ALL®

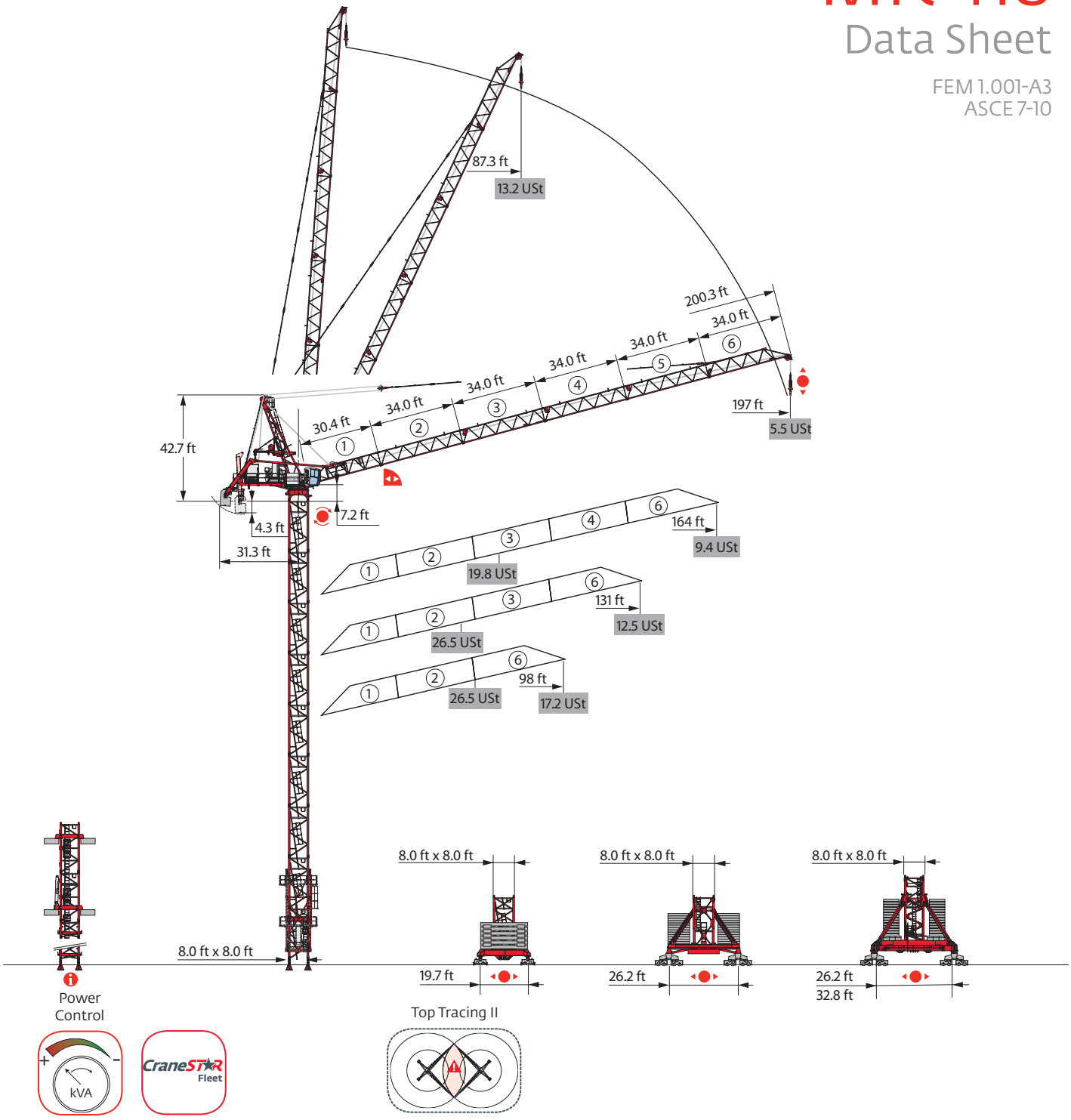
TOWER CRANE

Manitowoc

MR 418

Data Sheet

FEM 1.001-A3
ASCE 7-10

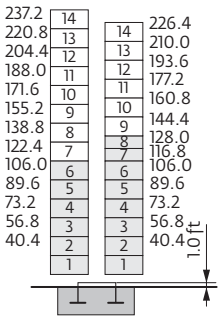


Values have been rounded

Mast

8.0 ft

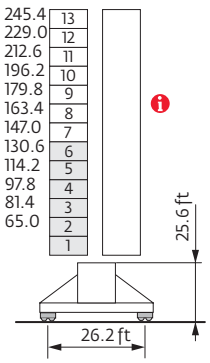
P 802A



FEM	H (ft)	16.4 ft	16.4 ft	16.4 ft	10.9 ft	10.9 ft
131 ft	226.4	6	6	-	-	2
164 ft	210.0	7	4	-	-	2
197 ft	193.6	7	3	-	-	2

ASCE	H (ft)	16.4 ft	16.4 ft	16.4 ft	10.9 ft	10.9 ft
131 ft	220.8	5	8	-	-	-
164 ft	204.4	4	8	-	-	-
197 ft	188.0	3	8	-	-	-

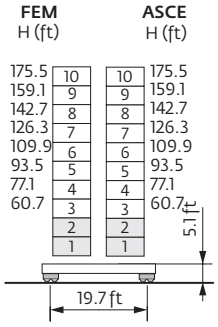
Y 800B



FEM	H (ft)	16.4 ft	16.4 ft	16.4 ft	10.9 ft	10.9 ft
131 ft	229.0	7	5	-	-	-
164 ft	217.8	6	4	-	-	2
197 ft	201.4	6	3	-	-	2

ASCE	H (ft)	16.4 ft	16.4 ft	16.4 ft	10.9 ft	10.9 ft
131 ft						
164 ft	ⓘ	ⓘ	ⓘ	ⓘ	ⓘ	ⓘ
197 ft						

ZX 6830



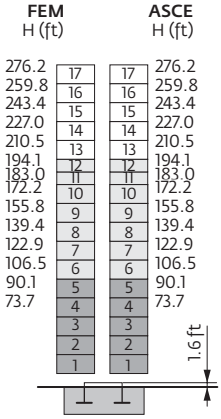
FEM	H (ft)	16.4 ft	16.4 ft	16.4 ft	10.9 ft	10.9 ft
131 ft	164.7	7	1	-	-	2
164 ft	159.1	8	1	-	-	-
197 ft	148.3	7	-	-	-	2

ASCE	H (ft)	16.4 ft	16.4 ft	16.4 ft	10.9 ft	10.9 ft
131 ft	164.7	7	1	-	-	2
164 ft	159.1	8	1	-	-	-
197 ft	148.3	7	-	-	-	2

JM 850 (32.8 ft)						
FEM	H (ft)	16.4 ft	16.4 ft	16.4 ft	10.9 ft	10.9 ft
131 ft	282.5	5	5	4	-	1
164 ft	271.3	6	4	4	-	-
197 ft	260.5	6	2	4	-	2

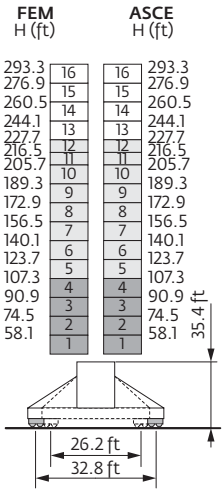
JM 850 (32.8 ft)						
ASCE	H (ft)	16.4 ft	16.4 ft	16.4 ft	10.9 ft	10.9 ft
131 ft	282.5	5	5	4	-	1
164 ft	271.3	6	4	4	-	-
197 ft	255.1	7	2	4	-	-

P 850US



FEM	H (ft)	16.4 ft	16.4 ft	16.4 ft	10.9 ft	10.9 ft
131 ft	265.1	7	3	5	-	1
164 ft	248.7	7	3	4	-	1
197 ft	237.9	8	2	4	-	-

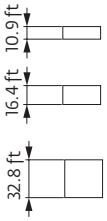
ASCE	H (ft)	16.4 ft	16.4 ft	16.4 ft	10.9 ft	10.9 ft
131 ft	265.1	7	3	5	-	1
164 ft	248.7	7	3	4	-	1
197 ft	237.9	8	2	4	-	-



YM 850 (26.2 ft)						
FEM	H (ft)	16.4 ft	16.4 ft	16.4 ft	10.9 ft	10.9 ft
98 ft	271.3	6	6	2	-	-
131 ft	254.9	7	5	1	-	-
164 ft	244.1	5	4	2	-	2
197 ft	227.7	6	2	2	-	2

YM 850 (26.2 ft)						
ASCE	H (ft)	16.4 ft	16.4 ft	16.4 ft	10.9 ft	10.9 ft
98 ft	260.5	5	6	1	-	2
131 ft	249.6	6	5	1	-	1
164 ft	238.7	7	4	1	-	-
197 ft	222.3	8	2	1	-	-

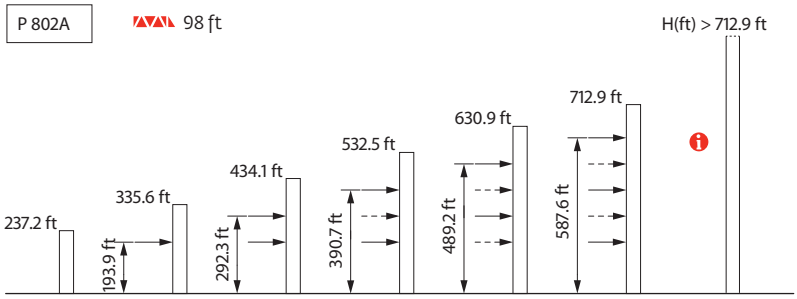
Y 800B	H1 = H	H2 = H - 2.6 ft	H3 = H - 3.9 ft
YM 850 - JM 850	H1 = H	-	H3 = H - 4.6 ft
ZX 6830	H1 = H	-	H3 = H - 1.0 ft

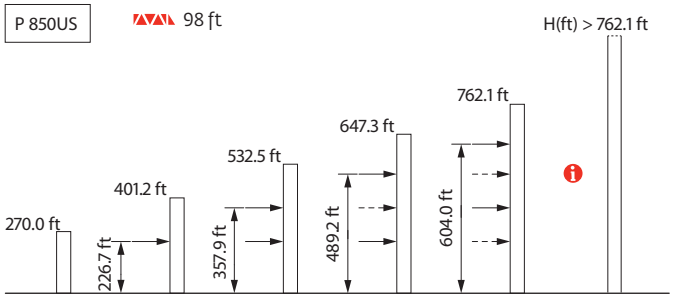


= Non-reinforced mast
= Reinforced mast
= K850 mast

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.

Anchorages (Consult us for ASCE 7-10 values)





Load charts

197 ft		19	►				87	92	98	115	131	148	164	180	197	ft	
							13.2	12.6	11.7	9.9	8.6	7.6	6.7	6.1	5.5	USt	
164 ft		17	►			77	79	82	85	92	98	115	118	131	148	164	ft
						19.8	19.5	18.7	18.0	16.5	15.3	13.0	-	11.2	9.8	8.7	USt
													13.2	11.9	10.5	9.4	USt
131 ft		14	►	62	66	72	79	82	85	92	98	115	124	131	ft		
				26.5	24.8	22.5	20.5	19.6	18.8	17.4	16.1	13.7	-	11.8	USt		
													13.2	12.5	USt		
98 ft		12	►		66	72	79	82	85	92	98	ft					
					26.5	23.9	21.8	20.9	20.1	18.5	17.2	USt					
											13.2	USt					

Base ballast

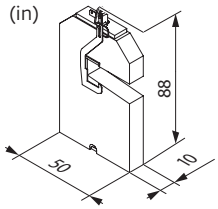
	FEM ☐ 8.0 ft							
	Y 800B		ZX 6830		YM 850		JM 850	
	H (ft)	(USt)	H (ft)	(USt)	H (ft)	(USt)	H (ft)	(USt)
98 ft	245.4	198.4	175.5	133.4	271.3	238.1	293.3	224.9
131 ft	229.0	185.2	164.7	133.4	254.9	224.9	282.5	224.9
164 ft	217.8	198.4	159.1	155.4	244.1	238.1	271.3	224.9
197 ft	201.4	198.4	148.3	177.5	227.7	238.1	260.5	238.1

	ASCE ☐ 8.0 ft							
	Y 800B		ZX 6830		YM 850		JM 850	
	H (ft)	(USt)	H (ft)	(t)	H (ft)	(t)	H (ft)	(t)
98 ft			175.5		260.5	224.9	293.3	224.9
131 ft			164.7		249.6	211.6	282.5	224.9
164 ft			159.1		238.7	224.9	271.3	224.9
197 ft			148.3		222.3	224.9	255.1	224.9

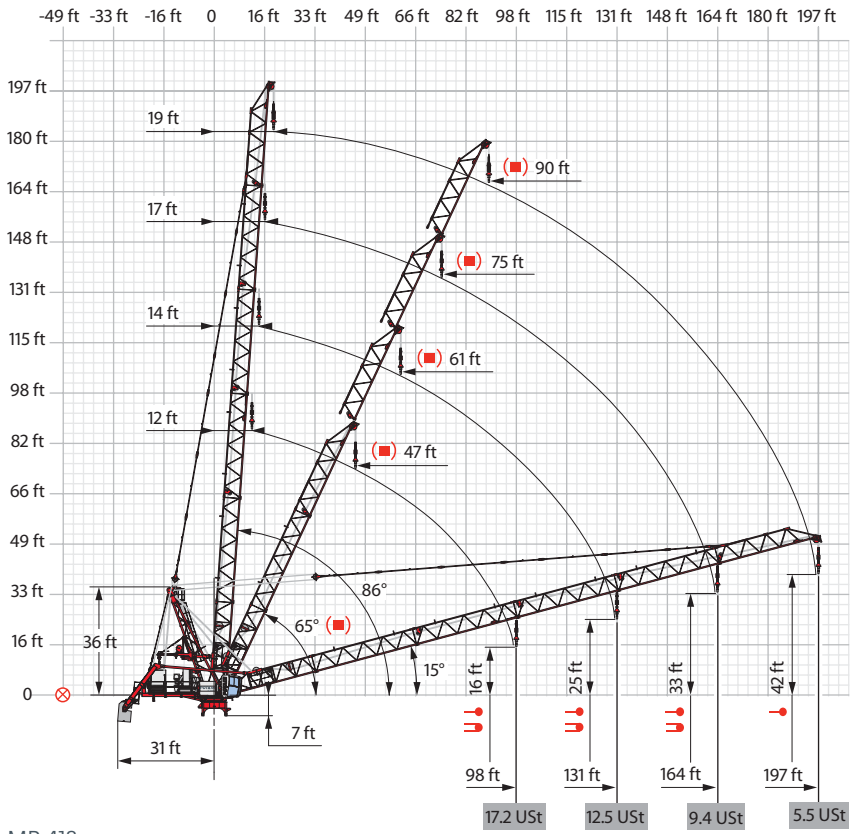
Jib weight & counter-jib ballast

	(lb)	9700 lb	(lb)
98 ft	18,927	7	67,902
131 ft	21,693	8	77,603
164 ft	25,265	9	87,303
197 ft	26,940	9	87,303

9700 lb



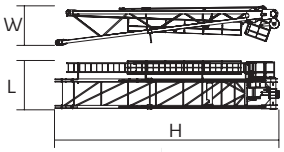
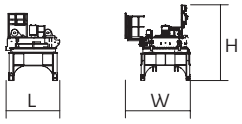
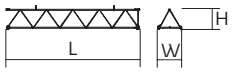
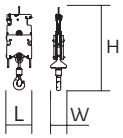
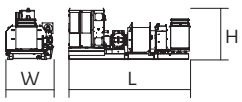
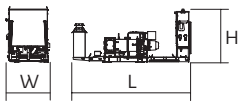
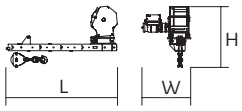
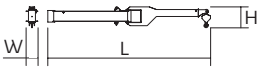
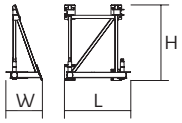
Luffing jib



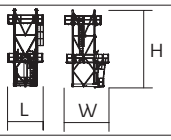
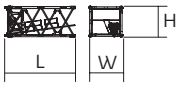
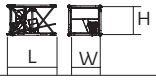
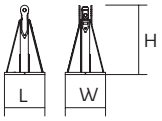
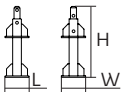
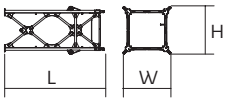
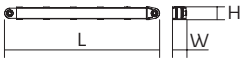
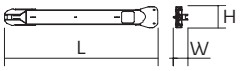
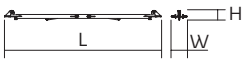
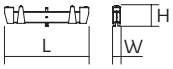
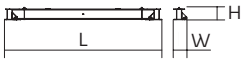
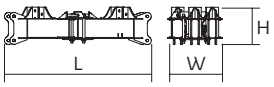
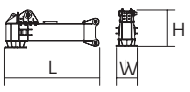
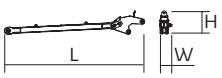
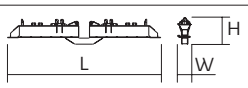
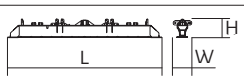
Component weights

Crane upper : 197 ft - - 180LVF

x 11 x 10

			L (ft)	W (ft)	H (ft)	lb (+/- 5%)
Counter-jib (+ Hand rail + Platform)			21.1	20.8	6.9	9270
Towerhead			8.4	6.9	38.8	12,236
Cab		Ultra View	14.9	6.5	8.2	3605
Pivot		⍁8.0 ft	10.6	10.7	12.5	22,630
Jib section		①	31.8	6.2	5.8	4850
Jib section		② ③ ④ ⑤ ⑥	34.5 34.5 34.5 34.5 34.4	6.2 6.2 6.2 6.2 6.2	5.8 5.8 5.8 5.8 6.1	2932 2855 2579 2304 4409
Pulley block			2.9	1.8	8.4	2601
Hoisting winch (+ rope)		180 LVF 320 LVF	16.1 18.4	7.5 7.1	6.3 7.8	22,366 30,545
Luffing winch (+ rope)		150 VVF	16.0	5.6	7.1	11,100
Rear left derrick arm (+ auxiliary winch + pulley block)			7.8	3.4	4.3	1356
Front left derrick arm			11.5	1.4	1.6	419
Articulated derrick arm			13.8	1.0	1.8	694
Derrick support			6.5	3.6	7.4	1477

Component weights

			L (ft)	W (ft)	H (ft)	lb (+/- 5%)
Climbing cage		⍁8.0 ft	15.2	19.0	33.6	28,484
K 850/KR 849A KRMT 849A K 849A KMT 850.10A		⍁8.0 ft	17.2 17.2 17.2 17.5	8.3 8.4 8.3 8.3	8.2 8.3 8.2 8.2	12,291 9017 7496 12,015
KRMT 849C		⍁8.0 ft	11.7	8.4	8.3	7066
Fixing angles		P 802A	2.5	2..5	4.2	1193
Fixing angles		P 850US	2.3	2.3	5.5	2127
Basic mast unit		Y 800B	19.8	9.6	9.6	19,004
Struts		Y 800B	18.1	1.6	1.5	2447
1/2 Side member		Y 800B	18.6	4.1	2.4	3351
Side member		Y 800B	39.4	4.1	2.4	6724
Ballast support		Y 800B	12.3	1.2	3.0	2392
Chassis beam		Y 800B	28.5	2.7	2.4	4938
Central cross (transport position)		YM 850 JM 850	17.1	5.6	4.9	14,771
Basic mast unit		YM 850 JM 850	28.7	8.2	8.2	32,187
Chassis girder		YM 850 JM 850	12.5 17.1	3.0 3.0	5.1 5.1	6173 7055
Chassis ties		YM 850 JM 850	23.6	0.8	1.1	551
Struts		YM 850 JM 850	24.6 26.9	2.5 2.5	4.3 4.3	4630 5071
Cross girder		ZX 6830	29.9	2.5	4.9	12,004
Cross girder		ZX 6830	29.9	3.7	3.6	11,607

Mechanisms

480 V - 60 Hz													hp	kW	
	180 LVF 120 Optima	fpm	184	240	341	571	689	92	123	174	312	344	180	132	1811 ft
		USt	13.2	9.9	6.6	3.3	2.4	26.5	19.8	13.2	6.6	5.8			
	320 LVF 120 Optima	fpm	331	427	581	797	833	166	213	312	399	417	320	240	2709 ft
		USt	13.2	9.9	6.6	4.2	3.3	26.5	19.8	13.2	9.9	8.4			
	150 VVF 56		1 min 15 s										150	110	
	RVF 162 Optima +	rpm	0 → 0.9										2 x 7.5	2 x 5.5	
Y 800B	RT 584 A1 - 2V	fpm	28 - 56										8 x 8.4	8 x 6.2	
ZX 6830	RT 664 A2B - 2V	fpm	62 - 125										6 x 8.4	6 x 6.2	
YM 850 JM 850															

IEC 60204-32	kVA
480 V (+6% -10%) 60 Hz	180 LVF : 278 → 146 kVA 320 LVF : 390 → 202 kVA

Key

- Standard equipment
- Options
- Reactions in service
- Reactions out of service
- Weightwithoutload,withoutballast, with jib and max. height
- Jib weight
- Total ballast weight
- Jib articulation axis
- Weathervaning position
- Truck 44 ft
- Container High Cube 40 ft, and/or Flat Rack 20 ft
- Tightened anchorage frame
- Loosened anchorage frame
- Hoisting
- Luffing
- Slewing
- Travelling
- Required power
- Power Control function: Hoisting speeds adapted to the available power
- Consult us

Notes

Note: These mast combinations meet the EN 14439 and ASME B30.3-2012 specifications for "out of service" wind conditions, provided the illustrated wind speed matches required design wind 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-A. 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 50-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.

Constant improvement and engineering progress make it necessary that we reserve the right to make specification, equipment and price changes without notice. Illustrations shown may include optional equipment and accessories, and may not include all standard equipment.

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