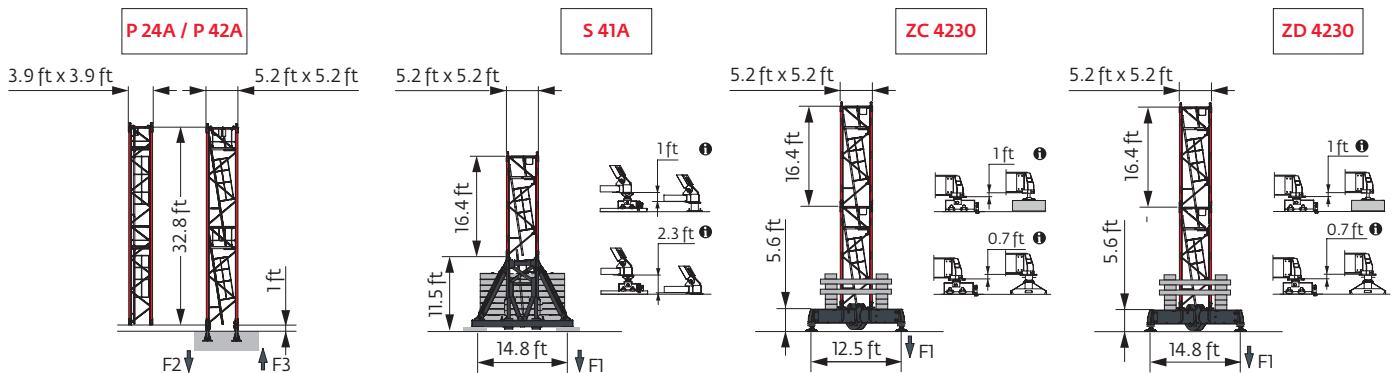
Mast - Reactions

3.9 ft City - P 24A								
WIND (ft)	82	98	115	131	148	164	180	
$\bar{H}$ (ft)	135.2	135.2	151.6	135.2	135.2	135.2	135.2	
$\bar{H}/P_r$ (ft)	102.4	102.4	102.4	102.4	102.4	135.2	135.2	
	4.9 ft	1	1	1	1	1	1	
	16.4 ft	6	6	7	6	6	6	
	32.8 ft	1	1	1	1	1	1	
F2 (Ust)	●	127	127	139	128	132	135	136
	■	153	152	200	161	158	157	165
F3 (Ust)	●	100	99	110	99	103	104	105
	■	130	128	174	136	132	130	138


5.2 ft City - P 42A								
WIND (ft)	82	98	115	131	148	164	180	
$\bar{H}$ (ft)	190.6	190.6	190.6	190.6	179.5	179.5	179.5	
$\bar{H}/P_r$ (ft)	190.6	190.6	190.6	190.6	179.5	179.5	179.5	
	10.9 ft	1	1	1	1	0	0	
	16.4 ft	9	9	9	9	9	9	
	32.8 ft	1	1	1	1	1	1	
F2 (Ust)	●	134	134	133	135	131	130	131
	■	220	220	226	227	199	198	205
F3 (Ust)	●	105	104	103	104	100	98	99
	■	194	193	199	199	171	169	176

5.2 ft City - ZC 4230 - 								
WIND (ft)	82	98	115	131	148	164	180	
$\bar{H}$ (ft)	128.6	133.9	133.9	133.9	128.6	123	123	
$\bar{H}/P_r$ (ft)	128.6	133.9	133.9	133.9	128.6	123	123	
	10.9 ft	1	0	0	1	2	2	
	16.4 ft	7	8	8	8	7	6	
F1 (Ust)	●	68	69	69	70	70	68	68
	■	65	67	71	71	67	64	67

5.2 ft City - ZD 4230 - 								
WIND (ft)	82	98	115	131	148	164	180	
$\bar{H}$ (ft)	155.8	155.8	155.8	155.8	150.3	150.3	150.3	
$\bar{H}/P_r$ (ft)	155.8	155.8	155.8	155.8	150.3	150.3	150.3	
	10.9 ft	2	2	2	2	0	0	
	16.4 ft	8	8	8	8	9	9	
F1 (Ust)	●	69	69	69	69	70	69	69
	■	81	80	84	85	75	74	78



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.

Other mast compositions - Please consult us

**5.2 ft - P 42A**

Height (ft)	82	98	115	131	148	164	180
$\bar{z}$ (ft)	186	186	186	186	180.8	175.2	175.2
$\bar{z}/P_z$ (ft)	186	186	186	186	180.8	175.2	175.2
6.6 ft	1	1	1	1	1	1	1
10.9 ft	0	0	0	0	1	2	2
16.4 ft	9	9	9	9	8	7	7
32.8 ft	1	1	1	1	1	1	1
F2 (Ust)	● 136	136	135	137	138	133	134
	■ 228	227	234	234	223	211	218
F3 (Ust)	● 104	102	101	102	103	98	98
	■ 198	197	203	203	191	179	185

**5.2 ft - S 41A**

Height (ft)	82	98	115	131	148	164	180
$\bar{z}$ (ft)	174.9	174.9	169.3	174.9	174.9	169.3	174.9
$\bar{z}/P_z$ (ft)	174.9	174.9	169.3	174.9	174.9	169.3	174.9
6.6 ft	1	1	1	1	1	1	1
10.9 ft	1	1	2	1	1	2	1
16.4 ft	9	9	8	9	9	8	9
F1 (Ust)	● 84	84	81	85	87	82	87
	■ 111	111	109	115	113	106	117

Anchorage



Base ballast

**(Ust) / 5.2 ft City - ZC 4230**

Height (ft)	82	98	115	131	148	164	180
133.9		88.2	88.2	88.2			
128.6	88.2	88.2	82.7	82.7	88.2		
123	82.7	82.7	77.2	77.2	82.7	88.2	88.2
106.6	71.7	71.7	66.1	66.1	71.7	71.7	71.7
90.2	71.7	71.7	66.1	66.1	66.1	66.1	66.1
73.8	71.7	71.7	66.1	66.1	66.1	66.1	66.1
57.4	71.7	71.7	66.1	66.1	66.1	66.1	66.1
41	71.7	71.7	66.1	66.1	66.1	66.1	66.1

**(Ust) / 5.2 ft City - ZD 4230**

Height (ft)	82	98	115	131	148	164	180
155.8	88.2	88.2	88.2	88.2			
150.3	82.7	82.7	77.2	77.2	88.2	88.2	88.2
133.9	66.1	66.1	66.1	66.1	71.7	71.7	71.7
117.5	55.1	55.1	49.6	55.1	60.6	60.6	60.6
101.1	55.1	49.6	49.6	44.1	44.1	44.1	44.1
84.7	55.1	49.6	49.6	44.1	44.1	44.1	44.1
68.2	55.1	49.6	49.6	44.1	44.1	44.1	44.1
51.8	55.1	49.6	49.6	44.1	44.1	44.1	44.1
35.4	55.1	49.6	49.6	44.1	44.1	44.1	44.1

**(Ust) / 5.2 ft - S 41A**

Height (ft)	82	98	115	131	148	164	180
174.9	125.7	125.7		125.7	125.7		125.7
169.3	119.1	112.4	119.1	119.1	112.4	112.4	119.1
152.9	86	86	92.6	92.6	92.6	92.6	92.6
136.5	72.8	72.8	66.1	72.8	79.4	79.4	79.4
120.1	59.5	59.5	52.9	59.5	59.5	66.1	59.5
103.7	46.3	46.3	46.3	46.3	46.3	52.9	46.3
87.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3
70.9	46.3	46.3	46.3	46.3	46.3	46.3	46.3
54.5	46.3	46.3	46.3	46.3	46.3	46.3	46.3
38.1	46.3	46.3	46.3	46.3	46.3	46.3	46.3

Load curves



▲▲▲▲ (ft)		56	66	72	82	89	98	105	115	121	131	138	148	154	164	171	180	ft	
▲▲▲▲	↔ 6.6 USt	↔ 3.3 USt									↔								
180	9 → 67	116 - 126	6.6	6.6	6	5.2	4.8	4.2	3.8	3.4	3.3	3.1	2.95	2.7	2.5	2.3	2.15	1.95	USt
	9 → 68	118 - 130	6.6	6.6	6.2	5.3	4.8	4.2	3.9	3.4	3.3	3.3	3.1	2.8	2.65	2.45	2.3	2.1	USt <b>P+</b>
164	9 → 73	123 - 135	6.6	6.6	6.6	5.7	5.1	4.5	4.1	3.6	3.4	3.3	3.2	2.95	2.8	2.55	USt		
	9 → 74	127 - 138	6.6	6.6	6.6	5.8	5.3	4.6	4.2	3.8	3.5	3.3	3.3	3.1	2.9	2.65	USt <b>P+</b>		
148	9 → 71	126 - 140	6.6	6.6	6.4	5.6	5.1	4.5	4.2	3.7	3.5	3.3	3.3	3.1	USt				
	9 → 77	135 - 148	6.6	6.6	6.6	6.1	5.6	5	4.6	4.1	3.8	3.4	3.3	3.3	USt <b>P+</b>				
131	9 → 68	122 - 131	6.6	6.6	6.2	5.4	4.9	4.3	4	3.6	3.3	3.3 USt							
	9 → 74		6.6	6.6	6.6	5.9	5.4	4.8	4.4	3.9	3.7	3.3	USt <b>P+</b>						
115	9 → 68		6.6	6.6	6.2	5.4	4.9	4.3	4	3.6	USt								
	9 → 74		6.6	6.6	6.6	5.9	5.4	4.8	4.4	3.9	USt <b>P+</b>								
98	9 → 73		6.6	6.6	6.6	5.8	5.3	4.7	USt										
	9 → 80		6.6	6.6	6.6	6.4	5.9	5.2	USt <b>P+</b>										
82	9 → 72		6.6	6.6	6.6	5.7	USt												
	9 → 79		6.6	6.6	6.6	6.3	USt <b>P+</b>												

$W = W - 0.42 \text{ USt max.}$



▲▲▲▲ (ft)		56	66	72	82	89	98	105	115	121	131	138	148	154	164	171	180	ft	
▲▲▲▲	↔ 6.6 USt	↔ 3.3 USt									↔								
180	7 → 69	121 - 121	6.6	6.6	6.2	5.4	5	4.4	4	3.6	3.3	3	2.8	2.55	2.4	2.15	2.05	1.85	USt
	7 → 70	124 - 125	6.6	6.6	6.4	5.5	5	4.4	4.1	3.7	3.4	3.1	2.95	2.7	2.5	2.3	2.2	1.95	USt <b>P+</b>
164	7 → 75	128 - 131	6.6	6.6	6.6	5.9	5.3	4.7	4.3	3.8	3.6	3.3	3.1	2.8	2.65	2.45	USt		
	7 → 76	133 - 133	6.6	6.6	6.6	6	5.5	4.8	4.4	4	3.7	3.4	3.2	2.95	2.75	2.55	USt <b>P+</b>		
148	7 → 73	132 - 135	6.6	6.6	6.6	5.8	5.3	4.7	4.4	3.9	3.7	3.3	3.2	2.95 USt					
	7 → 79	141 - 142	6.6	6.6	6.6	6.4	5.8	5.2	4.8	4.3	4	3.6	3.4	3.2	USt <b>P+</b>				
131	7 → 70	128 - 131	6.6	6.6	6.4	5.6	5.1	4.5	4.2	3.8	3.5	3.3	3.3 USt						
	7 → 76		6.6	6.6	6.6	6.1	5.6	5	4.6	4.1	3.9	3.5	USt <b>P+</b>						
115	7 → 70		6.6	6.6	6.4	5.6	5.1	4.5	4.2	3.8	USt								
	7 → 76		6.6	6.6	6.6	6.1	5.6	5	4.6	4.1	USt <b>P+</b>								
98	7 → 75		6.6	6.6	6.6	6	5.5	4.9	USt										
	7 → 82		6.6	6.6	6.6	6.6	6.1	5.4	USt <b>P+</b>										
82	7 → 74		6.6	6.6	6.6	5.9	USt												
	7 → 81		6.6	6.6	6.6	6.5	USt <b>P+</b>												

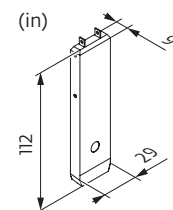
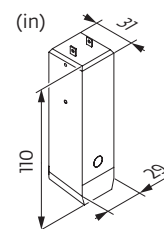
$W = W - 0.08 \text{ USt max.}$

Jib weight & counter-jib ballast

▲▲▲▲	▲▲▲▲ (lb) - 25 LVF (+/- 5%)			■		▲ (lb)
	↔ ↔	↔	↔ ↔	7,937 lb	2,425 lb	
180 ft	16,925	16,616	17,262	2	5	27,999
164 ft	16,495	16,186	16,832	2	5	27,999
148 ft	15,988	15,679	16,325	2	4	25,574
131 ft	15,338	15,029	15,675	2	3	23,149
115 ft	14,588	14,279	14,925	2	2	20,723
98 ft	13,986	13,678	14,323	2	2	20,723
82 ft	13,186	12,877	13,523	2	1	18,298

CAU - 7,937 lb


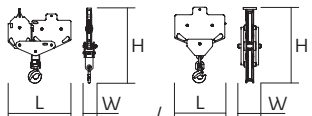

CAV - 2,425 lb

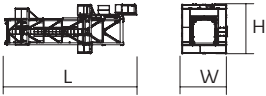
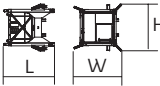
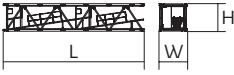

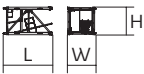
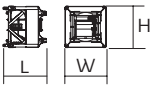


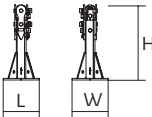
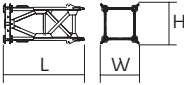
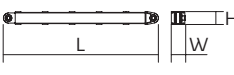
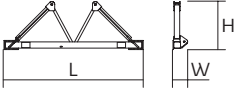
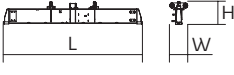
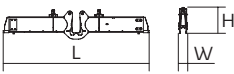


Dimensions and weight

Slewing crane part:  180 ft -  -  -  25 LVF



Slewing crane part		L (ft)	W (ft)	H (ft)	lb (+/- 5%)
Counter-jib		39	3.9	8.2	10,406
Towerhead + cab	 Ultra View	14.2	7.4	8	11,890
Jib section	 ① 25 LVF 6 DVF	35.9	9.6	8.5	7,110
Jib section	 ② ⑤ ⑥ ⑧	17.2 17 17 16.9	3.4 3.4 3.4 3.4	7.7 6.3 6.2 3.9	1,620 886 756 503
Jib section	 ③	33.4	3.4	7.7	2,482
Jib section	 ④ ⑦	17 16.9	3.4 3.4	7.6 6.2	990 646
Jib section	 ⑨	17	3.4	3.8	417
Hoisting winch (+ rope)	 25 LVF 33 LVF	4.3 4.5	2.3 3	2.3 2.9	1,687 2,127
Trolley	  6.6 USt	5.2	4.4	2.9	617
Pulley block	  6.6 USt	3	0.9	4.3	628
Trolley	  6.6 USt	4.6	4.1	3.1	617
Trolley	  6.6 USt  3.3 USt	4.7 5	4.1 4.3	3.1 3.1	617 518
Pulley block	  6.6 USt  3.3 USt	4.1 2.6	0.9 0.7	5 4.2	551 287

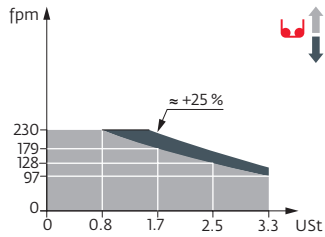
Crane tower		L (ft)	W (ft)	H (ft)	lb (+/- 5%)	
Telescopic cage T41		5.2 ft	35.6	12.3	13.5	15,653
K40/K40-2		5.2 ft	7.3	6.9	6.8	2,932
K 447E KM 447E KM 449E		5.2 ft	33.5 33.5 33.5	5.3 5.3 5.3	5.3 5.3 5.3	7,474 7,088 8,830
K 447A KMT 447A K 449A KMT 449A		5.2 ft	17.1 17.1 17.1 17.1	5.5 5.5 5.5 5.5	5.3 5.3 5.3 5.3	4,079 3,847 4,916 4,696
K 447C KMT 447C		5.2 ft	11.3 11.6	5.5 5.5	5.3 5.3	2,998 2,976
K20/K40		3.9/5.2 ft	5.6	5.4	5.4	4,189
KM 247E KM 249E		3.9 ft	33.5 33.5	4 4	4 4	7,165 8,818
KM 247A KM 249A		3.9 ft	17.1 17.1	4 4	4 4	3,748 4,630
Fixing angles		P 24A / P 42A	1.8	1.8	3.8	529
Basic mast unit		S 41A	11.9	6.4	6.8	7,132
Struts		S 41A	10.4	0.9	0.8	816
Half-bearer		S 41A	16.7	2	5.8	2,315
Cross girder		ZC 4230 ZD 4230	18.5 21.8	2.7 2.7	3.4 3.4	3,505 4,035
Cross girder		ZC 4230 ZD 4230	18.5 21.8	1.5 1.5	4.4 4.4	4,178 4,707

Mechanisms

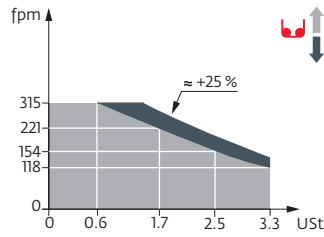
480 V - 60 Hz											hp	kW	
	<b>25 LVF 15 Optima</b>	fpm	97	128	179	230	49	66	92	115	25	18	912 ft
		USt	3.3	2.5	1.7	0.8	6.6	5	3.3	1.8			
	<b>33 LVF 15 Optima</b>	fpm	118	154	221	315	59	79	116	157	33	22	1,001 ft
		USt	3.3	2.5	1.7	0.6	6.6	5	3.3	1.4			
	<b>6 DVF 4 Optima</b>	fpm	0 → 262 (6.6 USt) 0 → 328 (2.2 USt)								5.5	4	
	<b>RVF 152 Optima+</b>	rpm	0 → 0.8								2 x 5.5	2 x 4	

	<b>kVA</b>		
480 V (+6% -10%) 60 Hz	25 LVF: 34 → 24 kVA	33 LVF: 41 → 28 kVA	



















25 LVF 15 Optima



33 LVF 15 Optima



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                          |  | Total ballast weight                              |  | Travelling  |
|  | Standard equipment                     |  | Jib weight  |  | Required power  |
|  | Options                                |  | Lorry 44 ft                                       |  | Power Control Function: winch speeds adapted to the available power |
|  | Potain Plus function: Plus load curves |  | Container High Cube 40 ft, and/or Flat Rack 20 ft |  | Consult us  |
|  | Hook heights with Plus load curves     |  | Trolleying  |   |   |
|  | Reactions in service                   |  | Slewing   |   |   |
|  | Reactions out of service               |  | Hoisting  |   |   |

 This commercial document is not legally binding. For any technical information, please refer to the corresponding instructions.

