


Liftcrane Boom Capacities With Luffing Jib Attached

Boom No. B65:685-680
Luffing Jib No. LJ11:680-681-682
with Mast No. M11:684
881,800 lb VPC (Variable Position Counterweight)
360 Degree Rating


**MLC650
VPC-MAX
SERIES 3**


 **LIFTING CAPACITIES:** Lifting capacities for various boom lengths, luffing jib lengths, boom-to-luffing jib angles, and boom 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 point sheaves, is considered part of load. Weight of luffing jib and 40,000 lb suspended beneath luffing jib point sheaves have been included in capacity determination. 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.

OPERATING CONDITIONS: Machine to operate on a firm, level, and uniformly supporting surface. Supporting surface and bearing turntable are to be level within a tolerance of 1/2 in. in 10 ft. During operation, luffing jib must be maintained at proper boom-to-luffing jib angle shown in table. Refer to Luffing Jib Rigging **No. 84038308**, Mast Rigging **No. 84050187**, Wire Rope Specifications chart **No. 9862-A**, Counterweight Arrangements chart **No. 9349-A**, Luffing Jib Raising Procedure chart **No. 9536-A**, and Wind Conditions chart **No. 9538-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 and luffing jib must be within angle range shown in capacity chart. Refer to Maximum Allowable Travel Specifications chart **No. 9537-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, 20 part luffing jib hoist reeving, luffing jib and backstay support straps, and 881,800 lb VPC.

Select counterweight position from Luffing Jib Raising Procedure chart **No. 9536-A** that will allow raising and lowering of boom and luffing jib length. Counterweight position selection may be changed with boom and luffing jib on ground or while boom and luffing jib are within operating range of capacity chart.

Consult Chart **No. 9533-A** for luffing jib capacities.

Luffing Jib Position During Operation	
 Luffing Jib Length Feet	 Boom-to-Luffing Jib Angle Degrees
85.3 - 105.0	135
114.8 - 173.9	150
193.6 - 331.4	169

Explanation of Symbols



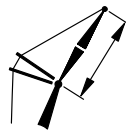
Luffing Jib No. LJ11:680-681-682
+
Boom No. B65:685-680



VPC (Variable Position Counterweight)



360 Degree Rating



Luffing Jib Length



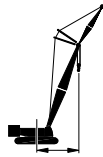
Boom-to-Luffing Jib Angle



Boom Length

REFERENCE ONLY!

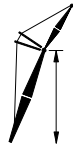
Explanation of Symbols
(continued)



Operating Radius
(see page 1)



Boom Angle
(see page 1)



Boom Point Elevation
(see page 1)



Counterweight Position
from Axis of Rotation

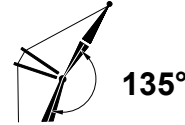
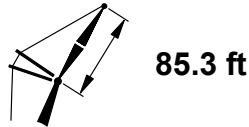


Lifting Capacities
(see page 1)

REFERENCE ONLY!

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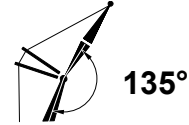
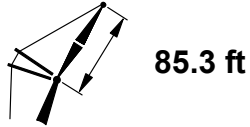


183.7 ft				
ft	°	ft	lb	lb
32	83.0	192.0	773,600	773,600
34	82.4	191.7	773,600	773,600
36	81.7	191.4	773,600	773,600
38	81.1	191.0	773,600	773,600
40	80.5	190.6	773,600	773,600
45	78.9	189.6	760,100	773,600
50	77.3	188.4	647,800	773,600
55	75.7	187.1	556,500	773,600
60	74.0	185.6	481,800	773,600
65	72.4	183.9	419,700	773,600
70	70.7	182.1	367,100	761,800
75	69.1	180.2	322,100	699,000
80	67.4	178.0	283,100	643,800
85	65.6	175.7	248,900	595,100
90	63.9	173.2	218,900	551,600
95	62.1	170.5	192,200	512,600
100	60.3	167.5	168,300	477,400
105	58.5	164.4	146,800	445,600
110	56.6	161.1	127,400	416,500
115	54.7	157.5	109,800	389,300
120	52.7	153.6	93,700	364,100
125	50.7	149.4	79,000	340,800
130	48.6	145.0	65,500	319,200
135	46.4	140.1	53,000	299,100

203.4 ft				
ft	°	ft	lb	lb
36	82.5	211.3	773,600	773,600
38	82.0	211.0	773,600	773,600
40	81.4	210.7	773,600	773,600
45	80.0	209.7	762,100	773,600
50	78.5	208.6	649,400	773,600
55	77.1	207.4	558,600	773,600
60	75.6	206.1	483,500	773,600
65	74.2	204.6	420,900	773,600
70	72.7	203.0	367,900	754,800
75	71.2	201.3	322,600	694,100
80	69.7	199.4	283,300	640,200
85	68.2	197.3	248,900	592,000
90	66.6	195.1	218,600	548,700
95	65.1	192.7	191,700	509,500
100	63.5	190.1	167,700	474,000
105	61.9	187.4	146,000	441,600
110	60.2	184.5	126,500	411,900
115	58.6	181.4	108,700	384,600
120	56.9	178.1	92,500	359,500
125	55.2	174.5	77,600	336,200
130	53.4	170.8	63,900	314,700
135	51.6	166.7	51,300	294,600
140	49.7	162.4	39,700	276,000
145	47.8	157.9	28,900	258,500
150	45.9	153.0	18,800	242,200

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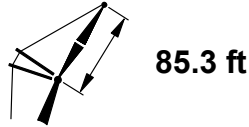


223.1 ft				
ft	°	ft	lb	lb
38	82.7	230.9	728,800	728,800
40	82.2	230.6	728,800	728,800
45	80.9	229.8	728,800	728,800
50	79.6	228.8	646,100	728,800
55	78.2	227.7	555,500	728,800
60	76.9	226.5	480,600	728,800
65	75.6	225.1	417,700	728,800
70	74.3	223.7	364,400	728,800
75	72.9	222.1	318,800	683,100
80	71.6	220.4	279,300	629,800
85	70.2	218.5	244,800	582,200
90	68.8	216.5	214,300	539,300
95	67.4	214.4	187,200	500,400
100	66.0	212.1	163,000	465,200
105	64.6	209.7	141,200	433,000
110	63.1	207.1	121,500	403,500
115	61.7	204.4	103,600	376,400
120	60.2	201.5	87,300	351,400
125	58.7	198.4	72,300	328,200
130	57.1	195.1	58,600	306,700
135	55.6	191.6	45,900	286,700
140	54.0	187.9	34,100	268,100
145	52.3	184.0	23,200	250,700
150	50.7	179.8		234,300
155	49.0	175.4		219,000
160	47.2	170.7		204,600
165	45.4	165.8		191,000

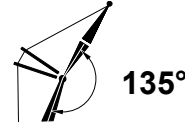
242.8 ft				
ft	°	ft	lb	lb
40	82.8	250.5	683,200	683,200
45	81.6	249.7	683,200	683,200
50	80.4	248.8	645,800	683,200
55	79.2	247.8	554,600	683,200
60	78.0	246.7	480,200	683,200
65	76.8	245.5	417,200	683,200
70	75.6	244.2	363,700	683,200
75	74.3	242.7	317,900	674,300
80	73.1	241.2	278,100	621,800
85	71.9	239.5	243,400	574,800
90	70.6	237.7	212,800	532,400
95	69.3	235.8	185,500	494,000
100	68.1	233.7	161,200	459,100
105	66.8	231.5	139,300	427,200
110	65.5	229.2	119,500	397,900
115	64.2	226.7	101,500	371,000
120	62.8	224.1	85,100	346,200
125	61.5	221.3	70,000	323,100
130	60.1	218.4	56,200	301,800
135	58.7	215.3	43,400	281,900
140	57.3	212.1	31,600	263,300
145	55.9	208.6	20,600	245,900
150	54.4	205.0		229,600
155	53.0	201.2		214,400
160	51.4	197.1		200,000
165	49.9	192.9		186,400
170	48.3	188.4		173,600
175	46.7	183.6		161,500

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85.3 ft



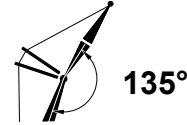
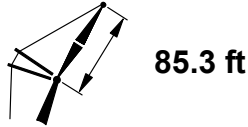
135°

262.5 ft				
ft	°	ft	lb	lb
45	82.3	269.7	634,400	634,400
50	81.1	268.8	634,400	634,400
55	80.0	267.9	629,600	634,400
60	78.9	266.9	547,800	634,400
65	77.8	265.8	479,800	634,400
70	76.7	264.6	421,200	634,400
75	75.6	263.2	371,000	634,400
80	74.4	261.8	327,500	613,600
85	73.3	260.2	289,400	567,400
90	72.1	258.6	255,800	525,600
95	71.0	256.8	226,000	487,800
100	69.8	254.9	199,300	453,200
105	68.6	252.9	175,300	421,700
110	67.4	250.8	153,600	392,700
115	66.2	248.6	133,900	366,000
120	65.0	246.2	115,800	341,400
125	63.8	243.7	99,300	318,500
130	62.6	241.1	84,200	297,300
135	61.3	238.3	70,200	277,500
140	60.1	235.4	57,200	259,100
145	58.8	232.3	45,100	241,800
150	57.5	229.0	33,900	225,600
155	56.2	225.7	23,500	210,300
160	54.8	222.1		196,000
165	53.5	218.3		182,500
170	52.1	214.4		169,700
175	50.7	210.2		157,600
180	49.2	205.9		146,200
185	47.7	201.3		135,300
190	46.2	196.5		125,000

282.2 ft				
ft	°	ft	lb	lb
45	82.8	289.6	585,600	585,600
50	81.8	288.8	585,600	585,600
55	80.7	287.9	585,600	585,600
60	79.7	287.0	545,900	585,600
65	78.7	286.0	477,400	585,600
70	77.6	284.8	419,500	585,600
75	76.6	283.6	369,100	585,600
80	75.5	282.3	325,400	585,600
85	74.5	280.8	287,200	558,700
90	73.4	279.3	253,400	517,600
95	72.3	277.7	223,500	480,300
100	71.3	275.9	196,700	446,200
105	70.2	274.1	172,600	415,000
110	69.1	272.1	150,800	386,400
115	68.0	270.1	130,900	359,900
120	66.9	267.9	112,800	335,500
125	65.8	265.6	96,300	312,800
130	64.7	263.2	81,000	291,700
135	63.5	260.7	66,900	272,100
140	62.4	258.0	53,900	253,700
145	61.2	255.2	41,800	236,500
150	60.0	252.3	30,600	220,400
155	58.8	249.2	20,100	205,200
160	57.6	246.0		191,000
165	56.4	242.7		177,500
170	55.2	239.1		164,700
175	53.9	235.5		152,700
180	52.6	231.6		141,300
185	51.3	227.5		130,400
190	50.0	223.3		120,100
195	48.6	218.9		110,300
200	47.2	214.2		101,000
205	45.8	209.3		92,100

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301.8 ft				
ft	°	ft	lb	lb
50	82.3	308.7	536,800	536,800
55	81.4	307.9	536,800	536,800
60	80.4	307.0	536,800	536,800
65	79.4	306.1	473,400	536,800
70	78.5	305.0	415,300	536,800
75	77.5	303.9	365,400	536,800
80	76.5	302.6	321,500	536,800
85	75.5	301.3	283,100	536,800
90	74.5	299.9	249,300	508,000
95	73.5	298.4	219,200	471,300
100	72.5	296.8	192,300	437,700
105	71.5	295.0	168,100	406,800
110	70.5	293.2	146,200	378,500
115	69.5	291.3	126,400	352,300
120	68.5	289.3	108,200	328,100
125	67.5	287.2	91,600	305,600
130	66.4	285.0	76,200	284,700
135	65.4	282.7	62,100	265,200
140	64.3	280.2	49,000	247,000
145	63.3	277.7	36,900	229,900
150	62.2	275.0	25,600	213,800
155	61.1	272.2		198,700
160	60.0	269.3		184,500
165	58.9	266.2		171,100
170	57.8	263.0		158,400
175	56.6	259.7		146,400
180	55.5	256.2		135,000
185	54.3	252.6		124,200
190	53.1	248.8		113,900
195	51.9	244.8		104,100
200	50.6	240.7		94,800
205	49.4	236.3		85,900
210	48.1	231.8		77,400
215	46.8	227.1		69,300
220	45.5	222.1		61,500

321.5 ft				
ft	°	ft	lb	lb
50	82.8	328.6	488,000	488,000
55	81.9	327.9	488,000	488,000
60	81.0	327.0	488,000	488,000
65	80.1	326.1	470,600	488,000
70	79.2	325.1	412,300	488,000
75	78.3	324.1	362,300	488,000
80	77.3	322.9	318,800	488,000
85	76.4	321.7	280,300	488,000
90	75.5	320.3	246,300	488,000
95	74.6	318.9	216,100	455,200
100	73.6	317.4	189,100	425,400
105	72.7	315.8	164,800	398,200
110	71.8	314.1	142,900	371,500
115	70.8	312.4	122,900	345,700
120	69.9	310.5	104,700	321,700
125	68.9	308.5	88,000	299,500
130	68.0	306.5	72,600	278,700
135	67.0	304.3	58,400	259,400
140	66.0	302.1	45,300	241,300
145	65.0	299.7	33,100	224,300
150	64.0	297.2	21,800	208,300
155	63.0	294.6		193,300
160	62.0	292.0		179,200
165	61.0	289.1		165,800
170	60.0	286.2		153,200
175	58.9	283.2		141,200
180	57.9	280.0		129,800
185	56.8	276.7		119,100
190	55.7	273.2		108,800
195	54.6	269.6		99,000
200	53.5	265.9		89,700
205	52.4	262.0		80,800
210	51.2	258.0		72,400
215	50.1	253.7		64,200
220	48.9	249.3		56,500
225	47.7	244.7		49,000
230	46.4	239.9		41,900
235	45.2	234.9		35,100

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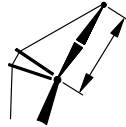
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881,800 lb



360°



85.3 ft

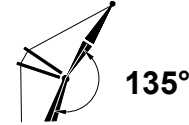
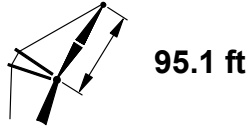


135°

<p>341.2 ft</p>				
ft	°	ft	lb	lb
55	82.4	347.8	439,200	439,200
60	81.5	347.0	439,200	439,200
65	80.7	346.1	439,200	439,200
70	79.8	345.2	408,300	439,200
75	78.9	344.2	358,200	439,200
80	78.1	343.1	314,800	439,200
85	77.2	341.9	276,500	439,200
90	76.4	340.7	242,400	439,200
95	75.5	339.4	212,100	427,500
100	74.6	338.0	185,000	398,900
105	73.7	336.5	160,700	372,800
110	72.9	334.9	138,600	349,000
115	72.0	333.2	118,600	327,100
120	71.1	331.5	100,300	306,900
125	70.2	329.7	83,600	288,100
130	69.3	327.7	68,100	270,500
135	68.4	325.7	53,900	252,900
140	67.5	323.6	40,700	234,900
145	66.6	321.4	28,500	218,000
150	65.6	319.1	17,100	202,200
155	64.7	316.7		187,300
160	63.8	314.2		173,200
165	62.8	311.6		159,900
170	61.9	308.9		147,300
175	60.9	306.1		135,400
180	59.9	303.2		124,100
185	58.9	300.1		113,300
190	58.0	297.0		103,100
195	57.0	293.7		93,400
200	55.9	290.3		84,100
205	54.9	286.7		75,200
210	53.9	283.0		66,700
215	52.8	279.2		58,600
220	51.7	275.2		50,900
225	50.6	271.1		43,500
230	49.5	266.8		36,300
235	48.4	262.3		29,500
240	47.3	257.6		22,900

MLC650 VPC-MAX S-3

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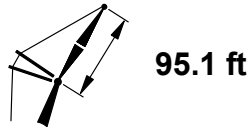


183.7 ft				
ft	°	ft	lb	lb
32	83.0	192.0	773,600	773,600
34	82.4	191.7	773,600	773,600
36	81.7	191.4	773,600	773,600
38	81.1	191.0	773,600	773,600
40	80.5	190.6	773,600	773,600
45	78.9	189.6	735,100	773,600
50	77.3	188.4	624,600	773,600
55	75.7	187.1	534,800	773,600
60	74.0	185.6	461,400	773,600
65	72.4	183.9	400,300	773,600
70	70.7	182.1	348,600	747,300
75	69.1	180.2	304,400	685,800
80	67.4	178.0	266,100	631,100
85	65.6	175.7	232,600	582,700
90	63.9	173.2	203,100	539,600
95	62.1	170.5	176,800	500,900
100	60.3	167.5	153,400	465,700
105	58.5	164.4	132,400	433,300
110	56.6	161.1	113,300	403,800
115	54.7	157.5	96,100	376,600
120	52.7	153.6	80,300	351,600
125	50.7	149.4	65,900	328,500
130	48.6	145.0	52,700	307,200
135	46.4	140.1	40,500	287,300

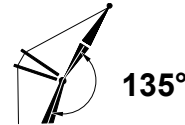
203.4 ft				
ft	°	ft	lb	lb
36	82.5	211.3	773,600	773,600
38	82.0	211.0	773,600	773,600
40	81.4	210.7	773,600	773,600
45	80.0	209.7	737,300	773,600
50	78.5	208.6	626,500	773,600
55	77.1	207.4	537,200	773,600
60	75.6	206.1	463,300	773,600
65	74.2	204.6	401,800	773,600
70	72.7	203.0	349,700	739,300
75	71.2	201.3	305,100	679,100
80	69.7	199.4	266,500	625,500
85	68.2	197.3	232,800	577,700
90	66.6	195.1	203,000	534,800
95	65.1	192.7	176,600	495,900
100	63.5	190.1	153,000	460,700
105	61.9	187.4	131,700	428,500
110	60.2	184.5	112,500	399,100
115	58.6	181.4	95,100	372,100
120	56.9	178.1	79,200	347,200
125	55.2	174.5	64,600	324,200
130	53.4	170.8	51,200	302,800
135	51.6	166.7	38,900	283,000
140	49.7	162.4	27,500	264,500
145	47.8	157.9		247,200
150	45.9	153.0		231,100

MLC650 VPC-MAX S-3

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95.1 ft



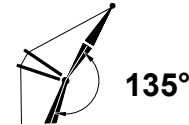
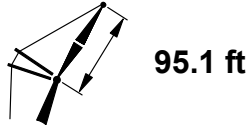
135°

223.1 ft				
ft	°	ft	lb	lb
38	82.7	230.9	728,800	728,800
40	82.2	230.6	728,800	728,800
45	80.9	229.8	728,800	728,800
50	79.6	228.8	623,500	728,800
55	78.2	227.7	534,400	728,800
60	76.9	226.5	460,700	728,800
65	75.6	225.1	398,800	728,800
70	74.3	223.7	346,500	727,900
75	72.9	222.1	301,600	668,400
80	71.6	220.4	262,800	615,500
85	70.2	218.5	228,800	568,200
90	68.8	216.5	198,900	525,600
95	67.4	214.4	172,300	487,100
100	66.0	212.1	148,500	452,100
105	64.6	209.7	127,100	420,200
110	63.1	207.1	107,800	390,900
115	61.7	204.4	90,200	364,000
120	60.2	201.5	74,200	339,200
125	58.7	198.4	59,500	316,300
130	57.1	195.1	46,000	295,000
135	55.6	191.6	33,500	275,200
140	54.0	187.9	22,000	256,700
145	52.3	184.0		239,500
150	50.7	179.8		223,300
155	49.0	175.4		208,200
160	47.2	170.7		193,900
165	45.4	165.8		180,500

242.8 ft				
ft	°	ft	lb	lb
40	82.8	250.5	683,200	683,200
45	81.6	249.7	683,200	683,200
50	80.4	248.8	623,300	683,200
55	79.2	247.8	533,700	683,200
60	78.0	246.7	460,400	683,200
65	76.8	245.5	398,500	683,200
70	75.6	244.2	345,900	683,200
75	74.3	242.7	300,800	659,900
80	73.1	241.2	261,800	607,800
85	71.9	239.5	227,600	561,100
90	70.6	237.7	197,500	519,000
95	69.3	235.8	170,800	480,900
100	68.1	233.7	146,800	446,300
105	66.8	231.5	125,300	414,600
110	65.5	229.2	105,800	385,600
115	64.2	226.7	88,200	358,900
120	62.8	224.1	72,000	334,200
125	61.5	221.3	57,300	311,400
130	60.1	218.4	43,700	290,200
135	58.7	215.3	31,100	270,500
140	57.3	212.1	19,500	252,100
145	55.9	208.6		234,900
150	54.4	205.0		218,700
155	53.0	201.2		203,600
160	51.4	197.1		189,400
165	49.9	192.9		175,900
170	48.3	188.4		163,300
175	46.7	183.6		151,300

MLC650 VPC-MAX S-3

ASME B30.5

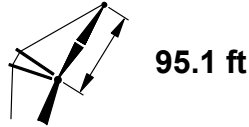


262.5 ft				
ft	°	ft	lb	lb
45	82.3	269.7	634,400	634,400
50	81.1	268.8	634,400	634,400
55	80.0	267.9	608,800	634,400
60	78.9	266.9	528,300	634,400
65	77.8	265.8	461,200	634,400
70	76.7	264.6	403,600	634,400
75	75.6	263.2	354,100	634,400
80	74.4	261.8	311,200	600,000
85	73.3	260.2	273,800	554,000
90	72.1	258.6	240,700	512,500
95	71.0	256.8	211,300	474,900
100	69.8	254.9	185,100	440,700
105	68.6	252.9	161,400	409,300
110	67.4	250.8	140,100	380,600
115	66.2	248.6	120,700	354,100
120	65.0	246.2	102,900	329,600
125	63.8	243.7	86,700	307,000
130	62.6	241.1	71,800	285,900
135	61.3	238.3	58,000	266,300
140	60.1	235.4	45,300	248,000
145	58.8	232.3	33,400	230,900
150	57.5	229.0	22,400	214,800
155	56.2	225.7		199,700
160	54.8	222.1		185,500
165	53.5	218.3		172,100
170	52.1	214.4		159,500
175	50.7	210.2		147,500
180	49.2	205.9		136,200
185	47.7	201.3		125,400
190	46.2	196.5		115,200

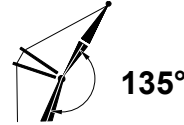
282.2 ft				
ft	°	ft	lb	lb
45	82.8	289.6	585,600	585,600
50	81.8	288.8	585,600	585,600
55	80.7	287.9	585,600	585,600
60	79.7	287.0	526,400	585,600
65	78.7	286.0	459,100	585,600
70	77.6	284.8	402,000	585,600
75	76.6	283.6	352,300	585,600
80	75.5	282.3	309,300	585,600
85	74.5	280.8	271,700	545,600
90	73.4	279.3	238,400	504,800
95	72.3	277.7	208,900	467,700
100	71.3	275.9	182,600	433,800
105	70.2	274.1	158,800	402,900
110	69.1	272.1	137,400	374,400
115	68.0	270.1	117,900	348,200
120	66.9	267.9	100,100	323,900
125	65.8	265.6	83,700	301,400
130	64.7	263.2	68,700	280,500
135	63.5	260.7	54,900	261,000
140	62.4	258.0	42,100	242,800
145	61.2	255.2	30,200	225,700
150	60.0	252.3	19,100	209,800
155	58.8	249.2		194,700
160	57.6	246.0		180,600
165	56.4	242.7		167,200
170	55.2	239.1		154,600
175	53.9	235.5		142,600
180	52.6	231.6		131,300
185	51.3	227.5		120,600
190	50.0	223.3		110,400
195	48.6	218.9		100,700
200	47.2	214.2		91,500
205	45.8	209.3		82,700

MLC650 VPC-MAX S-3

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95.1 ft



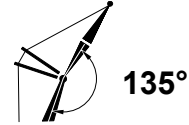
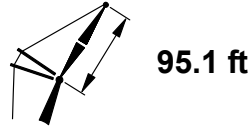
135°

ft	°	ft	lb	lb
50	82.3	308.7	536,800	536,800
55	81.4	307.9	536,800	536,800
60	80.4	307.0	522,800	536,800
65	79.4	306.1	455,100	536,800
70	78.5	305.0	397,900	536,800
75	77.5	303.9	348,800	536,800
80	76.5	302.6	305,500	536,800
85	75.5	301.3	267,800	535,600
90	74.5	299.9	234,400	495,400
95	73.5	298.4	204,800	458,900
100	72.5	296.8	178,300	425,500
105	71.5	295.0	154,500	394,900
110	70.5	293.2	133,000	366,700
115	69.5	291.3	113,400	340,800
120	68.5	289.3	95,500	316,700
125	67.5	287.2	79,100	294,400
130	66.4	285.0	64,100	273,600
135	65.4	282.7	50,200	254,300
140	64.3	280.2	37,300	236,200
145	63.3	277.7	25,400	219,200
150	62.2	275.0		203,300
155	61.1	272.2		188,300
160	60.0	269.3		174,200
165	58.9	266.2		160,900
170	57.8	263.0		148,300
175	56.6	259.7		136,400
180	55.5	256.2		125,100
185	54.3	252.6		114,400
190	53.1	248.8		104,200
195	51.9	244.8		94,500
200	50.6	240.7		85,300
205	49.4	236.3		76,500
210	48.1	231.8		68,100
215	46.8	227.1		60,100
220	45.5	222.1		52,400

ft	°	ft	lb	lb
50	82.8	328.6	488,000	488,000
55	81.9	327.9	488,000	488,000
60	81.0	327.0	488,000	488,000
65	80.1	326.1	452,400	488,000
70	79.2	325.1	395,000	488,000
75	78.3	324.1	345,800	488,000
80	77.3	322.9	302,900	488,000
85	76.4	321.7	265,000	488,000
90	75.5	320.3	231,500	473,300
95	74.6	318.9	201,800	440,900
100	73.6	317.4	175,200	411,500
105	72.7	315.8	151,300	384,700
110	71.8	314.1	129,700	360,000
115	70.8	312.4	110,000	334,300
120	69.9	310.5	92,100	310,500
125	68.9	308.5	75,600	288,400
130	68.0	306.5	60,500	267,800
135	67.0	304.3	46,500	248,600
140	66.0	302.1	33,600	230,600
145	65.0	299.7	21,600	213,800
150	64.0	297.2		197,900
155	63.0	294.6		183,000
160	62.0	292.0		169,000
165	61.0	289.1		155,700
170	60.0	286.2		143,200
175	58.9	283.2		131,300
180	57.9	280.0		120,100
185	56.8	276.7		109,400
190	55.7	273.2		99,200
195	54.6	269.6		89,500
200	53.5	265.9		80,300
205	52.4	262.0		71,500
210	51.2	258.0		63,100
215	50.1	253.7		55,100
220	48.9	249.3		47,400
225	47.7	244.7		40,000
230	46.4	239.9		33,000
235	45.2	234.9		26,200

MLC650 VPC-MAX S-3

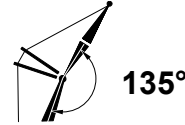
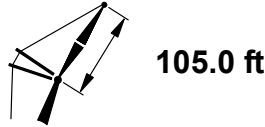
ASME B30.5



ft	°	ft	lb	lb
55	82.4	347.8	439,200	439,200
60	81.5	347.0	439,200	439,200
65	80.7	346.1	439,200	439,200
70	79.8	345.2	391,200	439,200
75	78.9	344.2	341,800	439,200
80	78.1	343.1	299,000	439,200
85	77.2	341.9	261,300	439,200
90	76.4	340.7	227,700	439,200
95	75.5	339.4	197,900	413,200
100	74.6	338.0	171,200	385,100
105	73.7	336.5	147,200	359,400
110	72.9	334.9	125,500	335,900
115	72.0	333.2	105,800	314,300
120	71.1	331.5	87,800	294,400
125	70.2	329.7	71,300	275,800
130	69.3	327.7	56,100	258,500
135	68.4	325.7	42,100	242,200
140	67.5	323.6	29,200	224,400
145	66.6	321.4	17,100	207,600
150	65.6	319.1		191,900
155	64.7	316.7		177,100
160	63.8	314.2		163,100
165	62.8	311.6		149,900
170	61.9	308.9		137,400
175	60.9	306.1		125,600
180	59.9	303.2		114,400
185	58.9	300.1		103,700
190	58.0	297.0		93,600
195	57.0	293.7		83,900
200	55.9	290.3		74,700
205	54.9	286.7		66,000
210	53.9	283.0		57,600
215	52.8	279.2		49,500
220	51.7	275.2		41,900
225	50.6	271.1		34,500
230	49.5	266.8		27,400
235	48.4	262.3		20,700

MLC650 VPC-MAX S-3

ASME B30.5

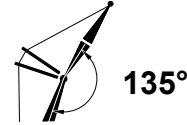
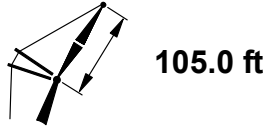


183.7 ft				
ft	°	ft	lb	lb
32	83.0	192.0	773,600	773,600
34	82.4	191.7	773,600	773,600
36	81.7	191.4	773,600	773,600
38	81.1	191.0	773,600	773,600
40	80.5	190.6	773,600	773,600
45	78.9	189.6	713,300	773,600
50	77.3	188.4	604,500	773,600
55	75.7	187.1	516,200	773,600
60	74.0	185.6	444,000	773,600
65	72.4	183.9	383,800	773,600
70	70.7	182.1	333,000	734,100
75	69.1	180.2	289,500	673,400
80	67.4	178.0	251,800	619,600
85	65.6	175.7	218,900	571,700
90	63.9	173.2	189,900	528,600
95	62.1	170.5	164,100	489,800
100	60.3	167.5	141,100	454,600
105	58.5	164.4	120,400	422,500
110	56.6	161.1	101,800	393,200
115	54.7	157.5	84,800	366,300
120	52.7	153.6	69,400	341,500
125	50.7	149.4	55,300	318,700
130	48.6	145.0	42,300	297,500
135	46.4	140.1	30,400	277,800

203.4 ft				
ft	°	ft	lb	lb
36	82.5	211.3	773,600	773,600
38	82.0	211.0	773,600	773,600
40	81.4	210.7	773,600	773,600
45	80.0	209.7	715,700	773,600
50	78.5	208.6	606,700	773,600
55	77.1	207.4	518,800	773,600
60	75.6	206.1	446,100	773,600
65	74.2	204.6	385,500	773,600
70	72.7	203.0	334,300	726,400
75	71.2	201.3	290,500	666,500
80	69.7	199.4	252,500	613,400
85	68.2	197.3	219,300	565,900
90	66.6	195.1	190,100	523,300
95	65.1	192.7	164,100	484,800
100	63.5	190.1	140,900	449,800
105	61.9	187.4	120,000	417,900
110	60.2	184.5	101,100	388,700
115	58.6	181.4	84,000	361,900
120	56.9	178.1	68,400	337,200
125	55.2	174.5	54,100	314,400
130	53.4	170.8	41,000	293,300
135	51.6	166.7	28,900	273,600
140	49.7	162.4	17,700	255,300
145	47.8	157.9		238,200
150	45.9	153.0		222,200

MLC650 VPC-MAX S-3

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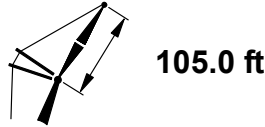


223.1 ft				
ft	°	ft	lb	lb
38	82.7	230.9	728,800	728,800
40	82.2	230.6	728,800	728,800
45	80.9	229.8	713,700	728,800
50	79.6	228.8	603,900	728,800
55	78.2	227.7	516,200	728,800
60	76.9	226.5	443,700	728,800
65	75.6	225.1	382,800	728,800
70	74.3	223.7	331,300	715,200
75	72.9	222.1	287,100	656,200
80	71.6	220.4	248,900	603,600
85	70.2	218.5	215,500	556,600
90	68.8	216.5	186,100	514,400
95	67.4	214.4	159,900	476,100
100	66.0	212.1	136,500	441,400
105	64.6	209.7	115,500	409,700
110	63.1	207.1	96,500	380,700
115	61.7	204.4	79,200	354,000
120	60.2	201.5	63,500	329,400
125	58.7	198.4	49,100	306,700
130	57.1	195.1	35,800	285,600
135	55.6	191.6	23,600	266,000
140	54.0	187.9		247,700
145	52.3	184.0		230,600
150	50.7	179.8		214,600
155	49.0	175.4		199,600
160	47.2	170.7		185,500
165	45.4	165.8		172,200

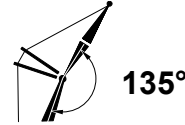
242.8 ft				
ft	°	ft	lb	lb
40	82.8	250.5	683,200	683,200
45	81.6	249.7	683,200	683,200
50	80.4	248.8	603,900	683,200
55	79.2	247.8	515,700	683,200
60	78.0	246.7	443,600	683,200
65	76.8	245.5	382,700	683,200
70	75.6	244.2	330,900	683,200
75	74.3	242.7	286,500	648,000
80	73.1	241.2	248,100	596,200
85	71.9	239.5	214,500	549,800
90	70.6	237.7	184,800	508,000
95	69.3	235.8	158,500	470,200
100	68.1	233.7	135,000	435,800
105	66.8	231.5	113,800	404,400
110	65.5	229.2	94,700	375,500
115	64.2	226.7	77,300	349,000
120	62.8	224.1	61,500	324,600
125	61.5	221.3	46,900	301,900
130	60.1	218.4	33,600	280,900
135	58.7	215.3	21,300	261,400
140	57.3	212.1		243,100
145	55.9	208.6		226,100
150	54.4	205.0		210,100
155	53.0	201.2		195,100
160	51.4	197.1		181,000
165	49.9	192.9		167,700
170	48.3	188.4		155,200
175	46.7	183.6		143,300

MLC650 VPC-MAX S-3

ASME B30.5



105.0 ft



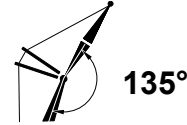
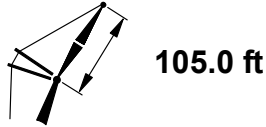
135°

262.5 ft				
ft	°	ft	lb	lb
45	82.3	269.7	634,400	634,400
50	81.1	268.8	634,400	634,400
55	80.0	267.9	591,000	634,400
60	78.9	266.9	511,600	634,400
65	77.8	265.8	445,500	634,400
70	76.7	264.6	388,700	634,400
75	75.6	263.2	339,900	634,400
80	74.4	261.8	297,700	588,600
85	73.3	260.2	260,800	543,000
90	72.1	258.6	228,200	501,800
95	71.0	256.8	199,200	464,400
100	69.8	254.9	173,400	430,400
105	68.6	252.9	150,100	399,300
110	67.4	250.8	129,000	370,700
115	66.2	248.6	109,900	344,400
120	65.0	246.2	92,500	320,200
125	63.8	243.7	76,500	297,700
130	62.6	241.1	61,800	276,800
135	61.3	238.3	48,300	257,300
140	60.1	235.4	35,700	239,200
145	58.8	232.3	24,100	222,200
150	57.5	229.0		206,200
155	56.2	225.7		191,300
160	54.8	222.1		177,200
165	53.5	218.3		163,900
170	52.1	214.4		151,400
175	50.7	210.2		139,600
180	49.2	205.9		128,400
185	47.7	201.3		117,700
190	46.2	196.5		107,600

282.2 ft				
ft	°	ft	lb	lb
45	82.8	289.6	585,600	585,600
50	81.8	288.8	585,600	585,600
55	80.7	287.9	585,600	585,600
60	79.7	287.0	509,900	585,600
65	78.7	286.0	443,500	585,600
70	77.6	284.8	387,300	585,600
75	76.6	283.6	338,300	585,600
80	75.5	282.3	295,900	579,700
85	74.5	280.8	258,800	534,800
90	73.4	279.3	226,000	494,200
95	72.3	277.7	197,000	457,400
100	71.3	275.9	171,000	423,800
105	70.2	274.1	147,600	393,000
110	69.1	272.1	126,400	364,700
115	68.0	270.1	107,200	338,700
120	66.9	267.9	89,700	314,600
125	65.8	265.6	73,600	292,300
130	64.7	263.2	58,900	271,500
135	63.5	260.7	45,200	252,200
140	62.4	258.0	32,600	234,100
145	61.2	255.2	20,900	217,200
150	60.0	252.3		201,300
155	58.8	249.2		186,400
160	57.6	246.0		172,400
165	56.4	242.7		159,100
170	55.2	239.1		146,600
175	53.9	235.5		134,800
180	52.6	231.6		123,600
185	51.3	227.5		112,900
190	50.0	223.3		102,900
195	48.6	218.9		93,200
200	47.2	214.2		84,100
205	45.8	209.3		75,400

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301.8 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
50	82.3	308.7	536,800	536,800
55	81.4	307.9	536,800	536,800
60	80.4	307.0	506,400	536,800
65	79.4	306.1	439,700	536,800
70	78.5	305.0	383,300	536,800
75	77.5	303.9	334,800	536,800
80	76.5	302.6	292,200	536,800
85	75.5	301.3	255,000	525,000
90	74.5	299.9	222,100	485,100
95	73.5	298.4	192,900	448,800
100	72.5	296.8	166,800	415,600
105	71.5	295.0	143,400	385,200
110	70.5	293.2	122,100	357,200
115	69.5	291.3	102,800	331,400
120	68.5	289.3	85,200	307,500
125	67.5	287.2	69,100	285,400
130	66.4	285.0	54,300	264,800
135	65.4	282.7	40,600	245,500
140	64.3	280.2	27,900	227,600
145	63.3	277.7		210,700
150	62.2	275.0		195,000
155	61.1	272.2		180,100
160	60.0	269.3		166,100
165	58.9	266.2		152,900
170	57.8	263.0		140,400
175	56.6	259.7		128,600
180	55.5	256.2		117,400
185	54.3	252.6		106,800
190	53.1	248.8		96,700
195	51.9	244.8		87,100
200	50.6	240.7		78,000
205	49.4	236.3		69,300
210	48.1	231.8		60,900
215	46.8	227.1		53,000
220	45.5	222.1		45,400

321.5 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
50	82.8	328.6	488,000	488,000
55	81.9	327.9	488,000	488,000
60	81.0	327.0	488,000	488,000
65	80.1	326.1	437,100	488,000
70	79.2	325.1	380,500	488,000
75	78.3	324.1	332,000	488,000
80	77.3	322.9	289,700	488,000
85	76.4	321.7	252,300	488,000
90	75.5	320.3	219,300	461,100
95	74.6	318.9	190,000	429,100
100	73.6	317.4	163,800	400,100
105	72.7	315.8	140,200	373,600
110	71.8	314.1	118,900	349,300
115	70.8	312.4	99,600	325,100
120	69.9	310.5	81,900	301,500
125	68.9	308.5	65,700	279,500
130	68.0	306.5	50,800	259,100
135	67.0	304.3	37,000	240,000
140	66.0	302.1	24,300	222,100
145	65.0	299.7		205,400
150	64.0	297.2		189,700
155	63.0	294.6		174,900
160	62.0	292.0		161,000
165	61.0	289.1		147,800
170	60.0	286.2		135,400
175	58.9	283.2		123,600
180	57.9	280.0		112,500
185	56.8	276.7		101,900
190	55.7	273.2		91,800
195	54.6	269.6		82,200
200	53.5	265.9		73,100
205	52.4	262.0		64,300
210	51.2	258.0		56,000
215	50.1	253.7		48,100
220	48.9	249.3		40,400
225	47.7	244.7		33,100
230	46.4	239.9		26,200
235	45.2	234.9		19,500

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881,800 lb



105.0 ft

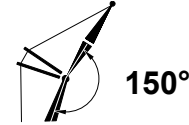
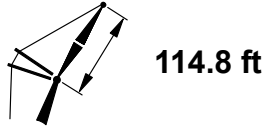


135°

<p>341.2 ft</p>				
ft	°	ft	lb	lb
55	82.4	347.8	439,200	439,200
60	81.5	347.0	439,200	439,200
65	80.7	346.1	433,500	439,200
70	79.8	345.2	376,700	439,200
75	78.9	344.2	328,000	439,200
80	78.1	343.1	285,900	439,200
85	77.2	341.9	248,700	439,200
90	76.4	340.7	215,600	432,300
95	75.5	339.4	186,200	401,500
100	74.6	338.0	159,900	373,700
105	73.7	336.5	136,300	348,400
110	72.9	334.9	114,900	325,300
115	72.0	333.2	95,400	303,900
120	71.1	331.5	77,700	284,200
125	70.2	329.7	61,400	265,900
130	69.3	327.7	46,500	248,900
135	68.4	325.7	32,700	232,900
140	67.5	323.6	19,900	216,000
145	66.6	321.4		199,400
150	65.6	319.1		183,800
155	64.7	316.7		169,100
160	63.8	314.2		155,200
165	62.8	311.6		142,100
170	61.9	308.9		129,700
175	60.9	306.1		118,000
180	59.9	303.2		106,900
185	58.9	300.1		96,300
190	58.0	297.0		86,200
195	57.0	293.7		76,700
200	55.9	290.3		67,500
205	54.9	286.7		58,800
210	53.9	283.0		50,500
215	52.8	279.2		42,500
220	51.7	275.2		34,900
225	50.6	271.1		27,600
230	49.5	266.8		20,700

MLC650 VPC-MAX S-3

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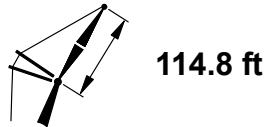


183.7 ft				
ft	°	ft	lb	lb
32	83.0	192.0	773,600	773,600
34	82.4	191.7	773,600	773,600
36	81.7	191.4	773,600	773,600
38	81.1	191.0	773,600	773,600
40	80.5	190.6	773,600	773,600
45	78.9	189.6	732,500	773,600
50	77.3	188.4	619,700	773,600
55	75.7	187.1	528,100	773,600
60	74.0	185.6	453,100	773,600
65	72.4	183.9	390,700	773,600
70	70.7	182.1	337,900	737,800
75	69.1	180.2	292,700	675,700
80	67.4	178.0	253,500	620,700
85	65.6	175.7	219,300	571,600
90	63.9	173.2	189,100	527,500
95	62.1	170.5	162,300	487,800
100	60.3	167.5	138,300	451,700
105	58.5	164.4	116,700	418,800
110	56.6	161.1	97,200	388,800
115	54.7	157.5	79,500	361,100
120	52.7	153.6	63,400	335,700
125	50.7	149.4	48,600	312,200
130	48.6	145.0	35,000	290,500
135	46.4	140.1	22,400	270,200
140	44.2	134.9		251,400
145	41.8	129.3		233,800
150	39.4	123.1		217,400
155	36.8	116.4		202,000
160	34.0	109.0		186,700
165	30.9	100.7		166,300

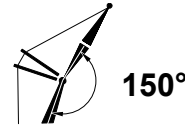
203.4 ft				
ft	°	ft	lb	lb
36	82.5	211.3	773,600	773,600
38	82.0	211.0	773,600	773,600
40	81.4	210.7	773,600	773,600
45	80.0	209.7	736,200	773,600
50	78.5	208.6	623,100	773,600
55	77.1	207.4	531,900	773,600
60	75.6	206.1	456,500	773,600
65	74.2	204.6	393,700	773,600
70	72.7	203.0	340,500	731,100
75	71.2	201.3	295,000	669,900
80	69.7	199.4	255,600	615,600
85	68.2	197.3	221,100	567,100
90	66.6	195.1	190,700	523,500
95	65.1	192.7	163,700	484,000
100	63.5	190.1	139,500	448,200
105	61.9	187.4	117,800	415,600
110	60.2	184.5	98,100	385,700
115	58.6	181.4	80,300	358,300
120	56.9	178.1	64,000	332,900
125	55.2	174.5	49,000	309,500
130	53.4	170.8	35,300	287,800
135	51.6	166.7	22,700	267,600
140	49.7	162.4		248,800
145	47.8	157.9		231,200
150	45.9	153.0		214,800
155	43.8	147.7		199,400
160	41.7	142.0		184,900
165	39.5	135.9		171,200
170	37.1	129.3		158,300
175	34.6	122.0		146,200
180	32.0	114.0		134,800

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114.8 ft



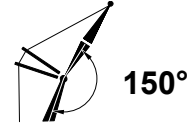
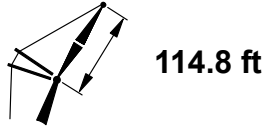
150°

223.1 ft				
ft	°	ft	lb	lb
38	82.7	230.9	728,800	728,800
40	82.2	230.6	728,800	728,800
45	80.9	229.8	728,800	728,800
50	79.6	228.8	621,200	728,800
55	78.2	227.7	530,300	728,800
60	76.9	226.5	455,100	728,800
65	75.6	225.1	391,900	728,800
70	74.3	223.7	338,500	720,900
75	72.9	222.1	292,700	660,500
80	71.6	220.4	253,100	606,800
85	70.2	218.5	218,400	558,800
90	68.8	216.5	187,800	515,600
95	67.4	214.4	160,700	476,500
100	66.0	212.1	136,300	440,900
105	64.6	209.7	114,500	408,500
110	63.1	207.1	94,700	378,800
115	61.7	204.4	76,700	351,500
120	60.2	201.5	60,300	326,300
125	58.7	198.4	45,300	303,000
130	57.1	195.1	31,500	281,400
135	55.6	191.6	18,800	261,300
140	54.0	187.9		242,500
145	52.3	184.0		225,000
150	50.7	179.8		208,500
155	49.0	175.4		193,100
160	47.2	170.7		178,600
165	45.4	165.8		164,900
170	43.5	160.5		152,000
175	41.6	154.8		139,800
180	39.5	148.7		128,300
185	37.4	142.1		117,400
190	35.2	135.0		107,000
195	32.8	127.2		97,200
200	30.3	118.7		87,900

242.8 ft				
ft	°	ft	lb	lb
40	82.8	250.5	683,200	683,200
45	81.6	249.7	683,200	683,200
50	80.4	248.8	622,000	683,200
55	79.2	247.8	530,600	683,200
60	78.0	246.7	455,900	683,200
65	76.8	245.5	392,700	683,200
70	75.6	244.2	339,000	683,200
75	74.3	242.7	293,000	653,000
80	73.1	241.2	253,100	600,100
85	71.9	239.5	218,300	552,700
90	70.6	237.7	187,500	510,000
95	69.3	235.8	160,200	471,300
100	68.1	233.7	135,800	436,200
105	66.8	231.5	113,800	404,000
110	65.5	229.2	93,900	374,600
115	64.2	226.7	75,900	347,500
120	62.8	224.1	59,400	322,400
125	61.5	221.3	44,300	299,200
130	60.1	218.4	30,400	277,700
135	58.7	215.3	17,500	257,700
140	57.3	212.1		239,000
145	55.9	208.6		221,500
150	54.4	205.0		205,100
155	53.0	201.2		189,700
160	51.4	197.1		175,300
165	49.9	192.9		161,600
170	48.3	188.4		148,700
175	46.7	183.6		136,500
180	45.0	178.6		125,000
185	43.3	173.2		114,100
190	41.5	167.5		103,700
195	39.6	161.4		93,800
200	37.7	154.9		84,400
205	35.7	147.9		75,500
210	33.5	140.4		66,900
215	31.2	132.1		58,800

MLC650 VPC-MAX S-3

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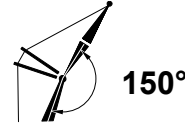
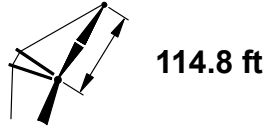


262.5 ft				
ft	°	ft	lb	lb
45	82.3	269.7	634,400	634,400
50	81.1	268.8	634,400	634,400
55	80.0	267.9	606,600	634,400
60	78.9	266.9	524,500	634,400
65	77.8	265.8	456,300	634,400
70	76.7	264.6	397,500	634,400
75	75.6	263.2	347,200	634,400
80	74.4	261.8	303,500	593,100
85	73.3	260.2	265,300	546,500
90	72.1	258.6	231,700	504,400
95	71.0	256.8	201,700	466,200
100	69.8	254.9	175,000	431,400
105	68.6	252.9	150,900	399,700
110	67.4	250.8	129,100	370,500
115	66.2	248.6	109,300	343,600
120	65.0	246.2	91,200	318,800
125	63.8	243.7	74,700	295,800
130	62.6	241.1	59,500	274,400
135	61.3	238.3	45,400	254,500
140	60.1	235.4	32,400	235,900
145	58.8	232.3	20,300	218,500
150	57.5	229.0		202,200
155	56.2	225.7		186,800
160	54.8	222.1		172,400
165	53.5	218.3		158,800
170	52.1	214.4		145,900
175	50.7	210.2		133,800
180	49.2	205.9		122,300
185	47.7	201.3		111,300
190	46.2	196.5		101,000
195	44.7	191.4		91,100
200	43.0	186.0		81,700
205	41.4	180.3		72,700
210	39.7	174.2		64,200
215	37.9	167.7		56,000
220	36.0	160.8		48,200
225	34.1	153.4		40,700
230	32.0	145.4		33,600

282.2 ft				
ft	°	ft	lb	lb
45	82.8	289.6	585,600	585,600
50	81.8	288.8	585,600	585,600
55	80.7	287.9	585,600	585,600
60	79.7	287.0	523,400	585,600
65	78.7	286.0	454,800	585,600
70	77.6	284.8	396,700	585,600
75	76.6	283.6	346,100	585,600
80	75.5	282.3	302,300	584,600
85	74.5	280.8	264,000	538,800
90	73.4	279.3	230,200	497,400
95	72.3	277.7	200,100	459,700
100	71.3	275.9	173,200	425,400
105	70.2	274.1	149,100	394,000
110	69.1	272.1	127,200	365,100
115	68.0	270.1	107,300	338,500
120	66.9	267.9	89,200	313,900
125	65.8	265.6	72,500	291,000
130	64.7	263.2	57,200	269,800
135	63.5	260.7	43,100	250,000
140	62.4	258.0	30,100	231,500
145	61.2	255.2	17,900	214,200
150	60.0	252.3		198,000
155	58.8	249.2		182,700
160	57.6	246.0		168,300
165	56.4	242.7		154,800
170	55.2	239.1		142,000
175	53.9	235.5		129,800
180	52.6	231.6		118,300
185	51.3	227.5		107,400
190	50.0	223.3		97,000
195	48.6	218.9		87,200
200	47.2	214.2		77,800
205	45.8	209.3		68,800
210	44.4	204.1		60,300
215	42.9	198.7		52,100
220	41.3	193.0		44,300
225	39.7	186.9		36,800
230	38.1	180.5		29,600
235	36.4	173.7		22,700

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ASME B30.5

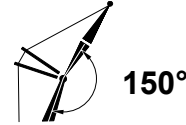
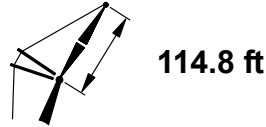


301.8 ft				
ft	°	ft	lb	lb
50	82.3	308.7	536,800	536,800
55	81.4	307.9	536,800	536,800
60	80.4	307.0	520,400	536,800
65	79.4	306.1	451,500	536,800
70	78.5	305.0	393,300	536,800
75	77.5	303.9	343,200	536,800
80	76.5	302.6	299,200	536,800
85	75.5	301.3	260,800	529,400
90	74.5	299.9	226,800	488,700
95	73.5	298.4	196,700	451,600
100	72.5	296.8	169,700	417,700
105	71.5	295.0	145,400	386,700
110	70.5	293.2	123,500	358,100
115	69.5	291.3	103,500	331,700
120	68.5	289.3	85,300	307,300
125	67.5	287.2	68,600	284,700
130	66.4	285.0	53,300	263,600
135	65.4	282.7	39,100	244,000
140	64.3	280.2	26,000	225,600
145	63.3	277.7		208,400
150	62.2	275.0		192,200
155	61.1	272.2		177,000
160	60.0	269.3		162,700
165	58.9	266.2		149,200
170	57.8	263.0		136,400
175	56.6	259.7		124,300
180	55.5	256.2		112,900
185	54.3	252.6		102,000
190	53.1	248.8		91,600
195	51.9	244.8		81,800
200	50.6	240.7		72,400
205	49.4	236.3		63,500
210	48.1	231.8		54,900
215	46.8	227.1		46,700
220	45.5	222.1		38,900
225	44.1	216.9		31,400
230	42.7	211.5		24,200
235	41.3	205.7		17,300

321.5 ft				
ft	°	ft	lb	lb
50	82.8	328.6	488,000	488,000
55	81.9	327.9	488,000	488,000
60	81.0	327.0	488,000	488,000
65	80.1	326.1	449,400	488,000
70	79.2	325.1	390,900	488,000
75	78.3	324.1	340,800	488,000
80	77.3	322.9	297,200	488,000
85	76.4	321.7	258,600	488,000
90	75.5	320.3	224,500	466,300
95	74.6	318.9	194,200	433,300
100	73.6	317.4	167,200	403,400
105	72.7	315.8	142,800	376,200
110	71.8	314.1	120,800	351,200
115	70.8	312.4	100,800	325,900
120	69.9	310.5	82,500	301,700
125	68.9	308.5	65,700	279,300
130	68.0	306.5	50,300	258,400
135	67.0	304.3	36,100	238,900
140	66.0	302.1	23,000	220,700
145	65.0	299.7		203,600
150	64.0	297.2		187,500
155	63.0	294.6		172,400
160	62.0	292.0		158,100
165	61.0	289.1		144,700
170	60.0	286.2		132,000
175	58.9	283.2		119,900
180	57.9	280.0		108,500
185	56.8	276.7		97,600
190	55.7	273.2		87,300
195	54.6	269.6		77,500
200	53.5	265.9		68,100
205	52.4	262.0		59,200
210	51.2	258.0		50,600
215	50.1	253.7		42,500
220	48.9	249.3		34,600
225	47.7	244.7		27,100
230	46.4	239.9		20,000

MLC650 VPC-MAX S-3

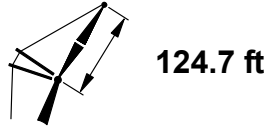
ASME B30.5



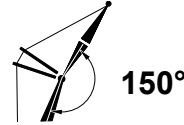
ft	°	ft	38.7 ft lb	60.0 ft lb
55	82.4	347.8	439,200	439,200
60	81.5	347.0	439,200	439,200
65	80.7	346.1	439,200	439,200
70	79.8	345.2	387,600	439,200
75	78.9	344.2	337,300	439,200
80	78.1	343.1	293,800	439,200
85	77.2	341.9	255,400	439,200
90	76.4	340.7	221,200	437,900
95	75.5	339.4	190,900	406,200
100	74.6	338.0	163,700	377,500
105	73.7	336.5	139,300	351,400
110	72.9	334.9	117,200	327,600
115	72.0	333.2	97,100	305,600
120	71.1	331.5	78,800	285,300
125	70.2	329.7	62,000	266,500
130	69.3	327.7	46,500	248,900
135	68.4	325.7	32,200	232,500
140	67.5	323.6	19,000	215,000
145	66.6	321.4		198,000
150	65.6	319.1		182,000
155	64.7	316.7		167,000
160	63.8	314.2		152,800
165	62.8	311.6		139,400
170	61.9	308.9		126,800
175	60.9	306.1		114,800
180	59.9	303.2		103,400
185	58.9	300.1		92,600
190	58.0	297.0		82,300
195	57.0	293.7		72,500
200	55.9	290.3		63,100
205	54.9	286.7		54,200
210	53.9	283.0		45,700
215	52.8	279.2		37,500
220	51.7	275.2		29,700
225	50.6	271.1		22,200

MLC650 VPC-MAX S-3

ASME B30.5



124.7 ft



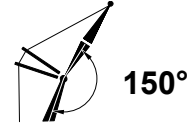
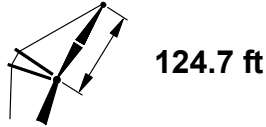
150°

183.7 ft				
ft	°	ft	lb	lb
32	83.0	192.0	773,600	773,600
34	82.4	191.7	773,600	773,600
36	81.7	191.4	773,600	773,600
38	81.1	191.0	773,600	773,600
40	80.5	190.6	773,600	773,600
45	78.9	189.6	773,600	773,600
50	77.3	188.4	690,500	773,600
55	75.7	187.1	591,300	773,600
60	74.0	185.6	510,200	773,600
65	72.4	183.9	442,700	773,600
70	70.7	182.1	385,600	729,500
75	69.1	180.2	336,700	667,700
80	67.4	178.0	294,300	612,900
85	65.6	175.7	257,300	564,100
90	63.9	173.2	224,600	520,200
95	62.1	170.5	195,600	480,600
100	60.3	167.5	169,700	444,700
105	58.5	164.4	146,300	412,000
110	56.6	161.1	125,300	382,100
115	54.7	157.5	106,100	354,600
120	52.7	153.6	88,700	329,300
125	50.7	149.4	72,700	306,000
130	48.6	145.0	58,000	284,300
135	46.4	140.1	44,500	264,200
140	44.2	134.9	32,000	245,500
145	41.8	129.3	20,400	228,000
150	39.4	123.1		211,700
155	36.8	116.4		196,500
160	34.0	109.0		181,200
165	30.9	100.7		161,100

203.4 ft				
ft	°	ft	lb	lb
36	82.5	211.3	773,600	773,600
38	82.0	211.0	773,600	773,600
40	81.4	210.7	773,600	773,600
45	80.0	209.7	773,600	773,600
50	78.5	208.6	694,400	773,600
55	77.1	207.4	595,700	773,600
60	75.6	206.1	514,100	773,600
65	74.2	204.6	446,100	773,600
70	72.7	203.0	388,600	723,300
75	71.2	201.3	339,400	662,300
80	69.7	199.4	296,800	608,200
85	68.2	197.3	259,500	559,900
90	66.6	195.1	226,600	516,400
95	65.1	192.7	197,400	477,200
100	63.5	190.1	171,200	441,500
105	61.9	187.4	147,700	409,000
110	60.2	184.5	126,500	379,300
115	58.6	181.4	107,200	352,000
120	56.9	178.1	89,600	326,800
125	55.2	174.5	73,500	303,500
130	53.4	170.8	58,700	281,900
135	51.6	166.7	45,000	261,800
140	49.7	162.4	32,300	243,100
145	47.8	157.9	20,600	225,700
150	45.9	153.0		209,300
155	43.8	147.7		194,000
160	41.7	142.0		179,600
165	39.5	135.9		166,000
170	37.1	129.3		153,200
175	34.6	122.0		141,200
180	32.0	114.0		129,900

MLC650 VPC-MAX S-3

ASME B30.5

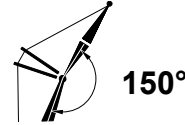
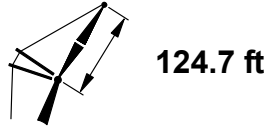


ft	°	ft	lb	lb
38	82.7	230.9	728,800	728,800
40	82.2	230.6	728,800	728,800
45	80.9	229.8	728,800	728,800
50	79.6	228.8	693,000	728,800
55	78.2	227.7	594,500	728,800
60	76.9	226.5	513,100	728,800
65	75.6	225.1	444,800	728,800
70	74.3	223.7	387,000	713,300
75	72.9	222.1	337,500	653,100
80	71.6	220.4	294,600	599,600
85	70.2	218.5	257,100	551,800
90	68.8	216.5	224,100	508,800
95	67.4	214.4	194,700	469,800
100	66.0	212.1	168,400	434,500
105	64.6	209.7	144,800	402,200
110	63.1	207.1	123,400	372,600
115	61.7	204.4	104,000	345,500
120	60.2	201.5	86,300	320,400
125	58.7	198.4	70,000	297,200
130	57.1	195.1	55,100	275,700
135	55.6	191.6	41,300	255,700
140	54.0	187.9	28,600	237,000
145	52.3	184.0		219,500
150	50.7	179.8		203,200
155	49.0	175.4		187,900
160	47.2	170.7		173,400
165	45.4	165.8		159,900
170	43.5	160.5		147,000
175	41.6	154.8		134,900
180	39.5	148.7		123,500
185	37.4	142.1		112,700
190	35.2	135.0		102,400
195	32.8	127.2		92,600
200	30.3	118.7		83,400

ft	°	ft	lb	lb
40	82.8	250.5	683,200	683,200
45	81.6	249.7	683,200	683,200
50	80.4	248.8	683,200	683,200
55	79.2	247.8	595,200	683,200
60	78.0	246.7	514,200	683,200
65	76.8	245.5	445,900	683,200
70	75.6	244.2	387,800	683,200
75	74.3	242.7	338,100	645,900
80	73.1	241.2	295,000	593,200
85	71.9	239.5	257,300	546,000
90	70.6	237.7	224,100	503,500
95	69.3	235.8	194,500	464,900
100	68.1	233.7	168,100	429,900
105	66.8	231.5	144,400	397,900
110	65.5	229.2	122,900	368,600
115	64.2	226.7	103,300	341,600
120	62.8	224.1	85,500	316,700
125	61.5	221.3	69,200	293,600
130	60.1	218.4	54,200	272,200
135	58.7	215.3	40,300	252,300
140	57.3	212.1	27,500	233,700
145	55.9	208.6		216,300
150	54.4	205.0		200,000
155	53.0	201.2		184,700
160	51.4	197.1		170,300
165	49.9	192.9		156,700
170	48.3	188.4		143,900
175	46.7	183.6		131,800
180	45.0	178.6		120,300
185	43.3	173.2		109,400
190	41.5	167.5		99,100
195	39.6	161.4		89,300
200	37.7	154.9		80,000
205	35.7	147.9		71,100
210	33.5	140.4		62,700
215	31.2	132.1		54,600

MLC650 VPC-MAX S-3

ASME B30.5

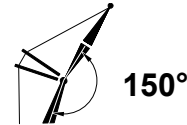
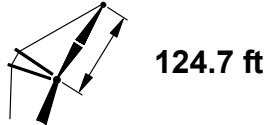


262.5 ft				
ft	°	ft	lb	lb
45	82.3	269.7	634,400	634,400
50	81.1	268.8	634,400	634,400
55	80.0	267.9	595,800	634,400
60	78.9	266.9	514,500	634,400
65	77.8	265.8	446,800	634,400
70	76.7	264.6	388,600	634,400
75	75.6	263.2	338,600	634,400
80	74.4	261.8	295,300	586,400
85	73.3	260.2	257,500	540,000
90	72.1	258.6	224,100	498,000
95	71.0	256.8	194,500	460,000
100	69.8	254.9	167,900	425,400
105	68.6	252.9	144,100	393,700
110	67.4	250.8	122,500	364,700
115	66.2	248.6	102,900	337,900
120	65.0	246.2	85,000	313,200
125	63.8	243.7	68,600	290,300
130	62.6	241.1	53,500	269,000
135	61.3	238.3	39,600	249,200
140	60.1	235.4	26,700	230,700
145	58.8	232.3		213,400
150	57.5	229.0		197,100
155	56.2	225.7		181,900
160	54.8	222.1		167,500
165	53.5	218.3		154,000
170	52.1	214.4		141,200
175	50.7	210.2		129,100
180	49.2	205.9		117,700
185	47.7	201.3		106,800
190	46.2	196.5		96,500
195	44.7	191.4		86,700
200	43.0	186.0		77,300
205	41.4	180.3		68,400
210	39.7	174.2		60,000
215	37.9	167.7		51,800
220	36.0	160.8		44,100
225	34.1	153.4		36,700
230	32.0	145.4		29,600

282.2 ft				
ft	°	ft	lb	lb
45	82.8	289.6	585,600	585,600
50	81.8	288.8	585,600	585,600
55	80.7	287.9	585,600	585,600
60	79.7	287.0	513,500	585,600
65	78.7	286.0	445,500	585,600
70	77.6	284.8	387,900	585,600
75	76.6	283.6	337,800	585,600
80	75.5	282.3	294,300	578,200
85	74.5	280.8	256,300	532,500
90	73.4	279.3	222,800	491,200
95	72.3	277.7	193,000	453,700
100	71.3	275.9	166,400	419,500
105	70.2	274.1	142,400	388,200
110	69.1	272.1	120,700	359,500
115	68.0	270.1	101,000	333,000
120	66.9	267.9	83,000	308,400
125	65.8	265.6	66,600	285,700
130	64.7	263.2	51,400	264,600
135	63.5	260.7	37,400	244,900
140	62.4	258.0	24,500	226,500
145	61.2	255.2		209,200
150	60.0	252.3		193,100
155	58.8	249.2		177,900
160	57.6	246.0		163,600
165	56.4	242.7		150,100
170	55.2	239.1		137,300
175	53.9	235.5		125,300
180	52.6	231.6		113,800
185	51.3	227.5		103,000
190	50.0	223.3		92,700
195	48.6	218.9		82,900
200	47.2	214.2		73,500
205	45.8	209.3		64,600
210	44.4	204.1		56,100
215	42.9	198.7		48,000
220	41.3	193.0		40,200
225	39.7	186.9		32,800
230	38.1	180.5		25,700
235	36.4	173.7		18,800

MLC650 VPC-MAX S-3

ASME B30.5



301.8 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
50	82.3	308.7	536,800	536,800
55	81.4	307.9	536,800	536,800
60	80.4	307.0	510,600	536,800
65	79.4	306.1	442,300	536,800
70	78.5	305.0	384,600	536,800
75	77.5	303.9	334,900	536,800
80	76.5	302.6	291,300	536,800
85	75.5	301.3	253,200	523,400
90	74.5	299.9	219,600	482,700
95	73.5	298.4	189,700	445,800
100	72.5	296.8	162,900	412,000
105	71.5	295.0	138,900	381,100
110	70.5	293.2	117,100	352,600
115	69.5	291.3	97,400	326,400
120	68.5	289.3	79,300	302,100
125	67.5	287.2	62,800	279,500
130	66.4	285.0	47,600	258,500
135	65.4	282.7	33,500	239,000
140	64.3	280.2	20,500	220,700
145	63.3	277.7		203,500
150	62.2	275.0		187,500
155	61.1	272.2		172,300
160	60.0	269.3		158,100
165	58.9	266.2		144,600
170	57.8	263.0		131,900
175	56.6	259.7		119,900
180	55.5	256.2		108,500
185	54.3	252.6		97,700
190	53.1	248.8		87,400
195	51.9	244.8		77,600
200	50.6	240.7		68,300
205	49.4	236.3		59,400
210	48.1	231.8		50,900
215	46.8	227.1		42,700
220	45.5	222.1		35,000
225	44.1	216.9		27,500
230	42.7	211.5		20,400

321.5 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
50	82.8	328.6	488,000	488,000
55	81.9	327.9	488,000	488,000
60	81.0	327.0	488,000	488,000
65	80.1	326.1	440,300	488,000
70	79.2	325.1	382,300	488,000
75	78.3	324.1	332,700	488,000
80	77.3	322.9	289,400	488,000
85	76.4	321.7	251,100	488,000
90	75.5	320.3	217,400	459,200
95	74.6	318.9	187,400	426,400
100	73.6	317.4	160,500	396,800
105	72.7	315.8	136,400	369,800
110	71.8	314.1	114,600	345,000
115	70.8	312.4	94,700	320,600
120	69.9	310.5	76,600	296,600
125	68.9	308.5	60,000	274,300
130	68.0	306.5	44,700	253,500
135	67.0	304.3	30,600	234,000
140	66.0	302.1	17,600	215,900
145	65.0	299.7		198,800
150	64.0	297.2		182,900
155	63.0	294.6		167,800
160	62.0	292.0		153,600
165	61.0	289.1		140,200
170	60.0	286.2		127,600
175	58.9	283.2		115,600
180	57.9	280.0		104,200
185	56.8	276.7		93,400
190	55.7	273.2		83,100
195	54.6	269.6		73,400
200	53.5	265.9		64,000
205	52.4	262.0		55,100
210	51.2	258.0		46,700
215	50.1	253.7		38,500
220	48.9	249.3		30,800
225	47.7	244.7		23,300

MLC650 VPC-MAX S-3

ASME B30.5



881,800 lb



124.7 ft

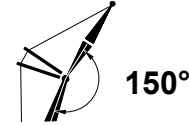
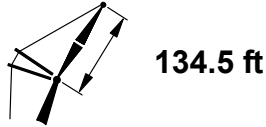


150°

 341.2 ft				
ft	°	ft	lb	lb
55	82.4	347.8	439,200	439,200
60	81.5	347.0	439,200	439,200
65	80.7	346.1	437,300	439,200
70	79.8	345.2	379,100	439,200
75	78.9	344.2	329,300	439,200
80	78.1	343.1	286,100	439,200
85	77.2	341.9	248,000	439,200
90	76.4	340.7	214,200	430,900
95	75.5	339.4	184,100	399,400
100	74.6	338.0	157,200	371,000
105	73.7	336.5	132,900	345,100
110	72.9	334.9	111,000	321,400
115	72.0	333.2	91,100	299,700
120	71.1	331.5	73,000	279,500
125	70.2	329.7	56,300	260,800
130	69.3	327.7	41,000	243,400
135	68.4	325.7	26,900	227,100
140	67.5	323.6		210,300
145	66.6	321.4		193,400
150	65.6	319.1		177,500
155	64.7	316.7		162,500
160	63.8	314.2		148,400
165	62.8	311.6		135,100
170	61.9	308.9		122,500
175	60.9	306.1		110,500
180	59.9	303.2		99,200
185	58.9	300.1		88,400
190	58.0	297.0		78,200
195	57.0	293.7		68,400
200	55.9	290.3		59,100
205	54.9	286.7		50,300
210	53.9	283.0		41,800
215	52.8	279.2		33,700
220	51.7	275.2		25,900
225	50.6	271.1		18,500

MLC650 VPC-MAX S-3

ASME B30.5

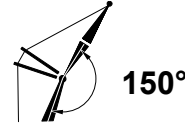
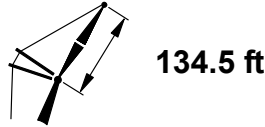


183.7 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
32	83.0	192.0	773,600	773,600
34	82.4	191.7	773,600	773,600
36	81.7	191.4	773,600	773,600
38	81.1	191.0	773,600	773,600
40	80.5	190.6	773,600	773,600
45	78.9	189.6	773,600	773,600
50	77.3	188.4	668,900	773,600
55	75.7	187.1	570,900	773,600
60	74.0	185.6	490,800	773,600
65	72.4	183.9	424,100	773,600
70	70.7	182.1	367,700	714,000
75	69.1	180.2	319,400	652,600
80	67.4	178.0	277,600	598,100
85	65.6	175.7	241,000	549,500
90	63.9	173.2	208,800	505,900
95	62.1	170.5	180,100	466,600
100	60.3	167.5	154,600	430,900
105	58.5	164.4	131,600	398,400
110	56.6	161.1	110,800	368,700
115	54.7	157.5	91,900	341,400
120	52.7	153.6	74,700	316,300
125	50.7	149.4	59,000	293,100
130	48.6	145.0	44,500	271,700
135	46.4	140.1	31,200	251,700
140	44.2	134.9	18,900	233,200
145	41.8	129.3		215,900
150	39.4	123.1		199,700
155	36.8	116.4		184,600
160	34.0	109.0		169,500
165	30.9	100.7		149,500

203.4 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
36	82.5	211.3	773,600	773,600
38	82.0	211.0	773,600	773,600
40	81.4	210.7	773,600	773,600
45	80.0	209.7	773,600	773,600
50	78.5	208.6	673,200	773,600
55	77.1	207.4	575,700	773,600
60	75.6	206.1	495,100	773,600
65	74.2	204.6	428,000	773,600
70	72.7	203.0	371,200	708,300
75	71.2	201.3	322,500	647,700
80	69.7	199.4	280,400	593,900
85	68.2	197.3	243,600	545,800
90	66.6	195.1	211,100	502,600
95	65.1	192.7	182,300	463,600
100	63.5	190.1	156,500	428,200
105	61.9	187.4	133,300	395,900
110	60.2	184.5	112,400	366,300
115	58.6	181.4	93,300	339,200
120	56.9	178.1	76,000	314,200
125	55.2	174.5	60,100	291,000
130	53.4	170.8	45,500	269,600
135	51.6	166.7	32,000	249,700
140	49.7	162.4	19,600	231,100
145	47.8	157.9		213,800
150	45.9	153.0		197,500
155	43.8	147.7		182,300
160	41.7	142.0		168,100
165	39.5	135.9		154,600
170	37.1	129.3		142,000
175	34.6	122.0		130,100
180	32.0	114.0		118,900

MLC650 VPC-MAX S-3

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223.1 ft

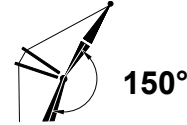
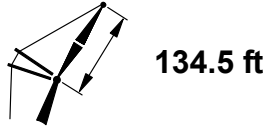
ft	°	ft	lb	
			38.7 ft	60.0 ft
38	82.7	230.9	728,800	728,800
40	82.2	230.6	728,800	728,800
45	80.9	229.8	728,800	728,800
50	79.6	228.8	672,200	728,800
55	78.2	227.7	574,900	728,800
60	76.9	226.5	494,500	728,800
65	75.6	225.1	427,000	728,800
70	74.3	223.7	369,900	698,800
75	72.9	222.1	321,000	638,900
80	71.6	220.4	278,600	585,700
85	70.2	218.5	241,600	538,100
90	68.8	216.5	208,900	495,300
95	67.4	214.4	179,900	456,600
100	66.0	212.1	154,000	421,400
105	64.6	209.7	130,700	389,400
110	63.1	207.1	109,600	360,000
115	61.7	204.4	90,400	333,000
120	60.2	201.5	72,900	308,100
125	58.7	198.4	56,900	285,000
130	57.1	195.1	42,200	263,700
135	55.6	191.6	28,600	243,800
140	54.0	187.9		225,200
145	52.3	184.0		207,900
150	50.7	179.8		191,700
155	49.0	175.4		176,500
160	47.2	170.7		162,200
165	45.4	165.8		148,700
170	43.5	160.5		136,000
175	41.6	154.8		124,000
180	39.5	148.7		112,700
185	37.4	142.1		101,900
190	35.2	135.0		91,800
195	32.8	127.2		82,100
200	30.3	118.7		73,000

242.8 ft

ft	°	ft	lb	
			38.7 ft	60.0 ft
40	82.8	250.5	683,200	683,200
45	81.6	249.7	683,200	683,200
50	80.4	248.8	673,700	683,200
55	79.2	247.8	575,900	683,200
60	78.0	246.7	495,900	683,200
65	76.8	245.5	428,400	683,200
70	75.6	244.2	371,000	683,200
75	74.3	242.7	321,900	632,100
80	73.1	241.2	279,300	579,700
85	71.9	239.5	242,100	532,700
90	70.6	237.7	209,200	490,400
95	69.3	235.8	180,100	452,100
100	68.1	233.7	154,000	417,200
105	66.8	231.5	130,500	385,400
110	65.5	229.2	109,300	356,200
115	64.2	226.7	90,000	329,400
120	62.8	224.1	72,400	304,600
125	61.5	221.3	56,300	281,700
130	60.1	218.4	41,500	260,400
135	58.7	215.3	27,900	240,600
140	57.3	212.1		222,200
145	55.9	208.6		204,900
150	54.4	205.0		188,700
155	53.0	201.2		173,500
160	51.4	197.1		159,200
165	49.9	192.9		145,700
170	48.3	188.4		133,000
175	46.7	183.6		121,000
180	45.0	178.6		109,600
185	43.3	173.2		98,900
190	41.5	167.5		88,600
195	39.6	161.4		78,900
200	37.7	154.9		69,700
205	35.7	147.9		60,900
210	33.5	140.4		52,600
215	31.2	132.1		44,600

MLC650 VPC-MAX S-3

ASME B30.5

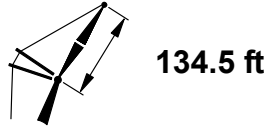


262.5 ft				
ft	°	ft	lb	lb
45	82.3	269.7	634,400	634,400
50	81.1	268.8	634,400	634,400
55	80.0	267.9	576,700	634,400
60	78.9	266.9	496,400	634,400
65	77.8	265.8	429,500	634,400
70	76.7	264.6	372,000	634,400
75	75.6	263.2	322,600	624,800
80	74.4	261.8	279,900	573,300
85	73.3	260.2	242,500	527,000
90	72.1	258.6	209,500	485,300
95	71.0	256.8	180,200	447,500
100	69.8	254.9	154,000	413,000
105	68.6	252.9	130,500	381,500
110	67.4	250.8	109,200	352,600
115	66.2	248.6	89,800	326,000
120	65.0	246.2	72,100	301,400
125	63.8	243.7	55,900	278,700
130	62.6	241.1	41,000	257,500
135	61.3	238.3	27,300	237,800
140	60.1	235.4		219,400
145	58.8	232.3		202,200
150	57.5	229.0		186,100
155	56.2	225.7		171,000
160	54.8	222.1		156,700
165	53.5	218.3		143,300
170	52.1	214.4		130,600
175	50.7	210.2		118,600
180	49.2	205.9		107,200
185	47.7	201.3		96,400
190	46.2	196.5		86,200
195	44.7	191.4		76,500
200	43.0	186.0		67,200
205	41.4	180.3		58,400
210	39.7	174.2		50,000
215	37.9	167.7		41,900
220	36.0	160.8		34,300
225	34.1	153.4		26,900
230	32.0	145.4		19,900

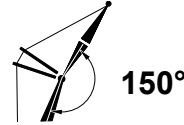
282.2 ft				
ft	°	ft	lb	lb
45	82.8	289.6	585,600	585,600
50	81.8	288.8	585,600	585,600
55	80.7	287.9	576,300	585,600
60	79.7	287.0	495,600	585,600
65	78.7	286.0	428,400	585,600
70	77.6	284.8	371,500	585,600
75	76.6	283.6	322,000	585,600
80	75.5	282.3	279,100	565,400
85	74.5	280.8	241,500	519,900
90	73.4	279.3	208,400	478,800
95	72.3	277.7	179,000	441,500
100	71.3	275.9	152,700	407,500
105	70.2	274.1	129,000	376,300
110	69.1	272.1	107,600	347,700
115	68.0	270.1	88,100	321,300
120	66.9	267.9	70,400	296,900
125	65.8	265.6	54,100	274,300
130	64.7	263.2	39,200	253,300
135	63.5	260.7	25,400	233,700
140	62.4	258.0		215,500
145	61.2	255.2		198,300
150	60.0	252.3		182,300
155	58.8	249.2		167,200
160	57.6	246.0		153,000
165	56.4	242.7		139,600
170	55.2	239.1		126,900
175	53.9	235.5		114,900
180	52.6	231.6		103,600
185	51.3	227.5		92,800
190	50.0	223.3		82,500
195	48.6	218.9		72,800
200	47.2	214.2		63,500
205	45.8	209.3		54,700
210	44.4	204.1		46,300
215	42.9	198.7		38,200
220	41.3	193.0		30,500
225	39.7	186.9		23,200

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134.5 ft



150°

301.8 ft				
ft	°	ft	lb	lb
50	82.3	308.7	536,800	536,800
55	81.4	307.9	536,800	536,800
60	80.4	307.0	492,900	536,800
65	79.4	306.1	425,400	536,800
70	78.5	305.0	368,400	536,800
75	77.5	303.9	319,400	536,800
80	76.5	302.6	276,300	536,800
85	75.5	301.3	238,600	511,100
90	74.5	299.9	205,400	470,600
95	73.5	298.4	175,800	433,800
100	72.5	296.8	149,400	400,200
105	71.5	295.0	125,700	369,400
110	70.5	293.2	104,200	341,100
115	69.5	291.3	84,600	315,000
120	68.5	289.3	66,800	290,800
125	67.5	287.2	50,500	268,400
130	66.4	285.0	35,500	247,500
135	65.4	282.7	21,600	228,000
140	64.3	280.2		209,900
145	63.3	277.7		192,800
150	62.2	275.0		176,800
155	61.1	272.2		161,800
160	60.0	269.3		147,600
165	58.9	266.2		134,300
170	57.8	263.0		121,600
175	56.6	259.7		109,700
180	55.5	256.2		98,400
185	54.3	252.6		87,600
190	53.1	248.8		77,400
195	51.9	244.8		67,700
200	50.6	240.7		58,400
205	49.4	236.3		49,600
210	48.1	231.8		41,100
215	46.8	227.1		33,100
220	45.5	222.1		25,400
225	44.1	216.9		18,000

321.5 ft				
ft	°	ft	lb	lb
50	82.8	328.6	488,000	488,000
55	81.9	327.9	488,000	488,000
60	81.0	327.0	488,000	488,000
65	80.1	326.1	423,600	488,000
70	79.2	325.1	366,300	488,000
75	78.3	324.1	317,300	488,000
80	77.3	322.9	274,500	488,000
85	76.4	321.7	236,700	481,100
90	75.5	320.3	203,300	445,100
95	74.6	318.9	173,700	412,800
100	73.6	317.4	147,200	383,400
105	72.7	315.8	123,300	356,700
110	71.8	314.1	101,800	332,200
115	70.8	312.4	82,200	309,500
120	69.9	310.5	64,300	285,600
125	68.9	308.5	47,900	263,300
130	68.0	306.5	32,800	242,600
135	67.0	304.3	18,900	223,300
140	66.0	302.1		205,200
145	65.0	299.7		188,300
150	64.0	297.2		172,400
155	63.0	294.6		157,400
160	62.0	292.0		143,300
165	61.0	289.1		130,000
170	60.0	286.2		117,400
175	58.9	283.2		105,500
180	57.9	280.0		94,200
185	56.8	276.7		83,500
190	55.7	273.2		73,300
195	54.6	269.6		63,600
200	53.5	265.9		54,300
205	52.4	262.0		45,500
210	51.2	258.0		37,100
215	50.1	253.7		29,000
220	48.9	249.3		21,300

MLC650 VPC-MAX S-3

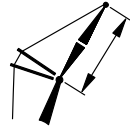
ASME B30.5



881,800 lb



360°



134.5 ft

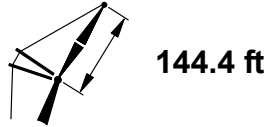


150°

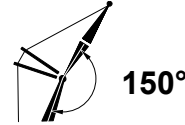
<p>341.2 ft</p>				
ft	°	ft	lb	lb
55	82.4	347.8	439,200	439,200
60	81.5	347.0	439,200	439,200
65	80.7	346.1	420,700	439,200
70	79.8	345.2	363,200	439,200
75	78.9	344.2	314,000	439,200
80	78.1	343.1	271,400	439,200
85	77.2	341.9	233,800	439,200
90	76.4	340.7	200,300	417,000
95	75.5	339.4	170,600	385,900
100	74.6	338.0	144,000	357,800
105	73.7	336.5	120,000	332,200
110	72.9	334.9	98,400	308,800
115	72.0	333.2	78,700	287,200
120	71.1	331.5	60,800	267,300
125	70.2	329.7	44,300	248,800
130	69.3	327.7	29,200	231,600
135	68.4	325.7		215,500
140	67.5	323.6		199,900
145	66.6	321.4		183,000
150	65.6	319.1		167,200
155	64.7	316.7		152,300
160	63.8	314.2		138,300
165	62.8	311.6		125,000
170	61.9	308.9		112,500
175	60.9	306.1		100,600
180	59.9	303.2		89,400
185	58.9	300.1		78,700
190	58.0	297.0		68,500
195	57.0	293.7		58,800
200	55.9	290.3		49,500
205	54.9	286.7		40,700
210	53.9	283.0		32,300
215	52.8	279.2		24,300

MLC650 VPC-MAX S-3

ASME B30.5



144.4 ft



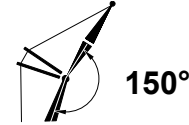
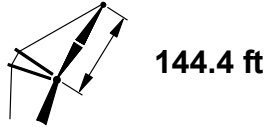
150°

183.7 ft				
ft	°	ft	lb	lb
32	83.0	192.0	773,600	773,600
34	82.4	191.7	773,600	773,600
36	81.7	191.4	773,600	773,600
38	81.1	191.0	773,600	773,600
40	80.5	190.6	773,600	773,600
45	78.9	189.6	768,700	773,600
50	77.3	188.4	649,400	773,600
55	75.7	187.1	552,600	773,600
60	74.0	185.6	473,500	773,600
65	72.4	183.9	407,600	770,000
70	70.7	182.1	351,900	700,500
75	69.1	180.2	304,200	639,400
80	67.4	178.0	262,900	585,300
85	65.6	175.7	226,800	537,000
90	63.9	173.2	195,000	493,600
95	62.1	170.5	166,800	454,500
100	60.3	167.5	141,500	419,100
105	58.5	164.4	118,800	386,800
110	56.6	161.1	98,400	357,300
115	54.7	157.5	79,800	330,200
120	52.7	153.6	62,800	305,300
125	50.7	149.4	47,300	282,300
130	48.6	145.0	33,100	261,000
135	46.4	140.1	20,000	241,200
140	44.2	134.9		222,800
145	41.8	129.3		205,700
150	39.4	123.1		189,700
155	36.8	116.4		174,800
160	34.0	109.0		160,300
165	30.9	100.7		140,600

203.4 ft				
ft	°	ft	lb	lb
36	82.5	211.3	773,600	773,600
38	82.0	211.0	773,600	773,600
40	81.4	210.7	773,600	773,600
45	80.0	209.7	773,600	773,600
50	78.5	208.6	654,100	773,600
55	77.1	207.4	557,800	773,600
60	75.6	206.1	478,200	773,600
65	74.2	204.6	411,800	763,700
70	72.7	203.0	355,800	695,300
75	71.2	201.3	307,700	635,000
80	69.7	199.4	266,100	581,500
85	68.2	197.3	229,800	533,700
90	66.6	195.1	197,700	490,700
95	65.1	192.7	169,300	451,900
100	63.5	190.1	143,800	416,700
105	61.9	187.4	120,900	384,700
110	60.2	184.5	100,300	355,300
115	58.6	181.4	81,500	328,300
120	56.9	178.1	64,400	303,500
125	55.2	174.5	48,700	280,500
130	53.4	170.8	34,300	259,200
135	51.6	166.7	21,100	239,500
140	49.7	162.4		221,000
145	47.8	157.9		203,800
150	45.9	153.0		187,800
155	43.8	147.7		172,700
160	41.7	142.0		158,600
165	39.5	135.9		145,300
170	37.1	129.3		132,800
175	34.6	122.0		121,000
180	32.0	114.0		109,900

MLC650 VPC-MAX S-3

ASME B30.5

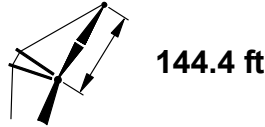


223.1 ft				
ft	°	ft	lb	lb
38	82.7	230.9	728,800	728,800
40	82.2	230.6	728,800	728,800
45	80.9	229.8	728,800	728,800
50	79.6	228.8	653,400	728,800
55	78.2	227.7	557,300	728,800
60	76.9	226.5	477,900	728,800
65	75.6	225.1	411,200	728,800
70	74.3	223.7	354,800	686,200
75	72.9	222.1	306,500	626,600
80	71.6	220.4	264,700	573,700
85	70.2	218.5	228,100	526,400
90	68.8	216.5	195,800	483,800
95	67.4	214.4	167,200	445,300
100	66.0	212.1	141,600	410,400
105	64.6	209.7	118,600	378,500
110	63.1	207.1	97,800	349,300
115	61.7	204.4	78,900	322,400
120	60.2	201.5	61,600	297,700
125	58.7	198.4	45,800	274,800
130	57.1	195.1	31,300	253,600
135	55.6	191.6	17,900	233,800
140	54.0	187.9		215,400
145	52.3	184.0		198,200
150	50.7	179.8		182,100
155	49.0	175.4		167,000
160	47.2	170.7		152,900
165	45.4	165.8		139,500
170	43.5	160.5		126,900
175	41.6	154.8		115,000
180	39.5	148.7		103,800
185	37.4	142.1		93,200
190	35.2	135.0		83,100
195	32.8	127.2		73,600
200	30.3	118.7		64,600

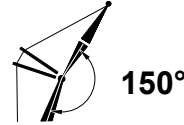
242.8 ft				
ft	°	ft	lb	lb
40	82.8	250.5	683,200	683,200
45	81.6	249.7	683,200	683,200
50	80.4	248.8	655,200	683,200
55	79.2	247.8	558,600	683,200
60	78.0	246.7	479,600	683,200
65	76.8	245.5	412,900	683,200
70	75.6	244.2	356,200	678,800
75	74.3	242.7	307,600	620,200
80	73.1	241.2	265,600	568,000
85	71.9	239.5	228,800	521,200
90	70.6	237.7	196,400	479,200
95	69.3	235.8	167,600	441,100
100	68.1	233.7	141,800	406,400
105	66.8	231.5	118,700	374,800
110	65.5	229.2	97,700	345,800
115	64.2	226.7	78,700	319,100
120	62.8	224.1	61,400	294,500
125	61.5	221.3	45,500	271,800
130	60.1	218.4	30,900	250,600
135	58.7	215.3	17,400	231,000
140	57.3	212.1		212,600
145	55.9	208.6		195,400
150	54.4	205.0		179,400
155	53.0	201.2		164,300
160	51.4	197.1		150,100
165	49.9	192.9		136,700
170	48.3	188.4		124,100
175	46.7	183.6		112,200
180	45.0	178.6		100,900
185	43.3	173.2		90,300
190	41.5	167.5		80,100
195	39.6	161.4		70,500
200	37.7	154.9		61,400
205	35.7	147.9		52,700
210	33.5	140.4		44,400
215	31.2	132.1		36,600

MLC650 VPC-MAX S-3

ASME B30.5



144.4 ft



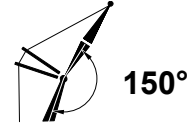
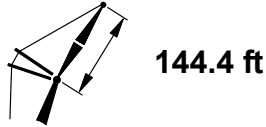
150°

262.5 ft				
ft	°	ft	lb	lb
45	82.3	269.7	634,400	634,400
50	81.1	268.8	634,400	634,400
55	80.0	267.9	559,700	634,400
60	78.9	266.9	480,300	634,400
65	77.8	265.8	414,200	634,400
70	76.7	264.6	357,400	634,400
75	75.6	263.2	308,600	613,200
80	74.4	261.8	266,400	561,900
85	73.3	260.2	229,500	515,900
90	72.1	258.6	196,900	474,400
95	71.0	256.8	168,000	436,800
100	69.8	254.9	142,100	402,500
105	68.6	252.9	118,800	371,200
110	67.4	250.8	97,800	342,500
115	66.2	248.6	78,700	316,000
120	65.0	246.2	61,300	291,600
125	63.8	243.7	45,300	269,000
130	62.6	241.1	30,600	247,900
135	61.3	238.3	17,000	228,400
140	60.1	235.4		210,100
145	58.8	232.3		193,000
150	57.5	229.0		177,000
155	56.2	225.7		162,000
160	54.8	222.1		147,800
165	53.5	218.3		134,500
170	52.1	214.4		121,900
175	50.7	210.2		110,000
180	49.2	205.9		98,700
185	47.7	201.3		88,000
190	46.2	196.5		77,800
195	44.7	191.4		68,200
200	43.0	186.0		59,000
205	41.4	180.3		50,300
210	39.7	174.2		41,900
215	37.9	167.7		34,000
220	36.0	160.8		26,400
225	34.1	153.4		19,200

282.2 ft				
ft	°	ft	lb	lb
45	82.8	289.6	585,600	585,600
50	81.8	288.8	585,600	585,600
55	80.7	287.9	559,500	585,600
60	79.7	287.0	479,700	585,600
65	78.7	286.0	413,400	585,600
70	77.6	284.8	357,200	585,600
75	76.6	283.6	308,200	585,600
80	75.5	282.3	265,800	554,400
85	74.5	280.8	228,700	509,100
90	73.4	279.3	196,000	468,200
95	72.3	277.7	166,900	431,100
100	71.3	275.9	140,900	397,200
105	70.2	274.1	117,600	366,200
110	69.1	272.1	96,400	337,800
115	68.0	270.1	77,200	311,600
120	66.9	267.9	59,700	287,300
125	65.8	265.6	43,600	264,800
130	64.7	263.2	28,900	244,000
135	63.5	260.7		224,500
140	62.4	258.0		206,300
145	61.2	255.2		189,300
150	60.0	252.3		173,300
155	58.8	249.2		158,300
160	57.6	246.0		144,200
165	56.4	242.7		130,900
170	55.2	239.1		118,300
175	53.9	235.5		106,400
180	52.6	231.6		95,200
185	51.3	227.5		84,500
190	50.0	223.3		74,300
195	48.6	218.9		64,700
200	47.2	214.2		55,500
205	45.8	209.3		46,700
210	44.4	204.1		38,400
215	42.9	198.7		30,400
220	41.3	193.0		22,700

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301.8 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
50	82.3	308.7	536,800	536,800
55	81.4	307.9	536,800	536,800
60	80.4	307.0	477,200	536,800
65	79.4	306.1	410,600	536,800
70	78.5	305.0	354,200	536,800
75	77.5	303.9	305,800	536,800
80	76.5	302.6	263,200	536,800
85	75.5	301.3	226,000	499,400
90	74.5	299.9	193,100	460,300
95	73.5	298.4	164,000	423,600
100	72.5	296.8	137,900	390,200
105	71.5	295.0	114,400	359,600
110	70.5	293.2	93,200	331,400
115	69.5	291.3	73,900	305,400
120	68.5	289.3	56,300	281,400
125	67.5	287.2	40,200	259,100
130	66.4	285.0	25,400	238,300
135	65.4	282.7		219,000
140	64.3	280.2		200,900
145	63.3	277.7		184,000
150	62.2	275.0		168,100
155	61.1	272.2		153,200
160	60.0	269.3		139,100
165	58.9	266.2		125,800
170	57.8	263.0		113,300
175	56.6	259.7		101,400
180	55.5	256.2		90,100
185	54.3	252.6		79,500
190	53.1	248.8		69,300
195	51.9	244.8		59,700
200	50.6	240.7		50,500
205	49.4	236.3		41,700
210	48.1	231.8		33,300
215	46.8	227.1		25,300
220	45.5	222.1		17,700

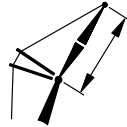
321.5 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
50	82.8	328.6	488,000	488,000
55	81.9	327.9	488,000	488,000
60	81.0	327.0	475,800	488,000
65	80.1	326.1	408,900	488,000
70	79.2	325.1	352,300	488,000
75	78.3	324.1	303,900	488,000
80	77.3	322.9	261,600	488,000
85	76.4	321.7	224,200	468,700
90	75.5	320.3	191,300	433,100
95	74.6	318.9	162,000	401,100
100	73.6	317.4	135,800	372,000
105	72.7	315.8	112,200	345,600
110	71.8	314.1	90,900	321,400
115	70.8	312.4	71,600	299,000
120	69.9	310.5	53,900	276,300
125	68.9	308.5	37,700	254,200
130	68.0	306.5	22,800	233,600
135	67.0	304.3		214,400
140	66.0	302.1		196,500
145	65.0	299.7		179,600
150	64.0	297.2		163,800
155	63.0	294.6		149,000
160	62.0	292.0		134,900
165	61.0	289.1		121,700
170	60.0	286.2		109,200
175	58.9	283.2		97,400
180	57.9	280.0		86,100
185	56.8	276.7		75,500
190	55.7	273.2		65,400
195	54.6	269.6		55,700
200	53.5	265.9		46,500
205	52.4	262.0		37,800
210	51.2	258.0		29,400
215	50.1	253.7		21,400

MLC650 VPC-MAX S-3

ASME B30.5



881,800 lb



144.4 ft

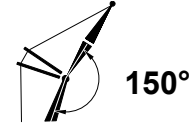
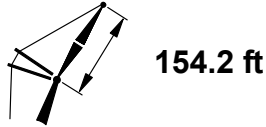


150°

 341.2 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
55	82.4	347.8	439,200	439,200
60	81.5	347.0	439,200	439,200
65	80.7	346.1	406,200	439,200
70	79.8	345.2	349,400	439,200
75	78.9	344.2	300,700	439,200
80	78.1	343.1	258,600	439,200
85	77.2	341.9	221,400	439,200
90	76.4	340.7	188,400	405,000
95	75.5	339.4	159,000	374,300
100	74.6	338.0	132,700	346,500
105	73.7	336.5	109,100	321,200
110	72.9	334.9	87,700	298,100
115	72.0	333.2	68,300	276,800
120	71.1	331.5	50,500	257,100
125	70.2	329.7	34,300	238,800
130	69.3	327.7	19,400	221,800
135	68.4	325.7		205,800
140	67.5	323.6		190,800
145	66.6	321.4		174,500
150	65.6	319.1		158,800
155	64.7	316.7		144,000
160	63.8	314.2		130,100
165	62.8	311.6		116,900
170	61.9	308.9		104,400
175	60.9	306.1		92,600
180	59.9	303.2		81,400
185	58.9	300.1		70,800
190	58.0	297.0		60,700
195	57.0	293.7		51,000
200	55.9	290.3		41,900
205	54.9	286.7		33,100
210	53.9	283.0		24,700

MLC650 VPC-MAX S-3

ASME B30.5

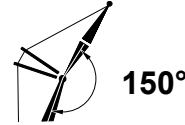
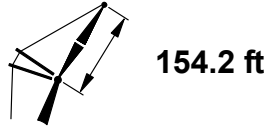


183.7 ft				
ft	°	ft	lb	lb
32	83.0	192.0	773,600	773,600
34	82.4	191.7	773,600	773,600
36	81.7	191.4	773,600	773,600
38	81.1	191.0	773,600	773,600
40	80.5	190.6	773,600	773,600
45	78.9	189.6	744,300	773,600
50	77.3	188.4	626,600	773,600
55	75.7	187.1	531,100	773,600
60	74.0	185.6	453,000	773,600
65	72.4	183.9	388,000	753,300
70	70.7	182.1	333,000	684,300
75	69.1	180.2	286,000	623,500
80	67.4	178.0	245,300	569,700
85	65.6	175.7	209,700	521,700
90	63.9	173.2	178,400	478,700
95	62.1	170.5	150,500	439,800
100	60.3	167.5	125,700	404,600
105	58.5	164.4	103,400	372,600
110	56.6	161.1	83,200	343,300
115	54.7	157.5	64,900	316,400
120	52.7	153.6	48,200	291,700
125	50.7	149.4	33,000	268,900
130	48.6	145.0	19,000	247,800
135	46.4	140.1		228,200
140	44.2	134.9		210,000
145	41.8	129.3		193,000
150	39.4	123.1		177,200
155	36.8	116.4		162,400
160	34.0	109.0		148,100
165	30.9	100.7		128,500

203.4 ft				
ft	°	ft	lb	lb
36	82.5	211.3	773,600	773,600
38	82.0	211.0	773,600	773,600
40	81.4	210.7	773,600	773,600
45	80.0	209.7	749,800	773,600
50	78.5	208.6	631,800	773,600
55	77.1	207.4	536,700	773,600
60	75.6	206.1	458,100	773,600
65	74.2	204.6	392,700	747,600
70	72.7	203.0	337,400	679,500
75	71.2	201.3	290,000	619,600
80	69.7	199.4	249,000	566,400
85	68.2	197.3	213,100	518,900
90	66.6	195.1	181,500	476,200
95	65.1	192.7	153,400	437,700
100	63.5	190.1	128,400	402,700
105	61.9	187.4	105,800	370,900
110	60.2	184.5	85,500	341,700
115	58.6	181.4	67,000	314,900
120	56.9	178.1	50,100	290,300
125	55.2	174.5	34,700	267,500
130	53.4	170.8	20,600	246,400
135	51.6	166.7		226,700
140	49.7	162.4		208,500
145	47.8	157.9		191,400
150	45.9	153.0		175,500
155	43.8	147.7		160,600
160	41.7	142.0		146,600
165	39.5	135.9		133,400
170	37.1	129.3		121,100
175	34.6	122.0		109,400
180	32.0	114.0		98,500

MLC650 VPC-MAX S-3

ASME B30.5

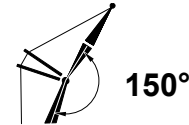
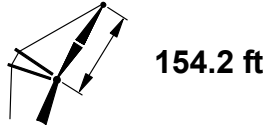


223.1 ft				
ft	°	ft	lb	lb
38	82.7	230.9	728,800	728,800
40	82.2	230.6	728,800	728,800
45	80.9	229.8	728,800	728,800
50	79.6	228.8	631,500	728,800
55	78.2	227.7	536,600	728,800
60	76.9	226.5	458,200	728,800
65	75.6	225.1	392,400	728,800
70	74.3	223.7	336,800	670,900
75	72.9	222.1	289,100	611,600
80	71.6	220.4	247,900	559,000
85	70.2	218.5	211,800	512,000
90	68.8	216.5	180,000	469,700
95	67.4	214.4	151,700	431,400
100	66.0	212.1	126,500	396,700
105	64.6	209.7	103,800	365,000
110	63.1	207.1	83,300	336,000
115	61.7	204.4	64,600	309,400
120	60.2	201.5	47,700	284,800
125	58.7	198.4	32,100	262,100
130	57.1	195.1	17,800	241,000
135	55.6	191.6		221,400
140	54.0	187.9		203,200
145	52.3	184.0		186,100
150	50.7	179.8		170,100
155	49.0	175.4		155,200
160	47.2	170.7		141,100
165	45.4	165.8		127,900
170	43.5	160.5		115,400
175	41.6	154.8		103,700
180	39.5	148.7		92,500
185	37.4	142.1		82,000
190	35.2	135.0		72,100
195	32.8	127.2		62,700
200	30.3	118.7		53,800

242.8 ft				
ft	°	ft	lb	lb
40	82.8	250.5	683,200	683,200
45	81.6	249.7	683,200	683,200
50	80.4	248.8	633,600	683,200
55	79.2	247.8	538,200	683,200
60	78.0	246.7	460,200	683,200
65	76.8	245.5	394,400	683,200
70	75.6	244.2	338,500	663,900
75	74.3	242.7	290,600	605,600
80	73.1	241.2	249,100	553,700
85	71.9	239.5	212,800	507,300
90	70.6	237.7	180,800	465,400
95	69.3	235.8	152,400	427,600
100	68.1	233.7	127,000	393,100
105	66.8	231.5	104,200	361,700
110	65.5	229.2	83,500	332,900
115	64.2	226.7	64,800	306,400
120	62.8	224.1	47,700	282,000
125	61.5	221.3	32,000	259,300
130	60.1	218.4	17,600	238,400
135	58.7	215.3		218,800
140	57.3	212.1		200,600
145	55.9	208.6		183,600
150	54.4	205.0		167,600
155	53.0	201.2		152,700
160	51.4	197.1		138,600
165	49.9	192.9		125,300
170	48.3	188.4		112,800
175	46.7	183.6		101,000
180	45.0	178.6		89,900
185	43.3	173.2		79,300
190	41.5	167.5		69,300
195	39.6	161.4		59,700
200	37.7	154.9		50,700
205	35.7	147.9		42,100
210	33.5	140.4		33,900
215	31.2	132.1		26,200

MLC650 VPC-MAX S-3

ASME B30.5

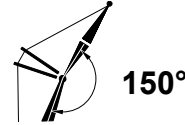
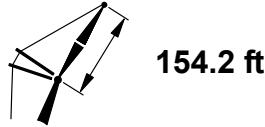


262.5 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
45	82.3	269.7	634,400	634,400
50	81.1	268.8	634,400	634,400
55	80.0	267.9	539,500	634,400
60	78.9	266.9	461,200	634,400
65	77.8	265.8	396,000	634,400
70	76.7	264.6	340,000	634,400
75	75.6	263.2	291,800	599,100
80	74.4	261.8	250,200	548,100
85	73.3	260.2	213,700	502,300
90	72.1	258.6	181,600	461,000
95	71.0	256.8	153,100	423,600
100	69.8	254.9	127,500	389,600
105	68.6	252.9	104,600	358,400
110	67.4	250.8	83,900	329,900
115	66.2	248.6	65,000	303,600
120	65.0	246.2	47,800	279,300
125	63.8	243.7	32,100	256,800
130	62.6	241.1	17,600	235,900
135	61.3	238.3		216,500
140	60.1	235.4		198,400
145	58.8	232.3		181,400
150	57.5	229.0		165,500
155	56.2	225.7		150,600
160	54.8	222.1		136,500
165	53.5	218.3		123,300
170	52.1	214.4		110,800
175	50.7	210.2		99,000
180	49.2	205.9		87,800
185	47.7	201.3		77,200
190	46.2	196.5		67,100
195	44.7	191.4		57,600
200	43.0	186.0		48,500
205	41.4	180.3		39,800
210	39.7	174.2		31,600
215	37.9	167.7		23,700

282.2 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
45	82.8	289.6	585,600	585,600
50	81.8	288.8	585,600	585,600
55	80.7	287.9	539,600	585,600
60	79.7	287.0	460,900	585,600
65	78.7	286.0	395,400	585,600
70	77.6	284.8	340,000	585,600
75	76.6	283.6	291,600	585,600
80	75.5	282.3	249,800	540,900
85	74.5	280.8	213,200	495,800
90	73.4	279.3	180,900	455,200
95	72.3	277.7	152,200	418,200
100	71.3	275.9	126,600	384,600
105	70.2	274.1	103,500	353,700
110	69.1	272.1	82,700	325,500
115	68.0	270.1	63,700	299,400
120	66.9	267.9	46,500	275,300
125	65.8	265.6	30,600	253,000
130	64.7	263.2		232,200
135	63.5	260.7		212,900
140	62.4	258.0		194,800
145	61.2	255.2		177,900
150	60.0	252.3		162,100
155	58.8	249.2		147,200
160	57.6	246.0		133,200
165	56.4	242.7		119,900
170	55.2	239.1		107,500
175	53.9	235.5		95,600
180	52.6	231.6		84,500
185	51.3	227.5		73,900
190	50.0	223.3		63,800
195	48.6	218.9		54,200
200	47.2	214.2		45,100
205	45.8	209.3		36,400
210	44.4	204.1		28,100
215	42.9	198.7		20,200

MLC650 VPC-MAX S-3

ASME B30.5

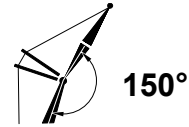
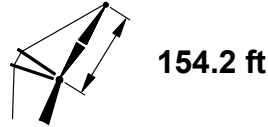


301.8 ft				
ft	°	ft	lb	lb
50	82.3	308.7	536,800	536,800
55	81.4	307.9	536,800	536,800
60	80.4	307.0	458,600	536,800
65	79.4	306.1	392,800	536,800
70	78.5	305.0	337,200	536,800
75	77.5	303.9	289,400	536,800
80	76.5	302.6	247,400	525,400
85	75.5	301.3	210,700	484,100
90	74.5	299.9	178,300	447,200
95	73.5	298.4	149,500	411,100
100	72.5	296.8	123,700	377,800
105	71.5	295.0	100,600	347,400
110	70.5	293.2	79,600	319,300
115	69.5	291.3	60,600	293,500
120	68.5	289.3	43,300	269,600
125	67.5	287.2	27,400	247,400
130	66.4	285.0		226,800
135	65.4	282.7		207,600
140	64.3	280.2		189,600
145	63.3	277.7		172,800
150	62.2	275.0		157,000
155	61.1	272.2		142,200
160	60.0	269.3		128,200
165	58.9	266.2		115,000
170	57.8	263.0		102,600
175	56.6	259.7		90,800
180	55.5	256.2		79,600
185	54.3	252.6		69,000
190	53.1	248.8		58,900
195	51.9	244.8		49,400
200	50.6	240.7		40,200
205	49.4	236.3		31,500
210	48.1	231.8		23,200

321.5 ft				
ft	°	ft	lb	lb
50	82.8	328.6	488,000	488,000
55	81.9	327.9	488,000	488,000
60	81.0	327.0	457,400	488,000
65	80.1	326.1	391,300	488,000
70	79.2	325.1	335,500	488,000
75	78.3	324.1	287,700	488,000
80	77.3	322.9	246,000	488,000
85	76.4	321.7	209,100	453,500
90	75.5	320.3	176,600	418,400
95	74.6	318.9	147,700	386,700
100	73.6	317.4	121,800	358,100
105	72.7	315.8	98,600	331,900
110	71.8	314.1	77,600	308,000
115	70.8	312.4	58,500	285,900
120	69.9	310.5	41,000	264,800
125	68.9	308.5	25,100	242,800
130	68.0	306.5		222,300
135	67.0	304.3		203,200
140	66.0	302.1		185,400
145	65.0	299.7		168,700
150	64.0	297.2		152,900
155	63.0	294.6		138,200
160	62.0	292.0		124,200
165	61.0	289.1		111,100
170	60.0	286.2		98,700
175	58.9	283.2		86,900
180	57.9	280.0		75,800
185	56.8	276.7		65,200
190	55.7	273.2		55,100
195	54.6	269.6		45,600
200	53.5	265.9		36,400
205	52.4	262.0		27,700
210	51.2	258.0		19,400

MLC650 VPC-MAX S-3

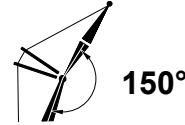
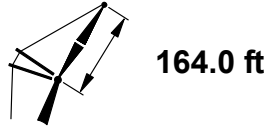
ASME B30.5



ft	°	ft	38.7 ft lb	60.0 ft lb
55	82.4	347.8	439,200	439,200
60	81.5	347.0	439,200	439,200
65	80.7	346.1	388,700	439,200
70	79.8	345.2	332,700	439,200
75	78.9	344.2	284,700	439,200
80	78.1	343.1	243,100	439,200
85	77.2	341.9	206,500	424,300
90	76.4	340.7	173,800	390,500
95	75.5	339.4	144,800	360,200
100	74.6	338.0	118,900	332,700
105	73.7	336.5	95,600	307,700
110	72.9	334.9	74,500	284,900
115	72.0	333.2	55,300	263,800
120	71.1	331.5	37,800	244,400
125	70.2	329.7	21,800	226,300
130	69.3	327.7		209,400
135	68.4	325.7		193,700
140	67.5	323.6		178,900
145	66.6	321.4		163,700
150	65.6	319.1		148,100
155	64.7	316.7		133,400
160	63.8	314.2		119,500
165	62.8	311.6		106,400
170	61.9	308.9		94,000
175	60.9	306.1		82,300
180	59.9	303.2		71,200
185	58.9	300.1		60,600
190	58.0	297.0		50,600
195	57.0	293.7		41,000
200	55.9	290.3		31,900
205	54.9	286.7		23,200

MLC650 VPC-MAX S-3

ASME B30.5

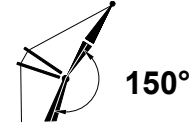
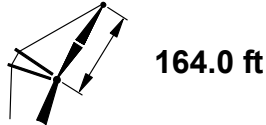


183.7 ft				
ft	°	ft	lb	lb
32	83.0	192.0	773,600	773,600
34	82.4	191.7	773,600	773,600
36	81.7	191.4	773,600	773,600
38	81.1	191.0	773,600	773,600
40	80.5	190.6	773,600	773,600
45	78.9	189.6	726,500	773,600
50	77.3	188.4	610,000	773,600
55	75.7	187.1	515,600	773,600
60	74.0	185.6	438,400	773,600
65	72.4	183.9	374,100	741,700
70	70.7	182.1	319,800	672,900
75	69.1	180.2	273,300	612,500
80	67.4	178.0	233,000	559,000
85	65.6	175.7	197,900	511,300
90	63.9	173.2	166,900	468,500
95	62.1	170.5	139,400	429,900
100	60.3	167.5	114,900	394,900
105	58.5	164.4	92,800	363,000
110	56.6	161.1	72,900	333,900
115	54.7	157.5	54,900	307,200
120	52.7	153.6	38,400	282,700
125	50.7	149.4	23,400	260,000
130	48.6	145.0		239,000
135	46.4	140.1		219,600
140	44.2	134.9		201,500
145	41.8	129.3		184,700
150	39.4	123.1		169,000
155	36.8	116.4		154,400
160	34.0	109.0		140,600
165	30.9	100.7		121,200

203.4 ft				
ft	°	ft	lb	lb
36	82.5	211.3	773,600	773,600
38	82.0	211.0	773,600	773,600
40	81.4	210.7	773,600	773,600
45	80.0	209.7	732,300	773,600
50	78.5	208.6	615,600	773,600
55	77.1	207.4	521,600	773,600
60	75.6	206.1	443,900	773,600
65	74.2	204.6	379,200	736,400
70	72.7	203.0	324,400	668,700
75	71.2	201.3	277,600	609,000
80	69.7	199.4	237,000	556,100
85	68.2	197.3	201,600	508,800
90	66.6	195.1	170,400	466,400
95	65.1	192.7	142,600	428,100
100	63.5	190.1	117,900	393,300
105	61.9	187.4	95,600	361,600
110	60.2	184.5	75,500	332,600
115	58.6	181.4	57,200	306,000
120	56.9	178.1	40,600	281,500
125	55.2	174.5	25,400	258,900
130	53.4	170.8		237,900
135	51.6	166.7		218,400
140	49.7	162.4		200,300
145	47.8	157.9		183,400
150	45.9	153.0		167,500
155	43.8	147.7		152,700
160	41.7	142.0		138,800
165	39.5	135.9		125,800
170	37.1	129.3		113,600
175	34.6	122.0		102,000
180	32.0	114.0		91,200

MLC650 VPC-MAX S-3

ASME B30.5

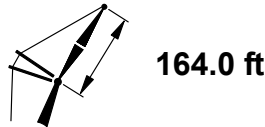


223.1 ft				
ft	°	ft	lb	lb
38	82.7	230.9	728,800	728,800
40	82.2	230.6	728,800	728,800
45	80.9	229.8	728,800	728,800
50	79.6	228.8	615,600	728,800
55	78.2	227.7	521,800	728,800
60	76.9	226.5	444,300	728,800
65	75.6	225.1	379,200	727,200
70	74.3	223.7	324,100	660,300
75	72.9	222.1	277,000	601,400
80	71.6	220.4	236,200	549,100
85	70.2	218.5	200,500	502,200
90	68.8	216.5	169,100	460,200
95	67.4	214.4	141,200	422,100
100	66.0	212.1	116,200	387,600
105	64.6	209.7	93,800	356,100
110	63.1	207.1	73,500	327,200
115	61.7	204.4	55,100	300,700
120	60.2	201.5	38,400	276,300
125	58.7	198.4	23,000	253,700
130	57.1	195.1		232,800
135	55.6	191.6		213,300
140	54.0	187.9		195,200
145	52.3	184.0		178,200
150	50.7	179.8		162,400
155	49.0	175.4		147,500
160	47.2	170.7		133,600
165	45.4	165.8		120,400
170	43.5	160.5		108,100
175	41.6	154.8		96,400
180	39.5	148.7		85,400
185	37.4	142.1		75,000
190	35.2	135.0		65,200
195	32.8	127.2		55,800
200	30.3	118.7		47,100

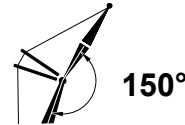
242.8 ft				
ft	°	ft	lb	lb
40	82.8	250.5	683,200	683,200
45	81.6	249.7	683,200	683,200
50	80.4	248.8	618,000	683,200
55	79.2	247.8	523,600	683,200
60	78.0	246.7	446,500	683,200
65	76.8	245.5	381,400	683,200
70	75.6	244.2	326,100	653,800
75	74.3	242.7	278,700	595,700
80	73.1	241.2	237,700	544,100
85	71.9	239.5	201,800	497,800
90	70.6	237.7	170,200	456,200
95	69.3	235.8	142,100	418,500
100	68.1	233.7	117,000	384,300
105	66.8	231.5	94,400	353,000
110	65.5	229.2	74,000	324,400
115	64.2	226.7	55,500	298,000
120	62.8	224.1	38,600	273,700
125	61.5	221.3	23,100	251,200
130	60.1	218.4		230,400
135	58.7	215.3		210,900
140	57.3	212.1		192,800
145	55.9	208.6		175,900
150	54.4	205.0		160,100
155	53.0	201.2		145,200
160	51.4	197.1		131,200
165	49.9	192.9		118,100
170	48.3	188.4		105,700
175	46.7	183.6		93,900
180	45.0	178.6		82,900
185	43.3	173.2		72,400
190	41.5	167.5		62,400
195	39.6	161.4		53,000
200	37.7	154.9		44,000
205	35.7	147.9		35,500
210	33.5	140.4		27,400
215	31.2	132.1		19,800

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ASME B30.5



164.0 ft



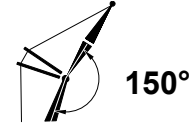
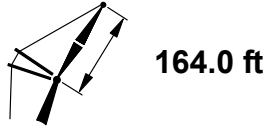
150°

262.5 ft				
ft	°	ft	lb	lb
45	82.3	269.7	634,400	634,400
50	81.1	268.8	620,000	634,400
55	80.0	267.9	525,200	634,400
60	78.9	266.9	447,700	634,400
65	77.8	265.8	383,300	634,400
70	76.7	264.6	327,800	634,400
75	75.6	263.2	280,200	589,500
80	74.4	261.8	239,000	538,700
85	73.3	260.2	203,000	493,100
90	72.1	258.6	171,200	452,100
95	71.0	256.8	143,000	414,800
100	69.8	254.9	117,700	380,900
105	68.6	252.9	95,000	350,000
110	67.4	250.8	74,500	321,600
115	66.2	248.6	55,900	295,400
120	65.0	246.2	38,900	271,300
125	63.8	243.7	23,400	248,900
130	62.6	241.1		228,200
135	61.3	238.3		208,800
140	60.1	235.4		190,800
145	58.8	232.3		173,900
150	57.5	229.0		158,100
155	56.2	225.7		143,300
160	54.8	222.1		129,300
165	53.5	218.3		116,200
170	52.1	214.4		103,800
175	50.7	210.2		92,000
180	49.2	205.9		80,900
185	47.7	201.3		70,400
190	46.2	196.5		60,400
195	44.7	191.4		50,900
200	43.0	186.0		41,900
205	41.4	180.3		33,300
210	39.7	174.2		25,200
215	37.9	167.7		17,400

282.2 ft				
ft	°	ft	lb	lb
45	82.8	289.6	585,600	585,600
50	81.8	288.8	585,600	585,600
55	80.7	287.9	525,500	585,600
60	79.7	287.0	447,600	585,600
65	78.7	286.0	382,800	585,600
70	77.6	284.8	328,000	585,600
75	76.6	283.6	280,200	581,600
80	75.5	282.3	238,800	531,800
85	74.5	280.8	202,600	486,900
90	73.4	279.3	170,700	446,400
95	72.3	277.7	142,300	409,700
100	71.3	275.9	117,000	376,200
105	70.2	274.1	94,200	345,500
110	69.1	272.1	73,600	317,400
115	68.0	270.1	54,800	291,400
120	66.9	267.9	37,700	267,500
125	65.8	265.6	22,100	245,200
130	64.7	263.2		224,600
135	63.5	260.7		205,400
140	62.4	258.0		187,400
145	61.2	255.2		170,600
150	60.0	252.3		154,900
155	58.8	249.2		140,100
160	57.6	246.0		126,100
165	56.4	242.7		113,000
170	55.2	239.1		100,600
175	53.9	235.5		88,900
180	52.6	231.6		77,800
185	51.3	227.5		67,200
190	50.0	223.3		57,200
195	48.6	218.9		47,700
200	47.2	214.2		38,700
205	45.8	209.3		30,000
210	44.4	204.1		21,800

MLC650 VPC-MAX S-3

ASME B30.5



301.8 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
50	82.3	308.7	536,800	536,800
55	81.4	307.9	523,700	536,800
60	80.4	307.0	445,500	536,800
65	79.4	306.1	380,400	536,800
70	78.5	305.0	325,400	536,800
75	77.5	303.9	278,100	536,800
80	76.5	302.6	236,600	514,500
85	75.5	301.3	200,200	473,700
90	74.5	299.9	168,200	437,100
95	73.5	298.4	139,700	402,700
100	72.5	296.8	114,300	369,600
105	71.5	295.0	91,400	339,300
110	70.5	293.2	70,700	311,400
115	69.5	291.3	51,900	285,700
120	68.5	289.3	34,700	261,900
125	67.5	287.2	19,000	239,900
130	66.4	285.0		219,400
135	65.4	282.7		200,300
140	64.3	280.2		182,400
145	63.3	277.7		165,700
150	62.2	275.0		150,000
155	61.1	272.2		135,200
160	60.0	269.3		121,300
165	58.9	266.2		108,200
170	57.8	263.0		95,800
175	56.6	259.7		84,100
180	55.5	256.2		73,000
185	54.3	252.6		62,500
190	53.1	248.8		52,500
195	51.9	244.8		43,000
200	50.6	240.7		33,900
205	49.4	236.3		25,300
210	48.1	231.8		17,000

321.5 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
50	82.8	328.6	488,000	488,000
55	81.9	327.9	488,000	488,000
60	81.0	327.0	444,400	488,000
65	80.1	326.1	379,100	488,000
70	79.2	325.1	323,800	488,000
75	78.3	324.1	276,500	488,000
80	77.3	322.9	235,300	482,200
85	76.4	321.7	198,800	443,300
90	75.5	320.3	166,600	408,400
95	74.6	318.9	138,000	377,100
100	73.6	317.4	112,500	348,700
105	72.7	315.8	89,500	322,900
110	71.8	314.1	68,700	299,100
115	70.8	312.4	49,800	277,300
120	69.9	310.5	32,600	257,000
125	68.9	308.5		235,400
130	68.0	306.5		215,100
135	67.0	304.3		196,100
140	66.0	302.1		178,300
145	65.0	299.7		161,700
150	64.0	297.2		146,000
155	63.0	294.6		131,300
160	62.0	292.0		117,500
165	61.0	289.1		104,400
170	60.0	286.2		92,100
175	58.9	283.2		80,400
180	57.9	280.0		69,300
185	56.8	276.7		58,800
190	55.7	273.2		48,800
195	54.6	269.6		39,300
200	53.5	265.9		30,200
205	52.4	262.0		21,600

MLC650 VPC-MAX S-3

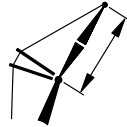
ASME B30.5



881,800 lb



360°



164.0 ft

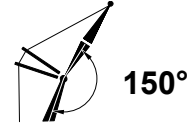
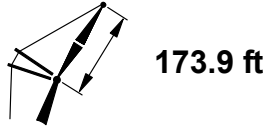


150°

<p>341.2 ft</p>				
ft	°	ft	38.7 ft lb	60.0 ft lb
55	82.4	347.8	439,200	439,200
60	81.5	347.0	439,200	439,200
65	80.7	346.1	376,600	439,200
70	79.8	345.2	321,200	439,200
75	78.9	344.2	273,700	439,200
80	78.1	343.1	232,600	439,200
85	77.2	341.9	196,300	414,100
90	76.4	340.7	164,000	380,700
95	75.5	339.4	135,300	350,700
100	74.6	338.0	109,700	323,500
105	73.7	336.5	86,600	298,800
110	72.9	334.9	65,800	276,100
115	72.0	333.2	46,800	255,300
120	71.1	331.5	29,500	236,100
125	70.2	329.7		218,200
130	69.3	327.7		201,500
135	68.4	325.7		185,900
140	67.5	323.6		171,200
145	66.6	321.4		156,900
150	65.6	319.1		141,300
155	64.7	316.7		126,700
160	63.8	314.2		112,900
165	62.8	311.6		99,900
170	61.9	308.9		87,600
175	60.9	306.1		75,900
180	59.9	303.2		64,800
185	58.9	300.1		54,300
190	58.0	297.0		44,400
195	57.0	293.7		34,900
200	55.9	290.3		25,800
205	54.9	286.7		17,200

MLC650 VPC-MAX S-3

ASME B30.5

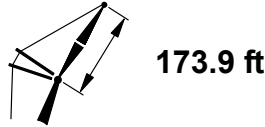


183.7 ft				
ft	°	ft	lb	lb
32	83.0	192.0	773,600	773,600
34	82.4	191.7	773,600	773,600
36	81.7	191.4	773,600	773,600
38	81.1	191.0	773,600	773,600
40	80.5	190.6	773,600	773,600
45	78.9	189.6	700,900	773,600
50	77.3	188.4	586,200	773,600
55	75.7	187.1	493,100	773,600
60	74.0	185.6	417,000	773,600
65	72.4	183.9	353,700	724,200
70	70.7	182.1	300,100	656,000
75	69.1	180.2	254,300	595,900
80	67.4	178.0	214,700	542,800
85	65.6	175.7	180,100	495,400
90	63.9	173.2	149,600	452,900
95	62.1	170.5	122,500	414,600
100	60.3	167.5	98,400	379,800
105	58.5	164.4	76,700	348,200
110	56.6	161.1	57,100	319,400
115	54.7	157.5	39,400	292,900
120	52.7	153.6	23,300	268,600
125	50.7	149.4		246,100
130	48.6	145.0		225,300
135	46.4	140.1		206,100
140	44.2	134.9		188,200
145	41.8	129.3		171,500
150	39.4	123.1		156,000
155	36.8	116.4		141,500
160	34.0	109.0		127,900
165	30.9	100.7		108,700

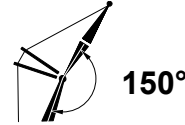
203.4 ft				
ft	°	ft	lb	lb
36	82.5	211.3	773,600	773,600
38	82.0	211.0	773,600	773,600
40	81.4	210.7	773,600	773,600
45	80.0	209.7	707,300	773,600
50	78.5	208.6	592,200	773,600
55	77.1	207.4	499,600	773,600
60	75.6	206.1	423,000	773,600
65	74.2	204.6	359,200	719,500
70	72.7	203.0	305,300	652,200
75	71.2	201.3	259,100	593,000
80	69.7	199.4	219,200	540,400
85	68.2	197.3	184,200	493,400
90	66.6	195.1	153,500	451,300
95	65.1	192.7	126,200	413,200
100	63.5	190.1	101,800	378,700
105	61.9	187.4	79,900	347,300
110	60.2	184.5	60,100	318,500
115	58.6	181.4	42,200	292,100
120	56.9	178.1	25,800	267,800
125	55.2	174.5		245,300
130	53.4	170.8		224,500
135	51.6	166.7		205,200
140	49.7	162.4		187,300
145	47.8	157.9		170,500
150	45.9	153.0		154,800
155	43.8	147.7		140,200
160	41.7	142.0		126,400
165	39.5	135.9		113,600
170	37.1	129.3		101,500
175	34.6	122.0		90,100
180	32.0	114.0		79,400

MLC650 VPC-MAX S-3

ASME B30.5



173.9 ft



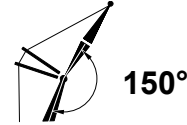
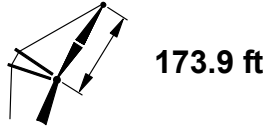
150°

223.1 ft				
ft	°	ft	lb	lb
38	82.7	230.9	728,800	728,800
40	82.2	230.6	728,800	728,800
45	80.9	229.8	708,400	728,800
50	79.6	228.8	592,600	728,800
55	78.2	227.7	500,200	728,800
60	76.9	226.5	423,800	728,800
65	75.6	225.1	359,600	710,800
70	74.3	223.7	305,400	644,400
75	72.9	222.1	258,900	585,800
80	71.6	220.4	218,700	533,800
85	70.2	218.5	183,600	487,300
90	68.8	216.5	152,600	445,500
95	67.4	214.4	125,100	407,700
100	66.0	212.1	100,500	373,400
105	64.6	209.7	78,500	342,100
110	63.1	207.1	58,500	313,500
115	61.7	204.4	40,400	287,200
120	60.2	201.5	23,900	263,000
125	58.7	198.4		240,500
130	57.1	195.1		219,800
135	55.6	191.6		200,500
140	54.0	187.9		182,500
145	52.3	184.0		165,700
150	50.7	179.8		150,000
155	49.0	175.4		135,200
160	47.2	170.7		121,400
165	45.4	165.8		108,400
170	43.5	160.5		96,200
175	41.6	154.8		84,600
180	39.5	148.7		73,800
185	37.4	142.1		63,500
190	35.2	135.0		53,800
195	32.8	127.2		44,600
200	30.3	118.7		35,900

242.8 ft				
ft	°	ft	lb	lb
40	82.8	250.5	683,200	683,200
45	81.6	249.7	683,200	683,200
50	80.4	248.8	595,300	683,200
55	79.2	247.8	502,300	683,200
60	78.0	246.7	426,300	683,200
65	76.8	245.5	362,200	683,200
70	75.6	244.2	307,600	638,300
75	74.3	242.7	260,900	580,600
80	73.1	241.2	220,500	529,200
85	71.9	239.5	185,200	483,300
90	70.6	237.7	154,000	441,900
95	69.3	235.8	126,300	404,500
100	68.1	233.7	101,600	370,500
105	66.8	231.5	79,400	339,400
110	65.5	229.2	59,300	311,000
115	64.2	226.7	41,000	284,800
120	62.8	224.1	24,400	260,700
125	61.5	221.3		238,400
130	60.1	218.4		217,600
135	58.7	215.3		198,400
140	57.3	212.1		180,400
145	55.9	208.6		163,600
150	54.4	205.0		147,900
155	53.0	201.2		133,200
160	51.4	197.1		119,300
165	49.9	192.9		106,300
170	48.3	188.4		94,000
175	46.7	183.6		82,400
180	45.0	178.6		71,400
185	43.3	173.2		61,000
190	41.5	167.5		51,200
195	39.6	161.4		41,900
200	37.7	154.9		33,000
205	35.7	147.9		24,600

MLC650 VPC-MAX S-3

ASME B30.5

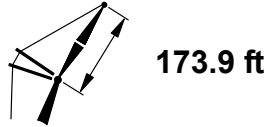


262.5 ft				
ft	°	ft	lb	lb
45	82.3	269.7	634,400	634,400
50	81.1	268.8	597,700	634,400
55	80.0	267.9	504,200	634,400
60	78.9	266.9	427,800	634,400
65	77.8	265.8	364,300	634,400
70	76.7	264.6	309,600	631,400
75	75.6	263.2	262,700	574,700
80	74.4	261.8	222,100	524,200
85	73.3	260.2	186,600	479,000
90	72.1	258.6	155,300	438,100
95	71.0	256.8	127,500	401,100
100	69.8	254.9	102,600	367,400
105	68.6	252.9	80,300	336,700
110	67.4	250.8	60,100	308,500
115	66.2	248.6	41,700	282,500
120	65.0	246.2	25,000	258,500
125	63.8	243.7		236,300
130	62.6	241.1		215,700
135	61.3	238.3		196,500
140	60.1	235.4		178,600
145	58.8	232.3		161,900
150	57.5	229.0		146,200
155	56.2	225.7		131,500
160	54.8	222.1		117,700
165	53.5	218.3		104,600
170	52.1	214.4		92,300
175	50.7	210.2		80,700
180	49.2	205.9		69,700
185	47.7	201.3		59,300
190	46.2	196.5		49,400
195	44.7	191.4		40,000
200	43.0	186.0		31,100
205	41.4	180.3		22,600

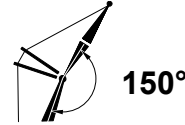
282.2 ft				
ft	°	ft	lb	lb
45	82.8	289.6	585,600	585,600
50	81.8	288.8	585,600	585,600
55	80.7	287.9	504,700	585,600
60	79.7	287.0	428,000	585,600
65	78.7	286.0	364,100	585,600
70	77.6	284.8	310,100	585,600
75	76.6	283.6	262,900	567,300
80	75.5	282.3	222,100	517,700
85	74.5	280.8	186,400	473,100
90	73.4	279.3	155,000	432,800
95	72.3	277.7	127,000	396,300
100	71.3	275.9	102,100	363,000
105	70.2	274.1	79,600	332,500
110	69.1	272.1	59,300	304,600
115	68.0	270.1	40,800	278,800
120	66.9	267.9	24,000	255,000
125	65.8	265.6		232,900
130	64.7	263.2		212,400
135	63.5	260.7		193,300
140	62.4	258.0		175,500
145	61.2	255.2		158,800
150	60.0	252.3		143,200
155	58.8	249.2		128,500
160	57.6	246.0		114,700
165	56.4	242.7		101,600
170	55.2	239.1		89,300
175	53.9	235.5		77,700
180	52.6	231.6		66,700
185	51.3	227.5		56,300
190	50.0	223.3		46,300
195	48.6	218.9		36,900
200	47.2	214.2		28,000
205	45.8	209.3		19,400

MLC650 VPC-MAX S-3

ASME B30.5



173.9 ft



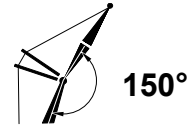
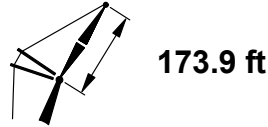
150°

301.8 ft				
ft	°	ft	lb	lb
50	82.3	308.7	536,800	536,800
55	81.4	307.9	503,100	536,800
60	80.4	307.0	426,000	536,800
65	79.4	306.1	361,900	536,800
70	78.5	305.0	307,700	536,800
75	77.5	303.9	261,100	536,800
80	76.5	302.6	220,100	498,100
85	75.5	301.3	184,300	457,700
90	74.5	299.9	152,700	421,700
95	73.5	298.4	124,600	389,200
100	72.5	296.8	99,600	356,800
105	71.5	295.0	77,000	326,600
110	70.5	293.2	56,600	298,900
115	69.5	291.3	38,100	273,400
120	68.5	289.3	21,200	249,700
125	67.5	287.2		227,800
130	66.4	285.0		207,400
135	65.4	282.7		188,400
140	64.3	280.2		170,700
145	63.3	277.7		154,100
150	62.2	275.0		138,500
155	61.1	272.2		123,900
160	60.0	269.3		110,100
165	58.9	266.2		97,100
170	57.8	263.0		84,800
175	56.6	259.7		73,200
180	55.5	256.2		62,100
185	54.3	252.6		51,700
190	53.1	248.8		41,800
195	51.9	244.8		32,300
200	50.6	240.7		23,400

321.5 ft				
ft	°	ft	lb	lb
50	82.8	328.6	488,000	488,000
55	81.9	327.9	488,000	488,000
60	81.0	327.0	425,200	488,000
65	80.1	326.1	360,800	488,000
70	79.2	325.1	306,300	488,000
75	78.3	324.1	259,700	488,000
80	77.3	322.9	219,000	466,000
85	76.4	321.7	183,100	427,500
90	75.5	320.3	151,300	393,100
95	74.6	318.9	123,200	362,200
100	73.6	317.4	98,000	334,200
105	72.7	315.8	75,300	308,700
110	71.8	314.1	54,800	285,300
115	70.8	312.4	36,200	263,700
120	69.9	310.5	19,200	243,700
125	68.9	308.5		223,600
130	68.0	306.5		203,400
135	67.0	304.3		184,500
140	66.0	302.1		166,800
145	65.0	299.7		150,300
150	64.0	297.2		134,800
155	63.0	294.6		120,200
160	62.0	292.0		106,400
165	61.0	289.1		93,500
170	60.0	286.2		81,200
175	58.9	283.2		69,600
180	57.9	280.0		58,600
185	56.8	276.7		48,200
190	55.7	273.2		38,200
195	54.6	269.6		28,800
200	53.5	265.9		19,800

MLC650 VPC-MAX S-3

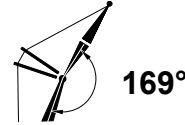
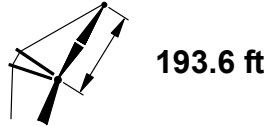
ASME B30.5



ft	°	ft	38.7 ft lb	60.0 ft lb
55	82.4	347.8	439,200	439,200
60	81.5	347.0	423,100	439,200
65	80.7	346.1	358,500	439,200
70	79.8	345.2	303,800	439,200
75	78.9	344.2	257,000	439,200
80	78.1	343.1	216,500	435,200
85	77.2	341.9	180,700	398,500
90	76.4	340.7	148,900	365,600
95	75.5	339.4	120,600	336,000
100	74.6	338.0	95,300	309,200
105	73.7	336.5	72,600	284,800
110	72.9	334.9	52,000	262,400
115	72.0	333.2	33,400	241,900
120	71.1	331.5		222,900
125	70.2	329.7		205,200
130	69.3	327.7		188,700
135	68.4	325.7		173,300
140	67.5	323.6		158,800
145	66.6	321.4		145,200
150	65.6	319.1		130,200
155	64.7	316.7		115,700
160	63.8	314.2		102,000
165	62.8	311.6		89,100
170	61.9	308.9		76,900
175	60.9	306.1		65,300
180	59.9	303.2		54,300
185	58.9	300.1		43,900
190	58.0	297.0		34,000
195	57.0	293.7		24,500

MLC650 VPC-MAX S-3

ASME B30.5

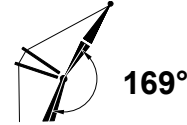
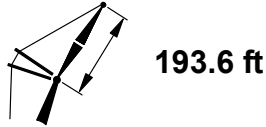


183.7 ft				
ft	°	ft	lb	lb
32	83.0	192.0	773,600	773,600
34	82.4	191.7	773,600	773,600
36	81.7	191.4	773,600	773,600
38	81.1	191.0	773,600	773,600
40	80.5	190.6	773,600	773,600
45	78.9	189.6	773,600	773,600
50	77.3	188.4	662,500	773,600
55	75.7	187.1	558,300	773,600
60	74.0	185.6	473,100	773,600
65	72.4	183.9	402,100	763,900
70	70.7	182.1	342,100	690,700
75	69.1	180.2	290,600	626,300
80	67.4	178.0	246,000	569,200
85	65.6	175.7	207,000	518,200
90	63.9	173.2	172,500	472,500
95	62.1	170.5	141,900	431,200
100	60.3	167.5	114,500	393,700
105	58.5	164.4	89,900	359,500
110	56.6	161.1	67,500	328,300
115	54.7	157.5	47,300	299,600
120	52.7	153.6	28,700	273,100
125	50.7	149.4		248,600
130	48.6	145.0		225,900
135	46.4	140.1		204,700
140	44.2	134.9		185,000
145	41.8	129.3		166,600
150	39.4	123.1		149,300
155	36.8	116.4		133,100
160	34.0	109.0		117,700
165	30.9	100.7		96,700
170	27.6	91.2		76,000
175	23.8	80.1		55,300
180	19.2	66.4		34,200

203.4 ft				
ft	°	ft	lb	lb
36	82.5	211.3	773,600	773,600
38	82.0	211.0	773,600	773,600
40	81.4	210.7	773,600	773,600
45	80.0	209.7	773,600	773,600
50	78.5	208.6	670,900	773,600
55	77.1	207.4	567,300	773,600
60	75.6	206.1	481,700	773,600
65	74.2	204.6	410,300	761,000
70	72.7	203.0	350,000	688,900
75	71.2	201.3	298,200	625,400
80	69.7	199.4	253,400	569,100
85	68.2	197.3	214,200	518,800
90	66.6	195.1	179,600	473,500
95	65.1	192.7	148,800	432,600
100	63.5	190.1	121,300	395,500
105	61.9	187.4	96,500	361,600
110	60.2	184.5	74,100	330,600
115	58.6	181.4	53,700	302,000
120	56.9	178.1	35,000	275,700
125	55.2	174.5	18,000	251,400
130	53.4	170.8		228,800
135	51.6	166.7		207,800
140	49.7	162.4		188,200
145	47.8	157.9		169,900
150	45.9	153.0		152,700
155	43.8	147.7		136,500
160	41.7	142.0		121,300
165	39.5	135.9		107,000
170	37.1	129.3		93,500
175	34.6	122.0		80,700
180	32.0	114.0		68,600
185	29.1	105.1		53,700
190	25.9	94.9		36,200
195	22.3	83.0		18,700

MLC650 VPC-MAX S-3

ASME B30.5

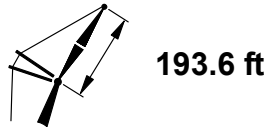


ft	°	ft	lb	lb
38	82.7	230.9	728,800	728,800
40	82.2	230.6	728,800	728,800
45	80.9	229.8	728,800	728,800
50	79.6	228.8	673,200	728,800
55	78.2	227.7	569,900	728,800
60	76.9	226.5	484,500	728,800
65	75.6	225.1	412,900	728,800
70	74.3	223.7	352,200	682,600
75	72.9	222.1	300,300	620,000
80	71.6	220.4	255,300	564,300
85	70.2	218.5	215,900	514,500
90	68.8	216.5	181,100	469,700
95	67.4	214.4	150,200	429,200
100	66.0	212.1	122,600	392,400
105	64.6	209.7	97,700	358,700
110	63.1	207.1	75,200	328,000
115	61.7	204.4	54,700	299,600
120	60.2	201.5	36,000	273,500
125	58.7	198.4	18,900	249,300
130	57.1	195.1		226,800
135	55.6	191.6		205,900
140	54.0	187.9		186,400
145	52.3	184.0		168,200
150	50.7	179.8		151,100
155	49.0	175.4		135,000
160	47.2	170.7		119,900
165	45.4	165.8		105,600
170	43.5	160.5		92,100
175	41.6	154.8		79,400
180	39.5	148.7		67,300
185	37.4	142.1		55,800
190	35.2	135.0		44,900
195	32.8	127.2		34,600
200	30.3	118.7		24,700

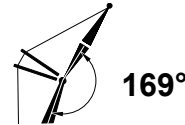
ft	°	ft	lb	lb
40	82.8	250.5	683,200	683,200
45	81.6	249.7	683,200	683,200
50	80.4	248.8	677,500	683,200
55	79.2	247.8	573,700	683,200
60	78.0	246.7	488,800	683,200
65	76.8	245.5	417,200	683,200
70	75.6	244.2	356,300	677,600
75	74.3	242.7	304,200	616,000
80	73.1	241.2	259,000	561,100
85	71.9	239.5	219,400	511,900
90	70.6	237.7	184,500	467,700
95	69.3	235.8	153,500	427,600
100	68.1	233.7	125,800	391,100
105	66.8	231.5	100,800	357,800
110	65.5	229.2	78,200	327,300
115	64.2	226.7	57,600	299,200
120	62.8	224.1	38,900	273,200
125	61.5	221.3	21,700	249,200
130	60.1	218.4		226,900
135	58.7	215.3		206,100
140	57.3	212.1		186,700
145	55.9	208.6		168,600
150	54.4	205.0		151,500
155	53.0	201.2		135,600
160	51.4	197.1		120,500
165	49.9	192.9		106,300
170	48.3	188.4		92,900
175	46.7	183.6		80,200
180	45.0	178.6		68,100
185	43.3	173.2		56,700
190	41.5	167.5		45,800
195	39.6	161.4		35,500
200	37.7	154.9		25,600

MLC650 VPC-MAX S-3

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193.6 ft



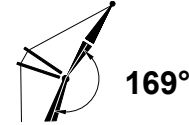
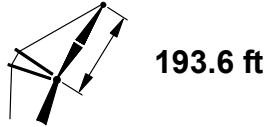
169°

262.5 ft				
ft	°	ft	lb	lb
45	82.3	269.7	634,400	634,400
50	81.1	268.8	634,400	634,400
55	80.0	267.9	576,900	634,400
60	78.9	266.9	491,700	634,400
65	77.8	265.8	420,700	634,400
70	76.7	264.6	359,800	634,400
75	75.6	263.2	307,400	611,000
80	74.4	261.8	262,100	557,100
85	73.3	260.2	222,400	508,700
90	72.1	258.6	187,400	465,100
95	71.0	256.8	156,300	425,500
100	69.8	254.9	128,500	389,500
105	68.6	252.9	103,400	356,500
110	67.4	250.8	80,800	326,300
115	66.2	248.6	60,200	298,400
120	65.0	246.2	41,300	272,700
125	63.8	243.7	24,100	248,900
130	62.6	241.1		226,700
135	61.3	238.3		206,100
140	60.1	235.4		186,800
145	58.8	232.3		168,800
150	57.5	229.0		151,800
155	56.2	225.7		135,900
160	54.8	222.1		120,900
165	53.5	218.3		106,800
170	52.1	214.4		93,400
175	50.7	210.2		80,800
180	49.2	205.9		68,800
185	47.7	201.3		57,400
190	46.2	196.5		46,600
195	44.7	191.4		36,300
200	43.0	186.0		26,500
205	41.4	180.3		17,100

282.2 ft				
ft	°	ft	lb	lb
45	82.8	289.6	585,600	585,600
50	81.8	288.8	585,600	585,600
55	80.7	287.9	578,600	585,600
60	79.7	287.0	493,000	585,600
65	78.7	286.0	421,800	585,600
70	77.6	284.8	361,500	585,600
75	76.6	283.6	309,000	585,600
80	75.5	282.3	263,500	551,200
85	74.5	280.8	223,600	503,700
90	73.4	279.3	188,500	460,700
95	72.3	277.7	157,300	421,700
100	71.3	275.9	129,400	386,100
105	70.2	274.1	104,200	353,500
110	69.1	272.1	81,500	323,600
115	68.0	270.1	60,800	296,000
120	66.9	267.9	42,000	270,500
125	65.8	265.6	24,600	246,800
130	64.7	263.2		224,800
135	63.5	260.7		204,300
140	62.4	258.0		185,200
145	61.2	255.2		167,200
150	60.0	252.3		150,400
155	58.8	249.2		134,600
160	57.6	246.0		119,700
165	56.4	242.7		105,600
170	55.2	239.1		92,300
175	53.9	235.5		79,700
180	52.6	231.6		67,800
185	51.3	227.5		56,400
190	50.0	223.3		45,600
195	48.6	218.9		35,400
200	47.2	214.2		25,600

MLC650 VPC-MAX S-3

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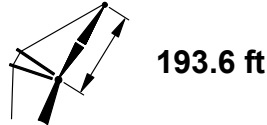


301.8 ft				
ft	°	ft	lb	lb
50	82.3	308.7	536,800	536,800
55	81.4	307.9	536,800	536,800
60	80.4	307.0	492,100	536,800
65	79.4	306.1	420,600	536,800
70	78.5	305.0	360,200	536,800
75	77.5	303.9	308,200	536,800
80	76.5	302.6	262,600	536,800
85	75.5	301.3	222,600	496,100
90	74.5	299.9	187,400	454,300
95	73.5	298.4	156,100	415,800
100	72.5	296.8	128,100	380,700
105	71.5	295.0	102,900	348,500
110	70.5	293.2	80,100	318,900
115	69.5	291.3	59,400	291,600
120	68.5	289.3	40,400	266,300
125	67.5	287.2	23,100	242,900
130	66.4	285.0		221,000
135	65.4	282.7		200,700
140	64.3	280.2		181,600
145	63.3	277.7		163,800
150	62.2	275.0		147,100
155	61.1	272.2		131,300
160	60.0	269.3		116,500
165	58.9	266.2		102,500
170	57.8	263.0		89,200
175	56.6	259.7		76,700
180	55.5	256.2		64,800
185	54.3	252.6		53,500
190	53.1	248.8		42,700
195	51.9	244.8		32,500
200	50.6	240.7		22,700

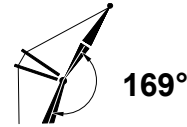
321.5 ft				
ft	°	ft	lb	lb
50	82.8	328.6	488,000	488,000
55	81.9	327.9	488,000	488,000
60	81.0	327.0	488,000	488,000
65	80.1	326.1	420,400	488,000
70	79.2	325.1	359,700	488,000
75	78.3	324.1	307,800	488,000
80	77.3	322.9	262,500	488,000
85	76.4	321.7	222,400	466,900
90	75.5	320.3	187,100	428,900
95	74.6	318.9	155,700	394,700
100	73.6	317.4	127,600	363,800
105	72.7	315.8	102,300	335,600
110	71.8	314.1	79,400	309,800
115	70.8	312.4	58,600	286,100
120	69.9	310.5	39,600	262,800
125	68.9	308.5	22,200	239,500
130	68.0	306.5		217,900
135	67.0	304.3		197,700
140	66.0	302.1		178,800
145	65.0	299.7		161,100
150	64.0	297.2		144,400
155	63.0	294.6		128,800
160	62.0	292.0		114,000
165	61.0	289.1		100,100
170	60.0	286.2		86,900
175	58.9	283.2		74,400
180	57.9	280.0		62,500
185	56.8	276.7		51,300
190	55.7	273.2		40,600
195	54.6	269.6		30,400
200	53.5	265.9		20,600

MLC650 VPC-MAX S-3

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193.6 ft

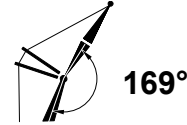
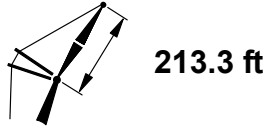


169°

<p>341.2 ft</p>				
ft	°	ft	38.7 ft lb	60.0 ft lb
55	82.4	347.8	439,200	439,200
60	81.5	347.0	439,200	439,200
65	80.7	346.1	418,900	439,200
70	79.8	345.2	358,000	439,200
75	78.9	344.2	305,900	439,200
80	78.1	343.1	260,800	439,200
85	77.2	341.9	220,900	438,700
90	76.4	340.7	185,500	402,200
95	75.5	339.4	154,000	369,400
100	74.6	338.0	125,800	339,700
105	73.7	336.5	100,500	312,700
110	72.9	334.9	77,600	288,000
115	72.0	333.2	56,700	265,200
120	71.1	331.5	37,700	244,200
125	70.2	329.7	20,200	224,700
130	69.3	327.7		206,600
135	68.4	325.7		189,600
140	67.5	323.6		173,600
145	66.6	321.4		157,400
150	65.6	319.1		140,800
155	64.7	316.7		125,300
160	63.8	314.2		110,600
165	62.8	311.6		96,700
170	61.9	308.9		83,600
175	60.9	306.1		71,100
180	59.9	303.2		59,300
185	58.9	300.1		48,100
190	58.0	297.0		37,400
195	57.0	293.7		27,300
200	55.9	290.3		17,600

MLC650 VPC-MAX S-3

ASME B30.5

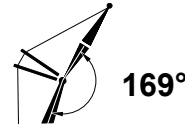
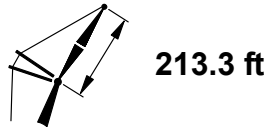


183.7 ft				
ft	°	ft	lb	lb
32	83.0	192.0	773,600	773,600
34	82.4	191.7	773,600	773,600
36	81.7	191.4	773,600	773,600
38	81.1	191.0	773,600	773,600
40	80.5	190.6	773,600	773,600
45	78.9	189.6	761,400	773,600
50	77.3	188.4	634,000	773,600
55	75.7	187.1	530,700	773,600
60	74.0	185.6	446,200	773,600
65	72.4	183.9	375,800	741,400
70	70.7	182.1	316,200	668,300
75	69.1	180.2	265,200	604,000
80	67.4	178.0	221,000	547,000
85	65.6	175.7	182,300	496,200
90	63.9	173.2	148,100	450,500
95	62.1	170.5	117,800	409,300
100	60.3	167.5	90,600	371,900
105	58.5	164.4	66,200	337,900
110	56.6	161.1	44,100	306,700
115	54.7	157.5	24,000	278,000
120	52.7	153.6		251,600
125	50.7	149.4		227,200
130	48.6	145.0		204,600
135	46.4	140.1		183,500
140	44.2	134.9		163,900
145	41.8	129.3		145,500
150	39.4	123.1		128,300
155	36.8	116.4		112,200
160	34.0	109.0		97,000
165	30.9	100.7		75,400
170	27.6	91.2		54,400
175	23.8	80.1		33,800

203.4 ft				
ft	°	ft	lb	lb
36	82.5	211.3	773,600	773,600
38	82.0	211.0	773,600	773,600
40	81.4	210.7	773,600	773,600
45	80.0	209.7	771,200	773,600
50	78.5	208.6	643,600	773,600
55	77.1	207.4	540,900	773,600
60	75.6	206.1	455,900	773,600
65	74.2	204.6	385,200	739,700
70	72.7	203.0	325,300	667,800
75	71.2	201.3	274,000	604,400
80	69.7	199.4	229,500	548,200
85	68.2	197.3	190,600	497,900
90	66.6	195.1	156,300	452,700
95	65.1	192.7	125,800	411,900
100	63.5	190.1	98,500	374,900
105	61.9	187.4	74,000	341,100
110	60.2	184.5	51,800	310,100
115	58.6	181.4	31,600	281,700
120	56.9	178.1		255,400
125	55.2	174.5		231,200
130	53.4	170.8		208,600
135	51.6	166.7		187,700
140	49.7	162.4		168,200
145	47.8	157.9		149,900
150	45.9	153.0		132,800
155	43.8	147.7		116,700
160	41.7	142.0		101,600
165	39.5	135.9		87,300
170	37.1	129.3		73,800
175	34.6	122.0		61,100
180	32.0	114.0		49,000
185	29.1	105.1		33,500

MLC650 VPC-MAX S-3

ASME B30.5

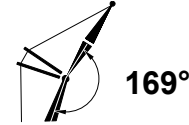
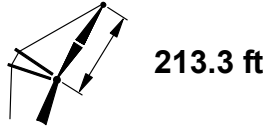


223.1 ft				
ft	°	ft	lb	lb
38	82.7	230.9	728,800	728,800
40	82.2	230.6	728,800	728,800
45	80.9	229.8	728,800	728,800
50	79.6	228.8	646,900	728,800
55	78.2	227.7	544,400	728,800
60	76.9	226.5	459,700	728,800
65	75.6	225.1	388,700	728,800
70	74.3	223.7	328,500	662,500
75	72.9	222.1	277,000	599,900
80	71.6	220.4	232,400	544,300
85	70.2	218.5	193,300	494,600
90	68.8	216.5	158,900	449,900
95	67.4	214.4	128,200	409,500
100	66.0	212.1	100,800	372,700
105	64.6	209.7	76,200	339,200
110	63.1	207.1	53,900	308,500
115	61.7	204.4	33,600	280,200
120	60.2	201.5		254,100
125	58.7	198.4		230,000
130	57.1	195.1		207,600
135	55.6	191.6		186,800
140	54.0	187.9		167,300
145	52.3	184.0		149,100
150	50.7	179.8		132,100
155	49.0	175.4		116,100
160	47.2	170.7		101,000
165	45.4	165.8		86,800
170	43.5	160.5		73,400
175	41.6	154.8		60,700
180	39.5	148.7		48,700
185	37.4	142.1		37,200
190	35.2	135.0		26,400

242.8 ft				
ft	°	ft	lb	lb
40	82.8	250.5	683,200	683,200
45	81.6	249.7	683,200	683,200
50	80.4	248.8	652,000	683,200
55	79.2	247.8	549,000	683,200
60	78.0	246.7	464,800	683,200
65	76.8	245.5	393,800	683,200
70	75.6	244.2	333,400	658,400
75	74.3	242.7	281,700	596,800
80	73.1	241.2	236,900	542,000
85	71.9	239.5	197,700	492,900
90	70.6	237.7	163,100	448,700
95	69.3	235.8	132,300	408,700
100	68.1	233.7	104,800	372,300
105	66.8	231.5	80,100	339,100
110	65.5	229.2	57,700	308,600
115	64.2	226.7	37,300	280,600
120	62.8	224.1	18,700	254,700
125	61.5	221.3		230,800
130	60.1	218.4		208,500
135	58.7	215.3		187,800
140	57.3	212.1		168,400
145	55.9	208.6		150,300
150	54.4	205.0		133,400
155	53.0	201.2		117,400
160	51.4	197.1		102,400
165	49.9	192.9		88,300
170	48.3	188.4		74,900
175	46.7	183.6		62,200
180	45.0	178.6		50,200
185	43.3	173.2		38,900
190	41.5	167.5		28,000
195	39.6	161.4		17,700

MLC650 VPC-MAX S-3

ASME B30.5

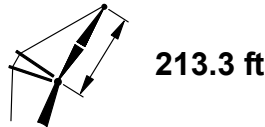


262.5 ft				
ft	°	ft	lb	lb
45	82.3	269.7	634,400	634,400
50	81.1	268.8	634,400	634,400
55	80.0	267.9	552,900	634,400
60	78.9	266.9	468,400	634,400
65	77.8	265.8	398,100	634,400
70	76.7	264.6	337,600	634,400
75	75.6	263.2	285,700	592,600
80	74.4	261.8	240,700	538,800
85	73.3	260.2	201,400	490,500
90	72.1	258.6	166,700	446,900
95	71.0	256.8	135,800	407,400
100	69.8	254.9	108,200	371,400
105	68.6	252.9	83,400	338,500
110	67.4	250.8	60,900	308,400
115	66.2	248.6	40,500	280,600
120	65.0	246.2	21,900	254,900
125	63.8	243.7		231,100
130	62.6	241.1		209,000
135	61.3	238.3		188,400
140	60.1	235.4		169,200
145	58.8	232.3		151,200
150	57.5	229.0		134,300
155	56.2	225.7		118,500
160	54.8	222.1		103,500
165	53.5	218.3		89,500
170	52.1	214.4		76,100
175	50.7	210.2		63,500
180	49.2	205.9		51,600
185	47.7	201.3		40,300
190	46.2	196.5		29,500
195	44.7	191.4		19,200

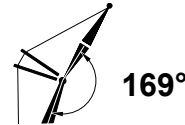
282.2 ft				
ft	°	ft	lb	lb
45	82.8	289.6	585,600	585,600
50	81.8	288.8	585,600	585,600
55	80.7	287.9	555,200	585,600
60	79.7	287.0	470,300	585,600
65	78.7	286.0	399,700	585,600
70	77.6	284.8	339,900	585,600
75	76.6	283.6	287,800	585,600
80	75.5	282.3	242,700	533,600
85	74.5	280.8	203,200	486,100
90	73.4	279.3	168,400	443,200
95	72.3	277.7	137,400	404,200
100	71.3	275.9	109,700	368,700
105	70.2	274.1	84,800	336,200
110	69.1	272.1	62,300	306,300
115	68.0	270.1	41,800	278,800
120	66.9	267.9	23,100	253,300
125	65.8	265.6		229,700
130	64.7	263.2		207,800
135	63.5	260.7		187,300
140	62.4	258.0		168,200
145	61.2	255.2		150,300
150	60.0	252.3		133,500
155	58.8	249.2		117,700
160	57.6	246.0		102,900
165	56.4	242.7		88,800
170	55.2	239.1		75,600
175	53.9	235.5		63,000
180	52.6	231.6		51,100
185	51.3	227.5		39,800
190	50.0	223.3		29,100
195	48.6	218.9		18,800

MLC650 VPC-MAX S-3

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213.3 ft



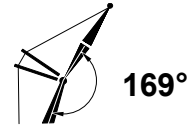
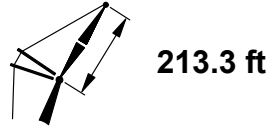
169°

301.8 ft				
ft	°	ft	lb	lb
50	82.3	308.7	536,800	536,800
55	81.4	307.9	536,800	536,800
60	80.4	307.0	470,000	536,800
65	79.4	306.1	399,100	536,800
70	78.5	305.0	339,100	536,800
75	77.5	303.9	287,600	536,800
80	76.5	302.6	242,300	520,300
85	75.5	301.3	202,700	476,200
90	74.5	299.9	167,800	436,800
95	73.5	298.4	136,800	399,000
100	72.5	296.8	109,000	363,900
105	71.5	295.0	84,000	331,800
110	70.5	293.2	61,400	302,200
115	69.5	291.3	40,800	274,900
120	68.5	289.3	22,100	249,700
125	67.5	287.2		226,300
130	66.4	285.0		204,500
135	65.4	282.7		184,200
140	64.3	280.2		165,200
145	63.3	277.7		147,400
150	62.2	275.0		130,700
155	61.1	272.2		115,000
160	60.0	269.3		100,200
165	58.9	266.2		86,200
170	57.8	263.0		73,000
175	56.6	259.7		60,500
180	55.5	256.2		48,700
185	54.3	252.6		37,400
190	53.1	248.8		26,700

321.5 ft				
ft	°	ft	lb	lb
50	82.8	328.6	488,000	488,000
55	81.9	327.9	488,000	488,000
60	81.0	327.0	470,400	488,000
65	80.1	326.1	399,300	488,000
70	79.2	325.1	339,100	488,000
75	78.3	324.1	287,600	488,000
80	77.3	322.9	242,700	488,000
85	76.4	321.7	203,000	447,400
90	75.5	320.3	167,900	409,700
95	74.6	318.9	136,800	375,800
100	73.6	317.4	108,900	345,200
105	72.7	315.8	83,900	317,200
110	71.8	314.1	61,200	291,600
115	70.8	312.4	40,600	268,000
120	69.9	310.5	21,700	246,200
125	68.9	308.5		223,500
130	68.0	306.5		201,900
135	67.0	304.3		181,700
140	66.0	302.1		162,900
145	65.0	299.7		145,200
150	64.0	297.2		128,600
155	63.0	294.6		113,000
160	62.0	292.0		98,200
165	61.0	289.1		84,300
170	60.0	286.2		71,200
175	58.9	283.2		58,700
180	57.9	280.0		46,900
185	56.8	276.7		35,700
190	55.7	273.2		25,000

MLC650 VPC-MAX S-3

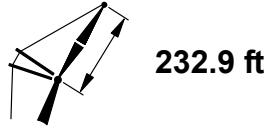
ASME B30.5



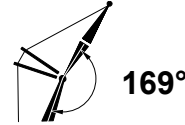
ft	°	ft	38.7 ft lb	60.0 ft lb
55	82.4	347.8	439,200	439,200
60	81.5	347.0	439,200	439,200
65	80.7	346.1	398,200	439,200
70	79.8	345.2	337,900	439,200
75	78.9	344.2	286,200	439,200
80	78.1	343.1	241,400	439,200
85	77.2	341.9	201,900	419,700
90	76.4	340.7	166,800	383,400
95	75.5	339.4	135,500	350,900
100	74.6	338.0	107,600	321,400
105	73.7	336.5	82,500	294,600
110	72.9	334.9	59,700	270,100
115	72.0	333.2	39,100	247,600
120	71.1	331.5	20,200	226,800
125	70.2	329.7		207,400
130	69.3	327.7		189,400
135	68.4	325.7		172,500
140	67.5	323.6		156,700
145	66.6	321.4		141,800
150	65.6	319.1		125,400
155	64.7	316.7		109,900
160	63.8	314.2		95,200
165	62.8	311.6		81,400
170	61.9	308.9		68,300
175	60.9	306.1		55,900
180	59.9	303.2		44,100
185	58.9	300.1		32,900
190	58.0	297.0		22,300

MLC650 VPC-MAX S-3

ASME B30.5



232.9 ft



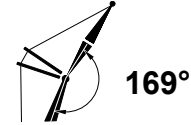
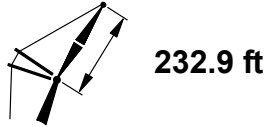
169°

183.7 ft				
ft	°	ft	lb	lb
32	83.0	192.0	773,600	773,600
34	82.4	191.7	773,600	773,600
36	81.7	191.4	773,600	773,600
38	81.1	191.0	773,600	773,600
40	80.5	190.6	773,600	773,600
45	78.9	189.6	722,600	773,600
50	77.3	188.4	596,600	773,600
55	75.7	187.1	494,300	773,600
60	74.0	185.6	410,700	773,600
65	72.4	183.9	341,100	711,400
70	70.7	182.1	282,100	638,500
75	69.1	180.2	231,600	574,300
80	67.4	178.0	187,900	517,500
85	65.6	175.7	149,600	466,800
90	63.9	173.2	115,900	421,300
95	62.1	170.5	85,900	380,200
100	60.3	167.5	59,000	342,900
105	58.5	164.4	34,900	309,000
110	56.6	161.1		277,900
115	54.7	157.5		249,400
120	52.7	153.6		223,100
125	50.7	149.4		198,800
130	48.6	145.0		176,200
135	46.4	140.1		155,300
140	44.2	134.9		135,700
145	41.8	129.3		117,500
150	39.4	123.1		100,400
155	36.8	116.4		84,300
160	34.0	109.0		68,000
165	30.9	100.7		46,500
170	27.6	91.2		25,800

203.4 ft				
ft	°	ft	lb	lb
36	82.5	211.3	773,600	773,600
38	82.0	211.0	773,600	773,600
40	81.4	210.7	773,600	773,600
45	80.0	209.7	733,800	773,600
50	78.5	208.6	607,500	773,600
55	77.1	207.4	505,900	773,600
60	75.6	206.1	421,800	773,600
65	74.2	204.6	351,800	711,200
70	72.7	203.0	292,600	639,400
75	71.2	201.3	241,800	576,200
80	69.7	199.4	197,900	520,100
85	68.2	197.3	159,400	470,000
90	66.6	195.1	125,500	424,900
95	65.1	192.7	95,300	384,200
100	63.5	190.1	68,300	347,300
105	61.9	187.4	44,000	313,600
110	60.2	184.5	22,100	282,700
115	58.6	181.4		254,400
120	56.9	178.1		228,300
125	55.2	174.5		204,100
130	53.4	170.8		181,600
135	51.6	166.7		160,800
140	49.7	162.4		141,300
145	47.8	157.9		123,100
150	45.9	153.0		106,100
155	43.8	147.7		90,100
160	41.7	142.0		75,000
165	39.5	135.9		60,900
170	37.1	129.3		47,500
175	34.6	122.0		34,800
180	32.0	114.0		22,900

MLC650 VPC-MAX S-3

ASME B30.5

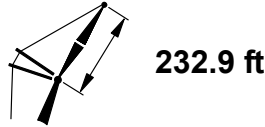


223.1 ft				
ft	°	ft	lb	lb
38	82.7	230.9	728,800	728,800
40	82.2	230.6	728,800	728,800
45	80.9	229.8	728,800	728,800
50	79.6	228.8	611,900	728,800
55	78.2	227.7	510,500	728,800
60	76.9	226.5	426,800	728,800
65	75.6	225.1	356,500	706,100
70	74.3	223.7	297,000	635,400
75	72.9	222.1	246,000	572,900
80	71.6	220.4	201,900	517,500
85	70.2	218.5	163,200	467,900
90	68.8	216.5	129,200	423,300
95	67.4	214.4	98,900	383,000
100	66.0	212.1	71,800	346,300
105	64.6	209.7	47,400	312,900
110	63.1	207.1	25,300	282,300
115	61.7	204.4		254,100
120	60.2	201.5		228,100
125	58.7	198.4		204,100
130	57.1	195.1		181,800
135	55.6	191.6		161,000
140	54.0	187.9		141,600
145	52.3	184.0		123,500
150	50.7	179.8		106,500
155	49.0	175.4		90,600
160	47.2	170.7		75,600
165	45.4	165.8		61,500
170	43.5	160.5		48,100
175	41.6	154.8		35,500
180	39.5	148.7		23,500

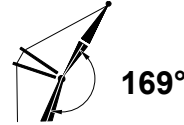
242.8 ft				
ft	°	ft	lb	lb
40	82.8	250.5	683,200	683,200
45	81.6	249.7	683,200	683,200
50	80.4	248.8	618,000	683,200
55	79.2	247.8	516,100	683,200
60	78.0	246.7	432,800	683,200
65	76.8	245.5	362,600	683,200
70	75.6	244.2	302,900	632,300
75	74.3	242.7	251,700	570,900
80	73.1	241.2	207,300	516,200
85	71.9	239.5	168,600	467,300
90	70.6	237.7	134,300	423,200
95	69.3	235.8	103,900	383,200
100	68.1	233.7	76,700	347,000
105	66.8	231.5	52,300	313,800
110	65.5	229.2	30,100	283,400
115	64.2	226.7		255,500
120	62.8	224.1		229,700
125	61.5	221.3		205,800
130	60.1	218.4		183,600
135	58.7	215.3		163,000
140	57.3	212.1		143,700
145	55.9	208.6		125,700
150	54.4	205.0		108,800
155	53.0	201.2		92,900
160	51.4	197.1		77,900
165	49.9	192.9		63,900
170	48.3	188.4		50,500
175	46.7	183.6		38,000
180	45.0	178.6		26,000

MLC650 VPC-MAX S-3

ASME B30.5



232.9 ft



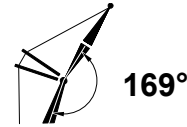
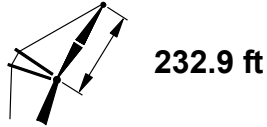
169°

 262.5 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
45	82.3	269.7	634,400	634,400
50	81.1	268.8	623,100	634,400
55	80.0	267.9	520,900	634,400
60	78.9	266.9	437,300	634,400
65	77.8	265.8	367,700	634,400
70	76.7	264.6	307,900	628,000
75	75.6	263.2	256,500	567,700
80	74.4	261.8	212,000	514,000
85	73.3	260.2	173,100	465,700
90	72.1	258.6	138,800	422,300
95	71.0	256.8	108,300	382,800
100	69.8	254.9	81,000	347,000
105	68.6	252.9	56,400	314,200
110	67.4	250.8	34,200	284,100
115	66.2	248.6		256,400
120	65.0	246.2		230,800
125	63.8	243.7		207,100
130	62.6	241.1		185,000
135	61.3	238.3		164,500
140	60.1	235.4		145,300
145	58.8	232.3		127,400
150	57.5	229.0		110,600
155	56.2	225.7		94,800
160	54.8	222.1		79,900
165	53.5	218.3		65,900
170	52.1	214.4		52,600
175	50.7	210.2		40,100
180	49.2	205.9		28,200

 282.2 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
45	82.8	289.6	585,600	585,600
50	81.8	288.8	585,600	585,600
55	80.7	287.9	523,800	585,600
60	79.7	287.0	439,900	585,600
65	78.7	286.0	370,000	585,600
70	77.6	284.8	310,900	585,600
75	76.6	283.6	259,300	562,400
80	75.5	282.3	214,700	509,700
85	74.5	280.8	175,700	462,200
90	73.4	279.3	141,200	419,400
95	72.3	277.7	110,600	380,500
100	71.3	275.9	83,200	345,000
105	70.2	274.1	58,600	312,600
110	69.1	272.1	36,300	282,800
115	68.0	270.1		255,300
120	66.9	267.9		229,900
125	65.8	265.6		206,400
130	64.7	263.2		184,500
135	63.5	260.7		164,100
140	62.4	258.0		145,100
145	61.2	255.2		127,200
150	60.0	252.3		110,500
155	58.8	249.2		94,800
160	57.6	246.0		80,000
165	56.4	242.7		66,000
170	55.2	239.1		52,800
175	53.9	235.5		40,300
180	52.6	231.6		28,400
185	51.3	227.5		17,200

MLC650 VPC-MAX S-3

ASME B30.5



301.8 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
50	82.3	308.7	536,800	536,800
55	81.4	307.9	524,400	536,800
60	80.4	307.0	440,100	536,800
65	79.4	306.1	370,000	536,800
70	78.5	305.0	310,700	536,800
75	77.5	303.9	259,700	536,800
80	76.5	302.6	215,000	492,900
85	75.5	301.3	175,800	449,300
90	74.5	299.9	141,300	410,200
95	73.5	298.4	110,600	375,100
100	72.5	296.8	83,100	341,000
105	71.5	295.0	58,400	308,900
110	70.5	293.2	36,000	279,400
115	69.5	291.3		252,200
120	68.5	289.3		227,000
125	67.5	287.2		203,700
130	66.4	285.0		181,900
135	65.4	282.7		161,700
140	64.3	280.2		142,700
145	63.3	277.7		125,000
150	62.2	275.0		108,300
155	61.1	272.2		92,700
160	60.0	269.3		77,900
165	58.9	266.2		64,000
170	57.8	263.0		50,800
175	56.6	259.7		38,400
180	55.5	256.2		26,600

321.5 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
50	82.8	328.6	488,000	488,000
55	81.9	327.9	488,000	488,000
60	81.0	327.0	441,200	488,000
65	80.1	326.1	370,800	488,000
70	79.2	325.1	311,300	488,000
75	78.3	324.1	260,300	488,000
80	77.3	322.9	215,900	462,800
85	76.4	321.7	176,600	421,000
90	75.5	320.3	141,900	383,700
95	74.6	318.9	111,100	350,200
100	73.6	317.4	83,600	319,800
105	72.7	315.8	58,800	292,100
110	71.8	314.1	36,400	266,800
115	70.8	312.4		243,400
120	69.9	310.5		221,800
125	68.9	308.5		201,500
130	68.0	306.5		179,900
135	67.0	304.3		159,800
140	66.0	302.1		141,000
145	65.0	299.7		123,400
150	64.0	297.2		106,800
155	63.0	294.6		91,200
160	62.0	292.0		76,500
165	61.0	289.1		62,700
170	60.0	286.2		49,600
175	58.9	283.2		37,100
180	57.9	280.0		25,400

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881,800 lb



232.9 ft

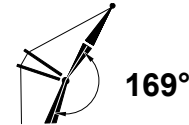
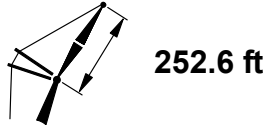


169°

 341.2 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
55	82.4	347.8	425,800	425,800
60	81.5	347.0	425,800	425,800
65	80.7	346.1	370,200	424,600
70	79.8	345.2	310,500	424,600
75	78.9	344.2	259,400	424,600
80	78.1	343.1	215,100	424,600
85	77.2	341.9	176,000	393,800
90	76.4	340.7	141,300	357,900
95	75.5	339.4	110,400	325,700
100	74.6	338.0	82,800	296,600
105	73.7	336.5	57,900	270,100
110	72.9	334.9	35,400	245,800
115	72.0	333.2		223,500
120	71.1	331.5		202,900
125	70.2	329.7		183,700
130	69.3	327.7		165,900
135	68.4	325.7		149,200
140	67.5	323.6		133,500
145	66.6	321.4		118,800
150	65.6	319.1		104,200
155	64.7	316.7		88,700
160	63.8	314.2		74,100
165	62.8	311.6		60,200
170	61.9	308.9		47,200
175	60.9	306.1		34,800
180	59.9	303.2		23,100

MLC650 VPC-MAX S-3

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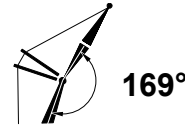
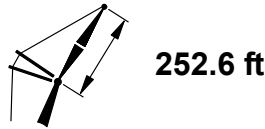


183.7 ft				
ft	°	ft	lb	lb
32	83.0	192.0	773,600	773,600
34	82.4	191.7	773,600	773,600
36	81.7	191.4	773,600	773,600
38	81.1	191.0	773,600	773,600
40	80.5	190.6	773,600	773,600
45	78.9	189.6	690,000	773,600
50	77.3	188.4	565,200	773,600
55	75.7	187.1	463,900	773,600
60	74.0	185.6	381,100	770,100
65	72.4	183.9	312,200	686,700
70	70.7	182.1	253,800	613,900
75	69.1	180.2	203,800	550,000
80	67.4	178.0	160,500	493,300
85	65.6	175.7	122,700	442,700
90	63.9	173.2	89,300	397,400
95	62.1	170.5	59,600	356,400
100	60.3	167.5	33,000	319,300
105	58.5	164.4		285,400
110	56.6	161.1		254,400
115	54.7	157.5		226,000
120	52.7	153.6		199,800
125	50.7	149.4		175,600
130	48.6	145.0		153,100
135	46.4	140.1		132,300
140	44.2	134.9		112,800
145	41.8	129.3		94,700
150	39.4	123.1		77,700
155	36.8	116.4		61,700
160	34.0	109.0		44,400
165	30.9	100.7		23,100

203.4 ft				
ft	°	ft	lb	lb
36	82.5	211.3	773,600	773,600
38	82.0	211.0	773,600	773,600
40	81.4	210.7	773,600	773,600
45	80.0	209.7	702,400	773,600
50	78.5	208.6	577,400	773,600
55	77.1	207.4	476,800	773,600
60	75.6	206.1	393,500	769,900
65	74.2	204.6	324,200	687,900
70	72.7	203.0	265,600	616,200
75	71.2	201.3	215,300	553,200
80	69.7	199.4	171,800	497,200
85	68.2	197.3	133,700	447,200
90	66.6	195.1	100,100	402,300
95	65.1	192.7	70,300	361,700
100	63.5	190.1	43,600	324,900
105	61.9	187.4	19,600	291,300
110	60.2	184.5		260,500
115	58.6	181.4		232,300
120	56.9	178.1		206,300
125	55.2	174.5		182,200
130	53.4	170.8		159,800
135	51.6	166.7		139,000
140	49.7	162.4		119,700
145	47.8	157.9		101,600
150	45.9	153.0		84,600
155	43.8	147.7		68,700
160	41.7	142.0		53,700
165	39.5	135.9		39,600
170	37.1	129.3		26,300

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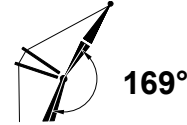
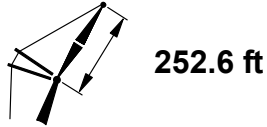


223.1 ft				
ft	°	ft	lb	lb
38	82.7	230.9	728,800	728,800
40	82.2	230.6	728,800	728,800
45	80.9	229.8	708,500	728,800
50	79.6	228.8	582,900	728,800
55	78.2	227.7	482,500	728,800
60	76.9	226.5	399,600	728,800
65	75.6	225.1	330,000	683,900
70	74.3	223.7	271,100	613,200
75	72.9	222.1	220,600	551,000
80	71.6	220.4	176,900	495,700
85	70.2	218.5	138,600	446,200
90	68.8	216.5	104,900	401,700
95	67.4	214.4	74,900	361,500
100	66.0	212.1	48,100	325,000
105	64.6	209.7	24,000	291,600
110	63.1	207.1		261,100
115	61.7	204.4		233,100
120	60.2	201.5		207,200
125	58.7	198.4		183,200
130	57.1	195.1		161,000
135	55.6	191.6		140,300
140	54.0	187.9		121,000
145	52.3	184.0		103,000
150	50.7	179.8		86,100
155	49.0	175.4		70,200
160	47.2	170.7		55,300
165	45.4	165.8		41,200
170	43.5	160.5		27,900

242.8 ft				
ft	°	ft	lb	lb
40	82.8	250.5	683,200	683,200
45	81.6	249.7	683,200	683,200
50	80.4	248.8	589,800	683,200
55	79.2	247.8	489,000	683,200
60	78.0	246.7	406,500	683,200
65	76.8	245.5	337,000	680,600
70	75.6	244.2	277,800	611,200
75	74.3	242.7	227,200	549,900
80	73.1	241.2	183,300	495,400
85	71.9	239.5	144,900	446,500
90	70.6	237.7	111,000	402,500
95	69.3	235.8	80,900	362,700
100	68.1	233.7	54,000	326,500
105	66.8	231.5	29,800	293,500
110	65.5	229.2		263,200
115	64.2	226.7		235,400
120	62.8	224.1		209,600
125	61.5	221.3		185,800
130	60.1	218.4		163,700
135	58.7	215.3		143,200
140	57.3	212.1		124,000
145	55.9	208.6		106,000
150	54.4	205.0		89,200
155	53.0	201.2		73,400
160	51.4	197.1		58,500
165	49.9	192.9		44,400
170	48.3	188.4		31,200
175	46.7	183.6		18,700

MLC650 VPC-MAX S-3

ASME B30.5

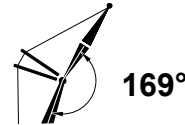
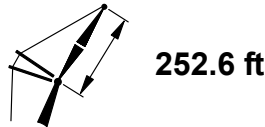


262.5 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
45	82.3	269.7	634,400	634,400
50	81.1	268.8	595,700	634,400
55	80.0	267.9	494,500	634,400
60	78.9	266.9	411,700	634,400
65	77.8	265.8	342,800	634,400
70	76.7	264.6	283,600	607,800
75	75.6	263.2	232,800	547,600
80	74.4	261.8	188,700	494,000
85	73.3	260.2	150,200	445,900
90	72.1	258.6	116,200	402,500
95	71.0	256.8	86,000	363,200
100	69.8	254.9	59,000	327,400
105	68.6	252.9	34,700	294,700
110	67.4	250.8		264,600
115	66.2	248.6		237,000
120	65.0	246.2		211,500
125	63.8	243.7		187,900
130	62.6	241.1		165,900
135	61.3	238.3		145,500
140	60.1	235.4		126,400
145	58.8	232.3		108,500
150	57.5	229.0		91,700
155	56.2	225.7		76,000
160	54.8	222.1		61,200
165	53.5	218.3		47,200
170	52.1	214.4		34,000
175	50.7	210.2		21,500

282.2 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
45	82.8	289.6	585,600	585,600
50	81.8	288.8	585,600	585,600
55	80.7	287.9	498,100	585,600
60	79.7	287.0	415,000	585,600
65	78.7	286.0	345,800	585,600
70	77.6	284.8	287,300	585,600
75	76.6	283.6	236,300	543,100
80	75.5	282.3	192,100	490,400
85	74.5	280.8	153,400	443,100
90	73.4	279.3	119,300	400,300
95	72.3	277.7	89,000	361,500
100	71.3	275.9	61,900	326,200
105	70.2	274.1	37,500	293,800
110	69.1	272.1		264,100
115	68.0	270.1		236,700
120	66.9	267.9		211,400
125	65.8	265.6		187,900
130	64.7	263.2		166,100
135	63.5	260.7		145,800
140	62.4	258.0		126,800
145	61.2	255.2		109,000
150	60.0	252.3		92,300
155	58.8	249.2		76,700
160	57.6	246.0		61,900
165	56.4	242.7		48,000
170	55.2	239.1		34,800
175	53.9	235.5		22,300

MLC650 VPC-MAX S-3

ASME B30.5

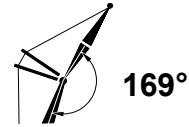
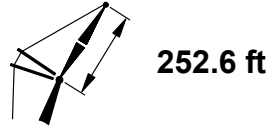


301.8 ft				
ft	°	ft	lb	lb
50	82.3	308.7	536,800	536,800
55	81.4	307.9	499,200	536,800
60	80.4	307.0	415,800	536,800
65	79.4	306.1	346,400	536,800
70	78.5	305.0	287,700	536,800
75	77.5	303.9	237,200	519,700
80	76.5	302.6	192,900	470,900
85	75.5	301.3	154,100	427,600
90	74.5	299.9	119,900	388,900
95	73.5	298.4	89,600	354,100
100	72.5	296.8	62,400	322,500
105	71.5	295.0	37,900	290,700
110	70.5	293.2		261,300
115	69.5	291.3		234,200
120	68.5	289.3		209,100
125	67.5	287.2		185,800
130	66.4	285.0		164,100
135	65.4	282.7		143,900
140	64.3	280.2		125,000
145	63.3	277.7		107,400
150	62.2	275.0		90,800
155	61.1	272.2		75,100
160	60.0	269.3		60,400
165	58.9	266.2		46,600
170	57.8	263.0		33,500
175	56.6	259.7		21,000

321.5 ft				
ft	°	ft	lb	lb
50	82.8	328.6	488,000	488,000
55	81.9	327.9	488,000	488,000
60	81.0	327.0	417,300	488,000
65	80.1	326.1	347,700	486,300
70	79.2	325.1	288,800	480,000
75	78.3	324.1	238,300	473,700
80	77.3	322.9	194,300	441,300
85	76.4	321.7	155,400	399,900
90	75.5	320.3	121,100	362,900
95	74.6	318.9	90,600	329,700
100	73.6	317.4	63,400	299,600
105	72.7	315.8	38,800	272,200
110	71.8	314.1		247,000
115	70.8	312.4		223,900
120	69.9	310.5		202,500
125	68.9	308.5		182,600
130	68.0	306.5		162,700
135	67.0	304.3		142,600
140	66.0	302.1		123,800
145	65.0	299.7		106,300
150	64.0	297.2		89,700
155	63.0	294.6		74,200
160	62.0	292.0		59,600
165	61.0	289.1		45,700
170	60.0	286.2		32,700
175	58.9	283.2		20,300

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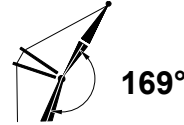
ft	°	ft	38.7 ft lb	60.0 ft lb
55	82.4	347.8	409,600	409,600
60	81.5	347.0	409,600	409,600
65	80.7	346.1	347,500	408,400
70	79.8	345.2	288,400	408,400
75	78.9	344.2	237,800	408,400
80	78.1	343.1	194,000	408,400
85	77.2	341.9	155,300	373,100
90	76.4	340.7	120,900	337,600
95	75.5	339.4	90,300	305,700
100	74.6	338.0	63,000	276,800
105	73.7	336.5	38,400	250,600
110	72.9	334.9		226,500
115	72.0	333.2		204,400
120	71.1	331.5		184,000
125	70.2	329.7		165,000
130	69.3	327.7		147,300
135	68.4	325.7		130,800
140	67.5	323.6		115,300
145	66.6	321.4		100,700
150	65.6	319.1		87,600
155	64.7	316.7		72,100
160	63.8	314.2		57,600
165	62.8	311.6		43,800
170	61.9	308.9		30,800
175	60.9	306.1		18,400

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272.3 ft



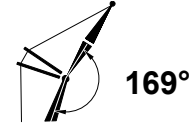
169°

183.7 ft				
ft	°	ft	lb	lb
32	83.0	192.0	773,600	773,600
34	82.4	191.7	773,600	773,600
36	81.7	191.4	773,600	773,600
38	81.1	191.0	773,600	773,600
40	80.5	190.6	773,600	773,600
45	78.9	189.6	660,800	773,600
50	77.3	188.4	537,100	773,600
55	75.7	187.1	436,800	773,600
60	74.0	185.6	354,800	748,000
65	72.4	183.9	286,500	664,800
70	70.7	182.1	228,700	592,200
75	69.1	180.2	179,200	528,500
80	67.4	178.0	136,300	471,900
85	65.6	175.7	98,800	421,500
90	63.9	173.2	65,800	376,300
95	62.1	170.5	36,400	335,500
100	60.3	167.5		298,400
105	58.5	164.4		264,700
110	56.6	161.1		233,900
115	54.7	157.5		205,500
120	52.7	153.6		179,400
125	50.7	149.4		155,300
130	48.6	145.0		133,000
135	46.4	140.1		112,200
140	44.2	134.9		92,800
145	41.8	129.3		74,800
150	39.4	123.1		57,900
155	36.8	116.4		42,000
160	34.0	109.0		23,800

203.4 ft				
ft	°	ft	lb	lb
36	82.5	211.3	773,600	773,600
38	82.0	211.0	773,600	773,600
40	81.4	210.7	773,600	773,600
45	80.0	209.7	674,300	773,600
50	78.5	208.6	550,500	773,600
55	77.1	207.4	450,800	773,600
60	75.6	206.1	368,400	749,000
65	74.2	204.6	299,700	667,200
70	72.7	203.0	241,600	595,700
75	71.2	201.3	191,900	532,800
80	69.7	199.4	148,800	477,000
85	68.2	197.3	111,100	427,100
90	66.6	195.1	77,800	382,400
95	65.1	192.7	48,300	341,900
100	63.5	190.1	21,900	305,200
105	61.9	187.4		271,700
110	60.2	184.5		241,100
115	58.6	181.4		212,900
120	56.9	178.1		187,000
125	55.2	174.5		163,000
130	53.4	170.8		140,800
135	51.6	166.7		120,100
140	49.7	162.4		100,800
145	47.8	157.9		82,700
150	45.9	153.0		65,900
155	43.8	147.7		50,000
160	41.7	142.0		35,100
165	39.5	135.9		21,100

MLC650 VPC-MAX S-3

ASME B30.5

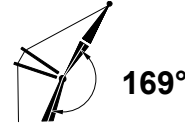


ft	°	ft	38.7 ft lb	60.0 ft lb
38	82.7	230.9	728,800	728,800
40	82.2	230.6	728,800	728,800
45	80.9	229.8	681,400	728,800
50	79.6	228.8	556,900	728,800
55	78.2	227.7	457,500	728,800
60	76.9	226.5	375,400	728,800
65	75.6	225.1	306,400	664,200
70	74.3	223.7	248,100	593,700
75	72.9	222.1	198,100	531,600
80	71.6	220.4	154,800	476,400
85	70.2	218.5	117,000	427,100
90	68.8	216.5	83,600	382,800
95	67.4	214.4	53,900	342,700
100	66.0	212.1	27,400	306,300
105	64.6	209.7		273,000
110	63.1	207.1		242,600
115	61.7	204.4		214,700
120	60.2	201.5		188,900
125	58.7	198.4		165,000
130	57.1	195.1		142,800
135	55.6	191.6		122,200
140	54.0	187.9		103,000
145	52.3	184.0		85,100
150	50.7	179.8		68,200
155	49.0	175.4		52,400
160	47.2	170.7		37,600
165	45.4	165.8		23,600

ft	°	ft	38.7 ft lb	60.0 ft lb
40	82.8	250.5	683,200	683,200
45	81.6	249.7	683,200	683,200
50	80.4	248.8	564,600	683,200
55	79.2	247.8	464,800	683,200
60	78.0	246.7	383,100	683,200
65	76.8	245.5	314,200	661,800
70	75.6	244.2	255,700	592,600
75	74.3	242.7	205,500	531,400
80	73.1	241.2	162,000	477,000
85	71.9	239.5	124,000	428,300
90	70.6	237.7	90,500	384,400
95	69.3	235.8	60,700	344,700
100	68.1	233.7	34,000	308,700
105	66.8	231.5		275,700
110	65.5	229.2		245,500
115	64.2	226.7		217,800
120	62.8	224.1		192,100
125	61.5	221.3		168,400
130	60.1	218.4		146,400
135	58.7	215.3		125,900
140	57.3	212.1		106,800
145	55.9	208.6		88,900
150	54.4	205.0		72,100
155	53.0	201.2		56,400
160	51.4	197.1		41,600
165	49.9	192.9		27,600

MLC650 VPC-MAX S-3

ASME B30.5



262.5 ft

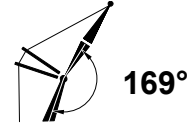
ft	°	ft	lb	
			38.7 ft	60.0 ft
45	82.3	269.7	634,400	634,400
50	81.1	268.8	571,200	634,400
55	80.0	267.9	471,000	634,400
60	78.9	266.9	389,000	634,400
65	77.8	265.8	320,800	634,400
70	76.7	264.6	262,100	589,900
75	75.6	263.2	211,800	529,900
80	74.4	261.8	168,200	476,400
85	73.3	260.2	130,000	428,400
90	72.1	258.6	96,400	385,100
95	71.0	256.8	66,500	345,900
100	69.8	254.9	39,800	310,200
105	68.6	252.9		277,600
110	67.4	250.8		247,700
115	66.2	248.6		220,200
120	65.0	246.2		194,700
125	63.8	243.7		171,200
130	62.6	241.1		149,300
135	61.3	238.3		128,900
140	60.1	235.4		109,900
145	58.8	232.3		92,100
150	57.5	229.0		75,400
155	56.2	225.7		59,700
160	54.8	222.1		44,900
165	53.5	218.3		31,000
170	52.1	214.4		17,900

282.2 ft

ft	°	ft	lb	
			38.7 ft	60.0 ft
45	82.8	289.6	585,600	585,600
50	81.8	288.8	575,900	585,600
55	80.7	287.9	475,200	585,600
60	79.7	287.0	392,900	585,600
65	78.7	286.0	324,400	585,600
70	77.6	284.8	266,400	584,900
75	76.6	283.6	215,900	526,100
80	75.5	282.3	172,100	473,500
85	74.5	280.8	133,800	426,300
90	73.4	279.3	100,100	383,700
95	72.3	277.7	70,100	345,000
100	71.3	275.9	43,200	309,700
105	70.2	274.1	19,100	277,400
110	69.1	272.1		247,800
115	68.0	270.1		220,500
120	66.9	267.9		195,200
125	65.8	265.6		171,800
130	64.7	263.2		150,100
135	63.5	260.7		129,800
140	62.4	258.0		110,900
145	61.2	255.2		93,200
150	60.0	252.3		76,600
155	58.8	249.2		61,000
160	57.6	246.0		46,200
165	56.4	242.7		32,400
170	55.2	239.1		19,300

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301.8 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
50	82.3	308.7	536,800	536,800
55	81.4	307.9	476,800	536,800
60	80.4	307.0	394,200	536,800
65	79.4	306.1	325,500	536,800
70	78.5	305.0	267,400	531,500
75	77.5	303.9	217,400	499,900
80	76.5	302.6	173,500	451,500
85	75.5	301.3	135,100	408,600
90	74.5	299.9	101,200	370,200
95	73.5	298.4	71,100	335,700
100	72.5	296.8	44,200	304,300
105	71.5	295.0	20,000	274,900
110	70.5	293.2		245,600
115	69.5	291.3		218,500
120	68.5	289.3		193,500
125	67.5	287.2		170,200
130	66.4	285.0		148,600
135	65.4	282.7		128,500
140	64.3	280.2		109,700
145	63.3	277.7		92,100
150	62.2	275.0		75,500
155	61.1	272.2		60,000
160	60.0	269.3		45,300
165	58.9	266.2		31,500
170	57.8	263.0		18,400

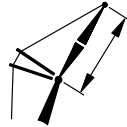
321.5 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
50	82.8	328.6	472,600	472,600
55	81.9	327.9	472,600	472,600
60	81.0	327.0	396,200	472,600
65	80.1	326.1	327,200	470,800
70	79.2	325.1	268,900	464,400
75	78.3	324.1	218,900	458,100
80	77.3	322.9	175,400	422,300
85	76.4	321.7	136,900	381,300
90	75.5	320.3	102,900	344,700
95	74.6	318.9	72,700	311,800
100	73.6	317.4	45,700	281,900
105	72.7	315.8	21,400	254,800
110	71.8	314.1		229,800
115	70.8	312.4		206,900
120	69.9	310.5		185,700
125	68.9	308.5		165,900
130	68.0	306.5		147,500
135	67.0	304.3		127,700
140	66.0	302.1		109,000
145	65.0	299.7		91,400
150	64.0	297.2		75,000
155	63.0	294.6		59,500
160	62.0	292.0		44,900
165	61.0	289.1		31,100
170	60.0	286.2		18,100

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881,800 lb



272.3 ft

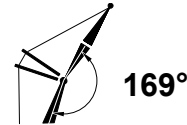
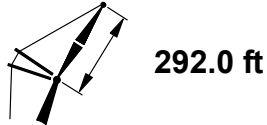


169°

 341.2 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
55	82.4	347.8	394,700	394,700
60	81.5	347.0	394,700	394,700
65	80.7	346.1	327,500	393,500
70	79.8	345.2	269,000	393,500
75	78.9	344.2	218,800	393,500
80	78.1	343.1	175,500	393,500
85	77.2	341.9	137,100	355,000
90	76.4	340.7	103,100	319,800
95	75.5	339.4	72,800	288,100
100	74.6	338.0	45,700	259,600
105	73.7	336.5	21,400	233,500
110	72.9	334.9		209,700
115	72.0	333.2		187,800
120	71.1	331.5		167,600
125	70.2	329.7		148,800
130	69.3	327.7		131,300
135	68.4	325.7		114,900
140	67.5	323.6		99,500
145	66.6	321.4		85,000
150	65.6	319.1		73,300
155	64.7	316.7		57,900
160	63.8	314.2		43,300
165	62.8	311.6		29,600

MLC650 VPC-MAX S-3

ASME B30.5

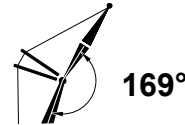
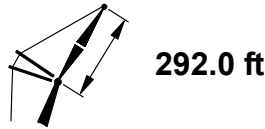


183.7 ft				
ft	°	ft	lb	lb
32	83.0	192.0	773,600	773,600
34	82.4	191.7	773,600	773,600
36	81.7	191.4	773,600	773,600
38	81.1	191.0	773,600	773,600
40	80.5	190.6	763,200	773,600
45	78.9	189.6	607,100	773,600
50	77.3	188.4	485,200	773,600
55	75.7	187.1	386,400	773,600
60	74.0	185.6	305,600	705,900
65	72.4	183.9	238,300	623,000
70	70.7	182.1	181,300	550,700
75	69.1	180.2	132,600	487,100
80	67.4	178.0	90,400	430,800
85	65.6	175.7	53,500	380,600
90	63.9	173.2	20,900	335,600
95	62.1	170.5		294,900
100	60.3	167.5		258,100
105	58.5	164.4		224,500
110	56.6	161.1		193,800
115	54.7	157.5		165,600
120	52.7	153.6		139,600
125	50.7	149.4		115,700
130	48.6	145.0		93,400
135	46.4	140.1		72,800
140	44.2	134.9		53,600
145	41.8	129.3		35,600
150	39.4	123.1		18,900

203.4 ft				
ft	°	ft	lb	lb
36	82.5	211.3	773,600	773,600
38	82.0	211.0	773,600	773,600
40	81.4	210.7	773,600	773,600
45	80.0	209.7	622,500	773,600
50	78.5	208.6	500,500	773,600
55	77.1	207.4	402,300	773,600
60	75.6	206.1	321,100	708,900
65	74.2	204.6	253,400	627,300
70	72.7	203.0	196,200	556,100
75	71.2	201.3	147,200	493,400
80	69.7	199.4	104,700	437,800
85	68.2	197.3	67,600	388,200
90	66.6	195.1	34,900	343,600
95	65.1	192.7		303,300
100	63.5	190.1		266,700
105	61.9	187.4		233,400
110	60.2	184.5		202,900
115	58.6	181.4		174,900
120	56.9	178.1		149,100
125	55.2	174.5		125,200
130	53.4	170.8		103,100
135	51.6	166.7		82,500
140	49.7	162.4		63,300
145	47.8	157.9		45,400
150	45.9	153.0		28,700

MLC650 VPC-MAX S-3

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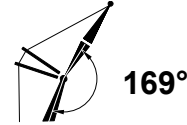
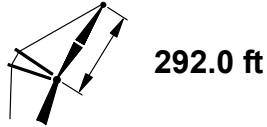


223.1 ft				
ft	°	ft	lb	lb
38	82.7	230.9	728,800	728,800
40	82.2	230.6	728,800	728,800
45	80.9	229.8	631,100	728,800
50	79.6	228.8	508,500	728,800
55	78.2	227.7	410,500	728,800
60	76.9	226.5	329,600	706,300
65	75.6	225.1	261,700	626,000
70	74.3	223.7	204,200	555,800
75	72.9	222.1	155,000	493,900
80	71.6	220.4	112,400	438,900
85	70.2	218.5	75,100	389,800
90	68.8	216.5	42,200	345,600
95	67.4	214.4		305,600
100	66.0	212.1		269,400
105	64.6	209.7		236,300
110	63.1	207.1		206,000
115	61.7	204.4		178,200
120	60.2	201.5		152,500
125	58.7	198.4		128,800
130	57.1	195.1		106,700
135	55.6	191.6		86,200
140	54.0	187.9		67,100
145	52.3	184.0		49,300
150	50.7	179.8		32,600

242.8 ft				
ft	°	ft	lb	lb
40	82.8	250.5	683,200	683,200
45	81.6	249.7	640,700	683,200
50	80.4	248.8	517,500	683,200
55	79.2	247.8	419,100	683,200
60	78.0	246.7	338,700	683,200
65	76.8	245.5	270,800	625,100
70	75.6	244.2	213,200	556,100
75	74.3	242.7	163,700	495,100
80	73.1	241.2	120,900	440,900
85	71.9	239.5	83,500	392,300
90	70.6	237.7	50,500	348,600
95	69.3	235.8	21,100	309,100
100	68.1	233.7		273,200
105	66.8	231.5		240,400
110	65.5	229.2		210,300
115	64.2	226.7		182,700
120	62.8	224.1		157,200
125	61.5	221.3		133,500
130	60.1	218.4		111,600
135	58.7	215.3		91,200
140	57.3	212.1		72,200
145	55.9	208.6		54,400
150	54.4	205.0		37,700
155	53.0	201.2		22,100

MLC650 VPC-MAX S-3

ASME B30.5

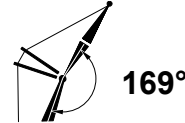
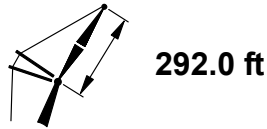


262.5 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
45	82.3	269.7	634,400	634,400
50	81.1	268.8	525,200	634,400
55	80.0	267.9	426,400	634,400
60	78.9	266.9	345,700	634,400
65	77.8	265.8	278,500	622,300
70	76.7	264.6	220,700	554,800
75	75.6	263.2	171,200	494,900
80	74.4	261.8	128,200	441,500
85	73.3	260.2	90,700	393,700
90	72.1	258.6	57,500	350,600
95	71.0	256.8	28,100	311,500
100	69.8	254.9		276,000
105	68.6	252.9		243,500
110	67.4	250.8		213,700
115	66.2	248.6		186,200
120	65.0	246.2		160,900
125	63.8	243.7		137,500
130	62.6	241.1		115,700
135	61.3	238.3		95,400
140	60.1	235.4		76,500
145	58.8	232.3		58,700
150	57.5	229.0		42,100
155	56.2	225.7		26,500

282.2 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
45	82.8	289.6	585,600	585,600
50	81.8	288.8	530,800	585,600
55	80.7	287.9	431,600	585,600
60	79.7	287.0	350,600	585,600
65	78.7	286.0	283,100	577,600
70	77.6	284.8	226,000	550,900
75	76.6	283.6	176,300	492,200
80	75.5	282.3	133,100	439,800
85	74.5	280.8	95,500	392,800
90	73.4	279.3	62,200	350,200
95	72.3	277.7	32,700	311,700
100	71.3	275.9		276,500
105	70.2	274.1		244,300
110	69.1	272.1		214,800
115	68.0	270.1		187,600
120	66.9	267.9		162,500
125	65.8	265.6		139,200
130	64.7	263.2		117,500
135	63.5	260.7		97,300
140	62.4	258.0		78,500
145	61.2	255.2		60,900
150	60.0	252.3		44,300
155	58.8	249.2		28,800

MLC650 VPC-MAX S-3

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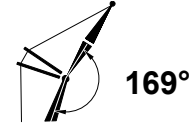
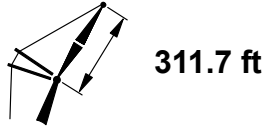


301.8 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
50	82.3	308.7	530,800	530,800
55	81.4	307.9	434,100	524,700
60	80.4	307.0	352,800	518,400
65	79.4	306.1	285,100	509,400
70	78.5	305.0	227,800	502,200
75	77.5	303.9	178,600	461,100
80	76.5	302.6	135,400	413,300
85	75.5	301.3	97,600	371,000
90	74.5	299.9	64,200	333,200
95	73.5	298.4	34,600	299,100
100	72.5	296.8		268,200
105	71.5	295.0		240,000
110	70.5	293.2		213,600
115	69.5	291.3		186,600
120	68.5	289.3		161,600
125	67.5	287.2		138,500
130	66.4	285.0		117,000
135	65.4	282.7		96,900
140	64.3	280.2		78,200
145	63.3	277.7		60,600
150	62.2	275.0		44,100
155	61.1	272.2		28,700

321.5 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
50	82.8	328.6	444,700	444,700
55	81.9	327.9	437,100	444,700
60	81.0	327.0	355,500	444,700
65	80.1	326.1	287,500	441,800
70	79.2	325.1	230,100	435,500
75	78.3	324.1	180,900	429,000
80	77.3	322.9	138,000	385,000
85	76.4	321.7	100,100	344,500
90	75.5	320.3	66,600	308,400
95	74.6	318.9	36,900	276,000
100	73.6	317.4		246,500
105	72.7	315.8		219,700
110	71.8	314.1		195,200
115	70.8	312.4		172,500
120	69.9	310.5		151,600
125	68.9	308.5		132,100
130	68.0	306.5		113,900
135	67.0	304.3		96,900
140	66.0	302.1		78,300
145	65.0	299.7		60,800
150	64.0	297.2		44,400
155	63.0	294.6		29,000

MLC650 VPC-MAX S-3

ASME B30.5

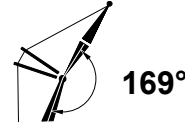
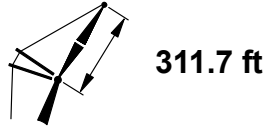


183.7 ft				
ft	°	ft	lb	lb
32	83.0	192.0	773,600	773,600
34	82.4	191.7	773,600	773,600
36	81.7	191.4	773,600	773,600
38	81.1	191.0	773,600	773,600
40	80.5	190.6	731,000	773,600
45	78.9	189.6	576,400	773,600
50	77.3	188.4	455,800	773,600
55	75.7	187.1	357,900	773,600
60	74.0	185.6	277,900	682,700
65	72.4	183.9	211,300	599,900
70	70.7	182.1	154,900	527,800
75	69.1	180.2	106,700	464,500
80	67.4	178.0	64,900	408,300
85	65.6	175.7	28,400	358,300
90	63.9	173.2		313,400
95	62.1	170.5		272,800
100	60.3	167.5		236,100
105	58.5	164.4		202,700
110	56.6	161.1		172,100
115	54.7	157.5		144,000
120	52.7	153.6		118,100
125	50.7	149.4		94,300
130	48.6	145.0		72,100
135	46.4	140.1		51,600
140	44.2	134.9		32,500

203.4 ft				
ft	°	ft	lb	lb
36	82.5	211.3	773,600	773,600
38	82.0	211.0	773,600	773,600
40	81.4	210.7	748,600	773,600
45	80.0	209.7	593,100	773,600
50	78.5	208.6	472,300	773,600
55	77.1	207.4	375,100	773,600
60	75.6	206.1	294,700	687,000
65	74.2	204.6	227,700	605,600
70	72.7	203.0	171,000	534,600
75	71.2	201.3	122,500	472,000
80	69.7	199.4	80,500	416,600
85	68.2	197.3	43,800	367,100
90	66.6	195.1		322,600
95	65.1	192.7		282,500
100	63.5	190.1		246,000
105	61.9	187.4		212,800
110	60.2	184.5		182,400
115	58.6	181.4		154,500
120	56.9	178.1		128,800
125	55.2	174.5		105,000
130	53.4	170.8		83,000
135	51.6	166.7		62,500
140	49.7	162.4		43,400
145	47.8	157.9		25,600

MLC650 VPC-MAX S-3

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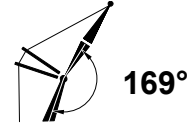
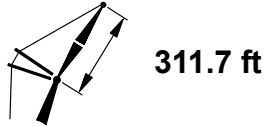


223.1 ft				
ft	°	ft	lb	lb
38	82.7	230.9	728,800	728,800
40	82.2	230.6	728,800	728,800
45	80.9	229.8	602,700	728,800
50	79.6	228.8	481,300	728,800
55	78.2	227.7	384,400	728,800
60	76.9	226.5	304,300	685,500
65	75.6	225.1	237,000	605,300
70	74.3	223.7	180,100	535,300
75	72.9	222.1	131,400	473,500
80	71.6	220.4	89,200	418,700
85	70.2	218.5	52,300	369,700
90	68.8	216.5	19,800	325,700
95	67.4	214.4		285,900
100	66.0	212.1		249,700
105	64.6	209.7		216,800
110	63.1	207.1		186,600
115	61.7	204.4		158,800
120	60.2	201.5		133,300
125	58.7	198.4		109,600
130	57.1	195.1		87,700
135	55.6	191.6		67,200
140	54.0	187.9		48,200
145	52.3	184.0		30,400

242.8 ft				
ft	°	ft	lb	lb
40	82.8	250.5	683,200	683,200
45	81.6	249.7	613,200	683,200
50	80.4	248.8	491,200	683,200
55	79.2	247.8	393,800	683,200
60	78.0	246.7	314,200	683,200
65	76.8	245.5	247,100	605,400
70	75.6	244.2	190,000	536,600
75	74.3	242.7	141,000	475,700
80	73.1	241.2	98,700	421,600
85	71.9	239.5	61,600	373,200
90	70.6	237.7	28,900	329,600
95	69.3	235.8		290,200
100	68.1	233.7		254,400
105	66.8	231.5		221,700
110	65.5	229.2		191,700
115	64.2	226.7		164,200
120	62.8	224.1		138,800
125	61.5	221.3		115,200
130	60.1	218.4		93,400
135	58.7	215.3		73,100
140	57.3	212.1		54,100
145	55.9	208.6		36,400
150	54.4	205.0		19,800

MLC650 VPC-MAX S-3

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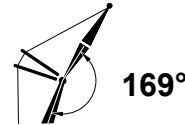
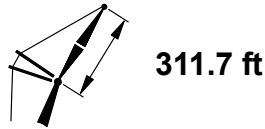


ft	°	ft	lb	lb
45	82.3	269.7	622,100	634,400
50	81.1	268.8	499,700	634,400
55	80.0	267.9	401,900	634,400
60	78.9	266.9	322,000	634,400
65	77.8	265.8	255,500	603,500
70	76.7	264.6	198,300	536,000
75	75.6	263.2	149,200	476,300
80	74.4	261.8	106,700	423,100
85	73.3	260.2	69,500	375,400
90	72.1	258.6	36,800	332,400
95	71.0	256.8		293,400
100	69.8	254.9		258,000
105	68.6	252.9		225,600
110	67.4	250.8		195,900
115	66.2	248.6		168,500
120	65.0	246.2		143,300
125	63.8	243.7		119,900
130	62.6	241.1		98,200
135	61.3	238.3		78,000
140	60.1	235.4		59,100
145	58.8	232.3		41,500
150	57.5	229.0		25,000

ft	°	ft	lb	lb
45	82.8	289.6	585,600	585,600
50	81.8	288.8	505,900	583,000
55	80.7	287.9	407,700	575,900
60	79.7	287.0	327,500	568,900
65	78.7	286.0	260,700	560,100
70	77.6	284.8	204,200	530,600
75	76.6	283.6	155,000	473,800
80	75.5	282.3	112,300	422,100
85	74.5	280.8	75,000	375,200
90	73.4	279.3	42,100	332,800
95	72.3	277.7		294,300
100	71.3	275.9		259,200
105	70.2	274.1		227,100
110	69.1	272.1		197,700
115	68.0	270.1		170,600
120	66.9	267.9		145,500
125	65.8	265.6		122,300
130	64.7	263.2		100,700
135	63.5	260.7		80,600
140	62.4	258.0		61,800
145	61.2	255.2		44,300
150	60.0	252.3		27,800

MLC650 VPC-MAX S-3

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301.8 ft

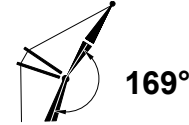
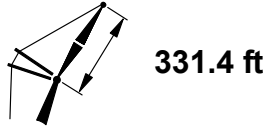
ft	°	ft	lb	
			38.7 ft	60.0 ft
50	82.3	308.7	509,300	513,800
55	81.4	307.9	410,800	507,600
60	80.4	307.0	330,300	501,200
65	79.4	306.1	263,200	492,100
70	78.5	305.0	206,600	484,900
75	77.5	303.9	157,900	440,400
80	76.5	302.6	115,100	393,100
85	75.5	301.3	77,700	351,100
90	74.5	299.9	44,700	313,700
95	73.5	298.4		279,900
100	72.5	296.8		249,300
105	71.5	295.0		221,300
110	70.5	293.2		195,600
115	69.5	291.3		170,200
120	68.5	289.3		145,300
125	67.5	287.2		122,200
130	66.4	285.0		100,800
135	65.4	282.7		80,800
140	64.3	280.2		62,100
145	63.3	277.7		44,600
150	62.2	275.0		28,200

321.5 ft

ft	°	ft	lb	
			38.7 ft	60.0 ft
50	82.8	328.6	427,000	427,000
55	81.9	327.9	414,300	427,000
60	81.0	327.0	333,500	427,000
65	80.1	326.1	266,200	424,500
70	79.2	325.1	209,400	418,200
75	78.3	324.1	160,700	410,000
80	77.3	322.9	118,200	365,200
85	76.4	321.7	80,700	325,200
90	75.5	320.3	47,600	289,400
95	74.6	318.9	18,200	257,200
100	73.6	317.4		228,100
105	72.7	315.8		201,500
110	71.8	314.1		177,200
115	70.8	312.4		154,800
120	69.9	310.5		134,000
125	68.9	308.5		114,700
130	68.0	306.5		96,700
135	67.0	304.3		79,800
140	66.0	302.1		62,700
145	65.0	299.7		45,300
150	64.0	297.2		28,900

MLC650 VPC-MAX S-3

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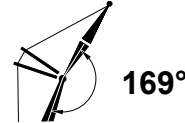
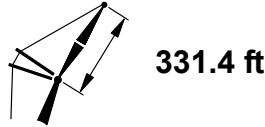


183.7 ft				
ft	°	ft	lb	lb
32	83.0	192.0	773,600	773,600
34	82.4	191.7	773,600	773,600
36	81.7	191.4	773,600	773,600
38	81.1	191.0	765,700	773,600
40	80.5	190.6	691,500	773,600
45	78.9	189.6	538,800	773,600
50	77.3	188.4	419,600	773,600
55	75.7	187.1	322,900	749,700
60	74.0	185.6	243,900	654,100
65	72.4	183.9	178,100	571,600
70	70.7	182.1	122,400	499,700
75	69.1	180.2	74,800	436,600
80	67.4	178.0	33,600	380,600
85	65.6	175.7		330,800
90	63.9	173.2		286,000
95	62.1	170.5		245,700
100	60.3	167.5		209,100
105	58.5	164.4		175,800
110	56.6	161.1		145,300
115	54.7	157.5		117,400
120	52.7	153.6		91,700
125	50.7	149.4		67,900
130	48.6	145.0		45,900
135	46.4	140.1		25,500

203.4 ft				
ft	°	ft	lb	lb
36	82.5	211.3	773,600	773,600
38	82.0	211.0	773,600	773,600
40	81.4	210.7	710,600	773,600
45	80.0	209.7	557,000	773,600
50	78.5	208.6	437,700	773,600
55	77.1	207.4	341,600	753,700
60	75.6	206.1	262,200	659,900
65	74.2	204.6	196,000	578,800
70	72.7	203.0	140,100	508,000
75	71.2	201.3	92,200	445,700
80	69.7	199.4	50,700	390,400
85	68.2	197.3		341,100
90	66.6	195.1		296,800
95	65.1	192.7		256,800
100	63.5	190.1		220,500
105	61.9	187.4		187,400
110	60.2	184.5		157,200
115	58.6	181.4		129,400
120	56.9	178.1		103,800
125	55.2	174.5		80,100
130	53.4	170.8		58,200
135	51.6	166.7		37,800
140	49.7	162.4		18,800

MLC650 VPC-MAX S-3

ASME B30.5

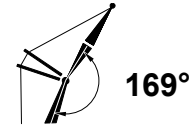
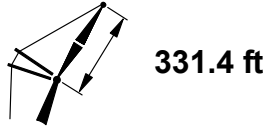


223.1 ft				
ft	°	ft	lb	lb
38	82.7	230.9	728,800	728,800
40	82.2	230.6	722,200	728,800
45	80.9	229.8	567,800	728,800
50	79.6	228.8	448,000	728,800
55	78.2	227.7	352,200	728,800
60	76.9	226.5	273,100	659,700
65	75.6	225.1	206,700	579,800
70	74.3	223.7	150,500	510,000
75	72.9	222.1	102,400	448,400
80	71.6	220.4	60,700	393,800
85	70.2	218.5	24,300	345,000
90	68.8	216.5		301,100
95	67.4	214.4		261,400
100	66.0	212.1		225,400
105	64.6	209.7		192,600
110	63.1	207.1		162,600
115	61.7	204.4		134,900
120	60.2	201.5		109,500
125	58.7	198.4		85,900
130	57.1	195.1		64,100
135	55.6	191.6		43,800
140	54.0	187.9		24,900

242.8 ft				
ft	°	ft	lb	lb
40	82.8	250.5	683,200	683,200
45	81.6	249.7	579,300	683,200
50	80.4	248.8	458,900	683,200
55	79.2	247.8	362,700	683,200
60	78.0	246.7	284,100	659,400
65	76.8	245.5	217,800	581,000
70	75.6	244.2	161,400	512,400
75	74.3	242.7	113,100	451,700
80	73.1	241.2	71,200	397,800
85	71.9	239.5	34,700	349,600
90	70.6	237.7		306,200
95	69.3	235.8		266,900
100	68.1	233.7		231,200
105	66.8	231.5		198,600
110	65.5	229.2		168,800
115	64.2	226.7		141,400
120	62.8	224.1		116,100
125	61.5	221.3		92,600
130	60.1	218.4		70,900
135	58.7	215.3		50,700
140	57.3	212.1		31,800

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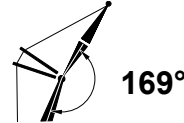
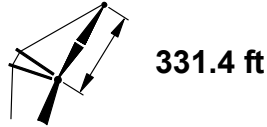


ft	°	ft	38.7 ft lb	60.0 ft lb
45	82.3	269.7	589,100	634,400
50	81.1	268.8	468,300	634,400
55	80.0	267.9	371,700	634,400
60	78.9	266.9	292,800	627,900
65	77.8	265.8	227,100	580,100
70	76.7	264.6	170,700	512,900
75	75.6	263.2	122,200	453,300
80	74.4	261.8	80,200	400,300
85	73.3	260.2	43,500	352,700
90	72.1	258.6		309,900
95	71.0	256.8		271,000
100	69.8	254.9		235,700
105	68.6	252.9		203,500
110	67.4	250.8		173,900
115	66.2	248.6		146,600
120	65.0	246.2		121,500
125	63.8	243.7		98,200
130	62.6	241.1		76,600
135	61.3	238.3		56,500
140	60.1	235.4		37,700
145	58.8	232.3		20,200

ft	°	ft	38.7 ft lb	60.0 ft lb
45	82.8	289.6	568,000	568,000
50	81.8	288.8	475,300	561,000
55	80.7	287.9	378,300	553,900
60	79.7	287.0	299,100	546,900
65	78.7	286.0	233,200	538,000
70	77.6	284.8	177,400	503,800
75	76.6	283.6	128,700	447,600
80	75.5	282.3	86,600	398,200
85	74.5	280.8	49,800	353,400
90	73.4	279.3	17,300	311,100
95	72.3	277.7		272,800
100	71.3	275.9		237,800
105	70.2	274.1		205,900
110	69.1	272.1		176,500
115	68.0	270.1		149,500
120	66.9	267.9		124,500
125	65.8	265.6		101,400
130	64.7	263.2		79,900
135	63.5	260.7		59,900
140	62.4	258.0		41,200
145	61.2	255.2		23,700

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301.8 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
50	82.3	308.7	479,300	492,200
55	81.4	307.9	382,000	485,900
60	80.4	307.0	302,500	479,500
65	79.4	306.1	236,400	470,200
70	78.5	305.0	180,400	463,000
75	77.5	303.9	132,400	414,900
80	76.5	302.6	90,100	368,100
85	75.5	301.3	53,100	326,600
90	74.5	299.9	20,600	289,500
95	73.5	298.4		256,100
100	72.5	296.8		225,800
105	71.5	295.0		198,200
110	70.5	293.2		172,800
115	69.5	291.3		149,400
120	68.5	289.3		125,000
125	67.5	287.2		102,100
130	66.4	285.0		80,700
135	65.4	282.7		60,800
140	64.3	280.2		42,200
145	63.3	277.7		24,700

321.5 ft				
ft	°	ft	38.7 ft lb	60.0 ft lb
50	82.8	328.6	404,300	404,300
55	81.9	327.9	386,100	404,300
60	81.0	327.0	306,400	404,300
65	80.1	326.1	239,900	402,600
70	79.2	325.1	183,800	396,200
75	78.3	324.1	135,800	385,100
80	77.3	322.9	93,800	340,800
85	76.4	321.7	56,800	301,200
90	75.5	320.3	24,100	265,900
95	74.6	318.9		234,100
100	73.6	317.4		205,300
105	72.7	315.8		179,000
110	71.8	314.1		155,000
115	70.8	312.4		132,800
120	69.9	310.5		112,300
125	68.9	308.5		93,200
130	68.0	306.5		75,300
135	67.0	304.3		58,600
140	66.0	302.1		43,400
145	65.0	299.7		26,000