

Liftcrane Jib Capacities

Jib No. 148 on
 Boom No. B10:680
 440,900 lb VPC (Variable Position Counterweight)
 360 Degree Rating

MLC650 SERIES 1



LIFTING CAPACITIES: Chart supplements Boom Capacity chart No. 9362-A. Lifting capacities for various boom lengths, jib lengths, and jib operating radii are for freely suspended loads and may be based on percent of static tipping or strength of structural components. Capacities must be reduced by applicable deducts.

Weight of all load blocks, hooks, weight ball, slings, hoist lines, etc., beneath boom and jib point sheaves is considered part of 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.

BOOM BACKWARD STABILITY: Capacities indicated by (b) require 2,400 lb minimum weight suspended beneath jib point, (c) require 10,000 lb minimum weight, and (d) require 20,000 lb minimum weight. **Caution: Do not operate in areas indicated by (b), (c), or (d) without required minimum weight.** Boom and jib may not lower and boom hoist wire rope may go slack causing wire rope damage or failure.

OPERATING CONDITIONS: Machine to operate on a firm, level, and uniformly supporting surface. Refer to Boom Rigging No. 81018141, Jib Rigging No. 81023385, Wire Rope Specifications chart No. 9673-A, Counterweight Arrangements chart No. 9349-A, and Wind Conditions chart No. 9670-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 the Operator Manual for operating guidelines.

MACHINE TRAVEL: Machine to travel on a firm, level, and uniformly supporting surface. Boom must be within boom angle range shown in capacity chart. Refer to Maximum Allowable Travel Specifications chart No. 9669-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 36 ft 6 in. crawlers, 60 in. or 80 in. treads, 36 ft 1 in. live mast, 30 part boom hoist reeving, boom support straps, and 440,900 lb VPC.

Luffing Jib Backstay Deduct	
Boom Length (ft)	Deduct (lb)
105.0	3,500
124.7	5,000
144.4	6,000
164.0	7,500
183.7	8,500
203.4	10,000
223.1	10,000
Deduct the appropriate value from capacities when luffing jib backstays are stored on boom.	

Refer to Table 1 (with luffing jib backstays stored) and Table 2 (without luffing jib backstays stored) for raising ability with the maximum weight of all load blocks, hooks, weight ball, slings, and hoist lines beneath boom and jib point sheaves. For block weights shown with #, load blocks, hooks, weight ball, and slings must remain on ground until combined weights are within rated capacity of chart. Raising is not permitted in shaded areas of table.

Combined weight beneath boom and jib point sheaves must not exceed block weight shown. Total weight beneath jib point must not exceed 6,200 lb.

Table 1a: With Luffing Jib Backstays

Over End or Side of Crawlers						
Boom Length (ft)	Jib No. 148					
	39.4 ft	59.1 ft	78.7 ft	98.4 ft	118.1 ft	137.8 ft
	Block Weight (lb)					
105.0	46,500	46,500	46,500	46,500	46,500	46,500
124.7	46,500	46,500	46,500	46,500	46,500	46,500
144.4	46,500	46,500	46,500	46,500	46,500	46,500
164.0	46,500	46,500	46,500	46,500	46,500	22,600
183.7	22,600	22,600	22,600	22,600	22,600	16,200
203.4	#	#	#	#	#	#
223.1	Raising Not Permitted					
242.8						

Table 1b: With Luffing Jib Backstays

Over End of Blocked Crawlers						
Boom Length (ft)	Jib No. 148					
	39.4 ft	59.1 ft	78.7 ft	98.4 ft	118.1 ft	137.8 ft
	Block Weight (lb)					
105.0	46,500	46,500	46,500	46,500	46,500	46,500
124.7	46,500	46,500	46,500	46,500	46,500	46,500
144.4	46,500	46,500	46,500	46,500	46,500	46,500
164.0	46,500	46,500	46,500	46,500	46,500	22,600
183.7	22,600	22,600	22,600	22,600	22,600	16,200
203.4	#	#	#	#	#	#
223.1	#	#	#	#	#	#
242.8	Raising Not Permitted					
Warning: Crane must remain in-line with crawlers when raising over end of blocked crawlers until operating radius is within 360 degree chart. Crane tipping or structural damage can occur.						

Table 2a: Without Luffing Jib Backstays

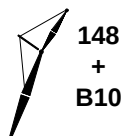
Over End or Side of Crawlers						
Boom Length (ft)	Jib No. 148					
	39.4 ft	59.1 ft	78.7 ft	98.4 ft	118.1 ft	137.8 ft
	Block Weight (lb)					
105.0	46,500	46,500	46,500	46,500	46,500	46,500
124.7	46,500	46,500	46,500	46,500	46,500	46,500
144.4	46,500	46,500	46,500	46,500	46,500	46,500
164.0	46,500	46,500	46,500	46,500	46,500	46,500
183.7	22,600	22,600	22,600	22,600	22,600	22,600
203.4	16,200	16,200	16,200	#	#	#
223.1	#	#	#	#	#	#
242.8	Raising Not Permitted					

Table 2b: Without Luffing Jib Backstays

Over End of Blocked Crawlers						
Boom Length (ft)	Jib No. 148					
	39.4 ft	59.1 ft	78.7 ft	98.4 ft	118.1 ft	137.8 ft
	Block Weight (lb)					
105.0	46,500	46,500	46,500	46,500	46,500	46,500
124.7	46,500	46,500	46,500	46,500	46,500	46,500
144.4	46,500	46,500	46,500	46,500	46,500	46,500
164.0	46,500	46,500	46,500	46,500	46,500	46,500
183.7	22,600	22,600	22,600	22,600	22,600	22,600
203.4	16,200	16,200	16,200	#	#	#
223.1	#	#	#	#	#	#
242.8	#	#	#	#	#	#

Warning: Crane must remain in-line with crawlers when raising over end of blocked crawlers until operating radius is within 360 degree chart. Crane tipping or structural damage can occur.

Explanation of Symbols



Jib No. 148
+
Boom No. B10:680



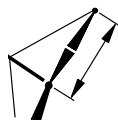
VPC (Variable Position Counterweight)



360 Degree Rating



Boom Length



Jib Length



Jib Offset Angle



Operating Radius
(see page 1)



Boom Angle
(see page 1)



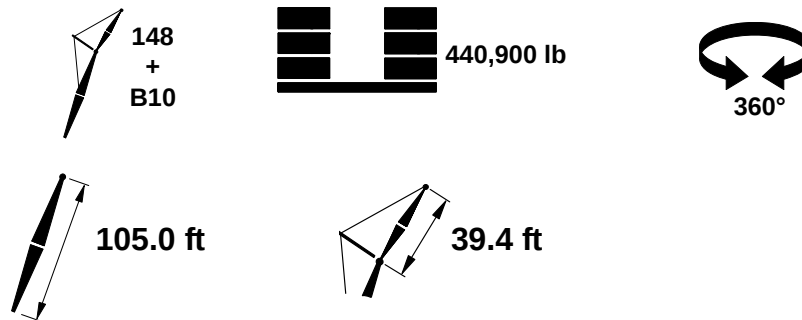
Jib Point Elevation
(see page 1)



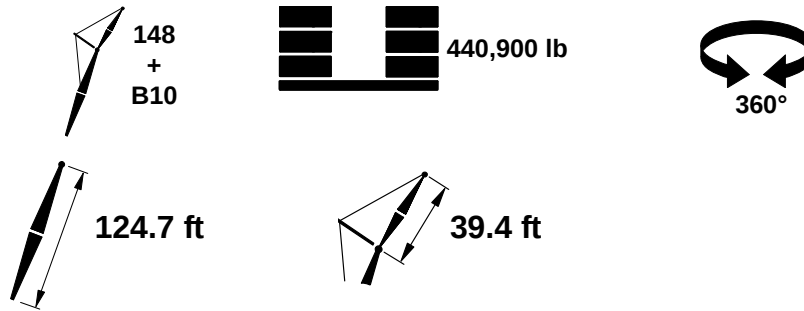
Lifting Capacities
(see page 1)

MLC650 S-1

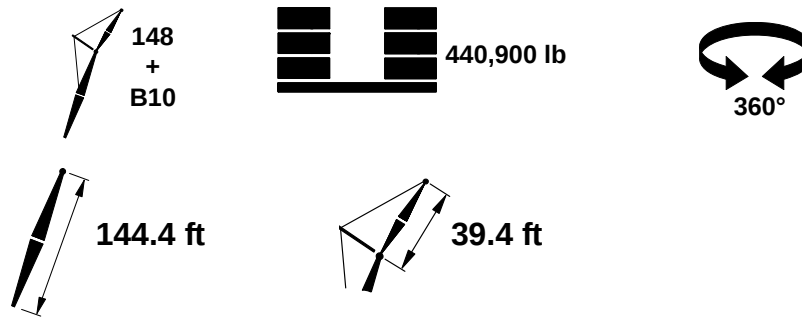
ASME B30.5



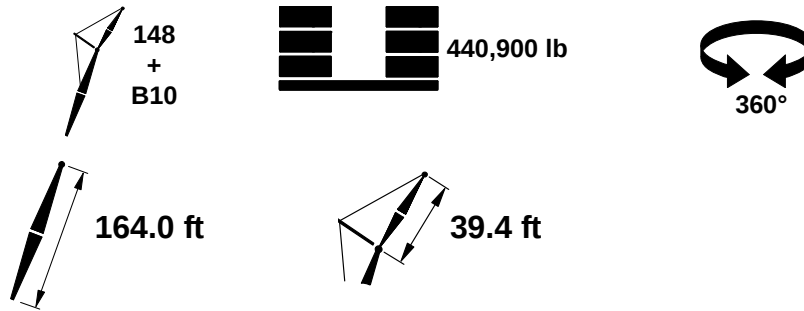
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
28	84.8	153.5	143,300d				28
30	84.0	153.2	143,300c				30
32	83.2	152.8	143,300c				32
34	82.4	152.4	143,300c	84.8	151.0	143,300c	34
36	81.6	152.0	143,300b	84.0	150.6	143,300c	36
38	80.8	151.5	143,300	83.2	150.1	143,300c	38
40	79.9	151.1	143,300	82.3	149.7	143,300b	40
45	77.9	149.7	143,300	80.3	148.3	138,000	45
50	75.8	148.2	143,300	78.2	146.8	129,700	50
55	73.8	146.5	143,300	76.1	145.0	122,400	55
60	71.6	144.5	143,300	73.9	143.0	115,900	60
65	69.5	142.4	137,300	71.8	140.9	110,100	65
70	67.3	140.0	129,100	69.6	138.5	104,900	70
75	65.1	137.3	121,900	67.3	135.8	100,200	75
80	62.8	134.5	115,400	65.0	132.9	96,000	80
85	60.5	131.3	109,700	62.6	129.7	92,200	85
90	58.1	127.8	104,500	60.2	126.2	88,700	90
95	55.6	124.1	99,800	57.7	122.3	85,500	95
100	53.0	119.9	95,500	55.1	118.1	82,600	100
105	50.3	115.4	91,700	52.4	113.5	80,000	105
110	47.6	110.4	88,100	49.5	108.4	77,600	110
115	44.6	104.9	84,900	46.5	102.8	75,400	115
120	41.5	98.7	82,100	43.3	96.5	73,400	120
125	38.1	91.8	79,400	39.9	89.4	71,600	125
130	34.4	83.9	76,900	36.0	81.2	70,000	130
135	30.3	74.7	74,800	31.7	71.6	68,800	135
140	25.4	63.5	72,900	26.5	59.7	67,800	140
145	19.2	48.4	71,400				145



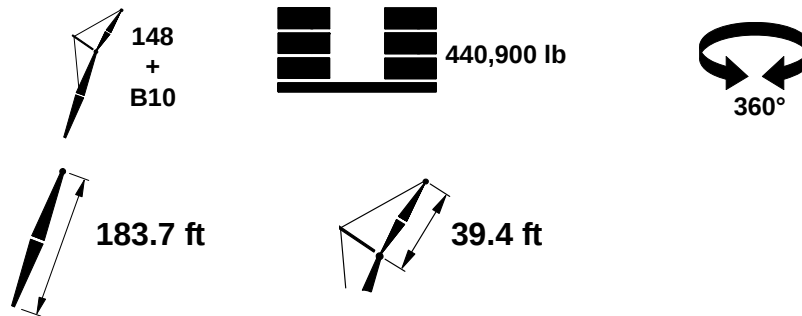
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
30	84.7	173.1	143,300c				30
32	84.0	172.8	143,300c				32
34	83.3	172.4	143,300b				34
36	82.6	172.0	143,300	84.7	170.6	143,300c	36
38	81.9	171.6	143,300	84.0	170.2	143,300b	38
40	81.2	171.2	143,300	83.3	169.8	143,300	40
45	79.4	170.1	143,300	81.5	168.6	143,300	45
50	77.6	168.7	143,300	79.7	167.2	135,400	50
55	75.8	167.2	143,300	77.8	165.7	128,300	55
60	73.9	165.5	143,300	76.0	164.0	122,000	60
65	72.1	163.7	143,300	74.1	162.1	116,300	65
70	70.2	161.6	140,200	72.2	160.1	111,200	70
75	68.3	159.4	132,700	70.3	157.8	106,500	75
80	66.4	156.9	125,900	68.3	155.3	102,300	80
85	64.4	154.3	119,800	66.3	152.6	98,400	85
90	62.4	151.4	114,300	64.3	149.7	94,900	90
95	60.3	148.2	109,400	62.2	146.5	91,600	95
100	58.2	144.8	104,800	60.1	143.1	88,600	100
105	56.1	141.2	100,700	57.9	139.4	85,800	105
110	53.9	137.2	96,800	55.7	135.3	83,200	110
115	51.6	132.9	93,400	53.3	131.0	80,900	115
120	49.2	128.2	90,200	50.9	126.2	78,700	120
125	46.7	123.1	87,200	48.4	121.0	76,700	125
130	44.1	117.6	84,400	45.7	115.4	74,800	130
135	41.3	111.5	81,900	42.9	109.1	73,200	135
140	38.4	104.7	79,600	39.9	102.2	71,600	140
145	35.3	97.1	77,500	36.7	94.4	70,300	145
150	31.8	88.5	75,500	33.1	85.4	69,100	150
155	27.9	78.4	73,800	29.0	74.9	68,200	155
160	23.3	66.1	72,300				160
165	17.3	49.6	71,100				165



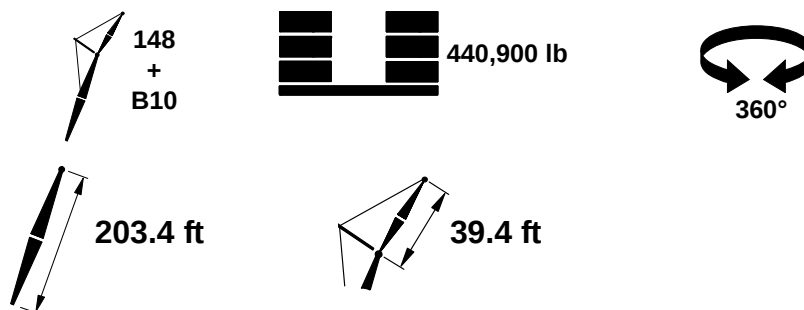
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
32	84.7	192.7	143,300 ^c				32
34	84.0	192.3	143,300				34
36	83.4	192.0	143,300				36
38	82.8	191.7	143,300	84.7	190.2	143,300 ^b	38
40	82.1	191.3	143,300	84.0	189.8	143,300	40
45	80.5	190.2	143,300	82.4	188.7	143,300	45
50	79.0	189.1	143,300	80.8	187.5	140,100	50
55	77.3	187.7	143,300	79.2	186.2	133,300	55
60	75.7	186.2	143,300	77.6	184.7	127,200	60
65	74.1	184.6	143,300	75.9	183.0	121,700	65
70	72.4	182.8	143,300	74.2	181.2	116,700	70
75	70.8	180.8	142,600	72.6	179.2	112,000	75
80	69.1	178.7	135,600	70.9	177.1	107,800	80
85	67.4	176.4	129,300	69.1	174.7	103,900	85
90	65.6	173.9	123,600	67.4	172.2	100,400	90
95	63.9	171.2	118,300	65.6	169.5	97,100	95
100	62.1	168.3	113,500	63.8	166.6	93,900	100
105	60.2	165.2	109,200	61.9	163.4	91,100	105
110	58.4	161.8	105,100	60.0	160.0	88,500	110
115	56.5	158.2	101,400	58.1	156.4	86,000	115
120	54.5	154.4	98,000	56.1	152.5	83,800	120
125	52.5	150.3	94,800	54.1	148.3	81,600	125
130	50.4	145.8	91,800	52.0	143.8	79,600	130
135	48.3	141.0	89,000	49.8	138.9	77,800	135
140	46.0	135.9	86,500	47.5	133.7	76,000	140
145	43.7	130.3	84,000	45.1	128.0	74,500	145
150	41.2	124.2	81,800	42.6	121.8	73,000	150
155	38.6	117.5	79,800	40.0	114.9	71,700	155
160	35.9	110.1	77,900	37.1	107.4	70,500	160
165	32.9	101.9	76,100	34.1	98.9	69,400	165
170	29.6	92.6	74,200	30.6	89.2	68,500	170
175	25.9	81.7	69,800	26.7	77.8	67,800	175
180	21.5	68.4	65,600				180



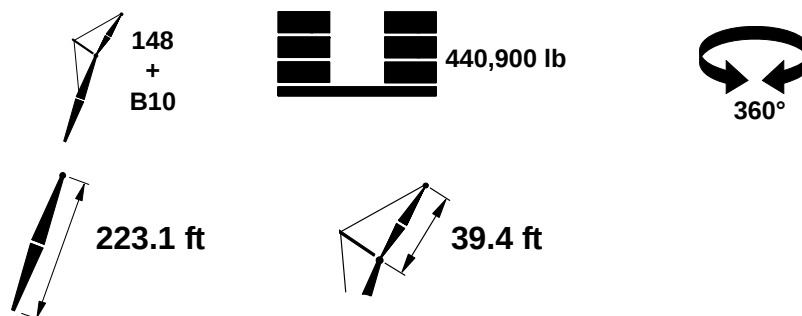
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
34	84.6	212.2	143,300				34
36	84.0	211.9	143,300				36
38	83.5	211.6	143,300				38
40	82.9	211.3	143,300	84.6	209.7	143,300	40
45	81.5	210.3	143,300	83.2	208.8	143,300	45
50	80.0	209.3	143,300	81.7	207.7	143,300	50
55	78.6	208.1	143,300	80.3	206.5	137,700	55
60	77.1	206.7	143,300	78.8	205.2	131,800	60
65	75.7	205.3	143,300	77.3	203.7	126,400	65
70	74.2	203.7	143,300	75.8	202.1	121,500	70
75	72.7	201.9	143,300	74.3	200.3	116,900	75
80	71.2	200.0	143,300	72.8	198.4	112,800	80
85	69.7	198.0	138,000	71.3	196.3	108,900	85
90	68.2	195.8	132,100	69.8	194.1	105,300	90
95	66.6	193.4	126,700	68.2	191.7	102,000	95
100	65.0	190.8	121,700	66.6	189.1	98,900	100
105	63.4	188.1	117,200	65.0	186.4	96,000	105
110	61.8	185.2	112,900	63.3	183.4	93,300	110
115	60.2	182.1	109,000	61.7	180.3	90,700	115
120	58.5	178.8	105,400	60.0	177.0	88,400	120
125	56.8	175.3	102,000	58.2	173.4	86,200	125
130	55.0	171.5	98,800	56.5	169.6	84,100	130
135	53.2	167.5	95,900	54.6	165.6	82,200	135
140	51.4	163.3	93,200	52.8	161.2	80,400	140
145	49.5	158.7	90,600	50.8	156.6	78,700	145
150	47.5	153.8	88,200	48.9	151.7	77,100	150
155	45.5	148.6	85,900	46.8	146.3	75,600	155
160	43.4	143.0	81,200	44.6	140.6	74,200	160
165	41.1	136.9	76,400	42.4	134.4	72,900	165
170	38.8	130.3	71,800	40.0	127.7	71,700	170
175	36.4	123.1	67,500	37.5	120.4	68,400	175
180	33.7	115.2	63,500	34.8	112.2	64,200	180
185	30.9	106.4	59,600	31.9	103.1	60,200	185
190	27.8	96.4	56,000	28.6	92.7	56,400	190
195	24.2	84.7	52,400				195
200	19.9	70.4	49,000				200



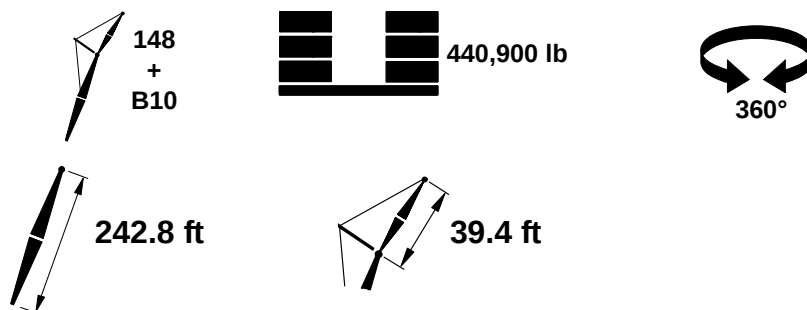
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
36	84.6	231.8	143,300				36
38	84.1	231.5	143,300				38
40	83.5	231.2	143,300				40
45	82.2	230.4	143,300	83.8	228.8	143,300	45
50	80.9	229.4	143,300	82.5	227.8	143,300	50
55	79.6	228.3	143,300	81.2	226.7	141,500	55
60	78.3	227.1	143,300	79.8	225.5	135,800	60
65	77.0	225.8	143,300	78.5	224.1	130,600	65
70	75.6	224.3	143,300	77.2	222.7	125,700	70
75	74.3	222.7	143,300	75.8	221.1	121,300	75
80	72.9	221.0	143,300	74.4	219.4	117,200	80
85	71.6	219.2	143,300	73.1	217.5	113,300	85
90	70.2	217.2	140,200	71.7	215.5	109,800	90
95	68.8	215.1	134,600	70.3	213.4	106,500	95
100	67.4	212.8	129,500	68.8	211.1	103,300	100
105	66.0	210.4	124,700	67.4	208.6	100,400	105
110	64.5	207.8	120,300	66.0	206.0	97,800	110
115	63.1	205.1	116,300	64.5	203.3	95,200	115
120	61.6	202.1	112,400	63.0	200.3	92,700	120
125	60.1	199.1	108,900	61.5	197.2	90,500	125
130	58.6	195.8	105,600	59.9	193.9	88,400	130
135	57.0	192.3	102,500	58.4	190.4	86,300	135
140	55.4	188.6	99,600	56.7	186.7	84,500	140
145	53.8	184.8	94,600	55.1	182.7	82,700	145
150	52.1	180.6	88,700	53.4	178.6	81,000	150
155	50.4	176.2	83,200	51.7	174.1	79,500	155
160	48.7	171.6	78,000	49.9	169.4	78,000	160
165	46.9	166.6	73,200	48.1	164.4	74,600	165
170	45.0	161.3	68,700	46.2	159.0	70,000	170
175	43.1	155.7	64,500	44.2	153.3	65,600	175
180	41.1	149.6	60,500	42.2	147.1	61,500	180
185	39.0	143.1	56,700	40.1	140.5	57,600	185
190	36.8	136.1	53,100	37.8	133.3	53,900	190
195	34.4	128.4	49,700	35.4	125.4	50,400	195
200	31.9	119.9	46,400	32.8	116.7	47,000	200
205	29.2	110.5	43,300	30.0	107.0	43,800	205
210	26.2	99.9	40,300	26.8	95.9	40,600	210
215	22.7	87.4	37,400				215
220	18.6	72.2	34,500				220



	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
36	85.0	251.6	143,300				36
38	84.5	251.4	143,300				38
40	84.1	251.1	143,300				40
45	82.9	250.3	143,300	84.3	248.7	143,300	45
50	81.7	249.4	143,300	83.1	247.8	143,300	50
55	80.5	248.4	143,300	81.9	246.8	143,300	55
60	79.3	247.3	143,300	80.7	245.7	139,400	60
65	78.1	246.1	143,300	79.5	244.5	134,300	65
70	76.8	244.8	143,300	78.2	243.1	129,600	70
75	75.6	243.3	143,300	77.0	241.7	125,200	75
80	74.4	241.8	143,300	75.8	240.1	121,200	80
85	73.1	240.1	143,300	74.5	238.4	117,400	85
90	71.9	238.3	143,300	73.2	236.6	113,900	90
95	70.6	236.4	142,100	72.0	234.7	110,600	95
100	69.4	234.3	136,700	70.7	232.6	107,500	100
105	68.1	232.1	131,900	69.4	230.4	104,500	105
110	66.8	229.8	127,400	68.1	228.1	101,800	110
115	65.5	227.4	123,200	66.8	225.6	99,200	115
120	64.1	224.8	119,200	65.4	222.9	96,800	120
125	62.8	222.0	115,600	64.1	220.2	94,600	125
130	61.4	219.1	112,100	62.7	217.2	92,300	130
135	60.0	216.0	104,700	61.3	214.1	90,300	135
140	58.6	212.8	97,800	59.9	210.9	88,400	140
145	57.2	209.3	91,400	58.4	207.4	86,500	145
150	55.8	205.7	85,500	57.0	203.7	84,800	150
155	54.3	201.9	80,000	55.5	199.9	81,900	155
160	52.8	197.9	74,900	54.0	195.8	76,600	160
165	51.2	193.7	70,100	52.4	191.5	71,700	165
170	49.7	189.2	65,600	50.8	187.0	67,100	170
175	48.0	184.4	61,300	49.2	182.2	62,700	175
180	46.4	179.4	57,300	47.5	177.1	58,600	180
185	44.6	174.1	53,600	45.7	171.7	54,800	185
190	42.9	168.4	50,000	43.9	166.0	51,100	190
195	41.0	162.4	46,600	42.0	159.8	47,600	195
200	39.1	155.9	43,400	40.1	153.2	44,300	200
205	37.1	149.0	40,300	38.0	146.2	41,100	205
210	35.0	141.5	37,400	35.9	138.5	38,100	210
215	32.7	133.3	34,600	33.5	130.1	35,200	215
220	30.3	124.3	31,900	31.1	120.9	32,400	220
225	27.7	114.4	29,300	28.4	110.6	29,700	225
230	24.8	103.1	26,800				230
235	21.4	89.9	24,400				235
240	17.4	73.7	21,800				240



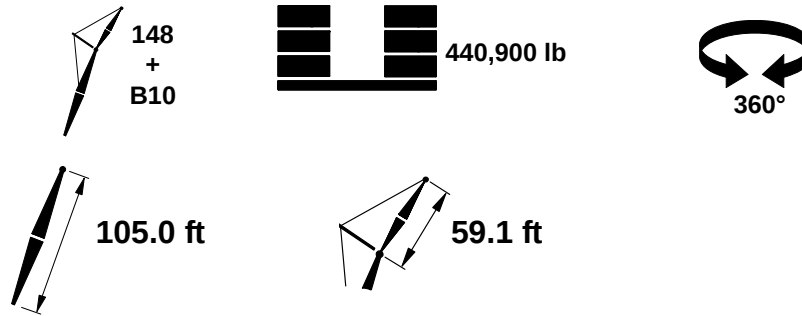
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
38	84.9	271.2	143,300				38
40	84.5	271.0	143,300				40
45	83.4	270.2	143,300	84.7	268.6	143,300	45
50	82.3	269.4	143,300	83.6	267.8	143,300	50
55	81.2	268.5	143,300	82.5	266.9	143,300	55
60	80.1	267.5	143,300	81.4	265.8	142,400	60
65	79.0	266.4	143,300	80.3	264.7	137,500	65
70	77.9	265.1	143,300	79.1	263.5	133,000	70
75	76.7	263.8	143,300	78.0	262.1	128,700	75
80	75.6	262.4	143,300	76.9	260.7	124,700	80
85	74.5	260.8	143,300	75.7	259.1	121,000	85
90	73.3	259.2	143,300	74.6	257.5	117,600	90
95	72.2	257.4	143,300	73.4	255.7	114,300	95
100	71.0	255.5	142,800	72.2	253.8	111,200	100
105	69.8	253.6	138,700	71.0	251.8	108,400	105
110	68.6	251.4	134,000	69.9	249.7	105,600	110
115	67.4	249.2	129,700	68.7	247.4	103,100	115
120	66.2	246.8	125,700	67.4	245.0	100,600	120
125	65.0	244.3	119,200	66.2	242.5	98,300	125
130	63.8	241.7	111,100	65.0	239.9	96,100	130
135	62.5	238.9	103,600	63.7	237.1	94,000	135
140	61.3	236.0	96,700	62.5	234.1	92,100	140
145	60.0	233.0	90,400	61.2	231.0	90,200	145
150	58.7	229.7	84,400	59.9	227.8	86,600	150
155	57.4	226.3	78,900	58.5	224.4	81,000	155
160	56.1	222.8	73,800	57.2	220.8	75,700	160
165	54.7	219.1	69,000	55.8	217.0	70,800	165
170	53.3	215.1	64,500	54.4	213.0	66,200	170
175	51.9	211.0	60,300	53.0	208.9	61,800	175
180	50.5	206.7	56,300	51.5	204.5	57,800	180
185	49.0	202.1	52,500	50.0	199.9	53,900	185
190	47.5	197.3	49,000	48.5	195.0	50,300	190
195	45.9	192.2	45,600	46.9	189.8	46,800	195
200	44.3	186.8	42,400	45.3	184.4	43,500	200
205	42.7	181.1	39,300	43.6	178.6	40,400	205
210	41.0	175.1	36,400	41.9	172.5	37,400	210
215	39.2	168.7	33,700	40.1	166.0	34,600	215
220	37.3	161.8	31,000	38.2	159.0	31,800	220
225	35.4	154.5	28,500	36.2	151.5	29,200	225
230	33.4	146.6	26,100	34.2	143.4	26,700	230
235	31.2	137.9	23,300	31.9	134.6	24,000	235
240	28.9	128.5	20,600	29.5	124.9	21,200	240
245	26.3	118.0	18,100	26.9	114.0	18,500	245
250	23.5	106.1	15,500				250



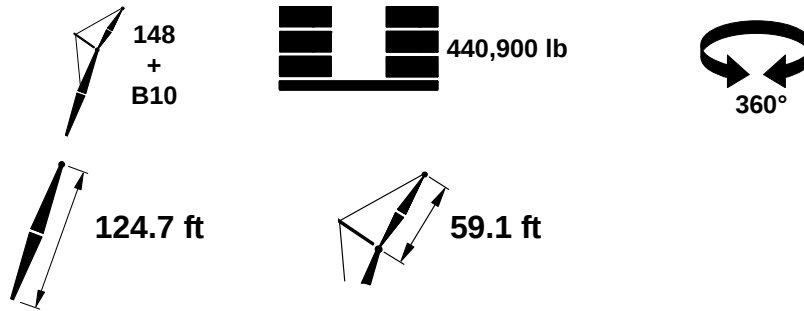
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
40	84.9	290.8	143,300				40
45	83.9	290.1	143,300				45
50	82.8	289.4	143,300	84.1	287.7	143,300	50
55	81.8	288.5	143,300	83.0	286.9	143,300	55
60	80.8	287.6	143,300	82.0	285.9	143,300	60
65	79.8	286.5	143,300	81.0	284.9	140,500	65
70	78.7	285.4	143,300	79.9	283.7	136,100	70
75	77.7	284.2	143,300	78.9	282.5	131,900	75
80	76.6	282.8	143,300	77.8	281.1	128,100	80
85	75.6	281.4	143,300	76.8	279.7	124,400	85
90	74.5	279.9	143,300	75.7	278.2	121,000	90
95	73.4	278.3	143,300	74.6	276.5	117,800	95
100	72.4	276.5	143,200	73.5	274.8	114,700	100
105	71.3	274.7	143,100	72.5	272.9	111,900	105
110	70.2	272.8	140,400	71.4	271.0	109,100	110
115	69.1	270.7	134,700	70.3	268.9	106,600	115
120	68.0	268.5	124,900	69.1	266.7	104,200	120
125	66.9	266.2	116,000	68.0	264.4	101,800	125
130	65.8	263.8	107,800	66.9	262.0	99,600	130
135	64.6	261.3	100,300	65.7	259.5	97,500	135
140	63.5	258.7	93,400	64.6	256.8	95,500	140
145	62.3	255.9	87,000	63.4	254.0	89,500	145
150	61.2	253.0	81,100	62.2	251.1	83,400	150
155	60.0	249.9	75,600	61.0	248.0	77,800	155
160	58.8	246.7	70,400	59.8	244.7	72,500	160
165	57.5	243.3	65,600	58.6	241.4	67,600	165
170	56.3	239.8	61,100	57.3	237.8	63,000	170
175	55.0	236.2	56,800	56.1	234.1	58,600	175
180	53.8	232.3	52,800	54.8	230.2	54,500	180
185	52.5	228.3	49,100	53.5	226.2	50,700	185
190	51.1	224.1	45,500	52.1	221.9	47,000	190
195	49.8	219.6	42,200	50.8	217.4	43,600	195
200	48.4	215.0	39,000	49.4	212.7	40,300	200
205	47.0	210.1	35,900	47.9	207.8	37,200	205
210	45.5	205.0	33,000	46.5	202.6	34,200	210
215	44.0	199.6	29,900	45.0	197.1	31,300	215
220	42.5	193.9	26,900	43.4	191.3	28,200	220
225	40.9	187.8	23,900	41.8	185.2	25,100	225
230	39.3	181.5	21,100	40.1	178.7	22,200	230
235	37.6	174.7	18,400	38.4	171.9	19,400	235
240	35.8	167.5	15,800	36.6	164.5	16,700	240
245	33.9	159.7	13,300	34.7	156.6	14,100	245
250	32.0	151.4	10,900	32.7	148.1	11,600	250
260	27.6	132.4	6,300	28.2	128.6	6,700	260

MLC650 S-1

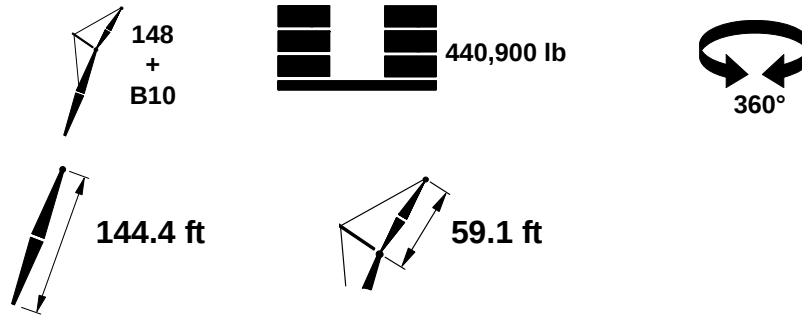
ASME B30.5



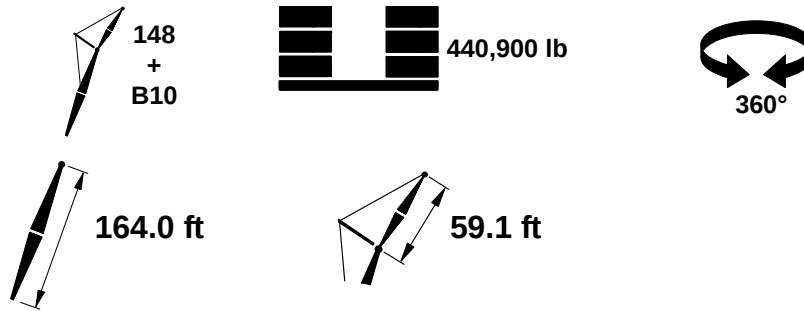
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
36	84.4	171.7	117,500 ^c				36
38	83.7	171.3	116,200 ^c				38
40	83.0	170.9	114,500 ^c				40
45	81.2	169.7	110,500	84.4	167.8	95,500 ^c	45
50	79.4	168.4	106,700	82.6	166.4	92,900 ^b	50
55	77.6	166.9	103,200	80.7	164.9	87,700	55
60	75.8	165.2	100,000	78.9	163.2	82,900	60
65	73.9	163.3	97,000	77.0	161.3	78,700	65
70	72.0	161.3	94,200	75.1	159.2	74,900	70
75	70.1	159.0	90,400	73.1	156.9	71,500	75
80	68.2	156.6	85,800	71.2	154.4	68,300	80
85	66.2	153.9	81,500	69.2	151.7	65,600	85
90	64.2	151.0	77,700	67.1	148.8	62,900	90
95	62.1	147.9	74,200	65.0	145.6	60,600	95
100	60.0	144.5	71,000	62.9	142.1	58,400	100
105	57.8	140.8	68,100	60.7	138.4	56,300	105
110	55.6	136.8	65,400	58.4	134.3	54,500	110
115	53.3	132.5	63,000	56.1	129.9	52,800	115
120	50.9	127.8	60,700	53.6	125.1	51,200	120
125	48.4	122.7	58,700	51.1	119.9	49,700	125
130	45.8	117.1	56,800	48.4	114.1	48,400	130
135	43.1	111.0	54,900	45.5	107.8	47,200	135
140	40.1	104.1	53,300	42.5	100.8	46,100	140
145	36.9	96.5	51,800	39.2	92.8	45,000	145
150	33.4	87.8	50,400	35.5	83.7	44,200	150
155	29.5	77.7	49,200	31.3	72.9	43,500	155
160	24.8	65.2	48,100				160



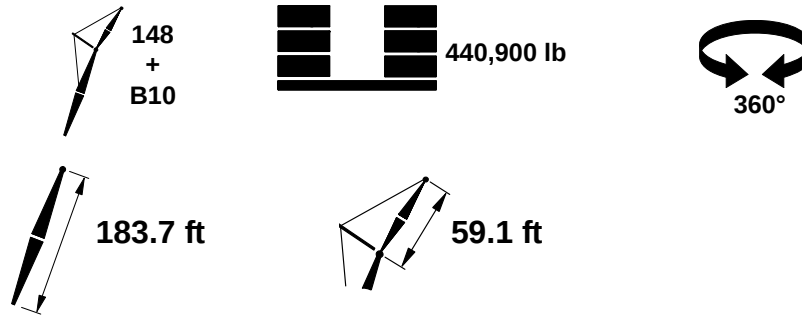
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
36	85.0	191.7	117,800c				36
38	84.4	191.3	117,200c				38
40	83.8	190.9	116,000b				40
45	82.2	189.9	112,300	85.0	187.8	96,300c	45
50	80.6	188.7	108,900	83.4	186.6	93,900	50
55	79.0	187.4	105,700	81.8	185.3	90,400	55
60	77.3	185.9	102,700	80.1	183.7	86,000	60
65	75.7	184.2	99,800	78.5	182.1	81,900	65
70	74.0	182.4	97,200	76.8	180.3	78,200	70
75	72.4	180.5	94,600	75.1	178.3	74,900	75
80	70.7	178.3	91,900	73.4	176.1	71,900	80
85	69.0	176.0	87,600	71.7	173.7	69,100	85
90	67.2	173.5	83,700	69.9	171.2	66,500	90
95	65.5	170.8	80,000	68.1	168.5	64,100	95
100	63.7	167.9	76,700	66.3	165.5	61,900	100
105	61.8	164.8	73,700	64.4	162.3	59,900	105
110	59.9	161.4	70,900	62.5	158.9	58,000	110
115	58.0	157.8	68,300	60.5	155.3	56,300	115
120	56.1	153.9	65,900	58.5	151.3	54,600	120
125	54.0	149.8	63,700	56.5	147.1	53,100	125
130	52.0	145.3	61,700	54.4	142.6	51,700	130
135	49.8	140.5	59,800	52.1	137.6	50,300	135
140	47.6	135.3	58,000	49.9	132.3	49,100	140
145	45.2	129.7	56,300	47.5	126.6	48,000	145
150	42.8	123.6	54,700	44.9	120.3	46,900	150
155	40.1	116.9	53,300	42.2	113.4	46,000	155
160	37.4	109.5	52,000	39.3	105.7	45,100	160
165	34.4	101.2	50,800	36.2	97.0	44,400	165
170	31.0	91.8	49,600	32.7	87.1	43,600	170
175	27.3	80.8	48,600	28.7	75.3	43,200	175
180	22.8	67.3	47,700				180



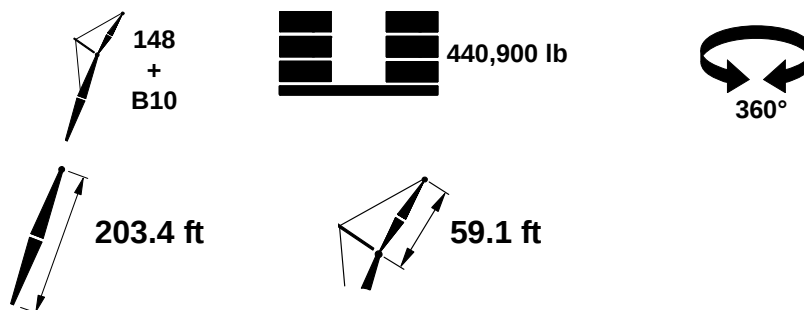
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
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40	84.4	210.9	116,900				40
45	82.9	209.9	113,800				45
50	81.5	208.9	110,600	84.1	206.7	94,700	50
55	80.1	207.7	107,600	82.6	205.5	92,600	55
60	78.6	206.3	104,800	81.1	204.1	88,600	60
65	77.1	204.9	102,100	79.7	202.6	84,700	65
70	75.7	203.3	99,600	78.2	201.0	81,200	70
75	74.2	201.5	97,200	76.6	199.2	77,900	75
80	72.7	199.6	94,900	75.1	197.3	75,000	80
85	71.1	197.5	92,800	73.6	195.2	72,200	85
90	69.6	195.3	89,100	72.0	193.0	69,600	90
95	68.1	193.0	85,400	70.4	190.6	67,300	95
100	66.5	190.4	82,000	68.8	188.0	65,100	100
105	64.9	187.7	78,900	67.2	185.2	63,100	105
110	63.2	184.8	76,000	65.6	182.3	61,100	110
115	61.6	181.7	73,300	63.9	179.1	59,400	115
120	59.9	178.3	70,800	62.2	175.8	57,700	120
125	58.2	174.8	68,500	60.4	172.2	56,100	125
130	56.4	171.1	66,300	58.6	168.3	54,700	130
135	54.6	167.0	64,300	56.8	164.3	53,300	135
140	52.8	162.8	62,500	54.9	159.9	52,100	140
145	50.9	158.2	60,700	53.0	155.2	50,800	145
150	48.9	153.3	59,000	51.0	150.2	49,700	150
155	46.8	148.0	57,500	48.9	144.9	48,700	155
160	44.7	142.4	56,000	46.7	139.1	47,700	160
165	42.5	136.3	54,600	44.4	132.8	46,800	165
170	40.2	129.7	53,400	42.0	126.0	45,900	170
175	37.7	122.4	52,200	39.5	118.5	45,100	175
180	35.1	114.5	51,000	36.7	110.2	44,400	180
185	32.2	105.6	50,000	33.7	100.9	43,800	185
190	29.0	95.5	49,000	30.4	90.2	43,300	190
195	25.4	83.7	48,200				195
200	21.1	69.1	47,500				200



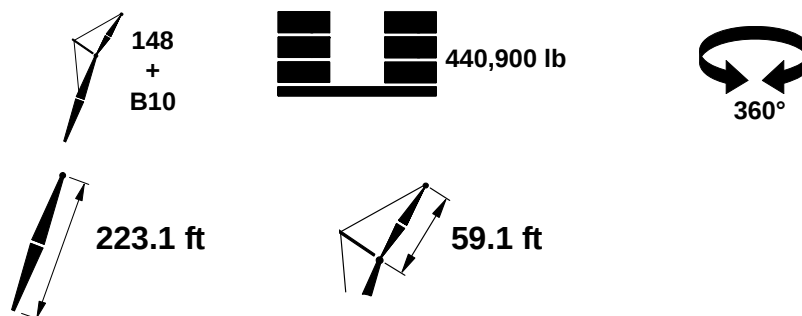
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ft	o	ft	lb	o	ft	lb	ft
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45	83.6	229.9	114,900				45
50	82.3	229.0	112,000	84.6	226.7	95,300	50
55	81.0	227.9	109,200	83.3	225.6	93,400	55
60	79.6	226.7	106,500	81.9	224.4	90,800	60
65	78.3	225.3	104,000	80.6	223.0	87,100	65
70	77.0	223.9	101,600	79.3	221.6	83,700	70
75	75.6	222.3	99,300	77.9	220.0	80,500	75
80	74.3	220.6	97,200	76.5	218.2	77,600	80
85	72.9	218.7	95,100	75.1	216.4	75,000	85
90	71.5	216.7	93,200	73.7	214.3	72,400	90
95	70.1	214.6	90,400	72.3	212.2	70,100	95
100	68.7	212.3	86,900	70.9	209.9	68,000	100
105	67.3	209.9	83,700	69.5	207.4	65,900	105
110	65.9	207.3	80,700	68.0	204.8	64,000	110
115	64.4	204.6	78,000	66.5	202.0	62,200	115
120	62.9	201.7	75,400	65.0	199.1	60,500	120
125	61.4	198.6	73,000	63.5	195.9	59,000	125
130	59.9	195.3	70,800	61.9	192.6	57,500	130
135	58.3	191.8	68,700	60.3	189.1	56,000	135
140	56.7	188.1	66,700	58.7	185.3	54,800	140
145	55.1	184.2	64,800	57.1	181.4	53,500	145
150	53.4	180.1	63,100	55.4	177.2	52,300	150
155	51.7	175.7	61,500	53.6	172.7	51,200	155
160	49.9	171.0	59,900	51.8	167.9	50,200	160
165	48.1	166.0	58,400	50.0	162.8	49,200	165
170	46.3	160.7	57,000	48.1	157.4	48,300	170
175	44.3	155.1	55,700	46.1	151.6	47,400	175
180	42.3	149.0	54,500	44.0	145.4	46,600	180
185	40.2	142.4	53,300	41.9	138.6	45,900	185
190	38.0	135.3	52,300	39.6	131.3	45,200	190
195	35.6	127.6	51,200	37.1	123.3	44,500	195
200	33.1	119.1	50,300	34.5	114.5	43,900	200
205	30.3	109.6	49,500	31.6	104.5	43,500	205
210	27.3	98.8	48,600	28.4	93.1	43,100	210
215	23.8	86.2	45,900				215
220	19.6	70.7	43,000				220



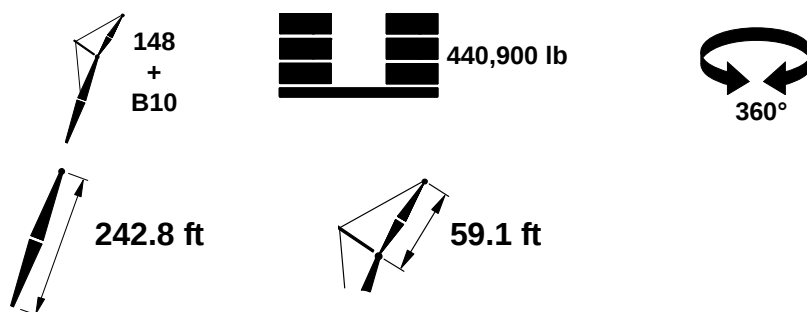
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
45	84.1	249.9	115,900	85.1	246.7	95,900	45
50	82.9	249.0	113,100	83.8	245.7	94,100	50
55	81.7	248.0	110,500	82.6	244.5	92,400	55
60	80.5	246.9	108,000	81.4	243.3	89,200	60
65	79.3	245.7	105,600	80.2	242.0	86,000	65
70	78.1	244.3	103,300	78.9	240.5	82,900	70
75	76.8	242.9	101,200	77.7	238.9	80,100	75
80	75.6	241.3	99,200	76.4	237.2	77,400	80
85	74.4	239.6	97,200	75.2	235.4	74,900	85
90	73.1	237.8	95,300	73.9	233.4	72,700	90
95	71.8	235.9	93,500	72.6	231.4	70,500	95
100	70.6	233.9	91,500	71.3	229.2	68,500	100
105	69.3	231.7	88,300	70.0	226.8	66,600	105
110	68.0	229.3	85,200	68.6	224.3	64,800	110
115	66.7	226.9	82,400	67.3	221.7	63,100	115
120	65.3	224.3	79,700	65.9	218.9	61,500	120
125	64.0	221.5	77,300	64.5	215.9	60,000	125
130	62.6	218.6	75,000	63.1	212.8	58,600	130
135	61.2	215.5	72,800	61.7	209.5	57,300	135
140	59.8	212.2	70,700	60.3	206.0	56,000	140
145	58.4	208.8	68,900	58.8	202.3	54,800	145
150	56.9	205.2	67,000	57.3	198.5	53,700	150
155	55.5	201.4	65,300	55.7	194.4	52,600	155
160	53.9	197.3	63,600	54.2	190.0	51,600	160
165	52.4	193.1	62,100	52.6	185.5	50,600	165
170	50.8	188.6	60,600	50.9	180.6	49,700	170
175	49.2	183.8	59,300	49.2	175.5	48,800	175
180	47.5	178.8	58,000	47.4	170.0	48,000	180
185	45.8	173.4	56,800	45.6	164.2	47,200	185
190	44.0	167.7	55,600	43.7	158.0	46,500	190
195	42.1	161.7	54,400	41.7	151.3	45,800	195
200	40.2	155.2	52,000	39.6	144.1	45,200	200
205	38.2	148.2	48,900	37.4	136.3	44,600	205
210	36.0	140.7	46,000	35.1	127.8	44,000	210
215	33.8	132.4	43,100	32.5	118.4	41,100	215
220	31.3	123.4	40,400	29.8	107.9	38,300	220
225	28.7	113.4	37,700				225
230	25.8	101.9	35,200				230
235	22.4	88.6	32,700				235



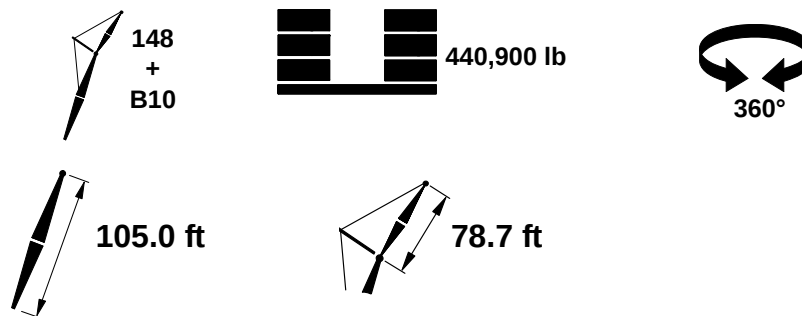
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
45	84.6	269.8	116,000				45
50	83.4	269.0	113,900				50
55	82.3	268.0	111,500	84.3	265.7	94,500	55
60	81.2	267.0	109,200	83.2	264.6	92,900	60
65	80.1	265.9	106,900	82.1	263.5	91,100	65
70	79.0	264.7	104,800	80.9	262.3	88,000	70
75	77.9	263.3	102,700	79.8	260.9	85,000	75
80	76.7	261.9	100,800	78.6	259.5	82,200	80
85	75.6	260.4	98,900	77.5	257.9	79,600	85
90	74.4	258.7	97,100	76.3	256.2	77,300	90
95	73.3	256.9	95,300	75.2	254.4	75,000	95
100	72.1	255.1	93,700	74.0	252.5	72,900	100
105	70.9	253.1	92,100	72.8	250.5	70,800	105
110	69.7	250.9	89,400	71.6	248.4	69,000	110
115	68.6	248.7	86,500	70.4	246.1	67,200	115
120	67.3	246.3	83,800	69.2	243.7	65,500	120
125	66.1	243.8	81,300	67.9	241.2	63,900	125
130	64.9	241.2	78,900	66.7	238.5	62,500	130
135	63.6	238.4	76,700	65.4	235.7	61,000	135
140	62.4	235.5	74,600	64.1	232.8	59,600	140
145	61.1	232.4	72,700	62.9	229.6	58,300	145
150	59.8	229.2	70,700	61.5	226.4	57,200	150
155	58.5	225.8	69,000	60.2	222.9	56,000	155
160	57.1	222.2	67,300	58.8	219.3	54,900	160
165	55.8	218.5	65,700	57.5	215.5	53,900	165
170	54.4	214.5	64,200	56.1	211.5	52,800	170
175	53.0	210.4	62,700	54.6	207.3	51,900	175
180	51.5	206.0	61,300	53.1	202.9	51,000	180
185	50.0	201.5	59,200	51.6	198.2	50,100	185
190	48.5	196.6	55,600	50.1	193.3	49,300	190
195	47.0	191.5	52,200	48.5	188.1	48,500	195
200	45.4	186.1	48,900	46.9	182.6	47,800	200
205	43.7	180.4	45,800	45.2	176.8	47,100	205
210	42.0	174.4	42,900	43.4	170.6	44,200	210
215	40.2	167.9	40,100	41.6	164.0	41,300	215
220	38.4	161.0	37,400	39.7	156.9	38,500	220
225	36.4	153.6	34,800	37.7	149.3	35,800	225
230	34.4	145.7	32,300	35.6	141.1	33,200	230
235	32.2	137.0	29,900	33.3	132.1	30,700	235
240	29.8	127.5	27,600	30.9	122.1	28,300	240
245	27.3	116.9	25,400				245
250	24.4	104.8	23,200				250



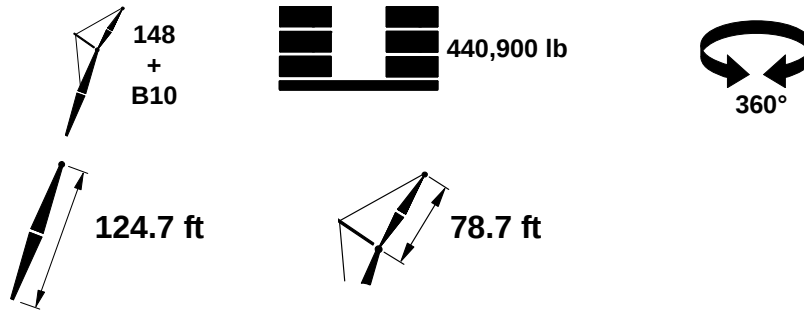
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
45	84.9	289.6	115,700				45
50	83.9	288.9	114,400				50
55	82.9	288.0	112,100	84.7	285.6	94,800	55
60	81.8	287.1	110,000	83.7	284.6	93,300	60
65	80.8	286.0	107,900	82.6	283.6	92,000	65
70	79.8	284.9	105,800	81.6	282.5	89,700	70
75	78.7	283.7	103,900	80.5	281.2	86,800	75
80	77.7	282.4	102,100	79.5	279.9	84,100	80
85	76.6	280.9	100,300	78.4	278.4	81,600	85
90	75.6	279.4	98,600	77.3	276.9	79,300	90
95	74.5	277.8	96,900	76.3	275.2	77,100	95
100	73.4	276.0	95,300	75.2	273.5	75,000	100
105	72.3	274.2	93,800	74.1	271.6	73,000	105
110	71.2	272.2	92,300	73.0	269.7	71,200	110
115	70.1	270.2	90,400	71.9	267.6	69,400	115
120	69.0	268.0	87,700	70.8	265.4	67,700	120
125	67.9	265.7	85,200	69.6	263.1	66,100	125
130	66.8	263.3	82,700	68.5	260.6	64,700	130
135	65.7	260.8	80,400	67.3	258.1	63,200	135
140	64.5	258.1	78,300	66.2	255.4	61,900	140
145	63.3	255.3	76,200	65.0	252.6	60,600	145
150	62.2	252.4	74,300	63.8	249.6	59,300	150
155	61.0	249.3	72,500	62.6	246.5	58,200	155
160	59.8	246.1	70,800	61.4	243.3	57,100	160
165	58.6	242.8	69,100	60.1	239.9	56,000	165
170	57.3	239.3	67,500	58.9	236.3	54,900	170
175	56.1	235.6	65,800	57.6	232.6	54,000	175
180	54.8	231.7	61,700	56.3	228.6	53,100	180
185	53.5	227.7	57,900	55.0	224.5	52,200	185
190	52.1	223.4	54,300	53.6	220.2	51,300	190
195	50.8	219.0	50,900	52.3	215.7	50,500	195
200	49.4	214.3	47,700	50.9	211.0	49,500	200
205	48.0	209.4	44,600	49.4	206.0	46,300	205
210	46.5	204.3	41,700	47.9	200.8	43,300	210
215	45.0	198.9	38,900	46.4	195.2	40,400	215
220	43.5	193.1	36,200	44.8	189.4	37,600	220
225	41.9	187.1	33,700	43.2	183.2	34,900	225
230	40.2	180.7	31,200	41.5	176.7	32,400	230
235	38.5	173.9	28,900	39.8	169.7	30,000	235
240	36.7	166.6	26,600	37.9	162.2	27,600	240
245	34.8	158.8	24,400	36.0	154.2	25,300	245
250	32.9	150.4	21,900	33.9	145.5	22,900	250
260	28.5	131.3	17,200	29.4	125.6	17,800	260
270	23.2	107.5	12,600				270



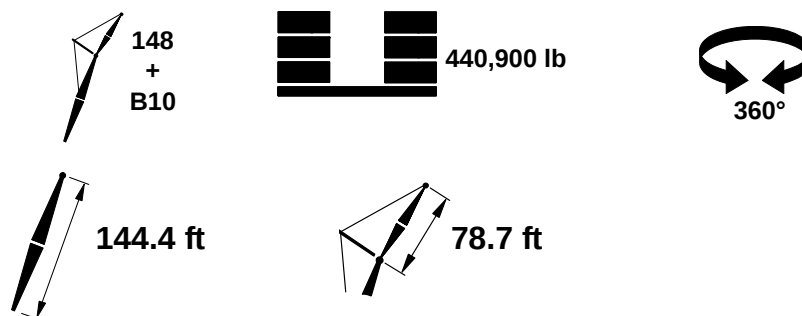
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
50	84.3	308.8	114,700				50
55	83.3	308.0	112,600				55
60	82.4	307.1	110,700	84.1	304.6	93,700	60
65	81.4	306.1	108,600	83.1	303.6	92,400	65
70	80.4	305.1	106,800	82.2	302.6	91,000	70
75	79.5	303.9	104,900	81.2	301.4	88,500	75
80	78.5	302.7	103,200	80.2	300.2	85,900	80
85	77.5	301.4	101,500	79.2	298.8	83,400	85
90	76.5	299.9	99,800	78.2	297.4	81,200	90
95	75.5	298.4	98,300	77.2	295.9	79,000	95
100	74.5	296.8	96,700	76.2	294.3	77,000	100
105	73.5	295.1	95,200	75.2	292.5	75,000	105
110	72.5	293.3	93,800	74.2	290.7	73,200	110
115	71.5	291.4	92,500	73.1	288.8	71,400	115
120	70.5	289.4	91,100	72.1	286.8	69,800	120
125	69.5	287.3	88,800	71.1	284.6	68,200	125
130	68.4	285.1	86,300	70.0	282.4	66,700	130
135	67.4	282.7	84,000	69.0	280.0	65,300	135
140	66.3	280.3	81,800	67.9	277.6	63,900	140
145	65.3	277.7	79,700	66.8	275.0	62,600	145
150	64.2	275.1	77,700	65.7	272.3	61,400	150
155	63.1	272.3	75,900	64.6	269.4	60,200	155
160	62.0	269.3	74,200	63.5	266.5	59,100	160
165	60.9	266.3	71,300	62.4	263.4	58,000	165
170	59.8	263.1	66,700	61.3	260.2	57,000	170
175	58.6	259.8	62,400	60.1	256.8	56,000	175
180	57.5	256.3	58,400	58.9	253.3	55,100	180
185	56.3	252.6	54,600	57.7	249.6	54,100	185
190	55.1	248.8	50,900	56.5	245.8	53,300	190
195	53.9	244.9	47,500	55.3	241.7	49,700	195
200	52.7	240.7	44,300	54.1	237.5	46,400	200
205	51.4	236.4	41,200	52.8	233.2	43,200	205
210	50.1	231.9	38,300	51.5	228.6	40,100	210
215	48.8	227.2	35,500	50.2	223.8	37,200	215
220	47.5	222.2	32,800	48.8	218.7	34,500	220
225	46.1	217.0	30,200	47.4	213.4	31,800	225
230	44.7	211.6	27,400	46.0	207.9	29,200	230
235	43.3	205.8	24,600	44.5	202.1	26,400	235
240	41.8	199.8	22,000	43.0	195.9	23,600	240
245	40.2	193.4	19,500	41.4	189.4	21,000	245
250	38.6	186.7	17,100	39.8	182.5	18,500	250
260	35.3	171.9	12,500	36.3	167.3	13,600	260
270	31.5	154.9	8,100	32.5	149.8	9,000	270



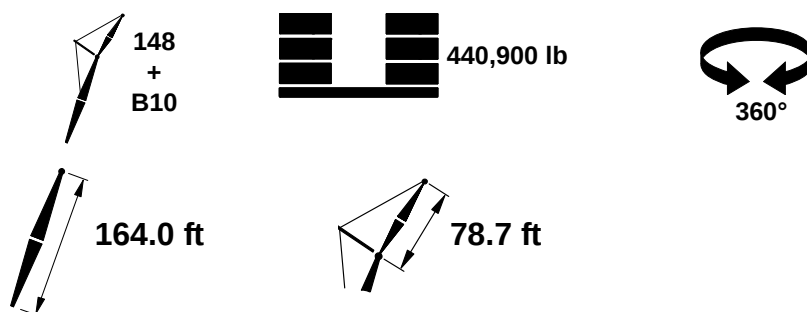
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
40	84.8	191.0	87,900 ^c				40
45	83.3	189.9	85,100 ^c				45
50	81.7	188.7	82,400				50
55	80.0	187.4	79,800	83.9	185.2	71,800 ^b	55
60	78.4	185.9	77,300	82.2	183.6	67,800	60
65	76.8	184.3	75,100	80.6	182.0	64,200	65
70	75.1	182.5	72,900	78.9	180.2	60,900	70
75	73.5	180.5	70,900	77.2	178.2	58,000	75
80	71.8	178.4	69,000	75.5	176.0	55,300	80
85	70.0	176.0	67,200	73.7	173.6	52,900	85
90	68.3	173.5	64,800	72.0	171.1	50,700	90
95	66.5	170.8	61,700	70.2	168.3	48,700	95
100	64.7	167.9	58,900	68.4	165.4	46,800	100
105	62.9	164.8	56,300	66.5	162.2	45,100	105
110	61.0	161.4	54,000	64.6	158.8	43,400	110
115	59.1	157.9	51,800	62.6	155.1	42,000	115
120	57.1	154.0	49,800	60.6	151.2	40,500	120
125	55.1	149.8	47,900	58.6	147.0	39,200	125
130	53.0	145.4	46,200	56.4	142.4	38,000	130
135	50.9	140.6	44,600	54.2	137.5	36,900	135
140	48.6	135.4	43,100	51.9	132.2	35,900	140
145	46.3	129.8	41,700	49.5	126.4	34,900	145
150	43.8	123.7	40,400	47.0	120.1	34,000	150
155	41.2	117.0	39,200	44.3	113.2	33,200	155
160	38.5	109.6	38,000	41.4	105.5	32,400	160
165	35.5	101.3	36,900	38.3	96.8	31,600	165
170	32.1	91.9	36,000	34.8	86.9	31,000	170
175	28.4	80.9	35,000	30.7	75.1	30,500	175
180	23.9	67.4	34,200				180



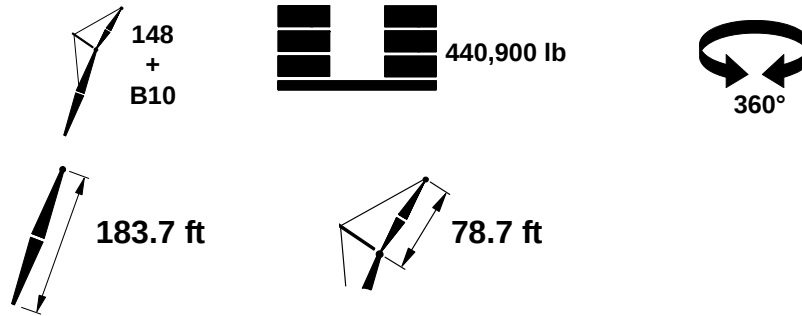
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
45	83.9	210.0	86,100b				45
50	82.5	208.9	83,500				50
55	81.0	207.7	81,200	84.5	205.3	72,400b	55
60	79.6	206.4	78,900	83.0	203.9	69,600	60
65	78.1	204.9	76,800	81.5	202.4	66,200	65
70	76.6	203.3	74,800	80.0	200.8	63,100	70
75	75.1	201.5	72,900	78.5	199.0	60,300	75
80	73.6	199.6	71,000	77.0	197.1	57,700	80
85	72.1	197.6	69,300	75.5	195.0	55,300	85
90	70.6	195.3	67,600	73.9	192.8	53,100	90
95	69.0	193.0	66,000	72.3	190.4	51,100	95
100	67.4	190.4	63,200	70.7	187.8	49,300	100
105	65.8	187.7	60,500	69.1	185.0	47,500	105
110	64.2	184.8	58,100	67.4	182.0	45,900	110
115	62.6	181.7	55,900	65.8	178.9	44,400	115
120	60.9	178.4	53,800	64.0	175.5	43,000	120
125	59.2	174.8	51,800	62.3	171.9	41,700	125
130	57.4	171.1	50,000	60.5	168.1	40,400	130
135	55.6	167.0	48,300	58.7	164.0	39,300	135
140	53.7	162.8	46,700	56.8	159.6	38,200	140
145	51.8	158.2	45,200	54.8	155.0	37,200	145
150	49.9	153.3	43,900	52.8	149.9	36,300	150
155	47.8	148.0	42,500	50.7	144.6	35,300	155
160	45.7	142.4	41,300	48.5	138.8	34,500	160
165	43.5	136.3	40,100	46.3	132.5	33,800	165
170	41.1	129.7	39,100	43.8	125.6	33,100	170
175	38.7	122.4	38,000	41.3	118.1	32,300	175
180	36.0	114.5	37,100	38.5	109.8	31,700	180
185	33.2	105.6	36,200	35.5	100.5	31,100	185
190	30.0	95.5	35,400	32.1	89.7	30,700	190
195	26.4	83.7	34,600	28.2	76.9	30,300	195
200	22.1	69.1	34,000				200



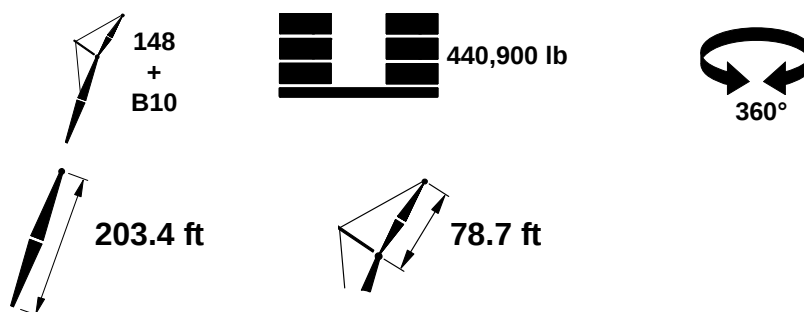
	10°			20°			
 ft	 °	 ft	 lb	 °	 ft	 lb	 ft
45	84.5	229.9	86,800				45
50	83.2	228.9	84,500				50
55	81.8	227.9	82,200	85.0	225.3	72,800	55
60	80.5	226.7	80,200	83.7	224.1	71,100	60
65	79.2	225.3	78,200	82.3	222.7	67,900	65
70	77.9	223.9	76,300	81.0	221.3	64,900	70
75	76.5	222.3	74,500	79.6	219.7	62,200	75
80	75.2	220.6	72,700	78.2	217.9	59,700	80
85	73.8	218.7	71,100	76.8	216.1	57,400	85
90	72.4	216.7	69,500	75.4	214.0	55,300	90
95	71.0	214.6	68,000	74.0	211.9	53,300	95
100	69.6	212.3	66,600	72.6	209.6	51,400	100
105	68.2	209.9	64,400	71.2	207.1	49,700	105
110	66.7	207.3	61,900	69.7	204.5	48,100	110
115	65.3	204.6	59,700	68.2	201.7	46,600	115
120	63.8	201.6	57,500	66.7	198.8	45,200	120
125	62.3	198.5	55,500	65.2	195.6	43,900	125
130	60.7	195.3	53,600	63.6	192.3	42,700	130
135	59.2	191.8	51,800	62.0	188.7	41,500	135
140	57.6	188.1	50,200	60.4	185.0	40,400	140
145	56.0	184.2	48,600	58.7	181.0	39,300	145
150	54.3	180.1	47,200	57.0	176.8	38,400	150
155	52.6	175.7	45,800	55.3	172.3	37,400	155
160	50.8	171.0	44,500	53.5	167.5	36,600	160
165	49.0	166.0	43,300	51.7	162.4	35,700	165
170	47.1	160.7	42,100	49.7	157.0	35,000	170
175	45.2	155.0	41,000	47.7	151.2	34,200	175
180	43.2	148.9	40,000	45.7	144.9	33,500	180
185	41.1	142.4	39,100	43.5	138.2	32,900	185
190	38.8	135.3	38,100	41.2	130.8	32,300	190
195	36.5	127.6	37,300	38.7	122.8	31,700	195
200	33.9	119.0	36,500	36.1	113.9	31,300	200
205	31.2	109.6	35,700	33.2	103.9	30,800	205
210	28.1	98.8	35,100	29.9	92.3	30,500	210
215	24.7	86.2	34,400				215
220	20.5	70.6	33,800				220



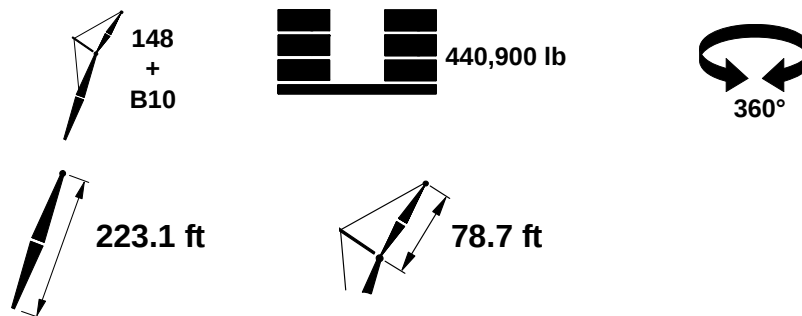
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
45	84.9	249.8	87,400				45
50	83.7	248.9	85,200				50
55	82.5	248.0	83,200				55
60	81.3	246.8	81,200	84.2	244.2	71,800	60
65	80.1	245.6	79,300	83.0	243.0	69,300	65
70	78.9	244.3	77,600	81.7	241.6	66,500	70
75	77.6	242.8	75,800	80.5	240.1	63,900	75
80	76.4	241.3	74,200	79.2	238.6	61,500	80
85	75.2	239.6	72,600	78.0	236.9	59,200	85
90	73.9	237.8	71,100	76.7	235.0	57,200	90
95	72.7	235.9	69,700	75.4	233.1	55,200	95
100	71.4	233.8	68,300	74.1	231.0	53,400	100
105	70.1	231.6	66,900	72.8	228.8	51,700	105
110	68.8	229.3	65,500	71.5	226.4	50,100	110
115	67.5	226.8	63,200	70.2	223.9	48,600	115
120	66.1	224.2	60,900	68.8	221.3	47,200	120
125	64.8	221.4	58,900	67.5	218.5	45,900	125
130	63.4	218.5	56,900	66.1	215.5	44,700	130
135	62.0	215.4	55,100	64.7	212.4	43,500	135
140	60.6	212.2	53,400	63.3	209.1	42,300	140
145	59.2	208.8	51,800	61.8	205.6	41,300	145
150	57.8	205.1	50,300	60.3	201.9	40,300	150
155	56.3	201.3	48,900	58.8	198.0	39,400	155
160	54.8	197.3	47,600	57.3	193.9	38,500	160
165	53.2	193.0	46,300	55.7	189.6	37,700	165
170	51.6	188.5	45,100	54.1	185.0	36,900	170
175	50.0	183.8	43,900	52.4	180.1	36,100	175
180	48.3	178.7	42,900	50.7	175.0	35,300	180
185	46.6	173.4	41,800	48.9	169.5	34,600	185
190	44.8	167.7	40,900	47.1	163.6	34,000	190
195	42.9	161.6	39,900	45.2	157.4	33,400	195
200	41.0	155.1	39,000	43.2	150.7	32,800	200
205	39.0	148.1	38,200	41.1	143.5	32,300	205
210	36.8	140.6	37,400	38.9	135.7	31,800	210
215	34.6	132.4	36,700	36.5	127.1	31,400	215
220	32.1	123.3	36,000	34.0	117.6	30,900	220
225	29.5	113.3	35,300	31.2	107.0	30,600	225
230	26.6	101.8	34,700	28.0	94.7	30,300	230
235	23.2	88.4	34,100				235
240	19.1	71.8	33,700				240



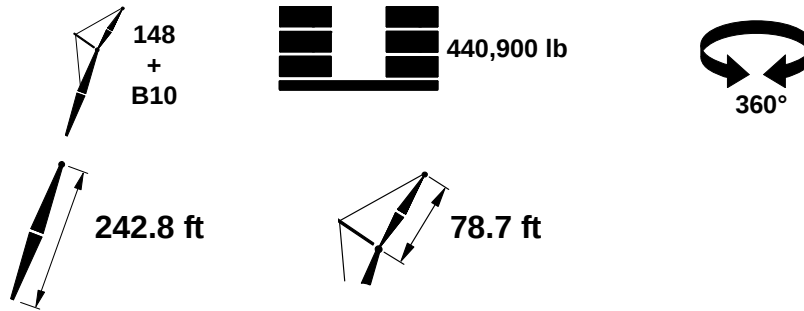
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
50	84.2	268.9	85,800				50
55	83.1	268.0	83,900				55
60	82.0	267.0	82,100	84.6	264.2	72,200	60
65	80.9	265.8	80,400	83.5	263.1	70,700	65
70	79.7	264.6	78,600	82.4	261.8	67,900	70
75	78.6	263.3	77,000	81.2	260.5	65,400	75
80	77.5	261.8	75,500	80.1	259.0	63,100	80
85	76.3	260.3	74,000	78.9	257.5	60,900	85
90	75.2	258.6	72,500	77.8	255.8	58,900	90
95	74.0	256.9	71,100	76.6	254.0	57,000	95
100	72.9	255.0	69,800	75.4	252.1	55,200	100
105	71.7	253.0	68,500	74.2	250.1	53,500	105
110	70.5	250.9	67,300	73.0	247.9	52,000	110
115	69.3	248.6	66,100	71.8	245.7	50,500	115
120	68.1	246.3	64,300	70.6	243.3	49,100	120
125	66.9	243.8	62,200	69.4	240.7	47,800	125
130	65.6	241.1	60,200	68.1	238.1	46,500	130
135	64.4	238.3	58,300	66.8	235.2	45,400	135
140	63.1	235.4	56,600	65.6	232.3	44,200	140
145	61.8	232.3	54,900	64.3	229.2	43,100	145
150	60.5	229.1	53,300	63.0	225.9	42,100	150
155	59.2	225.7	51,900	61.6	222.4	41,200	155
160	57.9	222.2	50,500	60.2	218.8	40,300	160
165	56.5	218.4	49,100	58.9	215.0	39,400	165
170	55.1	214.5	47,900	57.5	211.0	38,600	170
175	53.7	210.3	46,700	56.0	206.8	37,900	175
180	52.3	206.0	45,600	54.5	202.3	37,100	180
185	50.8	201.4	44,500	53.0	197.7	36,300	185
190	49.3	196.5	43,500	51.5	192.7	35,700	190
195	47.7	191.4	42,500	49.9	187.5	35,000	195
200	46.1	186.0	41,500	48.2	182.0	34,400	200
205	44.5	180.3	40,700	46.5	176.2	33,800	205
210	42.7	174.3	39,800	44.8	169.9	33,300	210
215	41.0	167.8	39,100	43.0	163.3	32,800	215
220	39.1	160.9	38,200	41.0	156.2	32,300	220
225	37.1	153.5	37,500	39.0	148.6	31,800	225
230	35.1	145.6	36,800	36.9	140.3	31,400	230
235	32.9	136.9	36,200	34.6	131.2	31,000	235
240	30.6	127.3	35,200	32.1	121.2	30,700	240
245	28.0	116.7	33,000	29.4	109.9	30,400	245
250	25.1	104.6	30,800				250



	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
50	84.6	288.8	86,200				50
55	83.6	288.0	84,400				55
60	82.5	287.0	82,700	85.0	284.2	72,400	60
65	81.5	286.0	81,100	84.0	283.1	71,200	65
70	80.5	284.8	79,500	82.9	282.0	69,200	70
75	79.4	283.6	78,000	81.9	280.7	66,800	75
80	78.4	282.3	76,500	80.8	279.4	64,500	80
85	77.3	280.8	75,100	79.7	278.0	62,400	85
90	76.3	279.3	73,700	78.7	276.4	60,400	90
95	75.2	277.7	72,400	77.6	274.8	58,500	95
100	74.1	276.0	71,100	76.5	273.0	56,800	100
105	73.0	274.1	69,900	75.4	271.1	55,200	105
110	71.9	272.2	68,700	74.3	269.2	53,600	110
115	70.8	270.1	67,500	73.2	267.1	52,200	115
120	69.7	267.9	66,400	72.1	264.9	50,800	120
125	68.6	265.6	65,200	71.0	262.6	49,500	125
130	67.5	263.2	63,200	69.8	260.1	48,300	130
135	66.4	260.7	61,300	68.7	257.6	47,100	135
140	65.2	258.0	59,500	67.5	254.9	45,900	140
145	64.0	255.2	57,800	66.3	252.0	44,900	145
150	62.9	252.3	56,200	65.1	249.1	43,900	150
155	61.7	249.3	54,700	63.9	246.0	42,900	155
160	60.5	246.0	53,300	62.7	242.7	42,000	160
165	59.2	242.7	51,900	61.5	239.3	41,100	165
170	58.0	239.2	50,600	60.2	235.7	40,300	170
175	56.7	235.5	49,400	58.9	232.0	39,500	175
180	55.5	231.6	48,200	57.6	228.1	38,700	180
185	54.2	227.6	47,100	56.3	224.0	38,000	185
190	52.8	223.3	46,000	54.9	219.6	37,300	190
195	51.5	218.9	45,000	53.5	215.1	36,600	195
200	50.1	214.2	44,000	52.1	210.4	36,000	200
205	48.7	209.3	43,100	50.7	205.4	35,400	205
210	47.2	204.2	42,200	49.2	200.1	34,800	210
215	45.7	198.7	41,400	47.7	194.6	34,300	215
220	44.2	193.0	40,600	46.1	188.7	33,700	220
225	42.6	187.0	39,200	44.4	182.5	33,200	225
230	40.9	180.6	36,800	42.8	175.9	32,800	230
235	39.2	173.7	34,400	41.0	168.9	32,300	235
240	37.4	166.5	32,200	39.1	161.4	31,900	240
245	35.5	158.7	30,000	37.2	153.3	31,200	245
250	33.5	150.3	27,900	35.1	144.6	28,900	250
260	29.1	131.1	23,800	30.5	124.5	24,600	260
270	23.9	107.3	19,900				270



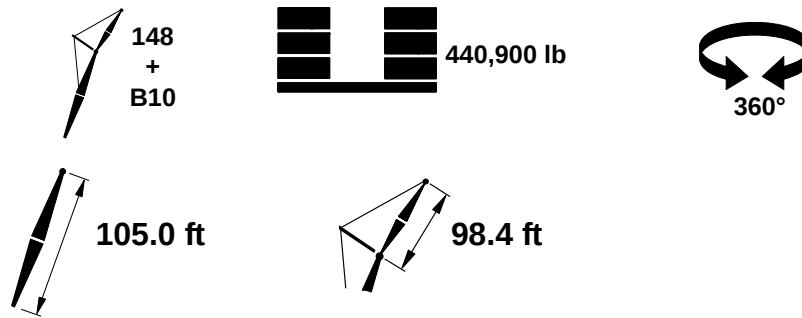
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
50	85.0	308.7	86,400				50
55	84.0	307.9	84,700				55
60	83.0	307.0	83,100				60
65	82.1	306.0	81,600	84.4	303.1	71,500	65
70	81.1	305.0	80,100	83.4	302.1	70,300	70
75	80.1	303.8	78,700	82.4	300.9	67,900	75
80	79.2	302.6	77,300	81.4	299.7	65,800	80
85	78.2	301.3	75,900	80.4	298.3	63,700	85
90	77.2	299.9	74,600	79.4	296.9	61,800	90
95	76.2	298.3	73,400	78.4	295.4	60,000	95
100	75.2	296.7	72,100	77.4	293.7	58,300	100
105	74.2	295.0	71,000	76.4	292.0	56,600	105
110	73.2	293.2	69,800	75.4	290.2	55,200	110
115	72.2	291.3	68,700	74.4	288.3	53,700	115
120	71.1	289.3	67,700	73.3	286.2	52,400	120
125	70.1	287.2	66,700	72.3	284.1	51,000	125
130	69.1	285.0	65,700	71.3	281.8	49,800	130
135	68.0	282.6	64,100	70.2	279.5	48,600	135
140	67.0	280.2	62,300	69.1	277.0	47,500	140
145	65.9	277.6	60,600	68.0	274.4	46,500	145
150	64.8	275.0	59,000	67.0	271.7	45,400	150
155	63.7	272.2	57,400	65.9	268.9	44,500	155
160	62.6	269.2	56,000	64.7	265.9	43,600	160
165	61.5	266.2	54,500	63.6	262.8	42,700	165
170	60.4	263.0	53,200	62.5	259.6	41,800	170
175	59.3	259.6	51,900	61.3	256.2	41,100	175
180	58.1	256.2	50,800	60.1	252.7	40,300	180
185	56.9	252.5	49,600	59.0	249.0	39,500	185
190	55.7	248.7	48,500	57.7	245.1	38,800	190
195	54.5	244.8	47,400	56.5	241.1	38,100	195
200	53.3	240.6	46,400	55.3	236.9	37,500	200
205	52.0	236.3	45,500	54.0	232.5	36,900	205
210	50.8	231.8	44,500	52.7	227.9	36,300	210
215	49.5	227.0	43,100	51.3	223.1	35,600	215
220	48.1	222.1	40,400	50.0	218.0	35,100	220
225	46.7	216.9	37,900	48.6	212.7	34,600	225
230	45.3	211.4	35,400	47.2	207.1	34,100	230
235	43.9	205.7	33,100	45.7	201.3	33,600	235
240	42.4	199.7	30,800	44.2	195.1	32,500	240
245	40.9	193.3	28,700	42.6	188.6	30,200	245
250	39.3	186.5	26,600	40.9	181.6	28,000	250
260	35.9	171.7	22,400	37.4	166.4	23,800	260
270	32.1	154.7	18,100	33.6	148.7	19,300	270
280	27.9	134.7	13,900	29.1	127.6	14,800	280
290	22.8	109.7	10,000				290

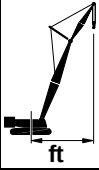


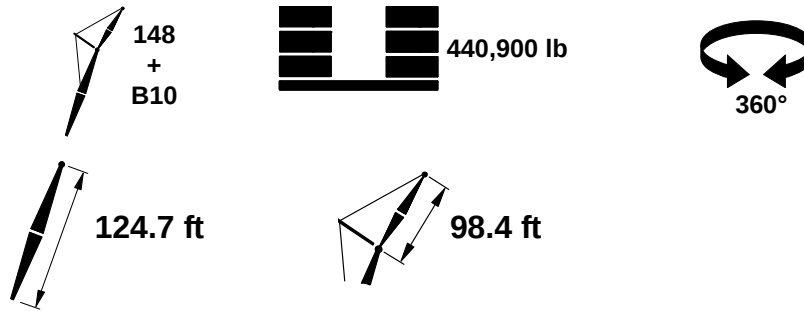
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
55	84.4	327.8	85,000				55
60	83.5	327.0	83,500				60
65	82.6	326.1	82,000	84.7	323.1	71,600	65
70	81.7	325.1	80,600	83.8	322.1	70,600	70
75	80.7	324.0	79,300	82.9	321.0	69,000	75
80	79.8	322.8	78,000	82.0	319.9	66,900	80
85	78.9	321.6	76,700	81.1	318.6	64,900	85
90	78.0	320.3	75,400	80.1	317.3	63,000	90
95	77.1	318.9	74,300	79.2	315.8	61,300	95
100	76.1	317.4	73,100	78.2	314.3	59,600	100
105	75.2	315.8	72,000	77.3	312.7	58,100	105
110	74.3	314.1	70,900	76.4	311.0	56,500	110
115	73.3	312.3	69,800	75.4	309.2	55,100	115
120	72.4	310.4	68,800	74.4	307.3	53,800	120
125	71.4	308.5	67,800	73.5	305.3	52,500	125
130	70.4	306.4	66,900	72.5	303.3	51,300	130
135	69.5	304.3	65,900	71.5	301.1	50,100	135
140	68.5	302.0	64,900	70.5	298.8	49,100	140
145	67.5	299.6	63,300	69.5	296.4	48,000	145
150	66.5	297.2	61,600	68.5	293.9	47,000	150
155	65.5	294.6	60,100	67.5	291.3	46,000	155
160	64.5	291.9	58,600	66.5	288.6	45,100	160
165	63.5	289.1	57,100	65.4	285.7	44,100	165
170	62.4	286.1	55,700	64.4	282.7	43,300	170
175	61.4	283.1	54,400	63.3	279.7	42,500	175
180	60.3	279.9	53,200	62.3	276.4	41,800	180
185	59.3	276.6	52,000	61.2	273.1	41,000	185
190	58.2	273.2	50,900	60.1	269.6	40,300	190
195	57.1	269.6	49,800	59.0	265.9	39,500	195
200	56.0	265.8	48,500	57.9	262.2	38,900	200
205	54.9	261.9	45,400	56.7	258.2	38,300	205
210	53.7	257.9	42,500	55.5	254.1	37,700	210
215	52.5	253.7	39,700	54.4	249.8	37,100	215
220	51.4	249.3	37,000	53.2	245.3	36,500	220
225	50.1	244.7	34,500	51.9	240.6	35,900	225
230	48.9	239.9	32,000	50.7	235.8	34,200	230
235	47.6	234.9	29,700	49.4	230.7	31,700	235
240	46.4	229.6	27,100	48.1	225.3	29,400	240
245	45.0	224.1	24,600	46.7	219.7	26,900	245
250	43.7	218.4	22,100	45.3	213.9	24,300	250
260	40.8	206.0	17,600	42.4	201.2	19,500	260
270	37.8	192.3	13,300	39.3	187.1	15,000	270
280	34.5	176.8	9,300	35.9	171.1	10,700	280
290				32.1	152.6	6,600	290

MLC650 S-1

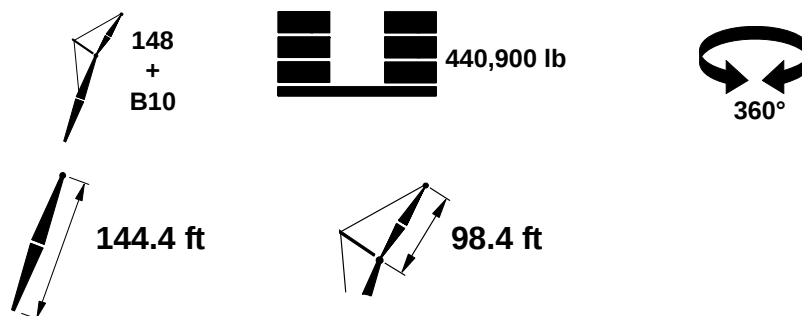
ASME B30.5



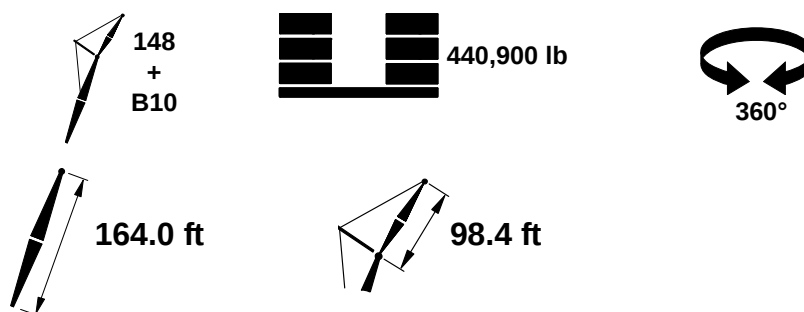
	10°			20°			
 ft	 o	 ft	 lb	 o	 ft	 lb	 ft
45	84.3	210.2	68,700 ^c				45
50	82.9	209.1	66,600 ^b				50
55	81.5	207.9	64,700				55
60	80.0	206.6	62,800	84.4	204.3	56,100 ^b	60
65	78.5	205.1	60,900	82.9	202.8	54,200	65
70	77.1	203.5	59,000	81.4	201.2	52,600	70
75	75.6	201.8	57,100	79.9	199.4	51,000	75
80	74.1	199.9	55,200	78.4	197.5	49,200	80
85	72.6	197.8	53,400	76.8	195.4	46,800	85
90	71.0	195.6	51,800	75.3	193.2	44,700	90
95	69.5	193.2	50,100	73.7	190.8	42,700	95
100	67.9	190.7	48,600	72.1	188.2	40,900	100
105	66.3	188.0	47,200	70.5	185.5	39,300	105
110	64.7	185.1	45,800	68.8	182.5	37,800	110
115	63.0	182.0	44,500	67.2	179.4	36,300	115
120	61.3	178.7	43,200	65.5	176.0	34,900	120
125	59.6	175.1	42,000	63.7	172.4	33,700	125
130	57.8	171.4	40,300	61.9	168.6	32,600	130
135	56.0	167.4	38,800	60.1	164.5	31,500	135
140	54.2	163.1	37,300	58.2	160.2	30,500	140
145	52.3	158.5	36,000	56.3	155.5	29,500	145
150	50.3	153.7	34,800	54.3	150.5	28,700	150
155	48.3	148.4	33,600	52.2	145.1	27,800	155
160	46.2	142.8	32,500	50.0	139.4	27,000	160
165	44.0	136.7	31,500	47.7	133.1	26,300	165
170	41.6	130.1	30,500	45.3	126.3	25,600	170
175	39.2	122.9	29,600	42.8	118.9	25,000	175
180	36.5	115.0	28,700	40.1	110.6	24,300	180
185	33.7	106.1	27,900	37.1	101.4	23,800	185
190	30.5	96.1	27,200	33.7	90.7	23,300	190
195	27.0	84.4	26,400	29.9	78.1	22,800	195
200	22.7	70.0	25,800				200
205	16.9	50.2	25,300				205



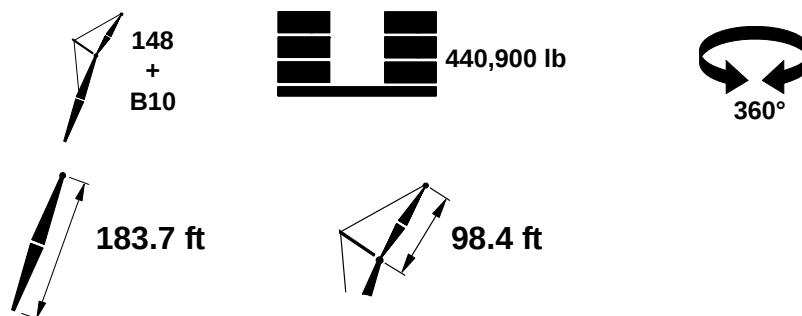
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
45	84.8	230.2	69,300 ^c				45
50	83.5	229.2	67,300				50
55	82.2	228.1	65,500				55
60	80.9	226.9	63,800	84.9	224.4	56,600 ^b	60
65	79.6	225.6	62,100	83.6	223.1	55,000	65
70	78.2	224.1	60,400	82.2	221.6	53,400	70
75	76.9	222.5	58,700	80.9	220.0	52,000	75
80	75.5	220.8	57,000	79.5	218.3	50,500	80
85	74.2	219.0	55,300	78.1	216.4	48,700	85
90	72.8	217.0	53,700	76.7	214.4	46,600	90
95	71.4	214.9	52,100	75.3	212.2	44,700	95
100	70.0	212.6	50,600	73.9	209.9	42,900	100
105	68.6	210.2	49,200	72.4	207.5	41,300	105
110	67.1	207.6	47,900	71.0	204.9	39,700	110
115	65.7	204.8	46,600	69.5	202.1	38,300	115
120	64.2	201.9	45,400	68.0	199.1	37,000	120
125	62.7	198.8	44,200	66.4	196.0	35,700	125
130	61.2	195.6	43,100	64.9	192.7	34,500	130
135	59.6	192.1	42,000	63.3	189.1	33,500	135
140	58.0	188.4	40,500	61.7	185.4	32,400	140
145	56.4	184.5	39,000	60.0	181.4	31,400	145
150	54.7	180.4	37,700	58.3	177.2	30,500	150
155	53.0	176.0	36,500	56.6	172.7	29,700	155
160	51.3	171.3	35,400	54.8	168.0	28,800	160
165	49.4	166.3	34,200	53.0	162.9	28,100	165
170	47.6	161.1	33,200	51.1	157.5	27,400	170
175	45.6	155.4	32,200	49.1	151.7	26,700	175
180	43.6	149.3	31,300	47.0	145.4	26,100	180
185	41.5	142.8	30,500	44.8	138.7	25,500	185
190	39.3	135.7	29,600	42.5	131.4	24,800	190
195	36.9	128.0	28,800	40.1	123.4	24,300	195
200	34.4	119.5	28,100	37.5	114.6	23,900	200
205	31.7	110.1	27,400	34.6	104.6	23,400	205
210	28.7	99.4	26,800	31.3	93.2	23,000	210
215	25.2	86.9	26,200	27.6	79.6	22,600	215
220	21.1	71.5	25,600				220



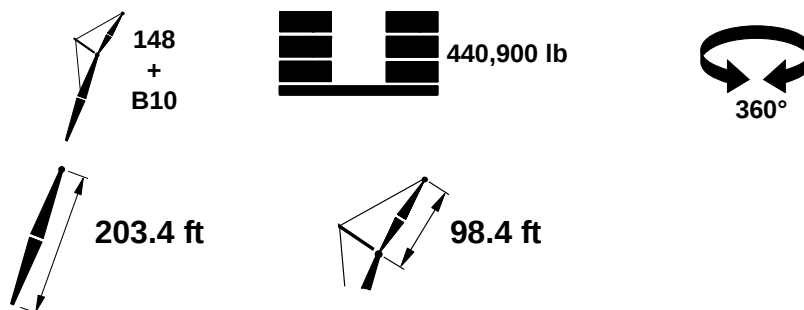
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
50	84.1	249.2	67,900				50
55	82.9	248.2	66,200				55
60	81.7	247.1	64,600				60
65	80.4	245.9	63,000	84.1	243.2	55,500	65
70	79.2	244.5	61,500	82.9	241.9	54,100	70
75	78.0	243.1	59,900	81.6	240.4	52,700	75
80	76.8	241.5	58,400	80.4	238.8	51,400	80
85	75.5	239.8	56,800	79.1	237.1	50,100	85
90	74.3	238.0	55,200	77.9	235.3	48,300	90
95	73.0	236.1	53,800	76.6	233.4	46,400	95
100	71.7	234.1	52,300	75.3	231.3	44,600	100
105	70.5	231.9	51,000	74.0	229.1	43,000	105
110	69.2	229.5	49,700	72.7	226.7	41,500	110
115	67.8	227.1	48,400	71.3	224.2	40,100	115
120	66.5	224.5	47,200	70.0	221.6	38,800	120
125	65.2	221.7	46,100	68.6	218.8	37,500	125
130	63.8	218.8	45,000	67.2	215.8	36,300	130
135	62.4	215.7	43,900	65.8	212.7	35,300	135
140	61.0	212.5	42,900	64.4	209.4	34,200	140
145	59.6	209.0	41,900	63.0	205.9	33,200	145
150	58.1	205.4	40,500	61.5	202.2	32,300	150
155	56.6	201.6	39,200	60.0	198.3	31,400	155
160	55.1	197.6	38,000	58.4	194.2	30,600	160
165	53.6	193.3	36,900	56.9	189.9	29,800	165
170	52.0	188.8	35,800	55.2	185.3	29,100	170
175	50.4	184.1	34,800	53.6	180.5	28,300	175
180	48.7	179.1	33,800	51.9	175.3	27,700	180
185	47.0	173.7	32,900	50.1	169.9	27,000	185
190	45.2	168.0	32,000	48.3	164.1	26,400	190
195	43.3	162.0	31,200	46.4	157.8	25,900	195
200	41.4	155.5	30,400	44.4	151.2	25,300	200
205	39.4	148.5	29,600	42.3	144.0	24,800	205
210	37.3	141.0	28,900	40.1	136.2	24,300	210
215	35.0	132.8	28,300	37.8	127.7	23,900	215
220	32.6	123.8	27,600	35.2	118.2	23,500	220
225	29.9	113.8	27,000	32.4	107.6	23,100	225
230	27.0	102.4	26,500	29.3	95.5	22,800	230
235	23.7	89.2	26,000				235
240	19.6	72.7	25,500				240



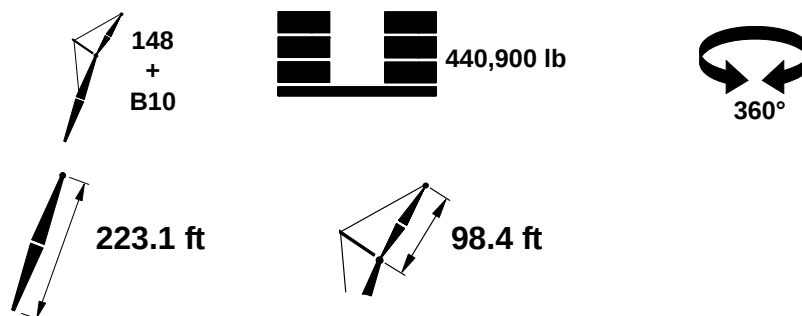
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
50	84.5	269.1	68,400				50
55	83.4	268.2	66,700				55
60	82.3	267.2	65,300				60
65	81.2	266.1	63,800	84.6	263.3	56,000	65
70	80.1	264.8	62,400	83.4	262.1	54,600	70
75	78.9	263.5	60,900	82.3	260.7	53,400	75
80	77.8	262.1	59,600	81.1	259.3	52,100	80
85	76.7	260.5	58,200	80.0	257.7	50,900	85
90	75.5	258.9	56,700	78.8	256.0	49,800	90
95	74.4	257.1	55,300	77.7	254.2	48,000	95
100	73.2	255.2	53,900	76.5	252.3	46,300	100
105	72.0	253.2	52,600	75.3	250.3	44,600	105
110	70.8	251.1	51,400	74.1	248.2	43,100	110
115	69.6	248.9	50,100	72.9	245.9	41,700	115
120	68.4	246.5	49,000	71.7	243.5	40,400	120
125	67.2	244.0	47,800	70.4	241.0	39,200	125
130	66.0	241.4	46,700	69.2	238.3	38,000	130
135	64.7	238.6	45,800	67.9	235.5	36,900	135
140	63.5	235.7	44,700	66.6	232.5	35,900	140
145	62.2	232.6	43,700	65.3	229.4	34,800	145
150	60.9	229.4	42,800	64.0	226.1	33,900	150
155	59.6	226.0	41,900	62.7	222.7	33,100	155
160	58.2	222.4	40,600	61.3	219.1	32,200	160
165	56.9	218.7	39,400	59.9	215.3	31,400	165
170	55.5	214.8	38,300	58.5	211.3	30,600	170
175	54.1	210.6	37,200	57.1	207.1	29,900	175
180	52.6	206.3	36,200	55.6	202.6	29,300	180
185	51.1	201.7	35,300	54.1	198.0	28,600	185
190	49.6	196.9	34,300	52.6	193.0	27,900	190
195	48.1	191.8	33,500	51.0	187.8	27,300	195
200	46.5	186.4	32,600	49.3	182.3	26,800	200
205	44.8	180.7	31,900	47.6	176.5	26,200	205
210	43.1	174.6	31,100	45.9	170.3	25,700	210
215	41.3	168.2	30,400	44.1	163.7	25,200	215
220	39.5	161.3	29,700	42.1	156.6	24,800	220
225	37.5	153.9	29,000	40.1	149.0	24,300	225
230	35.5	146.0	28,400	38.0	140.7	23,900	230
235	33.3	137.3	27,800	35.7	131.7	23,600	235
240	31.0	127.8	27,300	33.3	121.7	23,200	240
245	28.4	117.3	26,700	30.6	110.5	22,900	245
250	25.6	105.3	26,300	27.5	97.5	22,700	250
260	18.4	73.7	25,400				260



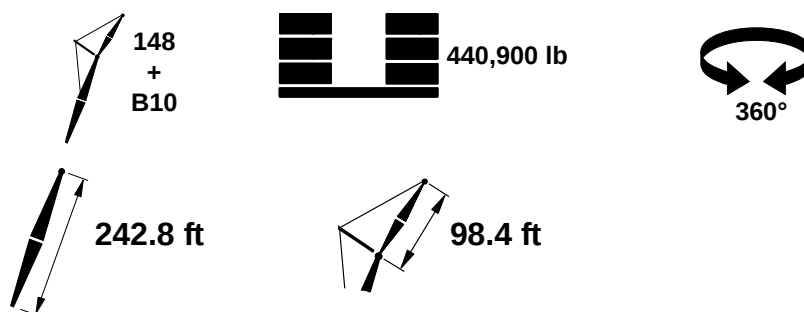
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
50	84.9	289.0	68,800				50
55	83.9	288.2	67,300				55
60	82.8	287.2	65,800				60
65	81.8	286.2	64,500	85.0	283.3	56,400	65
70	80.8	285.1	63,100	83.9	282.2	55,100	70
75	79.7	283.8	61,800	82.8	280.9	53,900	75
80	78.7	282.5	60,500	81.8	279.6	52,700	80
85	77.6	281.1	59,300	80.7	278.1	51,600	85
90	76.6	279.5	58,000	79.6	276.6	50,500	90
95	75.5	277.9	56,600	78.6	274.9	49,300	95
100	74.4	276.2	55,300	77.5	273.2	47,700	100
105	73.3	274.3	54,000	76.4	271.3	46,100	105
110	72.2	272.4	52,800	75.3	269.4	44,600	110
115	71.2	270.3	51,600	74.2	267.3	43,200	115
120	70.0	268.2	50,500	73.1	265.1	42,000	120
125	68.9	265.9	49,400	71.9	262.8	40,700	125
130	67.8	263.5	48,400	70.8	260.3	39,600	130
135	66.7	260.9	47,300	69.6	257.8	38,400	135
140	65.5	258.3	46,400	68.5	255.1	37,400	140
145	64.4	255.5	45,400	67.3	252.2	36,400	145
150	63.2	252.6	44,500	66.1	249.3	35,500	150
155	62.0	249.5	43,600	64.9	246.2	34,600	155
160	60.8	246.3	42,700	63.7	242.9	33,700	160
165	59.6	242.9	41,800	62.4	239.5	32,900	165
170	58.3	239.4	40,700	61.2	235.9	32,100	170
175	57.1	235.7	39,600	59.9	232.2	31,400	175
180	55.8	231.9	38,500	58.6	228.3	30,700	180
185	54.5	227.8	37,600	57.3	224.2	30,000	185
190	53.2	223.6	36,600	55.9	219.9	29,400	190
195	51.8	219.2	35,700	54.5	215.3	28,800	195
200	50.4	214.5	34,800	53.1	210.6	28,200	200
205	49.0	209.6	34,000	51.7	205.6	27,600	205
210	47.5	204.5	33,200	50.2	200.4	27,100	210
215	46.0	199.1	32,500	48.7	194.8	26,600	215
220	44.5	193.3	31,700	47.1	189.0	26,100	220
225	42.9	187.3	31,000	45.5	182.8	25,600	225
230	41.3	180.9	30,300	43.8	176.2	25,200	230
235	39.5	174.1	29,700	42.0	169.2	24,700	235
240	37.8	166.9	29,100	40.2	161.7	24,400	240
245	35.9	159.1	28,500	38.2	153.7	24,000	245
250	33.9	150.7	28,000	36.2	144.9	23,600	250
260	29.5	131.6	26,900	31.6	124.9	23,000	260
270	24.3	107.9	26,100				270
280	17.2	74.5	23,200				280



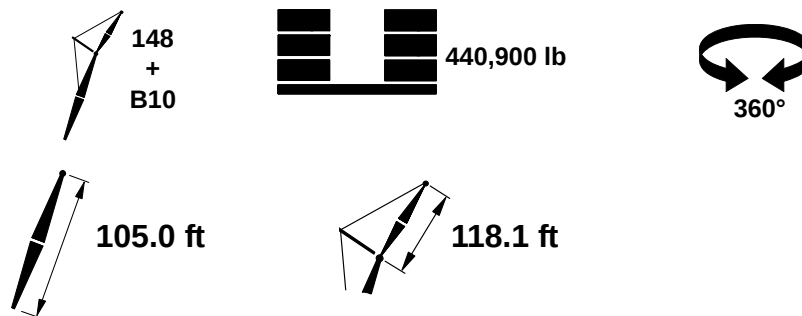
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
55	84.3	308.1	67,600				55
60	83.3	307.2	66,200				60
65	82.4	306.3	65,000				65
70	81.4	305.2	63,700	84.3	302.2	55,500	70
75	80.4	304.1	62,500	83.3	301.0	54,300	75
80	79.4	302.8	61,300	82.3	299.8	53,200	80
85	78.5	301.5	60,100	81.4	298.5	52,200	85
90	77.5	300.1	58,900	80.4	297.0	51,200	90
95	76.5	298.6	57,800	79.4	295.5	50,200	95
100	75.5	296.9	56,500	78.3	293.9	49,000	100
105	74.5	295.2	55,200	77.3	292.1	47,400	105
110	73.5	293.4	54,100	76.3	290.3	46,000	110
115	72.5	291.5	53,000	75.3	288.4	44,700	115
120	71.4	289.5	51,800	74.3	286.4	43,300	120
125	70.4	287.4	50,800	73.2	284.2	42,100	125
130	69.4	285.2	49,700	72.2	282.0	41,000	130
135	68.3	282.9	48,800	71.1	279.6	39,900	135
140	67.3	280.4	47,800	70.0	277.2	38,800	140
145	66.2	277.9	46,900	69.0	274.6	37,800	145
150	65.1	275.2	46,000	67.9	271.9	36,900	150
155	64.0	272.4	45,100	66.8	269.0	36,000	155
160	62.9	269.5	44,200	65.7	266.1	35,100	160
165	61.8	266.4	43,400	64.5	263.0	34,300	165
170	60.7	263.2	42,600	63.4	259.7	33,500	170
175	59.6	259.9	41,800	62.2	256.4	32,800	175
180	58.4	256.4	40,800	61.1	252.8	32,100	180
185	57.2	252.8	39,700	59.9	249.1	31,400	185
190	56.0	249.0	38,700	58.7	245.3	30,800	190
195	54.8	245.0	37,800	57.4	241.3	30,100	195
200	53.6	240.9	36,900	56.2	237.1	29,500	200
205	52.3	236.6	36,000	54.9	232.7	28,900	205
210	51.1	232.1	35,200	53.6	228.1	28,400	210
215	49.8	227.3	34,500	52.3	223.2	27,900	215
220	48.4	222.4	33,700	50.9	218.2	27,300	220
225	47.1	217.2	33,000	49.5	212.9	26,900	225
230	45.7	211.8	32,300	48.1	207.3	26,400	230
235	44.2	206.0	31,600	46.6	201.5	26,000	235
240	42.7	200.0	31,000	45.1	195.3	25,600	240
245	41.2	193.6	30,300	43.5	188.8	25,100	245
250	39.6	186.9	29,700	41.9	181.9	24,800	250
260	36.2	172.1	27,600	38.4	166.6	24,000	260
270	32.5	155.2	23,900	34.5	149.0	23,400	270
280	28.2	135.2	20,400	30.0	127.9	21,400	280
290	23.2	110.3	16,500				290



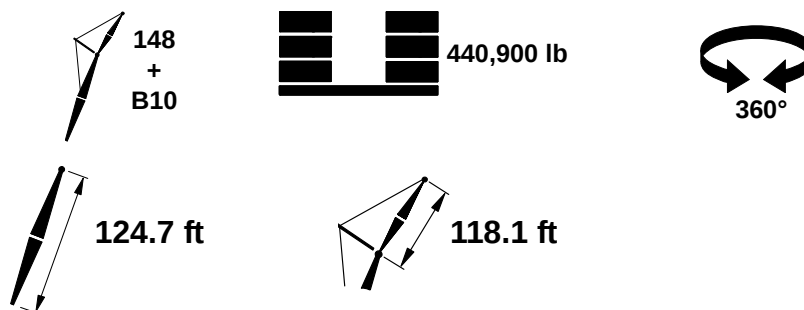
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
55	84.6	328.0	67,800				55
60	83.7	327.2	66,500				60
65	82.8	326.3	65,200				65
70	81.9	325.3	64,100	84.7	322.2	55,700	70
75	81.0	324.2	63,000	83.8	321.1	54,700	75
80	80.1	323.1	61,800	82.8	320.0	53,600	80
85	79.2	321.8	60,800	81.9	318.7	52,600	85
90	78.3	320.5	59,700	81.0	317.4	51,700	90
95	77.3	319.1	58,600	80.0	315.9	50,700	95
100	76.4	317.6	57,500	79.1	314.4	49,800	100
105	75.5	316.0	56,300	78.2	312.8	48,600	105
110	74.5	314.3	55,200	77.2	311.1	47,300	110
115	73.6	312.5	54,100	76.3	309.3	45,900	115
120	72.6	310.7	53,000	75.3	307.4	44,600	120
125	71.7	308.7	52,000	74.3	305.5	43,400	125
130	70.7	306.6	51,000	73.3	303.4	42,200	130
135	69.7	304.5	50,000	72.4	301.2	41,200	135
140	68.8	302.2	49,100	71.4	298.9	40,200	140
145	67.8	299.9	48,200	70.4	296.5	39,100	145
150	66.8	297.4	47,300	69.4	294.0	38,200	150
155	65.8	294.8	46,500	68.4	291.4	37,300	155
160	64.8	292.1	45,700	67.3	288.7	36,400	160
165	63.8	289.3	44,800	66.3	285.8	35,600	165
170	62.7	286.4	44,100	65.3	282.9	34,800	170
175	61.7	283.3	43,300	64.2	279.8	34,100	175
180	60.6	280.2	42,500	63.1	276.6	33,300	180
185	59.6	276.9	41,800	62.1	273.2	32,700	185
190	58.5	273.4	40,900	61.0	269.7	32,000	190
195	57.4	269.8	39,900	59.8	266.1	31,400	195
200	56.3	266.1	39,000	58.7	262.3	30,800	200
205	55.1	262.2	38,000	57.6	258.3	30,200	205
210	54.0	258.1	37,200	56.4	254.2	29,600	210
215	52.8	253.9	36,400	55.2	249.9	29,100	215
220	51.6	249.5	35,600	54.0	245.5	28,600	220
225	50.4	244.9	34,900	52.8	240.8	28,100	225
230	49.2	240.2	34,100	51.5	235.9	27,600	230
235	47.9	235.1	33,400	50.2	230.8	27,100	235
240	46.7	229.9	32,800	48.9	225.5	26,700	240
245	45.3	224.4	32,000	47.6	219.9	26,200	245
250	44.0	218.7	30,000	46.2	214.0	25,800	250
260	41.1	206.4	26,100	43.3	201.4	25,100	260
270	38.1	192.6	22,300	40.2	187.2	24,000	270
280	34.8	177.2	18,300	36.8	171.3	20,000	280
290	31.2	159.4	14,500	33.0	152.8	15,900	290
300	27.1	138.6	10,900	28.7	130.8	12,000	300
310	22.1	112.5	7,400				310



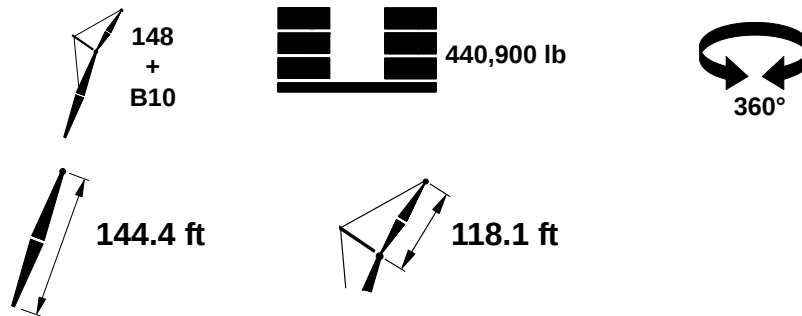
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
55	84.9	347.9	67,800				55
60	84.1	347.1	66,700				60
65	83.2	346.3	65,500				65
70	82.4	345.3	64,400	85.0	342.2	56,000	70
75	81.5	344.3	63,400	84.1	341.2	54,900	75
80	80.7	343.2	62,300	83.3	340.1	54,000	80
85	79.8	342.1	61,300	82.4	338.9	53,000	85
90	79.0	340.8	60,300	81.5	337.6	52,200	90
95	78.1	339.5	59,300	80.6	336.3	51,200	95
100	77.2	338.1	58,300	79.8	334.9	50,400	100
105	76.3	336.6	57,200	78.9	333.4	49,500	105
110	75.5	335.0	56,200	78.0	331.8	48,400	110
115	74.6	333.4	55,200	77.1	330.1	47,100	115
120	73.7	331.6	54,100	76.2	328.3	45,800	120
125	72.8	329.8	53,100	75.3	326.5	44,600	125
130	71.9	327.9	52,100	74.4	324.5	43,500	130
135	71.0	325.8	51,200	73.5	322.5	42,400	135
140	70.1	323.7	50,300	72.5	320.4	41,300	140
145	69.2	321.5	49,400	71.6	318.1	40,400	145
150	68.2	319.2	48,600	70.7	315.8	39,400	150
155	67.3	316.8	47,700	69.7	313.4	38,500	155
160	66.4	314.4	46,900	68.8	310.9	37,700	160
165	65.4	311.8	46,100	67.8	308.2	36,900	165
170	64.5	309.0	45,400	66.9	305.5	36,100	170
175	63.5	306.2	44,600	65.9	302.7	35,300	175
180	62.5	303.3	43,900	64.9	299.7	34,600	180
185	61.5	300.3	43,200	63.9	296.6	33,900	185
190	60.6	297.1	42,500	62.9	293.4	33,300	190
195	59.5	293.8	41,800	61.9	290.1	32,600	195
200	58.5	290.4	40,900	60.9	286.6	32,000	200
205	57.5	286.8	40,000	59.8	283.0	31,400	205
210	56.5	283.2	39,200	58.8	279.3	30,800	210
215	55.4	279.3	38,300	57.7	275.4	30,300	215
220	54.3	275.4	37,500	56.6	271.4	29,700	220
225	53.2	271.2	36,700	55.5	267.2	29,200	225
230	52.1	266.9	35,300	54.4	262.8	28,700	230
235	51.0	262.5	33,000	53.2	258.2	28,300	235
240	49.9	257.8	30,700	52.1	253.5	27,800	240
245	48.7	253.0	28,500	50.9	248.6	27,400	245
250	47.5	247.9	26,100	49.7	243.4	26,900	250
260	45.0	237.1	21,600	47.1	232.5	24,400	260
270	42.4	225.4	17,400	44.5	220.4	19,900	270
280	39.7	212.4	13,500	41.7	207.2	15,700	280
290	36.8	198.1	9,800	38.7	192.4	11,700	290
300	33.6	182.0	6,300	35.4	175.7	7,900	300

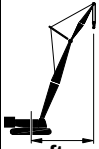


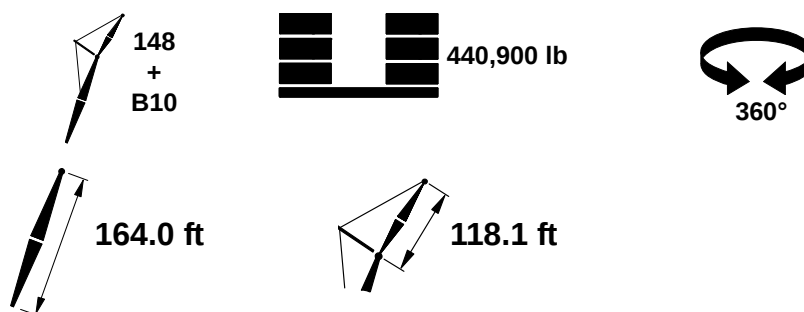
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
50	84.9	229.1	53,600 ^c				50
55	83.6	228.0	51,900 ^b				55
60	82.3	226.8	50,200				60
65	80.9	225.4	48,500				65
70	79.6	224.0	46,900	84.4	221.3	41,500 ^b	70
75	78.2	222.4	45,300	83.0	219.7	40,200	75
80	76.9	220.7	43,700	81.7	218.0	38,800	80
85	75.5	218.8	42,300	80.3	216.1	37,600	85
90	74.1	216.8	40,800	78.9	214.1	36,400	90
95	72.8	214.7	39,400	77.5	212.0	35,200	95
100	71.3	212.4	38,100	76.0	209.6	34,200	100
105	69.9	210.0	36,900	74.6	207.2	33,100	105
110	68.5	207.4	35,700	73.1	204.6	32,100	110
115	67.0	204.7	34,500	71.6	201.8	31,100	115
120	65.5	201.8	33,400	70.1	198.8	29,900	120
125	64.0	198.7	32,400	68.6	195.7	28,800	125
130	62.5	195.4	31,400	67.0	192.3	27,800	130
135	60.9	191.9	30,300	65.5	188.8	26,800	135
140	59.3	188.2	29,500	63.8	185.1	25,900	140
145	57.7	184.3	28,600	62.2	181.1	25,100	145
150	56.0	180.2	27,700	60.5	176.9	24,200	150
155	54.3	175.8	26,900	58.7	172.4	23,500	155
160	52.6	171.1	26,200	56.9	167.6	22,800	160
165	50.8	166.2	25,400	55.1	162.5	22,100	165
170	48.9	160.9	24,800	53.2	157.1	21,500	170
175	47.0	155.2	24,100	51.2	151.3	20,900	175
180	44.9	149.1	23,500	49.1	145.0	20,300	180
185	42.8	142.6	22,900	46.9	138.3	19,800	185
190	40.6	135.5	22,300	44.6	130.9	19,300	190
195	38.3	127.8	21,800	42.2	122.9	18,800	195
200	35.7	119.3	21,300	39.5	114.0	18,400	200
205	33.0	109.8	20,800	36.6	104.0	17,900	205
210	29.9	99.1	20,400	33.4	92.5	17,600	210
215	26.5	86.5	20,100	29.6	78.8	17,200	215
220	22.3	71.0	19,700				220



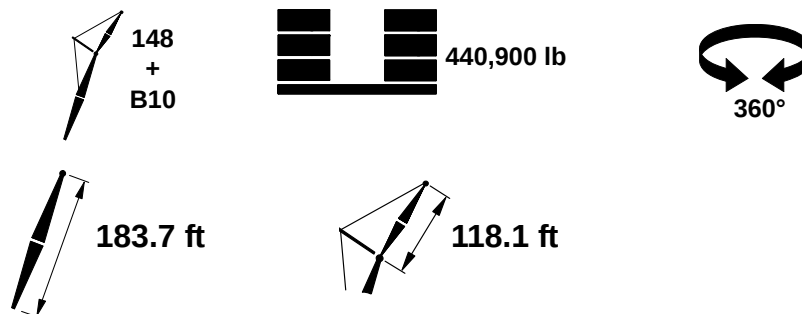
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
55	84.1	248.0	52,400				55
60	82.9	246.9	50,900				60
65	81.7	245.7	49,300				65
70	80.5	244.4	47,900	84.9	241.5	41,900	70
75	79.2	242.9	46,300	83.6	240.0	40,700	75
80	78.0	241.3	44,900	82.4	238.4	39,500	80
85	76.8	239.7	43,500	81.1	236.7	38,300	85
90	75.5	237.9	42,100	79.9	234.9	37,100	90
95	74.2	235.9	40,900	78.6	232.9	36,100	95
100	73.0	233.9	39,600	77.3	230.9	35,100	100
105	71.7	231.7	38,400	76.0	228.6	34,100	105
110	70.4	229.4	37,300	74.7	226.3	33,100	110
115	69.1	226.9	36,200	73.3	223.8	32,200	115
120	67.7	224.3	35,100	72.0	221.1	31,300	120
125	66.4	221.5	34,000	70.6	218.3	30,300	125
130	65.0	218.6	33,100	69.2	215.4	29,200	130
135	63.6	215.5	32,100	67.8	212.2	28,300	135
140	62.2	212.3	31,200	66.4	208.9	27,300	140
145	60.8	208.8	30,300	64.9	205.4	26,500	145
150	59.3	205.2	29,500	63.4	201.7	25,700	150
155	57.9	201.4	28,700	61.9	197.9	24,900	155
160	56.3	197.4	27,900	60.4	193.7	24,200	160
165	54.8	193.1	27,200	58.8	189.4	23,500	165
170	53.2	188.6	26,400	57.2	184.8	22,900	170
175	51.6	183.8	25,700	55.5	179.9	22,200	175
180	49.9	178.8	25,100	53.8	174.8	21,700	180
185	48.2	173.5	24,500	52.0	169.3	21,100	185
190	46.4	167.8	23,900	50.2	163.5	20,600	190
195	44.5	161.7	23,300	48.3	157.2	20,100	195
200	42.6	155.2	22,800	46.3	150.5	19,600	200
205	40.6	148.2	22,300	44.2	143.3	19,200	205
210	38.5	140.7	21,800	42.0	135.4	18,800	210
215	36.2	132.5	21,400	39.6	126.9	18,400	215
220	33.8	123.5	20,900	37.1	117.4	18,000	220
225	31.1	113.4	20,500	34.3	106.7	17,600	225
230	28.2	102.0	20,200	31.1	94.4	17,400	230
235	24.8	88.6	19,900	27.3	79.5	17,100	235
240	20.7	72.0	19,600				240



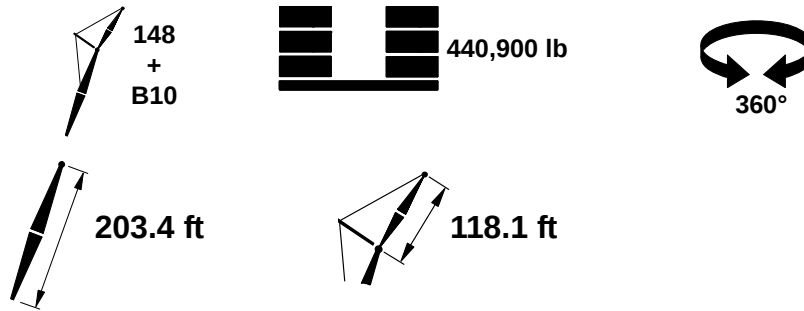
	10°			20°			
 ft	 o	 ft	 lb	 o	 ft	 lb	 ft
55	84.6	268.0	52,900				55
60	83.4	267.0	51,500				60
65	82.3	265.9	50,000				65
70	81.2	264.6	48,600				70
75	80.1	263.3	47,300	84.1	260.2	41,100	75
80	78.9	261.9	45,900	83.0	258.7	39,900	80
85	77.8	260.3	44,600	81.8	257.2	38,900	85
90	76.6	258.7	43,300	80.7	255.5	37,800	90
95	75.5	256.9	42,100	79.5	253.7	36,800	95
100	74.3	255.0	40,900	78.3	251.8	35,900	100
105	73.1	253.0	39,700	77.1	249.8	34,900	105
110	72.0	250.9	38,600	75.9	247.6	34,000	110
115	70.8	248.6	37,500	74.7	245.4	33,200	115
120	69.6	246.3	36,500	73.5	243.0	32,300	120
125	68.3	243.8	35,500	72.2	240.4	31,500	125
130	67.1	241.1	34,600	71.0	237.7	30,500	130
135	65.9	238.4	33,600	69.7	234.9	29,600	135
140	64.6	235.4	32,700	68.4	232.0	28,700	140
145	63.3	232.4	31,900	67.1	228.8	27,800	145
150	62.0	229.1	31,000	65.8	225.5	27,000	150
155	60.7	225.7	30,200	64.5	222.1	26,200	155
160	59.4	222.2	29,500	63.1	218.5	25,500	160
165	58.0	218.4	28,700	61.7	214.6	24,900	165
170	56.6	214.5	28,000	60.3	210.6	24,100	170
175	55.2	210.3	27,300	58.9	206.4	23,500	175
180	53.7	206.0	26,700	57.4	202.0	22,900	180
185	52.3	201.4	26,000	55.9	197.3	22,400	185
190	50.7	196.6	25,400	54.3	192.3	21,800	190
195	49.2	191.5	24,800	52.7	187.1	21,400	195
200	47.6	186.1	24,300	51.1	181.6	20,900	200
205	45.9	180.4	23,700	49.4	175.7	20,400	205
210	44.2	174.3	23,200	47.6	169.5	19,900	210
215	42.4	167.9	22,800	45.8	162.8	19,500	215
220	40.6	161.0	22,300	43.9	155.7	19,100	220
225	38.6	153.6	21,900	41.8	148.0	18,800	225
230	36.6	145.6	21,500	39.7	139.7	18,400	230
235	34.4	136.9	21,000	37.4	130.6	18,100	235
240	32.0	127.4	20,700	34.9	120.5	17,800	240
245	29.5	116.8	20,400	32.2	109.2	17,500	245
250	26.6	104.7	20,100	29.1	96.0	17,200	250
260	19.3	72.9	19,500				260



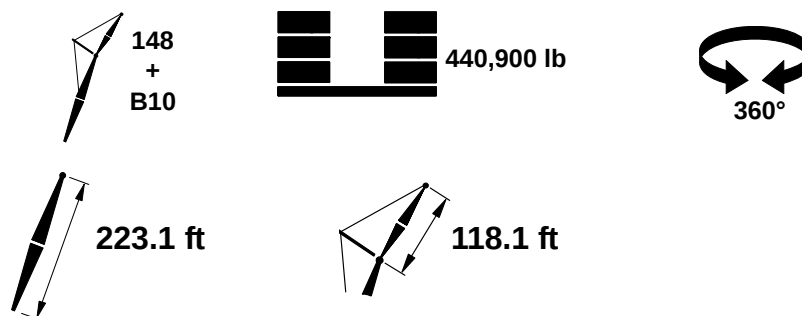
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
55	84.9	287.9	53,300				55
60	83.9	287.0	52,000				60
65	82.9	285.9	50,600				65
70	81.8	284.8	49,300				70
75	80.8	283.6	48,000				75
80	79.7	282.2	46,800	84.6	280.3	41,500	80
85	78.7	280.8	45,500	82.4	277.5	39,400	85
90	77.6	279.3	44,300	81.4	276.0	38,400	90
95	76.6	277.7	43,200	80.3	274.3	37,500	95
100	75.5	275.9	42,000	79.2	272.6	36,500	100
105	74.4	274.1	40,900	78.1	270.7	35,700	105
110	73.3	272.1	39,800	77.0	268.7	34,800	110
115	72.2	270.1	38,800	75.9	266.6	33,900	115
120	71.1	267.9	37,800	74.7	264.4	33,100	120
125	70.0	265.6	36,800	73.6	262.1	32,300	125
130	68.9	263.2	35,900	72.5	259.7	31,600	130
135	67.7	260.7	35,000	71.3	257.1	30,800	135
140	66.6	258.0	34,100	70.2	254.4	29,900	140
145	65.4	255.2	33,300	69.0	251.6	29,100	145
150	64.2	252.3	32,400	67.8	248.6	28,200	150
155	63.0	249.2	31,700	66.6	245.5	27,500	155
160	61.8	246.0	30,900	65.3	242.2	26,800	160
165	60.6	242.7	30,100	64.1	238.8	26,100	165
170	59.4	239.1	29,500	62.8	235.2	25,400	170
175	58.1	235.4	28,700	61.6	231.5	24,800	175
180	56.8	231.6	28,100	60.2	227.5	24,100	180
185	55.5	227.5	27,400	58.9	223.4	23,500	185
190	54.2	223.3	26,900	57.6	219.1	23,000	190
195	52.8	218.8	26,200	56.2	214.5	22,500	195
200	51.4	214.2	25,700	54.8	209.8	22,000	200
205	50.0	209.3	25,100	53.3	204.8	21,500	205
210	48.6	204.1	24,600	51.8	199.5	21,100	210
215	47.1	198.7	24,100	50.3	193.9	20,600	215
220	45.5	193.0	23,600	48.7	188.1	20,200	220
225	43.9	186.9	23,100	47.0	181.8	19,800	225
230	42.3	180.5	22,700	45.3	175.2	19,400	230
235	40.6	173.7	22,300	43.6	168.2	19,100	235
240	38.8	166.4	21,900	41.7	160.6	18,700	240
245	36.9	158.6	21,500	39.8	152.5	18,400	245
250	34.9	150.2	21,100	37.7	143.7	18,100	250
260	30.5	131.1	20,500	33.0	123.5	17,600	260
270	25.2	107.2	20,000	27.3	97.5	17,100	270
280	18.1	73.5	19,400				280



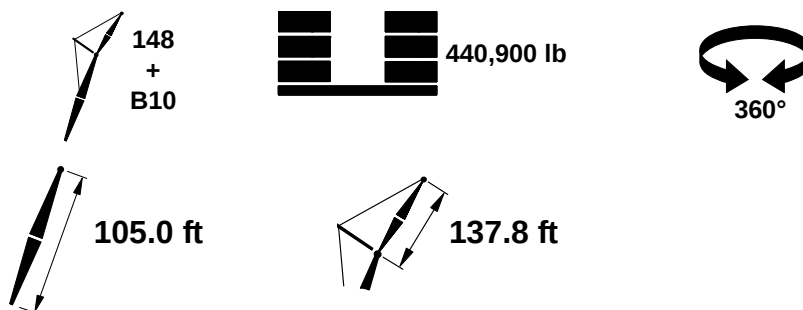
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
60	84.3	307.0	52,400				60
65	83.3	306.0	51,100				65
70	82.4	304.9	49,900				70
75	81.4	303.8	48,700	84.9	300.4	41,800	75
80	80.4	302.5	47,600	83.9	299.1	40,800	80
85	79.4	301.2	46,300	82.9	297.8	39,800	85
90	78.5	299.8	45,200	81.9	296.3	39,000	90
95	77.5	298.3	44,100	80.9	294.8	38,000	95
100	76.5	296.7	43,000	79.9	293.2	37,100	100
105	75.5	295.0	41,900	78.9	291.4	36,300	105
110	74.5	293.2	40,900	77.9	289.6	35,500	110
115	73.4	291.2	39,900	76.9	287.7	34,700	115
120	72.4	289.2	39,000	75.8	285.6	33,900	120
125	71.4	287.1	38,000	74.8	283.5	33,100	125
130	70.3	284.9	37,100	73.7	281.3	32,500	130
135	69.3	282.6	36,200	72.7	278.9	31,700	135
140	68.2	280.1	35,400	71.6	276.4	31,000	140
145	67.2	277.6	34,500	70.5	273.8	30,200	145
150	66.1	274.9	33,800	69.4	271.1	29,400	150
155	65.0	272.1	33,000	68.3	268.3	28,600	155
160	63.9	269.2	32,200	67.2	265.3	27,900	160
165	62.8	266.1	31,500	66.1	262.2	27,200	165
170	61.7	262.9	30,800	64.9	258.9	26,500	170
175	60.5	259.6	30,100	63.8	255.5	25,800	175
180	59.4	256.1	29,500	62.6	252.0	25,300	180
185	58.2	252.5	28,800	61.4	248.3	24,700	185
190	57.0	248.7	28,200	60.2	244.4	24,100	190
195	55.8	244.7	27,600	59.0	240.4	23,600	195
200	54.6	240.6	27,000	57.7	236.2	23,100	200
205	53.3	236.2	26,400	56.4	231.8	22,600	205
210	52.0	231.7	25,900	55.1	227.2	22,100	210
215	50.7	227.0	25,400	53.8	222.3	21,700	215
220	49.4	222.0	24,900	52.4	217.2	21,300	220
225	48.0	216.8	24,400	51.0	211.9	20,900	225
230	46.6	211.4	24,000	49.6	206.3	20,400	230
235	45.2	205.6	23,500	48.1	200.4	20,000	235
240	43.7	199.6	23,100	46.6	194.2	19,700	240
245	42.1	193.2	22,700	45.0	187.7	19,300	245
250	40.5	186.4	22,300	43.3	180.7	19,000	250
260	37.1	171.6	21,600	39.8	165.3	18,400	260
270	33.4	154.6	20,900	35.9	147.6	17,800	270
280	29.1	134.5	20,300	31.4	126.2	17,400	280
290	24.0	109.5	19,800				290



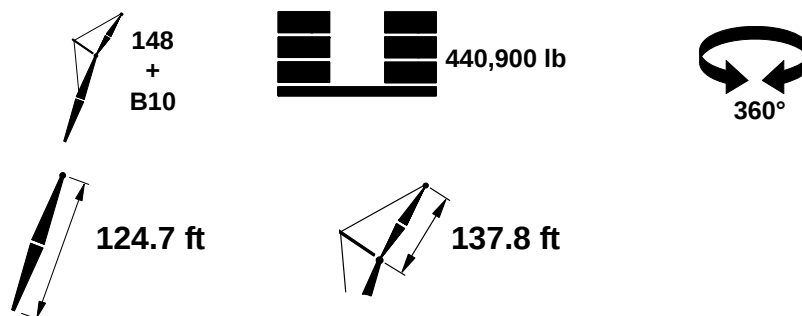
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
60	84.7	326.9	52,600				60
65	83.8	326.0	51,500				65
70	82.9	325.0	50,400				70
75	81.9	323.9	49,300				75
80	81.0	322.8	48,100	84.3	319.2	41,100	80
85	80.1	321.5	47,000	83.4	317.9	40,300	85
90	79.2	320.2	45,900	82.5	316.6	39,300	90
95	78.3	318.8	44,900	81.5	315.2	38,500	95
100	77.3	317.3	43,900	80.6	313.6	37,600	100
105	76.4	315.7	42,900	79.6	312.0	36,800	105
110	75.5	314.0	41,900	78.7	310.3	36,000	110
115	74.5	312.2	40,900	77.7	308.5	35,300	115
120	73.6	310.4	40,000	76.8	306.6	34,600	120
125	72.6	308.4	39,100	75.8	304.7	33,900	125
130	71.6	306.3	38,200	74.8	302.6	33,100	130
135	70.7	304.2	37,300	73.8	300.4	32,500	135
140	69.7	301.9	36,500	72.8	298.1	31,800	140
145	68.7	299.5	35,700	71.8	295.7	31,200	145
150	67.7	297.1	35,000	70.8	293.2	30,400	150
155	66.7	294.5	34,200	69.8	290.6	29,700	155
160	65.7	291.8	33,400	68.8	287.8	28,900	160
165	64.7	289.0	32,700	67.8	285.0	28,200	165
170	63.6	286.0	32,000	66.7	282.0	27,600	170
175	62.6	283.0	31,300	65.6	278.9	26,900	175
180	61.5	279.8	30,600	64.6	275.7	26,300	180
185	60.5	276.5	30,000	63.5	272.3	25,700	185
190	59.4	273.1	29,500	62.4	268.8	25,200	190
195	58.3	269.5	28,900	61.3	265.2	24,600	195
200	57.2	265.7	28,300	60.1	261.4	24,100	200
205	56.0	261.8	27,700	59.0	257.4	23,600	205
210	54.9	257.8	27,200	57.8	253.3	23,100	210
215	53.7	253.5	26,600	56.6	249.0	22,700	215
220	52.5	249.1	26,100	55.4	244.5	22,200	220
225	51.3	244.5	25,600	54.2	239.8	21,800	225
230	50.1	239.7	25,100	52.9	234.9	21,400	230
235	48.8	234.7	24,700	51.6	229.8	21,000	235
240	47.5	229.5	24,300	50.3	224.4	20,700	240
245	46.2	224.0	23,900	49.0	218.8	20,300	245
250	44.9	218.3	23,500	47.6	212.9	19,900	250
260	42.0	205.9	22,700	44.6	200.1	19,300	260
270	39.0	192.1	22,000	41.5	185.9	18,700	270
280	35.7	176.6	21,300	38.1	169.8	18,100	280
290	32.1	158.8	20,700	34.3	151.2	17,700	290
300	27.9	137.8	17,600	29.9	128.8	17,300	300
310	22.9	111.6	14,100				310



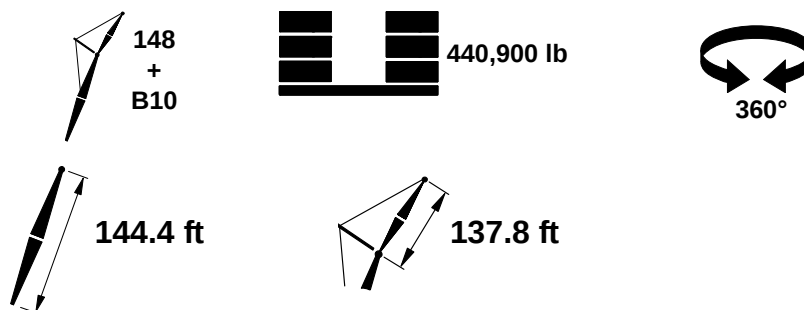
	10°			20°			
 ft	 °	 ft	 lb	 °	 ft	 lb	 ft
60	85.0	346.8	52,800				60
65	84.1	345.9	51,700				65
70	83.3	345.0	50,600				70
75	82.4	344.0	49,600				75
80	81.6	342.9	48,600				80
85	80.7	341.7	47,500	84.7	339.2	41,400	85
90	79.8	340.5	46,500	83.8	338.1	40,500	90
95	79.0	339.2	45,600	82.9	336.8	39,700	95
100	78.1	337.8	44,600	82.0	335.5	38,900	100
105	77.2	336.3	43,600	81.2	334.0	38,000	105
110	76.3	334.7	42,700	80.3	332.5	37,300	110
115	75.4	333.0	41,800	79.4	330.9	36,600	115
120	74.6	331.3	40,900	78.5	329.2	35,900	120
125	73.7	329.4	40,000	77.6	327.5	35,200	125
130	72.8	327.5	39,100	76.7	325.6	34,500	130
135	71.9	325.5	38,300	75.8	323.7	33,800	135
140	70.9	323.4	37,500	74.8	321.6	33,100	140
145	70.0	321.2	36,800	73.9	319.5	32,500	145
150	69.1	318.9	36,000	73.0	317.3	31,900	150
155	68.2	316.5	35,300	72.1	314.9	31,300	155
160	67.2	314.0	34,500	71.1	312.5	30,600	160
165	66.3	311.4	33,800	70.2	310.0	29,900	165
170	65.3	308.7	33,200	69.2	307.3	29,200	170
175	64.4	305.9	32,500	68.2	304.6	28,600	175
180	63.4	302.9	31,900	67.3	301.7	27,900	180
185	62.4	299.9	31,200	66.3	298.8	27,300	185
190	61.4	296.7	30,600	65.3	295.7	26,700	190
195	60.4	293.4	30,000	64.3	292.4	26,200	195
200	59.4	290.0	29,400	63.2	289.1	25,600	200
205	58.4	286.5	28,900	62.2	285.6	25,100	205
210	57.3	282.8	28,300	61.2	282.0	24,600	210
215	56.3	278.9	27,800	60.1	278.3	24,100	215
220	55.2	275.0	27,300	59.0	274.4	23,600	220
225	54.1	270.8	26,800	57.9	270.3	23,200	225
230	53.0	266.5	26,300	56.8	266.1	22,800	230
235	51.9	262.0	25,900	55.7	261.7	22,300	235
240	50.7	257.4	25,400	54.5	257.2	21,900	240
245	49.5	252.5	25,000	53.4	252.4	21,600	245
250	48.3	247.5	24,500	52.2	247.5	21,200	250
260	45.9	236.7	23,700	51.0	242.3	20,900	260
270	43.3	224.9	23,000	48.4	231.2	20,200	270
280	40.5	211.9	22,300	45.8	219.2	19,500	280
290	37.6	197.5	19,000	42.9	205.8	18,900	290
300	34.4	181.3	15,400	39.9	190.9	18,400	300
310	30.8	162.8	12,100	36.6	174.1	17,200	310
320	26.8	140.9	8,800	32.8	154.6	13,500	320
				28.5	131.3	9,900	320



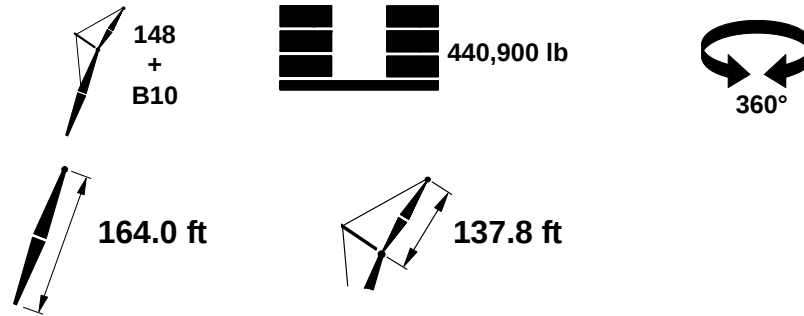
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
50	84.7	249.5	45,200 ^c				50
55	83.5	248.5	43,700 ^b				55
60	82.3	247.4	42,100				60
65	81.1	246.2	40,500				65
70	79.9	244.9	39,000				70
75	78.7	243.5	37,600	84.2	241.5	30,300	75
80	77.4	241.9	36,200	82.9	239.9	29,200	80
85	76.2	240.2	34,800	81.7	238.3	28,100	85
90	74.9	238.4	33,400	80.4	236.5	27,100	90
95	73.7	236.5	32,200	79.1	234.6	26,200	95
100	72.4	234.4	30,900	77.9	232.5	25,300	100
105	71.1	232.3	29,800	76.6	230.3	24,400	105
110	69.8	229.9	28,700	75.3	228.0	23,600	110
115	68.5	227.5	27,600	73.9	225.6	22,800	115
120	67.2	224.9	26,600	72.6	223.0	22,000	120
125	65.9	222.1	25,600	71.2	220.2	21,300	125
130	64.5	219.2	24,700	69.9	217.3	20,600	130
135	63.1	216.1	23,800	68.5	214.2	19,900	135
140	61.7	212.9	22,900	67.1	211.0	19,300	140
145	60.3	209.5	22,100	65.6	207.6	18,600	145
150	58.8	205.9	21,300	64.2	203.9	18,100	150
155	57.4	202.1	20,600	62.7	200.1	17,500	155
160	55.8	198.0	19,900	61.1	196.1	17,000	160
165	54.3	193.8	19,200	59.6	191.9	16,500	165
170	52.7	189.3	18,600	58.0	187.4	16,000	170
175	51.1	184.6	18,000	56.3	182.6	15,500	175
180	49.4	179.6	17,300	54.7	177.6	15,000	180
185	47.7	174.2	16,700	52.9	172.2	14,600	185
190	45.9	168.6	16,200	51.1	166.5	14,200	190
195	44.1	162.5	15,700	49.2	160.4	13,800	195
200	42.2	156.1	15,200	47.3	153.9	13,400	200
205	40.2	149.1	14,700	45.3	146.9	13,000	205
210	38.0	141.7	14,300	43.1	139.3	12,700	210
215	35.8	133.5	13,800	40.8	131.1	12,400	215
220	33.4	124.6	13,500	38.3	122.0	12,100	220
225	30.8	114.6	13,100	35.7	111.9	11,900	225
230	27.9	103.4	12,700	32.7	100.3	11,700	230
235	24.6	90.2	12,400	29.2	86.7	11,500	235
240	20.6	74.1	12,200				240



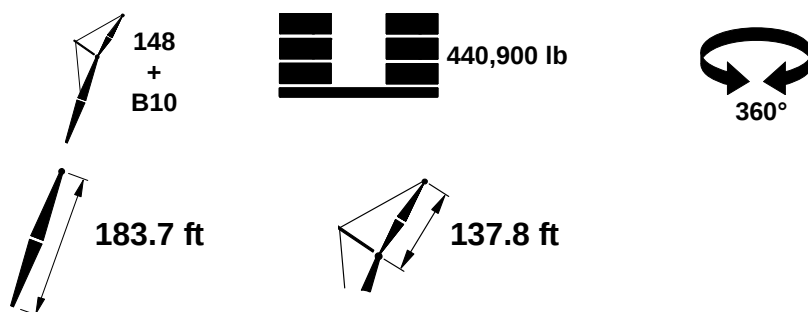
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
55	84.0	268.5	44,200b				55
60	82.9	267.5	42,800				60
65	81.8	266.4	41,300				65
70	80.7	265.2	39,900				70
75	79.5	263.9	38,500	84.6	261.6	30,700	75
80	78.4	262.4	37,200	83.5	260.2	29,700	80
85	77.3	260.9	35,900	82.3	258.7	28,700	85
90	76.1	259.2	34,700	81.2	257.0	27,700	90
95	75.0	257.5	33,400	80.0	255.3	26,800	95
100	73.8	255.6	32,200	78.8	253.4	26,000	100
105	72.6	253.6	31,100	77.7	251.4	25,100	105
110	71.5	251.5	30,000	76.5	249.3	24,300	110
115	70.3	249.2	29,000	75.3	247.1	23,600	115
120	69.1	246.9	28,000	74.0	244.7	22,800	120
125	67.8	244.4	27,000	72.8	242.2	22,100	125
130	66.6	241.8	26,100	71.6	239.6	21,500	130
135	65.4	239.0	25,200	70.3	236.8	20,800	135
140	64.1	236.1	24,400	69.0	233.9	20,200	140
145	62.8	233.0	23,600	67.8	230.8	19,500	145
150	61.5	229.8	22,800	66.4	227.6	19,000	150
155	60.2	226.4	22,100	65.1	224.2	18,400	155
160	58.9	222.8	21,300	63.8	220.6	17,900	160
165	57.5	219.1	20,600	62.4	216.9	17,400	165
170	56.1	215.2	20,000	61.0	212.9	16,900	170
175	54.7	211.0	19,400	59.6	208.8	16,500	175
180	53.3	206.7	18,800	58.1	204.4	16,000	180
185	51.8	202.1	18,200	56.6	199.8	15,500	185
190	50.3	197.3	17,600	55.1	195.0	15,200	190
195	48.7	192.2	17,100	53.5	189.9	14,700	195
200	47.1	186.9	16,600	51.9	184.5	14,300	200
205	45.5	181.2	16,100	50.2	178.8	14,000	205
210	43.8	175.2	15,600	48.5	172.7	13,600	210
215	42.0	168.8	15,200	46.7	166.2	13,300	215
220	40.2	161.9	14,700	44.8	159.3	13,000	220
225	38.2	154.6	14,300	42.8	151.8	12,700	225
230	36.2	146.6	13,900	40.8	143.8	12,400	230
235	34.0	138.0	13,600	38.5	135.0	12,200	235
240	31.7	128.6	13,200	36.2	125.4	11,900	240
245	29.2	118.1	12,800	33.5	114.6	11,700	245
250	26.4	106.2	12,500	30.6	102.3	11,500	250
260	19.2	75.1	12,100				260



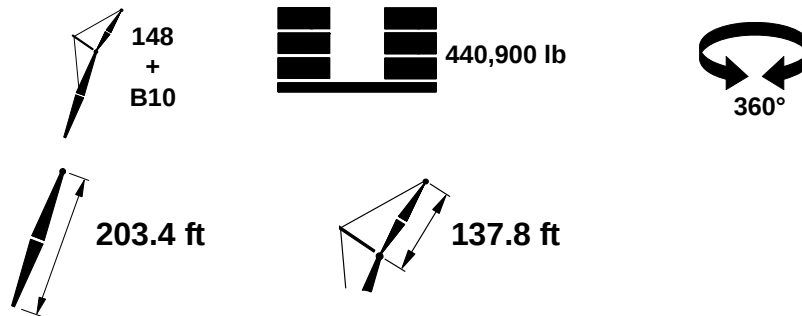
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
55	84.4	288.5	44,600				55
60	83.4	287.6	43,300				60
65	82.4	286.5	42,000				65
70	81.3	285.4	40,600				70
75	80.3	284.2	39,300				75
80	79.2	282.8	38,100	85.0	281.7	31,000	80
85	78.2	281.4	36,900	82.9	279.0	29,100	85
90	77.1	279.9	35,600	81.8	277.4	28,300	90
95	76.1	278.2	34,500	80.8	275.8	27,400	95
100	75.0	276.5	33,400	79.7	274.1	26,500	100
105	73.9	274.7	32,300	78.6	272.3	25,800	105
110	72.8	272.7	31,300	77.5	270.3	25,000	110
115	71.7	270.7	30,200	76.4	268.3	24,300	115
120	70.6	268.5	29,300	75.3	266.1	23,500	120
125	69.5	266.2	28,300	74.1	263.8	22,900	125
130	68.4	263.8	27,400	73.0	261.4	22,200	130
135	67.3	261.3	26,600	71.9	258.9	21,600	135
140	66.1	258.6	25,700	70.7	256.2	21,000	140
145	64.9	255.9	24,900	69.5	253.4	20,400	145
150	63.8	252.9	24,200	68.3	250.5	19,800	150
155	62.6	249.9	23,400	67.1	247.5	19,300	155
160	61.4	246.7	22,700	65.9	244.2	18,800	160
165	60.2	243.3	22,000	64.7	240.9	18,200	165
170	58.9	239.8	21,300	63.4	237.4	17,800	170
175	57.7	236.1	20,700	62.2	233.7	17,300	175
180	56.4	232.3	20,100	60.9	229.8	16,900	180
185	55.1	228.3	19,500	59.6	225.7	16,500	185
190	53.8	224.0	18,900	58.2	221.5	16,000	190
195	52.4	219.6	18,400	56.8	217.0	15,600	195
200	51.0	215.0	17,900	55.4	212.4	15,200	200
205	49.6	210.1	17,300	54.0	207.5	14,900	205
210	48.2	204.9	16,900	52.5	202.3	14,500	210
215	46.7	199.5	16,400	51.0	196.8	14,200	215
220	45.1	193.8	15,900	49.5	191.1	13,800	220
225	43.5	187.8	15,500	47.9	185.0	13,500	225
230	41.9	181.4	15,100	46.2	178.5	13,300	230
235	40.2	174.7	14,700	44.5	171.7	12,900	235
240	38.4	167.4	14,300	42.6	164.4	12,700	240
245	36.5	159.7	14,000	40.7	156.5	12,400	245
250	34.6	151.3	13,600	38.7	148.0	12,200	250
260	30.2	132.4	13,000	34.2	128.6	11,800	260
270	25.0	108.8	12,500	28.8	104.2	11,400	270
280	18.1	75.9	12,000				280



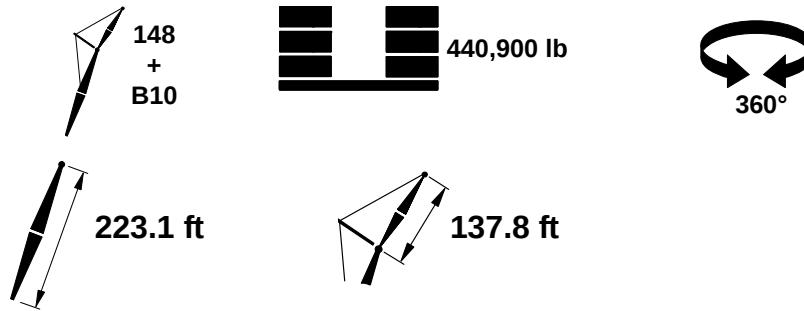
	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
55	84.8	308.4	45,000				55
60	83.8	307.5	43,700				60
65	82.9	306.6	42,500				65
70	81.9	305.5	41,200				70
75	80.9	304.4	40,100				75
80	80.0	303.1	38,900	84.4	300.5	30,400	80
85	79.0	301.8	37,700	83.4	299.2	29,500	85
90	78.0	300.4	36,500	82.4	297.8	28,700	90
95	77.0	298.9	35,400	81.4	296.2	27,900	95
100	76.0	297.3	34,400	80.4	294.6	27,000	100
105	75.0	295.6	33,300	79.4	292.9	26,300	105
110	74.0	293.8	32,300	78.4	291.1	25,600	110
115	73.0	291.9	31,300	77.3	289.2	24,900	115
120	72.0	289.9	30,400	76.3	287.2	24,200	120
125	70.9	287.7	29,500	75.3	285.1	23,500	125
130	69.9	285.5	28,600	74.2	282.9	22,900	130
135	68.9	283.2	27,800	73.2	280.6	22,300	135
140	67.8	280.8	26,900	72.1	278.2	21,700	140
145	66.7	278.2	26,100	71.0	275.6	21,200	145
150	65.7	275.5	25,400	69.9	272.9	20,600	150
155	64.6	272.8	24,600	68.8	270.1	20,000	155
160	63.5	269.8	23,900	67.7	267.2	19,500	160
165	62.4	266.8	23,300	66.6	264.1	19,100	165
170	61.3	263.6	22,600	65.5	260.9	18,600	170
175	60.1	260.3	22,000	64.3	257.6	18,100	175
180	59.0	256.8	21,300	63.2	254.1	17,700	180
185	57.8	253.2	20,700	62.0	250.5	17,200	185
190	56.6	249.4	20,200	60.8	246.7	16,900	190
195	55.4	245.4	19,700	59.6	242.7	16,400	195
200	54.2	241.3	19,100	58.3	238.5	16,000	200
205	52.9	237.0	18,600	57.0	234.2	15,700	205
210	51.6	232.5	18,100	55.8	229.7	15,300	210
215	50.3	227.8	17,600	54.4	224.9	14,900	215
220	49.0	222.8	17,100	53.1	219.9	14,600	220
225	47.6	217.6	16,700	51.7	214.7	14,300	225
230	46.2	212.2	16,300	50.3	209.2	14,000	230
235	44.8	206.5	15,900	48.8	203.5	13,700	235
240	43.3	200.5	15,500	47.3	197.4	13,400	240
245	41.8	194.1	15,100	45.8	191.0	13,200	245
250	40.2	187.4	14,700	44.1	184.2	12,900	250
260	36.8	172.7	14,100	40.7	169.2	12,400	260
270	33.1	155.8	13,400	36.9	152.0	12,000	270
280	28.9	135.9	12,800	32.5	131.6	11,600	280
290	23.8	111.2	12,400	27.3	105.9	11,400	290
300	17.0	76.5	12,000				300



	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
60	84.2	327.5	44,200				60
65	83.3	326.6	42,900				65
70	82.4	325.6	41,800				70
75	81.5	324.5	40,700				75
80	80.6	323.4	39,600				80
85	79.7	322.1	38,400	84.7	320.5	30,700	85
90	78.8	320.8	37,400	82.9	318.0	29,000	90
95	77.8	319.4	36,400	81.9	316.6	28,300	95
100	76.9	317.9	35,300	81.0	315.1	27,500	100
105	76.0	316.3	34,300	80.1	313.5	26,800	105
110	75.0	314.6	33,300	79.1	311.8	26,100	110
115	74.1	312.8	32,400	78.2	310.1	25,400	115
120	73.1	311.0	31,400	77.2	308.2	24,800	120
125	72.2	309.0	30,500	76.2	306.2	24,100	125
130	71.2	307.0	29,700	75.3	304.2	23,500	130
135	70.3	304.8	28,800	74.3	302.0	22,900	135
140	69.3	302.5	28,100	73.3	299.8	22,300	140
145	68.3	300.2	27,300	72.3	297.4	21,800	145
150	67.3	297.7	26,500	71.3	294.9	21,300	150
155	66.3	295.1	25,800	70.3	292.4	20,800	155
160	65.3	292.5	25,100	69.3	289.7	20,300	160
165	64.3	289.6	24,400	68.2	286.8	19,800	165
170	63.2	286.7	23,800	67.2	283.9	19,300	170
175	62.2	283.7	23,100	66.2	280.9	18,900	175
180	61.1	280.5	22,500	65.1	277.7	18,400	180
185	60.1	277.2	21,900	64.0	274.4	18,000	185
190	59.0	273.8	21,400	62.9	270.9	17,600	190
195	57.9	270.2	20,800	61.8	267.3	17,200	195
200	56.8	266.5	20,200	60.7	263.6	16,800	200
205	55.7	262.6	19,700	59.5	259.7	16,400	205
210	54.5	258.5	19,300	58.4	255.6	16,000	210
215	53.4	254.3	18,800	57.2	251.3	15,700	215
220	52.2	249.9	18,300	56.0	246.9	15,400	220
225	51.0	245.3	17,900	54.8	242.3	15,100	225
230	49.7	240.6	17,400	53.5	237.5	14,700	230
235	48.5	235.6	17,000	52.3	232.5	14,500	235
240	47.2	230.3	16,600	51.0	227.2	14,200	240
245	45.9	224.9	16,200	49.6	221.7	13,900	245
250	44.5	219.2	15,800	48.3	215.9	13,600	250
260	41.7	206.8	15,000	45.4	203.4	13,100	260
270	38.7	193.1	14,400	42.3	189.5	12,600	270
280	35.4	177.7	13,800	39.0	173.8	12,200	280
290	31.8	160.1	13,200	35.3	155.8	11,800	290
300	27.7	139.3	12,700	31.0	134.4	11,500	300
310	22.8	113.5	12,200	25.8	107.4	11,300	310
320	16.0	77.0	12,000				320



	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
60	84.6	347.4	44,400				60
65	83.7	346.5	43,300				65
70	82.9	345.6	42,300				70
75	82.0	344.6	41,200				75
80	81.1	343.5	40,100				80
85	80.3	342.4	39,100	85.0	340.5	30,900	85
90	79.4	341.1	38,000	84.2	339.4	30,100	90
95	78.6	339.8	37,000	83.3	338.2	29,400	95
100	77.7	338.4	36,100	82.4	336.8	28,700	100
105	76.8	336.9	35,100	81.5	335.4	27,900	105
110	75.9	335.3	34,200	80.7	333.9	27,200	110
115	75.0	333.7	33,200	79.8	332.4	26,500	115
120	74.2	331.9	32,400	78.9	330.7	25,900	120
125	73.3	330.1	31,500	78.0	329.0	25,300	125
130	72.4	328.2	30,700	77.1	327.2	24,700	130
135	71.5	326.2	29,900	76.2	325.2	24,100	135
140	70.6	324.0	29,100	75.3	323.2	23,500	140
145	69.6	321.8	28,300	74.3	321.1	23,000	145
150	68.7	319.6	27,600	73.4	318.9	22,400	150
155	67.8	317.2	26,900	72.5	316.6	21,900	155
160	66.8	314.7	26,200	71.6	314.2	21,400	160
165	65.9	312.1	25,500	70.6	311.7	21,000	165
170	65.0	309.4	24,800	69.7	309.1	20,500	170
175	64.0	306.6	24,200	68.7	306.4	20,000	175
180	63.0	303.6	23,600	67.7	303.6	19,500	180
185	62.0	300.6	23,000	66.7	300.7	19,100	185
190	61.0	297.4	22,400	65.7	297.6	18,700	190
195	60.0	294.1	21,900	64.7	294.4	18,300	195
200	59.0	290.7	21,400	63.7	291.1	17,900	200
205	58.0	287.2	20,900	62.7	287.7	17,500	205
210	57.0	283.5	20,400	61.7	284.1	17,100	210
215	55.9	279.7	19,900	60.6	280.4	16,700	215
220	54.8	275.7	19,300	59.5	276.6	16,400	220
225	53.7	271.6	18,900	58.5	272.6	16,100	225
230	52.6	267.3	18,500	57.4	268.5	15,800	230
235	51.5	262.8	18,000	56.2	264.1	15,500	235
240	50.4	258.2	17,600	55.1	259.6	15,200	240
245	49.2	253.4	17,300	53.9	255.0	14,900	245
250	48.0	248.3	16,800	52.8	250.1	14,600	250
260	45.5	237.6	16,100	51.6	245.0	14,300	260
270	43.0	225.8	15,400	49.1	234.1	13,800	270
280	40.2	212.9	14,700	46.4	222.3	13,300	280
290	37.3	198.6	14,200	43.6	209.2	12,800	290
300	34.1	182.5	13,600	40.7	194.6	12,400	300
310	30.6	164.1	13,000	37.4	178.3	12,000	310
320	26.6	142.5	12,600	33.8	159.4	11,800	320
330	21.8	115.5	11,300	29.6	137.0	11,500	330



	10°			20°			
ft	o	ft	lb	o	ft	lb	ft
60	84.9	367.3	44,600				60
65	84.1	366.5	43,500				65
70	83.3	365.6	42,600				70
75	82.4	364.6	41,500				75
80	81.6	363.6	40,600				80
85	80.8	362.5	39,600	84.5	359.4	30,300	85
90	80.0	361.4	38,600	83.7	358.3	29,600	90
95	79.2	360.1	37,600	82.9	357.0	28,900	95
100	78.4	358.8	36,700	82.0	355.7	28,200	100
105	77.6	357.4	35,800	81.2	354.3	27,600	105
110	76.7	355.9	34,900	80.4	352.8	27,000	110
115	75.9	354.3	34,000	79.5	351.3	26,300	115
120	75.1	352.7	33,200	78.7	349.6	25,700	120
125	74.2	351.0	32,400	77.8	347.9	25,100	125
130	73.4	349.2	31,600	77.0	346.1	24,600	130
135	72.5	347.3	30,800	76.1	344.2	24,000	135
140	71.7	345.3	30,000	75.3	342.3	23,500	140
145	70.8	343.3	29,200	74.4	340.2	23,000	145
150	70.0	341.1	28,600	73.5	338.1	22,500	150
155	69.1	338.9	27,900	72.7	335.8	22,000	155
160	68.2	336.6	27,200	71.8	333.5	21,500	160
165	67.3	334.1	26,500	70.9	331.1	21,000	165
170	66.4	331.6	25,900	70.0	328.5	20,700	170
175	65.6	329.0	25,300	69.1	325.9	20,200	175
180	64.6	326.3	24,600	68.2	323.2	19,700	180
185	63.7	323.5	24,100	67.3	320.4	19,300	185
190	62.8	320.5	23,500	66.3	317.4	18,900	190
195	61.9	317.5	22,900	65.4	314.4	18,600	195
200	61.0	314.4	22,400	64.4	311.2	18,200	200
205	60.0	311.1	21,900	63.5	307.9	17,800	205
210	59.1	307.7	21,400	62.5	304.5	17,400	210
215	58.1	304.2	20,900	61.5	301.0	17,100	215
220	57.1	300.6	20,400	60.5	297.3	16,700	220
225	56.1	296.8	19,900	59.5	293.6	16,500	225
230	55.1	292.9	19,500	58.5	289.6	16,100	230
235	54.1	288.8	19,100	57.5	285.5	15,800	235
240	53.0	284.6	18,600	56.4	281.3	15,500	240
245	52.0	280.3	18,200	55.4	276.9	15,200	245
250	50.9	275.7	17,800	54.3	272.4	14,900	250
260	48.7	266.1	17,100	52.1	262.7	14,400	260
270	46.4	255.8	16,400	49.7	252.2	13,900	270
280	44.1	244.5	15,600	47.3	240.8	13,400	280
290	41.5	232.2	15,000	44.8	228.4	13,000	290
300	38.9	218.8	14,500	42.1	214.7	12,600	300
310	36.0	203.9	13,900	39.2	199.6	12,300	310
320	32.9	187.1	12,000	36.0	182.5	11,900	320
330	29.5	168.0	9,000	32.5	162.9	10,700	330
340				28.4	139.5	7,500	340