

Liftcrane Boom Capacities

Boom No. B60:680

with Mast No. M10:684 or Mast No. M11:684

661,300 lb VPC (Variable Position Counterweight)

360 Degree Rating

MLC650 VPC-MAX SERIES 2



LIFTING CAPACITIES: Lifting capacities for various boom lengths and 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.

Upper boom point capacity for liftcrane service with single part whip line from Drum 3 is 30,000 lb or 60,000 lb with two part whip line. When Drum 1 or Drum 2 is used, capacity with single part whip line is 48,800 lb, or 73,500 lb with two part whip line. In all cases, upper boom point capacities cannot exceed those listed for main boom capacity.

Weight of all load blocks, hooks, weight ball, slings, hoist lines, etc., beneath boom and jib point sheaves is considered part of load. Boom is 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 8,200 lb minimum weight and (c) require 15,500 lb minimum weight. **Caution: Do not operate in areas indicated by (b) or (c) without required minimum weight.** *Boom 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. 81022686**, Mast Rigging **No. 81025005** or **No. 84050187**, Wire Rope Specifications chart **No. 9387-A**, Counterweight Arrangements chart **No. 9349-A**, and Wind Conditions chart **No. 9388-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 Specification chart **No. 9389-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.



BOOM POINT ELEVATION: Boom point elevation is vertical distance from ground level to centerline of boom point shaft.



MACHINE EQUIPMENT: Machine equipped with VPC-MAX, 36 ft 6 in. crawlers, 60 in. or 80 in. treads, 36 ft 1 in. live mast, 118.1 ft mast, 16 part boom hoist reeving, boom support straps, and 661,300 lb VPC.

Consult chart **No. 9675-A** when jib No. 148 is attached.

Luffing Jib Backstay Deduct	
Boom Length (ft)	Deduct (lb)
144.4	6,000
164.0	7,500
183.7	8,500
203.4	10,000
223.1	10,000
242.8	10,000
262.5	11,000
282.2	12,500
301.8	13,500
321.5	14,800
341.2	16,000
360.9	17,300
380.6	17,300
400.3	17,300
419.9	17,300
439.6	17,300
Deduct the appropriate value from capacities when luffing jib backstays are stored on boom.	

Deduct From Capacities When Jib No. 148 Is Attached	
Jib Length (ft)	Deduct (lb)
39.4	19,200
59.1	28,400
78.7	36,900
98.4	45,000
118.1	56,000
137.8	63,300
Weight of jib and 6,500 lb suspended beneath jib point have been included in determination of deduct.	

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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 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.

Select counterweight position from Tables 1 or 2 that will allow raising and lowering of boom length. Counterweight position selection may be changed with boom on ground or while boom is within operating range of capacity chart.

Combined weight beneath boom point sheaves must not exceed block weight shown.

Table 1a: With Luffing Jib Backstays

Over End or Side of Crawlers		
Boom Length (ft)	38.7 ft Counterweight Position	60.0 ft Counterweight Position
	Block Weight (lb)	
144.4 - 203.4	46,500	46,500
223.1 - 242.8	22,600	46,500
262.5	16,200	46,500
282.2 - 321.5	#	46,500
341.2	#	22,600
360.9	Raising Not Permitted	22,600
380.6		16,200
400.3		#
419.9		#
439.6		#
459.3		#

Table 1b: With Luffing Jib Backstays

Over End of Blocked Crawlers		
Boom Length (ft)	38.7 ft Counterweight Position	60.0 ft Counterweight Position
	Block Weight (lb)	
144.4 - 203.4	46,500	46,500
223.1 - 242.8	22,600	46,500
262.5	16,200	46,500
282.2 - 321.5	#	46,500
341.2	#	22,600
360.9	#	22,600
380.6	Raising Not Permitted	16,200
400.3		#
419.9		#
439.6		#
459.3		#
		#

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)	38.7 ft Counterweight Position	60.0 ft Counterweight Position
	Block Weight (lb)	
144.4 - 223.1	46,500	46,500
242.8 - 262.5	22,600	46,500
282.2 - 341.2	16,200	46,500
360.9	#	22,600
380.6	Raising Not Permitted	22,600
400.3		22,600
419.9		16,200
439.6		#
459.3		#

Table 2b: Without Luffing Jib Backstays

Over End of Blocked Crawlers		
Boom Length (ft)	38.7 ft Counterweight Position	60.0 ft Counterweight Position
	Block Weight (lb)	
144.4 - 223.1	46,500	46,500
242.8 - 262.5	22,600	46,500
282.2 - 341.2	16,200	46,500
360.9	#	22,600
380.6	#	22,600
400.3	Raising Not Permitted	22,600
419.9		16,200
439.6		#
459.3		#

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



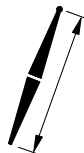
Boom No. B60:680



VPC (Variable Position Counterweight)



360 Degree Rating



Boom Length



Operating Radius
(see page 1)



Boom Angle
(see page 1)



Boom Point Elevation
(see page 1)



Counterweight Position
from Axis of Rotation



Lifting Capacities
(see page 1)

REFERENCE ONLY!

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144.4 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
28	82.7	152.8	1,418,300 c	1,460,100c
30	81.9	152.5	1,297,700 c	1,460,100c
32	81.1	152.1	1,195,000 c	1,424,000c
34	80.3	151.7	1,106,400 c	1,387,200c
36	79.4	151.3	1,029,200 b	1,387,200b
38	78.6	150.8	961,400 b	1,387,200b
40	77.8	150.3	901,400 b	1,378,200b
45	75.8	149.0	777,500	1,239,100
50	73.7	147.5	681,100	1,120,800
55	71.6	145.7	604,000	1,016,600
60	69.5	143.8	540,900	929,100
65	67.3	141.6	488,300	854,700
70	65.1	139.2	443,700	790,500
75	62.9	136.6	405,500	722,300
80	60.6	133.7	372,300	663,000
85	58.2	130.5	343,300	612,000
90	55.8	127.0	317,600	567,600
95	53.3	123.2	294,800	528,700
100	50.7	119.0	274,300	494,200
105	48.0	114.4	255,800	463,500
110	45.2	109.4	239,100	435,900
115	42.2	103.8	223,800	411,000
120	39.1	97.6	209,800	388,500
125	35.7	90.6	196,900	367,900
130	31.9	82.6	185,000	349,100
135	27.7	73.2	173,800	331,700
140	22.7	61.6	163,300	315,700
145	16.1	45.7	153,300	300,700

164.0 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
30	82.9	172.4	1,300,000 b	1,352,900b
32	82.2	172.1	1,196,700 b	1,350,900b
34	81.4	171.7	1,107,600 b	1,317,400b
36	80.7	171.4	1,030,000	1,285,500
38	80.0	171.0	961,900	1,281,900
40	79.3	170.6	901,500	1,281,900
45	77.5	169.4	777,000	1,215,200
50	75.7	168.0	680,100	1,103,900
55	73.9	166.5	602,600	1,009,800
60	72.0	164.8	539,200	925,000
65	70.2	163.0	486,300	850,600
70	68.3	160.9	441,600	786,500
75	66.4	158.6	403,200	719,900
80	64.4	156.2	369,900	660,500
85	62.4	153.5	340,800	609,500
90	60.4	150.6	315,000	565,100
95	58.4	147.4	292,100	526,100
100	56.3	144.0	271,600	491,700
105	54.1	140.3	253,200	460,900
110	51.8	136.3	236,400	433,400
115	49.5	132.0	221,200	408,500
120	47.1	127.3	207,200	386,000
125	44.6	122.2	194,400	365,400
130	42.0	116.6	182,600	346,600
135	39.2	110.4	171,600	329,400
140	36.3	103.5	161,400	313,400
145	33.1	95.8	151,900	298,700
150	29.5	87.1	143,000	285,000
160	20.8	64.1	126,500	260,300

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661,300 lb



360°

183.7 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
32	83.0	192.0	1,196,700	1,263,000
34	82.4	191.7	1,107,200	1,254,900
36	81.7	191.4	1,029,300	1,225,600
38	81.1	191.0	960,800	1,197,500
40	80.5	190.6	900,200	1,187,100
45	78.9	189.6	775,100	1,187,100
50	77.3	188.4	677,800	1,083,500
55	75.7	187.1	600,000	992,100
60	74.0	185.6	536,300	913,700
65	72.4	183.9	483,200	845,600
70	70.7	182.1	438,300	781,800
75	69.1	180.2	399,800	716,800
80	67.4	178.0	366,400	657,400
85	65.6	175.7	337,200	606,300
90	63.9	173.2	311,400	561,900
95	62.1	170.5	288,400	522,900
100	60.3	167.5	267,800	488,400
105	58.5	164.4	249,300	457,700
110	56.6	161.1	232,600	430,100
115	54.7	157.5	217,300	405,300
120	52.7	153.6	203,400	382,700
125	50.7	149.4	190,600	362,200
130	48.6	145.0	178,700	343,400
135	46.4	140.1	167,800	326,100
140	44.2	134.9	157,700	310,200
145	41.8	129.3	148,300	295,500
150	39.4	123.1	139,400	281,900
160	34.0	109.0	123,400	257,300
170	27.6	91.2	109,100	235,800
180	19.2	66.4	96,100	216,700

203.4 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
36	82.5	211.3	1,030,700	1,163,400
38	82.0	211.0	961,900	1,138,000
40	81.4	210.7	900,900	1,113,600
45	80.0	209.7	775,100	1,113,600
50	78.5	208.6	677,300	1,062,300
55	77.1	207.4	599,100	974,200
60	75.6	206.1	535,100	898,200
65	74.2	204.6	481,700	832,100
70	72.7	203.0	436,600	774,000
75	71.2	201.3	397,900	715,200
80	69.7	199.4	364,300	655,700
85	68.2	197.3	335,000	604,500
90	66.6	195.1	309,000	560,000
95	65.1	192.7	286,000	521,000
100	63.5	190.1	265,400	486,400
105	61.9	187.4	246,800	455,600
110	60.2	184.5	229,900	428,000
115	58.6	181.4	214,600	403,100
120	56.9	178.1	200,600	380,500
125	55.2	174.5	187,800	360,000
130	53.4	170.8	176,000	341,200
135	51.6	166.7	165,000	323,900
140	49.7	162.4	154,900	308,000
145	47.8	157.9	145,400	293,300
150	45.9	153.0	136,600	279,600
160	41.7	142.0	120,700	255,100
170	37.1	129.3	106,600	233,600
180	32.0	114.0	93,900	214,600
190	25.9	94.9	82,500	197,800
200	17.9	68.3	71,900	182,500

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223.1 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
38	82.7	230.9	965,500	1,081,000
40	82.2	230.6	904,200	1,059,000
45	80.9	229.8	777,900	1,011,800
50	79.6	228.8	679,700	1,011,800
55	78.2	227.7	601,100	957,600
60	76.9	226.5	536,800	884,400
65	75.6	225.1	483,300	820,400
70	74.3	223.7	437,900	764,100
75	72.9	222.1	399,100	714,000
80	71.6	220.4	365,400	656,300
85	70.2	218.5	335,900	605,100
90	68.8	216.5	309,900	560,500
95	67.4	214.4	286,700	521,400
100	66.0	212.1	266,000	486,800
105	64.6	209.7	247,400	455,900
110	63.1	207.1	230,500	428,300
115	61.7	204.4	215,100	403,300
120	60.2	201.5	201,100	380,700
125	58.7	198.4	188,200	360,200
130	57.1	195.1	176,300	341,300
135	55.6	191.6	165,400	324,000
140	54.0	187.9	155,200	308,100
145	52.3	184.0	145,800	293,400
150	50.7	179.8	137,000	279,700
160	47.2	170.7	121,000	255,100
170	43.5	160.5	106,900	233,700
180	39.5	148.7	94,400	214,800
190	35.2	135.0	83,100	197,900
200	30.3	118.7	72,900	182,900
210	24.5	98.4	63,500	169,200
220	16.7	70.0	54,700	156,800

242.8 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
40	82.8	250.5	903,500	956,400
45	81.6	249.7	776,700	956,400
50	80.4	248.8	678,100	954,200
55	79.2	247.8	599,200	936,500
60	78.0	246.7	534,600	866,300
65	76.8	245.5	480,800	804,600
70	75.6	244.2	435,300	750,000
75	74.3	242.7	396,300	701,400
80	73.1	241.2	362,500	654,200
85	71.9	239.5	332,900	602,800
90	70.6	237.7	306,800	558,200
95	69.3	235.8	283,600	519,000
100	68.1	233.7	262,800	484,300
105	66.8	231.5	244,100	453,500
110	65.5	229.2	227,100	425,800
115	64.2	226.7	211,700	400,800
120	62.8	224.1	197,700	378,200
125	61.5	221.3	184,700	357,500
130	60.1	218.4	172,800	338,700
135	58.7	215.3	161,900	321,400
140	57.3	212.1	151,700	305,400
145	55.9	208.6	142,200	290,700
150	54.4	205.0	133,400	277,000
160	51.4	197.1	117,400	252,400
170	48.3	188.4	103,400	230,900
180	45.0	178.6	90,800	212,000
190	41.5	167.5	79,600	195,200
200	37.7	154.9	69,500	180,100
210	33.5	140.4	60,300	166,600
220	28.8	123.1	51,800	154,300
230	23.2	101.5	44,000	143,000
240	15.7	71.4	36,500	132,600

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661,300 lb



360°

262.5 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
45	82.2	269.7	776,600	809,300
50	81.1	268.8	677,700	809,300
55	80.0	267.9	598,600	809,300
60	78.9	266.9	533,800	809,300
65	77.8	265.8	479,900	790,500
70	76.7	264.6	434,200	737,700
75	75.5	263.2	395,100	690,500
80	74.4	261.8	361,200	648,200
85	73.3	260.2	331,500	601,700
90	72.1	258.6	305,400	557,000
95	71.0	256.8	282,100	517,800
100	69.8	254.9	261,200	483,100
105	68.6	252.9	242,500	452,200
110	67.4	250.8	225,500	424,500
115	66.2	248.6	210,100	399,500
120	65.0	246.2	196,000	376,800
125	63.8	243.7	183,000	356,200
130	62.6	241.1	171,100	337,300
135	61.3	238.3	160,100	320,000
140	60.1	235.4	149,900	304,000
145	58.8	232.3	140,400	289,300
150	57.5	229.0	131,600	275,600
160	54.8	222.1	115,600	251,000
170	52.1	214.4	101,600	229,500
180	49.2	205.9	89,100	210,600
190	46.2	196.5	77,900	193,800
200	43.0	186.0	67,800	178,700
210	39.7	174.2	58,600	165,200
220	36.0	160.8	50,300	152,900
230	32.0	145.4	42,600	141,800
240	27.5	127.2	35,400	131,500
250	22.1	104.5	28,800	122,100

282.2 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
45	82.8	289.6	686,900	686,900
50	81.8	288.8	686,900	686,900
55	80.7	287.9	633,700	686,900
60	79.7	287.0	565,200	686,900
65	78.7	286.0	508,200	686,900
70	77.6	284.8	460,000	686,900
75	76.6	283.6	418,600	677,000
80	75.5	282.3	382,800	635,900
85	74.5	280.8	351,400	598,700
90	73.4	279.3	323,800	554,200
95	72.3	277.7	299,200	514,900
100	71.3	275.9	277,100	480,200
105	70.2	274.1	257,300	449,200
110	69.1	272.1	239,400	421,500
115	68.0	270.1	223,100	396,500
120	66.9	267.9	208,200	373,800
125	65.8	265.6	194,500	353,100
130	64.7	263.2	182,000	334,200
135	63.5	260.7	170,300	316,900
140	62.4	258.0	159,600	300,900
145	61.2	255.2	149,600	286,100
150	60.0	252.3	140,300	272,400
160	57.6	246.0	123,400	247,800
170	55.2	239.1	108,600	226,300
180	52.6	231.6	95,400	207,400
190	50.0	223.3	83,600	190,500
200	47.2	214.2	73,000	175,500
210	44.4	204.1	63,400	162,000
220	41.3	193.0	54,700	149,700
230	38.1	180.5	46,700	138,600
240	34.6	166.4	39,300	128,400
250	30.7	150.2	32,400	119,000
260	26.3	131.1	26,000	110,300
270	21.0	107.2	19,900	102,300

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301.8 ft

ft	°	ft	38.7 ft lb	60.0 ft lb
50	82.3	308.7	589,700	589,700
55	81.3	307.9	589,700	589,700
60	80.4	307.0	564,000	589,700
65	79.4	306.1	506,800	589,700
70	78.4	305.0	458,500	589,700
75	77.5	303.9	417,000	589,700
80	76.5	302.6	381,100	589,700
85	75.5	301.3	349,700	588,900
90	74.5	299.9	321,900	552,800
95	73.5	298.4	297,300	513,500
100	72.5	296.8	275,200	478,700
105	71.5	295.0	255,400	447,700
110	70.5	293.2	237,400	419,900
115	69.5	291.3	221,000	394,900
120	68.5	289.3	206,100	372,200
125	67.5	287.2	192,400	351,500
130	66.4	285.0	179,800	332,600
135	65.4	282.7	168,200	315,200
140	64.3	280.2	157,400	299,200
145	63.3	277.7	147,400	284,400
150	62.2	275.0	138,100	270,700
160	60.0	269.3	121,200	246,100
170	57.7	263.0	106,400	224,600
180	55.5	256.2	93,200	205,700
190	53.1	248.8	81,400	188,800
200	50.6	240.7	70,800	173,800
210	48.1	231.8	61,200	160,300
220	45.5	222.1	52,500	148,000
230	42.7	211.5	44,500	136,900
240	39.8	199.7	37,200	126,700
250	36.6	186.6	30,400	117,400
260	33.2	171.8	24,100	108,800
270	29.5	154.8	18,200	100,800
280	25.2	134.7		93,300
290	20.1	109.7		86,400

321.5 ft

ft	°	ft	38.7 ft lb	60.0 ft lb
50	82.8	328.6	506,900	506,900
55	81.9	327.9	506,900	506,900
60	81.0	327.0	506,900	506,900
65	80.1	326.1	503,100	506,900
70	79.2	325.1	454,600	506,900
75	78.3	324.1	413,000	506,900
80	77.3	322.9	377,000	506,900
85	76.4	321.7	345,500	506,900
90	75.5	320.3	317,700	506,900
95	74.6	318.9	293,000	506,900
100	73.6	317.4	270,800	475,500
105	72.7	315.8	250,900	444,500
110	71.8	314.1	232,900	416,600
115	70.8	312.4	216,500	391,600
120	69.9	310.5	201,600	368,800
125	68.9	308.5	187,900	348,100
130	68.0	306.5	175,200	329,200
135	67.0	304.3	163,600	311,800
140	66.0	302.1	152,800	295,800
145	65.0	299.7	142,700	281,000
150	64.0	297.2	133,400	267,200
160	62.0	292.0	116,500	242,600
170	60.0	286.2	101,600	221,100
180	57.9	280.0	88,400	202,100
190	55.7	273.2	76,700	185,300
200	53.5	265.9	66,100	170,200
210	51.2	258.0	56,500	156,700
220	48.9	249.3	47,700	144,400
230	46.4	239.9	39,800	133,300
240	43.9	229.7	32,400	123,100
250	41.2	218.5	25,700	113,800
260	38.4	206.1	19,400	105,200
270	35.3	192.4		97,200
280	32.0	176.9		89,900
290	28.4	159.1		83,000
300	24.3	138.2		76,500
310	19.3	112.1		70,400

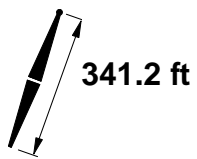
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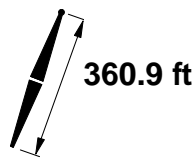
ASME B30.5



B60



 341.2 ft				
ft	°	ft	lb	lb
55	82.4	347.8	461,300	461,300
60	81.5	347.0	461,300	461,300
65	80.7	346.1	461,300	461,300
70	79.8	345.2	461,300	461,300
75	78.9	344.2	438,300	461,300
80	78.1	343.1	400,300	461,300
85	77.2	341.9	367,200	461,300
90	76.4	340.7	337,900	461,300
95	75.5	339.4	311,900	461,300
100	74.6	338.0	288,600	461,300
105	73.7	336.5	267,600	442,800
110	72.9	334.9	248,600	415,000
115	72.0	333.2	231,400	389,800
120	71.1	331.5	215,700	367,100
125	70.2	329.7	201,200	346,300
130	69.3	327.7	187,900	327,400
135	68.4	325.7	175,700	310,000
140	67.5	323.6	164,300	294,000
145	66.6	321.4	153,800	279,100
150	65.6	319.1	143,900	265,400
160	63.8	314.2	126,200	240,700
170	61.9	308.9	110,500	219,200
180	59.9	303.2	96,700	200,200
190	58.0	297.0	84,300	183,400
200	55.9	290.3	73,200	168,300
210	53.9	283.0	63,100	154,800
220	51.7	275.2	53,900	142,500
230	49.5	266.8	45,600	131,400
240	47.3	257.6	37,900	121,300
250	44.9	247.7	30,800	111,900
260	42.4	237.0	24,300	103,300
270	39.8	225.2	18,200	95,400
280	37.1	212.3		88,000
290	34.1	197.9		81,200
300	31.0	181.7		74,800
310	27.4	163.3		68,800
320	23.4	141.4		63,100
330	18.5	114.2		57,800

 360.9 ft				
ft	°	ft	lb	lb
60	82.0	366.9	402,000	402,000
65	81.2	366.1	402,000	402,000
70	80.4	365.2	402,000	402,000
75	79.6	364.3	402,000	402,000
80	78.7	363.3	395,600	402,000
85	77.9	362.2	362,300	402,000
90	77.1	361.0	333,000	402,000
95	76.3	359.7	306,900	402,000
100	75.5	358.4	283,500	402,000
105	74.7	357.0	262,500	402,000
110	73.8	355.5	243,500	402,000
115	73.0	354.0	226,300	386,300
120	72.2	352.3	210,500	363,500
125	71.3	350.6	196,000	342,700
130	70.5	348.8	182,700	323,700
135	69.6	346.9	170,400	306,300
140	68.8	344.9	159,000	290,200
145	67.9	342.9	148,500	275,400
150	67.1	340.7	138,600	261,600
160	65.3	336.2	120,900	236,900
170	63.5	331.2	105,200	215,400
180	61.7	325.9	91,300	196,400
190	59.9	320.1	79,000	179,500
200	58.0	313.9	67,800	164,500
210	56.1	307.3	57,800	150,900
220	54.2	300.1	48,600	138,700
230	52.2	292.4	40,300	127,600
240	50.1	284.2	32,700	117,400
250	48.0	275.2	25,600	108,100
260	45.8	265.6	19,100	99,500
270	43.5	255.3		91,600
280	41.1	244.0		84,300
290	38.6	231.7		77,400
300	35.9	218.2		71,100
310	33.1	203.2		65,100
320	30.0	186.4		59,500
330	26.5	167.2		54,200
340	22.6	144.5		49,200
350	17.8	116.2		44,500

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B60



380.6 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
60	82.4	386.8	348,100	348,100
65	81.6	386.1	348,100	348,100
70	80.9	385.2	348,100	348,100
75	80.1	384.3	348,100	348,100
80	79.3	383.4	348,100	348,100
85	78.6	382.3	348,100	348,100
90	77.8	381.2	333,600	348,100
95	77.0	380.0	307,500	348,100
100	76.2	378.8	284,100	348,100
105	75.5	377.5	263,100	348,100
110	74.7	376.1	244,000	348,100
115	73.9	374.6	226,700	348,100
120	73.1	373.0	210,900	348,100
125	72.3	371.4	196,400	343,100
130	71.5	369.7	183,100	324,100
135	70.7	367.9	170,800	306,700
140	69.9	366.1	159,400	290,600
145	69.1	364.1	148,900	275,800
150	68.3	362.1	139,000	262,000
160	66.7	357.8	121,200	237,300
170	65.0	353.2	105,600	215,700
180	63.3	348.2	91,700	196,700
190	61.6	342.8	79,300	179,900
200	59.9	337.1	68,200	164,800
210	58.1	330.9	58,200	151,300
220	56.3	324.3	49,000	139,000
230	54.5	317.2	40,700	127,900
240	52.6	309.6	33,100	117,800
250	50.6	301.5	26,100	108,500
260	48.6	292.8	19,600	99,900
270	46.6	283.4		92,000
280	44.4	273.3		84,700
290	42.2	262.5		77,900
300	39.9	250.7		71,500
310	37.4	237.9		65,600
320	34.8	223.8		60,000
330	32.1	208.3		54,800
340	29.0	190.9		49,800
350	25.7	171.0		45,200
360	21.8	147.5		40,700
370	17.2	118.1		36,500

400.3 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
60	82.8	406.7	305,600	305,600
65	82.0	406.0	305,600	305,600
70	81.3	405.2	305,600	305,600
75	80.6	404.3	305,600	305,600
80	79.9	403.4	305,600	305,600
85	79.1	402.4	305,600	305,600
90	78.4	401.4	305,600	305,600
95	77.7	400.3	302,700	305,600
100	76.9	399.1	279,300	305,600
105	76.2	397.8	258,200	305,600
110	75.5	396.5	239,100	305,600
115	74.7	395.1	221,800	305,600
120	74.0	393.6	206,000	305,600
125	73.2	392.1	191,500	305,400
130	72.5	390.5	178,100	305,400
135	71.7	388.8	165,800	303,000
140	71.0	387.1	154,400	286,900
145	70.2	385.2	143,800	272,100
150	69.4	383.3	133,900	258,300
160	67.9	379.3	116,100	233,500
170	66.3	374.9	100,400	211,900
180	64.7	370.2	86,500	192,900
190	63.1	365.2	74,100	176,000
200	61.5	359.8	63,000	161,000
210	59.9	354.0	53,000	147,400
220	58.2	347.9	43,800	135,200
230	56.5	341.3	35,500	124,000
240	54.7	334.3	27,900	113,900
250	52.9	326.8	20,800	104,600
260	51.1	318.8		96,000
270	49.2	310.2		88,100
280	47.3	301.1		80,800
290	45.3	291.3		74,000
300	43.2	280.8		67,600
310	41.0	269.5		61,700
320	38.8	257.2		56,100
330	36.4	243.9		50,900
340	33.9	229.3		46,000
350	31.1	213.2		41,400
360	28.2	195.2		37,000
370	24.9	174.6		32,800
380	21.1	150.3		28,800
390	16.6	119.8		25,000

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B60



661,300 lb



360°

 419.9 ft				
ft	°	ft	lb	lb
65	82.4	425.9	264,200	264,200
70	81.7	425.1	264,200	264,200
75	81.0	424.3	264,200	264,200
80	80.3	423.4	264,200	264,200
85	79.7	422.5	264,200	264,200
90	79.0	421.5	264,200	264,200
95	78.3	420.4	264,200	264,200
100	77.6	419.3	264,100	264,100
105	76.9	418.1	258,200	263,900
110	76.2	416.9	239,100	263,800
115	75.4	415.5	221,800	263,600
120	74.7	414.1	205,900	263,300
125	74.0	412.7	191,400	263,000
130	73.3	411.2	178,000	262,900
135	72.6	409.6	165,700	262,700
140	71.9	407.9	154,300	262,400
145	71.2	406.2	143,700	262,100
150	70.4	404.4	133,800	258,100
160	69.0	400.5	116,000	233,400
170	67.5	396.4	100,300	211,800
180	66.0	392.0	86,400	192,700
190	64.5	387.3	74,000	175,900
200	63.0	382.2	62,800	160,800
210	61.4	376.8	52,700	147,200
220	59.8	371.0	43,600	135,000
230	58.2	364.8	35,300	123,800
240	56.6	358.3	27,600	113,700
250	54.9	351.3	20,600	104,400
260	53.2	343.9		95,800
270	51.5	336.0		87,900
280	49.7	327.6		80,600
290	47.9	318.7		73,800
300	46.0	309.1		67,400
310	44.1	298.9		61,500
320	42.0	288.0		56,000
330	39.9	276.2		50,800
340	37.7	263.5		45,900
350	35.4	249.7		41,200
360	32.9	234.6		36,900
370	30.3	218.0		32,700
380	27.4	199.3		28,800
390	24.2	178.0		25,000
400	20.5	152.9		21,400
410	16.0	121.4		18,000

 439.6 ft				
ft	°	ft	lb	lb
65	82.8	445.8	247,000	247,000
70	82.1	445.0	247,000	247,000
75	81.4	444.3	247,000	247,000
80	80.8	443.4	247,000	247,000
85	80.1	442.5	247,000	247,000
90	79.5	441.6	246,900	246,900
95	78.8	440.6	246,700	246,700
100	78.1	439.5	246,600	246,600
105	77.5	438.4	246,400	246,400
110	76.8	437.2	234,100	246,200
115	76.1	435.9	216,800	246,000
120	75.4	434.6	200,900	245,800
125	74.8	433.2	186,300	245,500
130	74.1	431.7	173,000	245,300
135	73.4	430.2	160,600	245,000
140	72.7	428.6	149,200	244,500
145	72.0	427.0	138,500	244,200
150	71.3	425.3	128,700	244,000
160	70.0	421.6	110,800	229,600
170	68.6	417.7	95,100	208,000
180	67.1	413.5	81,200	188,900
190	65.7	409.1	68,700	172,000
200	64.3	404.3	57,600	156,900
210	62.8	399.2	47,500	143,300
220	61.3	393.7	38,400	131,100
230	59.8	387.9	30,000	119,900
240	58.3	381.8	22,400	109,800
250	56.7	375.3	15,300	100,500
260	55.2	368.4		91,900
270	53.5	361.0		84,000
280	51.9	353.3		76,700
290	50.2	345.0		69,900
300	48.5	336.2		63,500
310	46.7	326.9		57,600
320	44.8	316.9		52,100
330	42.9	306.3		46,900
340	41.0	295.0		42,000
350	38.9	282.8		37,300
360	36.8	269.6		33,000
370	34.5	255.3		28,900
380	32.1	239.7		24,900
390	29.5	222.5		21,200
400	26.7	203.3		17,700

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B60



661,300 lb



360°

ft	°	ft	38.7 ft lb	60.0 ft lb
70	82.4	464.9	215,100	215,100
75	81.8	464.2	215,100	215,100
80	81.2	463.4	215,000	215,000
85	80.5	462.5	214,800	214,800
90	79.9	461.6	214,700	214,700
95	79.3	460.7	214,500	214,500
100	78.6	459.6	214,300	214,300
105	78.0	458.5	214,200	214,200
110	77.4	457.4	213,900	213,900
115	76.7	456.2	213,700	213,700
120	76.1	454.9	200,600	213,500
125	75.4	453.6	186,100	213,200
130	74.8	452.2	172,600	213,000
135	74.1	450.8	160,300	212,700
140	73.5	449.3	148,800	212,500
145	72.8	447.7	138,200	212,000
150	72.2	446.1	128,300	211,700
160	70.9	442.6	110,300	211,100
170	69.5	438.9	94,600	207,600
180	68.2	434.9	80,700	188,600
190	66.8	430.7	68,200	171,700
200	65.5	426.1	57,100	156,600
210	64.1	421.3	47,000	143,000
220	62.7	416.1	37,800	130,700
230	61.2	410.7	29,500	119,600
240	59.8	404.9	21,800	109,400
250	58.3	398.8		100,100
260	56.9	392.3		91,500
270	55.3	385.4		83,600
280	53.8	378.1		76,300
290	52.2	370.5		69,500
300	50.6	362.3		63,200
310	49.0	353.7		57,200
320	47.3	344.5		51,700
330	45.5	334.8		46,500
340	43.8	324.5		41,600
350	41.9	313.5		37,000
360	40.0	301.7		32,700
370	38.0	289.1		28,600
380	35.9	275.5		24,700
390	33.6	260.8		21,000
400	31.3	244.7		17,400

REFERENCE ONLY!