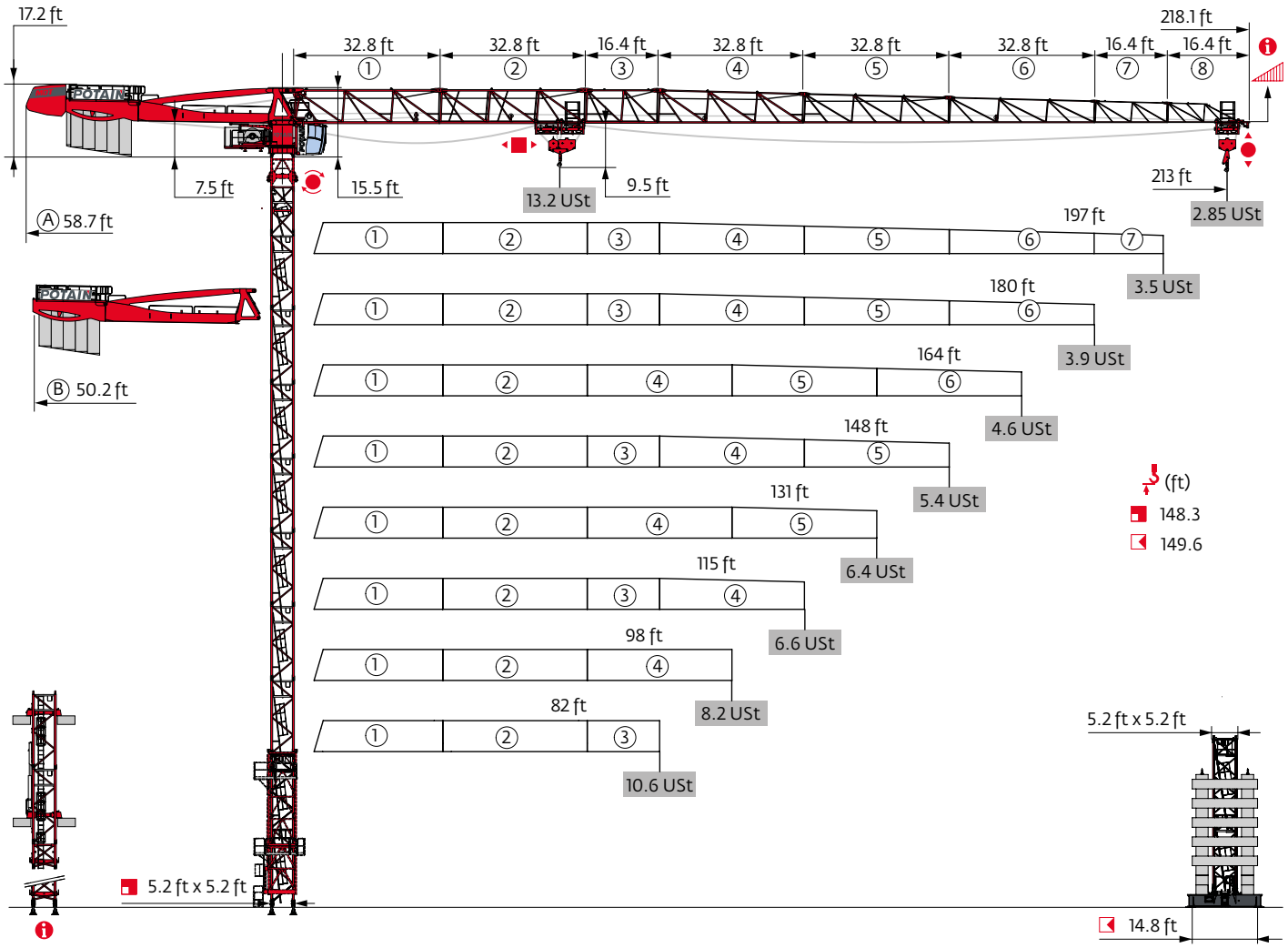
POTAIN®

MDT 249 J12



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

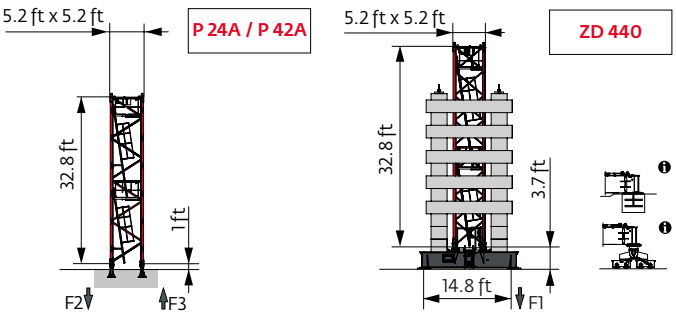
ASCE 7-10

Values have been rounded.

Mast - Reactions

5.2 ft City - P 42A										
(ft)		82	98	115	131	148	164	180	197	213
(ft)		147	147	147	141.7	147	147	147	136.2	136.2
/P+ (ft)		147	147	147	141.7	147	147	147	136.2	136.2
10.9 ft		0	0	0	1	0	0	0	2	2
16.4 ft		7	7	7	6	7	7	7	5	5
32.8 ft		1	1	1	1	1	1	1	1	1
F2 (USt)	●	153	152	149	148	149	147	148	144	144
	■	117	117	123	111	128	130	138	115	124
F3 (USt)	●	119	117	112	111	103	101	101	97	97
	■	83	82	87	73	89	91	97	75	83

5.2 ft City - ZD 440 -										
(ft)		82	98	115	131	148	164	180	197	213
(ft)		149.6	144.4	144.4	144.4	144.4	144.4	144.4	133.2	133.2
/P+ (ft)		149.6	144.4	144.4	144.4	144.4	144.4	144.4	133.2	133.2
10.9 ft		0	1	1	1	1	1	1	0	0
16.4 ft		7	6	6	6	6	6	6	6	6
32.8 ft		1	1	1	1	1	1	1	1	1
F1 (USt)	●	95	90	91	94	93	92	93	91	89
	■	80	74	77	79	79	80	83	75	74



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										
(ft)		82	98	115	131	148	164	180	197	213
(ft)		148.3	142.7	142.7	142.7	142.7	142.7	142.7	131.9	131.9
/P+ (ft)		148.3	142.7	142.7	142.7	142.7	142.7	142.7	131.9	131.9
	6.6 ft	1	1	1	1	1	1	1	1	1
	10.9 ft	1	2	2	2	2	2	2	1	1
	16.4 ft	6	5	5	5	5	5	5	5	5
	32.8 ft	1	1	1	1	1	1	1	1	1
F2 (USt)	●	158	152	149	152	149	147	148	143	144
	■	137	127	133	129	138	139	147	120	128
F3 (USt)	●	123	117	112	114	103	102	101	97	97
	■	102	91	96	91	98	100	107	80	88

∅ 5.2 ft - ZD 440 -										
(ft)		82	98	115	131	148	164	180	197	213
(ft)		145.3	139.8	139.8	139.8	139.8	139.8	139.8	128.9	128.9
/P+ (ft)		145.3	139.8	139.8	139.8	139.8	139.8	139.8	128.9	128.9
	6.6 ft	1	1	1	1	1	1	1	1	1
	10.9 ft	2	0	0	0	0	0	0	2	2
	16.4 ft	5	6	6	6	6	6	6	4	4
	32.8 ft	1	1	1	1	1	1	1	1	1
F1 (USt)	●	95	93	94	94	93	92	93	92	92
	■	83	79	82	81	81	81	84	78	81

Anchorages

Base ballast

(USt) / 5.2 ft City - ZD 440 -

(ft)	82	98	115	131	148	164	180	197	213
149.6	121.3								
144.4	121.3	110.2	110.2	121.3	110.2	110.2	110.2		
133.2	99.2	99.2	99.2	99.2	99.2	99.2	88.2	110.2	99.2
116.8	88.2	88.2	88.2	88.2	77.2	77.2	77.2	88.2	88.2
100.4	77.2	77.2	66.1	66.1	66.1	66.1	55.1	66.1	77.2
84	77.2	66.1	55.1	66.1	55.1	66.1	55.1	66.1	66.1
67.6	66.1	66.1	55.1	55.1	55.1	55.1	55.1	55.1	66.1

(USt) / 5.2 ft - ZD 440 -

(ft)	82	98	115	131	148	164	180	197	213
145.3	121.3								
139.8	121.3	121.3	121.3	121.3	110.2	110.2	110.2		
128.9	99.2	99.2	99.2	110.2	99.2	99.2	88.2	110.2	110.2
112.5	88.2	88.2	88.2	88.2	77.2	77.2	77.2	88.2	88.2
96.1	77.2	77.2	66.1	66.1	66.1	66.1	55.1	66.1	77.2
79.7	66.1	66.1	55.1	66.1	55.1	66.1	55.1	66.1	66.1
63.3	66.1	66.1	55.1	55.1	55.1	55.1	55.1	55.1	66.1

Load curves

(ft)			49	56	66	72	82	89	98	105	115	121	131	138	148	154	164	171	180	187	197	203	213	ft
	13.2 USt	6.6 USt																						
213	10 → 53	94 - 102	13.2	12.4	10.2	9.1	7.8	7.1	6.6	6.4	5.7	5.4	4.9	4.6	4.3	4	3.7	3.6	3.3	3.2	3	2.85	2.7	USt
	10 → 54	97 - 105	13.2	12.7	10.6	9.4	8.1	7.4	6.6	6.6	6	5.6	5.1	4.9	4.5	4.3	4	3.8	3.5	3.4	3.2	3	2.85	USt P+
197	10 → 56	101 - 108	13.2	13.2	11.1	9.9	8.5	7.8	6.8	6.6	6.2	5.8	5.3	5	4.6	4.4	4.1	3.9	3.6	3.5	3.3	USt		
	10 → 58	105 - 113	13.2	13.2	11.5	10.3	8.9	8.1	7.2	6.6	6.5	6.1	5.6	5.3	4.9	4.7	4.3	4.1	3.9	3.7	3.5	USt P+		
180	10 → 56	101 - 109	13.2	13.2	11.1	9.9	8.5	7.8	6.9	6.6	6.2	5.8	5.3	5	4.6	4.4	4.1	3.9	3.6	USt				
	10 → 58	106 - 115	13.2	13.2	11.6	10.4	9	8.2	7.2	6.7	6.6	6.2	5.6	5.3	4.9	4.7	4.4	4.2	3.9	USt P+				
164	10 → 59	106 - 113	13.2	13.2	11.7	10.4	9	8.2	7.2	6.7	6.5	6.1	5.6	5.3	4.9	4.6	4.3	USt						
	10 → 61	111 - 120	13.2	13.2	12.2	11	9.5	8.7	7.7	7.1	6.6	6.5	6	5.6	5.2	5	4.6	USt P+						
148	10 → 61	109 - 118	13.2	13.2	12.1	10.8	9.3	8.5	7.5	6.9	6.6	6.4	5.8	5.5	5.1	USt								
	10 → 64	116 - 125	13.2	13.2	12.8	11.4	9.9	9.1	8	7.4	6.7	6.6	6.2	5.9	5.4	USt P+								
131	10 → 62	111 - 120	13.2	13.2	12.4	11.1	9.6	8.7	7.7	7.1	6.6	6.5	6	USt										
	10 → 65	118 - 128	13.2	13.2	13.1	11.8	10.2	9.3	8.2	7.6	6.9	6.6	6.4	USt P+										
115	10 → 60	107 - 115	13.2	13.2	11.8	10.6	9.1	8.3	7.3	6.8	6.6	USt												
	10 → 63	114 - 115	13.2	13.2	12.6	11.3	9.7	8.9	7.9	7.3	6.6	USt P+												
98	10 → 61		13.2	13.2	12.2	10.9	9.4	8.6	7.5	USt														
	10 → 64		13.2	13.2	13	11.6	10.1	9.2	8.1	USt P+														
82	10 → 63		13.2	13.2	12.6	11.3	9.7	USt																
	10 → 67		13.2	13.2	13.2	12.2	10.5	USt P+																

= - 0.63 USt max.

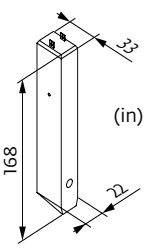
(ft)			49	56	66	72	82	89	98	105	115	121	131	138	148	154	164	171	180	187	197	203	213	ft
	13.2 USt	6.6 USt																						
213	8 → 53	95 - 97	13.2	12.5	10.3	9.2	7.9	7.2	6.5	6	5.4	5	4.5	4.3	3.9	3.7	3.4	3.2	2.95	2.8	2.6	2.5	2.3	USt
	8 → 54	98 - 100	13.2	12.8	10.6	9.5	8.2	7.5	6.6	6.3	5.6	5.3	4.8	4.5	4.1	3.9	3.6	3.4	3.2	3	2.8	2.7	2.5	USt P+
197	8 → 57	102 - 104	13.2	13.2	11.1	10	8.6	7.8	6.9	6.5	5.9	5.5	5	4.7	4.3	4.1	3.7	3.5	3.3	3.1	2.9	USt		
	8 → 58	106 - 108	13.2	13.2	11.6	10.4	9	8.2	7.2	6.7	6.2	5.8	5.3	5	4.6	4.3	4	3.8	3.5	3.4	3.2	USt P+		
180	8 → 57	102 - 104	13.2	13.2	11.2	10	8.6	7.9	6.9	6.6	5.9	5.5	5	4.7	4.3	4.1	3.8	3.6	3.3	USt				
	8 → 59	107 - 109	13.2	13.2	11.7	10.5	9	8.3	7.3	6.8	6.2	5.8	5.3	5	4.6	4.4	4	3.8	3.6	USt P+				
164	8 → 59	106 - 109	13.2	13.2	11.7	10.5	9	8.3	7.3	6.7	6.2	5.8	5.3	5	4.5	4.3	4	USt						
	8 → 61	112 - 115	13.2	13.2	12.3	11	9.5	8.7	7.7	7.2	6.6	6.2	5.6	5.3	4.9	4.6	4.3	USt P+						
148	8 → 61	110 - 112	13.2	13.2	12.2	10.9	9.4	8.6	7.6	7	6.4	6	5.5	5.2	4.7	USt								
	8 → 64	117 - 119	13.2	13.2	12.8	11.5	10	9.1	8.1	7.5	6.7	6.5	5.9	5.6	5.1	USt P+								
131	8 → 62	112 - 115	13.2	13.2	12.5	11.2	9.6	8.8	7.8	7.2	6.6	6.2	5.6	USt										
	8 → 65	119 - 122	13.2	13.2	13.2	11.8	10.2	9.4	8.3	7.7	6.9	6.6	6.1	USt P+										
115	8 → 60	108 - 110	13.2	13.2	11.9	10.6	9.2	8.4	7.4	6.8	6.3	USt												
	8 → 63		13.2	13.2	12.6	11.3	9.8	9	7.9	7.4	6.6	USt P+												
98	8 → 61		13.2	13.2	12.2	11	9.4	8.6	7.6	USt														
	8 → 65		13.2	13.2	13	11.7	10.1	9.3	8.2	USt P+														
82	8 → 63		13.2	13.2	12.7	11.4	9.8	USt																
	8 → 67		13.2	13.2	13.2	12.2	10.6	USt P+																

= - 0.18 USt max.

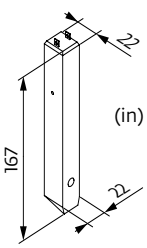
Jib weight & counter-jib ballast

	(lb) (+/- 5%)								
				10,141 lb	3,373 lb	(lb)	6,768 lb	3,373 lb	(lb)
213 ft	27,761	26,985	27,961	5	1	54,079	7	2	54,123
197 ft	27,090	26,381	27,247	5	1	54,079	7	2	54,123
180 ft	26,420	25,710	26,577	5	0	50,706	7	1	50,750
164 ft	24,562	23,852	24,718	4	2	47,311	6	2	47,355
148 ft	24,877	24,167	25,033	4	2	47,311	6	2	47,355
131 ft	23,089	22,379	23,246	4	1	43,938	6	1	43,982
115 ft	22,824	22,115	22,981	4	0	40,565	5	2	40,587
98 ft	20,723	20,014	20,880	3	2	37,170	5	1	37,214
82 ft	19,557	18,847	19,714	3	1	33,797	4	2	33,819

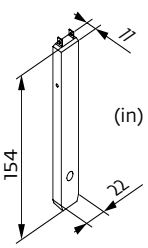
CBS - 10,141 lb



CBU - 6,768 lb



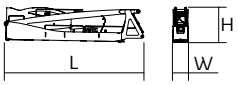
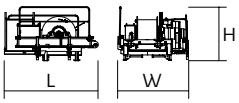
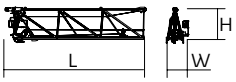
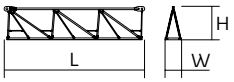
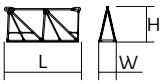
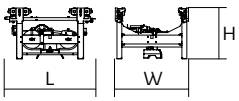
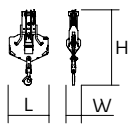
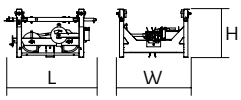
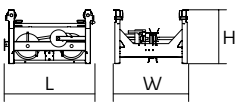
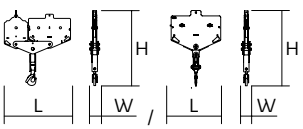
CBY - 3,373 lb

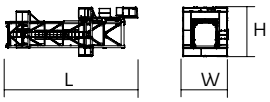
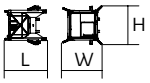
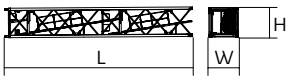
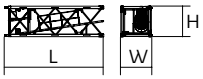
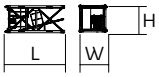
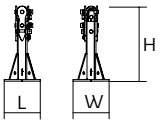
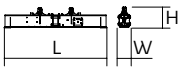
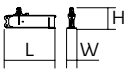


Dimensions and weight

Slewing crane part: 213 ft - - 50 LVF

x 6
x 5

Slewing crane part			L (ft)	W (ft)	H (ft)	lb (+/- 5%)
Counter-jib		Ⓐ Ⓑ	36.1 36.1	3.8 3.8	8.1 8.1	19,213 18,629
Towerhead + cab		5.2 ft	15.6	7.5	8.4	17,372
Hoisting winch (+ rope)		50 LVF 90 HPL™	10.6 10.6	8.1 10.8	6.2 5.8	6,945 9,235
Jib section		① 6 DVF	35.5	5.6	9	7,959
Jib section		② ④ ⑤ ⑥	33.8 33.5 33.6 33.4	3.9 3.9 3.9 3.9	7.9 7.8 6.9 6	5,335 3,439 2,723 1,753
Jib section		③ ⑦	17.3 16.7	3.9 3.9	7.8 5	2,116 683
Jib section		⑧	16.7	3.9	4.6	485
Trolley		13.2 USt	6.1	5	3.4	882
Pulley block		13.2 USt	3.9	1.4	7.6	1,003
Trolley		13.2 USt	5.2	5	3.2	463
Trolley		13.2 USt 6.6 USt	5.6 6.1	5 5	3 3.2	540 520
Pulley block		13.2 USt 6.6 USt	5.4 3.6	0.7 0.9	5.8 5.3	992 584

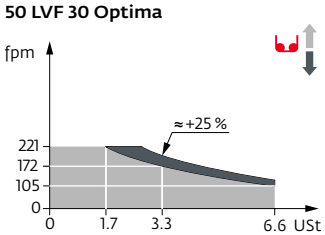
Crane tower			L (ft)	W (ft)	H (ft)	lb (+/- 5%)
Telescopic cage T 41		⍁5.2 ft	35.6	12.3	13.5	15,653
K40/K40-2		⍁5.2 ft	7.3	6.9	6.8	2,932
K 447E KM 447E KRM 449E		⍁5.2 ft	33.5 33.5 33.5	5.3 5.3 5.3	5.3 5.3 5.3	7,474 7,088 9,370
K 447A KMT 447A K 449A KMT 449A		⍁5.2 ft	17.1 17.1 17.1 17.1	5.5 5.5 5.5 5.5	5.3 5.3 5.3 5.3	4,079 3,847 4,916 4,696
KMT 447C		⍁5.2 ft	11.6	5.5	5.3	2,976
Fixing angles		P 24A / P 42A	1.8	1.8	3.8	529
Cross girder		ZD 440	22.2	2.8	4.3	6,702
1/2 Cross girder		ZD 440	10.8	1.9	4.4	2,778

Mechanisms

480 V - 60 Hz											hp	kW	
	50 LVF 30 Optima	fpm	105	131	172	221	54	69	90	110	50	37	1,106 ft
		USt	6.6	5	3.3	1.7	13.2	9.9	6.6	3.5			
	90 HPL™ 30	fpm	176	228	326	469	723	90	120	172	244	361	90	66	2,434 ft
		USt	6.6	5	3.3	1.7	0.2	13.2	9.9	6.6	3.3	0.9			
	6 DVF 4 Optima	fpm	0 → 164 (13.2 USt) 0 → 328 (6.6 USt) 0 → 394 (3.3 USt)								5.5	4	
	RVF 162 Optima+	rpm	0 → 0.9								2 x 7.5	2 x 5.5	

IEC 60204-32	kVA	
480 V (+6% -10%) 60 Hz	50 LVF: 58 → 38 kVA 90 HPL™: 90 → 54 kVA	

50 LVF 30 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
- 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

Ref. 02D_ASCEUSt_MDT249J12_2015_47-11