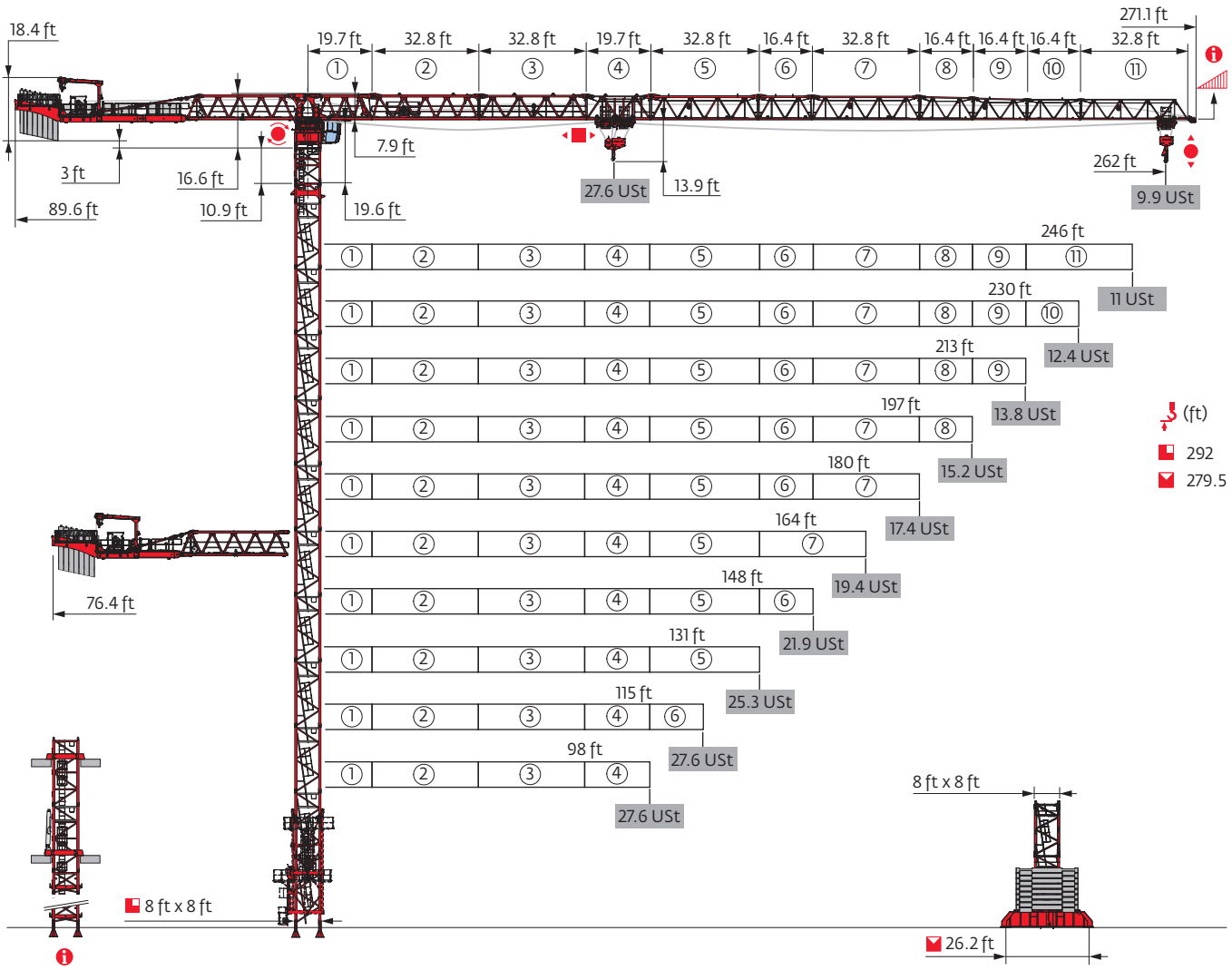
POTAIN®
by Manitowoc

MDT 809 M25



Potain Plus | Power Control | Top Site | Top Tracing 3

Values have been rounded.

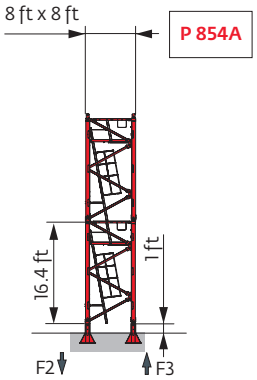
Mast - Reactions

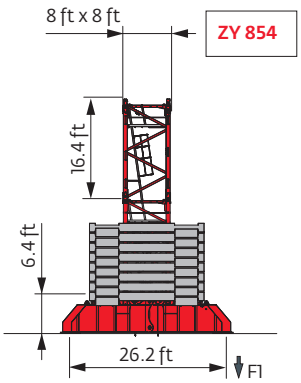
8 ft - P 854A												
(ft)		98	115	131	148	164	180	197	213	230	246	262
(ft)		292	264.8	264.8	270.3	264.8	270.3	264.8	270.3	264.8	259.2	253.9
/P+ (ft)		292	259.2	248.4	242.8	242.8	253.9	248.4	259.2	259.2	259.2	253.9
10.9 ft		1	1	1	1	1	1	1	1	1	1	1
6.2 ft		1	1	1	1	1	1	1	1	1	1	1
10.9 ft		0	2	2	1	2	1	2	1	2	0	1
16.4 ft		17	14	14	15	14	15	14	15	14	15	14
F2 (USt)	●	392	399	397	401	398	398	397	400	381	392	388
	■	629	519	510	544	519	549	528	562	549	520	510
F3 (USt)	●	259	264	258	257	254	254	251	252	234	244	240
	■	508	398	384	414	389	419	395	428	416	385	375

8 ft - ZY 854 -												
(ft)		98	115	131	148	164	180	197	213	230	246	262
(ft)		279.5	263.1	263.1	268.7	257.9	257.9	252.3	252.3	252.3	246.7	241.5
/P+ (ft)		279.5	263.1	241.5	219.5	219.5	225.1	225.1	252.3	252.3	246.7	241.5
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	0	0	2	1	1	2	2	2	0	1
16.4 ft		16	15	15	14	14	14	13	13	13	14	13
F1 (USt)	●	230	236	232	238	228	227	225	232	237	231	237
	■	292	244	237	266	232	240	226	237	241	225	230

Motorized accesses of Cab-IN and TCL types: Adapted mast compositions, base ballast and reactions.

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.


8 ft x 8 ft
P 854A
16.4 ft
1 ft
F2
F3


8 ft x 8 ft
ZY 854
16.4 ft
6.4 ft
26.2 ft
F1

Anchorages

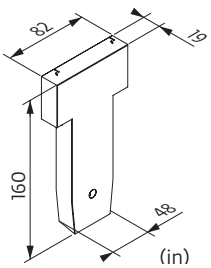
Base ballast

(USt) / 8 ft - ZY 854 -												
(ft)	98	115	131	148	164	180	197	213	230	246	262
279.5	185.2										
268.7	158.7			145.5							
263.1	132.3	158.7	158.7	145.5							
257.9	132.3	158.7	145.5	145.5	132.3	145.5					
252.3	119.1	158.7	145.5	132.3	132.3	132.3	145.5	158.7	172		
246.7	119.1	145.5	145.5	132.3	132.3	132.3	145.5	158.7	172	172	
241.5	105.8	145.5	145.5	132.3	132.3	132.3	145.5	158.7	158.7	172	198.4
225.1	92.6	145.5	145.5	119.1	119.1	132.3	132.3	158.7	158.7	158.7	185.2
208.7	79.4	119.1	132.3	132.3	132.3	119.1	132.3	145.5	158.7	158.7	185.2
192.3	66.1	105.8	105.8	105.8	105.8	119.1	132.3	145.5	145.5	158.7	172
175.9	52.9	92.6	92.6	92.6	92.6	119.1	132.3	132.3	145.5	158.7	172
159.5	52.9	92.6	92.6	92.6	92.6	105.8	132.3	132.3	145.5	158.7	158.7
143	52.9	92.6	92.6	92.6	92.6	105.8	132.3	132.3	145.5	158.7	158.7
126.6	52.9	92.6	92.6	92.6	92.6	105.8	132.3	119.1	145.5	158.7	158.7
110.2	52.9	92.6	92.6	92.6	92.6	105.8	132.3	119.1	145.5	158.7	158.7
93.8	52.9	92.6	92.6	92.6	92.6	105.8	132.3	119.1	145.5	158.7	158.7
77.4	52.9	92.6	92.6	92.6	92.6	105.8	132.3	119.1	145.5	158.7	158.7
61	52.9	92.6	92.6	92.6	92.6	105.8	132.3	119.1	145.5	158.7	158.7

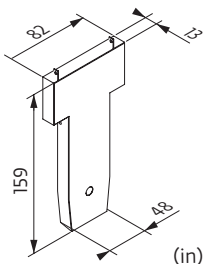
Counter-jib ballast

	100 LVF			180 HPL™ GH		
	14,551 lb	10,362 lb	(lb)	14,551 lb	10,362 lb	(lb)
262 ft	6	2	108,027	7	0	101,854
246 ft	5	3	103,838	6	1	97,665
230 ft	7	0	101,854	5	2	93,476
213 ft	6	1	97,665	4	3	89,287
197 ft	5	2	93,476	6	0	87,303
180 ft	6	0	87,303	4	2	78,925
164 ft	7	0	101,854	6	1	97,665
148 ft	6	1	97,665	4	3	89,287
131 ft	4	3	89,287	5	1	83,114
115 ft	4	2	78,925	4	1	68,564
98 ft	3	2	64,375	4	0	58,202

CCP - 14,551 lb



CCQ - 10,362 lb



Load curves

(ft)			89	98	105	115	121	131	138	148	154	164	171	180	187	197	203	213	220	230	236	246	253	262	ft
	27.6 USt	13.8 USt																							
262	14.8 → 94.3	167.6 - 183	27.6	26.2	24.3	21.9	20.5	18.6	17.6	16.1	15.3	14.2	13.8	13.8	13.4	12.7	12.2	11.5	11.1	10.6	10.2	9.7	9.4	9	USt
	14.8 → 101.8	180.5 - 197.9	27.6	27.6	26.6	24	22.4	20.5	19.3	17.8	16.8	15.6	14.8	13.8	13.8	13.8	13.3	12.6	12.2	11.6	11.2	10.7	10.3	9.9	USt P+
246	14.8 → 96.4	171.8 - 187.2	27.6	26.9	25	22.5	21	19.2	18.1	16.6	15.8	14.6	13.9	13.8	13.8	13	12.5	11.8	11.4	10.8	10.5	10	USt		
	14.8 → 104.3	185.2 - 202.7	27.6	27.6	27.3	24.6	23.1	21.1	19.9	18.3	17.3	16.1	15.3	14.2	13.8	13.8	13.7	13	12.5	11.9	11.5	11	USt P+		
230	14.8 → 99.8	178.5 - 193.8	27.6	27.6	26	23.4	21.9	20	18.9	17.4	16.5	15.3	14.6	13.8	13.8	13.5	13	12.3	11.9	11.3	USt				
	14.8 → 108.3	192.4 - 210.3	27.6	27.6	27.6	25.7	24.1	22	20.8	19.1	18.1	16.8	16	14.9	14.3	13.8	13.8	13.6	13.1	12.4	USt P+				
213	14.8 → 106	189.7 - 206.7	27.6	27.6	27.6	25.1	23.6	21.5	20.3	18.7	17.8	16.5	15.7	14.7	14	13.8	13.8	13.2	USt						
	14.8 → 109.6	196.3 - 213.3	27.6	27.6	27.6	26.1	24.5	22.4	21.1	19.5	18.5	17.2	16.4	15.3	14.6	13.8	13.8	13.8	USt P+						
197	14.8 → 109.9		27.6	27.6	27.6	26.2	24.6	22.4	21.2	19.5	18.6	17.2	16.4	15.3	14.7	13.8	USt								
	14.8 → 116.8		27.6	27.6	27.6	27.6	26.4	24.2	22.9	21.2	20.1	18.8	17.9	16.8	16.1	15.2	USt P+								
180	14.8 → 109		27.6	27.6	27.6	26	24.3	22.2	21	19.4	18.4	17.1	16.3	15.2	USt										
	14.8 → 116.3		27.6	27.6	27.6	27.6	26.3	24.1	22.8	21.1	20	18.7	17.8	16.7	USt P+										
164	14.8 → 110.8		27.6	27.6	27.6	26.4	24.8	22.7	21.4	19.7	18.7	17.4	USt												
	14.8 → 118.7		27.6	27.6	27.6	27.6	26.9	24.6	23.3	21.6	20.5	19.1	USt P+												
148	14.8 → 110.2		27.6	27.6	27.6	26.3	24.6	22.5	21.3	19.6	USt														
	14.8 → 117.7		27.6	27.6	27.6	27.6	26.6	24.4	23.1	21.4	USt P+														
131	14.8 → 114.5		27.6	27.6	27.6	27.5	25.8	23.6	USt																
	14.8 → 119.4		27.6	27.6	27.6	27.6	27.1	24.8	USt P+																
115	14.8 → 112.7		27.6	27.6	27.6	27	USt																		
	14.8 → 114.8		27.6	27.6	27.6	27.6	USt P+																		
98	14.8 → 98.4		27.6	27.6	USt																				
	14.8 → 98.4		27.6	27.6	USt P+																				

= - 1,62 USt max.

(ft)			89	98	105	115	121	131	138	148	154	164	171	180	187	197	203	213	220	230	236	246	253	262	ft
	27.6 USt	13.8 USt																							
262	13.1 → 95.8	172.6 - 176.2	27.6	26.7	24.8	22.4	21	19.1	18.1	16.7	15.8	14.7	14	13.4	12.8	12	11.6	10.9	10.5	9.9	9.6	9.1	8.8	8.4	USt
	13.1 → 102.9	185.6 - 189.5	27.6	27.6	26.9	24.3	22.8	20.8	19.7	18.2	17.2	16	15.3	14.3	13.8	13.2	12.6	11.9	11.5	10.9	10.5	10	9.7	9.2	USt P+
246	13.1 → 98	177 - 180.8	27.6	27.4	25.5	23	21.6	19.7	18.6	17.1	16.3	15.1	14.4	13.8	13.2	12.4	11.9	11.3	10.9	10.3	9.9	9.4	USt		
	13.1 → 105.5	190.9 - 194.9	27.6	27.6	27.6	25	23.5	21.5	20.3	18.7	17.8	16.5	15.8	14.8	14.1	13.6	13.1	12.4	11.9	11.3	10.9	10.4	USt P+		
230	13.1 → 101.7	184.5 - 188.4	27.6	27.6	26.5	24	22.5	20.6	19.4	17.9	17.1	15.9	15.1	14.2	13.8	13.1	12.6	11.9	11.5	10.9	USt				
	13.1 → 109.7	199.5 - 203.8	27.6	27.6	27.6	26.2	24.6	22.5	21.3	19.7	18.7	17.4	16.6	15.5	14.9	14	13.8	13.1	12.6	11.9	USt P+				
213	13.1 → 108.3	196.8 - 201	27.6	27.6	27.6	25.7	24.2	22.1	20.9	19.3	18.4	17.1	16.3	15.3	14.6	13.8	13.6	12.8	USt						
	13.1 → 114.6	208.8 - 213.3	27.6	27.6	27.6	27.5	25.8	23.6	22.4	20.7	19.7	18.3	17.5	16.4	15.7	14.8	14.2	13.8	USt P+						
197	13.1 → 108.3		27.6	27.6	27.6	25.8	24.2	22.1	20.9	19.3	18.4	17.1	16.3	15.3	14.7	13.8	USt								
	13.1 → 115.1		27.6	27.6	27.6	27.6	26	23.9	22.6	21	20	18.6	17.8	16.7	16.1	15.2	USt P+								
180	13.1 → 111.2		27.6	27.6	27.6	26.6	25	22.8	21.6	20	19	17.7	16.9	15.8	USt										
	13.1 → 119		27.6	27.6	27.6	27.6	27	24.8	23.5	21.8	20.7	19.4	18.5	17.4	USt P+										
164	13.1 → 113		27.6	27.6	27.6	27.1	25.4	23.3	22	20.3	19.3	18	USt												
	13.1 → 119.4		27.6	27.6	27.6	27.6	27.1	24.9	23.6	21.8	20.8	19.4	USt P+												
148	13.1 → 112.4		27.6	27.6	27.6	26.9	25.3	23.1	21.9	20.2	USt														
	13.1 → 119.5		27.6	27.6	27.6	27.6	27.1	24.9	23.6	21.9	USt P+														
131	13.1 → 116.8		27.6	27.6	27.6	27.6	26.4	24.2	USt																
	13.1 → 121.4		27.6	27.6	27.6	27.6	27.5	25.3	USt P+																
115	13.1 → 114.8		27.6	27.6	27.6	27.6	USt																		
	13.1 → 114.8		27.6	27.6	27.6	27.6	USt P+																		
98	13.1 → 98.4		27.6	27.6	USt																				
	13.1 → 98.4		27.6	27.6	USt P+																				

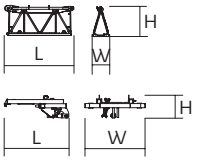
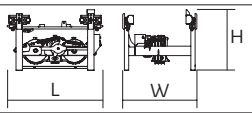
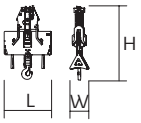
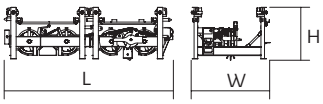
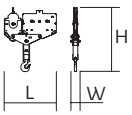
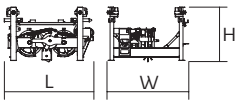
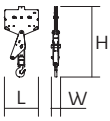
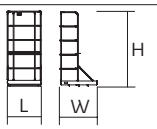
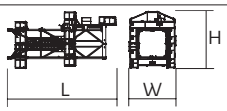
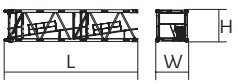
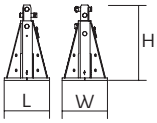
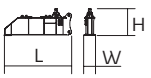
= - 0,39 USt max.

Dimensions and weight

Slewing crane part: 262 ft - 100 LVF

x 11
x 10

Slewing crane part		L (ft)	W (ft)	H (ft)	lb (+/- 5%)
Counter-jib		25.9	7.4	7.4	22,240
		39.4	7.4	7.4	31,048
		34	6.7	8.1	22,070
	100 LVF	39.7	17	13.7	25,677
	180 HPL™ GH	39.7	21.9	13.7	26,109
	100 LVF	52.8	17	13.7	34,525
	180 HPL™ GH	52.8	21.9	13.7	34,959
	100 LVF	39.7	17	13.7	34,800
	180 HPL™ GH	39.7	21.9	13.7	45,391
	100 LVF	52.8	17	13.7	43,648
	180 HPL™ GH	52.8	21.9	13.7	54,241
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
Hoisting winch (+ rope)	100 LVF	11.8	5.2	5.7	9,123
	180 HPL™ GH	15.8	6.3	6.5	19,282
Jib section	①	25.6	5.1	8.2	27,637
	②	34.5	7.3	8.2	26,030
	③	34.1	4.8	8.1	18,683
	④	20.9	4.5	7.9	8,754
	⑤	34.4	4.5	7.8	10,983
	⑦	33.9	4.5	7.5	7,043
	⑪	33.2	4.5	6.4	3,103

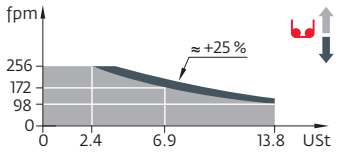
			L (ft)	W (ft)	H (ft)	lb (+/- 5%)
Jib section		⑥ ⑧ ⑨ ⑩	17.8 17.3 17.3 17.3	4.5 4.5 4.5 4.5	7.7 7.3 6.8 6.7	4,859 3,013 2,175 1,955
			5.5	5.2	1.9	714
Trolley		27.6 USt	7.3	5.7	4.7	1,676
Pulley block		27.6 USt	5.1	1.9	8	1,874
Trolley		27.6 USt	12.5	5.6	4.1	2,469
Pulley block		27.6 USt	6.3	1.1	7.7	2,028
Trolley		13.8 USt	6.6	5.6	4.1	1,323
Pulley block		13.8 USt	4.1	1.1	8.5	1,345
Trolley inspection platform			3.1	3.4	7	125
Crane tower						
T 851		⍁8 ft	36.7	15.9	19	34,723
K 850/K 850		⍁8 ft	7.3	10.7	8.2	8,069
KM 850.10B KM 850.14B KMT 850.10A KMT 850.14A KMT 850.10C		⍁8 ft	33.9 33.9 17.5 17.5 12	8.3 8.3 8.3 8.3 8.3	8.2 8.2 8.2 8.2 8.2	22,201 24,670 12,015 13,206 9,326
Fixing angles		P 854A	3	3	4.9	2,072
1/2 Cross girder		ZY 854	18.6	3.2	7.4	13,095
Cross girder		ZY 854	39	4.7	7.4	29,432

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			
	180 HPL™ 63 GH	fpm	179	220	289	438	640	92	112	149	236	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 USt)		0 → 328 (13.8 USt)		0 → 361 (6.9 USt)	10	7.4	
	RVF 174 Optima +	rpm	0 → 0.7										4 x 10	4 x 7.5	

IEC 60204-32	kVA	
480 V (+6% -10%) 60 Hz	100 LVF : 126 → 86 kVA 180 HPL ™ GH : 190 → 118 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.

- 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
- 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.