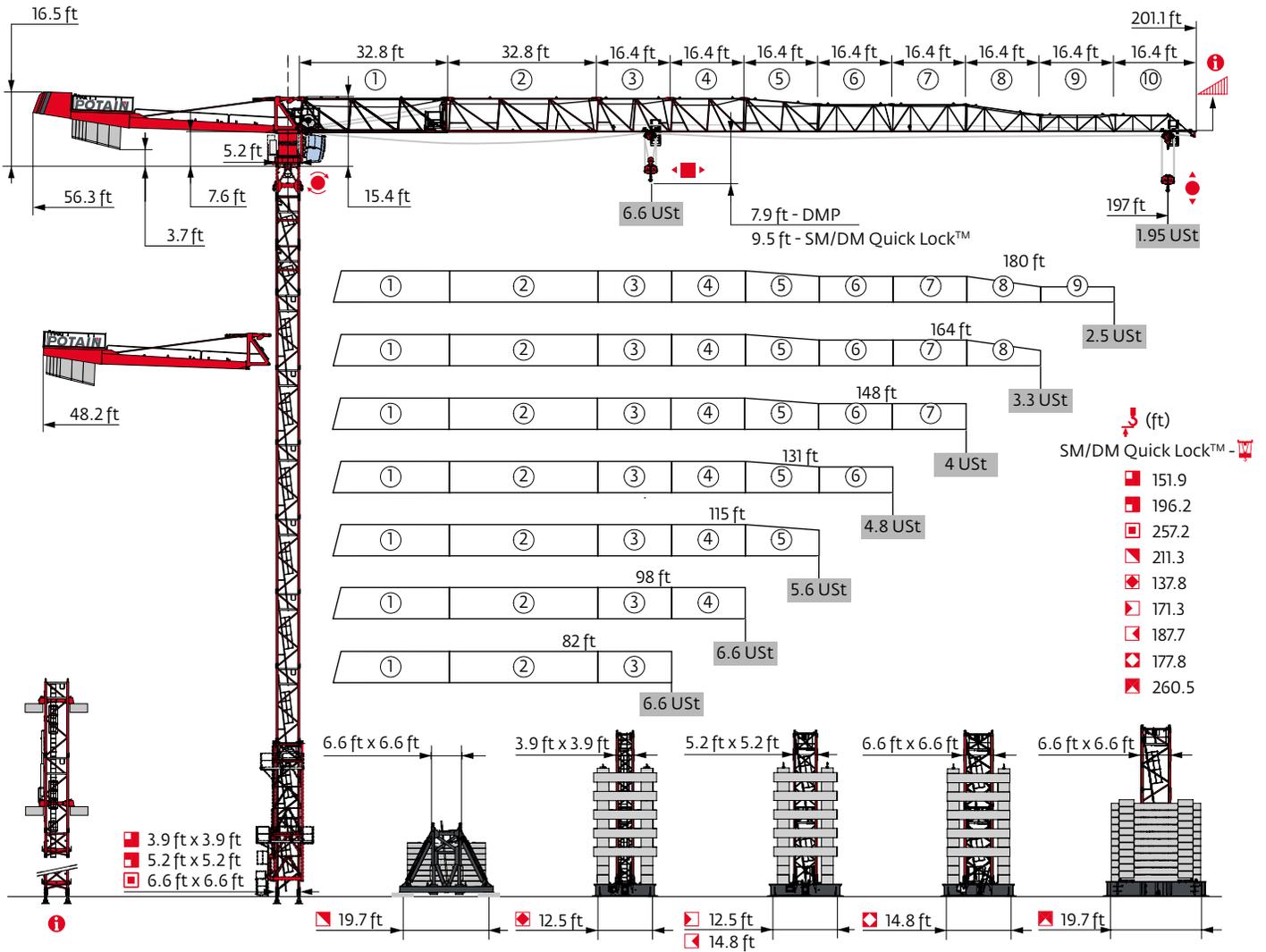


MDT 159



Potain Plus Power Control Top Site Anti-collision systems Automatic Rotation Control

Mast - Reactions

3.9 ft City - P 24A

Height (ft)	82	98	115	131	148	164	180	197
Height (ft)	151.9	135.5	135.5	135.5	135.5	135.5	135.5	135.5
Height/P _r (ft)	151.9	102.7	102.7	102.7	102.7	102.7	119.1	102.7
10.9 ft	1	1	1	1	1	1	1	1
16.4 ft	7	6	6	6	6	6	6	6
32.8 ft	1	1	1	1	1	1	1	1
F2 (USt)	● 140 ■ 187	137 137	136 137	137 139	138 140	134 151	138 159	142 168
F3 (USt)	● 114 ■ 161	111 111	110 110	109 111	109 111	102 123	106 130	109 139

3.9 ft City - ZC 240 - □

Height (ft)	82	98	115	131	148	164	180	197
Height (ft)	137.8	137.8	137.8	121.4	121.4	121.4	121.4	121.4
Height/P _r (ft)	137.8	105	105	105	105	105	121.4	105
10.9 ft	1	1	1	1	1	1	1	1
16.4 ft	8	6	6	7	7	7	5	7
32.8 ft	0	1	1	0	0	0	1	0
F1 (USt)	● 72 ■ 75	78 75	78 76	69 60	69 61	69 64	75 69	71 69

5.2 ft City - P 42A

Height (ft)	82	98	115	131	148	164	180	197
Height (ft)	196.2	185	185	179.8	179.8	179.8	174.2	174.2
Height/P _r (ft)	196.2	185	185	179.8	179.8	179.8	174.2	174.2
10.9 ft	0	2	2	0	0	0	1	1
16.4 ft	10	8	8	9	9	9	8	8
32.8 ft	1	1	1	1	1	1	1	1
F2 (USt)	● 133 ■ 226	134 199	132 200	129 185	131 186	133 195	133 191	135 198
F3 (USt)	● 106 ■ 200	106 171	103 171	97 156	98 157	99 165	100 161	102 168

5.2 ft City - ZC 440 - □

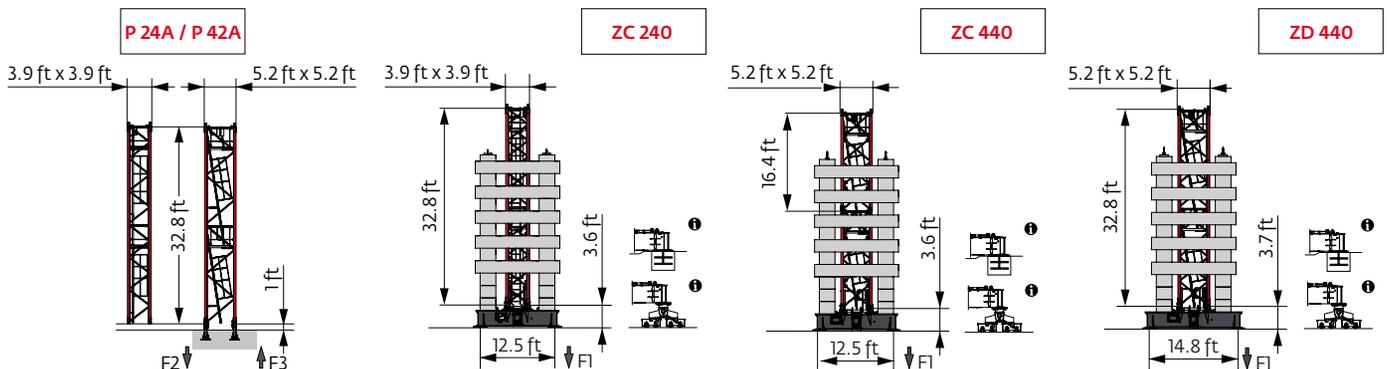
Height (ft)	82	98	115	131	148	164	180	197
Height (ft)	171.3	165.7	165.7	165.7	160.4	160.4	154.9	154.9
Height/P _r (ft)	171.3	165.7	165.7	165.7	160.4	160.4	154.9	154.9
10.9 ft	2	0	0	0	1	1	2	2
16.4 ft	9	10	10	10	9	9	8	8
F1 (USt)	● 90 ■ 119	91 102	92 102	93 103	92 99	91 103	91 101	92 106

5.2 ft City - ZD 440 - □

Height (ft)	82	98	115	131	148	164	180	197
Height (ft)	187.7	182.1	182.1	182.1	176.8	176.8	171.3	171.3
Height/P _r (ft)	187.7	182.1	182.1	182.1	176.8	176.8	171.3	171.3
10.9 ft	2	0	0	0	1	1	2	2
16.4 ft	8	9	9	9	8	8	7	7
32.8 ft	1	1	1	1	1	1	1	1
F1 (USt)	● 88 ■ 121	85 105	85 105	86 106	86 101	86 106	87 104	87 108

5.2 ft - P 42A

Height (ft)	82	98	115	131	148	164	180	197
Height (ft)	186.4	180.8	180.8	180.8	175.2	175.2	170	170
Height/P _r (ft)	186.4	180.8	180.8	180.8	175.2	175.2	170	170
6.6 ft	1	1	1	1	1	1	1	1
10.9 ft	0	1	1	1	2	2	0	0
16.4 ft	9	8	8	8	7	7	8	8
32.8 ft	1	1	1	1	1	1	1	1
F2 (USt)	● 130 ■ 222	134 205	133 206	134 207	133 198	134 206	133 197	135 203
F3 (USt)	● 104 ■ 196	106 177	104 177	101 178	99 168	100 176	100 167	102 173



6.6 ft - P 63A

Height (ft)	82	98	115	131	148	164	180	197
F_1 (ft)	257.2	257.2	257.2	257.2	257.2	252	252	252
F_1/P_1 (ft)	257.2	257.2	257.2	257.2	257.2	252	252	252
6.6 ft	1	1	1	1	1	1	1	1
10.9 ft	2	2	2	2	2	0	0	0
16.4 ft	12	12	12	12	12	13	13	13
32.8 ft	1	1	1	1	1	1	1	1
F_2 (Ust)	● 170 ■ 398	175 393	173 394	176 395	178 396	175 385	180 390	181 395
F_3 (Ust)	● 131 ■ 359	134 352	132 352	130 353	132 353	129 342	133 347	135 352

6.6 ft - V 60A

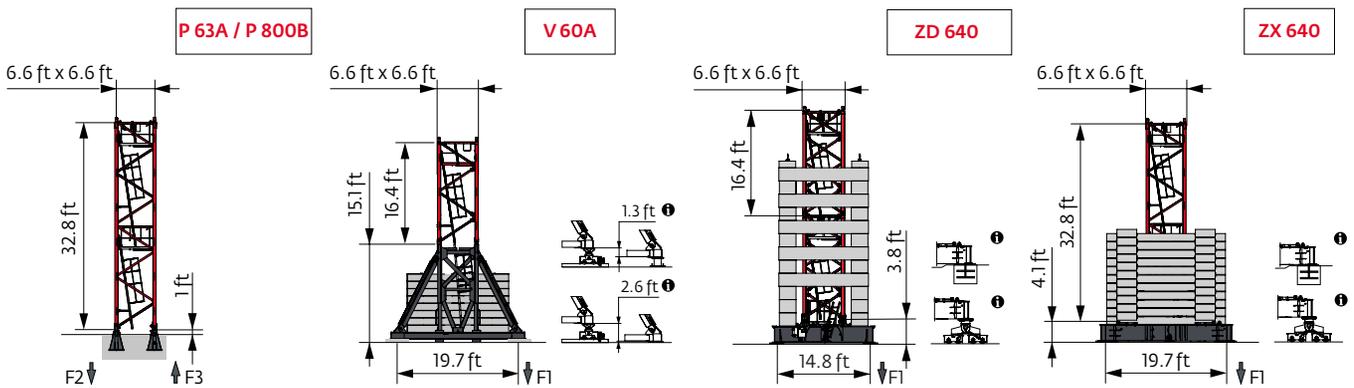
Height (ft)	82	98	115	131	148	164	180	197
F_1 (ft)	205.7	211.3	211.3	211.3	211.3	211.3	205.7	205.7
F_1/P_1 (ft)	205.7	211.3	211.3	211.3	211.3	211.3	205.7	205.7
6.6 ft	1	1	1	1	1	1	1	1
10.9 ft	2	1	1	1	1	1	2	2
16.4 ft	10	11	11	11	11	11	10	10
F_1 (Ust)	● 91 ■ 138	94 140	95 140	96 141	97 141	97 145	97 141	98 145

6.6 ft - ZD 640

Height (ft)	82	98	115	131	148	164	180	197
F_1 (ft)	167	172.6	172.6	172.6	177.8	172.6	172.6	167
F_1/P_1 (ft)	167	172.6	172.6	172.6	177.8	172.6	172.6	167
6.6 ft	1	1	1	1	1	1	1	1
10.9 ft	1	0	0	0	2	0	0	1
16.4 ft	9	10	10	10	9	10	10	9
F_1 (Ust)	● 87 ■ 120	91 122	91 123	92 123	97 133	94 129	96 133	94 129

6.6 ft - ZX 640

Height (ft)	82	98	115	131	148	164	180	197
F_1 (ft)	254.9	260.5	260.5	260.5	260.5	254.9	254.9	249.7
F_1/P_1 (ft)	254.9	260.5	260.5	260.5	260.5	254.9	254.9	249.7
6.6 ft	1	1	1	1	1	1	1	1
10.9 ft	0	2	2	2	2	0	0	1
16.4 ft	13	12	12	12	12	13	13	12
32.8 ft	1	1	1	1	1	1	1	1
F_1 (Ust)	● 130 ■ 208	134 215	134 215	136 215	137 216	132 210	137 213	133 208



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.

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

Other mast compositions - Please consult us

Anchorage

i

Base ballast

USt) / 3.9 ft City - ZC 240 -

Δ (ft)	82	98	115	131	148	164	180	197
137.8	99.2	110.2	110.2					
121.4	88.2	88.2	88.2	88.2	88.2	88.2	99.2	88.2
105	77.2	88.2	88.2	88.2	88.2	77.2	77.2	77.2
88.6	66.1	88.2	88.2	77.2	77.2	77.2	66.1	66.1
72.2	66.1	77.2	77.2	77.2	77.2	77.2	66.1	66.1
55.8	66.1	77.2	77.2	77.2	77.2	66.1	66.1	66.1

USt) / 5.2 ft City - ZD 440 -

Δ (ft)	82	98	115	131	148	164	180	197
187.7	137.8							
182.1	121.3	121.3	121.3	121.3				
176.8	121.3	121.3	121.3	121.3	121.3	121.3		
171.3	110.2	110.2	110.2	110.2	121.3	121.3	121.3	121.3
154.9	88.2	99.2	99.2	99.2	99.2	99.2	110.2	110.2
138.5	77.2	88.2	88.2	88.2	88.2	88.2	88.2	88.2
122.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1
105.6	55.1	55.1	55.1	55.1	55.1	55.1	55.1	55.1
89.2	44.1	55.1	55.1	55.1	55.1	44.1	44.1	44.1
72.8	44.1	55.1	55.1	55.1	55.1	44.1	44.1	44.1
56.4	44.1	55.1	55.1	55.1	55.1	44.1	44.1	44.1

USt) / 6.6 ft - ZD 640 -

Δ (ft)	82	98	115	131	148	164	180	197
177.8					137.8			
172.6		132.3	132.3	132.3	132.3	132.3	137.8	
167	132.3	121.3	121.3	121.3	121.3	121.3	132.3	132.3
150.6	99.2	99.2	99.2	99.2	99.2	99.2	110.2	110.2
134.2	77.2	88.2	88.2	88.2	88.2	88.2	88.2	88.2
117.8	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1
101.4	55.1	55.1	55.1	55.1	55.1	55.1	55.1	55.1
85	44.1	55.1	55.1	55.1	44.1	44.1	44.1	44.1
68.6	44.1	55.1	55.1	55.1	44.1	44.1	44.1	33.1
52.2	44.1	55.1	55.1	55.1	44.1	44.1	44.1	33.1

USt) / 5.2 ft City - ZC 440 -

Δ (ft)	82	98	115	131	148	164	180	197
171.3	137.8							
165.7	132.3	137.8	137.8	137.8				
160.4	121.3	132.3	132.3	132.3	137.8	132.3		
154.9	121.3	132.3	132.3	132.3	132.3	132.3	132.3	132.3
138.5	99.2	110.2	110.2	110.2	110.2	110.2	121.3	110.2
122.1	88.2	99.2	88.2	99.2	99.2	88.2	99.2	99.2
105.6	66.1	77.2	77.2	77.2	77.2	77.2	77.2	77.2
89.2	66.1	77.2	77.2	77.2	77.2	66.1	66.1	66.1
72.8	66.1	77.2	77.2	77.2	77.2	66.1	66.1	66.1
56.4	66.1	77.2	77.2	77.2	77.2	66.1	66.1	66.1

USt) / 6.6 ft - V 60A -

Δ (ft)	82	98	115	131	148	164	180	197
211.3		145.5	145.5	145.5	145.5	145.5		
205.7	145.5	132.3	132.3	132.3	132.3	145.5	145.5	145.5
189.3	119.1	105.8	105.8	105.8	105.8	105.8	119.1	119.1
172.9	92.6	79.4	79.4	79.4	79.4	79.4	92.6	92.6
156.5	66.1	52.9	52.9	52.9	52.9	52.9	66.1	66.1
140.1	39.7	39.7	39.7	39.7	39.7	39.7	52.9	39.7
123.7	26.5	39.7	39.7	39.7	39.7	39.7	39.7	39.7
107.3	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5
90.9	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5
58.1	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5

USt) / 6.6 ft - ZX 640 -

Δ (ft)	82	98	115	131	148	164	180	197
260.5		242.5	242.5	242.5	242.5			
254.9	242.5	231.5	231.5	231.5	231.5	231.5	242.5	
249.7	231.5	220.5	220.5	220.5	220.5	220.5	231.5	231.5
233.3	187.4	176.4	176.4	176.4	176.4	187.4	187.4	198.4
216.9	154.3	143.3	143.3	143.3	143.3	154.3	154.3	154.3
200.5	132.3	121.3	121.3	121.3	110.2	121.3	121.3	132.3
184.1	99.2	88.2	88.2	88.2	88.2	88.2	99.2	99.2
167.7	77.2	66.1	66.1	66.1	66.1	66.1	66.1	77.2
151.3	44.1	55.1	55.1	55.1	55.1	55.1	55.1	55.1
134.8	33.1	44.1	44.1	44.1	44.1	33.1	44.1	44.1
118.4	22.1	33.1	33.1	33.1	33.1	22.1	33.1	33.1
102	22.1	22.1	22.1	22.1	22.1	22.1	22.1	11
85.6	11	22.1	22.1	22.1	11	11	11	11
52.8	11	22.1	22.1	22.1	11	11	11	11

Load curves



(ft)		72	82	89	98	105	115	121	131	138	148	154	164	171	180	187	197	ft	
	6.6 USt																		
	3.3 USt																		
197	7.2 → 74.3	6.6	5.8	5.3	4.6	4.2	3.7	3.4	3.2	2.95	2.7	2.5	2.3	2.2	2	1.9	1.75	USt	
	7.2 → 79.3	6.6	6.3	5.7	5	4.6	4	3.7	3.4	3.2	2.95	2.75	2.55	2.4	2.2	2.1	1.95	USt P+	
180	7.2 → 77.7	6.6	6.2	5.6	4.9	4.5	4.1	3.8	3.4	3.3	3	2.85	2.6	2.5	2.3	USt			
	7.2 → 83.7	6.6	6.6	6.2	5.4	5	4.4	4.1	3.7	3.5	3.3	3.1	2.85	2.7	2.5	USt P+			
164	7.2 → 83.2	6.6	6.6	6.1	5.4	5	4.5	4.2	3.8	3.6	3.3	3.2	2.95	USt					
	7.2 → 89.9	6.6	6.6	6.6	5.9	5.5	4.9	4.6	4.2	3.9	3.6	3.4	3.3	USt P+					
148	7.2 → 90.4	6.6	6.6	6.6	6	5.5	5	4.6	4.2	4	3.6	USt							
	7.2 → 97.6	6.6	6.6	6.6	6.5	6.1	5.4	5.1	4.6	4.3	4	USt P+							
131	7.2 → 92.4	6.6	6.6	6.6	6.1	5.7	5.1	4.8	4.4	USt									
	7.2 → 97.6	6.6	6.6	6.6	6.6	6.1	5.5	5.2	4.7	USt P+									
115	7.2 → 93	6.6	6.6	6.6	6.2	5.7	5.1	USt											
	7.2 → 98.4	6.6	6.6	6.6	6.6	6.1	5.5	USt P+											
98	7.2 → 93	6.6	6.6	6.6	6.1	USt													
	7.2 → 97.3	6.6	6.6	6.6	6.5	USt P+													
82	7.2 → 82	6.6	6.6	USt															
	7.2 → 82	6.6	6.6	USt P+															

$$\text{USt} = \text{USt} - 0.11 \text{ USt max.}$$



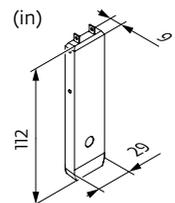
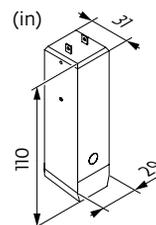
(ft)		72	82	89	98	105	115	121	131	138	148	154	164	171	180	187	197	ft	
	6.6 USt																		
197	7.2 → 74.5	6.6	5.8	5.3	4.6	4.2	3.7	3.4	3.1	2.85	2.6	2.45	2.2	2.1	1.9	1.8	1.65	USt	
	7.2 → 79.6	6.6	6.4	5.7	5	4.6	4	3.7	3.4	3.1	2.85	2.65	2.4	2.3	2.1	2	1.8	USt P+	
180	7.2 → 77.4	6.6	6.2	5.6	4.9	4.5	4	3.8	3.4	3.2	2.9	2.75	2.5	2.4	2.2	USt			
	7.2 → 83.6	6.6	6.6	6.2	5.4	5	4.4	4.1	3.7	3.5	3.2	3	2.75	2.6	2.4	USt P+			
164	7.2 → 83.6	6.6	6.6	6.2	5.4	5	4.5	4.2	3.8	3.6	3.3	3.1	2.85	USt					
	7.2 → 90.1	6.6	6.6	6.6	5.9	5.5	4.9	4.6	4.2	3.9	3.6	3.4	3.2	USt P+					
148	7.2 → 90.4	6.6	6.6	6.6	6	5.5	5	4.6	4.2	4	3.6	USt							
	7.2 → 97.5	6.6	6.6	6.6	6.5	6.1	5.4	5.1	4.6	4.3	4	USt P+							
131	7.2 → 92.4	6.6	6.6	6.6	6.1	5.7	5.1	4.8	4.4	USt									
	7.2 → 98.6	6.6	6.6	6.6	6.6	6.2	5.6	5.2	4.8	USt P+									
115	7.2 → 93	6.6	6.6	6.6	6.2	5.7	5.1	USt											
	7.2 → 98.5	6.6	6.6	6.6	6.6	6.2	5.6	USt P+											
98	7.2 → 93	6.6	6.6	6.6	6.1	USt													
	7.2 → 98.4	6.6	6.6	6.6	6.6	USt P+													
82	7.2 → 82	6.6	6.6	USt															
	7.2 → 82	6.6	6.6	USt P+															

Jib weight & counter-jib ballast

	(lb) - 33 LVF (+/- 5%)			(lb)
		7,937 lb	2,425 lb	
197 ft	19,621	3	4	33,510
180 ft	19,180	3	4	33,510
164 ft	18,519	3	4	33,510
148 ft	17,857	3	4	33,510
131 ft	17,196	3	3	31,085
115 ft	16,094	3	2	28,660
98 ft	15,212	3	1	26,235
82 ft	14,330	2	2	20,723

CAU - 7,937 lb

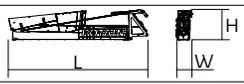
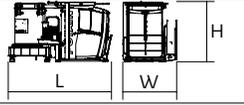
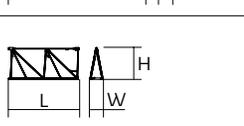
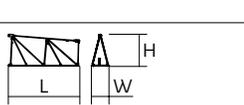
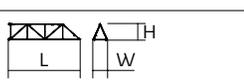
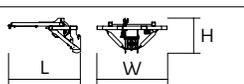
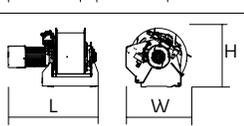
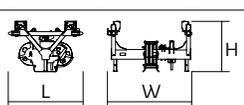
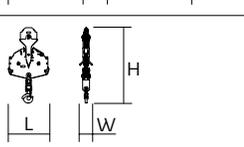
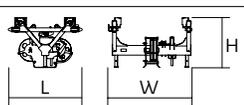
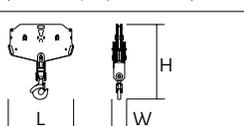
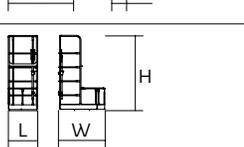
CAV - 2,425 lb

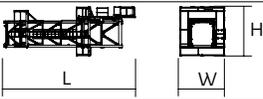
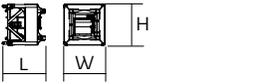
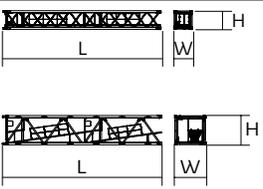
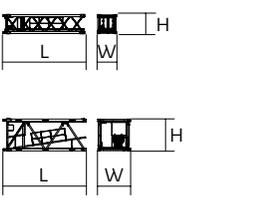
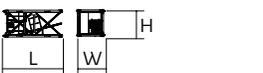
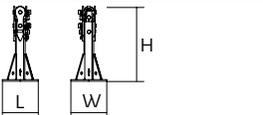
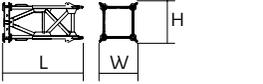
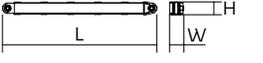
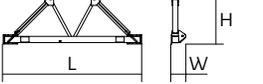
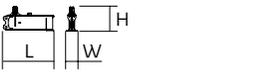
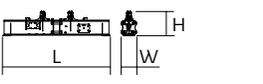
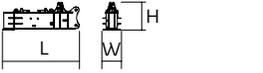


Dimensions and weight

Slewing crane part:  197 ft -  SM/DM Quick Lock™ -  33 LVF



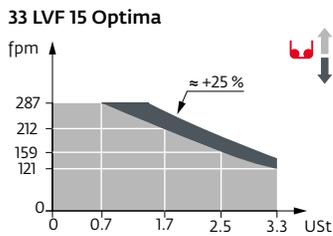
Slewing crane part		L (ft)	W (ft)	H (ft)	lb (+/- 5%)
Counter-jib		38.9	4.4	8.2	11,023
Towerhead + cab	 Ultra View	14.2	7.4	8.1	13,338
Jib section	 ① 33 LVF 6 DVF	36	9.5	8.5	8,377
Jib section	 ②	33.6	3.4	7.8	3,217
Jib section	 ③ ④ ⑥ ⑦ ⑨	17.1 17 17 17 16.9	3.4 3.4 3.4 3.4 3.4	7.7 7.6 6.3 6.2 3.9	1,336 1,283 886 756 503
Jib section	 ⑤ ⑧	17 16.9	3.4 3.4	7.6 6.2	990 646
Jib section	 ⑩	16.7	3.4	3.8	417
Jib section		4.1	4	2	225
Hoisting winch (+ rope)	 33 LVF	4.5	3	2.9	2,150
Trolley	 SM/DM Quick Lock™ 6.6 USt	3.8	4.3	2.5	399
Pulley block	 SM/DM Quick Lock™ 6.6 USt	2.9	0.9	5.4	401
Trolley	 DMP 6.6 USt	3.8	4.3	2.5	399
Trolley	 DMP 6.6 USt	2.9	0.6	3.4	291
Trolley inspection platform		2.2	3.5	5.7	99

Crane tower			L (ft)	W (ft)	H (ft)	lb (+/- 5%)
Telescopic cage T41 Telescopic cage T61		▧ 5.2 ft ▧ 6.6 ft	35.6 35.5	12.3 13.6	13.5 14.7	15,653 21,385
K20/K40 K40/K40-2 K60/K40-2		▧ 3.9 ft/5.2 ft ▧ 5.2 ft ▧ 6.6/5.2 ft	5.6 7.3 7.3	5.4 6.9 8.2	5.4 6.8 8.1	4,189 2,932 5,820
KM 247E KRM 249E K 447E KM 447E KRM 449E K 649B KM 649E KRM 6410B		▧ 3.9 ft ▧ 3.9 ft ▧ 5.2 ft ▧ 5.2 ft ▧ 5.2 ft ▧ 6.6 ft ▧ 6.6 ft ▧ 6.6 ft	33.5 33.5 33.5 33.5 33.5 33.6 33.8 33.6	4 4 5.3 5.3 5.3 6.8 6.7 6.9	4 4 5.3 5.3 5.3 6.7 6.7 6.8	7,165 9,204 7,474 7,088 9,370 11,663 10,692 15,653
KM 247A KM 249A K 447A KMT 447A K 449A KMT 449A KR 649A KRMT 649A K 649A KMT 649A		▧ 3.9 ft ▧ 3.9 ft ▧ 5.2 ft ▧ 5.2 ft ▧ 5.2 ft ▧ 5.2 ft ▧ 6.6 ft ▧ 6.6 ft ▧ 6.6 ft ▧ 6.6 ft	17.1 17.1 17.1 17.1 17.1 17.1 17.2 17.2 17.2 17.2	4 4 5.5 5.5 5.5 5.5 6.9 6.9 6.8 6.8	4 4 5.3 5.3 5.3 5.3 6.8 6.8 6.7 6.7	3,748 4,630 4,079 3,847 4,916 4,696 7,165 6,724 6,184 5,666
KMT 447C KRMT 649C		▧ 5.2 ft ▧ 6.6 ft	11.6 11.7	5.5 6.9	5.3 6.8	2,976 5,401
Fixing angles		P 24A / P 42A P 63A / P 800B	1.8 2.5	1.8 2.5	3.8 4.2	529 1,025
Basic mast unit		V 60A	16.4	7.9	7.9	10,494
Struts		V 60A	14.8	1	1	1,036
Half-bearer		V 60A	22	2.3	7.6	4,057
1/2 Cross girder		ZC 240 ZC 440 ZD 440 ZD 640	9.2 9.2 10.8 10.8	1.9 1.9 1.9 1.9	4.3 4.3 4.4 4.7	2,447 2,447 2,778 2,976
Cross girder		ZC 240 ZC 440 ZD 440 ZD 640	19 19 22.2 22.2	2.7 2.8 2.8 1	4.3 4.3 4.3 4.7	5,997 5,997 6,702 7,055
1/2 Cross girder		ZX 640	14.3	3.3	5.1	7,319
Cross girder		ZX 640	30	3.9	5.1	15,168

Mechanisms

480 V - 60 Hz											hp	kW	
	33 LVF 15 Optima	fpm	121	159	212	287	61	80	105	144	33	22	1,001 ft
		USt	3.3	2.5	1.7	0.7	6.6	5	3.3	1.4			
	6 DVF 4 Optima	fpm	0 → 262 (6.6 USt) 0 → 328 (2.2 USt)								5.5	4	
	RVF 152 Optima+	rpm	0 → 0.8								2 x 5.5	2 x 4	

	IEC 60204-32		kVA	
	480 V (+6% -10%) 60 Hz		41 → 28 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

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

