

Liftcrane Jib Capacities

Jib No. 133 or No. 133A with 21 ft Strut on
Boom No. 58 HL

224,000 lb Crane Counterweight

0 lb Carbody Counterweight

360 Degree Rating



LIFTING CAPACITIES: Chart supplements boom capacity chart No. 8661-A. Lifting capacities for various boom lengths, jib lengths, and jib operating radii are for freely suspended loads and do not exceed 75% of a static tipping load. Capacities based on structural competence are denoted by an asterisk (*).

Weight of all load blocks, hooks, weight ball, slings, hoist lines, etc., beneath boom and jib point sheaves is considered part of jib load. Boom and jib are not to be lowered beyond radii where combined weights are greater than rated capacity. Where no capacity is shown, operation is not intended or approved.

OPERATING CONDITIONS: Machine to operate in a level position on a firm uniformly supporting surface. Refer to boom rigging **No. A10415**, Jib Assembly **No. 81015738**, Wire Rope Specification chart **No. 8674-D**, Counterweight Arrangement chart **No. 8682-A** and Wind Conditions chart **No. 8688-A**. Crane operator judgment must be used to allow for dynamic load effects of swinging, hoisting or lowering, travel, wind conditions, as well as adverse operating conditions and physical machine depreciation. Refer to Operator's Manual for operating guidelines.

MACHINE TRAVEL: Machine to travel on a firm, level, and uniformly supporting surface and boom within boom angle range shown in capacity chart. Refer to Maximum Allowable Travel Specification chart **No. 8683-A**.



OPERATING RADIUS: Operating radius is horizontal distance from axis of rotation to center of vertical hoist line or load block.



BOOM ANGLE: Boom angle in degrees (°) is angle between horizontal and centerline of boom butt and inserts, and is an indication of operating radius. In all cases, operating radius shall govern capacity.



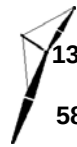
JIB POINT ELEVATION: Jib point elevation is vertical distance from ground level to centerline of jib point shaft.

MACHINE EQUIPMENT: Machine equipped with 34 ft crawlers, 60 in. treads, 32 ft live mast, 26 part boom hoist reeving, boom support straps, 224,000 lb crane counterweight, and 0 lb carbody counterweight.

Maximum Boom and Jib Lengths Lifted Unassisted

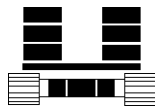
Over End of Blocked Crawlers		Over Side of Crawlers	
Boom Length	Jib No. 133(A)	Boom Length	Jib No. 133(A)
236.2 ft	—	216.5 ft	—
216.5 ft	—	196.9 ft	—
196.9 ft	—	177.2 ft	—
177.2 ft	90.0 ft	157.5 ft	90.0 ft
157.5 ft	130.0 ft	137.8 ft	130.0 ft
137.8 ft	140.0 ft		
Load block, hook and weight ball on ground at start.			

Explanation of Symbols



133(A)
+
58 HL

Jib No. 133 or No. 133A
+
Boom No. 58 HL



Crane Counterweight
+
Carbody Counterweight



360 Degree Rating



Boom Length



Jib Length

**Explanation of Symbols
(continued)**

Boom Angle
(see page 1)



Operating Radius
(see page 1)



Jib Offset Angle

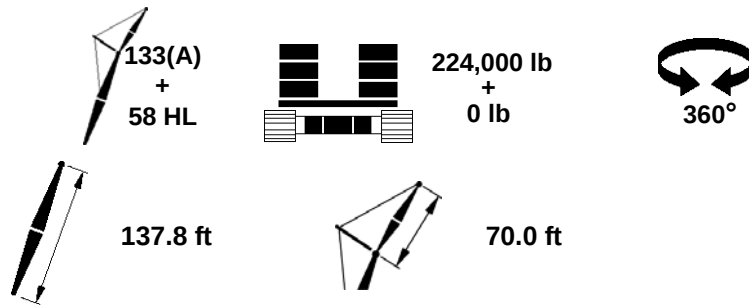


Jib Point Elevation
(see page 1)

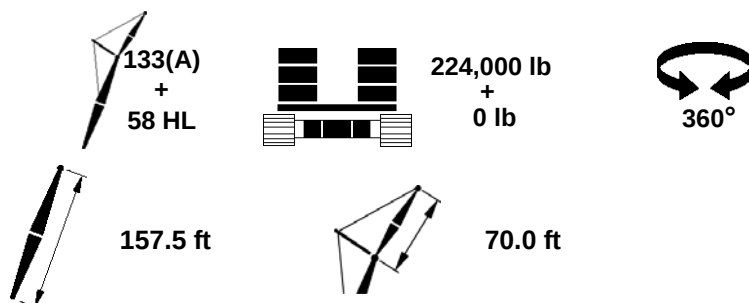


Lifting Capacities
(see page 1)

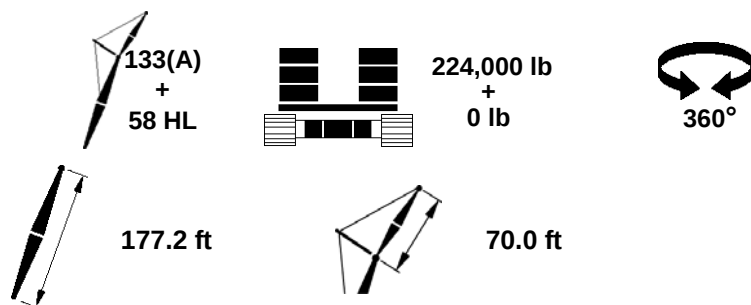
REFERENCE
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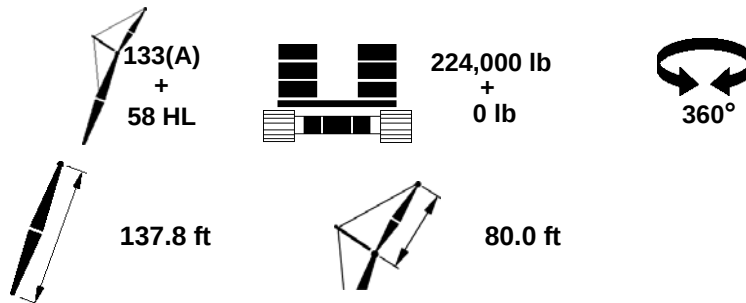
	8°			20°		
	ft	ft	lb	ft	ft	lb
50	81.5	216.0	205,700 *			
55	80.2	214.8	184,300			
60	78.8	213.6	161,400			
65	77.4	212.1	142,800	81.0	209.8	143,700 *
70	75.9	210.6	127,500	79.6	208.3	133,700
75	74.5	208.9	114,500	78.1	206.6	120,200
80	73.1	207.1	103,500	76.7	204.7	108,700
85	71.6	205.1	94,000	75.2	202.7	98,800
90	70.2	203.0	85,700	73.7	200.6	90,100
95	68.7	200.8	78,400	72.2	198.3	82,500
100	67.2	198.3	71,900	70.7	195.8	75,800
105	65.6	195.7	66,200	69.2	193.2	69,700
110	64.1	193.0	61,000	67.6	190.4	64,300
115	62.5	190.0	56,300	66.0	187.4	59,400
120	60.9	186.9	52,000	64.4	184.2	54,900
125	59.3	183.6	48,100	62.7	180.9	50,800
130	57.7	180.0	44,600	61.0	177.3	47,100
135	56.0	176.3	41,300	59.3	173.4	43,600
140	54.2	172.3	38,300	57.6	169.4	40,500
145	52.5	168.0	35,400	55.8	165.0	37,500
150	50.6	163.5	32,800	53.9	160.4	34,700
155	48.8	158.6	30,400	52.0	155.5	32,200
160	46.8	153.5	28,100	50.0	150.2	29,800
165	44.8	147.9	26,000	47.9	144.5	27,500
170	42.7	141.9	24,000	45.8	138.4	25,400
175	40.5	135.5	22,100	43.5	131.7	23,300
180	38.2	128.5	20,300	41.1	124.5	21,400
185	35.7	120.8	18,600			
190	33.0	112.4	17,000			
195	30.1	102.9	15,400			



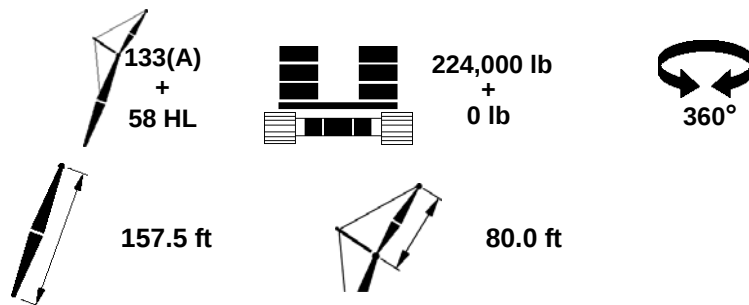
	8°			20°		
	ft	ft	lb	ft	ft	lb
55	81.2	234.9	183,900			
60	79.9	233.8	160,800			
65	78.6	232.5	142,000	81.9	230.0	148,100 *
70	77.3	231.1	126,500	80.6	228.5	133,300
75	76.0	229.6	113,500	79.3	227.0	119,700
80	74.7	227.9	102,400	78.0	225.3	108,000
85	73.4	226.1	92,800	76.7	223.5	98,000
90	72.1	224.2	84,400	75.3	221.6	89,300
95	70.8	222.2	77,100	74.0	219.5	81,600
100	69.4	220.0	70,500	72.6	217.3	74,700
105	68.0	217.7	64,700	71.2	215.0	68,600
110	66.7	215.2	59,500	69.8	212.5	63,100
115	65.3	212.6	54,800	68.4	209.8	58,200
120	63.8	209.8	50,500	67.0	207.0	53,700
125	62.4	206.9	46,500	65.5	204.0	49,600
130	61.0	203.8	43,000	64.1	200.9	45,800
135	59.5	200.5	39,700	62.6	197.5	42,300
140	58.0	197.0	36,600	61.0	194.0	39,100
145	56.4	193.3	33,800	59.5	190.2	36,100
150	54.9	189.4	31,200	57.9	186.3	33,400
155	53.3	185.3	28,700	56.2	182.0	30,800
160	51.6	180.9	26,400	54.6	177.6	28,400
165	49.9	176.2	24,300	52.8	172.9	26,100
170	48.2	171.3	22,300	51.1	167.8	24,000
175	46.4	166.1	20,400	49.2	162.5	21,900
180	44.5	160.5	18,600	47.3	156.8	20,000
185	42.6	154.5	16,900	45.4	150.6	18,200
190	40.6	148.1	15,300	43.3	144.0	16,500
195	38.5	141.2	13,800	41.1	136.9	14,900
200	36.3	133.8	12,300			
205	33.9	125.6	10,900			
210	31.4	116.6	9,600			
215	28.6	106.5	8,300			



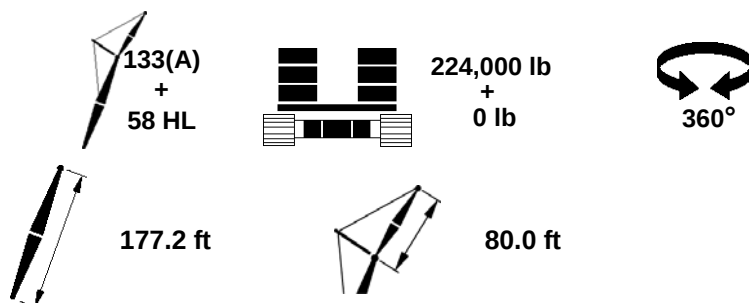
	8°			20°		
	ft	ft	lb	ft	ft	lb
55	81.7	255.1	182,600			
60	80.6	254.0	159,400			
65	79.4	252.8	140,700			
70	78.2	251.6	125,100	81.3	249.0	132,400
75	77.0	250.2	112,100	80.1	247.6	118,700
80	75.8	248.7	100,900	78.9	246.1	107,000
85	74.6	247.0	91,300	77.7	244.4	96,900
90	73.4	245.3	83,000	76.4	242.7	88,200
95	72.2	243.4	75,600	75.2	240.8	80,400
100	71.0	241.5	69,100	74.0	238.8	73,600
105	69.8	239.4	63,200	72.7	236.7	67,500
110	68.5	237.1	58,000	71.5	234.4	62,000
115	67.2	234.8	53,300	70.2	232.0	57,000
120	66.0	232.3	49,000	68.9	229.5	52,500
125	64.7	229.6	45,100	67.6	226.8	48,300
130	63.4	226.8	41,500	66.3	224.0	44,600
135	62.0	223.9	38,200	64.9	221.0	41,100
140	60.7	220.8	35,100	63.6	217.9	37,900
145	59.3	217.5	32,300	62.2	214.5	34,900
150	58.0	214.1	29,700	60.8	211.0	32,100
155	56.6	210.4	27,300	59.4	207.4	29,600
160	55.1	206.6	25,000	57.9	203.5	27,200
165	53.7	202.6	22,800	56.4	199.4	24,900
170	52.2	198.4	20,800	54.9	195.1	22,800
175	50.6	193.9	19,000	53.3	190.5	20,800
180	49.1	189.2	17,200	51.7	185.7	18,900
185	47.5	184.2	15,500	50.1	180.6	17,100
190	45.8	178.9	13,900	48.4	175.2	15,400
195	44.1	173.3	12,400	46.6	169.5	13,800
200	42.3	167.3	11,000	44.8	163.4	12,300
205	40.5	161.0	9,600	42.9	156.9	10,800
210	38.5	154.2	8,300	41.0	149.9	9,400
215	36.5	146.9	7,100			



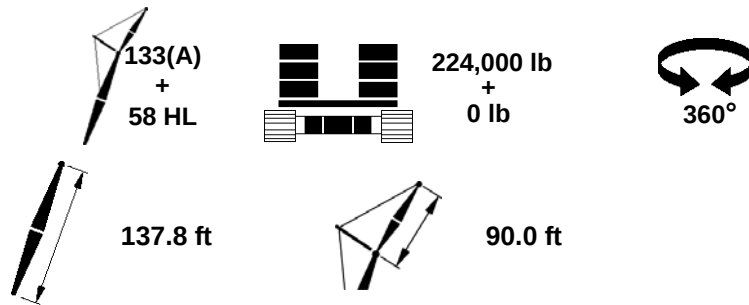
	8°			20°		
	ft	ft	lb	ft	ft	lb
55	81.3	224.9	176,800 *			
60	80.0	223.7	163,300			
65	78.7	222.4	144,600			
70	77.3	220.9	129,100	81.3	218.2	123,900 *
75	76.0	219.3	116,100	79.9	216.6	118,400 *
80	74.6	217.6	105,000	78.5	214.8	110,800
85	73.2	215.7	95,400	77.1	212.9	100,700
90	71.8	213.7	87,000	75.7	210.9	92,000
95	70.4	211.6	79,700	74.3	208.7	84,300
100	69.0	209.3	73,100	72.9	206.4	77,400
105	67.6	206.8	67,300	71.4	203.9	71,300
110	66.1	204.2	62,100	69.9	201.3	65,800
115	64.6	201.5	57,300	68.4	198.4	60,800
120	63.1	198.5	53,100	66.9	195.5	56,300
125	61.6	195.4	49,100	65.4	192.3	52,200
130	60.1	192.1	45,500	63.8	188.9	48,400
135	58.5	188.6	42,200	62.2	185.3	44,900
140	56.9	184.8	39,200	60.5	181.5	41,700
145	55.2	180.9	36,400	58.9	177.5	38,700
150	53.6	176.7	33,700	57.1	173.2	35,900
155	51.8	172.3	31,300	55.4	168.7	33,400
160	50.0	167.5	29,000	53.6	163.9	30,900
165	48.2	162.5	26,800	51.7	158.7	28,600
170	46.3	157.1	24,800	49.7	153.2	26,500
175	44.3	151.3	22,900	47.7	147.2	24,500
180	42.3	145.2	21,100	45.6	140.9	22,500
185	40.1	138.5	19,400	43.4	134.0	20,700
190	37.9	131.3	17,800	41.0	126.5	18,900
195	35.5	123.3	16,200			
200	32.9	114.6	14,800			
205	30.0	104.8	13,300			



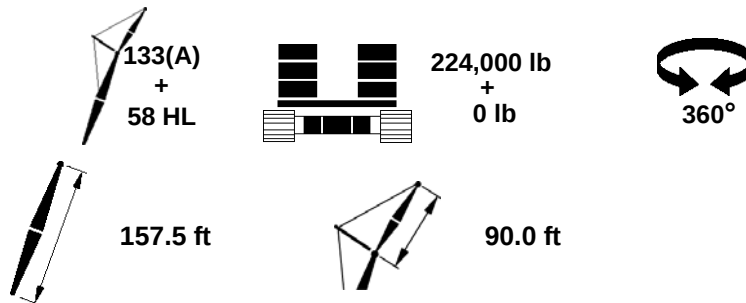
	8°			20°		
	ft	ft	lb	ft	ft	lb
60	81.0	243.9	162,900			
65	79.8	242.6	144,000			
70	78.6	241.3	128,300			
75	77.3	239.8	115,200	80.9	236.8	122,100
80	76.1	238.3	103,900	79.7	235.3	110,300
85	74.8	236.6	94,300	78.4	233.5	100,100
90	73.6	234.7	85,800	77.1	231.7	91,200
95	72.3	232.8	78,400	75.8	229.7	83,400
100	71.0	230.7	71,800	74.5	227.6	76,500
105	69.7	228.5	65,900	73.2	225.4	70,300
110	68.4	226.2	60,700	71.9	223.0	64,800
115	67.1	223.7	55,900	70.6	220.5	59,700
120	65.7	221.1	51,500	69.2	217.8	55,200
125	64.4	218.3	47,600	67.8	215.0	51,000
130	63.0	215.3	44,000	66.4	212.0	47,200
135	61.6	212.2	40,600	65.0	208.8	43,700
140	60.2	208.9	37,600	63.5	205.5	40,400
145	58.7	205.5	34,700	62.1	202.0	37,400
150	57.3	201.8	32,100	60.6	198.2	34,600
155	55.8	198.0	29,600	59.1	194.3	32,000
160	54.2	193.9	27,300	57.5	190.1	29,500
165	52.7	189.6	25,100	55.9	185.7	27,200
170	51.1	185.0	23,100	54.3	181.1	25,100
175	49.4	180.2	21,200	52.6	176.2	23,100
180	47.7	175.1	19,400	50.8	170.9	21,100
185	46.0	169.7	17,700	49.0	165.4	19,300
190	44.2	163.9	16,100	47.2	159.4	17,600
195	42.3	157.7	14,600	45.2	153.1	15,900
200	40.3	151.1	13,100	43.2	146.2	14,400
205	38.2	144.0	11,700			
210	36.1	136.3	10,400			
215	33.7	127.9	9,100			
220	31.2	118.6	7,900			

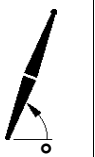


	8°			20°		
	ft	ft	lb	ft	ft	lb
60	81.5	264.1	161,600			
65	80.4	262.9	142,600			
70	79.3	261.7	126,900			
75	78.2	260.4	113,700			
80	77.0	258.9	102,500	81.5	257.4	121,200
85	75.9	257.4	92,800	80.4	255.9	109,300
90	74.7	255.7	84,400	79.2	254.3	99,100
95	73.5	253.9	76,900	78.0	252.6	90,200
100	72.4	252.0	70,300	76.9	250.8	82,400
105	71.2	250.0	64,400	75.7	248.9	75,400
110	70.0	247.9	59,200	74.5	246.9	69,200
115	68.8	245.6	54,400	73.3	244.7	63,600
120	67.6	243.2	50,100	72.0	242.4	58,600
125	66.4	240.7	46,100	70.8	240.0	54,000
130	65.1	238.1	42,500	69.6	237.5	49,800
135	63.9	235.3	39,100	68.3	234.8	46,000
140	62.6	232.3	36,100	67.0	231.9	42,500
145	61.3	229.2	33,200	65.7	228.9	39,200
150	60.0	226.0	30,600	64.4	225.8	36,200
155	58.7	222.5	28,100	63.1	222.5	33,400
160	57.3	218.9	25,800	61.7	219.0	30,800
165	55.9	215.2	23,700	60.4	215.3	28,300
170	54.5	211.2	21,600	59.0	211.5	26,000
175	53.1	207.0	19,700	57.5	207.4	23,900
180	51.6	202.6	18,000	56.1	203.2	21,900
185	50.1	198.0	16,300	54.6	198.7	19,900
190	48.6	193.1	14,700	53.1	194.0	18,100
195	47.0	187.9	13,100	51.5	189.0	16,400
200	45.4	182.5	11,700	49.9	183.7	14,800
205	43.7	176.7	10,300	48.2	178.1	13,200
210	42.0	170.6	9,000	46.5	172.2	11,800
215	40.2	164.0	7,800	44.7	165.8	10,300
220				42.8	159.1	9,000
				40.9	151.9	7,700



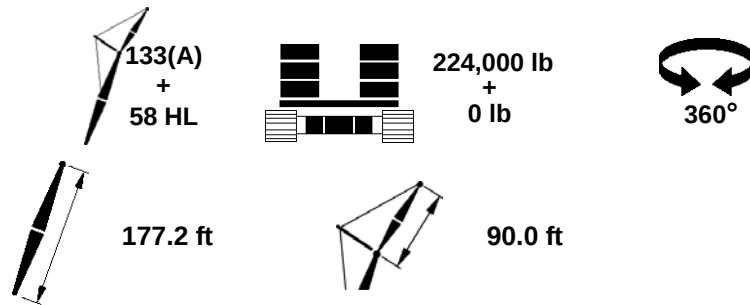
	8°			20°		
	ft	ft	lb	ft	ft	lb
60	81.2	233.9	154,500 *			
65	79.9	232.6	146,400			
70	78.6	231.2	130,800			
75	77.3	229.7	117,700	81.6	226.5	108,600 *
80	76.0	228.0	106,500	80.3	224.9	104,000 *
85	74.7	226.2	96,800	78.9	223.1	99,800 *
90	73.4	224.3	88,400	77.6	221.1	93,900
95	72.1	222.3	81,000	76.2	219.1	86,100
100	70.7	220.1	74,400	74.9	216.9	79,100
105	69.3	217.8	68,500	73.5	214.5	73,000
110	68.0	215.3	63,300	72.1	212.0	67,400
115	66.6	212.7	58,500	70.7	209.3	62,400
120	65.2	209.9	54,200	69.2	206.5	57,800
125	63.7	207.0	50,200	67.8	203.5	53,700
130	62.3	203.9	46,600	66.3	200.3	49,800
135	60.8	200.6	43,300	64.8	197.0	46,300
140	59.3	197.1	40,200	63.2	193.4	43,100
145	57.7	193.4	37,400	61.7	189.7	40,100
150	56.2	189.5	34,700	60.1	185.7	37,200
155	54.6	185.4	32,300	58.4	181.5	34,600
160	52.9	181.0	29,900	56.8	177.0	32,200
165	51.2	176.4	27,800	55.0	172.2	29,900
170	49.5	171.5	25,800	53.2	167.2	27,700
175	47.7	166.2	23,800	51.4	161.8	25,700
180	45.9	160.6	22,000	49.5	156.1	23,700
185	43.9	154.7	20,300	47.5	149.9	21,900
190	41.9	148.3	18,700	45.4	143.3	20,100
195	39.8	141.4	17,200	43.2	136.1	18,500
200	37.6	133.9	15,700			
205	35.2	125.8	14,300			
210	32.7	116.8	12,900			
215	29.9	106.7	11,600			



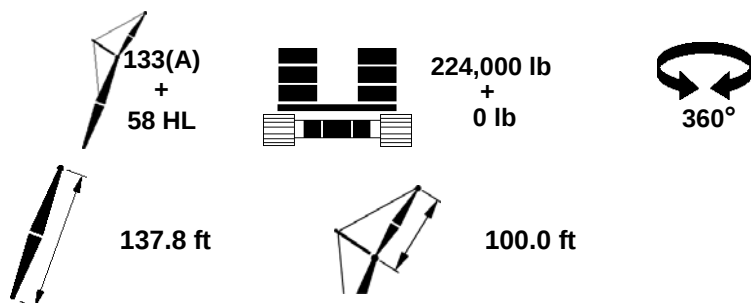
	8°			20°		
						
	ft	ft	lb	ft	ft	lb
65	80.9	252.7	145,900			
70	79.7	251.5	130,100			
75	78.5	250.1	116,900			
80	77.3	248.6	105,600	81.2	245.2	107,300 *
85	76.1	246.9	95,800	80.0	243.5	102,300
90	74.9	245.2	87,300	78.8	241.7	93,300
95	73.7	243.3	79,800	77.6	239.9	85,400
100	72.5	241.4	73,200	76.3	237.8	78,400
105	71.2	239.3	67,200	75.1	235.7	72,100
110	70.0	237.0	61,900	73.8	233.4	66,500
115	68.7	234.7	57,100	72.5	231.0	61,400
120	67.5	232.2	52,700	71.2	228.5	56,800
125	66.2	229.5	48,800	69.9	225.8	52,600
130	64.9	226.7	45,100	68.6	223.0	48,700
135	63.5	223.8	41,700	67.2	220.0	45,100
140	62.2	220.7	38,600	65.9	216.8	41,800
145	60.8	217.4	35,800	64.5	213.5	38,800
150	59.5	214.0	33,100	63.1	210.0	36,000
155	58.0	210.3	30,600	61.6	206.3	33,300
160	56.6	206.5	28,300	60.2	202.4	30,800
165	55.1	202.5	26,100	58.7	198.2	28,500
170	53.7	198.2	24,100	57.1	193.9	26,300
175	52.1	193.8	22,200	55.6	189.3	24,300
180	50.6	189.0	20,400	54.0	184.5	22,300
185	48.9	184.1	18,600	52.3	179.4	20,500
190	47.3	178.8	17,000	50.6	173.9	18,800
195	45.6	173.2	15,500	48.8	168.1	17,100
200	43.8	167.2	14,000	47.0	162.0	15,500
205	41.9	160.8	12,600	45.1	155.4	14,000
210	40.0	154.0	11,300	43.1	148.3	12,600
215	38.0	146.7	10,000			
220	35.9	138.8	8,800			
225	33.6	130.1	7,600			

16000 S-1

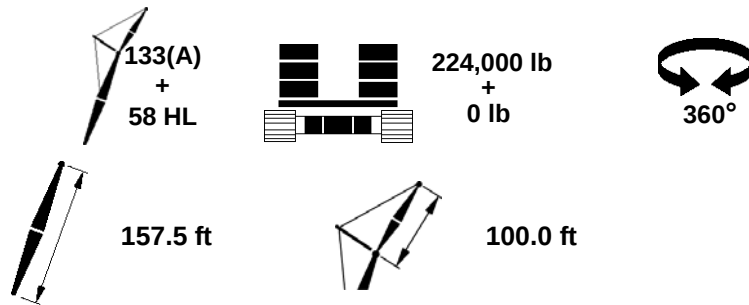
ANSI B30.5

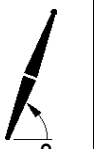
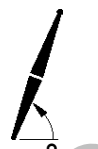


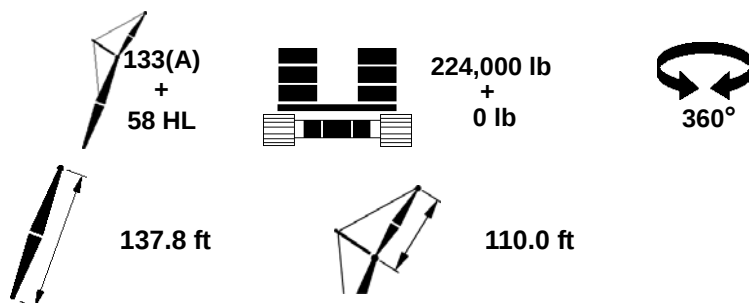
	8°			20°		
ft	ft	ft	lb	ft	ft	lb
65	81.4	273.0	144,600			
70	80.3	271.8	128,800			
75	79.2	270.5	115,500			
80	78.1	269.1	104,200	81.8	265.7	109,200 *
85	77.0	267.7	94,400	80.6	264.2	101,300
90	75.9	266.1	85,800	79.5	262.6	92,300
95	74.8	264.3	78,300	78.4	260.8	84,300
100	73.7	262.5	71,700	77.2	259.0	77,300
105	72.5	260.6	65,800	76.1	257.0	71,000
110	71.4	258.6	60,400	74.9	255.0	65,400
115	70.2	256.4	55,600	73.8	252.8	60,300
120	69.1	254.1	51,200	72.6	250.5	55,600
125	67.9	251.7	47,300	71.4	248.0	51,400
130	66.7	249.2	43,600	70.2	245.4	47,500
135	65.5	246.5	40,200	69.0	242.7	43,900
140	64.3	243.7	37,100	67.7	239.9	40,600
145	63.1	240.8	34,300	66.5	236.9	37,600
150	61.8	237.7	31,600	65.2	233.8	34,700
155	60.6	234.4	29,100	64.0	230.4	32,100
160	59.3	231.0	26,800	62.6	227.0	29,600
165	58.0	227.4	24,600	61.3	223.3	27,300
170	56.7	223.7	22,600	60.0	219.5	25,100
175	55.3	219.8	20,700	58.6	215.5	23,100
180	54.0	215.6	18,900	57.2	211.3	21,100
185	52.6	211.3	17,200	55.8	206.9	19,300
190	51.1	206.7	15,500	54.3	202.2	17,600
195	49.7	201.9	14,000	52.8	197.3	15,900
200	48.2	196.9	12,600	51.3	192.1	14,400
205	46.6	191.6	11,200	49.7	186.6	12,900
210	45.0	186.0	9,900	48.0	180.9	11,400
215	43.4	180.0	8,600	46.4	174.7	10,100
220	41.7	173.7	7,400	44.6	168.2	8,800
225				42.8	161.2	7,500



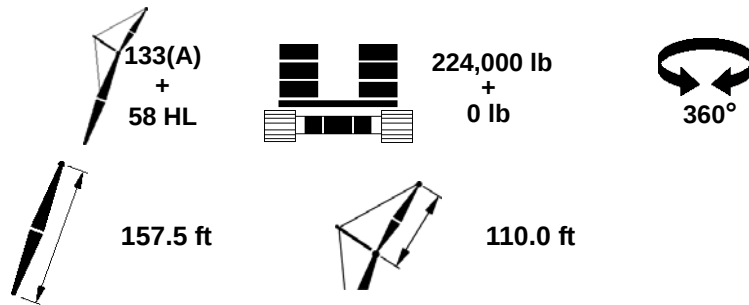
	8°			20°		
	ft	ft	lb	ft	ft	lb
60	81.3	244.4	146,200 *			
65	80.1	243.1	141,800 *			
70	78.8	241.8	130,500			
75	77.6	240.4	117,400			
80	76.4	238.8	106,200	80.9	235.9	107,900 *
85	75.1	237.1	96,600	79.6	234.2	103,000
90	73.8	235.3	88,200	78.4	232.3	94,200
95	72.6	233.3	80,800	77.1	230.4	86,400
100	71.3	231.3	74,300	75.8	228.3	79,500
105	70.0	229.1	68,500	74.5	226.0	73,300
110	68.7	226.7	63,200	73.1	223.7	67,700
115	67.4	224.2	58,500	71.8	221.1	62,700
120	66.0	221.6	54,200	70.4	218.5	58,200
125	64.7	218.8	50,200	69.1	215.7	54,000
130	63.3	215.9	46,600	67.7	212.7	50,200
135	61.9	212.8	43,300	66.3	209.5	46,700
140	60.5	209.5	40,300	64.8	206.2	43,500
145	59.1	206.1	37,500	63.4	202.7	40,500
150	57.6	202.4	34,800	61.9	199.0	37,700
155	56.1	198.6	32,400	60.3	195.1	35,100
160	54.6	194.5	30,100	58.8	190.9	32,600
165	53.0	190.2	27,900	57.2	186.5	30,300
170	51.4	185.7	25,900	55.6	181.9	28,200
175	49.8	180.9	24,000	53.9	177.0	26,200
180	48.1	175.8	22,300	52.2	171.8	24,200
185	46.3	170.4	20,600	50.4	166.3	22,400
190	44.5	164.7	19,000	48.5	160.4	20,700
195	42.7	158.5	17,400	46.6	154.0	19,100
200	40.7	152.0	16,000	44.6	147.3	17,500
205	38.6	144.9	14,600	42.4	139.9	16,000
210	36.5	137.2	13,300	40.2	132.0	14,500
215	34.2	128.9	12,000			
220	31.7	119.7	10,800			
225	29.0	109.4	9,600			



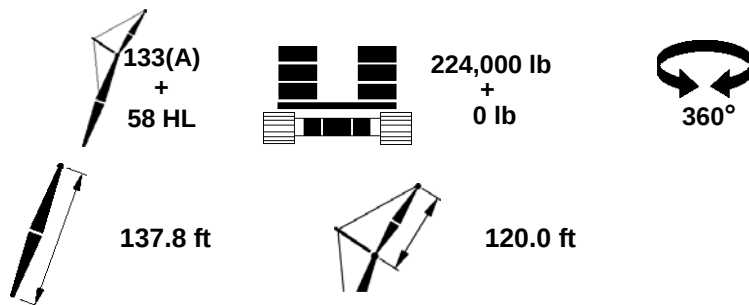
	8°			20°		
						
	ft	ft	lb	ft	ft	lb
65	81.0	263.3	142,700 *			
70	79.9	262.1	129,800			
75	78.7	260.7	116,600			
80	77.6	259.3	105,300	81.8	256.1	109,400 *
85	76.5	257.7	95,600	80.6	254.6	102,600
90	75.3	256.1	87,100	79.4	252.9	93,600
95	74.1	254.3	79,700	78.3	251.1	85,700
100	73.0	252.4	73,000	77.1	249.2	78,700
105	71.8	250.4	67,100	75.9	247.1	72,500
110	70.6	248.3	61,800	74.7	245.0	66,800
115	69.4	246.0	57,100	73.4	242.7	61,800
120	68.2	243.6	52,700	72.2	240.3	57,100
125	67.0	241.1	48,700	71.0	237.7	52,900
130	65.7	238.4	45,100	69.7	235.0	49,100
135	64.5	235.7	41,800	68.4	232.2	45,500
140	63.2	232.7	38,700	67.1	229.2	42,200
145	61.9	229.6	35,800	65.8	226.0	39,200
150	60.6	226.4	33,200	64.5	222.7	36,400
155	59.3	223.0	30,700	63.2	219.3	33,700
160	57.9	219.4	28,400	61.8	215.6	31,300
165	56.5	215.6	26,200	60.4	211.8	29,000
170	55.1	211.6	24,200	59.0	207.7	26,800
175	53.7	207.5	22,300	57.5	203.5	24,700
180	52.3	203.1	20,500	56.0	199.0	22,800
185	50.8	198.4	18,800	54.5	194.3	21,000
190	49.2	193.6	17,200	52.9	189.3	19,300
195	47.7	188.4	15,700	51.3	184.0	17,600
200	46.0	183.0	14,200	49.7	178.4	16,000
205	44.4	177.2	12,900	47.9	172.5	14,600
210	42.6	171.1	11,500	46.2	166.2	13,100
215	40.8	164.6	10,300	44.3	159.5	11,800
220	39.0	157.6	9,100	42.4	152.2	10,400
225	37.0	150.1	7,900	40.3	144.4	9,200



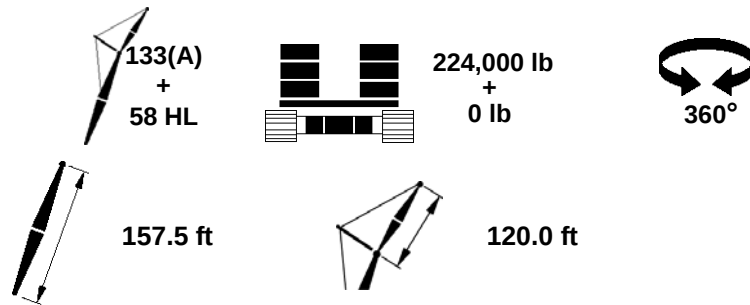
	8°			20°		
	ft	ft	lb	ft	ft	lb
65	81.1	253.3	128,200 *			
70	79.9	252.0	124,400 *			
75	78.7	250.7	118,900			
80	77.5	249.2	107,700			
85	76.3	247.5	98,000	81.1	244.3	95,300 *
90	75.1	245.8	89,600	79.9	242.6	92,500 *
95	73.9	243.9	82,200	78.7	240.7	88,100
100	72.7	242.0	75,600	77.4	238.7	81,100
105	71.5	239.9	69,700	76.2	236.6	74,900
110	70.2	237.6	64,400	74.9	234.3	69,300
115	69.0	235.3	59,700	73.6	231.9	64,300
120	67.7	232.8	55,300	72.3	229.4	59,700
125	66.4	230.1	51,400	71.0	226.7	55,500
130	65.1	227.4	47,800	69.7	223.9	51,600
135	63.8	224.4	44,400	68.4	220.9	48,100
140	62.4	221.3	41,400	67.0	217.7	44,800
145	61.1	218.1	38,500	65.6	214.4	41,800
150	59.7	214.6	35,900	64.2	210.9	39,000
155	58.3	211.0	33,400	62.8	207.3	36,400
160	56.9	207.2	31,100	61.3	203.4	33,900
165	55.4	203.2	29,000	59.8	199.3	31,600
170	53.9	199.0	27,000	58.3	195.0	29,500
175	52.4	194.5	25,100	56.8	190.4	27,400
180	50.8	189.8	23,300	55.2	185.6	25,500
185	49.2	184.9	21,600	53.5	180.5	23,700
190	47.6	179.6	20,000	51.8	175.1	21,900
195	45.9	174.0	18,500	50.1	169.4	20,300
200	44.1	168.1	17,000	48.3	163.3	18,700
205	42.3	161.8	15,600	46.4	156.7	17,200
210	40.4	155.0	14,300	44.4	149.7	15,800
215	38.4	147.7	13,000	42.3	142.2	14,400
220	36.2	139.8	11,800			
225	34.0	131.3	10,700			
230	31.5	121.8	9,600			
235	28.9	111.3	8,500			



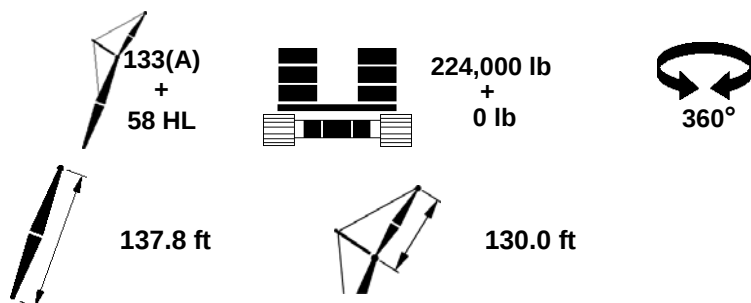
	8°			20°		
ft	o	ft	lb	o	ft	lb
65	81.9	273.4	128,700 *			
70	80.9	272.2	125,300 *			
75	79.8	270.9	118,200			
80	78.7	269.5	106,900			
85	77.6	268.1	97,100	82.0	264.6	96,200 *
90	76.5	266.5	88,600	80.9	262.9	94,000 *
95	75.3	264.8	81,100	79.7	261.2	87,600
100	74.2	262.9	74,400	78.6	259.4	80,500
105	73.1	261.0	68,500	77.4	257.4	74,200
110	71.9	259.0	63,100	76.3	255.4	68,500
115	70.8	256.8	58,300	75.1	253.2	63,400
120	69.6	254.5	54,000	73.9	250.9	58,700
125	68.5	252.1	50,000	72.7	248.4	54,500
130	67.3	249.6	46,300	71.5	245.8	50,600
135	66.1	246.9	42,900	70.3	243.1	47,000
140	64.9	244.1	39,800	69.1	240.3	43,700
145	63.6	241.2	37,000	67.8	237.3	40,600
150	62.4	238.1	34,300	66.6	234.2	37,800
155	61.2	234.9	31,800	65.3	230.9	35,100
160	59.9	231.5	29,500	64.0	227.4	32,600
165	58.6	227.9	27,300	62.7	223.8	30,300
170	57.3	224.2	25,300	61.3	220.0	28,100
175	55.9	220.3	23,400	60.0	216.0	26,100
180	54.5	216.1	21,600	58.6	211.8	24,100
185	53.2	211.8	19,900	57.1	207.3	22,300
190	51.7	207.3	18,300	55.7	202.7	20,500
195	50.3	202.5	16,700	54.2	197.8	18,900
200	48.8	197.5	15,300	52.7	192.6	17,300
205	47.2	192.1	13,900	51.1	187.2	15,800
210	45.6	186.5	12,600	49.4	181.4	14,400
215	44.0	180.6	11,300	47.8	175.3	13,000
220	42.3	174.3	10,100	46.0	168.8	11,700
225	40.5	167.6	9,000	44.2	161.8	10,400
230	38.7	160.4	7,800	42.2	154.4	9,200



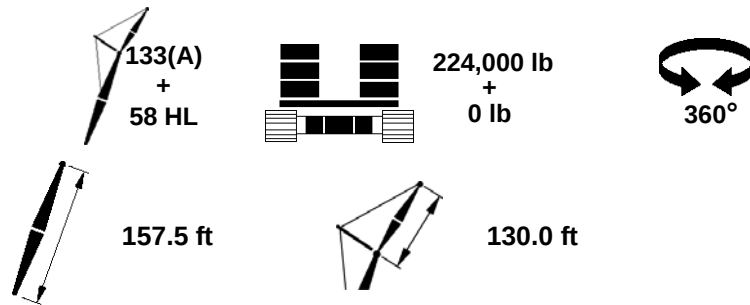
	8°			20°		
	ft	ft	lb	ft	ft	lb
65	82.0	263.5	118,300 *			
70	80.9	262.3	114,800 *			
75	79.7	260.9	111,500 *			
80	78.6	259.5	108,300 *			
85	77.4	257.9	98,900			
90	76.3	256.3	90,400	81.3	252.8	85,200 *
95	75.1	254.5	82,900	80.1	251.0	82,600 *
100	74.0	252.6	76,300	78.9	249.1	79,600 *
105	72.8	250.6	70,400	77.7	247.1	76,000
110	71.6	248.5	65,100	76.5	244.9	70,400
115	70.4	246.2	60,300	75.3	242.6	65,300
120	69.2	243.9	56,000	74.1	240.2	60,600
125	67.9	241.3	52,000	72.8	237.7	56,400
130	66.7	238.7	48,300	71.6	235.0	52,500
135	65.5	235.9	45,000	70.3	232.1	49,000
140	64.2	233.0	41,900	69.0	229.1	45,700
145	62.9	229.9	39,100	67.7	226.0	42,600
150	61.6	226.6	36,400	66.4	222.7	39,800
155	60.3	223.2	33,900	65.0	219.2	37,100
160	58.9	219.6	31,600	63.6	215.6	34,700
165	57.6	215.9	29,500	62.2	211.7	32,400
170	56.2	211.9	27,400	60.8	207.7	30,200
175	54.7	207.7	25,500	59.4	203.4	28,100
180	53.3	203.4	23,700	57.9	198.9	26,200
185	51.8	198.7	22,000	56.3	194.2	24,400
190	50.3	193.9	20,400	54.8	189.2	22,600
195	48.7	188.7	18,900	53.2	184.0	21,000
200	47.1	183.3	17,400	51.5	178.4	19,400
205	45.4	177.6	16,100	49.8	172.4	17,900
210	43.7	171.4	14,700	48.0	166.1	16,500
215	41.9	164.9	13,500	46.1	159.4	15,100
220	40.0	158.0	12,300	44.2	152.2	13,800
225	38.0	150.5	11,100	42.1	144.4	12,500
230	35.9	142.4	10,000			
235	33.7	133.6	8,900			
240	31.3	123.9	7,900			



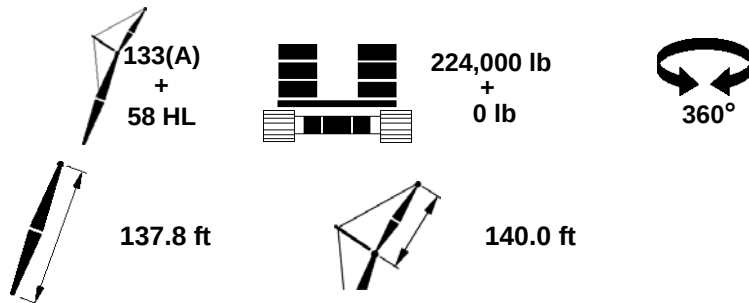
	8°			20°		
	ft	ft	lb	ft	ft	lb
70	81.7	282.4	115,400 *			
75	80.6	281.2	112,300 *			
80	79.6	279.8	107,900			
85	78.5	278.4	98,100			
90	77.5	276.9	89,500			
95	76.4	275.2	81,900	81.0	271.4	84,000 *
100	75.3	273.5	75,200	80.0	269.6	81,100 *
105	74.2	271.6	69,300	78.8	267.7	75,400
110	73.1	269.7	63,900	77.7	265.7	69,700
115	72.0	267.6	59,000	76.6	263.6	64,500
120	70.9	265.4	54,600	75.5	261.4	59,800
125	69.8	263.1	50,600	74.4	259.1	55,500
130	68.7	260.7	46,900	73.2	256.6	51,600
135	67.5	258.2	43,500	72.0	254.1	47,900
140	66.4	255.5	40,400	70.9	251.3	44,600
145	65.2	252.7	37,500	69.7	248.5	41,500
150	64.0	249.7	34,900	68.5	245.5	38,600
155	62.8	246.7	32,400	67.3	242.4	35,900
160	61.6	243.4	30,000	66.0	239.1	33,400
165	60.4	240.1	27,800	64.8	235.6	31,100
170	59.1	236.5	25,800	63.5	232.0	28,900
175	57.9	232.8	23,900	62.2	228.2	26,800
180	56.6	228.9	22,100	60.9	224.3	24,900
185	55.2	224.9	20,300	59.5	220.1	23,000
190	53.9	220.6	18,700	58.2	215.7	21,300
195	52.5	216.1	17,200	56.8	211.2	19,600
200	51.1	211.4	15,700	55.3	206.3	18,000
205	49.7	206.5	14,300	53.9	201.3	16,500
210	48.2	201.3	13,000	52.4	196.0	15,100
215	46.7	195.8	11,700	50.8	190.3	13,700
220	45.2	190.1	10,500	49.2	184.4	12,400
225	43.6	184.0	9,400	47.5	178.1	11,100
230	41.9	177.5	8,300	45.8	171.4	9,900
235	40.2	170.6	7,200	44.0	164.2	8,700
240				42.1	156.5	7,600



	8°			20°		
	ft	ft	lb	ft	ft	lb
70	81.7	272.5	106,500 *			
75	80.6	271.2	103,400 *			
80	79.6	269.8	100,400 *			
85	78.5	268.3	97,500 *			
90	77.3	266.7	91,300			
95	76.2	265.0	83,800	81.4	261.3	76,500 *
100	75.1	263.2	77,100	80.3	259.5	74,300 *
105	74.0	261.3	71,200	79.2	257.5	71,700 *
110	72.8	259.3	65,900	78.0	255.5	69,200 *
115	71.7	257.1	61,000	76.8	253.3	66,300
120	70.5	254.8	56,700	75.7	251.0	61,700
125	69.4	252.4	52,700	74.5	248.5	57,400
130	68.2	249.9	49,000	73.3	246.0	53,500
135	67.0	247.2	45,700	72.1	243.3	49,900
140	65.8	244.5	42,600	70.8	240.4	46,600
145	64.6	241.5	39,700	69.6	237.4	43,500
150	63.3	238.4	37,000	68.3	234.3	40,700
155	62.1	235.2	34,500	67.0	231.0	38,000
160	60.8	231.8	32,200	65.7	227.5	35,500
165	59.5	228.2	30,000	64.4	223.9	33,200
170	58.2	224.5	28,000	63.1	220.1	31,000
175	56.8	220.6	26,100	61.7	216.1	28,900
180	55.5	216.5	24,300	60.3	211.9	27,000
185	54.1	212.2	22,600	58.9	207.5	25,100
190	52.6	207.6	21,000	57.4	202.8	23,400
195	51.2	202.9	19,400	55.9	197.9	21,700
200	49.7	197.8	18,000	54.4	192.8	20,200
205	48.2	192.5	16,600	52.8	187.3	18,700
210	46.6	186.9	15,300	51.2	181.6	17,200
215	44.9	181.0	14,000	49.5	175.5	15,900
220	43.2	174.7	12,800	47.8	169.0	14,500
225	41.5	168.0	11,700	45.9	162.0	13,300
230	39.6	160.9	10,600	44.0	154.6	12,000
235	37.7	153.2	9,500	42.0	146.6	10,900
240	35.7	144.9	8,500			
245	33.5	135.9	7,500			



	8°			20°		
ft	o	ft	lb	o	ft	lb
75	81.5	291.3	104,100 *			
80	80.5	290.0	101,300 *			
85	79.5	288.7	98,700 *			
90	78.4	287.2	90,500			
95	77.4	285.6	82,900			
100	76.4	283.9	76,100	81.2	279.8	75,400 *
105	75.3	282.2	70,100	80.2	278.0	73,000 *
110	74.3	280.3	64,700	79.1	276.1	70,600 *
115	73.2	278.3	59,800	78.0	274.1	65,700
120	72.2	276.2	55,400	76.9	272.0	60,900
125	71.1	274.0	51,400	75.8	269.7	56,600
130	70.0	271.7	47,700	74.7	267.4	52,600
135	68.9	269.2	44,300	73.6	264.9	49,000
140	67.8	266.7	41,100	72.5	262.3	45,600
145	66.7	264.0	38,200	71.4	259.6	42,500
150	65.6	261.2	35,500	70.2	256.7	39,600
155	64.4	258.3	33,000	69.0	253.7	36,900
160	63.3	255.2	30,700	67.9	250.6	34,400
165	62.1	252.0	28,500	66.7	247.3	32,000
170	60.9	248.6	26,400	65.5	243.9	29,800
175	59.7	245.1	24,500	64.2	240.3	27,700
180	58.5	241.4	22,700	63.0	236.5	25,700
185	57.2	237.5	20,900	61.7	232.6	23,800
190	56.0	233.5	19,300	60.4	228.5	22,100
195	54.7	229.3	17,800	59.1	224.2	20,400
200	53.4	224.9	16,300	57.8	219.7	18,800
205	52.0	220.3	14,900	56.4	214.9	17,300
210	50.7	215.4	13,600	55.0	210.0	15,900
215	49.3	210.4	12,300	53.6	204.7	14,500
220	47.8	205.0	11,100	52.1	199.2	13,100
225	46.3	199.4	9,900	50.5	193.4	11,900
230	44.8	193.5	8,800	49.0	187.3	10,700
235	43.2	187.2	7,800	47.3	180.8	9,500
240				45.6	173.9	8,300
245				43.9	166.6	7,200



	8°			20°		
	ft	ft	lb	ft	ft	lb
75	81.5	281.5	96,100 *			
80	80.4	280.1	93,300 *			
85	79.4	278.7	90,600 *			
90	78.3	277.2	88,000 *			
95	77.2	275.5	84,400			
100	76.2	273.8	77,700	81.6	269.8	68,600 *
105	75.1	271.9	71,800	80.5	267.9	67,000 *
110	74.0	270.0	66,400	79.4	265.9	64,800 *
115	72.9	267.9	61,600	78.3	263.9	62,700 *
120	71.8	265.7	57,200	77.2	261.6	60,700 *
125	70.6	263.4	53,100	76.0	259.3	58,200
130	69.5	261.0	49,500	74.9	256.8	54,200
135	68.4	258.5	46,100	73.7	254.3	50,600
140	67.2	255.8	43,000	72.5	251.5	47,300
145	66.1	253.0	40,100	71.4	248.7	44,200
150	64.9	250.1	37,400	70.2	245.7	41,300
155	63.7	247.0	34,900	68.9	242.6	38,600
160	62.5	243.8	32,600	67.7	239.3	36,100
165	61.2	240.4	30,400	66.5	235.9	33,800
170	60.0	236.9	28,400	65.2	232.2	31,600
175	58.7	233.2	26,400	63.9	228.5	29,500
180	57.4	229.3	24,600	62.6	224.5	27,600
185	56.1	225.2	22,900	61.2	220.3	25,700
190	54.8	221.0	21,300	59.9	216.0	24,000
195	53.4	216.5	19,800	58.5	211.4	22,300
200	52.0	211.8	18,300	57.0	206.6	20,700
205	50.6	206.9	16,900	55.6	201.6	19,200
210	49.1	201.7	15,600	54.1	196.2	17,800
215	47.6	196.3	14,300	52.5	190.6	16,400
220	46.1	190.5	13,100	50.9	184.7	15,100
225	44.5	184.4	12,000	49.3	178.4	13,800
230	42.8	178.0	10,900	47.5	171.7	12,600
235	41.1	171.1	9,800	45.7	164.5	11,400
240	39.3	163.8	8,800	43.8	156.9	10,300
245	37.4	155.9	7,800	41.9	148.6	9,200