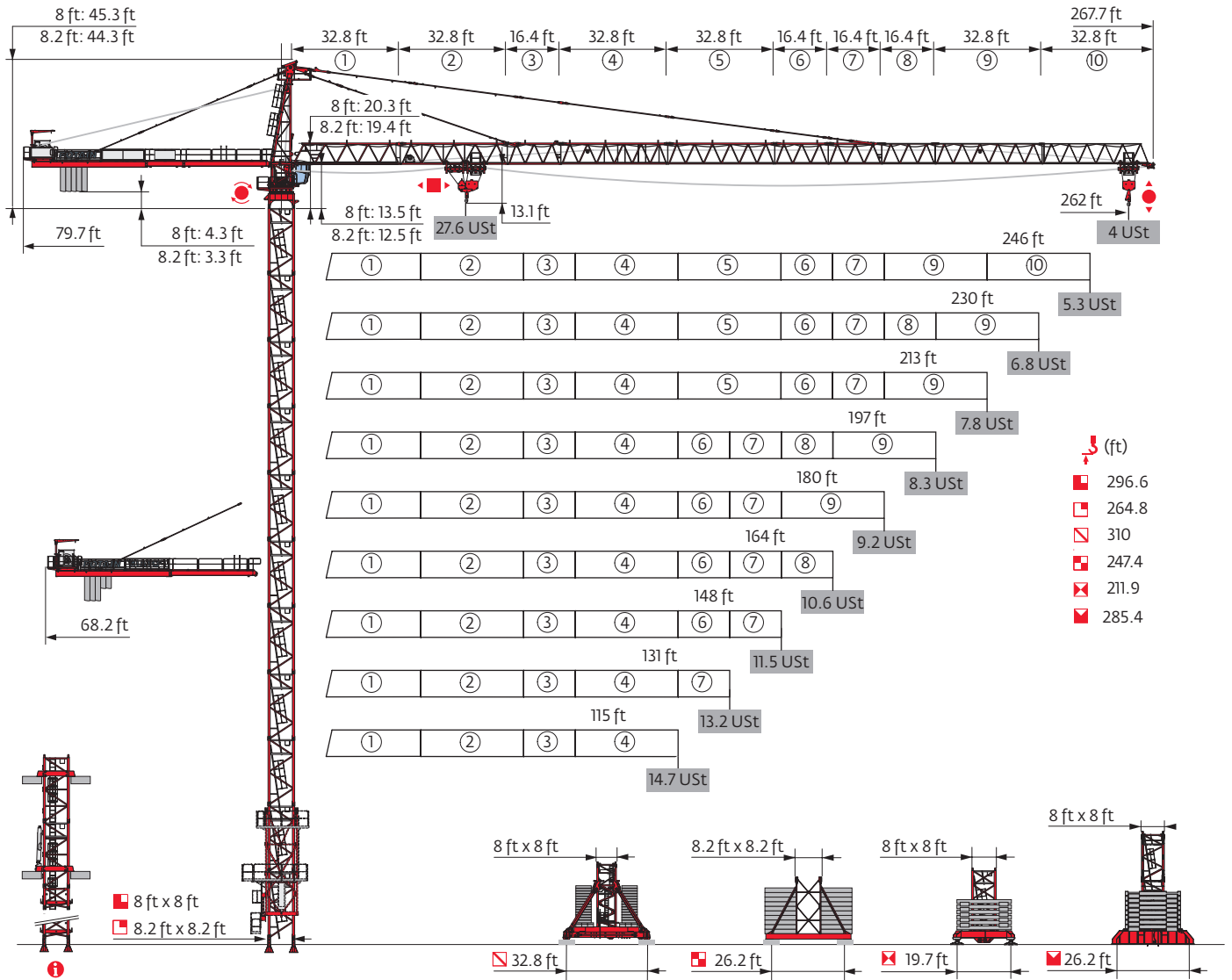


## MD 509 M25



Mast - Reactions

8 ft - P 802B										
(ft)	115	131	148	164	180	197	213	230	246	262
$\uparrow$ (ft)	247.4	247.4	247.4	247.4	247.4	241.8	241.8	241.8	236.2	219.8
$\uparrow/P_+$ (ft)	247.4	247.4	247.4	247.4	247.4	241.8	241.8	241.8	236.2	219.8
10.9 ft	0	0	0	0	0	1	1	1	2	2
16.4 ft	15	15	15	15	15	14	14	14	13	12
F2 (Ust)	● 256	● 261	● 264	● 257	● 259	● 254	● 256	● 256	● 240	● 227
	■ 394	■ 402	■ 406	■ 400	■ 405	■ 396	■ 393	■ 399	■ 390	■ 338
F3 (Ust)	● 180	● 181	● 183	● 173	● 177	● 171	● 171	● 169	● 154	● 141
	■ 332	■ 336	■ 338	■ 330	■ 338	■ 327	■ 321	■ 326	■ 317	■ 265

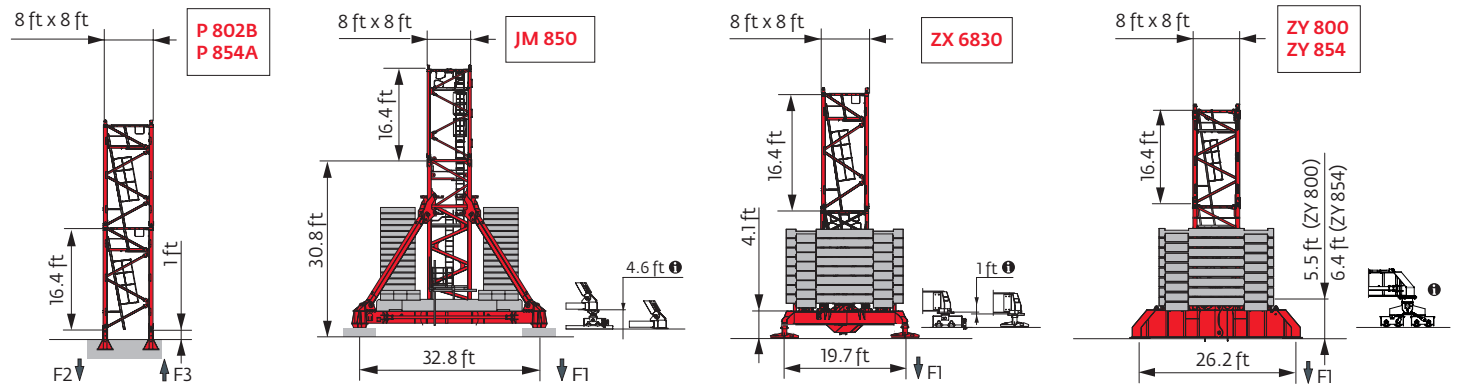
8 ft - P 854A										
(ft)	115	131	148	164	180	197	213	230	246	262
$\uparrow$ (ft)	296.6	296.6	296.6	296.6	296.6	296.6	296.6	296.6	291	291
$\uparrow/P_+$ (ft)	296.6	296.6	296.6	296.6	296.6	296.6	296.6	296.6	291	291
10.9 ft	0	0	0	0	0	0	0	1	1	1
16.4 ft	18	18	18	18	18	18	18	17	17	17
F2 (Ust)	● 307	● 312	● 316	● 308	● 310	● 309	● 312	● 309	● 304	● 311
	■ 575	■ 582	■ 589	■ 580	■ 589	■ 593	■ 590	■ 581	■ 585	■ 584
F3 (Ust)	● 220	● 220	● 222	● 213	● 217	● 214	● 214	● 211	● 206	● 211
	■ 501	■ 505	■ 509	■ 499	■ 509	■ 511	■ 505	■ 496	■ 501	■ 497

8 ft - JM 850										
(ft)	115	131	148	164	180	197	213	230	246	262
$\uparrow$ (ft)	310	310	310	310	310	310	310	310	310	310
$\uparrow/P_+$ (ft)	310	310	310	310	310	310	310	310	310	310
10.9 ft	0	0	0	0	0	0	0	0	0	0
16.4 ft	17	17	17	17	17	17	17	17	17	17
F1 (Ust)	● 171	● 170	● 172	● 171	● 171	● 171	● 173	● 174	● 172	● 176
	■ 245	■ 248	■ 250	■ 246	■ 250	■ 251	■ 249	■ 252	■ 254	■ 254

8 ft - ZX 6830										
(ft)	115	131	148	164	180	197	213	230	246	262
$\uparrow$ (ft)	211.9	206.7	206.7	211.9	206.7	211.9	211.9	211.9	211.9	211.9
$\uparrow/P_+$ (ft)	211.9	206.7	206.7	211.9	206.7	206.7	211.9	211.9	211.9	211.9
10.9 ft	1	2	2	1	2	1	1	1	1	1
16.4 ft	12	11	11	12	11	12	12	12	12	12
F1 (Ust)	● 161	● 160	● 161	● 161	● 159	● 163	● 162	● 163	● 160	● 158
	■ 185	■ 180	■ 182	■ 185	■ 182	■ 192	■ 188	■ 192	■ 196	■ 192

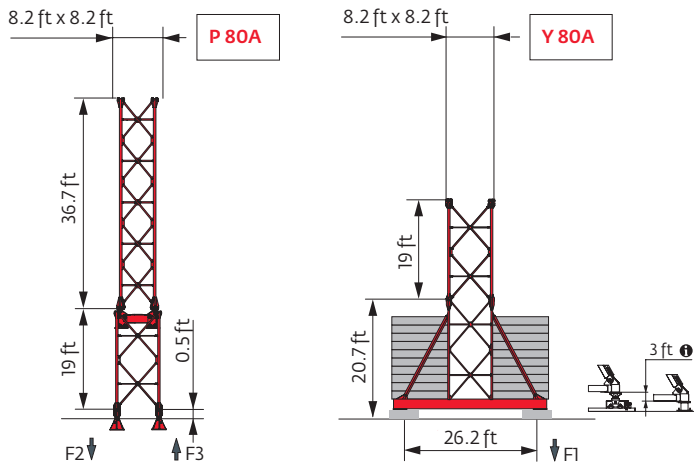
8 ft - ZY 800										
(ft)	115	131	148	164	180	197	213	230	246	262
$\uparrow$ (ft)	246.4	240.8	240.8	240.8	240.8	240.8	235.2	235.2	235.2	218.8
$\uparrow/P_+$ (ft)	246.4	240.8	240.8	240.8	240.8	240.8	235.2	235.2	235.2	218.8
10.9 ft	1	2	2	2	2	2	0	0	0	0
16.4 ft	14	13	13	13	13	13	14	14	14	13
F1 (Ust)	● 160	● 159	● 161	● 157	● 160	● 160	● 152	● 153	● 148	● 133
	■ 200	■ 197	■ 200	■ 195	■ 199	■ 202	■ 185	■ 189	■ 193	■ 163

8 ft - ZY 854										
(ft)	115	131	148	164	180	197	213	230	246	262
$\uparrow$ (ft)	279.9	285.4	285.4	285.4	285.4	279.9	285.4	285.4	279.9	279.9
$\uparrow/P_+$ (ft)	279.9	285.4	285.4	285.4	285.4	279.9	285.4	285.4	279.9	279.9
10.9 ft	1	0	0	0	0	1	0	0	1	1
16.4 ft	16	17	17	17	17	16	17	17	16	16
F1 (Ust)	● 194	● 200	● 202	● 201	● 200	● 199	● 203	● 204	● 199	● 199
	■ 267	■ 282	■ 285	■ 281	■ 285	■ 278	■ 286	■ 291	■ 286	■ 285



8.2 ft - P 80A										
Height (ft)	115	131	148	164	180	197	213	230	246	262
Height (ft)	264.8	264.8	264.8	264.8	264.8	264.8	264.8	264.8	264.8	264.8
Height/P <sub>r</sub> (ft)	264.8	264.8	264.8	264.8	264.8	264.8	264.8	264.8	264.8	264.8
F2 (USt)	36.7 ft	1	1	1	1	1	1	1	1	1
	19 ft	12	12	12	12	12	12	12	12	12
F3 (USt)	● 234	238	242	235	237	235	238	238	232	237
	■ 330	337	341	336	341	344	342	347	352	348
F1 (USt)	● 154	154	156	147	150	148	147	145	140	142
	■ 264	267	269	261	268	270	265	269	273	267

8.2 ft - Y 80A										
Height (ft)	115	131	148	164	180	197	213	230	246	262
Height (ft)	247.4	247.4	247.4	247.4	247.4	247.4	247.4	247.4	247.4	247.4
Height/P <sub>r</sub> (ft)	247.4	247.4	247.4	247.4	247.4	247.4	247.4	247.4	247.4	247.4
F2 (USt)	36.7 ft	1	1	1	1	1	1	1	1	1
	19 ft	10	10	10	10	10	10	10	10	10
F3 (USt)	● 126	129	131	126	129	129	128	128	126	128
	■ 144	147	148	144	148	149	147	150	152	149



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.

Anchorage

**i**

Base ballast

**Ust) / 8 ft - JM 850 -**

(ft)	115	131	148	164	180	197	213	230	246	262
310	211.6	198.4	198.4	198.4	198.4	198.4	198.4	198.4	198.4	198.4
293.6	172	172	172	158.7	172	172	158.7	158.7	172	158.7
277.2	145.5	145.5	145.5	132.3	145.5	145.5	132.3	132.3	132.3	132.3
260.8	119.1	119.1	119.1	105.8	119.1	105.8	105.8	105.8	105.8	105.8
244.4	92.6	92.6	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
228	66.1	66.1	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9
211.6	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9
195.2	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9
178.8	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9
162.4	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9
146	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9
129.6	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9
113.2	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9
96.8	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.9

**Ust) / 8 ft - ZY 800 -**

(ft)	115	131	148	164	180	197	213	230	246	262
246.4	172									
240.8	158.7	158.7	158.7	145.5	158.7	158.7				
235.2	145.5	145.5	145.5	132.3	145.5	132.3	132.3	132.3	132.3	
218.8	105.8	105.8	105.8	92.6	105.8	105.8	92.6	92.6	105.8	92.6
202.4	79.4	79.4	79.4	66.1	79.4	79.4	79.4	66.1	66.1	79.4
186	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1	79.4
169.6	66.1	66.1	66.1	52.9	66.1	66.1	66.1	66.1	66.1	66.1
153.2	52.9	52.9	52.9	52.9	66.1	66.1	66.1	66.1	66.1	66.1
136.8	52.9	52.9	52.9	39.7	66.1	66.1	66.1	66.1	66.1	66.1
120.4	52.9	52.9	52.9	39.7	66.1	66.1	66.1	66.1	66.1	66.1
104	52.9	52.9	52.9	39.7	66.1	66.1	66.1	66.1	66.1	66.1
87.6	52.9	52.9	52.9	39.7	66.1	66.1	66.1	66.1	66.1	66.1

**Ust) / 8.2 ft - Y 80A -**

(ft)	115	131	148	164	180	197	213	230	246	262
247.4	105.8	105.8	105.8	92.6	105.8	105.8	92.6	92.6	92.6	92.6
228.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
209.3	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
190.6	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
171.6	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
152.6	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
133.5	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
114.5	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
95.8	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
76.8	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4

**Ust) / 8 ft - ZX 6830 -**

(ft)	115	131	148	164	180	197	213	230	246	262
211.9	188.5			177.5		188.5	177.5	177.5	188.5	177.5
206.7	177.5	177.5	177.5	155.4	177.5	166.5	166.5	166.5	166.5	166.5
190.3	144.4	133.4	133.4	122.4	133.4	133.4	133.4	133.4	133.4	144.4
173.9	133.4	133.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4	122.4
157.5	122.4	111.3	111.3	111.3	122.4	122.4	122.4	122.4	122.4	122.4
141.1	111.3	111.3	111.3	100.3	111.3	111.3	122.4	111.3	111.3	111.3
124.7	111.3	111.3	111.3	100.3	111.3	111.3	111.3	111.3	111.3	111.3
108.3	111.3	111.3	111.3	100.3	111.3	111.3	111.3	111.3	111.3	111.3
91.9	111.3	111.3	111.3	100.3	111.3	111.3	111.3	111.3	111.3	111.3
75.5	111.3	111.3	111.3	100.3	111.3	111.3	111.3	111.3	111.3	111.3

**Ust) / 8 ft - ZY 854 -**

(ft)	115	131	148	164	180	197	213	230	246	262
285.4		238.1	238.1	238.1	238.1		238.1	238.1		
279.9	238.1	224.9	224.9	224.9	224.9	238.1	224.9	224.9	238.1	224.9
263.5	198.4	198.4	198.4	185.2	198.4	198.4	185.2	185.2	185.2	185.2
247.1	158.7	158.7	158.7	145.5	158.7	158.7	145.5	145.5	158.7	145.5
230.6	132.3	119.1	119.1	119.1	119.1	119.1	119.1	119.1	119.1	105.8
214.2	92.6	92.6	92.6	79.4	92.6	92.6	79.4	79.4	92.6	79.4
197.8	66.1	66.1	66.1	52.9	66.1	66.1	66.1	66.1	66.1	66.1
181.4	66.1	52.9	52.9	52.9	52.9	66.1	66.1	66.1	66.1	66.1
165	52.9	52.9	52.9	39.7	52.9	52.9	52.9	52.9	52.9	66.1
148.6	52.9	39.7	39.7	39.7	52.9	52.9	52.9	52.9	52.9	52.9
132.2	39.7	39.7	39.7	39.7	52.9	52.9	52.9	52.9	52.9	52.9
115.8	39.7	39.7	39.7	39.7	52.9	52.9	52.9	52.9	52.9	52.9
99.4	39.7	39.7	39.7	39.7	52.9	52.9	52.9	52.9	52.9	52.9

Load curves



(ft)		49	56	66	82	89	98	115	121	131	148	154	164	180	187	197	213	220	230	246	253	262	ft
262	12.1 → 50.4 12.1 → 53.6	27.6	24.5	20.5	15.6	14.2	13.8	11.8	11	10.1	8.8	8.3	7.7	6.8	6.5	6.1	5.5	5.3	4.9	4.4	4.2	3.8	USt
246	12.1 → 54.2 12.1 → 56.3	27.6	25.9	22.5	17.3	15.8	13.9	12.9	12.2	11.1	9.7	9.2	8.6	7.6	7.3	6.8	6.1	5.8	5.5	4.9	4.5	4	USt P+
230	12.1 → 61.2 12.1 → 62.6	27.6	27.6	23.5	18.2	16.6	14.6	13.6	12.8	11.7	10.2	9.7	9.1	8.1	7.7	7.2	6.5	6.3	5.9	5.3	5.3	USt P+	
213	12.1 → 62.5 12.1 → 64.6	27.6	27.6	26	20.3	18.6	16.4	13.8	13.8	12.8	11.2	10.6	9.9	8.8	8.5	7.9	7.2	USt					
197	12.1 → 62 12.1 → 62.5	27.6	27.6	25.8	20	18.3	16.1	13.8	13.8	12.7	11.1	10.6	9.8	8.8	8.4	7.9	USt						
180	12.1 → 63.9 12.1 → 63.9	27.6	27.6	26.7	20.6	18.9	16.6	13.8	13.8	13	11.4	10.8	10.1	9	USt								
164	12.1 → 64.9 12.1 → 65	27.6	27.6	27	21	19.2	17	14.1	13.8	13.3	11.6	11.1	10.3	USt									
148	12.1 → 65.1 12.1 → 65.1	27.6	27.6	27	21	19.2	16.9	13.9	13.8	13.1	11.5	USt											
131	12.1 → 64.9 12.1 → 64.9	27.6	27.6	27	20.9	19.1	16.8	14	13.8	13.2	USt												
115	12.1 → 65.6 12.1 → 65.6	27.6	27.6	27.6	21.2	19.5	17.1	14.1	USt														

$W = W - 1.73 \text{ USt max.}$



(ft)		49	56	66	82	89	98	115	121	131	148	154	164	180	187	197	213	220	230	246	253	262	ft
262	8.2 → 51.3 8.2 → 54.6	27.6	25.1	21	16.2	14.8	13.4	11.1	10.4	9.4	8.1	7.7	7.1	6.2	5.9	5.5	4.8	4.6	4.3	3.7	3.5	3.2	USt
246	8.2 → 55.2 8.2 → 57.3	27.6	26.9	22.9	17.8	16.3	14.3	12.2	11.4	10.4	8.9	8.4	7.8	6.8	6.5	6	5.3	5.1	4.7	4.1	3.9	3.4	USt P+
230	8.2 → 62.3 8.2 → 63.7	27.6	27.6	24.1	18.7	17.2	15.2	13.1	12.2	11.2	9.7	9.2	8.5	7.6	7.2	6.7	6	5.7	5.3	4.8	4.8	USt P+	
213	8.2 → 63.6 8.2 → 65.8	27.6	27.6	26.6	20.9	19.2	17	14.1	13.5	12.4	10.8	10.2	9.5	8.4	8	7.5	6.8	USt					
197	8.2 → 63.1 8.2 → 63.6	27.6	27.6	26.6	21.1	19.4	17.2	14.4	13.8	12.7	11.1	10.5	9.8	8.7	8.4	7.9	USt P+						
180	8.2 → 65 8.2 → 65	27.6	27.6	27.3	21.3	19.5	17.4	14.6	13.8	12.6	11	10.4	9.7	8.6	USt								
164	8.2 → 66.1 8.2 → 66.3	27.6	27.6	27.6	21.6	19.8	17.5	14.6	13.8	12.9	11.2	10.6	9.9	USt									
148	8.2 → 66.3 8.2 → 66.3	27.6	27.6	27.6	21.6	19.7	17.4	14.5	13.8	12.7	11.1	USt											
131	8.2 → 66.1 8.2 → 66.1	27.6	27.6	27.6	21.5	19.7	17.4	14.6	13.8	12.8	USt												
115	8.2 → 66.8 8.2 → 66.8	27.6	27.6	27.6	21.8	20	17.7	14.7	USt														

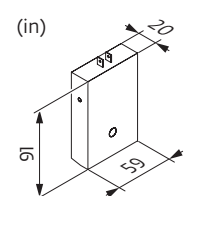
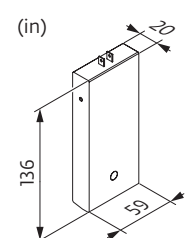
$W = W - 0.52 \text{ USt max.}$

Jib weight & counter-jib ballast

ft				100 LVF / 132 HPL™			180 HPL™ GH		
				13,228 lb	8,818 lb		13,228 lb	8,818 lb	
262 ft	43,497	42,505	44,688	5	0	66,139	3	2	57,320
246 ft	42,097	41,105	43,288	4	1	61,729	3	1	48,502
230 ft	41,734	40,741	42,924	4	1	61,729	3	1	48,502
213 ft	40,124	39,132	41,315	3	2	57,320	2	2	44,092
197 ft	37,721	36,729	38,912	3	1	48,502	2	1	35,274
180 ft	36,123	35,131	37,313	2	2	44,092	1	2	30,865
164 ft	34,921	33,929	36,112	3	2	57,320	2	2	44,092
148 ft	33,323	32,331	34,513	3	1	48,502	2	1	35,274
131 ft	31,151	30,159	32,342	2	2	44,092	1	2	30,865
115 ft	28,671	27,679	29,862	2	1	35,274	1	1	22,046

CBC - 13,228 lb


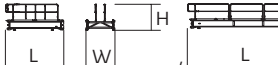
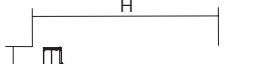

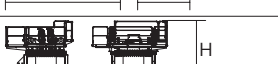

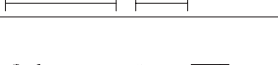


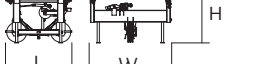






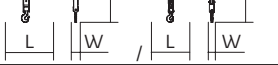




CBD - 8,818 lb


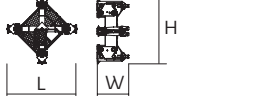


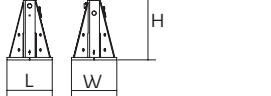
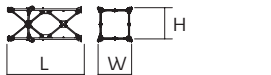
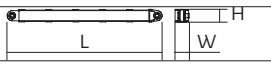
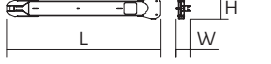

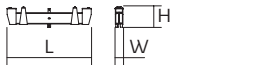
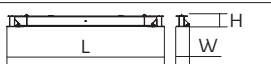
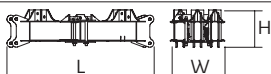

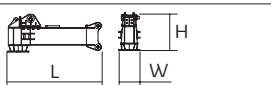
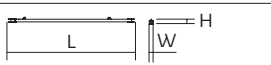
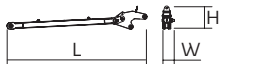
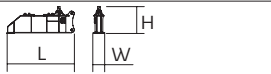

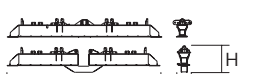



Dimensions and weight

Slewing crane part:  262 ft -  -  -  100 LVF



Slewing crane part		L (ft)	W (ft)	H (ft)	lb (+/- 5%)	
Counter-jib		35.4	10.2	5.6	8,300	
		12.1	6.2	5.6	2,172	
		26.9	6.2	5.6	4,575	
Cathead		13.8	7.3	38.7	16,524	
Cab	 Ultra View	16.5	7.3	8.2	3,704	
Towerhead		8 ft	12.5	14	20,349	
		8.2 ft	12.5	14	18,805	
Hoisting winch (+ rope)		100 LVF	11.2	5.2	5.7	9,016
		132 HPL™	12.4	6.1	6.2	11,387
		180 HPL™ GH	15.8	6.3	6.5	19,279
Jib section		①	33.7	6.6	7.8	7,066
		② 10 DVF	33.7	6.2	7.4	8,223
		④	33.6	6.2	7.3	4,729
		⑤	33.6	6.2	7.3	4,001
		⑨	33.4	6.2	6.5	2,800
		⑩	33.2	6.2	6.4	1,764
Jib section		③	17.6	6.2	7.4	3,197
		⑥	17.2	6.2	7.3	2,183
		⑦	17.1	6.2	7.3	2,480
		⑧	17.1	6.2	6.6	1,609
Trolley + Pulley block		 27.6 Ust	5.9	7.3	4.7	1,587
			3.9	1.4	7.4	1,973
Trolley		 27.6 Ust	13.5	7.2	3.8	2,635
Trolley		 13.8 Ust	7	7.2	3.8	1,422
Pulley block		 27.6 Ust	6	1.1	7.7	1,995
		 13.8 Ust	3.9	0.7	6.4	992
<b>Crane tower</b>						
Telescopic cage T 851		8 ft	36.7	15.9	19	34,723
Telescopic cage		8.2 ft	24.3	12	19.1	13,669

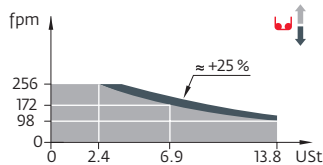
		L (ft)	W (ft)	H (ft)	lb (+/- 5%)
Slider		8.2			
Slider base		8.2			
K 85/KR 84B2 KM 850.10B KM 850.14B K 849A KR 849A KMT 849A KRMT 849A K 85/KR 84A2 KMT 850.10A KMT 850.14A KRMT 849C		8			
R 87 R 86 R 85		8.2			
Fixing angles		P 802B P 854A P 80A			
Basic mast unit		Y 80A			
Struts		Y 80A			
1/2 Side member		Y 80A			
Side member		Y 80A			
Ballast support		Y 80A			
Chassis beam		Y 80A			
Central cross (transport position)		JM 850			
Basic mast unit		JM 850			
Chassis girder		JM 850			
Chassis ties		JM 850			
Struts		JM 850			
1/2 Cross girder		ZY 800 ZY 854			
Cross girder		ZY 800 ZY 854			
		ZX 6830			
					

Mechanisms

480 V - 60 Hz													hp	kW	
	100 LVF 63 Optima	fpm	98	126	172	226	256	49	64	89	116	128	100	75	2,382 ft
		USt	13.8	10.4	6.9	3.4	2.4	27.6	20.7	13.8	6.9	6			
	132 HPL™ 63	fpm	133	172	243	363	502	67	87	125	185	251	132	98	2,815 ft
USt	13.8	10.4	6.9	3.4	1.1	27.6	20.7	13.8	6.9	2.9					
	180 HPL™ 63 GH	fpm	179	220	289	438	640	90	112	149	238	320	180	132	3,937 ft
		USt	13.8	10.4	6.9	3.4	0.9	27.6	20.7	13.8	6.9	3.3			
	10 DVF 10 Optima	fpm	0 → 217 (27,6 USt) 0 → 262 (22.1 USt) 0 → 328 (13.8 USt) 0 → 361 (6.9 USt)									10	7.4		
	RVF 173 Optima+	rpm	0 → 0.9									3 x 10	3 x 7.5		

480 V (+6% -10%) 60 Hz	100 LVF : 117 → 77 kVA	
	132 HPL™ : 142 → 90 kVA	
	180 HPL™GH : 181 → 109 kVA	

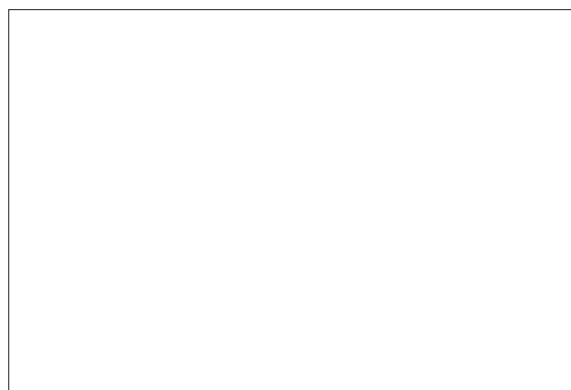
100 LVF 63 Optima



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.

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

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