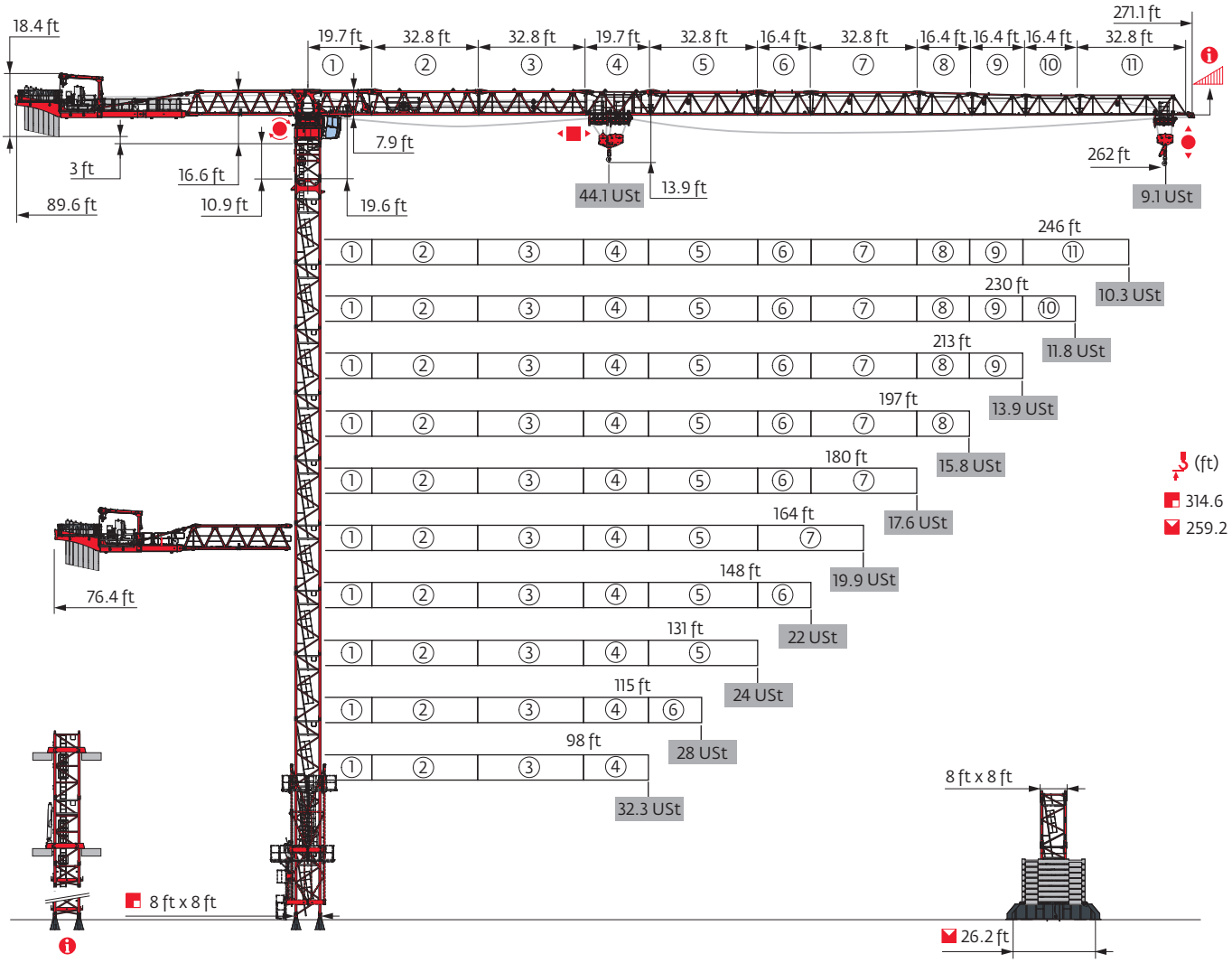
POTAIN®

MDT 809 M40



Potain Plus

Power Control

Top Site

Top Tracing 3

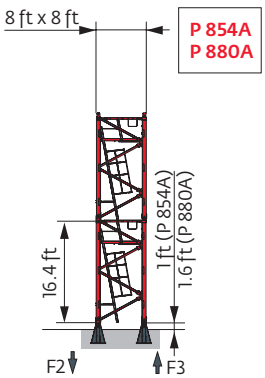
ASCE 7-10

Values have been rounded.

Mast - Reactions

⍁ 8 ft - P 854A												
(ft)		98	115	131	148	164	180	197	213	230	246	262
(ft)		259.2	264.8	259.2	259.2	264.8	270.3	264.8	264.8	259.2	259.2	253.9
P+ (ft)		242.8	248.4	242.8	242.8	242.8	242.8	237.5	242.8	242.8	259.2	253.9
10.9 ft		1	1	1	1	1	1	1	1	1	1	1
6.2 ft		1	1	1	1	1	1	1	1	1	1	1
10.9 ft		0	2	0	0	2	1	2	2	0	0	1
16.4 ft		15	14	15	15	14	15	14	14	15	15	14
F2 (USt)	●	414	415	418	412	420	417	419	413	406	418	414
	■	496	518	496	503	532	553	540	547	531	533	523
F3 (USt)	●	275	271	271	262	266	262	264	257	251	260	256
	■	379	395	370	375	399	420	406	412	398	396	386

⍁ 8 ft - P 880A												
(ft)		98	115	131	148	164	180	197	213	230	246	262
(ft)		309.1	314.6	303.8	309.1	309.1	314.6	309.1	309.1	309.1	309.1	303.8
P+ (ft)		292.7	292.7	292.7	292.7	287.4	292.7	276.3	292.7	292.7	309.1	303.8
10.9 ft		1	1	1	1	1	1	1	1	1	1	1
6.2 ft		1	1	1	1	1	1	1	1	1	1	1
10.9 ft		0	2	1	0	0	2	0	0	0	0	1
16.4 ft		18	17	17	18	18	17	18	18	18	18	17
F2 (USt)	●	505	507	501	499	499	492	498	482	490	509	506
	■	789	859	761	784	783	849	795	773	807	829	805
F3 (USt)	●	333	330	324	319	317	311	314	302	306	318	318
	■	639	704	606	626	623	690	633	614	645	661	638

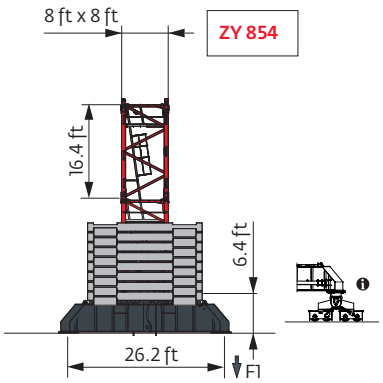


Note: When "ASCE" is noted in this data sheet it is referring to 115 mph Wind Zone, Exposure B, Design Wind Speed = 98 mph.
See back cover for design wind speed calculations.

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

Other mast compositions - Please consult us

8 ft - ZY 854 -												
(ft)		98	115	131	148	164	180	197	213	230	246	262
(ft)		242.8	259.2	237.2	259.2	253.6	253.6	242.8	248.4	248.4	248.4	242.8
/P+ (ft)		210	204.4	193.6	188	177.2	199.2	177.2	199.2	193.6	226.4	226.4
	10.9 ft	1	1	1	1	1	1	1	1	1	1	1
	6.2 ft	1	1	1	1	1	1	1	1	1	1	1
	10.9 ft	1	1	2	1	2	2	1	0	0	0	1
	16.4 ft	13	14	12	14	13	13	13	14	14	14	13
Fl (USt)	●	230	242	229	247	242	240	237	243	244	240	243
	■	201	234	194	243	231	233	215	227	237	237	236



Anchorages

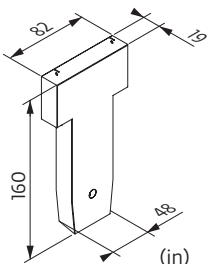
Base ballast

(USt) / 8 ft - ZY 854 -												
(ft)	98	115	131	148	164	180	197	213	230	246	262	
259.2		145.5		145.5								
253.6		145.5		132.3	132.3	158.7						
248.4		145.5		132.3	132.3	158.7		172	172	172		
242.8	145.5	145.5		132.3	132.3	158.7	158.7	172	172	172	185.2	
237.2	145.5	145.5	132.3	132.3	119.1	158.7	158.7	158.7	172	172	172	
220.8	132.3	119.1	119.1	105.8	105.8	145.5	158.7	158.7	158.7	172	172	
204.4	132.3	119.1	105.8	92.6	92.6	145.5	145.5	158.7	158.7	158.7	172	
188	105.8	105.8	105.8	105.8	92.6	145.5	145.5	145.5	145.5	158.7	172	
171.6	92.6	92.6	92.6	92.6	92.6	132.3	145.5	145.5	145.5	145.5	172	
155.2	92.6	92.6	79.4	92.6	92.6	132.3	132.3	132.3	145.5	145.5	172	
138.8	92.6	92.6	79.4	92.6	92.6	119.1	132.3	132.3	132.3	145.5	172	
122.4	92.6	92.6	79.4	92.6	92.6	119.1	119.1	132.3	132.3	145.5	172	
106	92.6	92.6	79.4	92.6	92.6	119.1	119.1	119.1	132.3	145.5	172	
89.6	92.6	92.6	79.4	92.6	92.6	105.8	119.1	119.1	132.3	145.5	172	
73.2	92.6	92.6	79.4	92.6	92.6	105.8	105.8	105.8	132.3	145.5	172	
56.8	92.6	92.6	79.4	92.6	92.6	105.8	105.8	105.8	132.3	145.5	172	

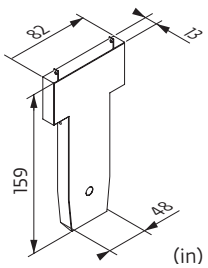
Counter-jib ballast

	180 HPL™	320 LVF			320 LVF GH		
		14,551 lb	10,362 lb	(lb)	14,551 lb	10,362 lb	(lb)
262 ft		6	1	97,665	5	2	93,476
246 ft		5	2	93,476	4	3	89,287
230 ft		4	3	89,287	6	0	87,303
213 ft		4	3	89,287	5	1	83,114
197 ft		5	1	83,114	4	2	78,925
180 ft		4	2	78,925	5	0	72,753
164 ft		5	2	93,476	4	3	89,287
148 ft		6	0	87,303	5	1	83,114
131 ft		4	2	78,925	3	3	74,737
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	105	115	121	131	138	148	154	164	171	180	187	197	203	213	220	230	236	246	253	262	ft
44.1 USt / 22 USt																									
262	13.8 → 61	108.8 - 117.5	44.1	40.5	31.1	24.9	23	22	21.2	19.4	18.3	16.9	16.1	14.9	14.2	13.3	12.7	11.9	11.5	10.8	10.4	9.8	9.5	9	8.7	8.3	USt
	13.8 → 65.3	116.8 - 126.2	44.1	43.9	33.8	27.2	25.1	22.5	22	21.1	19.9	18.4	17.5	16.2	15.5	14.5	13.9	13.1	12.5	11.8	11.4	10.8	10.4	9.9	9.6	9.1	USt P+
246	13.8 → 62.3	111.7 - 120.4	44.1	41.6	32	25.7	23.8	22	21.8	20	18.9	17.4	16.6	15.4	14.7	13.7	13.2	12.4	11.9	11.2	10.8	10.2	9.9	9.4	USt	
	13.8 → 66.9	120.3 - 129.7	44.1	44.1	34.9	28.1	26	23.4	22	21.7	20.6	19	18.1	16.8	16.1	15	14.4	13.5	13	12.3	11.9	11.2	10.8	10.3	USt P+	
230	13.8 → 64.6	116.1 - 124.7	44.1	43.3	33.4	26.9	24.9	22.3	22	20.8	19.7	18.2	17.3	16.1	15.4	14.4	13.8	13	12.5	11.8	11.3	10.7	USt			
	13.8 → 69.6	125.4 - 134.7	44.1	44.1	36.5	29.5	27.3	24.5	22.9	22	21.5	19.9	18.9	17.6	16.8	15.8	15.1	14.2	13.7	12.9	12.5	11.8	USt P+			
213	13.8 → 68.6	123.4 - 132.5	44.1	44.1	35.8	28.9	26.8	24.1	22.5	22	21.1	19.5	18.6	17.3	16.5	15.5	14.8	13.9	13.4	12.7	USt					
	13.8 → 74.1	133.3 - 143.5	44.1	44.1	39.2	31.7	29.4	26.4	24.7	22.5	22	21.3	20.3	18.9	18.1	17	16.3	15.3	14.7	13.9	USt P+					
197	13.8 → 69.9	126.2 - 135.6	44.1	44.1	36.7	29.7	27.5	24.7	23.1	22	21.6	20	19	17.7	16.9	15.9	15.2	14.3	USt							
	13.8 → 75.8	136.3 - 147	44.1	44.1	40.3	32.6	30.2	27.2	25.4	23.1	22	21.9	20.9	19.5	18.6	17.4	16.7	15.8	USt P+							
180	13.8 → 70.5	126.9 - 136.4	44.1	44.1	37	29.9	27.7	24.9	23.3	22	21.8	20.1	19.2	17.9	17.1	16	USt									
	13.8 → 76.4	137.1 - 148	44.1	44.1	40.6	32.9	30.5	27.4	25.6	23.3	22	22	21	19.6	18.8	17.6	USt P+									
164	13.8 → 71.5	129 - 138.6	44.1	44.1	37.7	30.5	28.2	25.4	23.7	22	22	20.5	19.5	18.2	USt											
	13.8 → 76.1	139.1 - 149.7	44.1	44.1	40.5	33	30.6	27.6	25.9	23.6	22.3	22	21.3	19.9	USt P+											
148	13.8 → 71.2	128.3 - 137.8	44.1	44.1	37.4	30.3	28.1	25.2	23.6	22	22	20.4	USt													
	13.8 → 75.1	137.2 - 147.6	44.1	44.1	39.9	32.5	30.2	27.2	25.5	23.2	22	22	USt P+													
131	13.8 → 73.8		44.1	44.1	39.1	31.7	29.4	26.4	24.7	22.5	USt															
	13.8 → 76.1		44.1	44.1	40.7	33.2	30.9	27.9	26.2	24	USt P+															
115	13.8 → 72.8		44.1	44.1	38.4	31.1	28.8	25.9	USt																	
	13.8 → 76.4		44.1	44.1	40.8	33.3	31	28	USt P+																	
98	13.8 → 72.2		44.1	44.1	38.2	30.9	USt																			
	13.8 → 75.1		44.1	44.1	39.9	32.3	USt P+																			

= - 2.24 USt max.

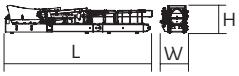
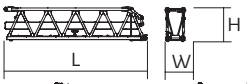
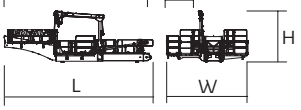
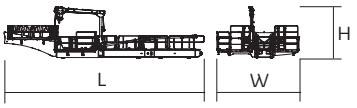
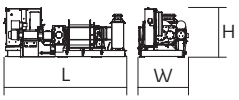
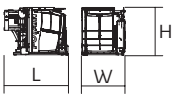
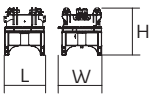
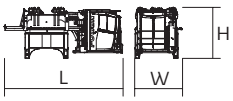
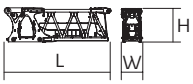
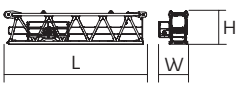
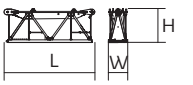
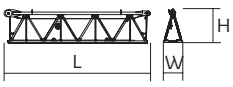
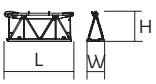
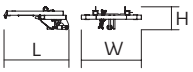
(m)	56	66	82	98	105	115	121	131	138	148	154	164	171	180	187	197	203	213	220	230	236	246	253	262	ft
44.1 USt / 22 USt																									
262	11.2 → 60.7	107.8 - 110.1	44.1	40.2	30.9	24.7	22.8	20.9	19.5	17.7	16.6	15.2	14.3	13.2	12.5	11.6	11	10.2	9.8	9.1	8.7	8.1	7.8	7.3	7	6.6	USt
	11.2 → 65.1	115.8 - 118.2	44.1	43.7	33.6	27	24.9	22.3	21.4	19.4	18.2	16.7	15.8	14.5	13.8	12.8	12.2	11.3	10.8	10.1	9.7	9.1	8.7	8.2	7.8	7.4	USt P+
246	11.2 → 62.1	110.8 - 113.1	44.1	41.3	31.8	25.5	23.6	21.6	20.2	18.3	17.2	15.8	14.9	13.8	13.1	12.1	11.5	10.7	10.3	9.6	9.2	8.6	8.2	7.7	USt		
	11.2 → 66.8	119.3 - 121.8	44.1	44.1	34.7	27.9	25.8	23.1	22	20.1	18.9	17.4	16.4	15.2	14.4	13.4	12.8	11.9	11.4	10.7	10.2	9.6	9.2	8.7	USt P+		
230	11.2 → 64	114.2 - 116.6	44.1	42.8	33	26.5	24.5	22	21	19.1	17.9	16.4	15.5	14.3	13.6	12.6	12	11.2	10.7	10	9.6	9	USt				
	11.2 → 69	123.4 - 126	44.1	44.1	36	29	26.9	24.1	22.5	21	19.7	18.1	17.2	15.9	15.1	14	13.4	12.5	11.9	11.2	10.7	10.1	USt P+				
213	11.2 → 68.2	122.4 - 125	44.1	44.1	35.6	28.7	26.6	23.8	22.3	20.8	19.6	18	17	15.8	15	13.9	13.3	12.4	11.9	11.2	USt						
	11.2 → 73.7	132.2 - 135.2	44.1	44.1	39	31.5	29.2	26.2	24.5	22.3	21.6	19.8	18.8	17.4	16.6	15.4	14.7	13.8	13.2	12.4	USt P+						
197	11.2 → 69.7	125.2 - 128	44.1	44.1	36.5	29.5	27.3	24.5	22.9	21.4	20.1	18.5	17.5	16.2	15.4	14.4	13.7	12.8	USt								
	11.2 → 75.4	135.3 - 138.5	44.1	44.1	40	32.4	30	27	25.2	22.9	22	20.4	19.4	17.9	17.1	15.9	15.2	14.2	USt P+								
180	11.2 → 70.4	126.9 - 129.6	44.1	44.1	37	29.9	27.7	24.9	23.3	21.7	20.5	18.8	17.9	16.6	15.8	14.7	USt										
	11.2 → 76.3	137.1 - 140.7	44.1	44.1	40.6	32.9	30.5	27.4	25.6	23.3	22	20.7	19.7	18.3	17.5	16.3	USt P+										
164	11.2 → 71.5	129 - 131.7	44.1	44.1	37.7	30.5	28.2	25.4	23.7	22	20.9	19.2	18.2	16.9	USt												
	11.2 → 76.1	139.1 - 142.2	44.1	44.1	40.5	33	30.6	27.6	25.9	23.6	22.3	20.7	20	18.6	USt P+												
148	11.2 → 71.2	128.3 - 131.2	44.1	44.1	37.4	30.3	28.1	25.2	23.6	22	20.8	19.1	USt														
	11.2 → 75.1	137.2 - 147.6	44.1	44.1	39.9	32.5	30.2	27.2	25.5	23.2	22	22	USt P+														
131	11.2 → 73.9		44.1	44.1	39.1	31.7	29.4	26.4	24.7	22.5	USt																
	11.2 → 76.2		44.1	44.1	40.7	33.2	30.9	27.9	26.2	24	USt P+																
115	11.2 → 72.8		44.1	44.1	38.4	31.1	28.8	25.9	USt																		
	11.2 → 76.3		44.1	44.1	40.8	33.3	31	28	USt P+																		
98	11.2 → 72.3		44.1	44.1	38.2	30.9	USt																				
	11.2 → 75.2		44.1	44.1	39.9	32.3	USt P+																				

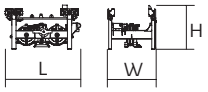
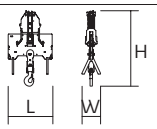
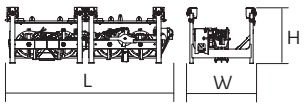
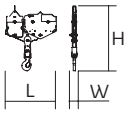
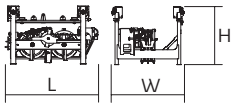
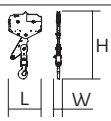
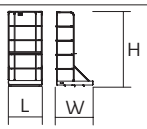
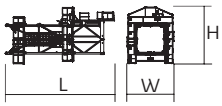
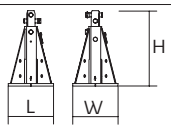
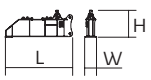
= - 1.86 USt max.

Dimensions and weight

Slewing crane part: 262 ft - 180 HPL™

x 11
x 10

Slewing crane part			L (ft)	W (ft)	H (ft)	lb (+/- 5%)
Counter-jib			25.9	7.4	7.4	23,171
			39.4	7.4	7.4	31,978
			34	4.5	8.1	21,142
			39.7	21.9	13.7	27,040
			52.8	21.9	13.7	35,891
Hoisting winch (+ rope)		180 HPL™ 320 LVF 320 LVF GH	16.2 16.8 18.4	6.6 7.3 7.2	6.6 7.3 7.8	20,459 21,437 31,150
Cab		Ultra View	11	7.5	8.2	6,614
Towerhead		⍁8 ft	8.5	8.2	9.7	34,392
			22.5	8.2	9.7	41,006
Jib section		①	25.6	5.1	8.2	27,893
		② ③	34.5 34.1	7.3 4.8	8.2 8.1	27,133 18,683
		④	20.9	4.5	7.9	8,754
		⑤ ⑦ ⑪	34.4 33.9 33.2	4.5 4.5 4.5	7.8 7.5 6.4	10,983 7,043 3,103
		⑥ ⑧ ⑨ ⑩	17.8 17.3 17.3 17.3	4.5 4.5 4.5 4.5	7.7 7.3 6.8 6.7	4,859 3,013 2,175 1,955
			5.5	5.2	1.9	728

			L (ft)	W (ft)	H (ft)	lb (+/- 5%)
Trolley		44.1 USt	8.6	5.7	5.2	2,678
Pulley block		44.1 USt	6.2	2.6	10.4	3,120
Trolley		44.1 USt	13.8	5.9	4.9	3,219
Pulley block		44.1 USt	7.5	1.1	9.7	2,888
Trolley		22 USt	6.9	5.9	4.9	1,720
Pulley block		22 USt	5	1.1	10	1,786
Trolley inspection platform			3.1	3.4	7	125
Crane tower						
T 851		☐8 ft	36.7	15.9	19	34,723
K 85/K 85-2		☐8 ft	7.3	10.7	8.2	7,937
KM 850.10B KM 850.14B KMT 850.10A KMT 850.14A K 88/K 85A2 KM 880.10A KMT 850.10C		☐8 ft	33.9 33.9 17.5 17.5 17.5 17.8 12	8.3 8.3 8.3 8.3 8.2 8.3 8.3	8.2 8.2 8.2 8.2 8.2 8.3 8.2	22,201 24,670 12,015 13,206 18,281 18,453 9,326
Fixing angles		P 854A P 880A	3 3.3	3 3.3	4.9 6.2	2,072 3,536
1/2 Cross girder		ZY 854	18.7	3.2	7.4	14,176
Cross girder		ZY 854	39	4.7	7.4	30,865

Mechanisms

480 V - 60 Hz													hp	kW	
	180 HPL™100	fpm	107	131	174	274	323	53	66	89	143	161	180	132	1,745 ft
		USt	22	16.5	11	5.5	4	44.1	33.1	22	11	8.9			
	320 LVF 100 Optima	fpm	220	282	387	486	531	112	141	197	243	266	320	240	1,745 ft
		USt	22	16.5	11	7.5	6.6	44.1	33.1	22	15.7	14			
	320 LVF 100 GH Optima	fpm	220	279	369	436		112	141	187	218		320	240	3,488 ft
		USt	22	16.5	11	8		44.1	33.1	22	18.1				
	15 DVF 16 Optima	fpm	0 → 108 (44.1 USt)			0 → 164 (22 USt)		0 → 220 (11 USt)			0 → 328 (2.8 USt)		15	11	
	RVF 174 Optima +	rpm	0 → 0.7										4 x 10	4 x 7.5	

IEC 60204-32	kVA
480 V (+6% -10%) 60 Hz	180 HPL™: 194 → 122 kVA 320 LVF: 306 → 178 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
- 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

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