

Liftcrane Jib Capacities

Jib No. FJ10:687 on
 Boom No. B90:686-685-680-681-682
 with Mast No. M11:684
 661,300 lb VPC (Variable Position Counterweight)
 360 Degree Rating

MLC650 VPC-MAX SERIES 2



LIFTING CAPACITIES: Lifting capacities for various boom lengths, jib lengths, and jib operating radii are for freely suspended loads and may be based on percent of static tipping or strength of structural components. Capacities must be reduced by applicable deducts.

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

Weight of all load blocks, hooks, weight ball, slings, hoist lines, etc., beneath jib point sheaves is considered part of load. Jib 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. Refer to Jib Rigging No. 80158563, Mast Rigging No. 84050187, Wire Rope Specifications chart No. A046-A, Counterweight Arrangements chart No. 9349-A, and Wind Conditions chart No. A045-A. Crane operator judgment must be used to allow for dynamic load effects of swinging, hoisting or lowering, travel, wind conditions, as well as adverse operating conditions and physical machine depreciation. Refer to the Operator Manual for operating guidelines.

MACHINE TRAVEL: Machine to travel on a firm, level, and uniformly supporting surface. Boom must be within boom angle range shown in capacity chart. Refer to Maximum Allowable Travel Specification chart No. A044-A.



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



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



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

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

Upper Jib Point Deduct

Deduct 3,000 lb from capacities when upper jib point is attached.

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Refer to Table 1 (raising over end or side of crawlers) and Table 2 (raising over end of blocked crawlers) for raising ability with the maximum weight of all load blocks, hooks, weight ball, slings, and hoist lines beneath jib point sheaves. For block weights shown with #, load blocks, hooks, weight ball, and slings must remain on ground until combined weights are within rated capacity of chart. For jib lengths shown with (a), upper jib point must be removed from jib top. Raising is not permitted in shaded areas of table.

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

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

Table 1:

Over End or Side of Crawlers																			
Boom Length (ft)	Counterweight Position (ft)																		
	38.7							60.0											
	Jib Length (ft)																		
	39.4	49.2	59.1	68.9	78.7	88.6	98.4	39.4	49.2	59.1	68.9	78.7	88.6	98.4					
	Block Weight (lb)																		
255.9	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000					
295.3	21,950	18,700	15,600	13,600	10,650	8,850	6,050	30,000	30,000	30,000	30,000	30,000	30,000	30,000					
334.6	#	(a)	Raising Not Permitted					30,000	30,000	20,000	20,000	15,000	15,000	15,000					
374.0	Raising Not Permitted							17,850	14,950	12,100	10,350	7,650	6,000	#					
383.9								12,300	9,500	6,800	5,150	#	#	(a)					
393.7								#	#	(a)	(a)	Raising Not Permitted							
403.5								(a)											

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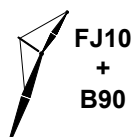
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Table 2:

Over End of Blocked Crawlers														
Boom Length (ft)	Counterweight Position (ft)													
	38.7							60.0						
	Jib Length (ft)													
	39.4	49.2	59.1	68.9	78.7	88.6	98.4	39.4	49.2	59.1	68.9	78.7	88.6	98.4
	Block Weight (lb)													
255.9	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
295.3	30,000	30,000	27,500	25,150	21,900	19,750	16,650	30,000	30,000	30,000	30,000	30,000	30,000	30,000
334.6	12,850	10,000	7,200	5,500	#	#	(a)	30,000	30,000	20,000	20,000	20,000	20,000	20,000
374.0	Raising Not Permitted							28,250	25,050	20,000	20,000	17,050	15,200	12,400
383.9								22,450	19,400	16,450	14,600	11,800	10,100	7,400
393.7								14,750	11,900	9,150	7,500	#	#	#
403.5								9,250	6,550	#	#	(a)	(a)	
Warning: Crane must remain in-line with crawlers when raising over end of blocked crawlers until operating radius is within 360 degree chart. <i>Crane tipping or structural damage can occur.</i>														

Explanation of Symbols



Jib No. FJ10:687
+
Boom No. B90:686-685-680-681-682



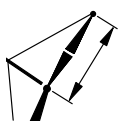
VPC (Variable Position Counterweight)



360 Degree Rating



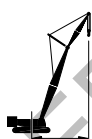
Boom Length



Jib Length



Jib Offset Angle



Operating Radius
(see page 1)



Boom Angle
(see page 1)



Jib Point Elevation
(see page 1)



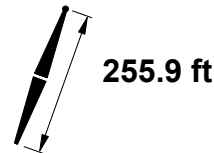
Counterweight Position
from Axis of Rotation



Lifting Capacities
(see page 1)

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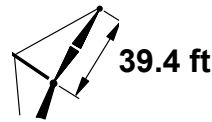
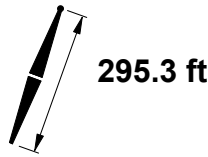
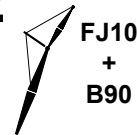
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	 10°				 15°				 20°				
			 38.7 ft  lb	 60.0 ft  lb			 38.7 ft  lb	 60.0 ft  lb			 38.7 ft  lb	 60.0 ft  lb	
38	85.3	303.1	488,000	488,000									38
39	85.1	303.0	486,200	486,200									39
40	85.0	302.9	486,200	486,200									40
41	84.8	302.7	486,200	486,200	85.2	302.3	488,000	488,000					41
42	84.6	302.6	486,200	486,200	85.0	302.1	488,000	488,000					42
43	84.4	302.5	486,200	486,200	84.8	302.0	488,000	488,000	85.3	301.3	484,700	484,700	43
44	84.2	302.4	486,200	486,200	84.6	301.9	488,000	488,000	85.1	301.2	480,700	480,700	44
45	84.0	302.2	486,200	486,200	84.4	301.7	488,000	488,000	84.9	301.0	476,700	476,700	45
46	83.8	302.1	486,200	486,200	84.2	301.6	488,000	488,000	84.7	300.9	472,700	472,700	46
48	83.4	301.8	486,200	486,200	83.8	301.3	488,000	488,000	84.4	300.6	465,100	465,100	48
50	83.0	301.5	486,200	486,200	83.4	301.0	488,000	488,000	84.0	300.3	457,600	457,600	50
52	82.6	301.2	486,200	486,200	83.1	300.7	488,000	488,000	83.6	300.0	450,400	450,400	52
54	82.2	300.8	486,200	486,200	82.7	300.4	488,000	488,000	83.2	299.6	443,400	443,400	54
56	81.8	300.5	486,200	486,200	82.3	300.0	488,000	488,000	82.8	299.3	436,700	436,700	56
58	81.4	300.1	486,200	486,200	81.9	299.7	488,000	488,000	82.4	298.9	430,100	430,100	58
60	81.0	299.8	486,200	486,200	81.5	299.3	488,000	488,000	82.0	298.6	423,800	423,800	60
65	80.0	298.8	486,200	486,200	80.5	298.3	485,900	485,900	81.0	297.6	408,800	408,800	65
70	79.0	297.7	486,200	486,200	79.5	297.2	467,300	467,300	80.0	296.5	394,800	394,800	70
75	78.0	296.5	482,400	486,200	78.5	296.0	450,100	450,100	79.0	295.3	381,800	381,800	75
80	77.0	295.2	452,500	486,200	77.5	294.7	434,000	434,000	78.0	294.0	369,900	369,900	80
85	76.0	293.9	425,400	469,800	76.5	293.4	419,200	419,200	77.0	292.6	358,500	358,500	85
90	75.0	292.4	400,700	452,200	75.5	291.9	402,700	405,500	75.9	291.2	347,900	347,900	90
95	74.0	290.9	378,000	435,900	74.4	290.4	379,900	392,500	74.9	289.6	337,900	337,900	95
100	73.0	289.2	353,600	420,800	73.4	288.7	355,400	380,500	73.9	288.0	328,500	328,500	100
105	71.9	287.5	329,700	406,700	72.4	287.0	331,400	369,100	72.9	286.2	319,700	319,700	105
110	70.9	285.6	308,300	393,500	71.3	285.1	309,900	358,500	71.8	284.3	311,300	311,300	110
115	69.9	283.6	289,000	381,100	70.3	283.1	290,500	348,500	70.8	282.4	292,100	303,400	115
120	68.8	281.6	271,400	369,600	69.2	281.1	272,800	339,100	69.7	280.3	274,400	295,900	120
125	67.7	279.4	255,500	358,700	68.2	278.9	256,800	330,200	68.6	278.1	258,300	288,800	125
130	66.7	277.1	240,900	341,700	67.1	276.6	242,100	321,700	67.6	275.8	243,500	282,100	130
135	65.6	274.7	227,500	324,200	66.0	274.2	228,700	313,800	66.5	273.4	230,000	275,700	135
140	64.5	272.2	215,100	308,000	64.9	271.7	216,300	306,200	65.4	270.9	217,500	269,600	140
145	63.4	269.6	203,700	293,000	63.8	269.0	204,800	294,100	64.3	268.2	205,900	263,800	145
150	62.3	266.8	193,100	279,200	62.7	266.3	194,100	280,200	63.2	265.4	195,200	258,300	150
160	60.0	260.9	174,100	254,300	60.5	260.3	175,000	255,200	60.9	259.5	176,000	248,000	160
170	57.7	254.4	157,500	232,500	58.1	253.9	158,300	233,400	58.6	253.0	159,200	234,300	170
180	55.3	247.4	142,800	213,400	55.8	246.8	143,600	214,100	56.2	245.9	144,400	214,900	180
190	52.9	239.7	129,800	196,400	53.3	239.0	130,500	197,000	53.7	238.1	131,200	197,800	190
200	50.3	231.2	118,100	181,100	50.7	230.6	118,800	181,800	51.1	229.6	119,400	182,400	200
210	47.7	222.0	107,700	167,400	48.1	221.3	108,200	168,000	48.5	220.3	108,800	168,600	210
220	44.9	211.8	98,200	155,100	45.3	211.1	98,600	155,500	45.7	210.1	99,200	156,000	220
230	42.0	200.6	89,500	143,800	42.4	199.8	89,900	144,200	42.7	198.7	90,400	144,600	230
240	38.9	188.1	81,600	133,500	39.2	187.3	82,000	133,800	39.6	186.1	82,300	134,200	240
250	35.5	174.0	74,300	124,000	35.9	173.2	74,600	124,300	36.2	171.9	74,900	124,600	250

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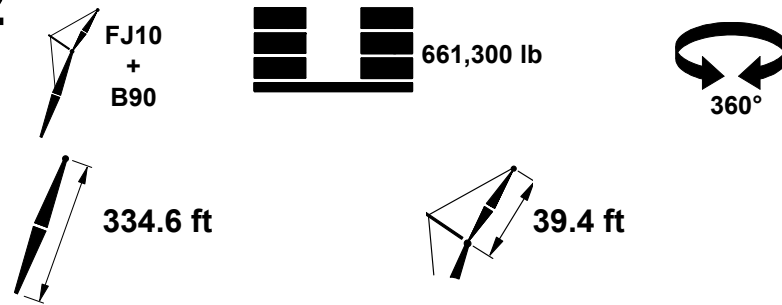
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	10°				15°				20°				
ft	°	ft	lb	lb	°	ft	lb	lb	°	ft	lb	lb	ft
43	85.2	342.0	488,000	488,000									43
44	85.0	341.9	488,000	488,000									44
45	84.8	341.7	488,000	488,000	85.2	341.2	488,000	488,000					45
46	84.7	341.6	488,000	488,000	85.1	341.1	488,000	488,000					46
47	84.5	341.5	488,000	488,000	84.9	340.9	488,000	488,000	85.3	340.2	461,700	461,700	47
48	84.3	341.4	488,000	488,000	84.7	340.8	488,000	488,000	85.2	340.1	458,500	458,500	48
49	84.1	341.2	488,000	488,000	84.5	340.7	488,000	488,000	85.0	339.9	455,400	455,400	49
50	84.0	341.1	488,000	488,000	84.4	340.5	488,000	488,000	84.8	339.8	452,300	452,300	50
52	83.6	340.8	488,000	488,000	84.0	340.3	488,000	488,000	84.5	339.5	446,300	446,300	52
54	83.3	340.5	488,000	488,000	83.7	340.0	488,000	488,000	84.1	339.2	440,300	440,300	54
56	82.9	340.2	488,000	488,000	83.3	339.7	488,000	488,000	83.8	338.9	434,500	434,500	56
58	82.6	339.9	488,000	488,000	83.0	339.4	488,000	488,000	83.4	338.6	428,900	428,900	58
60	82.2	339.6	488,000	488,000	82.6	339.0	488,000	488,000	83.1	338.3	423,500	423,500	60
65	81.4	338.7	488,000	488,000	81.8	338.2	476,900	476,900	82.2	337.4	410,400	410,400	65
70	80.5	337.8	488,000	488,000	80.9	337.2	461,000	461,000	81.3	336.4	398,000	398,000	70
75	79.6	336.7	461,200	488,000	80.0	336.2	446,000	446,000	80.4	335.4	386,900	386,900	75
80	78.7	335.6	432,800	487,100	79.1	335.1	432,100	432,100	79.6	334.3	376,000	376,000	80
85	77.9	334.4	406,900	470,300	78.2	333.9	409,100	419,000	78.7	333.1	365,800	365,800	85
90	77.0	333.1	383,100	454,600	77.4	332.6	385,300	406,700	77.8	331.8	356,100	356,100	90
95	76.1	331.8	361,300	440,000	76.5	331.2	363,400	395,200	76.9	330.4	347,000	347,000	95
100	75.2	330.3	341,200	426,300	75.6	329.8	343,200	384,300	76.0	329.0	338,400	338,400	100
105	74.3	328.8	322,700	413,500	74.7	328.2	324,600	374,100	75.1	327.5	326,700	330,200	105
110	73.4	327.2	303,100	401,400	73.8	326.6	304,900	364,400	74.2	325.8	306,800	322,500	110
115	72.5	325.5	283,600	390,100	72.9	324.9	285,300	355,300	73.3	324.1	287,100	315,100	115
120	71.6	323.7	266,000	376,300	72.0	323.1	267,500	346,600	72.4	322.3	269,300	308,100	120
125	70.7	321.8	249,900	355,200	71.0	321.3	251,400	338,300	71.4	320.4	253,000	301,400	125
130	69.7	319.9	235,200	336,000	70.1	319.3	236,600	330,500	70.5	318.5	238,100	295,100	130
135	68.8	317.8	221,700	318,400	69.2	317.2	223,000	319,700	69.6	316.4	224,500	289,100	135
140	67.9	315.6	209,200	302,100	68.2	315.0	210,500	303,400	68.6	314.2	211,900	283,200	140
150	66.0	311.0	187,100	273,100	66.3	310.4	188,200	274,300	66.7	309.6	189,500	272,400	150
160	64.1	306.0	167,900	248,100	64.4	305.4	169,000	249,200	64.8	304.5	170,100	250,300	160
170	62.1	300.5	151,200	226,200	62.5	299.9	152,100	227,200	62.8	299.0	153,200	228,200	170
180	60.1	294.6	136,400	207,000	60.5	294.0	137,300	207,900	60.8	293.1	138,300	208,800	180
190	58.1	288.2	123,300	189,900	58.4	287.6	124,200	190,700	58.8	286.7	125,000	191,600	190
200	56.0	281.3	111,600	174,600	56.3	280.6	112,400	175,400	56.7	279.7	113,200	176,100	200
210	53.8	273.8	101,100	160,900	54.2	273.1	101,800	161,600	54.5	272.2	102,500	162,300	210
220	51.6	265.7	91,600	148,500	52.0	265.0	92,200	149,100	52.3	264.0	92,800	149,700	220
230	49.4	257.0	82,900	137,200	49.7	256.2	83,500	137,700	50.0	255.2	84,000	138,300	230
240	47.0	247.4	75,000	126,900	47.3	246.7	75,500	127,400	47.6	245.6	76,000	127,900	240
250	44.5	237.1	67,700	117,400	44.8	236.3	68,200	117,800	45.1	235.2	68,600	118,300	250
260	41.9	225.8	61,000	108,700	42.2	225.0	61,400	109,100	42.5	223.8	61,800	109,500	260
270	39.2	213.4	54,800	100,600	39.5	212.5	55,100	100,900	39.8	211.3	55,500	101,300	270
280	36.3	199.6	49,000	93,100	36.6	198.7	49,300	93,400	36.8	197.3	49,600	93,700	280
285									35.3	189.8	46,800	90,100	285

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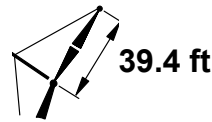
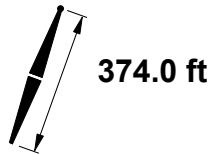
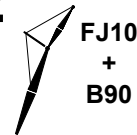
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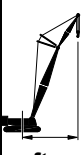
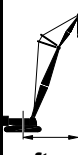


	10°				15°				20°				
ft	°	ft	lb	lb	°	ft	lb	lb	°	ft	lb	lb	ft
46	85.3	381.1	488,000	488,000									46
47	85.1	381.0	488,000	488,000									47
48	85.0	380.9	488,000	488,000									48
49	84.8	380.8	488,000	488,000	85.2	380.2	488,000	488,000					49
50	84.7	380.7	488,000	488,000	85.0	380.1	488,000	488,000					50
51	84.5	380.5	488,000	488,000	84.9	380.0	488,000	488,000	85.3	379.2	439,000	439,000	51
52	84.4	380.4	488,000	488,000	84.7	379.9	488,000	488,000	85.1	379.0	436,500	436,500	52
53	84.2	380.3	488,000	488,000	84.6	379.7	488,000	488,000	85.0	378.9	434,100	434,100	53
54	84.1	380.2	488,000	488,000	84.4	379.6	488,000	488,000	84.8	378.8	431,800	431,800	54
56	83.8	379.9	488,000	488,000	84.1	379.3	488,000	488,000	84.5	378.5	427,200	427,200	56
58	83.4	379.6	488,000	488,000	83.8	379.1	485,100	485,100	84.2	378.2	422,700	422,700	58
60	83.1	379.3	488,000	488,000	83.5	378.8	479,200	479,200	83.9	377.9	418,200	418,200	60
65	82.4	378.5	488,000	488,000	82.7	378.0	464,800	464,800	83.1	377.2	407,100	407,100	65
70	81.6	377.7	465,900	488,000	81.9	377.1	451,200	451,200	82.3	376.3	396,800	396,800	70
75	80.8	376.8	437,600	488,000	81.1	376.2	438,500	438,500	81.5	375.4	386,700	386,700	75
80	80.0	375.8	411,600	480,400	80.4	375.2	414,000	426,500	80.7	374.4	377,100	377,100	80
85	79.2	374.7	387,800	465,900	79.6	374.2	390,000	415,200	80.0	373.3	368,100	368,100	85
90	78.4	373.6	365,800	452,200	78.8	373.0	368,000	404,400	79.2	372.2	359,500	359,500	90
95	77.7	372.4	345,500	439,300	78.0	371.8	347,600	394,200	78.4	371.0	349,900	351,300	95
100	76.9	371.1	326,800	427,100	77.2	370.5	328,800	384,600	77.6	369.7	330,900	343,500	100
105	76.1	369.7	309,400	415,700	76.4	369.2	311,300	375,400	76.8	368.3	313,300	336,100	105
110	75.3	368.3	293,100	404,800	75.6	367.7	295,000	366,700	76.0	366.9	297,000	329,000	110
115	74.5	366.8	278,100	390,000	74.8	366.2	279,800	358,400	75.2	365.4	281,700	322,300	115
120	73.7	365.2	263,900	372,500	74.0	364.7	265,600	350,500	74.4	363.8	267,500	315,800	120
130	72.0	361.8	233,700	334,600	72.4	361.3	235,200	335,800	72.7	360.4	236,800	303,700	130
140	70.4	358.1	207,700	300,500	70.7	357.5	209,000	301,900	71.1	356.7	210,500	292,500	140
150	68.7	354.1	185,400	271,500	69.1	353.5	186,600	272,700	69.4	352.6	187,900	274,000	150
160	67.1	349.7	166,100	246,300	67.4	349.1	167,300	247,500	67.7	348.2	168,500	248,700	160
170	65.4	344.9	149,300	224,400	65.7	344.3	150,400	225,400	66.0	343.4	151,500	226,500	170
180	63.6	339.8	134,500	205,100	64.0	339.2	135,500	206,000	64.3	338.3	136,500	207,100	180
190	61.9	334.3	121,400	188,000	62.2	333.7	122,300	188,800	62.5	332.7	123,200	189,800	190
200	60.1	328.4	109,600	172,600	60.4	327.7	110,500	173,400	60.8	326.8	111,300	174,300	200
210	58.3	322.0	99,100	158,900	58.6	321.4	99,800	159,600	58.9	320.4	100,600	160,400	210
220	56.4	315.2	89,500	146,400	56.7	314.6	90,200	147,100	57.1	313.6	90,900	147,800	220
230	54.5	307.9	80,800	135,100	54.8	307.2	81,500	135,700	55.1	306.2	82,100	136,400	230
240	52.6	300.1	72,900	124,800	52.9	299.4	73,500	125,300	53.2	298.4	74,100	125,900	240
250	50.6	291.7	65,600	115,300	50.9	291.0	66,100	115,800	51.2	289.9	66,700	116,400	250
260	48.5	282.7	58,900	106,600	48.8	281.9	59,400	107,100	49.1	280.8	59,900	107,600	260
270	46.4	273.0	52,700	98,500	46.6	272.2	53,200	99,000	46.9	271.0	53,600	99,400	270
280	44.1	262.5	47,000	91,000	44.4	261.7	47,400	91,400	44.7	260.5	47,800	91,800	280
290	41.8	251.1	41,600	84,100	42.1	250.3	42,000	84,500	42.3	249.0	42,300	84,800	290
300	39.4	238.8	36,600	77,600	39.6	237.9	36,900	77,900	39.9	236.5	37,200	78,200	300
310	36.8	225.2	31,900	71,500	37.0	224.3	32,200	71,800	37.3	222.9	32,500	72,100	310
315	35.4	218.0	29,700	68,700	35.7	217.0	29,900	68,900	35.9	215.5	30,200	69,200	315

MLC650 VPC-MAX S-2

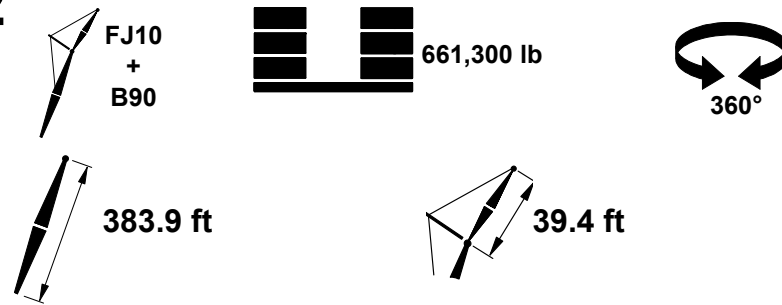
ASME B30.5



	 10°				 15°				 20°				
			 38.7 ft	 60.0 ft			 38.7 ft	 60.0 ft			 38.7 ft	 60.0 ft	
ft	°	ft	lb	lb	°	ft	lb	lb	°	ft	lb	lb	ft
50	85.2	420.3	488,000	488,000									50
51	85.1	420.2	486,400	486,400									51
52	84.9	420.0	483,600	483,600	85.3	419.4	485,000	485,000					52
53	84.8	419.9	480,800	480,800	85.1	419.3	482,200	482,200					53
54	84.7	419.8	478,000	478,000	85.0	419.2	479,400	479,400					54
55	84.5	419.7	475,200	475,200	84.8	419.1	476,700	476,700	85.2	418.3	417,600	417,600	55
56	84.4	419.6	472,500	472,500	84.7	419.0	473,900	473,900	85.0	418.1	415,600	415,600	56
57	84.2	419.4	469,800	469,800	84.6	418.8	471,200	471,200	84.9	418.0	413,700	413,700	57
58	84.1	419.3	467,000	467,000	84.4	418.7	468,500	468,500	84.8	417.9	411,800	411,800	58
60	83.8	419.0	461,700	461,700	84.1	418.4	463,100	463,100	84.5	417.6	407,900	407,900	60
65	83.1	418.3	448,600	448,600	83.4	417.7	450,000	450,000	83.8	416.9	398,800	398,800	65
70	82.4	417.6	431,300	442,800	82.7	417.0	433,900	442,000	83.1	416.2	389,800	389,800	70
75	81.7	416.7	406,100	441,800	82.0	416.1	408,600	431,100	82.4	415.3	381,400	381,400	75
80	81.0	415.8	382,800	429,800	81.3	415.3	385,200	420,700	81.7	414.4	373,400	373,400	80
85	80.3	414.9	361,200	418,200	80.6	414.3	363,500	410,800	81.0	413.5	365,700	365,700	85
90	79.6	413.9	341,200	412,600	79.9	413.3	343,400	401,400	80.2	412.4	345,800	358,400	90
95	78.9	412.8	322,600	412,600	79.2	412.2	324,700	392,400	79.5	411.4	327,000	351,300	95
100	78.2	411.6	305,200	412,600	78.5	411.0	307,300	383,800	78.8	410.2	309,500	344,600	100
110	76.7	409.1	273,900	384,000	77.0	408.5	275,900	367,800	77.4	407.7	277,900	331,900	110
120	75.3	406.4	246,500	350,400	75.6	405.8	248,300	352,100	75.9	404.9	250,200	320,300	120
130	73.8	403.3	222,300	320,600	74.1	402.7	224,000	322,200	74.5	401.9	225,800	309,300	130
140	72.4	400.0	200,800	294,000	72.7	399.4	202,400	295,500	73.0	398.5	204,000	297,200	140
150	70.9	396.4	179,600	265,700	71.2	395.8	181,000	267,000	71.5	394.9	182,400	268,500	150
160	69.4	392.5	160,200	240,400	69.7	391.9	161,500	241,700	70.0	391.0	162,800	243,000	160
170	67.9	388.3	143,400	218,400	68.2	387.6	144,500	219,600	68.5	386.8	145,700	220,800	170
180	66.4	383.8	128,500	199,000	66.7	383.1	129,500	200,100	67.0	382.2	130,700	201,200	180
190	64.8	378.9	115,300	181,800	65.1	378.3	116,300	182,800	65.4	377.3	117,300	183,900	190
200	63.3	373.7	103,500	166,500	63.6	373.1	104,400	167,400	63.9	372.1	105,400	168,300	200
210	61.7	368.2	92,900	152,700	62.0	367.5	93,700	153,500	62.3	366.6	94,600	154,400	210
220	60.1	362.3	83,300	140,200	60.3	361.6	84,100	140,900	60.6	360.6	84,900	141,800	220
230	58.4	356.0	74,600	128,800	58.7	355.3	75,300	129,500	59.0	354.3	76,000	130,300	230
240	56.7	349.2	66,600	118,500	57.0	348.5	67,300	119,100	57.3	347.5	68,000	119,800	240
250	55.0	342.1	59,300	109,000	55.3	341.4	59,900	109,600	55.6	340.3	60,600	110,200	250
260	53.3	334.5	52,600	100,200	53.6	333.7	53,100	100,800	53.8	332.7	53,700	101,400	260
270	51.5	326.3	46,400	92,200	51.8	325.6	46,900	92,700	52.0	324.5	47,400	93,200	270
280	49.7	317.7	40,600	84,700	49.9	316.9	41,100	85,200	50.2	315.8	41,600	85,700	280
290	47.8	308.4	35,200	77,700	48.0	307.6	35,700	78,200	48.3	306.5	36,200	78,600	290
300	45.8	298.6	29,600	71,300	46.1	297.7	30,100	71,700	46.3	296.5	30,700	72,100	300
310	43.8	288.0	24,000	65,200	44.0	287.1	24,400	65,600	44.3	285.9	24,900	66,000	310
320	41.7	276.6	18,600	59,500	41.9	275.6	19,100	59,900	42.2	274.4	19,500	60,200	320
330	39.5	264.3	13,600	54,200	39.7	263.3	14,000	54,500	39.9	262.0	14,400	54,800	330
340	37.2	250.9		49,200	37.4	249.9		49,400	37.6	248.5		49,700	340
345	36.0	243.8		46,800	36.2	242.8		47,000	36.4	241.3		47,300	345
350									35.1	233.8		44,900	350

MLC650 VPC-MAX S-2

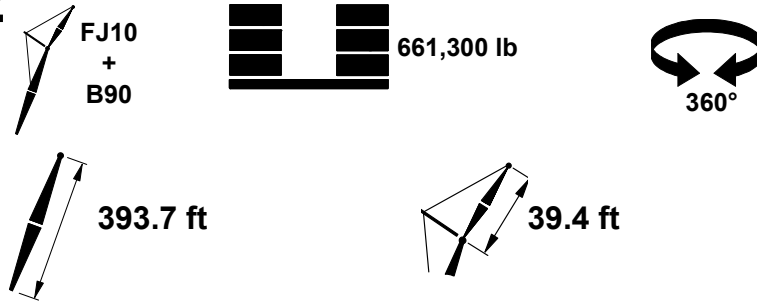
ASME B30.5



	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	ft	lb	lb	ft
50	85.2	430.4	467,400	467,400									50
51	85.0	430.3	464,800	464,800									51
52	84.9	430.2	462,200	462,200	85.2	429.6	463,600	463,600					52
53	84.8	430.1	459,600	459,600	85.1	429.5	461,000	461,000					53
54	84.6	429.9	457,000	457,000	84.9	429.4	458,400	458,400	85.2	428.8	446,000	446,000	54
55	84.5	429.8	454,500	454,500	84.8	429.3	455,800	455,800	85.1	428.7	443,800	443,800	55
56	84.4	429.7	451,900	451,900	84.7	429.2	453,300	453,300	85.0	428.5	441,700	441,700	56
57	84.2	429.6	449,400	449,400	84.5	429.0	450,800	450,800	84.8	428.4	439,500	439,500	57
58	84.1	429.5	446,900	446,900	84.4	428.9	448,300	448,300	84.7	428.3	437,400	437,400	58
60	83.8	429.2	441,900	441,900	84.1	428.7	443,300	443,300	84.4	428.0	433,200	433,200	60
65	83.1	428.5	429,800	429,800	83.4	428.0	431,100	431,100	83.7	427.3	422,900	422,900	65
70	82.4	427.8	418,000	418,000	82.8	427.2	419,300	419,300	83.1	426.6	413,200	413,200	70
75	81.7	427.0	395,500	418,000	82.1	426.4	398,100	419,300	82.4	425.8	400,500	403,900	75
80	81.1	426.1	373,200	412,700	81.4	425.6	375,600	414,000	81.7	424.9	377,900	395,100	80
85	80.4	425.2	352,400	401,800	80.7	424.6	354,800	403,100	81.0	424.0	357,000	386,600	85
90	79.7	424.2	333,100	391,300	80.0	423.6	335,300	392,600	80.3	423.0	337,500	378,600	90
95	79.0	423.1	315,100	391,300	79.3	422.6	317,300	392,600	79.6	421.9	319,300	370,800	95
100	78.3	422.0	298,300	391,300	78.6	421.4	300,400	386,600	78.9	420.8	302,300	363,500	100
110	76.9	419.5	267,800	374,700	77.2	419.0	269,800	369,100	77.5	418.3	271,600	349,500	110
120	75.5	416.8	241,100	343,300	75.8	416.3	242,900	345,100	76.1	415.6	244,600	336,700	120
130	74.1	413.9	217,400	314,400	74.4	413.3	219,100	316,000	74.7	412.7	220,700	317,600	130
140	72.7	410.6	196,400	288,400	73.0	410.1	198,000	290,000	73.2	409.4	199,500	291,400	140
150	71.2	407.1	177,500	263,800	71.5	406.6	179,000	265,300	71.8	405.9	180,400	266,600	150
160	69.8	403.3	158,500	238,700	70.1	402.8	159,800	240,000	70.3	402.1	161,000	241,200	160
170	68.3	399.2	141,600	216,700	68.6	398.7	142,800	217,900	68.9	398.0	144,000	219,000	170
180	66.8	394.9	126,800	197,300	67.1	394.3	127,900	198,500	67.4	393.6	128,900	199,500	180
190	65.3	390.1	113,600	180,200	65.6	389.6	114,700	181,200	65.9	388.9	115,600	182,200	190
200	63.8	385.1	101,800	164,800	64.1	384.5	102,800	165,800	64.4	383.8	103,700	166,700	200
210	62.3	379.7	91,300	151,000	62.6	379.1	92,200	151,900	62.8	378.4	93,000	152,800	210
220	60.7	374.0	81,700	138,600	61.0	373.4	82,500	139,400	61.3	372.7	83,300	140,200	220
230	59.1	367.9	73,000	127,200	59.4	367.3	73,800	128,000	59.7	366.5	74,500	128,700	230
240	57.5	361.4	65,000	116,900	57.8	360.8	65,800	117,600	58.0	360.0	66,400	118,300	240
250	55.8	354.5	57,800	107,400	56.1	353.9	58,400	108,100	56.4	353.1	59,000	108,700	250
260	54.2	347.2	51,100	98,700	54.4	346.5	51,700	99,400	54.7	345.7	52,300	99,900	260
270	52.4	339.4	44,900	90,700	52.7	338.7	45,500	91,300	53.0	337.9	46,000	91,800	270
280	50.7	331.1	39,100	83,200	51.0	330.4	39,700	83,800	51.2	329.5	40,200	84,200	280
290	48.9	322.2	33,600	76,300	49.1	321.5	34,200	76,800	49.4	320.6	34,700	77,200	290
300	47.0	312.8	27,600	69,800	47.3	312.1	28,200	70,300	47.5	311.2	28,700	70,700	300
310	45.1	302.7	21,900	63,800	45.3	301.9	22,500	64,200	45.6	301.0	23,000	64,600	310
320	43.1	291.9	16,700	58,100	43.3	291.1	17,200	58,500	43.6	290.2	17,600	58,900	320
330	41.0	280.3	11,700	52,800	41.3	279.5	12,200	53,200	41.5	278.5	12,500	53,500	330
340	38.8	267.8		47,800	39.1	266.9		48,200	39.3	265.9		48,400	340
350	36.6	254.2		43,100	36.8	253.3		43,400	37.0	252.2		43,600	350
355	35.4	247.0		40,900	35.6	246.1		41,100	35.8	244.9		41,300	355

MLC650 VPC-MAX S-2

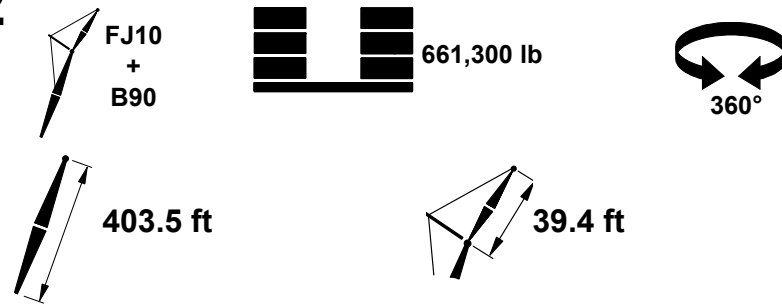
ASME B30.5



	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	ft	lb	lb	ft
51	85.1	440.2	453,800	453,800									51
52	85.0	440.1	451,300	451,300									52
53	84.9	440.0	448,800	448,800	85.2	439.4	450,200	450,200					53
54	84.7	439.8	446,300	446,300	85.1	439.3	447,700	447,700					54
55	84.6	439.7	443,800	443,800	84.9	439.2	445,200	445,200	85.2	438.6	441,400	441,400	55
56	84.5	439.6	441,300	441,300	84.8	439.1	442,700	442,700	85.1	438.5	439,300	439,300	56
57	84.3	439.5	438,900	438,900	84.7	439.0	440,300	440,300	84.9	438.3	437,200	437,200	57
58	84.2	439.4	436,400	436,400	84.5	438.8	437,800	437,800	84.8	438.2	435,200	435,200	58
60	83.9	439.1	431,600	431,600	84.3	438.6	433,000	433,000	84.5	438.0	431,200	431,200	60
65	83.3	438.5	419,800	419,800	83.6	437.9	421,200	421,200	83.9	437.3	421,200	421,200	65
70	82.6	437.7	408,400	408,400	82.9	437.2	409,800	409,800	83.2	436.6	411,000	411,000	70
75	81.9	436.9	389,300	408,400	82.2	436.4	391,900	408,700	82.5	435.8	394,300	402,900	75
80	81.3	436.1	367,200	403,400	81.6	435.5	369,700	404,700	81.9	434.9	372,100	394,400	80
85	80.6	435.2	346,700	392,800	80.9	434.6	349,200	394,100	81.2	434.0	351,400	386,200	85
90	79.9	434.2	327,700	382,600	80.2	433.7	330,000	383,800	80.5	433.0	332,200	378,400	90
95	79.2	433.2	309,900	379,500	79.5	432.6	312,100	379,000	79.8	432.0	314,200	370,800	95
100	78.6	432.1	293,200	379,500	78.9	431.5	295,400	379,000	79.1	430.9	297,400	363,600	100
110	77.2	429.7	263,100	370,300	77.5	429.2	265,100	372,300	77.8	428.5	267,000	350,100	110
120	75.8	427.1	236,600	338,100	76.1	426.5	238,500	339,900	76.4	425.9	240,200	337,600	120
130	74.5	424.2	213,100	309,400	74.8	423.6	214,800	311,100	75.0	423.0	216,500	312,700	130
140	73.1	421.0	192,100	283,700	73.4	420.5	193,800	285,300	73.6	419.8	195,300	286,800	140
150	71.7	417.6	173,400	260,500	72.0	417.0	174,900	262,100	72.2	416.4	176,400	263,400	150
160	70.2	413.9	156,000	236,200	70.5	413.3	157,400	237,600	70.8	412.7	158,700	238,900	160
170	68.8	409.9	139,100	214,200	69.1	409.3	140,400	215,500	69.4	408.7	141,600	216,600	170
180	67.4	405.6	124,300	194,800	67.7	405.1	125,500	196,000	67.9	404.4	126,500	197,100	180
190	65.9	401.1	111,100	177,600	66.2	400.5	112,200	178,700	66.5	399.8	113,200	179,700	190
200	64.4	396.2	99,300	162,300	64.7	395.6	100,300	163,300	65.0	394.9	101,200	164,200	200
210	63.0	391.0	88,700	148,500	63.2	390.4	89,600	149,400	63.5	389.6	90,500	150,300	210
220	61.4	385.4	79,100	136,000	61.7	384.8	80,000	136,900	62.0	384.1	80,800	137,600	220
230	59.9	379.5	70,400	124,600	60.2	378.9	71,200	125,500	60.4	378.1	71,900	126,200	230
240	58.3	373.2	62,400	114,300	58.6	372.6	63,200	115,100	58.9	371.8	63,900	115,700	240
250	56.7	366.5	55,100	104,800	57.0	365.9	55,800	105,500	57.3	365.1	56,500	106,100	250
260	55.1	359.4	48,400	96,100	55.4	358.8	49,100	96,700	55.6	358.0	49,700	97,300	260
270	53.5	351.9	42,200	88,000	53.7	351.3	42,800	88,600	54.0	350.5	43,400	89,200	270
280	51.8	343.9	36,300	80,600	52.0	343.2	37,000	81,100	52.3	342.4	37,600	81,600	280
290	50.0	335.4	29,800	73,600	50.3	334.7	30,500	74,200	50.5	333.9	31,100	74,600	290
300	48.2	326.4	23,800	67,200	48.5	325.7	24,500	67,700	48.7	324.8	25,000	68,100	300
310	46.4	316.7	18,200	61,100	46.6	316.0	18,800	61,600	46.9	315.1	19,300	62,000	310
320	44.5	306.5	12,900	55,500	44.7	305.7	13,500	55,900	45.0	304.8	13,900	56,200	320
330	42.5	295.5		50,100	42.8	294.7		50,500	43.0	293.7		50,900	330
340	40.5	283.6		45,100	40.7	282.8		45,500	40.9	281.8		45,800	340
350	38.3	270.9		40,400	38.6	270.0		40,700	38.7	269.0		41,000	350
360	36.1	257.1		36,000	36.3	256.2		36,200	36.5	255.1		36,500	360
365					35.1	248.8		34,100	35.3	247.7		34,300	365

MLC650 VPC-MAX S-2

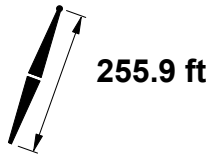
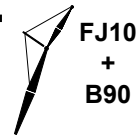
ASME B30.5



	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	ft	lb	lb	ft
51	85.3	450.1	441,900	441,900									51
52	85.1	450.0	439,500	439,500									52
53	85.0	449.9	437,100	437,100									53
54	84.9	449.8	434,700	434,700	85.2	449.2	436,100	436,100					54
55	84.7	449.6	432,400	432,400	85.0	449.1	433,800	433,800					55
56	84.6	449.5	430,000	430,000	84.9	449.0	431,400	431,400	85.2	448.3	432,700	432,700	56
57	84.5	449.4	427,700	427,700	84.8	448.9	429,100	429,100	85.1	448.2	430,400	430,400	57
58	84.3	449.3	425,300	425,300	84.7	448.7	426,700	426,700	84.9	448.1	428,000	428,000	58
59	84.2	449.2	423,000	423,000	84.5	448.6	424,400	424,400	84.8	448.0	425,700	425,700	59
60	84.1	449.0	420,700	420,700	84.4	448.5	422,100	422,100	84.7	447.9	423,400	423,400	60
65	83.4	448.4	409,500	409,500	83.7	447.8	410,800	410,800	84.0	447.2	412,100	412,100	65
70	82.8	447.7	398,500	398,500	83.1	447.1	399,800	399,800	83.4	446.5	401,100	401,100	70
75	82.1	446.9	383,400	394,200	82.4	446.3	386,000	393,700	82.7	445.7	388,400	393,300	75
80	81.5	446.1	361,900	393,900	81.8	445.5	364,400	393,700	82.1	444.9	366,700	390,800	80
85	80.8	445.2	341,900	383,800	81.1	444.6	344,300	385,000	81.4	444.0	346,500	383,000	85
90	80.1	444.2	323,100	373,900	80.5	443.7	325,500	375,200	80.7	443.0	327,700	375,500	90
100	78.8	442.2	289,300	365,200	79.1	441.6	291,500	365,600	79.4	441.0	293,500	361,300	100
110	77.5	439.8	259,700	363,600	77.8	439.3	261,700	358,500	78.1	438.6	263,600	348,200	110
120	76.2	437.3	233,500	334,000	76.5	436.7	235,400	335,800	76.7	436.0	237,100	336,100	120
130	74.8	434.4	210,200	305,700	75.1	433.9	212,000	307,400	75.4	433.2	213,600	309,000	130
140	73.5	431.4	189,500	280,300	73.8	430.8	191,200	281,900	74.0	430.1	192,700	283,400	140
150	72.1	428.0	170,900	257,400	72.4	427.5	172,500	259,000	72.6	426.8	173,900	260,400	150
160	70.7	424.4	154,200	235,100	71.0	423.8	155,600	236,500	71.3	423.2	157,000	237,800	160
170	69.3	420.5	138,000	213,100	69.6	420.0	139,300	214,400	69.9	419.3	140,500	215,500	170
180	67.9	416.4	123,100	193,700	68.2	415.8	124,300	194,900	68.5	415.1	125,400	196,000	180
190	66.5	411.9	109,900	176,500	66.8	411.3	111,000	177,600	67.0	410.6	112,000	178,600	190
200	65.1	407.2	98,100	161,100	65.4	406.6	99,100	162,100	65.6	405.9	100,100	163,100	200
210	63.6	402.1	87,500	147,300	63.9	401.5	88,500	148,300	64.1	400.8	89,300	149,100	210
220	62.1	396.7	77,900	134,800	62.4	396.1	78,800	135,700	62.7	395.4	79,600	136,500	220
230	60.6	391.0	69,200	123,400	60.9	390.3	70,000	124,300	61.2	389.6	70,800	125,000	230
240	59.1	384.9	61,200	113,100	59.4	384.2	62,000	113,900	59.6	383.5	62,700	114,600	240
250	57.6	378.4	53,900	103,600	57.9	377.8	54,700	104,300	58.1	377.0	55,300	105,000	250
260	56.0	371.6	47,200	94,900	56.3	370.9	47,900	95,600	56.5	370.1	48,500	96,200	260
270	54.4	364.3	41,000	86,800	54.7	363.6	41,600	87,400	54.9	362.8	42,200	88,000	270
280	52.8	356.6	34,500	79,300	53.0	355.9	35,200	79,900	53.3	355.1	35,900	80,500	280
290	51.1	348.4	28,000	72,400	51.4	347.7	28,800	73,000	51.6	346.9	29,400	73,400	290
300	49.4	339.7	22,100	65,900	49.6	339.0	22,700	66,500	49.9	338.1	23,300	66,900	300
310	47.6	330.5	16,400	59,900	47.9	329.7	17,100	60,400	48.1	328.9	17,600	60,800	310
320	45.8	320.6	11,200	54,300	46.1	319.9	11,700	54,700	46.3	319.0	12,200	55,100	320
330	43.9	310.2		48,900	44.2	309.4		49,300	44.4	308.4		49,700	330
340	42.0	299.0		43,900	42.2	298.1		44,300	42.4	297.2		44,600	340
350	40.0	286.9		39,200	40.2	286.1		39,600	40.4	285.1		39,800	350
360	37.8	274.0		34,800	38.1	273.1		35,100	38.2	272.0		35,300	360
370	35.6	260.0		30,600	35.8	259.0		30,800	36.0	257.9		31,000	370

MLC650 VPC-MAX S-2

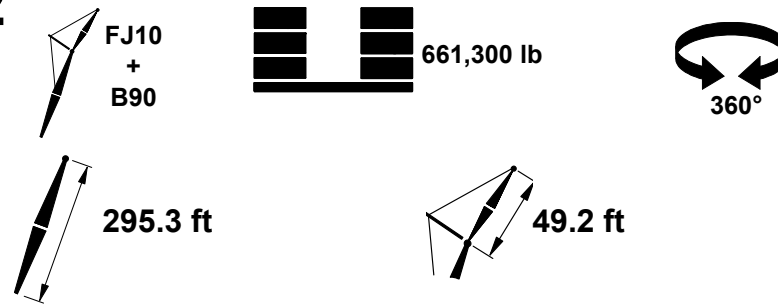
ASME B30.5



	10°				15°				20°				
ft	°	ft	lb	lb	°	ft	lb	lb	°	ft	lb	lb	ft
41	85.4	312.4	488,000	488,000									41
42	85.2	312.3	488,000	488,000									42
43	85.0	312.2	488,000	488,000									43
44	84.8	312.0	488,000	488,000	85.4	311.4	488,000	488,000					44
45	84.6	311.9	488,000	488,000	85.2	311.3	488,000	488,000					45
46	84.4	311.8	488,000	488,000	85.0	311.2	484,700	484,700					46
47	84.2	311.6	488,000	488,000	84.8	311.0	480,300	480,300	85.4	310.1	411,800	411,800	47
48	84.0	311.5	488,000	488,000	84.6	310.9	475,900	475,900	85.2	310.0	408,700	408,700	48
49	83.9	311.4	488,000	488,000	84.4	310.7	471,700	471,700	85.0	309.9	405,500	405,500	49
50	83.7	311.2	488,000	488,000	84.2	310.6	467,500	467,500	84.8	309.7	402,500	402,500	50
52	83.3	310.9	488,000	488,000	83.8	310.3	459,300	459,300	84.5	309.4	396,500	396,500	52
54	82.9	310.6	488,000	488,000	83.5	310.0	451,500	451,500	84.1	309.1	390,700	390,700	54
56	82.5	310.3	488,000	488,000	83.1	309.6	443,900	443,900	83.7	308.7	385,000	385,000	56
58	82.1	309.9	488,000	488,000	82.7	309.3	436,500	436,500	83.3	308.4	379,500	379,500	58
60	81.8	309.5	488,000	488,000	82.3	308.9	429,400	429,400	82.9	308.0	374,200	374,200	60
65	80.8	308.6	471,200	471,200	81.3	308.0	412,700	412,700	82.0	307.1	361,600	361,600	65
70	79.8	307.5	451,000	451,000	80.4	306.9	397,100	397,100	81.0	306.0	349,800	349,800	70
75	78.9	306.4	432,300	432,300	79.4	305.8	382,800	382,800	80.0	304.9	338,800	338,800	75
80	77.9	305.2	415,100	415,100	78.4	304.5	369,500	369,500	79.0	303.6	328,500	328,500	80
85	76.9	303.9	399,300	399,300	77.5	303.2	357,000	357,000	78.1	302.3	318,700	318,700	85
90	76.0	302.4	384,600	384,600	76.5	301.8	345,400	345,400	77.1	300.9	309,700	309,700	90
95	75.0	300.9	371,000	371,000	75.5	300.3	334,600	334,600	76.1	299.4	301,200	301,200	95
100	74.0	299.4	356,200	358,400	74.5	298.7	324,400	324,400	75.1	297.8	293,100	293,100	100
105	73.0	297.7	332,200	346,600	73.5	297.0	314,900	314,900	74.1	296.1	285,400	285,400	105
110	72.0	295.9	310,700	335,500	72.5	295.2	305,900	305,900	73.1	294.3	278,300	278,300	110
115	71.0	294.0	291,300	325,100	71.5	293.3	293,100	297,500	72.1	292.4	271,400	271,400	115
120	70.0	292.0	273,700	315,400	70.5	291.3	275,400	289,400	71.1	290.4	264,700	264,700	120
125	68.9	289.9	257,700	306,200	69.5	289.2	259,300	281,900	70.0	288.3	258,400	258,400	125
130	67.9	287.7	243,000	297,600	68.4	287.0	244,600	274,800	69.0	286.1	246,300	252,400	130
135	66.9	285.4	229,600	289,500	67.4	284.7	231,100	268,000	68.0	283.8	232,700	246,700	135
140	65.8	283.0	217,200	281,800	66.4	282.3	218,600	261,600	66.9	281.3	220,100	241,300	140
145	64.8	280.4	205,700	274,500	65.3	279.8	207,000	255,500	65.9	278.8	208,500	236,100	145
150	63.7	277.8	195,100	267,500	64.2	277.1	196,400	249,700	64.8	276.1	197,700	231,200	150
160	61.6	272.1	176,000	254,800	62.1	271.4	177,100	238,900	62.6	270.4	178,400	222,000	160
170	59.3	265.9	159,300	234,400	59.8	265.2	160,300	229,100	60.4	264.2	161,500	213,600	170
180	57.1	259.2	144,600	215,100	57.6	258.5	145,500	216,100	58.1	257.4	146,600	205,900	180
190	54.7	251.9	131,500	198,100	55.2	251.1	132,400	198,900	55.7	250.0	133,300	198,900	190
200	52.3	243.9	119,800	182,800	52.8	243.1	120,600	183,600	53.3	241.9	121,400	184,400	200
210	49.8	235.2	109,300	169,100	50.3	234.3	110,000	169,800	50.8	233.1	110,800	170,500	210
220	47.2	225.6	99,800	156,700	47.7	224.8	100,400	157,300	48.2	223.5	101,100	158,000	220
230	44.5	215.2	91,100	145,400	44.9	214.3	91,700	145,900	45.4	212.9	92,300	146,500	230
240	41.6	203.6	83,200	135,000	42.1	202.7	83,700	135,500	42.5	201.3	84,200	136,000	240
250	38.6	190.8	75,900	125,500	39.0	189.7	76,300	126,000	39.4	188.3	76,700	126,400	250
260	35.3	176.3	69,100	116,800	35.7	175.2	69,500	117,200	36.0	173.6	69,900	117,500	260

MLC650 VPC-MAX S-2

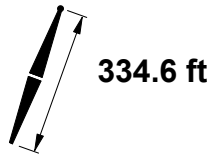
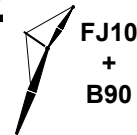
ASME B30.5



	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	ft	lb	lb	ft
46	85.3	351.2	488,000	488,000									46
47	85.1	351.1	488,000	488,000									47
48	84.9	351.0	488,000	488,000	85.4	350.3	456,800	456,800					48
49	84.7	350.9	488,000	488,000	85.2	350.2	453,300	453,300					49
50	84.6	350.7	488,000	488,000	85.1	350.1	449,900	449,900					50
51	84.4	350.6	488,000	488,000	84.9	349.9	446,600	446,600	85.4	349.0	385,900	385,900	51
52	84.2	350.5	488,000	488,000	84.7	349.8	443,200	443,200	85.3	348.8	383,400	383,400	52
53	84.1	350.3	488,000	488,000	84.6	349.6	440,000	440,000	85.1	348.7	381,000	381,000	53
54	83.9	350.2	488,000	488,000	84.4	349.5	436,700	436,700	84.9	348.5	378,600	378,600	54
56	83.6	349.9	488,000	488,000	84.1	349.2	430,400	430,400	84.6	348.3	374,000	374,000	56
58	83.2	349.6	487,900	487,900	83.7	348.9	424,200	424,200	84.2	347.9	369,400	369,400	58
60	82.9	349.3	480,000	480,000	83.4	348.6	418,300	418,300	83.9	347.6	364,900	364,900	60
65	82.0	348.4	461,200	461,200	82.5	347.7	404,000	404,000	83.1	346.8	354,200	354,200	65
70	81.2	347.5	443,800	443,800	81.7	346.8	390,800	390,800	82.2	345.8	344,100	344,100	70
75	80.3	346.5	427,600	427,600	80.8	345.8	378,400	378,400	81.3	344.8	334,600	334,600	75
80	79.5	345.4	412,700	412,700	80.0	344.7	366,800	366,800	80.5	343.7	325,700	325,700	80
85	78.6	344.3	398,700	398,700	79.1	343.6	355,800	355,800	79.6	342.6	317,200	317,200	85
90	77.8	343.0	383,300	385,600	78.3	342.3	345,600	345,600	78.8	341.3	309,100	309,100	90
95	76.9	341.7	361,700	373,500	77.4	341.0	335,900	335,900	77.9	340.0	301,600	301,600	95
100	76.0	340.3	341,800	362,100	76.5	339.6	326,800	326,800	77.0	338.6	294,400	294,400	100
105	75.2	338.8	323,500	351,300	75.6	338.1	318,200	318,200	76.2	337.1	287,600	287,600	105
110	74.3	337.3	305,800	341,200	74.8	336.5	308,000	310,000	75.3	335.6	281,100	281,100	110
115	73.4	335.6	286,200	331,700	73.9	334.9	288,300	302,300	74.4	333.9	274,900	274,900	115
120	72.5	333.9	268,500	322,700	73.0	333.2	270,400	295,000	73.5	332.2	269,000	269,000	120
125	71.7	332.1	252,300	314,200	72.1	331.3	254,200	288,000	72.6	330.3	256,200	263,400	125
130	70.8	330.1	237,500	306,200	71.2	329.4	239,300	281,500	71.7	328.4	241,200	258,100	130
135	69.9	328.1	224,000	298,500	70.3	327.4	225,600	275,100	70.8	326.4	227,400	252,900	135
140	69.0	326.1	211,500	291,300	69.4	325.3	213,000	269,200	69.9	324.3	214,800	248,000	140
150	67.1	321.6	189,200	275,200	67.6	320.8	190,600	258,000	68.1	319.8	192,200	238,800	150
160	65.3	316.7	169,900	250,100	65.7	316.0	171,300	247,800	66.2	314.9	172,700	230,400	160
170	63.4	311.5	153,100	228,200	63.8	310.7	154,300	229,400	64.3	309.6	155,600	222,700	170
180	61.5	305.8	138,300	208,900	61.9	305.0	139,400	210,000	62.4	303.9	140,600	211,200	180
190	59.5	299.6	125,200	191,700	59.9	298.8	126,200	192,700	60.4	297.7	127,300	193,800	190
200	57.5	293.0	113,400	176,400	57.9	292.2	114,300	177,300	58.4	291.0	115,300	178,300	200
210	55.5	285.8	102,800	162,600	55.9	285.0	103,700	163,500	56.3	283.8	104,600	164,400	210
220	53.4	278.1	93,300	150,100	53.8	277.2	94,000	150,900	54.2	276.0	94,800	151,700	220
230	51.2	269.7	84,500	138,800	51.6	268.8	85,300	139,500	52.0	267.6	86,000	140,300	230
240	48.9	260.7	76,600	128,500	49.3	259.8	77,200	129,100	49.7	258.5	77,900	129,800	240
250	46.6	251.0	69,300	119,000	47.0	250.0	69,900	119,500	47.4	248.6	70,500	120,100	250
260	44.2	240.3	62,500	110,200	44.5	239.3	63,100	110,700	44.9	237.9	63,600	111,300	260
270	41.6	228.7	56,300	102,100	42.0	227.7	56,800	102,600	42.3	226.2	57,200	103,000	270
280	38.9	216.0	50,500	94,600	39.3	214.9	50,900	95,000	39.6	213.3	51,300	95,400	280
290	36.0	201.9	45,100	87,600	36.4	200.7	45,500	88,000	36.7	199.0	45,800	88,300	290
295									35.1	191.2	43,200	84,900	295

MLC650 VPC-MAX S-2

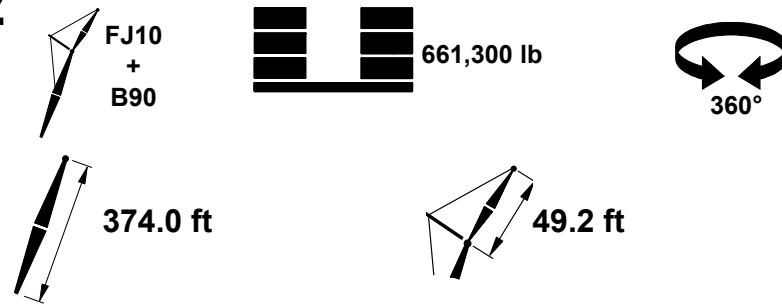
ASME B30.5



	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	ft	lb	lb	ft
49	85.4	390.4	488,000	488,000									49
50	85.2	390.3	488,000	488,000									50
51	85.1	390.2	488,000	488,000									51
52	84.9	390.0	488,000	488,000	85.3	389.3	426,100	426,100					52
53	84.8	389.9	485,900	485,900	85.2	389.2	423,400	423,400					53
54	84.6	389.8	483,900	483,900	85.0	389.1	420,900	420,900					54
55	84.5	389.7	480,500	480,500	84.9	388.9	418,200	418,200	85.4	387.9	364,200	364,200	55
56	84.3	389.5	477,200	477,200	84.7	388.8	415,700	415,700	85.2	387.8	362,300	362,300	56
57	84.2	389.4	473,900	473,900	84.6	388.7	413,200	413,200	85.1	387.6	360,400	360,400	57
58	84.0	389.3	470,600	470,600	84.4	388.5	410,700	410,700	84.9	387.5	358,500	358,500	58
60	83.7	389.0	464,100	464,100	84.1	388.2	405,800	405,800	84.6	387.2	354,800	354,800	60
65	82.9	388.2	448,500	448,500	83.4	387.5	394,000	394,000	83.9	386.4	345,900	345,900	65
70	82.2	387.4	433,800	433,800	82.6	386.7	382,700	382,700	83.1	385.6	337,300	337,300	70
75	81.4	386.5	420,100	420,100	81.9	385.8	372,000	372,000	82.3	384.7	329,100	329,100	75
80	80.7	385.5	407,200	407,200	81.1	384.8	361,900	361,900	81.6	383.7	321,300	321,300	80
85	79.9	384.5	386,900	395,100	80.3	383.8	352,500	352,500	80.8	382.7	313,900	313,900	85
90	79.1	383.4	365,300	383,700	79.6	382.6	343,500	343,500	80.0	381.6	307,000	307,000	90
95	78.4	382.2	345,300	372,900	78.8	381.5	334,900	334,900	79.3	380.4	300,200	300,200	95
100	77.6	381.0	326,800	362,600	78.0	380.2	326,700	326,700	78.5	379.2	293,900	293,900	100
105	76.8	379.6	309,600	353,100	77.2	378.9	311,900	319,100	77.7	377.8	287,700	287,700	105
110	76.0	378.3	293,600	343,900	76.5	377.5	295,800	311,700	76.9	376.4	281,900	281,900	110
115	75.3	376.8	278,600	335,300	75.7	376.0	280,800	304,800	76.1	375.0	276,300	276,300	115
120	74.5	375.3	264,700	327,100	74.9	374.5	266,700	298,100	75.4	373.4	269,000	271,000	120
130	72.9	372.0	236,100	311,800	73.3	371.2	237,900	285,600	73.8	370.1	239,900	261,000	130
140	71.3	368.3	209,800	298,000	71.7	367.6	211,500	274,200	72.2	366.5	213,300	251,800	140
150	69.7	364.4	187,500	273,500	70.1	363.6	189,000	263,800	70.6	362.5	190,600	243,200	150
160	68.1	360.1	168,100	248,300	68.5	359.4	169,500	249,700	68.9	358.2	171,000	235,300	160
170	66.4	355.5	151,200	226,300	66.8	354.8	152,500	227,600	67.3	353.6	153,900	228,100	170
180	64.8	350.6	136,300	206,900	65.2	349.8	137,500	208,100	65.6	348.6	138,800	209,300	180
190	63.1	345.3	123,100	189,700	63.5	344.4	124,200	190,800	63.9	343.3	125,400	191,900	190
200	61.3	339.5	111,300	174,300	61.7	338.7	112,300	175,300	62.1	337.5	113,400	176,400	200
210	59.6	333.4	100,700	160,500	60.0	332.6	101,600	161,400	60.4	331.4	102,600	162,400	210
220	57.8	326.8	91,100	148,000	58.2	326.0	92,000	148,800	58.6	324.7	92,900	149,800	220
230	56.0	319.8	82,400	136,600	56.3	318.9	83,200	137,400	56.7	317.7	84,000	138,300	230
240	54.1	312.3	74,400	126,200	54.5	311.4	75,100	127,000	54.8	310.1	75,900	127,700	240
250	52.2	304.2	67,100	116,700	52.5	303.3	67,700	117,400	52.9	302.0	68,400	118,100	250
260	50.2	295.6	60,300	108,000	50.5	294.7	60,900	108,600	50.9	293.3	61,600	109,200	260
270	48.1	286.4	54,100	99,900	48.5	285.4	54,700	100,500	48.9	283.9	55,200	101,000	270
280	46.0	276.4	48,300	92,400	46.4	275.4	48,800	92,900	46.7	273.9	49,400	93,400	280
290	43.8	265.7	42,900	85,400	44.2	264.6	43,400	85,900	44.5	263.1	43,900	86,400	290
300	41.5	254.0	37,900	78,900	41.9	252.9	38,300	79,300	42.2	251.3	38,800	79,800	300
310	39.1	241.4	33,200	72,800	39.4	240.2	33,600	73,200	39.7	238.5	34,000	73,600	310
320	36.6	227.6	28,800	67,100	36.9	226.3	29,100	67,400	37.2	224.5	29,400	67,800	320
325	35.2	220.2	26,600	64,400	35.5	218.9	27,000	64,700	35.8	217.0	27,300	65,000	325

MLC650 VPC-MAX S-2

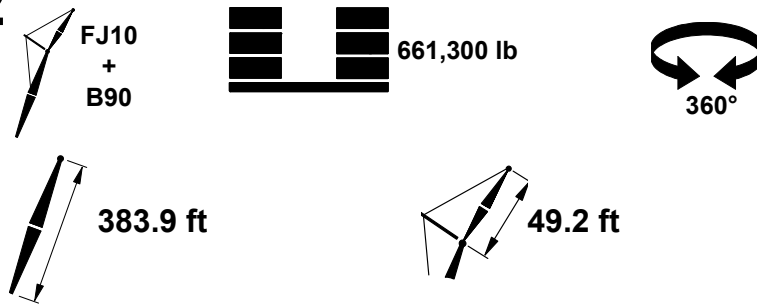
ASME B30.5



	10°				15°				20°				
ft	°	ft	lb	lb	°	ft	lb	lb	°	ft	lb	lb	ft
53	85.3	429.5	468,600	468,600									53
54	85.1	429.4	466,000	466,000									54
55	85.0	429.3	463,400	463,400									55
56	84.9	429.1	460,800	460,800	85.3	428.4	403,700	403,700					56
57	84.7	429.0	458,200	458,200	85.1	428.3	401,500	401,500					57
58	84.6	428.9	455,700	455,700	85.0	428.2	399,400	399,400					58
59	84.5	428.8	452,900	452,900	84.8	428.0	397,300	397,300	85.3	427.0	348,000	348,000	59
60	84.3	428.6	450,200	450,200	84.7	427.9	395,100	395,100	85.2	426.9	346,400	346,400	60
61	84.2	428.5	447,600	447,600	84.6	427.8	393,100	393,100	85.0	426.7	344,800	344,800	61
62	84.0	428.4	445,000	445,000	84.4	427.6	391,100	391,100	84.9	426.6	343,200	343,200	62
65	83.6	427.9	437,100	437,100	84.0	427.2	385,000	385,000	84.5	426.2	338,600	338,600	65
70	83.0	427.2	424,500	424,500	83.3	426.5	375,200	375,200	83.8	425.4	331,200	331,200	70
75	82.3	426.4	403,500	412,700	82.6	425.7	366,000	366,000	83.1	424.6	324,000	324,000	75
80	81.6	425.5	380,900	401,600	82.0	424.8	357,300	357,300	82.4	423.7	317,200	317,200	80
85	80.9	424.6	359,800	391,000	81.3	423.8	349,000	349,000	81.7	422.8	310,700	310,700	85
90	80.2	423.6	340,200	381,000	80.6	422.9	341,000	341,000	81.0	421.8	304,600	304,600	90
95	79.5	422.5	321,900	371,400	79.9	421.8	324,500	333,400	80.3	420.7	298,600	298,600	95
100	78.8	421.4	304,900	362,400	79.2	420.7	307,400	326,200	79.6	419.6	292,900	292,900	100
110	77.4	419.0	274,100	345,500	77.8	418.2	276,500	312,600	78.2	417.1	279,000	282,200	110
120	76.0	416.3	247,100	330,100	76.4	415.5	249,200	300,200	76.8	414.4	251,600	272,300	120
130	74.6	413.3	223,100	316,200	75.0	412.5	225,100	288,800	75.4	411.5	227,300	263,100	130
140	73.2	410.1	201,800	294,100	73.5	409.3	203,700	278,200	73.9	408.2	205,800	254,600	140
150	71.7	406.5	181,800	267,900	72.1	405.8	183,500	268,600	72.5	404.7	185,300	246,700	150
160	70.3	402.7	162,300	242,500	70.6	402.0	163,900	244,100	71.0	400.8	165,600	239,300	160
170	68.8	398.6	145,300	220,400	69.2	397.9	146,800	221,800	69.6	396.7	148,300	223,400	170
180	67.3	394.2	130,400	200,900	67.7	393.5	131,700	202,300	68.1	392.3	133,100	203,700	180
190	65.8	389.5	117,100	183,700	66.2	388.7	118,300	184,900	66.6	387.6	119,600	186,200	190
200	64.3	384.5	105,200	168,200	64.6	383.7	106,400	169,400	65.0	382.5	107,600	170,600	200
210	62.8	379.1	94,600	154,300	63.1	378.3	95,600	155,400	63.5	377.1	96,700	156,500	210
220	61.2	373.4	84,900	141,800	61.5	372.5	85,900	142,800	61.9	371.3	86,900	143,800	220
230	59.6	367.3	76,100	130,400	59.9	366.4	77,000	131,300	60.3	365.2	78,000	132,300	230
240	58.0	360.8	68,100	120,000	58.3	359.9	69,000	120,800	58.7	358.6	69,900	121,700	240
250	56.3	353.8	60,800	110,500	56.7	353.0	61,600	111,200	57.0	351.7	62,400	112,100	250
260	54.6	346.5	54,000	101,700	55.0	345.6	54,700	102,400	55.3	344.3	55,500	103,200	260
270	52.9	338.7	47,800	93,600	53.2	337.7	48,400	94,200	53.6	336.4	49,200	95,000	270
280	51.2	330.3	42,000	86,100	51.5	329.4	42,600	86,700	51.8	328.0	43,300	87,300	280
290	49.3	321.5	36,600	79,100	49.6	320.5	37,200	79,700	50.0	319.1	37,800	80,300	290
300	47.5	312.0	31,200	72,600	47.8	311.0	31,900	73,100	48.1	309.5	32,600	73,700	300
310	45.5	301.9	25,500	66,500	45.8	300.9	26,100	67,000	46.1	299.3	26,800	67,500	310
320	43.5	291.1	20,200	60,800	43.8	290.0	20,700	61,200	44.1	288.4	21,300	61,700	320
330	41.5	279.4	15,100	55,400	41.7	278.3	15,700	55,800	42.0	276.7	16,200	56,200	330
340	39.3	266.9	10,400	50,400	39.5	265.7	10,900	50,800	39.8	264.0	11,300	51,100	340
350	37.0	253.3		45,600	37.2	252.0		45,900	37.5	250.2		46,300	350
355	35.8	246.0		43,300	36.0	244.7		43,600	36.3	242.8		43,900	355

MLC650 VPC-MAX S-2

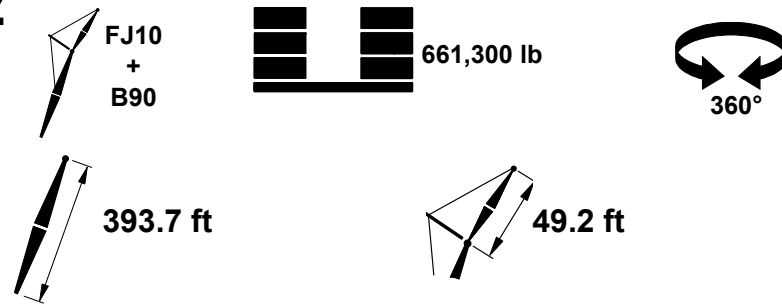
ASME B30.5



	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	ft	lb	lb	ft
53	85.2	439.7	447,500	447,500									53
54	85.1	439.6	445,100	445,100									54
55	84.9	439.5	442,700	442,700	85.3	438.8	425,800	425,800					55
56	84.8	439.4	440,300	440,300	85.2	438.7	423,400	423,400					56
57	84.7	439.2	437,900	437,900	85.1	438.6	421,100	421,100					57
58	84.5	439.1	435,500	435,500	84.9	438.4	418,800	418,800	85.3	437.6	371,900	371,900	58
59	84.4	439.0	433,200	433,200	84.8	438.3	416,600	416,600	85.2	437.5	370,200	370,200	59
60	84.3	438.9	430,800	430,800	84.7	438.2	414,300	414,300	85.0	437.4	368,400	368,400	60
61	84.1	438.7	428,500	428,500	84.5	438.0	412,200	412,200	84.9	437.3	366,600	366,600	61
65	83.6	438.2	419,400	419,400	84.0	437.5	403,500	403,500	84.4	436.7	359,800	359,800	65
70	82.9	437.5	408,300	408,300	83.3	436.8	393,000	393,000	83.7	436.0	351,400	351,400	70
75	82.3	436.7	392,500	404,700	82.7	436.0	383,200	383,200	83.0	435.2	343,600	343,600	75
80	81.6	435.8	370,800	401,600	82.0	435.1	373,700	373,900	82.3	434.3	336,200	336,200	80
85	80.9	434.9	350,500	392,800	81.3	434.2	353,400	364,900	81.7	433.4	329,000	329,000	85
90	80.2	433.9	331,600	383,200	80.6	433.2	334,400	356,400	81.0	432.4	322,100	322,100	90
95	79.6	432.9	314,000	375,400	79.9	432.2	316,700	348,300	80.3	431.4	315,600	315,600	95
100	78.9	431.8	297,500	366,900	79.3	431.1	300,100	340,600	79.6	430.3	302,500	309,300	100
110	77.5	429.4	267,700	350,400	77.9	428.7	270,100	326,100	78.3	427.9	272,300	297,500	110
120	76.1	426.8	241,300	335,100	76.5	426.1	243,600	312,800	76.9	425.3	245,600	286,600	120
130	74.8	423.9	217,900	313,700	75.1	423.2	220,000	300,600	75.5	422.4	222,000	276,500	130
140	73.4	420.8	197,100	288,100	73.8	420.0	199,100	289,400	74.1	419.2	200,900	267,200	140
150	72.0	417.3	178,400	265,100	72.4	416.6	180,300	266,900	72.7	415.8	182,000	258,500	150
160	70.6	413.6	160,400	240,600	70.9	412.9	162,100	242,200	71.3	412.1	163,600	243,800	160
170	69.1	409.6	143,500	218,500	69.5	408.9	145,000	220,100	69.8	408.1	146,400	221,400	170
180	67.7	405.4	128,500	199,100	68.1	404.6	130,000	200,500	68.4	403.8	131,200	201,800	180
190	66.2	400.8	115,300	181,900	66.6	400.0	116,600	183,200	66.9	399.2	117,800	184,400	190
200	64.8	395.9	103,500	166,500	65.1	395.1	104,700	167,700	65.4	394.2	105,800	168,800	200
210	63.3	390.7	92,800	152,600	63.6	389.9	94,000	153,700	63.9	389.0	95,000	154,800	210
220	61.7	385.1	83,200	140,100	62.1	384.3	84,300	141,100	62.4	383.4	85,200	142,100	220
230	60.2	379.2	74,500	128,700	60.6	378.4	75,400	129,700	60.9	377.5	76,300	130,600	230
240	58.6	372.9	66,500	118,300	59.0	372.1	67,400	119,300	59.3	371.2	68,200	120,100	240
250	57.0	366.2	59,200	108,800	57.4	365.4	60,000	109,700	57.7	364.4	60,800	110,500	250
260	55.4	359.1	52,400	100,100	55.8	358.3	53,200	100,900	56.1	357.3	53,900	101,600	260
270	53.8	351.6	46,200	92,000	54.1	350.7	46,900	92,700	54.4	349.7	47,600	93,400	270
280	52.1	343.6	40,400	84,500	52.4	342.7	41,100	85,200	52.7	341.7	41,700	85,800	280
290	50.3	335.1	35,100	77,600	50.6	334.2	35,700	78,200	50.9	333.1	36,300	78,800	290
300	48.5	326.0	29,100	71,100	48.9	325.1	29,800	71,700	49.1	324.0	30,500	72,200	300
310	46.7	316.4	23,400	65,000	47.0	315.4	24,100	65,600	47.3	314.3	24,700	66,100	310
320	44.8	306.1	18,100	59,300	45.1	305.1	18,800	59,900	45.4	303.9	19,300	60,300	320
330	42.8	295.1	13,100	54,000	43.1	294.0	13,700	54,500	43.4	292.8	14,200	54,900	330
340	40.8	283.2		49,000	41.1	282.2		49,400	41.3	280.9		49,800	340
350	38.6	270.5		44,300	38.9	269.4		44,600	39.1	268.1		45,000	350
360	36.3	256.7		39,800	36.6	255.5		40,100	36.8	254.1		40,400	360
365	35.2	249.3		37,600	35.4	248.1		38,000	35.7	246.7		38,200	365

MLC650 VPC-MAX S-2

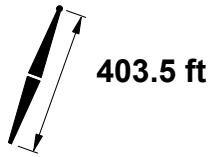
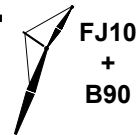
ASME B30.5



	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	ft	lb	lb	ft
54	85.2	449.5	434,800	434,800									54
55	85.0	449.4	432,500	432,500									55
56	84.9	449.3	430,200	430,200	85.3	448.6	421,100	421,100					56
57	84.8	449.2	427,900	427,900	85.2	448.5	418,900	418,900					57
58	84.7	449.0	425,600	425,600	85.0	448.4	416,700	416,700					58
59	84.5	448.9	423,300	423,300	84.9	448.2	414,500	414,500	85.3	447.5	368,500	368,500	59
60	84.4	448.8	421,000	421,000	84.8	448.1	412,400	412,400	85.1	447.3	366,700	366,700	60
61	84.3	448.7	418,800	418,800	84.6	448.0	410,300	410,300	85.0	447.2	365,100	365,100	61
62	84.1	448.5	416,600	416,600	84.5	447.9	408,200	408,200	84.9	447.1	363,400	363,400	62
65	83.7	448.1	409,900	409,900	84.1	447.5	401,900	401,900	84.5	446.7	358,500	358,500	65
70	83.1	447.4	399,100	399,100	83.5	446.7	391,800	391,800	83.8	446.0	350,400	350,400	70
75	82.4	446.6	386,400	391,700	82.8	446.0	382,300	382,300	83.2	445.2	342,800	342,800	75
80	81.8	445.8	364,900	391,700	82.1	445.1	368,000	373,300	82.5	444.3	335,600	335,600	80
85	81.1	444.9	345,000	384,500	81.5	444.2	347,900	364,600	81.8	443.5	328,600	328,600	85
90	80.5	444.0	326,300	374,800	80.8	443.3	329,200	356,400	81.2	442.5	321,900	321,900	90
100	79.1	441.9	292,600	365,300	79.5	441.2	295,300	340,900	79.8	440.4	297,700	309,500	100
110	77.8	439.6	263,000	363,900	78.2	438.9	265,500	326,800	78.5	438.1	267,800	297,900	110
120	76.5	437.0	236,900	337,000	76.8	436.3	239,200	313,800	77.2	435.5	241,300	287,300	120
130	75.1	434.2	213,700	308,800	75.5	433.5	215,900	301,800	75.8	432.7	217,800	277,400	130
140	73.8	431.1	192,900	283,500	74.1	430.4	195,000	285,500	74.5	429.6	196,900	268,300	140
150	72.4	427.8	174,400	260,600	72.8	427.1	176,300	262,500	73.1	426.2	178,000	259,700	150
160	71.0	424.2	157,600	238,200	71.4	423.4	159,400	239,900	71.7	422.6	161,000	241,500	160
170	69.6	420.3	141,000	216,100	70.0	419.6	142,600	217,700	70.3	418.7	144,100	219,100	170
180	68.2	416.1	126,100	196,700	68.6	415.4	127,600	198,100	68.9	414.5	128,900	199,400	180
190	66.8	411.6	112,800	179,400	67.1	410.9	114,200	180,800	67.5	410.1	115,400	182,000	190
200	65.4	406.9	101,000	164,000	65.7	406.1	102,200	165,200	66.0	405.3	103,400	166,400	200
210	63.9	401.8	90,300	150,100	64.3	401.1	91,500	151,300	64.6	400.2	92,500	152,300	210
220	62.4	396.4	80,700	137,600	62.8	395.6	81,800	138,700	63.1	394.8	82,800	139,600	220
230	60.9	390.7	71,900	126,200	61.3	389.9	72,900	127,200	61.6	389.0	73,900	128,100	230
240	59.4	384.6	63,900	115,800	59.8	383.8	64,900	116,700	60.1	382.9	65,700	117,600	240
250	57.9	378.1	56,600	106,200	58.2	377.3	57,500	107,100	58.5	376.4	58,300	107,900	250
260	56.3	371.2	49,800	97,500	56.6	370.4	50,700	98,300	56.9	369.5	51,400	99,100	260
270	54.7	364.0	43,600	89,400	55.0	363.1	44,400	90,200	55.3	362.2	45,100	90,900	270
280	53.1	356.3	37,800	81,900	53.4	355.4	38,500	82,600	53.7	354.4	39,200	83,300	280
290	51.4	348.1	31,400	74,900	51.7	347.2	32,300	75,600	52.0	346.2	33,000	76,200	290
300	49.7	339.4	25,400	68,400	50.0	338.5	26,200	69,100	50.3	337.4	26,900	69,600	300
310	47.9	330.1	19,700	62,400	48.2	329.2	20,500	63,000	48.5	328.1	21,100	63,500	310
320	46.1	320.3	14,400	56,700	46.4	319.3	15,100	57,200	46.7	318.2	15,700	57,700	320
330	44.2	309.8		51,400	44.5	308.8	10,100	51,900	44.8	307.7	10,600	52,300	330
340	42.3	298.6		46,300	42.6	297.5		46,800	42.8	296.3		47,200	340
350	40.2	286.5		41,600	40.5	285.5		42,000	40.8	284.2		42,400	350
360	38.1	273.6		37,100	38.4	272.4		37,500	38.6	271.1		37,800	360
370	35.9	259.5		32,900	36.1	258.3		33,200	36.4	256.9		33,500	370
375									35.2	249.4		31,400	375

MLC650 VPC-MAX S-2

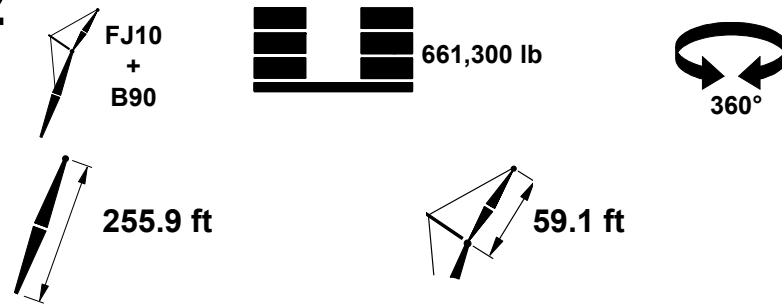
ASME B30.5



	10°				15°				20°				
ft	°	ft	lb	lb	°	ft	lb	lb	°	ft	lb	lb	ft
54	85.3	459.4	416,800	416,800									54
55	85.2	459.3	416,700	416,700									55
56	85.0	459.2	416,600	416,600									56
57	84.9	459.1	416,600	416,600	85.3	458.4	409,700	409,700					57
58	84.8	458.9	414,600	414,600	85.2	458.3	409,600	409,600					58
59	84.6	458.8	412,500	412,500	85.0	458.1	409,200	409,200					59
60	84.5	458.7	410,300	410,300	84.9	458.0	407,100	407,100	85.2	457.2	362,800	362,800	60
61	84.4	458.6	408,200	408,200	84.8	457.9	405,100	405,100	85.1	457.1	361,200	361,200	61
62	84.3	458.4	406,000	406,000	84.6	457.7	403,200	403,200	85.0	457.0	359,600	359,600	62
63	84.1	458.3	403,900	403,900	84.5	457.6	401,200	401,200	84.9	456.8	358,000	358,000	63
65	83.9	458.1	399,600	399,600	84.3	457.4	397,200	397,200	84.6	456.6	354,900	354,900	65
70	83.2	457.4	389,300	389,300	83.6	456.7	387,600	387,600	84.0	455.9	347,100	347,100	70
75	82.6	456.6	379,200	379,200	83.0	455.9	378,500	378,500	83.3	455.1	339,900	339,900	75
80	82.0	455.8	359,500	379,200	82.3	455.1	362,600	369,800	82.7	454.3	332,900	332,900	80
90	80.7	454.0	321,800	366,200	81.0	453.3	324,600	353,600	81.4	452.5	319,800	319,800	90
100	79.4	452.0	288,700	355,200	79.7	451.3	291,300	338,800	80.1	450.5	293,800	307,700	100
110	78.1	449.7	259,500	340,400	78.4	449.0	262,000	325,100	78.8	448.2	264,300	296,600	110
120	76.8	447.2	233,700	326,300	77.1	446.5	236,100	312,600	77.5	445.7	238,200	286,200	120
130	75.4	444.4	210,800	305,000	75.8	443.7	213,000	301,000	76.1	442.9	215,000	276,700	130
140	74.1	441.4	190,300	280,000	74.5	440.7	192,300	282,000	74.8	439.9	194,200	267,700	140
150	72.8	438.2	171,900	257,500	73.2	437.4	173,800	259,400	73.5	436.6	175,600	259,500	150
160	71.4	434.6	155,200	237,000	71.8	433.9	157,100	238,800	72.1	433.1	158,700	240,400	160
170	70.1	430.9	139,900	215,000	70.4	430.1	141,500	216,600	70.8	429.3	143,000	218,100	170
180	68.7	426.8	124,900	195,500	69.1	426.1	126,400	197,000	69.4	425.2	127,800	198,400	180
190	67.3	422.5	111,700	178,200	67.7	421.7	113,100	179,600	68.0	420.8	114,300	180,900	190
200	65.9	417.8	99,800	162,800	66.3	417.1	101,100	164,100	66.6	416.2	102,300	165,200	200
210	64.5	412.9	89,100	148,900	64.9	412.1	90,300	150,100	65.2	411.2	91,400	151,200	210
220	63.1	407.6	79,500	136,400	63.4	406.9	80,600	137,500	63.7	406.0	81,600	138,500	220
230	61.6	402.1	70,700	125,000	62.0	401.3	71,800	126,000	62.3	400.4	72,700	127,000	230
240	60.2	396.1	62,700	114,600	60.5	395.3	63,700	115,600	60.8	394.4	64,600	116,400	240
250	58.7	389.9	55,400	105,000	59.0	389.1	56,300	106,000	59.3	388.1	57,100	106,800	250
260	57.1	383.2	48,600	96,300	57.5	382.4	49,500	97,100	57.8	381.4	50,200	97,900	260
270	55.6	376.2	42,400	88,200	55.9	375.3	43,200	89,000	56.2	374.4	43,900	89,700	270
280	54.0	368.7	36,100	80,700	54.3	367.9	37,000	81,400	54.6	366.9	37,900	82,100	280
290	52.4	360.8	29,600	73,700	52.7	360.0	30,500	74,400	53.0	358.9	31,300	75,000	290
300	50.7	352.5	23,600	67,200	51.1	351.6	24,400	67,900	51.3	350.5	25,200	68,400	300
310	49.1	343.6	17,900	61,200	49.4	342.7	18,700	61,800	49.6	341.6	19,400	62,300	310
320	47.3	334.2	12,600	55,500	47.6	333.2	13,400	56,000	47.9	332.1	14,000	56,500	320
330	45.5	324.1		50,100	45.8	323.1		50,700	46.1	322.0		51,100	330
340	43.7	313.4		45,100	44.0	312.4		45,600	44.2	311.2		46,000	340
350	41.7	302.0		40,400	42.0	300.9		40,800	42.3	299.7		41,200	350
360	39.7	289.8		35,900	40.0	288.6		36,300	40.2	287.4		36,700	360
370	37.6	276.6		31,700	37.9	275.4		32,000	38.1	274.1		32,300	370
380	35.4	262.3		27,700	35.7	261.1		28,000	35.9	259.6		28,200	380

MLC650 VPC-MAX S-2

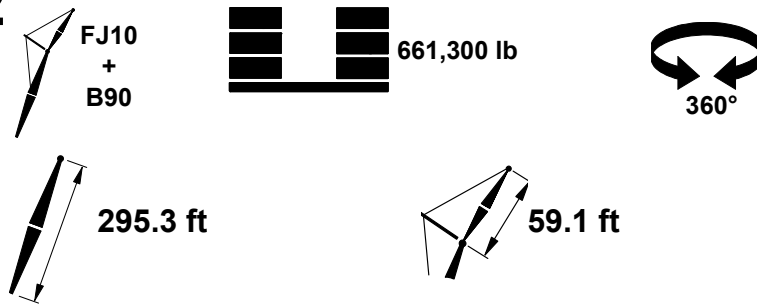
ASME B30.5



	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	ft	lb	lb	ft
43	85.5	322.0	488,000	488,000									43
44	85.3	321.9	488,000	488,000									44
45	85.1	321.7	488,000	488,000									45
46	84.9	321.6	488,000	488,000									46
47	84.7	321.5	488,000	488,000	85.4	320.8	431,200	431,200					47
48	84.6	321.3	488,000	488,000	85.2	320.6	427,200	427,200					48
49	84.4	321.2	487,600	487,600	85.0	320.5	423,400	423,400					49
50	84.2	321.1	487,200	487,200	84.8	320.4	419,600	419,600					50
51	84.0	320.9	483,400	483,400	84.6	320.2	415,900	415,900	85.3	319.3	351,200	351,200	51
52	83.8	320.8	479,500	479,500	84.5	320.1	412,200	412,200	85.2	319.1	348,400	348,400	52
53	83.6	320.6	474,700	474,700	84.3	319.9	408,600	408,600	85.0	318.9	345,800	345,800	53
54	83.4	320.5	469,900	469,900	84.1	319.8	405,000	405,000	84.8	318.8	343,100	343,100	54
56	83.1	320.1	460,600	460,600	83.7	319.4	398,100	398,100	84.4	318.5	338,000	338,000	56
58	82.7	319.8	451,700	451,700	83.4	319.1	391,400	391,400	84.0	318.1	333,000	333,000	58
60	82.3	319.4	443,100	443,100	83.0	318.7	385,000	385,000	83.7	317.8	328,100	328,100	60
65	81.4	318.5	422,900	422,900	82.1	317.8	369,800	369,800	82.7	316.8	316,600	316,600	65
70	80.5	317.5	404,500	404,500	81.1	316.8	355,700	355,700	81.8	315.8	305,900	305,900	70
75	79.5	316.4	387,600	387,600	80.2	315.7	342,700	342,700	80.9	314.7	295,900	295,900	75
80	78.6	315.2	372,000	372,000	79.2	314.5	330,600	330,600	79.9	313.5	286,500	286,500	80
85	77.7	313.9	357,700	357,700	78.3	313.2	319,300	319,300	79.0	312.2	277,800	277,800	85
90	76.7	312.6	344,400	344,400	77.4	311.9	308,700	308,700	78.0	310.9	269,500	269,500	90
95	75.8	311.1	332,000	332,000	76.4	310.4	299,000	299,000	77.1	309.4	261,800	261,800	95
100	74.8	309.6	320,600	320,600	75.4	308.9	289,800	289,800	76.1	307.9	254,600	254,600	100
105	73.9	308.0	309,900	309,900	74.5	307.2	281,000	281,000	75.1	306.2	247,600	247,600	105
110	72.9	306.2	299,900	299,900	73.5	305.5	273,000	273,000	74.2	304.5	241,100	241,100	110
115	71.9	304.4	290,500	290,500	72.5	303.7	265,300	265,300	73.2	302.7	235,000	235,000	115
120	70.9	302.5	275,400	281,600	71.6	301.8	258,100	258,100	72.2	300.7	229,200	229,200	120
125	70.0	300.5	259,300	273,300	70.6	299.7	251,200	251,200	71.2	298.7	223,600	223,600	125
130	69.0	298.4	244,600	265,600	69.6	297.6	244,700	244,700	70.2	296.6	218,300	218,300	130
140	67.0	293.8	218,700	251,100	67.6	293.0	220,400	232,700	68.2	292.0	208,600	208,600	140
150	64.9	288.8	196,600	238,300	65.5	288.1	198,100	221,900	66.2	287.0	199,600	199,600	150
160	62.9	283.4	177,400	226,700	63.4	282.6	178,800	212,200	64.1	281.5	180,400	191,600	160
170	60.7	277.5	160,700	216,200	61.3	276.7	162,000	203,300	61.9	275.5	163,400	184,100	170
180	58.6	271.0	146,000	206,700	59.1	270.2	147,200	195,100	59.7	269.0	148,400	177,300	180
190	56.3	264.0	132,900	198,000	56.9	263.2	134,000	187,600	57.5	262.0	135,100	171,100	190
200	54.0	256.4	121,200	184,200	54.6	255.6	122,200	180,800	55.2	254.3	123,200	165,300	200
210	51.7	248.2	110,700	170,400	52.2	247.3	111,500	171,300	52.8	246.0	112,500	159,900	210
220	49.2	239.2	101,100	158,000	49.8	238.2	101,900	158,800	50.3	236.9	102,700	155,000	220
230	46.7	229.4	92,400	146,700	47.2	228.4	93,200	147,400	47.7	227.0	93,900	148,200	230
240	44.0	218.6	84,500	136,400	44.5	217.6	85,100	137,000	45.0	216.1	85,800	137,700	240
250	41.2	206.7	77,200	126,900	41.7	205.6	77,800	127,400	42.2	204.1	78,300	128,000	250
260	38.1	193.6	70,400	118,100	38.6	192.4	70,900	118,600	39.1	190.8	71,400	119,100	260
265	36.5	186.4	67,300	114,000	37.0	185.2	67,700	114,400	37.5	183.5	68,200	114,900	265
270					35.4	177.5	64,600	110,400	35.8	175.7	65,000	110,800	270

MLC650 VPC-MAX S-2

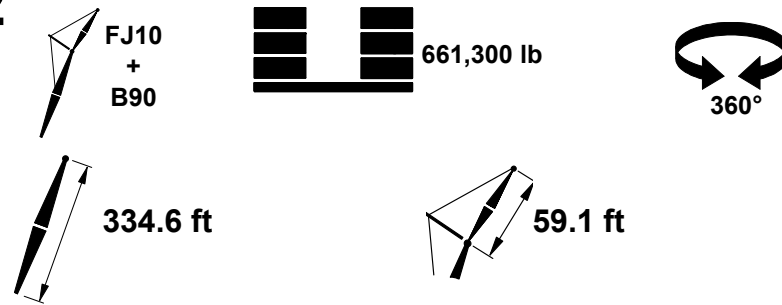
ASME B30.5

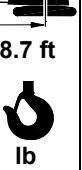
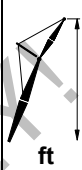
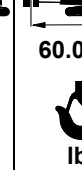


	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	ft	lb	lb	ft
48	85.4	360.8	476,600	476,600									48
49	85.2	360.6	472,400	472,400									49
50	85.1	360.5	468,200	468,200									50
51	84.9	360.4	464,100	464,100	85.5	359.6	399,400	399,400					51
52	84.7	360.2	460,100	460,100	85.3	359.5	396,500	396,500					52
53	84.6	360.1	456,100	456,100	85.1	359.3	393,500	393,500					53
54	84.4	360.0	452,200	452,200	85.0	359.2	390,600	390,600					54
55	84.2	359.8	448,300	448,300	84.8	359.0	387,800	387,800	85.5	357.9	332,200	332,200	55
56	84.1	359.7	444,500	444,500	84.7	358.9	385,000	385,000	85.3	357.8	330,100	330,100	56
57	83.9	359.5	440,700	440,700	84.5	358.7	382,200	382,200	85.1	357.6	328,000	328,000	57
58	83.8	359.4	437,000	437,000	84.3	358.6	379,400	379,400	85.0	357.5	325,900	325,900	58
60	83.4	359.1	429,800	429,800	84.0	358.3	374,000	374,000	84.6	357.2	321,800	321,800	60
65	82.6	358.3	412,900	412,900	83.2	357.5	361,200	361,200	83.8	356.3	312,000	312,000	65
70	81.8	357.4	397,100	397,100	82.3	356.6	349,100	349,100	83.0	355.4	302,700	302,700	70
75	81.0	356.4	382,500	382,500	81.5	355.6	337,900	337,900	82.1	354.4	294,100	294,100	75
80	80.1	355.3	368,900	368,900	80.7	354.5	327,300	327,300	81.3	353.4	285,900	285,900	80
85	79.3	354.2	356,300	356,300	79.9	353.4	317,500	317,500	80.5	352.3	278,200	278,200	85
90	78.5	353.0	344,600	344,600	79.0	352.2	308,200	308,200	79.6	351.0	270,900	270,900	90
95	77.6	351.7	333,500	333,500	78.2	350.9	299,400	299,400	78.8	349.8	264,000	264,000	95
100	76.8	350.4	323,200	323,200	77.3	349.6	291,200	291,200	77.9	348.4	257,400	257,400	100
105	75.9	348.9	313,500	313,500	76.5	348.1	283,400	283,400	77.1	346.9	251,200	251,200	105
110	75.1	347.4	304,400	304,400	75.6	346.6	276,100	276,100	76.2	345.4	245,300	245,300	110
115	74.2	345.8	288,100	295,700	74.8	345.0	269,000	269,000	75.4	343.8	239,700	239,700	115
120	73.4	344.1	270,300	287,600	73.9	343.3	262,400	262,400	74.5	342.1	234,300	234,300	120
125	72.5	342.4	254,100	279,900	73.1	341.5	256,100	256,100	73.7	340.4	229,200	229,200	125
130	71.7	340.5	239,300	272,600	72.2	339.7	241,400	250,200	72.8	338.5	224,300	224,300	130
135	70.8	338.6	225,700	265,700	71.3	337.7	227,700	244,400	71.9	336.5	219,700	219,700	135
140	69.9	336.6	213,200	259,200	70.4	335.7	215,100	239,000	71.0	334.5	215,200	215,200	140
150	68.1	332.2	190,800	247,000	68.7	331.4	192,600	228,900	69.3	330.2	194,400	206,900	150
160	66.4	327.6	171,500	236,000	66.9	326.7	173,100	219,700	67.5	325.4	174,800	199,200	160
170	64.5	322.5	154,700	225,900	65.1	321.6	156,100	211,100	65.6	320.3	157,700	192,100	170
180	62.7	317.0	139,800	210,400	63.2	316.1	141,100	203,300	63.8	314.8	142,600	185,600	180
190	60.8	311.1	126,600	193,200	61.3	310.1	127,800	194,400	61.9	308.8	129,200	179,600	190
200	58.9	304.7	114,800	177,800	59.4	303.7	116,000	179,000	59.9	302.4	117,200	174,000	200
210	56.9	297.8	104,200	164,000	57.4	296.8	105,300	165,000	57.9	295.5	106,400	166,200	210
220	54.9	290.4	94,600	151,500	55.4	289.4	95,600	152,500	55.9	288.0	96,600	153,500	220
230	52.8	282.4	85,900	140,200	53.3	281.4	86,800	141,000	53.8	280.0	87,700	142,000	230
240	50.7	273.9	77,900	129,800	51.1	272.8	78,700	130,600	51.6	271.3	79,600	131,400	240
250	48.5	264.6	70,600	120,300	48.9	263.5	71,300	121,000	49.4	261.9	72,100	121,800	250
260	46.2	254.6	63,800	111,500	46.6	253.4	64,500	112,200	47.1	251.8	65,200	112,900	260
270	43.8	243.7	57,600	103,400	44.2	242.5	58,200	104,000	44.7	240.8	58,800	104,600	270
280	41.2	231.8	51,800	95,900	41.7	230.6	52,300	96,400	42.1	228.8	52,900	97,000	280
290	38.6	218.8	46,400	88,900	39.0	217.5	46,900	89,400	39.4	215.6	47,300	89,800	290
300	35.7	204.4	41,300	82,300	36.1	203.0	41,800	82,800	36.5	200.9	42,200	83,200	300

MLC650 VPC-MAX S-2

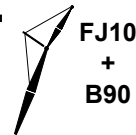
ASME B30.5



	10°				15°				20°				
													
	ft	°	ft	lb	lb	ft	°	ft	lb	lb	ft	°	ft
52	85.4	399.8	439,700	439,700									52
53	85.2	399.7	436,500	436,500									53
54	85.1	399.5	433,300	433,300									54
55	84.9	399.4	430,200	430,200	85.4	398.6	373,700	373,700					55
56	84.8	399.3	427,200	427,200	85.3	398.4	371,400	371,400					56
57	84.6	399.1	424,200	424,200	85.1	398.3	369,000	369,000					57
58	84.5	399.0	421,200	421,200	85.0	398.2	366,800	366,800					58
59	84.3	398.9	418,200	418,200	84.8	398.0	364,600	364,600	85.4	396.9	316,700	316,700	59
60	84.2	398.7	415,300	415,300	84.7	397.9	362,400	362,400	85.2	396.7	315,000	315,000	60
61	84.0	398.6	412,500	412,500	84.5	397.7	360,200	360,200	85.1	396.6	313,200	313,200	61
62	83.9	398.4	409,700	409,700	84.4	397.6	358,100	358,100	84.9	396.4	311,500	311,500	62
65	83.4	398.0	401,300	401,300	83.9	397.2	351,700	351,700	84.5	396.0	306,600	306,600	65
70	82.7	397.2	388,100	388,100	83.2	396.3	341,600	341,600	83.8	395.2	298,600	298,600	70
75	82.0	396.3	375,600	375,600	82.5	395.5	332,000	332,000	83.0	394.3	291,000	291,000	75
80	81.2	395.4	363,900	363,900	81.7	394.5	322,800	322,800	82.3	393.4	283,800	283,800	80
85	80.5	394.4	352,900	352,900	81.0	393.5	314,200	314,200	81.5	392.3	277,000	277,000	85
90	79.7	393.3	342,500	342,500	80.2	392.4	306,000	306,000	80.8	391.3	270,500	270,500	90
95	79.0	392.1	332,700	332,700	79.5	391.3	298,300	298,300	80.0	390.1	264,300	264,300	95
100	78.2	390.9	323,500	323,500	78.7	390.1	290,900	290,900	79.3	388.9	258,400	258,400	100
105	77.5	389.7	308,800	314,700	78.0	388.8	283,900	283,900	78.5	387.6	252,800	252,800	105
110	76.7	388.3	293,000	306,500	77.2	387.4	277,200	277,200	77.7	386.2	247,400	247,400	110
120	75.2	385.4	264,500	291,200	75.7	384.5	264,900	264,900	76.2	383.3	237,400	237,400	120
130	73.7	382.2	237,800	277,400	74.1	381.3	240,000	253,600	74.7	380.1	228,200	228,200	130
140	72.1	378.7	211,500	264,900	72.6	377.8	213,500	243,400	73.1	376.5	215,700	219,700	140
150	70.5	374.8	189,000	253,500	71.0	373.9	190,900	233,900	71.5	372.7	192,900	211,900	150
160	69.0	370.7	169,600	243,000	69.4	369.8	171,300	225,200	70.0	368.5	173,100	204,700	160
170	67.4	366.2	152,700	227,700	67.8	365.3	154,200	217,200	68.3	364.0	155,900	197,900	170
180	65.7	361.4	137,700	208,300	66.2	360.5	139,200	209,700	66.7	359.2	140,700	191,700	180
190	64.1	356.3	124,500	191,100	64.6	355.3	125,800	192,400	65.1	354.0	127,200	185,900	190
200	62.4	350.7	112,600	175,600	62.9	349.8	113,900	176,900	63.4	348.4	115,200	178,200	200
210	60.7	344.8	102,000	161,800	61.2	343.8	103,100	162,900	61.7	342.5	104,300	164,100	210
220	59.0	338.5	92,400	149,200	59.5	337.5	93,400	150,300	59.9	336.1	94,500	151,400	220
230	57.2	331.7	83,600	137,900	57.7	330.7	84,600	138,800	58.2	329.3	85,600	139,900	230
240	55.4	324.5	75,600	127,500	55.9	323.4	76,500	128,400	56.3	322.0	77,400	129,300	240
250	53.6	316.7	68,200	117,900	54.0	315.7	69,100	118,800	54.5	314.2	70,000	119,600	250
260	51.7	308.5	61,500	109,100	52.1	307.4	62,300	109,900	52.6	305.8	63,100	110,700	260
270	49.8	299.6	55,200	101,000	50.2	298.5	56,000	101,800	50.6	296.9	56,700	102,500	270
280	47.7	290.1	49,400	93,500	48.1	289.0	50,100	94,200	48.6	287.3	50,800	94,900	280
290	45.7	279.9	44,100	86,500	46.1	278.7	44,700	87,100	46.5	277.0	45,300	87,800	290
300	43.5	269.0	39,000	80,000	43.9	267.7	39,600	80,600	44.3	265.9	40,100	81,100	300
310	41.2	257.1	34,300	73,900	41.6	255.8	34,800	74,400	42.0	253.9	35,300	74,900	310
320	38.8	244.2	29,900	68,200	39.2	242.8	30,300	68,700	39.6	240.9	30,800	69,100	320
330	36.3	230.1	25,400	62,800	36.7	228.6	25,900	63,200	37.0	226.5	26,400	63,600	330
335					35.3	221.0	23,500	60,600	35.6	218.8	23,900	61,000	335

MLC650 VPC-MAX S-2

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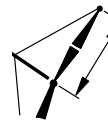
661,300 lb



360°



374.0 ft

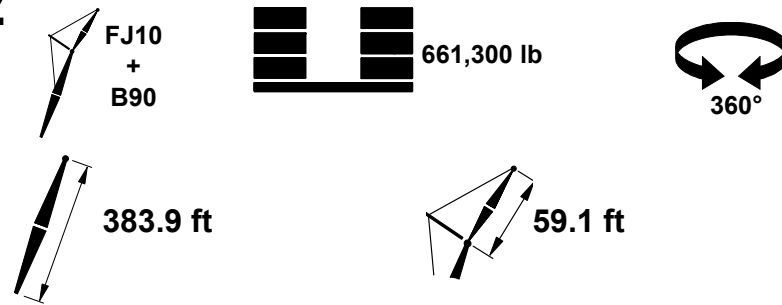


59.1 ft

	10°				15°				20°				
ft	°	ft	lb	lb	°	ft	lb	lb	°	ft	lb	lb	ft
56	85.3	438.9	413,300	413,300									56
57	85.1	438.8	410,700	410,700									57
58	85.0	438.6	408,200	408,200									58
59	84.9	438.5	405,700	405,700	85.3	437.7	354,800	354,800					59
60	84.7	438.4	403,200	403,200	85.2	437.6	352,900	352,900					60
61	84.6	438.2	400,800	400,800	85.1	437.4	351,000	351,000					61
62	84.5	438.1	398,400	398,400	84.9	437.3	349,100	349,100					62
63	84.3	438.0	396,000	396,000	84.8	437.2	347,300	347,300	85.3	435.9	304,300	304,300	63
64	84.2	437.8	393,600	393,600	84.6	437.0	345,500	345,500	85.2	435.8	302,900	302,900	64
65	84.1	437.7	391,200	391,200	84.5	436.9	343,700	343,700	85.0	435.7	301,500	301,500	65
66	83.9	437.6	389,000	389,000	84.4	436.7	341,900	341,900	84.9	435.5	300,100	300,100	66
70	83.4	437.0	379,900	379,900	83.8	436.1	334,800	334,800	84.4	434.9	294,700	294,700	70
75	82.7	436.2	369,000	369,000	83.2	435.4	326,400	326,400	83.7	434.1	288,200	288,200	75
80	82.1	435.3	358,900	358,900	82.5	434.5	318,400	318,400	83.0	433.3	281,800	281,800	80
85	81.4	434.4	349,300	349,300	81.8	433.6	310,900	310,900	82.3	432.4	275,700	275,700	85
90	80.7	433.5	338,200	340,100	81.1	432.6	303,700	303,700	81.7	431.4	269,800	269,800	90
100	79.3	431.3	303,700	323,200	79.8	430.5	290,200	290,200	80.3	429.2	258,900	258,900	100
110	78.0	428.9	273,400	307,900	78.4	428.1	276,200	277,900	78.9	426.8	248,900	248,900	110
120	76.6	426.3	246,800	293,900	77.0	425.4	249,400	266,700	77.5	424.2	239,600	239,600	120
130	75.2	423.4	223,200	281,200	75.7	422.5	225,600	256,400	76.1	421.3	228,200	231,100	130
140	73.8	420.3	202,100	269,600	74.3	419.4	204,400	246,800	74.8	418.1	206,800	223,200	140
150	72.4	416.8	183,300	258,900	72.9	415.9	185,400	238,000	73.3	414.7	187,700	215,900	150
160	71.0	413.1	163,900	244,100	71.4	412.2	165,800	229,800	71.9	410.9	167,800	209,100	160
170	69.6	409.1	146,900	221,900	70.0	408.2	148,600	222,300	70.5	406.9	150,500	202,700	170
180	68.1	404.8	131,900	202,400	68.6	403.9	133,500	204,000	69.0	402.6	135,200	196,800	180
190	66.7	400.3	118,500	185,100	67.1	399.3	120,000	186,600	67.6	398.0	121,600	188,200	190
200	65.2	395.4	106,600	169,600	65.6	394.4	108,000	171,000	66.1	393.1	109,500	172,400	200
210	63.7	390.1	95,900	155,700	64.1	389.2	97,200	157,000	64.6	387.8	98,500	158,300	210
220	62.2	384.6	86,200	143,100	62.6	383.6	87,400	144,300	63.0	382.2	88,700	145,600	220
230	60.6	378.6	77,400	131,700	61.0	377.7	78,500	132,800	61.5	376.2	79,700	134,000	230
240	59.1	372.3	69,400	121,200	59.5	371.3	70,400	122,300	59.9	369.9	71,500	123,400	240
250	57.5	365.6	62,000	111,700	57.9	364.6	63,000	112,600	58.3	363.2	64,000	113,600	250
260	55.8	358.5	55,200	102,900	56.2	357.5	56,100	103,800	56.7	356.0	57,000	104,700	260
270	54.2	351.0	48,900	94,700	54.6	349.9	49,800	95,600	55.0	348.4	50,600	96,400	270
280	52.5	343.0	43,100	87,200	52.9	341.9	43,900	88,000	53.3	340.3	44,700	88,800	280
290	50.7	334.5	37,700	80,200	51.1	333.4	38,400	80,900	51.5	331.7	39,200	81,700	290
300	48.9	325.4	32,500	73,700	49.3	324.3	33,300	74,400	49.7	322.6	34,000	75,000	300
310	47.1	315.7	26,800	67,600	47.5	314.5	27,600	68,200	47.8	312.8	28,400	68,800	310
320	45.2	305.4	21,500	61,900	45.5	304.2	22,200	62,400	45.9	302.4	22,900	63,000	320
330	43.2	294.4	16,400	56,500	43.6	293.1	17,100	57,000	43.9	291.2	17,800	57,600	330
340	41.2	282.5	11,700	51,500	41.5	281.2	12,300	51,900	41.8	279.2	12,900	52,400	340
350	39.0	269.7		46,700	39.3	268.3		47,100	39.6	266.3		47,500	350
360	36.7	255.8		42,200	37.0	254.4		42,500	37.3	252.2		42,900	360
365	35.6	248.5		40,000	35.9	246.9		40,400	36.1	244.7		40,700	365

MLC650 VPC-MAX S-2

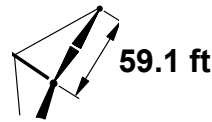
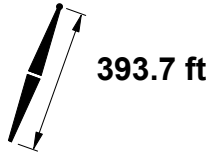
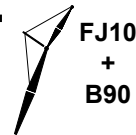
ASME B30.5



	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	ft	lb	lb	ft
55	85.3	449.3	416,500	416,500									55
56	85.1	449.1	415,100	415,100									56
57	85.0	449.0	413,600	413,600									57
58	84.9	448.9	412,100	412,100	85.3	448.1	375,000	375,000					58
59	84.8	448.8	410,600	410,600	85.2	448.0	373,000	373,000					59
60	84.6	448.7	409,100	409,100	85.1	447.9	370,900	370,900					60
61	84.5	448.5	407,600	407,600	85.0	447.8	368,900	368,900	85.4	446.8	327,300	327,300	61
62	84.4	448.4	406,100	406,100	84.8	447.6	366,900	366,900	85.3	446.7	325,600	325,600	62
63	84.2	448.3	404,500	404,500	84.7	447.5	364,900	364,900	85.1	446.6	324,100	324,100	63
64	84.1	448.1	403,000	403,000	84.6	447.4	363,000	363,000	85.0	446.4	322,500	322,500	64
65	84.0	448.0	401,500	401,500	84.4	447.2	361,000	361,000	84.9	446.3	321,000	321,000	65
70	83.3	447.3	393,300	393,300	83.8	446.5	351,600	351,600	84.2	445.6	313,500	313,500	70
75	82.7	446.5	385,300	385,300	83.1	445.7	342,500	342,500	83.5	444.8	306,300	306,300	75
80	82.0	445.7	377,400	377,400	82.5	444.9	333,900	333,900	82.9	444.0	299,500	299,500	80
90	80.7	443.8	329,400	359,000	81.1	443.1	318,000	318,000	81.6	442.1	286,800	286,800	90
100	79.4	441.8	296,000	340,700	79.8	441.0	299,100	303,600	80.2	440.0	275,100	275,100	100
110	78.0	439.4	266,700	324,100	78.5	438.7	269,600	290,400	78.9	437.7	264,400	264,400	110
120	76.7	436.9	240,800	309,000	77.1	436.1	243,500	278,300	77.6	435.1	245,900	254,500	120
130	75.3	434.1	217,800	295,200	75.8	433.3	220,300	267,300	76.2	432.3	222,600	245,300	130
140	74.0	431.0	197,200	282,600	74.4	430.2	199,500	257,100	74.8	429.2	201,700	236,900	140
150	72.6	427.6	178,700	264,600	73.1	426.8	180,900	247,700	73.5	425.8	182,900	229,000	150
160	71.2	424.0	161,800	242,000	71.7	423.2	163,800	239,000	72.1	422.2	165,600	221,700	160
170	69.8	420.1	144,800	219,900	70.3	419.3	146,700	221,700	70.7	418.3	148,400	214,900	170
180	68.4	416.0	129,900	200,400	68.9	415.1	131,600	202,100	69.3	414.1	133,100	203,700	180
190	67.0	411.5	116,600	183,200	67.5	410.7	118,200	184,700	67.8	409.6	119,600	186,200	190
200	65.6	406.7	104,700	167,700	66.0	405.9	106,200	169,200	66.4	404.9	107,500	170,500	200
210	64.1	401.7	94,000	153,800	64.6	400.8	95,400	155,200	64.9	399.8	96,700	156,400	210
220	62.7	396.3	84,400	141,300	63.1	395.4	85,700	142,600	63.5	394.3	86,800	143,700	220
230	61.2	390.5	75,600	129,900	61.6	389.6	76,800	131,100	62.0	388.6	77,900	132,200	230
240	59.6	384.4	67,600	119,500	60.1	383.5	68,700	120,600	60.4	382.4	69,700	121,600	240
250	58.1	378.0	60,300	109,900	58.5	377.0	61,300	111,000	58.9	375.9	62,300	111,900	250
260	56.5	371.1	53,500	101,200	56.9	370.2	54,500	102,100	57.3	369.0	55,400	103,000	260
270	54.9	363.8	47,300	93,100	55.3	362.9	48,200	94,000	55.7	361.7	49,000	94,800	270
280	53.3	356.1	41,500	85,600	53.7	355.1	42,300	86,400	54.0	353.9	43,100	87,200	280
290	51.6	347.9	36,100	78,600	52.0	346.9	36,900	79,400	52.4	345.7	37,600	80,100	290
300	49.9	339.2	30,300	72,100	50.3	338.2	31,200	72,800	50.6	336.9	32,100	73,500	300
310	48.1	330.0	24,600	66,000	48.5	328.9	25,500	66,700	48.8	327.6	26,300	67,300	310
320	46.3	320.1	19,300	60,300	46.7	319.0	20,100	61,000	47.0	317.7	20,800	61,500	320
330	44.4	309.6	14,300	55,000	44.8	308.5	15,100	55,600	45.1	307.1	15,700	56,100	330
340	42.5	298.4		50,000	42.8	297.2	10,300	50,500	43.1	295.8	10,900	51,000	340
350	40.4	286.3		45,200	40.8	285.1		45,700	41.1	283.6		46,200	350
360	38.3	273.3		40,800	38.7	272.1		41,200	38.9	270.5		41,600	360
370	36.1	259.3		36,500	36.4	257.9		36,900	36.7	256.3		37,200	370
375					35.2	250.4		34,800	35.5	248.7		35,200	375

MLC650 VPC-MAX S-2

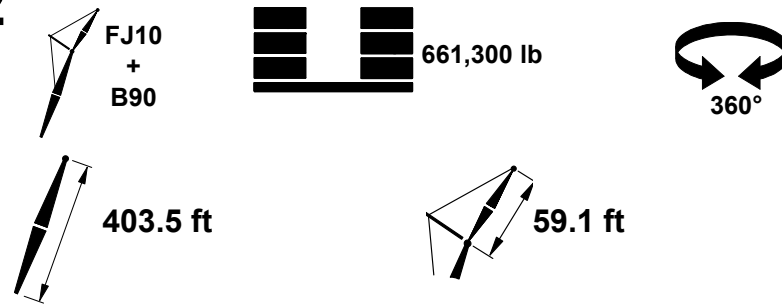
ASME B30.5



	10°				15°				20°				
ft	°	ft	lb	lb	°	ft	lb	lb	°	ft	lb	lb	ft
56	85.2	459.1	411,000	411,000									56
57	85.1	459.0	411,000	411,000									57
58	85.0	458.8	411,000	411,000									58
59	84.9	458.7	410,900	410,900	85.3	457.9	371,200	371,200					59
60	84.7	458.6	410,300	410,300	85.2	457.8	369,200	369,200					60
61	84.6	458.5	408,200	408,200	85.1	457.7	367,200	367,200					61
62	84.5	458.3	406,100	406,100	84.9	457.6	365,300	365,300	85.4	456.6	324,300	324,300	62
63	84.3	458.2	404,000	404,000	84.8	457.4	363,400	363,400	85.2	456.5	322,800	322,800	63
64	84.2	458.1	401,900	401,900	84.7	457.3	361,500	361,500	85.1	456.4	321,300	321,300	64
65	84.1	458.0	399,800	399,800	84.6	457.2	359,600	359,600	85.0	456.3	319,800	319,800	65
70	83.5	457.3	389,500	389,500	83.9	456.5	350,500	350,500	84.3	455.6	312,600	312,600	70
75	82.8	456.5	379,600	379,600	83.3	455.7	341,600	341,600	83.7	454.8	305,600	305,600	75
80	82.2	455.7	361,700	378,800	82.6	454.9	333,400	333,400	83.0	454.0	298,900	298,900	80
85	81.5	454.8	342,300	368,700	82.0	454.0	325,500	325,500	82.4	453.1	292,600	292,600	85
90	80.9	453.9	324,200	359,100	81.3	453.1	318,000	318,000	81.7	452.2	286,500	286,500	90
100	79.6	451.9	291,200	341,200	80.0	451.1	294,300	303,900	80.4	450.1	275,100	275,100	100
110	78.3	449.6	262,200	325,000	78.7	448.8	265,100	291,000	79.1	447.9	264,700	264,700	110
120	77.0	447.1	236,500	310,200	77.4	446.3	239,200	279,200	77.8	445.3	241,700	255,000	120
130	75.7	444.3	213,600	296,700	76.1	443.5	216,200	268,400	76.5	442.6	218,500	246,100	130
140	74.3	441.3	193,100	282,600	74.8	440.5	195,500	258,300	75.2	439.5	197,700	237,800	140
150	73.0	438.1	174,700	260,100	73.4	437.2	177,000	249,000	73.8	436.3	179,100	230,100	150
160	71.7	434.5	158,100	239,700	72.1	433.7	160,300	240,400	72.5	432.7	162,200	222,800	160
170	70.3	430.7	142,500	217,500	70.7	429.9	144,400	219,500	71.1	428.9	146,100	216,100	170
180	68.9	426.7	127,500	198,000	69.4	425.8	129,200	199,800	69.7	424.9	130,800	201,400	180
190	67.5	422.3	114,200	180,700	68.0	421.5	115,800	182,400	68.4	420.5	117,300	183,800	190
200	66.1	417.7	102,300	165,300	66.6	416.8	103,800	166,800	67.0	415.8	105,200	168,200	200
210	64.7	412.8	91,600	151,400	65.2	411.9	93,000	152,800	65.5	410.9	94,300	154,100	210
220	63.3	407.5	81,900	138,800	63.7	406.6	83,200	140,100	64.1	405.6	84,400	141,300	220
230	61.9	401.9	73,100	127,400	62.3	401.0	74,400	128,600	62.6	400.0	75,500	129,700	230
240	60.4	396.0	65,100	116,900	60.8	395.1	66,200	118,100	61.2	394.0	67,300	119,200	240
250	58.9	389.7	57,700	107,400	59.3	388.8	58,800	108,500	59.6	387.7	59,800	109,500	250
260	57.4	383.1	50,900	98,600	57.8	382.2	52,000	99,600	58.1	381.1	52,900	100,500	260
270	55.8	376.1	44,700	90,500	56.2	375.1	45,700	91,500	56.6	374.0	46,500	92,300	270
280	54.2	368.6	38,900	83,000	54.6	367.6	39,800	83,900	55.0	366.5	40,600	84,700	280
290	52.6	360.7	32,700	76,000	53.0	359.7	33,700	76,800	53.3	358.5	34,700	77,600	290
300	51.0	352.3	26,600	69,500	51.3	351.3	27,600	70,300	51.7	350.1	28,500	71,000	300
310	49.3	343.4	21,000	63,400	49.6	342.4	21,900	64,100	50.0	341.2	22,700	64,800	310
320	47.5	334.0	15,600	57,700	47.9	332.9	16,500	58,400	48.2	331.7	17,300	59,000	320
330	45.7	324.0	10,600	52,400	46.1	322.8	11,500	53,000	46.4	321.5	12,200	53,500	330
340	43.9	313.3		47,300	44.2	312.1		47,900	44.5	310.8		48,400	340
350	41.9	301.8		42,600	42.3	300.6		43,100	42.6	299.2		43,600	350
360	39.9	289.6		38,100	40.3	288.3		38,600	40.6	286.8		39,000	360
370	37.8	276.4		33,900	38.2	275.1		34,300	38.4	273.5		34,700	370
380	35.6	262.1		29,800	35.9	260.7		30,200	36.2	259.1		30,600	380

MLC650 VPC-MAX S-2

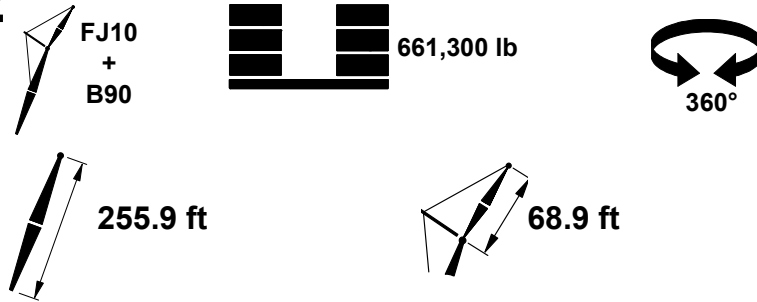
ASME B30.5



	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	ft	lb	lb	ft
57	85.2	468.8	385,800	385,800									57
58	85.1	468.7	385,700	385,700									58
59	85.0	468.6	385,700	385,700									59
60	84.9	468.5	385,700	385,700	85.3	467.7	366,600	366,600					60
61	84.7	468.4	385,400	385,400	85.2	467.6	364,800	364,800					61
62	84.6	468.2	385,100	385,100	85.0	467.5	362,900	362,900					62
63	84.5	468.1	384,900	384,900	84.9	467.3	361,100	361,100	85.3	466.4	321,000	321,000	63
64	84.3	468.0	384,600	384,600	84.8	467.2	359,200	359,200	85.2	466.3	319,600	319,600	64
65	84.2	467.9	384,300	384,300	84.7	467.1	357,400	357,400	85.1	466.1	318,100	318,100	65
66	84.1	467.7	382,800	382,800	84.5	466.9	355,700	355,700	85.0	466.0	316,700	316,700	66
70	83.6	467.2	376,900	376,900	84.0	466.4	348,600	348,600	84.5	465.5	311,200	311,200	70
75	83.0	466.4	369,800	369,800	83.4	465.7	340,100	340,100	83.8	464.7	304,400	304,400	75
80	82.3	465.6	356,300	362,700	82.8	464.9	332,100	332,100	83.2	463.9	297,900	297,900	80
90	81.1	463.9	319,500	348,400	81.5	463.1	317,200	317,200	81.9	462.2	285,900	285,900	90
100	79.8	461.9	287,200	334,500	80.3	461.1	290,300	303,500	80.7	460.2	274,800	274,800	100
110	78.5	459.7	258,600	320,800	79.0	458.9	261,600	290,800	79.4	457.9	264,300	264,600	110
120	77.3	457.2	233,300	307,800	77.7	456.4	236,100	279,300	78.1	455.5	238,600	255,100	120
130	76.0	454.5	210,700	295,700	76.4	453.7	213,300	268,700	76.8	452.8	215,700	246,300	130
140	74.7	451.6	190,400	279,200	75.1	450.8	192,900	258,900	75.5	449.8	195,100	238,200	140
150	73.4	448.4	172,200	256,900	73.8	447.6	174,500	249,800	74.2	446.6	176,600	230,600	150
160	72.1	445.0	155,700	236,800	72.5	444.2	157,900	238,900	72.9	443.2	159,900	223,500	160
170	70.8	441.3	140,800	216,400	71.2	440.5	142,800	218,400	71.6	439.5	144,700	216,900	170
180	69.4	437.3	126,300	196,900	69.8	436.5	128,100	198,700	70.2	435.5	129,800	200,300	180
190	68.1	433.1	113,000	179,600	68.5	432.2	114,700	181,200	68.9	431.2	116,200	182,800	190
200	66.7	428.6	101,100	164,100	67.1	427.7	102,700	165,600	67.5	426.7	104,100	167,100	200
210	65.3	423.8	90,400	150,200	65.7	422.9	91,800	151,600	66.1	421.9	93,200	152,900	210
220	63.9	418.6	80,700	137,600	64.3	417.8	82,100	139,000	64.7	416.7	83,300	140,200	220
230	62.5	413.2	71,900	126,200	62.9	412.3	73,200	127,400	63.3	411.3	74,300	128,600	230
240	61.1	407.5	63,900	115,700	61.5	406.6	65,100	116,900	61.9	405.5	66,100	118,000	240
250	59.6	401.4	56,500	106,200	60.0	400.5	57,600	107,300	60.4	399.4	58,600	108,300	250
260	58.2	394.9	49,700	97,400	58.6	394.0	50,800	98,400	58.9	392.9	51,700	99,400	260
270	56.7	388.1	43,500	89,300	57.0	387.2	44,500	90,300	57.4	386.0	45,300	91,100	270
280	55.1	380.9	37,300	81,800	55.5	380.0	38,500	82,700	55.9	378.8	39,400	83,500	280
290	53.6	373.3	30,800	74,800	53.9	372.3	32,000	75,600	54.3	371.1	32,900	76,400	290
300	52.0	365.2	24,800	68,300	52.3	364.2	25,900	69,100	52.7	363.0	26,800	69,800	300
310	50.3	356.6	19,200	62,200	50.7	355.6	20,100	62,900	51.0	354.4	21,000	63,600	310
320	48.7	347.6	13,900	56,500	49.0	346.5	14,800	57,200	49.3	345.2	15,600	57,800	320
330	46.9	338.0		51,200	47.3	336.9		51,800	47.6	335.6	10,400	52,400	330
340	45.2	327.7		46,100	45.5	326.6		46,700	45.8	325.2		47,300	340
350	43.3	316.8		41,400	43.7	315.7		41,900	44.0	314.3		42,400	350
360	41.4	305.2		36,900	41.8	304.0		37,400	42.1	302.5		37,900	360
370	39.4	292.7		32,700	39.8	291.5		33,100	40.0	289.9		33,500	370
380	37.4	279.3		28,600	37.7	278.0		29,100	38.0	276.4		29,400	380
390	35.2	264.8		24,800	35.5	263.4		25,200	35.7	261.7		25,500	390

MLC650 VPC-MAX S-2

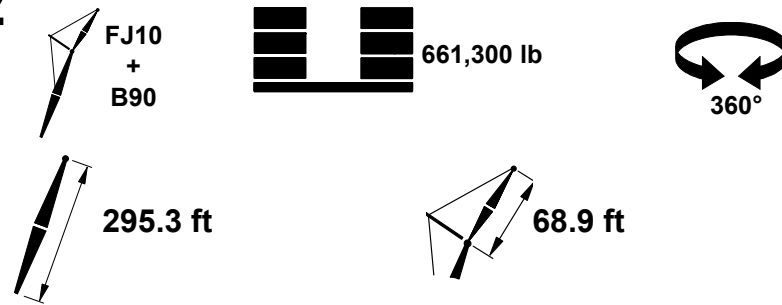
ASME B30.5



	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	ft	lb	lb	ft
45	85.6	331.6	453,300	453,300									45
46	85.4	331.5	451,900	451,900									46
47	85.2	331.3	450,600	450,600									47
48	85.0	331.2	449,200	449,200									48
49	84.8	331.0	445,800	445,800	85.6	330.3	381,400	381,400					49
50	84.7	330.9	442,400	442,400	85.4	330.1	377,800	377,800					50
51	84.5	330.8	437,800	437,800	85.2	330.0	374,300	374,300					51
52	84.3	330.6	433,200	433,200	85.0	329.9	370,900	370,900					52
54	83.9	330.3	424,500	424,500	84.7	329.6	364,300	364,300	85.5	328.5	301,400	301,400	54
55	83.8	330.2	420,200	420,200	84.5	329.4	361,100	361,100	85.3	328.3	299,100	299,100	55
56	83.6	330.0	416,000	416,000	84.3	329.2	357,900	357,900	85.1	328.2	296,800	296,800	56
57	83.4	329.9	412,000	412,000	84.1	329.1	354,800	354,800	84.9	328.0	294,600	294,600	57
58	83.2	329.7	408,000	408,000	84.0	328.9	351,600	351,600	84.7	327.8	292,400	292,400	58
60	82.9	329.4	400,100	400,100	83.6	328.6	345,700	345,700	84.4	327.5	288,000	288,000	60
65	82.0	328.5	381,800	381,800	82.7	327.7	331,600	331,600	83.5	326.6	277,800	277,800	65
70	81.1	327.5	365,100	365,100	81.8	326.7	318,500	318,500	82.6	325.6	268,300	268,300	70
75	80.2	326.4	349,700	349,700	80.9	325.6	306,500	306,500	81.7	324.5	259,300	259,300	75
80	79.3	325.3	335,600	335,600	80.0	324.5	295,300	295,300	80.7	323.4	251,000	251,000	80
85	78.3	324.0	322,500	322,500	79.1	323.2	284,900	284,900	79.8	322.1	243,200	243,200	85
90	77.4	322.7	310,300	310,300	78.1	321.9	275,200	275,200	78.9	320.8	235,800	235,800	90
95	76.5	321.3	299,100	299,100	77.2	320.5	266,200	266,200	78.0	319.4	228,900	228,900	95
100	75.6	319.8	288,700	288,700	76.3	319.0	257,700	257,700	77.1	317.9	222,400	222,400	100
105	74.7	318.2	278,900	278,900	75.4	317.4	249,700	249,700	76.1	316.3	216,300	216,300	105
110	73.7	316.6	269,900	269,900	74.4	315.8	242,300	242,300	75.2	314.6	210,500	210,500	110
115	72.8	314.8	261,300	261,300	73.5	314.0	235,200	235,200	74.2	312.9	205,000	205,000	115
120	71.8	313.0	253,300	253,300	72.6	312.1	228,600	228,600	73.3	311.0	199,800	199,800	120
125	70.9	311.0	245,700	245,700	71.6	310.2	222,300	222,300	72.3	309.0	194,900	194,900	125
130	69.9	309.0	238,600	238,600	70.6	308.1	216,300	216,300	71.4	307.0	190,200	190,200	130
140	68.0	304.6	220,900	225,500	68.7	303.7	205,400	205,400	69.4	302.6	181,400	181,400	140
150	66.0	299.8	198,700	213,800	66.7	298.9	195,500	195,500	67.5	297.7	173,600	173,600	150
160	64.1	294.6	179,500	203,200	64.7	293.7	181,200	186,500	65.4	292.5	166,300	166,300	160
170	62.0	288.9	162,800	193,700	62.7	288.0	164,300	178,300	63.4	286.7	159,700	159,700	170
180	59.9	282.7	148,000	184,900	60.6	281.8	149,400	170,800	61.3	280.5	150,800	153,600	180
190	57.8	276.0	134,900	177,000	58.5	275.1	136,200	163,900	59.1	273.8	137,500	148,000	190
200	55.6	268.8	123,200	169,800	56.3	267.8	124,300	157,700	56.9	266.5	125,500	142,800	200
210	53.4	260.9	112,600	163,100	54.0	259.9	113,700	151,900	54.7	258.5	114,800	138,000	210
220	51.0	252.4	103,100	157,000	51.7	251.4	104,000	146,500	52.3	249.9	105,000	133,600	220
230	48.6	243.1	94,400	148,700	49.3	242.1	95,300	141,500	49.9	240.6	96,200	129,500	230
240	46.1	233.0	86,400	138,300	46.7	231.9	87,200	136,900	47.3	230.4	88,000	125,700	240
250	43.5	222.0	79,100	128,800	44.1	220.8	79,800	129,500	44.7	219.2	80,600	122,300	250
260	40.7	209.8	72,400	120,100	41.3	208.6	73,000	120,700	41.9	206.9	73,700	119,000	260
270	37.7	196.4	66,200	112,000	38.3	195.0	66,700	112,500	38.8	193.2	67,300	113,100	270
275	36.2	189.0	63,200	108,100	36.7	187.6	63,700	108,600	37.2	185.7	64,200	109,100	275
280									35.6	177.7	61,300	105,400	280

MLC650 VPC-MAX S-2

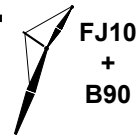
ASME B30.5



	10°				15°				20°				
ft	°	ft	lb	lb	°	ft	lb	lb	°	ft	lb	lb	ft
50	85.5	370.3	421,900	421,900									50
51	85.4	370.1	418,200	418,200									51
52	85.2	370.0	414,500	414,500									52
53	85.1	369.9	410,900	410,900									53
54	84.9	369.7	407,400	407,400	85.6	368.8	351,500	351,500					54
55	84.7	369.6	403,900	403,900	85.4	368.7	348,900	348,900					55
56	84.6	369.5	400,400	400,400	85.2	368.5	346,300	346,300					56
57	84.4	369.3	397,100	397,100	85.1	368.4	343,800	343,800					57
58	84.3	369.2	393,700	393,700	84.9	368.3	341,300	341,300	85.6	367.0	285,300	285,300	58
59	84.1	369.0	390,400	390,400	84.8	368.1	338,900	338,900	85.5	366.9	283,500	283,500	59
60	83.9	368.9	387,200	387,200	84.6	368.0	336,400	336,400	85.3	366.7	281,700	281,700	60
61	83.8	368.7	384,100	384,100	84.4	367.8	334,100	334,100	85.1	366.6	280,000	280,000	61
65	83.1	368.1	371,800	371,800	83.8	367.1	324,700	324,700	84.5	365.9	273,000	273,000	65
70	82.3	367.2	357,500	357,500	83.0	366.3	313,900	313,900	83.7	365.0	264,800	264,800	70
75	81.5	366.3	344,300	344,300	82.2	365.3	303,600	303,600	82.9	364.1	257,100	257,100	75
80	80.7	365.2	332,000	332,000	81.4	364.3	294,000	294,000	82.1	363.1	249,800	249,800	80
85	79.9	364.1	320,500	320,500	80.6	363.2	284,800	284,800	81.3	362.0	243,000	243,000	85
90	79.1	363.0	309,700	309,700	79.8	362.0	276,300	276,300	80.4	360.8	236,500	236,500	90
95	78.3	361.7	299,800	299,800	79.0	360.8	268,100	268,100	79.6	359.5	230,300	230,300	95
100	77.5	360.4	290,300	290,300	78.1	359.5	260,400	260,400	78.8	358.2	224,500	224,500	100
105	76.7	359.0	281,500	281,500	77.3	358.1	253,200	253,200	78.0	356.8	219,000	219,000	105
110	75.8	357.5	273,200	273,200	76.5	356.6	246,400	246,400	77.1	355.3	213,700	213,700	110
115	75.0	356.0	265,400	265,400	75.7	355.0	240,000	240,000	76.3	353.8	208,700	208,700	115
120	74.2	354.4	258,000	258,000	74.8	353.4	233,900	233,900	75.5	352.1	203,900	203,900	120
125	73.3	352.6	251,100	251,100	74.0	351.7	228,100	228,100	74.6	350.4	199,400	199,400	125
130	72.5	350.9	241,700	244,400	73.1	349.9	222,500	222,500	73.8	348.6	195,100	195,100	130
140	70.8	347.0	215,500	232,200	71.4	346.0	212,300	212,300	72.1	344.7	187,000	187,000	140
150	69.1	342.8	193,100	221,100	69.7	341.8	195,100	202,900	70.4	340.5	179,500	179,500	150
160	67.4	338.3	173,700	211,100	68.0	337.3	175,600	194,400	68.6	335.9	172,700	172,700	160
170	65.6	333.4	156,800	201,900	66.2	332.4	158,500	186,500	66.8	331.0	160,400	166,400	170
180	63.8	328.1	141,900	193,500	64.4	327.0	143,500	179,400	65.0	325.7	145,200	160,600	180
190	62.0	322.4	128,700	185,900	62.6	321.3	130,200	172,700	63.2	319.9	131,700	155,200	190
200	60.2	316.2	116,900	178,800	60.8	315.1	118,200	166,600	61.3	313.7	119,600	150,200	200
210	58.3	309.6	106,300	166,100	58.9	308.5	107,500	160,900	59.4	307.0	108,800	145,500	210
220	56.3	302.5	96,600	153,500	56.9	301.4	97,800	154,700	57.5	299.9	99,000	141,200	220
230	54.3	294.9	87,900	142,200	54.9	293.7	88,900	143,200	55.5	292.2	90,000	137,100	230
240	52.3	286.7	79,900	131,800	52.9	285.5	80,900	132,700	53.4	283.9	81,900	133,400	240
250	50.2	277.9	72,600	122,200	50.7	276.6	73,400	123,100	51.3	275.0	74,400	124,000	250
260	48.0	268.4	65,800	113,500	48.6	267.1	66,600	114,300	49.1	265.4	67,400	115,100	260
270	45.7	258.1	59,500	105,300	46.3	256.7	60,300	106,100	46.8	255.0	61,000	106,800	270
280	43.4	246.9	53,700	97,800	43.9	245.5	54,400	98,500	44.4	243.7	55,100	99,200	280
290	40.9	234.8	48,300	90,800	41.4	233.3	48,900	91,400	41.9	231.4	49,500	92,000	290
300	38.3	221.5	43,300	84,300	38.8	219.9	43,800	84,800	39.2	217.8	44,300	85,300	300
310	35.5	206.8	38,500	78,200	35.9	205.1	39,000	78,600	36.3	202.8	39,500	79,100	310

MLC650 VPC-MAX S-2

ASME B30.5



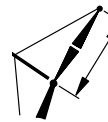
661,300 lb



360°



334.6 ft

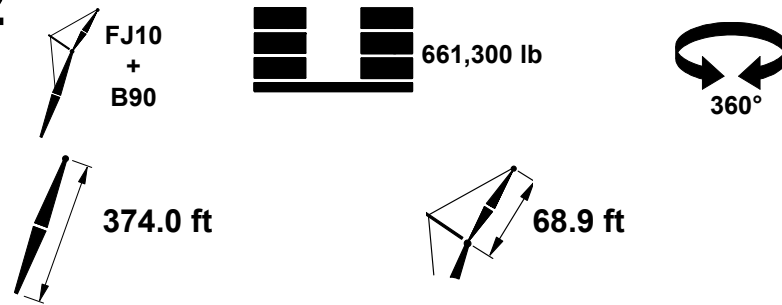


68.9 ft

	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	ft	lb	lb	ft
54	85.5	409.3	390,400	390,400									54
55	85.4	409.1	390,400	390,400									55
56	85.2	409.0	390,400	390,400									56
57	85.1	408.9	388,600	388,600									57
58	84.9	408.8	385,900	385,900	85.5	407.8	334,800	334,800					58
59	84.8	408.6	383,100	383,100	85.4	407.6	332,700	332,700					59
60	84.6	408.5	380,300	380,300	85.2	407.5	330,600	330,600					60
61	84.5	408.3	377,700	377,700	85.1	407.4	328,600	328,600					61
63	84.2	408.0	372,500	372,500	84.8	407.1	324,600	324,600	85.4	405.7	274,500	274,500	63
64	84.1	407.9	369,900	369,900	84.7	406.9	322,600	322,600	85.3	405.6	272,900	272,900	64
65	83.9	407.8	367,300	367,300	84.5	406.8	320,700	320,700	85.2	405.4	271,400	271,400	65
66	83.8	407.6	364,800	364,800	84.4	406.6	318,800	318,800	85.0	405.3	270,000	270,000	66
70	83.2	407.0	354,900	354,900	83.8	406.0	311,300	311,300	84.4	404.7	264,200	264,200	70
75	82.5	406.1	343,200	343,200	83.1	405.1	302,200	302,200	83.7	403.8	257,300	257,300	75
80	81.8	405.2	332,200	332,200	82.3	404.2	293,700	293,700	83.0	402.9	250,800	250,800	80
85	81.0	404.2	321,900	321,900	81.6	403.2	285,700	285,700	82.2	401.9	244,600	244,600	85
90	80.3	403.2	312,200	312,200	80.9	402.2	278,100	278,100	81.5	400.8	238,600	238,600	90
95	79.6	402.1	303,100	303,100	80.2	401.1	270,800	270,800	80.8	399.7	233,000	233,000	95
100	78.8	400.9	294,500	294,500	79.4	399.9	264,000	264,000	80.0	398.5	227,700	227,700	100
110	77.4	398.3	278,600	278,600	77.9	397.3	251,300	251,300	78.6	395.9	217,700	217,700	110
120	75.9	395.5	264,400	264,400	76.5	394.4	239,800	239,800	77.1	393.1	208,500	208,500	120
130	74.4	392.3	240,200	251,500	75.0	391.3	229,400	229,400	75.6	389.9	200,200	200,200	130
140	72.9	388.9	213,800	239,900	73.5	387.9	216,200	219,600	74.0	386.5	192,500	192,500	140
150	71.4	385.2	191,300	229,300	71.9	384.2	193,400	210,600	72.5	382.8	185,400	185,400	150
160	69.8	381.2	171,800	219,600	70.4	380.1	173,800	202,400	71.0	378.7	175,900	178,900	160
170	68.3	376.8	154,800	210,700	68.8	375.8	156,600	194,800	69.4	374.3	158,600	172,800	170
180	66.7	372.2	139,800	202,500	67.3	371.1	141,500	187,700	67.8	369.6	143,300	167,200	180
190	65.1	367.2	126,500	193,100	65.7	366.1	128,100	181,200	66.2	364.6	129,700	161,900	190
200	63.5	361.8	114,700	177,600	64.0	360.7	116,100	175,100	64.6	359.2	117,600	157,000	200
210	61.8	356.1	104,000	163,800	62.4	354.9	105,300	165,100	62.9	353.4	106,700	152,500	210
220	60.2	349.9	94,300	151,200	60.7	348.8	95,500	152,400	61.2	347.2	96,900	148,100	220
230	58.5	343.4	85,500	139,800	59.0	342.2	86,700	140,900	59.5	340.6	87,900	142,100	230
240	56.7	336.4	77,500	129,400	57.3	335.2	78,600	130,400	57.8	333.6	79,700	131,600	240
250	55.0	329.0	70,100	119,800	55.5	327.8	71,100	120,800	56.0	326.1	72,200	121,800	250
260	53.1	321.0	63,300	111,000	53.6	319.8	64,300	111,900	54.2	318.1	65,200	112,900	260
270	51.3	312.6	57,100	102,900	51.8	311.3	57,900	103,700	52.3	309.5	58,800	104,600	270
280	49.3	303.5	51,300	95,400	49.8	302.2	52,100	96,100	50.3	300.4	52,900	97,000	280
290	47.4	293.8	45,900	88,400	47.8	292.4	46,600	89,100	48.3	290.5	47,300	89,800	290
300	45.3	283.4	40,800	81,800	45.8	281.9	41,500	82,500	46.2	280.0	42,200	83,200	300
310	43.2	272.2	36,100	75,700	43.6	270.7	36,700	76,300	44.1	268.6	37,300	76,900	310
320	40.9	260.1	31,700	70,000	41.4	258.5	32,200	70,600	41.8	256.4	32,800	71,100	320
330	38.6	246.9	27,500	64,600	39.0	245.2	28,000	65,100	39.4	243.0	28,500	65,600	330
340	36.1	232.5	22,900	59,500	36.5	230.8	23,400	60,000	36.9	228.4	24,000	60,400	340
345									35.5	220.5	21,600	57,900	345

MLC650 VPC-MAX S-2

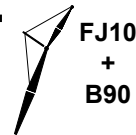
ASME B30.5



	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	ft	lb	lb	ft
58	85.4	448.4	373,700	373,700									58
59	85.3	448.2	371,400	371,400									59
60	85.2	448.1	369,000	369,000									60
61	85.0	448.0	366,700	366,700									61
62	84.9	447.8	364,500	364,500	85.4	446.9	318,100	318,100					62
63	84.8	447.7	362,200	362,200	85.3	446.8	316,400	316,400					63
64	84.6	447.6	360,000	360,000	85.1	446.6	314,700	314,700					64
65	84.5	447.5	357,700	357,700	85.0	446.5	313,000	313,000					65
66	84.4	447.3	355,600	355,600	84.9	446.4	311,300	311,300	85.5	445.0	265,600	265,600	66
67	84.2	447.2	353,500	353,500	84.7	446.2	309,700	309,700	85.3	444.8	264,300	264,300	67
68	84.1	447.0	351,300	351,300	84.6	446.1	308,000	308,000	85.2	444.7	263,100	263,100	68
69	84.0	446.9	349,200	349,200	84.5	445.9	306,400	306,400	85.1	444.5	261,800	261,800	69
70	83.8	446.7	347,100	347,100	84.4	445.8	304,800	304,800	84.9	444.4	260,600	260,600	70
80	82.5	445.1	327,400	327,400	83.0	444.2	289,500	289,500	83.6	442.8	248,600	248,600	80
90	81.2	443.3	309,800	309,800	81.7	442.3	275,700	275,700	82.3	440.9	237,700	237,700	90
100	79.9	441.2	293,900	293,900	80.4	440.2	263,100	263,100	81.0	438.8	227,900	227,900	100
110	78.5	438.9	273,300	279,700	79.0	437.9	251,700	251,700	79.6	436.5	218,800	218,800	110
120	77.2	436.3	247,200	266,600	77.7	435.3	241,200	241,200	78.3	433.9	210,400	210,400	120
130	75.9	433.5	223,900	254,800	76.4	432.5	226,700	231,600	76.9	431.1	202,600	202,600	130
140	74.5	430.4	203,200	244,000	75.0	429.4	205,700	222,700	75.6	428.0	195,500	195,500	140
150	73.1	427.1	184,500	234,000	73.6	426.1	186,900	214,600	74.2	424.6	188,800	188,800	150
160	71.7	423.4	166,200	224,900	72.2	422.4	168,400	207,000	72.8	421.0	170,700	182,700	160
170	70.4	419.5	149,100	216,400	70.8	418.5	151,100	200,000	71.4	417.0	153,300	176,900	170
180	68.9	415.4	134,000	204,600	69.4	414.3	135,900	193,400	70.0	412.8	137,900	171,500	180
190	67.5	410.9	120,600	187,200	68.0	409.9	122,400	187,200	68.5	408.4	124,200	166,500	190
200	66.1	406.1	108,700	171,700	66.6	405.1	110,300	173,300	67.1	403.5	112,000	161,800	200
210	64.6	401.1	97,900	157,700	65.1	400.0	99,400	159,200	65.6	398.4	101,000	157,300	210
220	63.2	395.6	88,200	145,100	63.6	394.6	89,600	146,500	64.1	393.0	91,100	148,000	220
230	61.7	389.9	79,400	133,600	62.1	388.8	80,700	134,900	62.6	387.2	82,100	136,300	230
240	60.1	383.8	71,300	123,200	60.6	382.7	72,500	124,400	61.1	381.0	73,800	125,700	240
250	58.6	377.3	63,900	113,600	59.0	376.2	65,000	114,700	59.5	374.5	66,200	115,900	250
260	57.0	370.4	57,100	104,800	57.5	369.3	58,200	105,800	58.0	367.6	59,300	106,900	260
270	55.4	363.1	50,800	96,600	55.8	362.0	51,800	97,600	56.3	360.2	52,800	98,600	270
280	53.8	355.4	45,000	89,100	54.2	354.2	45,900	90,000	54.7	352.4	46,900	91,000	280
290	52.1	347.2	39,500	82,000	52.5	346.0	40,400	82,900	53.0	344.1	41,300	83,800	290
300	50.4	338.5	34,500	75,500	50.8	337.2	35,300	76,300	51.2	335.3	36,100	77,100	300
310	48.6	329.2	29,100	69,400	49.0	327.9	30,000	70,100	49.5	326.0	31,000	70,900	310
320	46.8	319.3	23,700	63,700	47.2	318.0	24,600	64,400	47.6	316.0	25,500	65,100	320
330	44.9	308.8	18,600	58,300	45.3	307.4	19,500	58,900	45.7	305.4	20,300	59,600	330
340	42.9	297.5	13,900	53,200	43.3	296.1	14,600	53,800	43.7	294.0	15,400	54,400	340
350	40.9	285.4		48,400	41.3	283.9	10,100	49,000	41.7	281.7	10,700	49,500	350
360	38.8	272.4		43,900	39.1	270.8		44,400	39.5	268.5		44,900	360
370	36.5	258.3		39,600	36.9	256.6		40,100	37.2	254.2		40,500	370
375	35.3	250.8		37,600	35.7	249.1		38,000	36.0	246.5		38,400	375

MLC650 VPC-MAX S-2

ASME B30.5



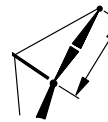
661,300 lb



360°



383.9 ft

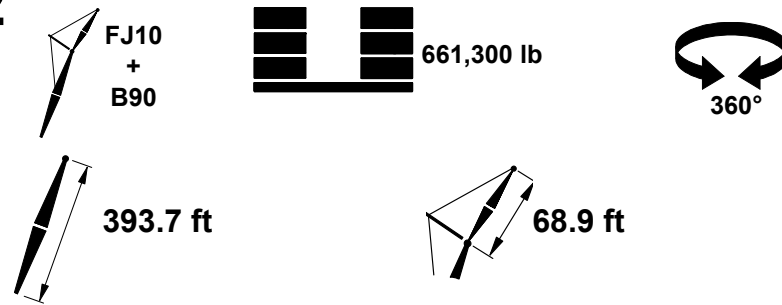


68.9 ft

	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	ft	lb	lb	ft
57	85.4	458.8	376,400	376,400									57
58	85.2	458.7	375,900	375,900									58
59	85.1	458.5	375,300	375,300									59
60	85.0	458.4	374,700	374,700									60
61	84.9	458.3	374,200	374,200	85.4	457.4	336,900	336,900					61
62	84.7	458.2	373,600	373,600	85.3	457.3	335,100	335,100					62
63	84.6	458.0	373,000	373,000	85.1	457.1	333,200	333,200					63
64	84.5	457.9	372,500	372,500	85.0	457.0	331,300	331,300					64
65	84.4	457.8	371,900	371,900	84.9	456.9	329,500	329,500	85.4	455.8	292,000	292,000	65
66	84.2	457.6	371,100	371,100	84.8	456.7	327,700	327,700	85.3	455.7	290,600	290,600	66
67	84.1	457.5	370,400	370,400	84.6	456.6	326,000	326,000	85.1	455.6	289,100	289,100	67
70	83.7	457.1	368,100	368,100	84.3	456.2	320,600	320,600	84.7	455.1	285,000	285,000	70
80	82.4	455.5	347,000	347,000	83.0	454.6	304,200	304,200	83.4	453.6	271,900	271,900	80
90	81.1	453.7	327,500	327,800	81.7	452.8	289,300	289,300	82.2	451.8	259,700	259,700	90
100	79.8	451.7	295,000	310,600	80.4	450.8	275,800	275,800	80.9	449.7	248,400	248,400	100
110	78.5	449.4	266,400	295,000	79.1	448.5	263,400	263,400	79.5	447.4	238,000	238,000	110
120	77.2	446.9	241,000	280,900	77.8	446.0	244,000	252,200	78.2	444.9	228,500	228,500	120
130	75.9	444.1	218,300	268,000	76.4	443.2	221,200	241,900	76.9	442.1	219,800	219,800	130
140	74.6	441.1	198,000	256,300	75.1	440.2	200,700	232,400	75.6	439.1	203,200	211,700	140
150	73.3	437.9	179,800	245,500	73.8	436.9	182,300	223,700	74.2	435.8	184,600	204,200	150
160	71.9	434.4	163,300	235,600	72.4	433.4	165,700	215,600	72.9	432.3	167,900	197,200	160
170	70.6	430.6	146,900	222,000	71.1	429.6	149,100	208,000	71.5	428.5	151,000	190,800	170
180	69.2	426.5	131,900	202,500	69.7	425.5	133,900	201,000	70.1	424.4	135,700	184,800	180
190	67.8	422.2	118,600	185,100	68.3	421.2	120,400	187,000	68.8	420.0	122,100	179,100	190
200	66.4	417.5	106,700	169,700	66.9	416.5	108,400	171,400	67.3	415.4	109,900	172,900	200
210	65.0	412.6	96,000	155,800	65.5	411.6	97,600	157,400	65.9	410.4	99,000	158,800	210
220	63.6	407.3	86,300	143,200	64.1	406.3	87,800	144,700	64.5	405.1	89,100	146,000	220
230	62.1	401.7	77,500	131,700	62.6	400.7	78,900	133,100	63.0	399.5	80,100	134,400	230
240	60.6	395.8	69,500	121,300	61.1	394.8	70,800	122,600	61.5	393.6	71,900	123,800	240
250	59.1	389.6	62,100	111,800	59.6	388.5	63,300	113,000	60.0	387.3	64,400	114,100	250
260	57.6	382.9	55,300	103,000	58.1	381.8	56,500	104,100	58.5	380.6	57,500	105,200	260
270	56.1	375.9	49,100	94,900	56.5	374.8	50,100	95,900	56.9	373.5	51,100	96,900	270
280	54.5	368.4	43,300	87,300	54.9	367.3	44,300	88,300	55.3	366.0	45,200	89,200	280
290	52.9	360.5	37,900	80,300	53.3	359.3	38,800	81,300	53.7	358.0	39,600	82,100	290
300	51.2	352.1	32,400	73,800	51.7	350.9	33,500	74,700	52.0	349.6	34,500	75,500	300
310	49.5	343.2	26,700	67,800	50.0	342.0	27,800	68,600	50.3	340.6	28,800	69,300	310
320	47.8	333.8	21,400	62,100	48.2	332.5	22,400	62,800	48.6	331.1	23,300	63,500	320
330	46.0	323.7	16,400	56,700	46.4	322.4	17,300	57,400	46.8	321.0	18,100	58,000	330
340	44.1	313.0	11,700	51,700	44.5	311.7	12,600	52,300	44.9	310.2	13,300	52,900	340
350	42.2	301.6		46,900	42.6	300.2		47,500	42.9	298.6		48,100	350
360	40.2	289.3		42,400	40.6	287.9		43,000	40.9	286.2		43,500	360
370	38.1	276.1		38,200	38.5	274.6		38,700	38.8	272.8		39,100	370
380	35.8	261.8		34,200	36.2	260.2		34,600	36.5	258.3		35,000	380
385									35.4	250.6		33,000	385

MLC650 VPC-MAX S-2

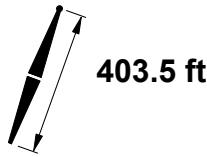
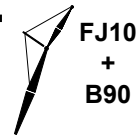
ASME B30.5



	10°				15°				20°				
ft	°	ft	lb	lb	°	ft	lb	lb	°	ft	lb	lb	ft
58	85.3	468.6	373,200	373,200									58
59	85.2	468.5	372,700	372,700									59
60	85.1	468.4	372,100	372,100									60
61	85.0	468.2	371,600	371,600									61
62	84.8	468.1	371,000	371,000	85.4	467.2	333,600	333,600					62
63	84.7	468.0	370,500	370,500	85.2	467.1	331,700	331,700					63
64	84.6	467.9	370,000	370,000	85.1	467.0	330,000	330,000					64
65	84.5	467.7	369,500	369,500	85.0	466.8	328,200	328,200					65
66	84.3	467.6	368,900	368,900	84.9	466.7	326,400	326,400	85.3	465.7	289,400	289,400	66
67	84.2	467.5	368,400	368,400	84.7	466.6	324,700	324,700	85.2	465.5	288,000	288,000	67
68	84.1	467.3	367,800	367,800	84.6	466.4	323,000	323,000	85.1	465.4	286,700	286,700	68
70	83.8	467.0	366,800	366,800	84.4	466.1	319,600	319,600	84.8	465.1	284,000	284,000	70
80	82.6	465.5	346,400	346,400	83.1	464.6	303,600	303,600	83.6	463.6	271,300	271,300	80
90	81.3	463.8	322,400	327,800	81.8	462.8	289,100	289,100	82.3	461.8	259,600	259,600	90
100	80.1	461.8	290,300	311,000	80.6	460.9	276,000	276,000	81.0	459.8	248,500	248,500	100
110	78.8	459.5	261,900	295,800	79.3	458.6	264,000	264,000	79.8	457.6	238,400	238,400	110
120	77.5	457.1	236,700	282,000	78.0	456.2	239,800	253,000	78.5	455.1	229,000	229,000	120
130	76.2	454.4	214,200	269,400	76.7	453.5	217,100	242,800	77.2	452.4	219,800	220,400	130
140	74.9	451.5	194,000	257,800	75.4	450.5	196,800	233,500	75.9	449.5	199,300	212,500	140
150	73.6	448.3	175,900	247,200	74.1	447.3	178,500	224,900	74.6	446.3	180,900	205,100	150
160	72.3	444.8	159,400	237,400	72.8	443.9	161,900	216,900	73.3	442.8	164,100	198,200	160
170	71.0	441.1	144,500	219,700	71.5	440.2	146,800	209,400	71.9	439.1	148,800	191,800	170
180	69.6	437.2	129,600	200,100	70.1	436.2	131,600	202,200	70.6	435.1	133,500	185,900	180
190	68.3	432.9	116,200	182,800	68.8	432.0	118,100	184,700	69.2	430.8	119,800	180,300	190
200	66.9	428.4	104,300	167,300	67.4	427.4	106,100	169,000	67.9	426.3	107,700	170,600	200
210	65.6	423.6	93,500	153,300	66.0	422.6	95,200	155,000	66.5	421.5	96,700	156,500	210
220	64.2	418.5	83,800	140,700	64.6	417.5	85,400	142,300	65.1	416.3	86,800	143,700	220
230	62.7	413.1	75,000	129,300	63.2	412.1	76,500	130,700	63.7	410.9	77,800	132,000	230
240	61.3	407.3	67,000	118,800	61.8	406.3	68,300	120,200	62.2	405.1	69,600	121,400	240
250	59.9	401.2	59,600	109,300	60.3	400.2	60,900	110,500	60.7	399.0	62,000	111,700	250
260	58.4	394.8	52,800	100,400	58.9	393.7	54,000	101,600	59.3	392.5	55,100	102,700	260
270	56.9	388.0	46,500	92,300	57.3	386.9	47,600	93,400	57.7	385.6	48,600	94,400	270
280	55.4	380.7	40,700	84,800	55.8	379.6	41,800	85,800	56.2	378.4	42,700	86,800	280
290	53.8	373.1	34,900	77,800	54.2	372.0	36,100	78,800	54.6	370.7	37,200	79,700	290
300	52.2	365.0	28,800	71,300	52.6	363.9	30,000	72,200	53.0	362.5	31,100	73,000	300
310	50.6	356.5	23,100	65,200	51.0	355.3	24,300	66,000	51.4	353.9	25,300	66,800	310
320	48.9	347.4	17,800	59,500	49.3	346.2	18,900	60,300	49.7	344.8	19,800	61,000	320
330	47.2	337.8	12,800	54,100	47.6	336.5	13,800	54,900	48.0	335.1	14,600	55,500	330
340	45.4	327.5		49,100	45.8	326.2		49,800	46.2	324.7		50,400	340
350	43.5	316.6		44,300	44.0	315.3		45,000	44.3	313.7		45,500	350
360	41.6	305.0		39,800	42.0	303.6		40,400	42.4	302.0		40,900	360
370	39.7	292.5		35,600	40.1	291.1		36,100	40.4	289.4		36,600	370
380	37.6	279.1		31,500	38.0	277.6		32,000	38.3	275.8		32,500	380
390	35.4	264.6		27,700	35.8	263.0		28,100	36.1	261.1		28,500	390

MLC650 VPC-MAX S-2

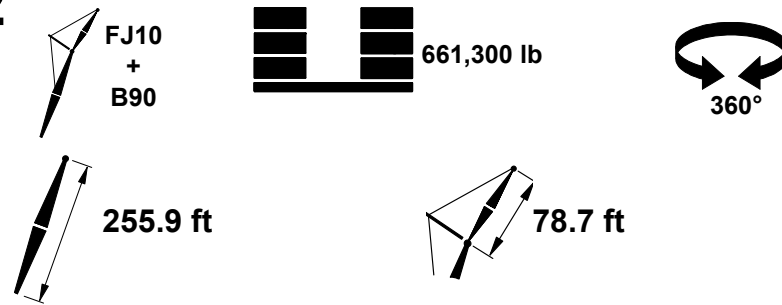
ASME B30.5



	10°				15°				20°				
	ft	°	ft	lb	lb	ft	lb	lb	ft	lb	lb	ft	
59	85.3	478.4	357,300	357,300									59
60	85.2	478.2	357,300	357,300									60
61	85.1	478.1	357,200	357,200									61
62	85.0	478.0	357,200	357,200									62
63	84.8	477.9	357,200	357,200	85.3	477.0	328,200	328,200					63
64	84.7	477.7	357,200	357,200	85.2	476.9	326,400	326,400					64
65	84.6	477.6	357,200	357,200	85.1	476.7	324,800	324,800					65
66	84.5	477.5	356,600	356,600	85.0	476.6	323,100	323,100					66
67	84.3	477.4	356,000	356,000	84.8	476.5	321,400	321,400	85.3	475.4	285,500	285,500	67
70	84.0	477.0	354,300	354,300	84.5	476.1	316,600	316,600	84.9	475.0	281,600	281,600	70
80	82.7	475.5	341,200	341,200	83.2	474.6	301,200	301,200	83.7	473.5	269,400	269,400	80
90	81.5	473.7	317,800	325,300	82.0	472.8	287,300	287,300	82.5	471.8	258,200	258,200	90
100	80.3	471.8	286,300	309,200	80.8	470.9	274,600	274,600	81.2	469.8	247,800	247,800	100
110	79.0	469.6	258,400	294,500	79.5	468.7	261,700	263,000	80.0	467.7	238,000	238,000	110
120	77.8	467.2	233,500	281,000	78.3	466.3	236,700	252,200	78.7	465.3	228,800	228,800	120
130	76.5	464.6	211,300	268,700	77.0	463.7	214,200	242,400	77.5	462.6	217,000	220,500	130
140	75.3	461.7	191,300	257,500	75.7	460.8	194,100	233,300	76.2	459.7	196,700	212,600	140
150	74.0	458.6	173,300	247,100	74.5	457.7	176,000	224,900	74.9	456.6	178,400	205,400	150
160	72.7	455.2	157,000	237,200	73.2	454.3	159,500	217,000	73.6	453.2	161,800	198,700	160
170	71.4	451.6	142,200	218,600	71.9	450.7	144,600	209,700	72.3	449.6	146,700	192,400	170
180	70.1	447.8	128,400	199,000	70.6	446.8	130,500	201,100	71.0	445.7	132,400	186,500	180
190	68.8	443.6	115,000	181,600	69.3	442.7	117,000	183,600	69.7	441.6	118,800	181,000	190
200	67.5	439.2	103,100	166,100	67.9	438.3	104,900	167,900	68.4	437.1	106,600	169,500	200
210	66.1	434.5	92,400	152,100	66.6	433.6	94,100	153,800	67.0	432.4	95,600	155,400	210
220	64.8	429.6	82,600	139,500	65.2	428.6	84,200	141,100	65.6	427.4	85,700	142,500	220
230	63.4	424.3	73,800	128,100	63.8	423.3	75,300	129,600	64.3	422.1	76,600	130,900	230
240	62.0	418.7	65,700	117,600	62.4	417.7	67,100	119,000	62.9	416.5	68,400	120,300	240
250	60.6	412.8	58,400	108,000	61.0	411.7	59,700	109,400	61.4	410.5	60,900	110,500	250
260	59.1	406.5	51,600	99,200	59.6	405.5	52,800	100,500	60.0	404.2	53,900	101,600	260
270	57.7	399.9	45,300	91,100	58.1	398.8	46,400	92,200	58.5	397.6	47,500	93,300	270
280	56.2	392.9	39,500	83,600	56.6	391.8	40,600	84,600	57.0	390.6	41,500	85,600	280
290	54.7	385.5	33,000	76,600	55.1	384.4	34,400	77,600	55.5	383.1	35,500	78,500	290
300	53.2	377.7	27,000	70,000	53.6	376.6	28,200	71,000	54.0	375.3	29,300	71,800	300
310	51.6	369.5	21,300	63,900	52.0	368.3	22,500	64,800	52.4	366.9	23,500	65,600	310
320	50.0	360.7	16,000	58,200	50.4	359.5	17,100	59,100	50.7	358.2	18,100	59,800	320
330	48.3	351.5	11,000	52,900	48.7	350.3	12,000	53,700	49.1	348.8	12,900	54,400	330
340	46.6	341.7		47,800	47.0	340.4		48,600	47.4	338.9		49,200	340
350	44.8	331.2		43,100	45.2	329.9		43,800	45.6	328.4		44,400	350
360	43.0	320.1		38,600	43.4	318.8		39,200	43.8	317.2		39,800	360
370	41.1	308.3		34,400	41.5	306.9		34,900	41.9	305.3		35,400	370
380	39.2	295.6		30,300	39.6	294.2		30,900	39.9	292.5		31,300	380
390	37.1	282.0		26,500	37.5	280.5		27,000	37.8	278.7		27,400	390
395	36.1	274.7		24,600	36.4	273.2		25,100	36.7	271.3		25,500	395
400					35.3	265.6		23,300	35.6	263.7		23,600	400

MLC650 VPC-MAX S-2

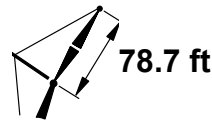
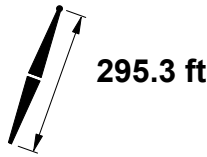
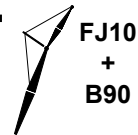
ASME B30.5



	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	ft	lb	lb	ft
50	84.9	341.0	417,300	417,300									50
51	84.7	340.8	416,000	416,000									51
52	84.5	340.7	414,700	414,700									52
53	84.4	340.5	412,600	412,600									53
54	84.2	340.4	408,300	408,300									54
55	84.0	340.2	404,000	404,000	84.8	339.5	337,200	337,200					55
56	83.8	340.1	399,800	399,800	84.6	339.3	334,100	334,100					56
57	83.7	339.9	395,700	395,700	84.5	339.2	331,000	331,000					57
58	83.5	339.8	391,600	391,600	84.3	339.0	328,000	328,000					58
60	83.1	339.4	383,800	383,800	83.9	338.7	322,100	322,100	84.8	337.6	266,700	266,700	60
61	83.0	339.3	380,100	380,100	83.8	338.5	319,300	319,300	84.6	337.4	264,600	264,600	61
62	82.8	339.1	376,400	376,400	83.6	338.3	316,600	316,600	84.5	337.2	262,600	262,600	62
63	82.6	338.9	372,700	372,700	83.4	338.2	313,800	313,800	84.3	337.1	260,600	260,600	63
65	82.3	338.6	365,400	365,400	83.1	337.8	308,300	308,300	83.9	336.7	256,700	256,700	65
70	81.4	337.6	348,600	348,600	82.2	336.9	295,600	295,600	83.1	335.7	247,500	247,500	70
75	80.5	336.6	333,200	333,200	81.3	335.8	283,800	283,800	82.2	334.7	238,800	238,800	75
80	79.6	335.5	319,100	319,100	80.4	334.7	272,900	272,900	81.3	333.6	230,800	230,800	80
85	78.8	334.3	306,000	306,000	79.6	333.5	262,900	262,900	80.4	332.4	223,200	223,200	85
90	77.9	333.0	293,800	293,800	78.7	332.2	253,400	253,400	79.5	331.1	216,200	216,200	90
95	77.0	331.6	282,400	282,400	77.8	330.9	244,700	244,700	78.6	329.7	209,500	209,500	95
100	76.1	330.2	271,900	271,900	76.9	329.4	236,500	236,500	77.7	328.3	203,300	203,300	100
105	75.2	328.7	262,100	262,100	76.0	327.9	228,900	228,900	76.8	326.7	197,400	197,400	105
110	74.3	327.1	253,000	253,000	75.1	326.3	221,700	221,700	75.9	325.1	191,800	191,800	110
115	73.4	325.4	244,400	244,400	74.2	324.6	215,000	215,000	75.0	323.4	186,600	186,600	115
120	72.5	323.6	236,400	236,400	73.3	322.8	208,700	208,700	74.1	321.6	181,600	181,600	120
125	71.6	321.7	229,000	229,000	72.3	320.9	202,600	202,600	73.2	319.7	176,900	176,900	125
130	70.6	319.7	221,900	221,900	71.4	318.9	196,900	196,900	72.2	317.7	172,500	172,500	130
135	69.7	317.7	215,300	215,300	70.5	316.8	191,600	191,600	71.3	315.7	168,200	168,200	135
140	68.8	315.5	209,000	209,000	69.5	314.7	186,500	186,500	70.4	313.5	164,100	164,100	140
150	66.9	310.9	197,500	197,500	67.6	310.0	177,100	177,100	68.5	308.8	156,600	156,600	150
160	65.0	305.8	180,200	187,100	65.7	305.0	168,600	168,600	66.5	303.8	149,800	149,800	160
170	63.0	300.4	163,500	177,700	63.8	299.5	160,800	160,800	64.5	298.3	143,500	143,500	170
180	61.0	294.5	148,700	169,200	61.8	293.6	150,300	153,700	62.5	292.3	137,700	137,700	180
190	59.0	288.0	135,600	161,400	59.7	287.2	137,100	147,200	60.5	285.8	132,400	132,400	190
200	56.9	281.1	123,900	154,300	57.6	280.2	125,200	141,200	58.4	278.9	126,700	127,400	200
210	54.7	273.6	113,400	147,800	55.5	272.7	114,600	135,700	56.2	271.3	115,900	122,900	210
220	52.5	265.5	103,800	141,800	53.2	264.6	105,000	130,700	54.0	263.1	106,200	118,700	220
230	50.3	256.8	95,200	136,300	51.0	255.8	96,200	126,000	51.7	254.3	97,300	114,800	230
240	47.9	247.3	87,200	131,200	48.6	246.2	88,200	121,600	49.3	244.7	89,200	111,200	240
250	45.4	236.9	79,900	126,400	46.1	235.8	80,800	117,600	46.8	234.2	81,700	107,900	250
260	42.8	225.6	73,200	120,900	43.5	224.4	74,000	113,800	44.2	222.7	74,800	104,700	260
270	40.1	213.2	67,000	112,800	40.7	211.9	67,700	110,300	41.4	210.1	68,400	101,900	270
280	37.2	199.4	61,200	105,300	37.8	198.1	61,800	105,900	38.4	196.1	62,500	99,200	280
285	35.6	191.9	58,500	101,800	36.2	190.5	59,100	102,300	36.8	188.5	59,600	98,100	285

MLC650 VPC-MAX S-2

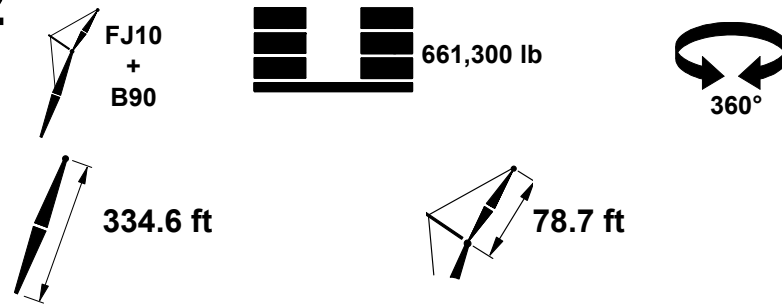
ASME B30.5



	10°				15°				20°				
ft	°	ft	lb	lb	°	ft	lb	lb	°	ft	lb	lb	ft
56	84.9	379.5	390,400	390,400									56
57	84.7	379.3	387,000	387,000									57
58	84.6	379.2	383,500	383,500									58
59	84.4	379.0	380,000	380,000									59
60	84.2	378.9	376,700	376,700	84.9	378.0	318,400	318,400					60
61	84.1	378.7	373,500	373,500	84.8	377.9	316,000	316,000					61
62	83.9	378.6	370,300	370,300	84.6	377.7	313,500	313,500					62
63	83.8	378.4	367,100	367,100	84.5	377.6	311,100	311,100					63
65	83.5	378.1	360,700	360,700	84.2	377.2	306,400	306,400	84.9	376.0	254,900	254,900	65
66	83.3	377.9	357,800	357,800	84.0	377.1	304,100	304,100	84.8	375.8	253,200	253,200	66
67	83.1	377.8	354,900	354,900	83.8	376.9	301,800	301,800	84.6	375.6	251,600	251,600	67
68	83.0	377.6	351,900	351,900	83.7	376.7	299,600	299,600	84.5	375.5	250,000	250,000	68
70	82.7	377.3	346,100	346,100	83.4	376.4	295,100	295,100	84.1	375.1	246,800	246,800	70
75	81.9	376.3	332,400	332,400	82.6	375.5	284,700	284,700	83.4	374.2	239,200	239,200	75
80	81.1	375.3	319,900	319,900	81.8	374.5	275,000	275,000	82.6	373.2	232,000	232,000	80
85	80.3	374.3	308,100	308,100	81.0	373.4	265,800	265,800	81.8	372.1	225,200	225,200	85
90	79.6	373.1	297,200	297,200	80.2	372.3	257,300	257,300	81.0	371.0	218,800	218,800	90
95	78.8	371.9	287,000	287,000	79.4	371.1	249,300	249,300	80.2	369.8	212,800	212,800	95
100	78.0	370.7	277,600	277,600	78.6	369.8	241,700	241,700	79.4	368.5	207,100	207,100	100
105	77.2	369.3	268,600	268,600	77.8	368.4	234,600	234,600	78.6	367.1	201,600	201,600	105
110	76.4	367.9	260,200	260,200	77.0	367.0	227,900	227,900	77.8	365.7	196,500	196,500	110
115	75.6	366.4	252,400	252,400	76.2	365.5	221,600	221,600	77.0	364.2	191,600	191,600	115
120	74.8	364.8	245,000	245,000	75.4	363.9	215,600	215,600	76.2	362.6	187,000	187,000	120
130	73.1	361.4	231,300	231,300	73.8	360.5	204,600	204,600	74.5	359.1	178,400	178,400	130
140	71.5	357.7	216,200	219,000	72.2	356.7	194,600	194,600	72.9	355.4	170,500	170,500	140
150	69.8	353.6	193,800	207,900	70.5	352.7	185,500	185,500	71.2	351.3	163,300	163,300	150
160	68.2	349.2	174,500	197,700	68.8	348.3	176,600	177,200	69.5	346.9	156,700	156,700	160
170	66.5	344.5	157,600	188,500	67.1	343.5	159,500	169,700	67.8	342.1	150,700	150,700	170
180	64.7	339.3	142,700	180,100	65.4	338.4	144,500	162,800	66.1	336.9	145,100	145,100	180
190	63.0	333.8	129,500	172,400	63.6	332.8	131,100	156,400	64.3	331.4	132,900	139,900	190
200	61.2	327.9	117,600	165,300	61.8	326.9	119,200	150,500	62.5	325.4	120,800	135,100	200
210	59.4	321.5	107,000	158,800	60.0	320.5	108,400	145,000	60.7	319.0	110,000	130,600	210
220	57.5	314.7	97,400	152,700	58.1	313.7	98,700	139,900	58.8	312.1	100,100	126,400	220
230	55.6	307.4	88,700	142,900	56.2	306.3	89,900	135,200	56.9	304.7	91,200	122,500	230
240	53.6	299.6	80,700	132,500	54.2	298.4	81,800	130,800	54.9	296.8	83,000	119,000	240
250	51.6	291.1	73,300	123,000	52.2	290.0	74,400	124,100	52.9	288.3	75,500	115,600	250
260	49.6	282.1	66,600	114,300	50.1	280.9	67,600	115,200	50.8	279.2	68,600	112,400	260
270	47.4	272.4	60,400	106,200	48.0	271.1	61,200	107,000	48.6	269.3	62,200	108,000	270
280	45.2	261.9	54,600	98,700	45.8	260.6	55,400	99,500	46.3	258.7	56,200	100,300	280
290	42.9	250.5	49,200	91,700	43.4	249.1	49,900	92,400	44.0	247.2	50,700	93,200	290
300	40.4	238.1	44,100	85,100	40.9	236.7	44,800	85,800	41.5	234.6	45,500	86,500	300
310	37.8	224.5	39,400	79,000	38.3	223.0	40,000	79,600	38.9	220.8	40,600	80,200	310
315	36.5	217.2	37,200	76,100	37.0	215.7	37,700	76,700	37.5	213.4	38,300	77,200	315
320					35.5	207.9	35,500	73,800	36.0	205.5	36,000	74,300	320

MLC650 VPC-MAX S-2

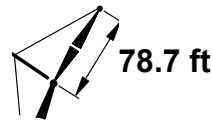
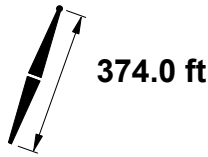
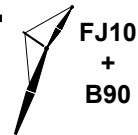
ASME B30.5



	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	ft	lb	lb	ft
60	84.9	418.5	362,200	362,200									60
61	84.8	418.3	359,500	359,500									61
62	84.6	418.2	356,900	356,900									62
63	84.5	418.1	354,200	354,200									63
65	84.2	417.8	349,100	349,100	84.9	416.8	299,500	299,500					65
66	84.1	417.6	346,700	346,700	84.7	416.6	297,600	297,600					66
67	83.9	417.5	344,300	344,300	84.6	416.5	295,600	295,600					67
68	83.8	417.3	341,800	341,800	84.4	416.3	293,700	293,700					68
70	83.5	417.0	336,900	336,900	84.2	416.0	289,900	289,900	84.9	414.6	242,500	242,500	70
71	83.4	416.8	334,600	334,600	84.0	415.8	288,100	288,100	84.7	414.4	241,100	241,100	71
72	83.2	416.7	332,300	332,300	83.9	415.7	286,300	286,300	84.6	414.2	239,800	239,800	72
73	83.1	416.5	330,000	330,000	83.7	415.5	284,500	284,500	84.5	414.1	238,500	238,500	73
75	82.8	416.2	325,300	325,300	83.5	415.2	280,900	280,900	84.2	413.7	235,900	235,900	75
80	82.1	415.3	314,500	314,500	82.7	414.3	272,300	272,300	83.5	412.8	229,600	229,600	80
85	81.4	414.3	304,300	304,300	82.0	413.3	264,300	264,300	82.8	411.9	223,600	223,600	85
90	80.7	413.3	294,700	294,700	81.3	412.3	256,600	256,600	82.0	410.8	217,900	217,900	90
95	80.0	412.2	285,700	285,700	80.6	411.2	249,400	249,400	81.3	409.7	212,500	212,500	95
100	79.3	411.1	277,200	277,200	79.9	410.0	242,700	242,700	80.6	408.6	207,400	207,400	100
110	77.8	408.6	261,600	261,600	78.5	407.5	230,100	230,100	79.2	406.1	197,800	197,800	110
120	76.4	405.8	247,700	247,700	77.0	404.8	218,700	218,700	77.7	403.3	189,100	189,100	120
130	74.9	402.7	235,100	235,100	75.6	401.7	208,500	208,500	76.2	400.2	181,200	181,200	130
140	73.5	399.4	214,500	223,800	74.1	398.4	199,200	199,200	74.8	396.9	173,900	173,900	140
150	72.0	395.8	192,000	213,400	72.6	394.7	190,600	190,600	73.3	393.2	167,200	167,200	150
160	70.5	391.9	172,500	204,000	71.1	390.8	174,700	182,700	71.8	389.3	160,900	160,900	160
170	69.0	387.7	155,500	195,400	69.6	386.6	157,500	175,500	70.3	385.0	155,200	155,200	170
180	67.4	383.1	140,500	187,500	68.1	382.1	142,400	168,900	68.7	380.5	144,500	149,800	180
190	65.9	378.3	127,200	180,100	66.5	377.2	129,000	162,700	67.2	375.6	130,900	144,900	190
200	64.3	373.1	115,300	173,300	64.9	372.0	117,000	157,000	65.6	370.3	118,800	140,200	200
210	62.7	367.5	104,600	164,400	63.3	366.4	106,200	151,600	64.0	364.7	107,800	135,900	210
220	61.1	361.6	95,000	151,800	61.7	360.4	96,400	146,600	62.4	358.8	97,900	131,800	220
230	59.5	355.3	86,200	140,400	60.1	354.1	87,500	141,800	60.7	352.4	88,900	128,000	230
240	57.8	348.6	78,100	130,000	58.4	347.4	79,400	131,300	59.0	345.6	80,700	124,400	240
250	56.1	341.4	70,800	120,500	56.7	340.2	72,000	121,600	57.3	338.4	73,200	121,100	250
260	54.3	333.7	64,000	111,700	54.9	332.5	65,100	112,800	55.5	330.7	66,300	113,900	260
270	52.5	325.6	57,800	103,600	53.1	324.3	58,800	104,600	53.7	322.5	59,800	105,600	270
280	50.7	316.9	52,000	96,000	51.3	315.6	52,900	97,000	51.8	313.7	53,900	98,000	280
290	48.8	307.7	46,600	89,000	49.4	306.3	47,400	89,900	49.9	304.3	48,300	90,800	290
300	46.8	297.7	41,500	82,500	47.4	296.3	42,300	83,300	47.9	294.3	43,200	84,200	300
310	44.8	287.1	36,800	76,400	45.3	285.6	37,600	77,200	45.9	283.5	38,300	77,900	310
320	42.7	275.7	32,400	70,700	43.2	274.1	33,100	71,400	43.7	271.9	33,800	72,100	320
330	40.5	263.3	28,200	65,400	41.0	261.7	28,900	66,000	41.5	259.4	29,500	66,600	330
340	38.2	250.0	23,700	60,300	38.7	248.3	24,400	60,800	39.1	245.8	25,200	61,400	340
350	35.7	235.3	19,200	55,500	36.2	233.5	19,800	56,000	36.6	230.9	20,500	56,500	350
355									35.3	222.9	18,200	54,100	355

MLC650 VPC-MAX S-2

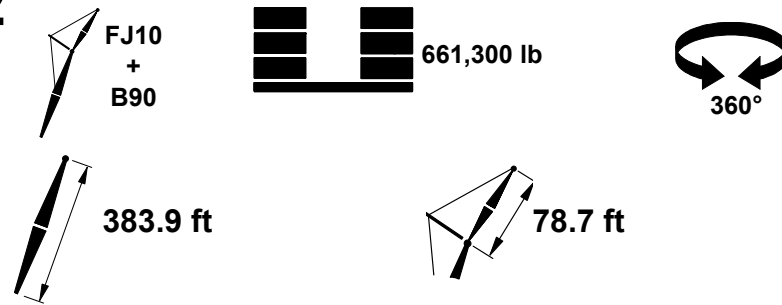
ASME B30.5

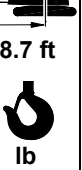
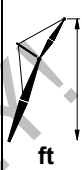
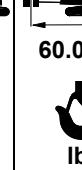


	10°				15°				20°				
ft	°	ft	lb	lb	°	ft	lb	lb	°	ft	lb	lb	ft
65	84.7	457.5	339,600	339,600									65
66	84.6	457.3	337,500	337,500									66
67	84.5	457.2	335,300	335,300									67
68	84.4	457.0	333,200	333,200									68
69	84.2	456.9	331,100	331,100	84.8	455.9	287,200	287,200					69
70	84.1	456.8	329,000	329,000	84.7	455.7	285,500	285,500					70
71	84.0	456.6	327,000	327,000	84.6	455.6	283,900	283,900					71
72	83.8	456.5	325,000	325,000	84.4	455.4	282,200	282,200					72
74	83.6	456.2	321,000	321,000	84.2	455.1	279,100	279,100	84.8	453.7	234,100	234,100	74
75	83.5	456.0	319,000	319,000	84.0	455.0	277,500	277,500	84.7	453.5	233,000	233,000	75
76	83.3	455.8	317,100	317,100	83.9	454.8	276,000	276,000	84.6	453.4	231,800	231,800	76
77	83.2	455.7	315,200	315,200	83.8	454.6	274,400	274,400	84.4	453.2	230,700	230,700	77
80	82.8	455.2	309,500	309,500	83.4	454.2	269,900	269,900	84.1	452.7	227,400	227,400	80
90	81.5	453.4	292,100	292,100	82.1	452.4	255,800	255,800	82.8	450.9	216,900	216,900	90
100	80.2	451.4	276,500	276,500	80.8	450.3	243,100	243,100	81.4	448.9	207,400	207,400	100
110	78.9	449.1	262,500	262,500	79.5	448.0	231,700	231,700	80.1	446.6	198,700	198,700	110
120	77.6	446.6	245,600	249,700	78.2	445.5	221,200	221,200	78.8	444.0	190,600	190,600	120
130	76.3	443.8	222,800	238,100	76.9	442.8	211,700	211,700	77.5	441.3	183,300	183,300	130
140	75.0	440.8	202,300	227,500	75.5	439.7	202,900	202,900	76.2	438.2	176,500	176,500	140
150	73.6	437.5	183,900	217,800	74.2	436.5	186,700	194,800	74.8	435.0	170,200	170,200	150
160	72.3	434.0	166,900	209,000	72.9	432.9	169,400	187,400	73.5	431.4	164,300	164,300	160
170	70.9	430.2	149,800	200,700	71.5	429.1	152,100	180,500	72.1	427.6	154,600	158,900	170
180	69.6	426.2	134,700	193,100	70.1	425.1	136,800	174,100	70.7	423.5	139,100	153,800	180
190	68.2	421.8	121,300	186,100	68.7	420.7	123,300	168,200	69.3	419.1	125,400	149,000	190
200	66.8	417.2	109,400	172,300	67.3	416.0	111,200	162,600	67.9	414.5	113,200	144,500	200
210	65.4	412.2	98,600	158,400	65.9	411.1	100,300	157,400	66.5	409.5	102,200	140,400	210
220	63.9	407.0	88,900	145,800	64.5	405.8	90,500	147,400	65.0	404.2	92,200	136,400	220
230	62.5	401.4	80,000	134,300	63.0	400.2	81,500	135,800	63.6	398.6	83,200	132,700	230
240	61.0	395.4	72,000	123,800	61.5	394.3	73,400	125,200	62.1	392.6	74,900	126,800	240
250	59.5	389.2	64,600	114,200	60.0	388.0	65,900	115,600	60.6	386.3	67,300	117,000	250
260	58.0	382.5	57,800	105,400	58.5	381.3	59,000	106,700	59.0	379.6	60,300	108,000	260
270	56.4	375.5	51,500	97,300	56.9	374.2	52,600	98,400	57.5	372.4	53,900	99,700	270
280	54.8	368.0	45,600	89,700	55.3	366.7	46,700	90,800	55.9	364.9	47,900	92,000	280
290	53.2	360.1	40,200	82,700	53.7	358.8	41,200	83,700	54.2	356.9	42,300	84,800	290
300	51.6	351.7	35,200	76,200	52.1	350.3	36,100	77,100	52.6	348.5	37,100	78,100	300
310	49.9	342.8	29,800	70,100	50.4	341.4	31,000	71,000	50.9	339.5	32,200	71,900	310
320	48.1	333.3	24,500	64,300	48.6	331.9	25,500	65,200	49.1	329.9	26,700	66,000	320
330	46.3	323.3	19,400	59,000	46.8	321.8	20,400	59,700	47.3	319.7	21,500	60,500	330
340	44.4	312.5	14,700	53,900	44.9	311.0	15,600	54,600	45.4	308.9	16,500	55,400	340
350	42.5	301.1	10,200	49,100	43.0	299.5	11,000	49,800	43.4	297.3	11,900	50,500	350
360	40.5	288.8		44,600	40.9	287.1		45,200	41.4	284.8		45,800	360
370	38.4	275.6		40,400	38.8	273.8		40,900	39.3	271.4		41,500	370
380	36.2	261.2		36,300	36.6	259.4		36,800	37.0	256.8		37,300	380
385					35.4	251.7		34,800	35.8	249.0		35,300	385

MLC650 VPC-MAX S-2

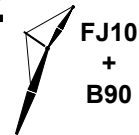
ASME B30.5



	10°				15°				20°				
													
ft	°	ft	lb	lb	°	ft	lb	lb	°	ft	lb	lb	ft
64	84.7	467.9	344,400	344,400									64
65	84.6	467.8	343,900	343,900									65
66	84.4	467.7	343,300	343,300									66
67	84.3	467.5	342,800	342,800									67
68	84.2	467.4	342,200	342,200	84.8	466.5	306,500	306,500					68
69	84.0	467.3	341,700	341,700	84.7	466.3	304,700	304,700					69
70	83.9	467.1	341,100	341,100	84.5	466.2	303,000	303,000					70
71	83.8	467.0	340,500	340,500	84.4	466.0	301,300	301,300					71
72	83.7	466.8	339,900	339,900	84.3	465.9	299,600	299,600	84.8	464.8	260,000	260,000	72
73	83.5	466.7	339,400	339,400	84.2	465.7	297,900	297,900	84.7	464.6	258,700	258,700	73
74	83.4	466.5	338,800	338,800	84.0	465.6	296,300	296,300	84.6	464.5	257,300	257,300	74
75	83.3	466.4	338,200	338,200	83.9	465.4	294,600	294,600	84.5	464.3	256,100	256,100	75
80	82.7	465.6	329,100	329,100	83.3	464.6	286,700	286,700	83.8	463.5	249,600	249,600	80
90	81.4	463.8	310,100	310,100	82.0	462.9	272,100	272,100	82.6	461.7	237,600	237,600	90
100	80.1	461.8	292,100	292,100	80.7	460.9	258,800	258,800	81.3	459.7	226,700	226,700	100
110	78.9	459.6	264,100	277,600	79.5	458.7	246,700	246,700	80.0	457.5	216,800	216,800	110
120	77.6	457.2	239,200	263,700	78.2	456.2	235,600	235,600	78.7	455.1	207,700	207,700	120
130	76.3	454.5	216,900	251,100	76.9	453.5	220,100	225,600	77.4	452.3	199,300	199,300	130
140	75.0	451.5	197,000	239,600	75.6	450.6	200,000	216,300	76.1	449.4	191,600	191,600	140
150	73.7	448.3	179,000	229,100	74.3	447.4	181,800	207,400	74.8	446.2	184,500	184,500	150
160	72.4	444.9	162,700	219,500	73.0	443.9	165,400	199,300	73.5	442.7	167,900	177,900	160
170	71.1	441.2	147,500	210,600	71.7	440.2	149,900	191,800	72.2	439.0	152,100	171,800	170
180	69.7	437.3	132,400	202,400	70.3	436.3	134,700	184,700	70.8	435.0	136,800	166,000	180
190	68.4	433.0	119,100	185,700	69.0	432.0	121,200	178,300	69.5	430.8	123,200	160,600	190
200	67.0	428.5	107,200	170,200	67.6	427.5	109,200	172,200	68.1	426.2	111,000	155,600	200
210	65.7	423.7	96,500	156,300	66.2	422.7	98,300	158,100	66.7	421.4	100,000	151,000	210
220	64.3	418.6	86,800	143,700	64.8	417.5	88,500	145,400	65.3	416.3	90,100	146,500	220
230	62.8	413.2	78,000	132,300	63.4	412.1	79,600	133,900	63.9	410.8	81,100	135,400	230
240	61.4	407.4	70,000	121,900	62.0	406.3	71,500	123,400	62.5	405.0	72,900	124,800	240
250	60.0	401.3	62,600	112,300	60.5	400.2	64,100	113,700	61.0	398.9	65,400	115,000	250
260	58.5	394.9	55,900	103,500	59.0	393.8	57,200	104,900	59.5	392.4	58,400	106,100	260
270	57.0	388.1	49,600	95,400	57.5	386.9	50,900	96,700	58.0	385.6	52,000	97,800	270
280	55.4	380.8	43,800	87,900	56.0	379.7	45,000	89,100	56.5	378.3	46,100	90,100	280
290	53.9	373.2	38,400	80,900	54.4	372.0	39,500	82,000	54.9	370.6	40,500	83,000	290
300	52.3	365.1	33,000	74,400	52.8	363.9	34,400	75,500	53.3	362.5	35,400	76,400	300
310	50.7	356.6	27,400	68,300	51.2	355.3	28,600	69,300	51.6	353.8	29,800	70,200	310
320	49.0	347.5	22,100	62,700	49.5	346.2	23,300	63,600	49.9	344.7	24,300	64,400	320
330	47.3	337.9	17,100	57,300	47.8	336.6	18,200	58,200	48.2	335.0	19,200	58,900	330
340	45.5	327.6	12,400	52,300	46.0	326.3	13,400	53,100	46.4	324.7	14,300	53,800	340
350	43.6	316.7		47,500	44.1	315.4		48,300	44.6	313.7		48,900	350
360	41.7	305.1		43,100	42.2	303.7		43,800	42.6	301.9		44,300	360
370	39.8	292.6		38,800	40.2	291.1		39,500	40.6	289.3		40,000	370
380	37.7	279.2		34,800	38.1	277.6		35,400	38.5	275.7		35,900	380
390	35.5	264.7		31,000	35.9	263.0		31,500	36.3	261.0		31,900	390

MLC650 VPC-MAX S-2

ASME B30.5



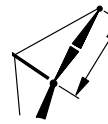
661,300 lb



360°



393.7 ft

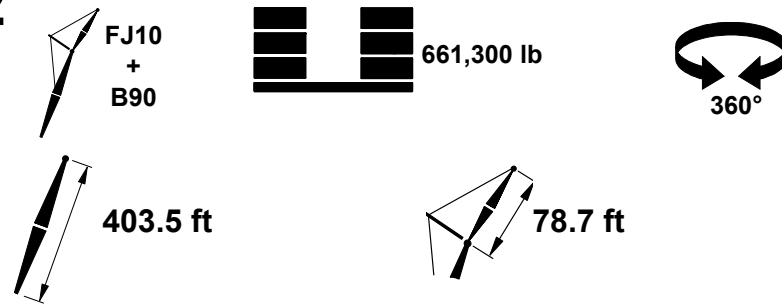


78.7 ft

	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	ft	lb	lb	ft
65	84.7	477.7	341,500	341,500									65
66	84.5	477.6	341,000	341,000									66
67	84.4	477.5	340,500	340,500									67
68	84.3	477.3	340,000	340,000									68
69	84.2	477.2	339,500	339,500	84.8	476.3	303,600	303,600					69
70	84.0	477.1	339,000	339,000	84.6	476.1	301,900	301,900					70
71	83.9	476.9	338,400	338,400	84.5	476.0	300,300	300,300					71
72	83.8	476.8	337,800	337,800	84.4	475.9	298,700	298,700					72
74	83.5	476.5	336,600	336,600	84.1	475.6	295,500	295,500	84.7	474.5	256,700	256,700	74
75	83.4	476.3	336,100	336,100	84.0	475.4	293,800	293,800	84.6	474.3	255,500	255,500	75
80	82.8	475.6	328,500	328,500	83.4	474.6	286,100	286,100	83.9	473.5	249,100	249,100	80
90	81.6	473.8	310,000	310,000	82.2	472.9	271,900	271,900	82.7	471.8	237,500	237,500	90
100	80.3	471.9	287,500	293,400	80.9	471.0	258,900	258,900	81.5	469.9	226,800	226,800	100
110	79.1	469.7	259,700	278,400	79.7	468.8	247,200	247,200	80.2	467.7	217,100	217,100	110
120	77.8	467.3	235,000	264,800	78.4	466.4	236,300	236,300	78.9	465.3	208,200	208,200	120
130	76.6	464.7	212,900	252,400	77.2	463.7	216,200	226,400	77.7	462.6	199,900	199,900	130
140	75.3	461.8	193,000	241,000	75.9	460.9	196,200	217,300	76.4	459.7	192,400	192,400	140
150	74.0	458.7	175,100	230,700	74.6	457.8	178,100	208,600	75.1	456.6	180,800	185,300	150
160	72.8	455.4	158,900	221,100	73.3	454.4	161,700	200,500	73.8	453.2	164,300	178,800	160
170	71.5	451.8	144,200	212,300	72.0	450.8	146,800	193,100	72.5	449.6	149,200	172,700	170
180	70.2	447.9	130,100	200,700	70.7	446.9	132,500	186,200	71.2	445.7	134,600	167,100	180
190	68.9	443.8	116,800	183,300	69.4	442.8	119,000	179,700	69.9	441.6	120,900	161,800	190
200	67.5	439.3	104,800	167,800	68.1	438.3	106,900	169,900	68.6	437.2	108,700	156,800	200
210	66.2	434.7	94,100	153,900	66.7	433.6	96,000	155,800	67.2	432.4	97,700	152,200	210
220	64.8	429.7	84,400	141,300	65.4	428.7	86,200	143,100	65.9	427.4	87,800	144,700	220
230	63.5	424.4	75,600	129,800	64.0	423.4	77,300	131,500	64.5	422.1	78,800	133,000	230
240	62.1	418.8	67,500	119,400	62.6	417.8	69,100	121,000	63.1	416.5	70,500	122,400	240
250	60.6	412.9	60,100	109,800	61.2	411.8	61,600	111,300	61.7	410.6	63,000	112,700	250
260	59.2	406.6	53,400	101,000	59.8	405.6	54,800	102,400	60.2	404.3	56,000	103,700	260
270	57.8	400.0	47,100	92,900	58.3	398.9	48,400	94,200	58.8	397.6	49,600	95,400	270
280	56.3	393.0	41,300	85,400	56.8	391.9	42,500	86,600	57.3	390.6	43,600	87,700	280
290	54.8	385.7	35,500	78,400	55.3	384.5	37,000	79,500	55.7	383.1	38,100	80,600	290
300	53.2	377.9	29,500	71,900	53.7	376.7	30,900	73,000	54.2	375.3	32,100	73,900	300
310	51.6	369.6	23,800	65,800	52.2	368.4	25,100	66,800	52.6	367.0	26,300	67,700	310
320	50.0	360.9	18,500	60,100	50.5	359.6	19,700	61,000	51.0	358.2	20,800	61,900	320
330	48.4	351.6	13,500	54,700	48.9	350.3	14,700	55,600	49.3	348.9	15,700	56,400	330
340	46.7	341.8		49,700	47.2	340.5		50,500	47.6	339.0	10,800	51,300	340
350	44.9	331.4		45,000	45.4	330.0		45,700	45.8	328.5		46,400	350
360	43.1	320.3		40,500	43.6	318.9		41,200	44.0	317.3		41,800	360
370	41.2	308.5		36,200	41.7	307.0		36,900	42.1	305.3		37,500	370
380	39.3	295.8		32,200	39.7	294.3		32,800	40.1	292.5		33,300	380
390	37.2	282.2		28,400	37.7	280.6		28,900	38.0	278.7		29,400	390
395	36.1	274.9		26,500	36.6	273.3		27,100	36.9	271.4		27,500	395
400					35.5	265.7		25,200	35.8	263.7		25,700	400

MLC650 VPC-MAX S-2

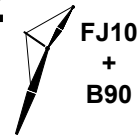
ASME B30.5



	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	ft	lb	lb	ft
66	84.6	487.5	332,700	332,700									66
67	84.5	487.4	332,700	332,700									67
68	84.4	487.3	332,700	332,700									68
69	84.3	487.1	332,700	332,700									69
70	84.2	487.0	332,600	332,600	84.7	486.1	299,000	299,000					70
71	84.0	486.9	332,100	332,100	84.6	485.9	297,400	297,400					71
72	83.9	486.7	331,700	331,700	84.5	485.8	295,800	295,800					72
73	83.8	486.6	331,200	331,200	84.4	485.7	294,300	294,300					73
75	83.6	486.3	330,300	330,300	84.1	485.4	291,300	291,300	84.7	484.3	254,000	254,000	75
80	83.0	485.5	324,300	324,300	83.5	484.6	283,800	283,800	84.1	483.5	247,800	247,800	80
90	81.8	483.8	307,600	307,600	82.3	482.9	270,100	270,100	82.8	481.8	236,600	236,600	90
100	80.5	481.9	283,400	291,700	81.1	481.0	257,600	257,600	81.6	479.9	226,100	226,100	100
110	79.3	479.8	256,100	277,100	79.9	478.9	246,200	246,200	80.4	477.8	216,700	216,700	110
120	78.1	477.5	231,800	263,900	78.7	476.5	235,300	235,600	79.2	475.4	208,000	208,000	120
130	76.9	474.9	209,900	251,800	77.4	473.9	213,300	226,000	77.9	472.8	200,000	200,000	130
140	75.6	472.1	190,300	240,900	76.2	471.1	193,500	217,200	76.7	470.0	192,500	192,500	140
150	74.4	469.0	172,600	230,700	74.9	468.1	175,600	208,900	75.5	466.9	178,300	185,600	150
160	73.1	465.8	156,500	221,300	73.7	464.8	159,300	201,000	74.2	463.6	161,900	179,200	160
170	71.9	462.2	141,900	212,700	72.4	461.3	144,500	193,700	72.9	460.1	147,000	173,200	170
180	70.6	458.5	128,500	199,500	71.2	457.5	131,000	186,900	71.6	456.3	133,300	167,600	180
190	69.3	454.4	115,600	182,200	69.9	453.4	117,800	180,500	70.4	452.3	119,900	162,400	190
200	68.0	450.1	103,600	166,600	68.6	449.1	105,700	168,700	69.1	447.9	107,600	157,500	200
210	66.7	445.6	92,900	152,700	67.3	444.5	94,900	154,600	67.7	443.3	96,600	152,900	210
220	65.4	440.7	83,200	140,100	65.9	439.7	85,000	141,900	66.4	438.5	86,700	143,600	220
230	64.0	435.6	74,400	128,600	64.6	434.5	76,100	130,300	65.1	433.3	77,600	131,900	230
240	62.7	430.1	66,300	118,200	63.2	429.1	67,900	119,800	63.7	427.8	69,400	121,300	240
250	61.3	424.4	58,900	108,600	61.8	423.3	60,400	110,100	62.3	422.0	61,800	111,500	250
260	59.9	418.3	52,100	99,800	60.5	417.2	53,600	101,200	60.9	415.9	54,800	102,500	260
270	58.5	411.9	45,800	91,600	59.0	410.8	47,200	93,000	59.5	409.5	48,400	94,200	270
280	57.1	405.1	40,000	84,100	57.6	404.0	41,300	85,400	58.0	402.6	42,400	86,500	280
290	55.6	397.9	33,700	77,100	56.1	396.8	35,200	78,300	56.6	395.4	36,600	79,400	290
300	54.1	390.4	27,600	70,600	54.6	389.2	29,100	71,700	55.1	387.8	30,400	72,700	300
310	52.6	382.4	22,000	64,500	53.1	381.2	23,300	65,600	53.5	379.8	24,600	66,500	310
320	51.0	374.0	16,700	58,800	51.5	372.8	18,000	59,800	52.0	371.3	19,100	60,700	320
330	49.4	365.1	11,700	53,500	49.9	363.8	12,900	54,400	50.4	362.3	14,000	55,200	330
340	47.8	355.7		48,400	48.3	354.4		49,300	48.7	352.8		50,100	340
350	46.1	345.7		43,700	46.6	344.3		44,500	47.0	342.8		45,200	350
360	44.4	335.1		39,200	44.9	333.7		40,000	45.3	332.1		40,600	360
370	42.6	323.8		35,000	43.1	322.4		35,700	43.4	320.7		36,300	370
380	40.7	311.8		31,000	41.2	310.3		31,600	41.6	308.5		32,200	380
390	38.8	298.9		27,100	39.2	297.3		27,700	39.6	295.5		28,200	390
400	36.8	285.0		23,500	37.2	283.4		24,000	37.5	281.5		24,500	400
405	35.7	277.7		21,300	36.1	276.0		22,000	36.5	274.1		22,600	405
410									35.4	266.3		20,400	410

MLC650 VPC-MAX S-2

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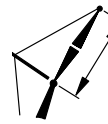
661,300 lb



360°



255.9 ft

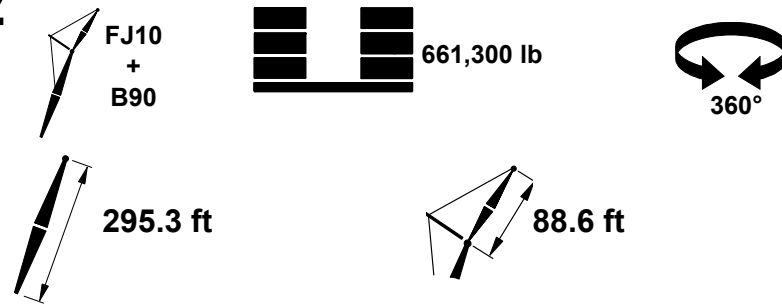


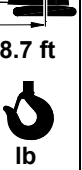
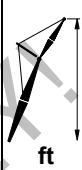
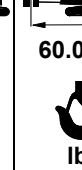
88.6 ft

	10°				15°				20°				
	ft	o	ft	lb	lb	ft	lb	lb	ft	lb	lb	ft	
51	85.0	350.8	383,600	383,600									51
52	84.8	350.7	382,400	382,400									52
53	84.6	350.5	381,200	381,200									53
54	84.4	350.4	380,100	380,100									54
56	84.1	350.1	377,700	377,700									56
57	83.9	350.0	373,800	373,800	84.8	349.2	309,300	309,300					57
58	83.8	349.8	369,900	369,900	84.6	349.0	306,400	306,400					58
59	83.6	349.6	365,900	365,900	84.5	348.9	303,500	303,500					59
60	83.4	349.5	362,000	362,000	84.3	348.7	300,700	300,700					60
62	83.1	349.1	354,600	354,600	84.0	348.4	295,300	295,300	85.0	347.2	244,000	244,000	62
63	82.9	349.0	350,900	350,900	83.8	348.2	292,700	292,700	84.8	347.0	242,000	242,000	63
64	82.8	348.8	347,200	347,200	83.6	348.0	290,000	290,000	84.6	346.9	240,200	240,200	64
65	82.6	348.6	343,500	343,500	83.5	347.9	287,300	287,300	84.4	346.7	238,300	238,300	65
70	81.7	347.7	326,800	326,800	82.6	346.9	275,100	275,100	83.6	345.7	229,400	229,400	70
75	80.9	346.7	311,500	311,500	81.8	345.9	263,800	263,800	82.7	344.7	221,200	221,200	75
80	80.0	345.6	297,600	297,600	80.9	344.9	253,400	253,400	81.9	343.7	213,400	213,400	80
85	79.2	344.5	284,700	284,700	80.0	343.7	243,800	243,800	81.0	342.5	206,300	206,300	85
90	78.3	343.2	273,000	273,000	79.2	342.5	234,700	234,700	80.2	341.2	199,500	199,500	90
95	77.5	341.9	262,100	262,100	78.3	341.1	226,400	226,400	79.3	339.9	193,200	193,200	95
100	76.6	340.5	252,000	252,000	77.5	339.7	218,600	218,600	78.4	338.5	187,200	187,200	100
105	75.7	339.0	242,700	242,700	76.6	338.2	211,300	211,300	77.5	337.0	181,600	181,600	105
110	74.9	337.5	234,000	234,000	75.7	336.7	204,500	204,500	76.7	335.5	176,400	176,400	110
115	74.0	335.8	225,800	225,800	74.8	335.0	198,100	198,100	75.8	333.8	171,400	171,400	115
120	73.1	334.1	218,300	218,300	73.9	333.3	192,000	192,000	74.9	332.1	166,700	166,700	120
125	72.2	332.3	211,200	211,200	73.1	331.5	186,400	186,400	74.0	330.2	162,300	162,300	125
130	71.3	330.4	204,500	204,500	72.2	329.6	181,000	181,000	73.1	328.3	158,000	158,000	130
135	70.4	328.4	198,100	198,100	71.3	327.6	175,900	175,900	72.2	326.3	153,900	153,900	135
140	69.5	326.3	192,200	192,200	70.4	325.5	171,000	171,000	71.3	324.2	150,100	150,100	140
150	67.7	321.8	181,300	181,300	68.5	321.0	162,200	162,200	69.5	319.7	143,000	143,000	150
160	65.8	317.0	171,400	171,400	66.7	316.1	154,100	154,100	67.6	314.8	136,500	136,500	160
170	64.0	311.7	162,600	162,600	64.8	310.9	146,800	146,800	65.7	309.5	130,600	130,600	170
180	62.0	306.0	150,100	154,600	62.9	305.1	140,000	140,000	63.8	303.8	125,100	125,100	180
190	60.1	299.9	137,000	147,200	60.9	299.0	133,900	133,900	61.8	297.6	120,100	120,100	190
200	58.1	293.2	125,300	140,600	58.9	292.3	126,800	128,400	59.8	290.9	115,500	115,500	200
210	56.0	286.1	114,800	134,400	56.8	285.1	116,200	123,200	57.7	283.7	111,200	111,200	210
220	53.9	278.4	105,300	128,800	54.7	277.4	106,600	118,400	55.6	275.9	107,200	107,200	220
230	51.8	270.0	96,600	123,600	52.5	269.0	97,800	114,000	53.4	267.5	99,100	103,500	230
240	49.5	261.0	88,700	118,700	50.3	260.0	89,800	109,800	51.1	258.4	90,900	100,100	240
250	47.2	251.3	81,400	114,300	47.9	250.2	82,400	106,000	48.8	248.5	83,500	96,900	250
260	44.7	240.7	74,700	110,100	45.5	239.5	75,600	102,400	46.3	237.8	76,600	93,900	260
270	42.2	229.1	68,500	106,200	42.9	227.9	69,400	99,100	43.7	226.0	70,200	91,200	270
280	39.5	216.4	62,800	102,600	40.2	215.1	63,500	96,000	41.0	213.1	64,300	88,700	280
290	36.6	202.3	57,400	99,300	37.3	201.0	58,100	93,200	38.1	198.8	58,700	86,300	290
295					35.8	193.3	55,500	91,800	36.5	191.1	56,100	85,200	295

MLC650 VPC-MAX S-2

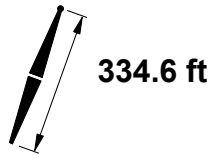
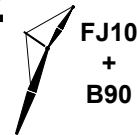
ASME B30.5



	10°				15°				20°				
													
	ft	°	ft	lb	lb	ft	°	ft	lb	lb	ft	°	ft
57	85.0	389.3	364,600	364,600									57
58	84.8	389.2	362,900	362,900									58
59	84.7	389.0	359,700	359,700									59
60	84.5	388.9	356,300	356,300									60
62	84.2	388.6	349,800	349,800	85.0	387.7	291,100	291,100					62
63	84.1	388.4	346,600	346,600	84.8	387.5	288,900	288,900					63
64	83.9	388.3	343,400	343,400	84.7	387.4	286,600	286,600					64
65	83.8	388.1	340,200	340,200	84.5	387.2	284,300	284,300					65
68	83.3	387.6	331,300	331,300	84.1	386.7	277,900	277,900	84.9	385.4	230,900	230,900	68
69	83.2	387.5	328,400	328,400	83.9	386.5	275,800	275,800	84.8	385.2	229,500	229,500	69
70	83.0	387.3	325,400	325,400	83.8	386.4	273,600	273,600	84.6	385.0	227,900	227,900	70
71	82.8	387.1	322,700	322,700	83.6	386.2	271,600	271,600	84.5	384.9	226,400	226,400	71
75	82.2	386.4	311,800	311,800	83.0	385.5	263,600	263,600	83.9	384.1	220,700	220,700	75
80	81.5	385.4	299,300	299,300	82.3	384.5	254,300	254,300	83.1	383.2	213,800	213,800	80
85	80.7	384.4	287,800	287,800	81.5	383.5	245,600	245,600	82.3	382.1	207,300	207,300	85
90	80.0	383.3	276,900	276,900	80.7	382.4	237,400	237,400	81.6	381.0	201,300	201,300	90
95	79.2	382.1	267,000	267,000	79.9	381.2	229,800	229,800	80.8	379.8	195,600	195,600	95
100	78.4	380.9	257,600	257,600	79.2	379.9	222,700	222,700	80.0	378.6	190,200	190,200	100
105	77.6	379.6	248,900	248,900	78.4	378.6	215,900	215,900	79.2	377.3	185,000	185,000	105
110	76.9	378.2	240,700	240,700	77.6	377.2	209,600	209,600	78.4	375.9	180,100	180,100	110
115	76.1	376.7	233,100	233,100	76.8	375.8	203,600	203,600	77.7	374.4	175,500	175,500	115
120	75.3	375.2	225,900	225,900	76.1	374.2	197,900	197,900	76.9	372.8	171,100	171,100	120
130	73.7	371.9	212,700	212,700	74.5	370.9	187,400	187,400	75.3	369.5	163,000	163,000	130
140	72.1	368.3	200,900	200,900	72.9	367.3	178,000	178,000	73.7	365.9	155,600	155,600	140
150	70.5	364.3	190,300	190,300	71.3	363.3	169,500	169,500	72.1	361.9	148,800	148,800	150
160	68.9	360.1	176,000	180,800	69.6	359.1	161,700	161,700	70.4	357.6	142,600	142,600	160
170	67.2	355.5	159,100	172,100	68.0	354.4	154,600	154,600	68.8	353.0	136,900	136,900	170
180	65.6	350.5	144,200	164,200	66.3	349.5	146,200	148,000	67.1	348.0	131,600	131,600	180
190	63.9	345.2	130,900	157,000	64.6	344.1	132,800	142,000	65.4	342.6	126,700	126,700	190
200	62.1	339.5	119,100	150,300	62.9	338.4	120,900	136,500	63.6	336.9	122,200	122,200	200
210	60.4	333.3	108,500	144,200	61.1	332.2	110,100	131,400	61.9	330.7	111,900	117,900	210
220	58.6	326.8	98,900	138,500	59.3	325.6	100,400	126,600	60.1	324.0	102,000	114,100	220
230	56.8	319.7	90,200	133,300	57.5	318.6	91,500	122,200	58.2	317.0	93,000	110,400	230
240	54.9	312.2	82,200	128,400	55.6	311.0	83,500	118,000	56.3	309.4	84,800	107,000	240
250	53.0	304.2	74,800	123,800	53.7	303.0	76,100	114,200	54.4	301.2	77,300	103,800	250
260	51.0	295.5	68,100	115,800	51.7	294.3	69,200	110,600	52.4	292.5	70,400	100,800	260
270	49.0	286.3	61,900	107,700	49.6	285.0	62,900	107,200	50.3	283.1	64,000	98,000	270
280	46.8	276.3	56,100	100,200	47.5	275.0	57,000	101,100	48.2	273.1	58,000	95,400	280
290	44.6	265.6	50,700	93,200	45.3	264.2	51,600	94,100	46.0	262.2	52,500	92,900	290
300	42.3	253.9	45,700	86,700	43.0	252.5	46,500	87,500	43.6	250.4	47,300	88,300	300
310	39.9	241.3	41,000	80,600	40.6	239.8	41,700	81,300	41.2	237.6	42,400	82,100	310
320	37.4	227.5	36,600	74,900	38.0	225.8	37,200	75,500	38.6	223.5	37,900	76,200	320
325	36.0	220.0	34,400	72,200	36.6	218.4	35,100	72,800	37.2	215.9	35,700	73,400	325
330									35.8	207.9	33,500	70,600	330

MLC650 VPC-MAX S-2

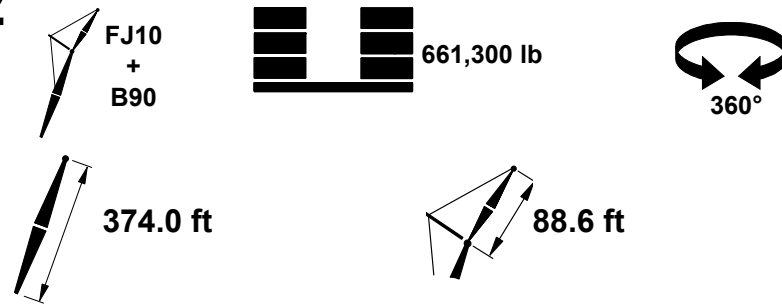
ASME B30.5



	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	ft	lb	lb	ft
62	84.9	428.1	336,800	336,800									62
63	84.8	428.0	334,200	334,200									63
64	84.7	427.8	331,700	331,700									64
65	84.5	427.7	329,200	329,200									65
67	84.3	427.4	324,500	324,500	85.0	426.3	273,700	273,700					67
68	84.1	427.2	322,100	322,100	84.8	426.2	271,900	271,900					68
69	84.0	427.1	319,800	319,800	84.7	426.0	270,100	270,100					69
70	83.8	426.9	317,400	317,400	84.6	425.9	268,300	268,300					70
73	83.4	426.5	310,700	310,700	84.2	425.4	263,100	263,100	84.9	423.9	219,700	219,700	73
74	83.3	426.3	308,500	308,500	84.0	425.2	261,400	261,400	84.8	423.7	218,400	218,400	74
75	83.2	426.1	306,300	306,300	83.9	425.1	259,700	259,700	84.7	423.6	217,200	217,200	75
76	83.0	426.0	304,200	304,200	83.7	424.9	258,000	258,000	84.5	423.4	216,000	216,000	76
80	82.5	425.3	295,800	295,800	83.2	424.2	251,500	251,500	84.0	422.7	211,200	211,200	80
85	81.8	424.3	285,900	285,900	82.5	423.3	243,800	243,800	83.3	421.7	205,600	205,600	85
90	81.1	423.3	276,500	276,500	81.8	422.3	236,600	236,600	82.6	420.7	200,200	200,200	90
95	80.4	422.3	267,400	267,400	81.1	421.2	229,800	229,800	81.9	419.7	195,100	195,100	95
100	79.7	421.1	259,000	259,000	80.4	420.1	223,300	223,300	81.2	418.5	190,200	190,200	100
110	78.3	418.7	243,500	243,500	79.0	417.6	211,400	211,400	79.8	416.1	181,200	181,200	110
120	76.9	416.0	229,700	229,700	77.6	414.9	200,600	200,600	78.4	413.4	172,900	172,900	120
130	75.5	413.0	217,400	217,400	76.2	411.9	190,900	190,900	76.9	410.4	165,400	165,400	130
140	74.0	409.8	206,300	206,300	74.7	408.7	182,100	182,100	75.5	407.1	158,500	158,500	140
150	72.6	406.3	193,400	196,300	73.3	405.2	174,000	174,000	74.0	403.6	152,200	152,200	150
160	71.2	402.5	173,900	187,100	71.8	401.3	166,600	166,600	72.6	399.7	146,300	146,300	160
170	69.7	398.4	156,900	178,700	70.4	397.2	159,200	159,800	71.1	395.6	140,900	140,900	170
180	68.2	394.0	141,900	171,100	68.9	392.8	144,100	153,500	69.6	391.2	135,800	135,800	180
190	66.7	389.2	128,600	164,000	67.4	388.1	130,600	147,800	68.1	386.4	131,100	131,100	190
200	65.2	384.2	116,700	157,500	65.8	383.0	118,600	142,300	66.6	381.3	120,600	126,800	200
210	63.6	378.8	106,000	151,500	64.3	377.6	107,800	137,400	65.0	375.9	109,700	122,800	210
220	62.1	373.1	96,400	145,900	62.7	371.8	98,000	132,700	63.4	370.1	99,700	118,900	220
230	60.5	367.0	87,600	140,700	61.1	365.7	89,100	128,300	61.8	364.0	90,700	115,400	230
240	58.9	360.4	79,600	131,400	59.5	359.2	81,000	124,200	60.2	357.4	82,500	111,900	240
250	57.2	353.5	72,200	121,900	57.8	352.2	73,500	120,400	58.5	350.4	74,900	108,900	250
260	55.5	346.2	65,400	113,100	56.1	344.8	66,700	114,300	56.8	343.0	68,000	105,900	260
270	53.8	338.3	59,200	105,000	54.4	337.0	60,300	106,100	55.1	335.1	61,600	103,100	270
280	52.0	330.0	53,400	97,500	52.6	328.6	54,500	98,500	53.3	326.7	55,600	99,700	280
290	50.2	321.1	48,000	90,500	50.8	319.7	49,000	91,500	51.4	317.7	50,000	92,500	290
300	48.3	311.6	42,900	84,000	48.9	310.2	43,900	84,900	49.6	308.1	44,900	85,900	300
310	46.4	301.5	38,200	77,900	47.0	300.0	39,100	78,700	47.6	297.9	40,000	79,600	310
320	44.4	290.7	33,800	72,200	45.0	289.1	34,600	73,000	45.6	286.9	35,500	73,800	320
330	42.3	279.0	29,700	66,800	42.9	277.4	30,400	67,500	43.5	275.0	31,200	68,300	330
340	40.1	266.5	25,500	61,800	40.7	264.7	26,400	62,400	41.2	262.3	27,100	63,100	340
350	37.8	252.8	21,000	57,000	38.4	251.0	21,800	57,600	38.9	248.4	22,600	58,200	350
355	36.6	245.6	18,900	54,700	37.2	243.7	19,600	55,300	37.7	241.0	20,400	55,800	355
360					35.9	236.0	17,500	53,000	36.4	233.2	18,200	53,500	360

MLC650 VPC-MAX S-2

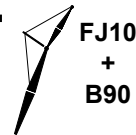
ASME B30.5



	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	ft	lb	lb	ft
66	84.9	467.2	317,800	317,800									66
67	84.8	467.1	315,700	315,700									67
68	84.6	467.0	313,700	313,700									68
69	84.5	466.8	311,700	311,700									69
70	84.4	466.7	309,600	309,600									70
71	84.3	466.5	307,700	307,700	84.9	465.4	262,300	262,300					71
72	84.1	466.4	305,800	305,800	84.8	465.3	260,700	260,700					72
73	84.0	466.2	303,800	303,800	84.7	465.2	259,200	259,200					73
74	83.9	466.1	301,900	301,900	84.6	465.0	257,700	257,700					74
75	83.8	465.9	299,900	299,900	84.4	464.8	256,200	256,200					75
77	83.5	465.6	296,300	296,300	84.2	464.5	253,300	253,300	84.9	463.0	212,100	212,100	77
80	83.1	465.1	290,800	290,800	83.8	464.0	249,000	249,000	84.5	462.5	209,000	209,000	80
90	81.9	463.4	274,000	274,000	82.5	462.3	235,600	235,600	83.2	460.7	199,000	199,000	90
100	80.6	461.4	259,000	259,000	81.3	460.3	223,500	223,500	82.0	458.7	190,000	190,000	100
110	79.3	459.2	245,400	245,400	80.0	458.1	212,700	212,700	80.7	456.5	181,700	181,700	110
120	78.1	456.7	232,900	232,900	78.7	455.6	202,700	202,700	79.4	454.0	174,200	174,200	120
130	76.8	454.0	221,400	221,400	77.4	452.9	193,700	193,700	78.1	451.3	167,200	167,200	130
140	75.5	451.1	202,400	210,900	76.1	449.9	185,400	185,400	76.8	448.4	160,800	160,800	140
150	74.2	447.9	184,300	201,300	74.8	446.8	177,800	177,800	75.5	445.1	154,900	154,900	150
160	72.9	444.4	167,900	192,600	73.5	443.3	170,700	170,700	74.2	441.7	149,300	149,300	160
170	71.5	440.7	151,300	184,600	72.2	439.6	153,900	164,300	72.8	438.0	144,200	144,200	170
180	70.2	436.8	136,200	177,200	70.8	435.6	138,600	158,200	71.5	434.0	139,400	139,400	180
190	68.8	432.5	122,800	170,300	69.5	431.4	125,000	152,600	70.1	429.7	127,400	134,900	190
200	67.5	428.0	110,800	163,900	68.1	426.8	112,900	147,400	68.8	425.1	115,100	130,700	200
210	66.1	423.2	100,000	158,000	66.7	422.0	102,000	142,600	67.4	420.3	104,100	126,700	210
220	64.7	418.1	90,300	147,200	65.3	416.9	92,100	138,000	66.0	415.1	94,100	123,100	220
230	63.3	412.7	81,500	135,700	63.9	411.4	83,200	133,700	64.5	409.7	85,000	119,600	230
240	61.9	406.9	73,400	125,300	62.5	405.6	75,000	126,900	63.1	403.9	76,700	116,300	240
250	60.4	400.8	66,000	115,700	61.0	399.5	67,500	117,200	61.6	397.7	69,100	113,200	250
260	58.9	394.4	59,200	106,800	59.5	393.1	60,600	108,300	60.1	391.2	62,100	109,800	260
270	57.4	387.5	52,900	98,700	58.0	386.2	54,200	100,000	58.6	384.3	55,600	101,400	270
280	55.9	380.3	47,100	91,100	56.5	379.0	48,300	92,400	57.1	377.0	49,600	93,700	280
290	54.3	372.7	41,600	84,100	54.9	371.3	42,800	85,300	55.5	369.3	44,100	86,500	290
300	52.7	364.6	36,600	77,600	53.3	363.2	37,700	78,700	53.9	361.2	38,800	79,900	300
310	51.1	356.0	31,600	71,500	51.6	354.5	32,900	72,500	52.2	352.5	34,000	73,600	310
320	49.4	346.9	26,200	65,800	50.0	345.4	27,500	66,700	50.5	343.3	28,800	67,700	320
330	47.7	337.3	21,200	60,400	48.2	335.7	22,400	61,300	48.8	333.6	23,600	62,200	330
340	45.9	327.0	16,400	55,300	46.4	325.4	17,500	56,200	47.0	323.2	18,700	57,100	340
350	44.1	316.1	12,000	50,600	44.6	314.5	13,000	51,400	45.1	312.2	14,000	52,200	350
360	42.2	304.4		46,100	42.7	302.7		46,800	43.2	300.3		47,500	360
370	40.2	291.9		41,800	40.7	290.2		42,500	41.2	287.6		43,100	370
380	38.1	278.5		37,800	38.6	276.6		38,400	39.0	274.0		39,000	380
390	35.9	263.9		33,900	36.4	261.9		34,500	36.8	259.1		35,000	390
395									35.6	251.2		33,100	395

MLC650 VPC-MAX S-2

ASME B30.5



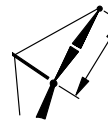
661,300 lb



360°



383.9 ft

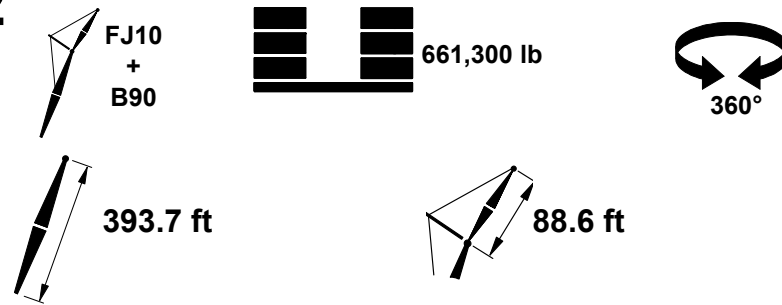


88.6 ft

	10°				15°				20°				
ft	°	ft	lb	lb	°	ft	lb	lb	°	ft	lb	lb	ft
65	84.8	477.7	318,800	318,800									65
66	84.7	477.6	318,300	318,300									66
67	84.6	477.5	317,800	317,800									67
68	84.4	477.3	317,300	317,300									68
70	84.2	477.1	316,200	316,200	84.8	476.1	284,500	284,500					70
71	84.1	476.9	315,700	315,700	84.7	476.0	282,900	282,900					71
72	83.9	476.8	315,200	315,200	84.6	475.8	281,200	281,200					72
73	83.8	476.6	314,700	314,700	84.5	475.7	279,500	279,500					73
75	83.6	476.3	313,600	313,600	84.2	475.4	276,200	276,200	84.8	474.2	236,000	236,000	75
76	83.4	476.2	312,800	312,800	84.1	475.2	274,600	274,600	84.7	474.0	234,700	234,700	76
80	83.0	475.5	309,800	309,800	83.6	474.6	268,100	268,100	84.2	473.4	229,800	229,800	80
90	81.7	473.8	291,400	291,400	82.4	472.9	253,200	253,200	83.0	471.7	218,500	218,500	90
100	80.5	471.9	274,900	274,900	81.1	470.9	239,900	239,900	81.7	469.7	208,100	208,100	100
110	79.2	469.7	260,100	260,100	79.9	468.7	227,800	227,800	80.5	467.5	198,700	198,700	110
120	78.0	467.3	238,200	246,700	78.6	466.3	217,000	217,000	79.2	465.1	190,100	190,100	120
130	76.7	464.7	216,400	234,500	77.4	463.7	206,900	206,900	78.0	462.5	182,200	182,200	130
140	75.5	461.8	196,800	223,500	76.1	460.8	197,900	197,900	76.7	459.6	174,900	174,900	140
150	74.2	458.7	179,100	213,500	74.8	457.7	182,300	189,600	75.4	456.5	168,100	168,100	150
160	72.9	455.3	163,100	204,200	73.5	454.3	166,000	181,900	74.1	453.1	161,900	161,900	160
170	71.6	451.7	148,500	195,700	72.2	450.7	151,300	174,700	72.8	449.5	153,900	156,100	170
180	70.3	447.9	133,800	187,800	70.9	446.8	136,300	168,200	71.5	445.6	138,600	150,700	180
190	69.0	443.7	120,400	180,500	69.6	442.7	122,800	162,000	70.2	441.4	125,000	145,700	190
200	67.7	439.3	108,500	171,500	68.3	438.3	110,700	156,400	68.9	437.0	112,800	141,000	200
210	66.3	434.6	97,800	157,600	66.9	433.6	99,900	151,100	67.5	432.3	101,800	136,500	210
220	65.0	429.7	88,100	145,000	65.6	428.6	90,100	146,100	66.2	427.3	91,900	132,400	220
230	63.6	424.4	79,300	133,600	64.2	423.3	81,200	135,400	64.8	422.0	82,800	128,600	230
240	62.2	418.8	71,300	123,200	62.8	417.7	73,000	124,900	63.4	416.3	74,600	124,800	240
250	60.8	412.9	64,000	113,600	61.4	411.8	65,600	115,200	61.9	410.4	67,000	116,700	250
260	59.4	406.6	57,200	104,800	60.0	405.5	58,700	106,400	60.5	404.1	60,100	107,700	260
270	57.9	400.0	50,900	96,700	58.5	398.9	52,400	98,200	59.0	397.4	53,700	99,500	270
280	56.4	393.0	45,100	89,200	57.0	391.9	46,500	90,600	57.5	390.4	47,700	91,800	280
290	54.9	385.6	39,800	82,200	55.5	384.4	41,000	83,500	56.0	382.9	42,200	84,700	290
300	53.4	377.8	34,700	75,700	53.9	376.6	35,900	76,900	54.5	375.1	37,000	78,000	300
310	51.8	369.6	29,000	69,700	52.4	368.3	30,500	70,800	52.9	366.8	31,800	71,800	310
320	50.2	360.8	23,700	64,000	50.7	359.6	25,100	65,000	51.3	358.0	26,300	66,000	320
330	48.5	351.6	18,700	58,700	49.1	350.3	20,000	59,600	49.6	348.6	21,200	60,500	330
340	46.8	341.8	14,100	53,600	47.4	340.4	15,300	54,600	47.9	338.7	16,300	55,400	340
350	45.1	331.4		48,900	45.6	330.0	10,700	49,800	46.1	328.2	11,700	50,500	350
360	43.2	320.3		44,400	43.8	318.8		45,200	44.3	317.0		45,900	360
370	41.4	308.4		40,200	41.9	306.9		40,900	42.4	305.1		41,600	370
380	39.4	295.8		36,200	39.9	294.2		36,900	40.4	292.2		37,500	380
390	37.3	282.1		32,400	37.9	280.5		33,000	38.3	278.4		33,500	390
395	36.3	274.9		30,500	36.8	273.2		31,100	37.2	271.1		31,600	395
400					35.7	265.6		29,300	36.1	263.5		29,800	400

MLC650 VPC-MAX S-2

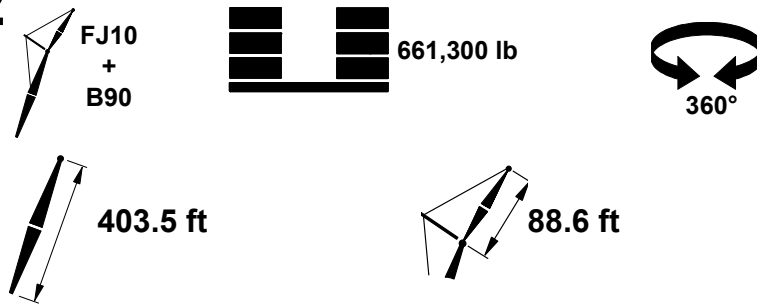
ASME B30.5



	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	ft	lb	lb	ft
66	84.8	487.6	316,200	316,200									66
67	84.6	487.4	315,700	315,700									67
68	84.5	487.3	315,300	315,300									68
69	84.4	487.2	314,800	314,800									69
70	84.3	487.0	314,200	314,200									70
71	84.1	486.9	313,700	313,700	84.8	485.9	281,900	281,900					71
72	84.0	486.7	313,200	313,200	84.7	485.8	280,300	280,300					72
73	83.9	486.6	312,700	312,700	84.6	485.6	278,800	278,800					73
76	83.5	486.1	311,100	311,100	84.2	485.2	274,000	274,000	84.8	484.0	234,200	234,200	76
80	83.1	485.6	309,000	309,000	83.7	484.6	267,600	267,600	84.3	483.4	229,400	229,400	80
90	81.9	483.9	291,400	291,400	82.5	482.9	253,200	253,200	83.1	481.7	218,300	218,300	90
100	80.6	482.0	275,300	275,300	81.3	481.0	240,200	240,200	81.9	479.8	208,200	208,200	100
110	79.4	479.8	258,300	260,800	80.1	478.9	228,400	228,400	80.7	477.7	198,900	198,900	110
120	78.2	477.5	234,100	247,600	78.9	476.5	217,600	217,600	79.4	475.3	190,500	190,500	120
130	77.0	474.9	212,400	235,700	77.6	473.9	207,800	207,800	78.2	472.7	182,700	182,700	130
140	75.7	472.1	192,900	224,800	76.4	471.1	196,400	198,800	77.0	469.9	175,500	175,500	140
150	74.5	469.1	175,300	214,800	75.1	468.1	178,600	190,600	75.7	466.9	168,900	168,900	150
160	73.2	465.8	159,300	205,700	73.9	464.8	162,400	183,000	74.4	463.6	162,800	162,800	160
170	72.0	462.3	144,700	197,200	72.6	461.2	147,700	175,900	73.2	460.0	150,400	157,000	170
180	70.7	458.5	131,500	189,400	71.3	457.5	134,100	169,400	71.9	456.2	136,500	151,700	180
190	69.4	454.5	118,100	182,200	70.1	453.4	120,600	163,300	70.6	452.2	122,800	146,700	190
200	68.1	450.2	106,200	169,200	68.8	449.1	108,500	157,700	69.3	447.8	110,600	142,000	200
210	66.8	445.6	95,400	155,200	67.4	444.5	97,600	152,500	68.0	443.3	99,600	137,700	210
220	65.5	440.7	85,700	142,600	66.1	439.7	87,800	144,700	66.7	438.4	89,600	133,500	220
230	64.2	435.6	76,900	131,200	64.8	434.5	78,800	133,100	65.3	433.2	80,500	129,700	230
240	62.8	430.2	68,900	120,700	63.4	429.0	70,700	122,500	63.9	427.7	72,300	124,100	240
250	61.4	424.4	61,500	111,200	62.0	423.3	63,200	112,900	62.6	421.9	64,700	114,400	250
260	60.0	418.3	54,700	102,400	60.6	417.2	56,300	104,000	61.2	415.8	57,700	105,400	260
270	58.6	411.9	48,400	94,200	59.2	410.7	49,900	95,700	59.7	409.4	51,300	97,100	270
280	57.2	405.1	42,600	86,700	57.8	403.9	44,000	88,100	58.3	402.5	45,300	89,400	280
290	55.7	398.0	37,100	79,700	56.3	396.8	38,600	81,100	56.8	395.3	39,800	82,200	290
300	54.2	390.4	31,100	73,200	54.8	389.2	32,700	74,500	55.3	387.7	34,200	75,600	300
310	52.7	382.4	25,500	67,100	53.3	381.2	27,000	68,300	53.8	379.7	28,400	69,400	310
320	51.1	374.0	20,200	61,400	51.7	372.7	21,600	62,600	52.2	371.2	22,900	63,500	320
330	49.6	365.1	15,200	56,100	50.1	363.8	16,500	57,100	50.6	362.2	17,700	58,100	330
340	47.9	355.7	10,500	51,100	48.5	354.3	11,800	52,000	49.0	352.7	12,900	52,900	340
350	46.2	345.7		46,300	46.8	344.3		47,200	47.3	342.7		48,000	350
360	44.5	335.1		41,900	45.0	333.7		42,700	45.5	332.0		43,500	360
370	42.7	323.8		37,600	43.2	322.3		38,400	43.7	320.6		39,100	370
380	40.8	311.8		33,600	41.4	310.3		34,300	41.8	308.4		35,000	380
390	38.9	298.9		29,800	39.4	297.3		30,500	39.8	295.4		31,000	390
400	36.9	285.1		26,100	37.4	283.4		26,800	37.8	281.4		27,300	400
405	35.8	277.7		24,400	36.3	276.0		25,000	36.7	273.9		25,500	405
410									35.6	266.2		23,700	410

MLC650 VPC-MAX S-2

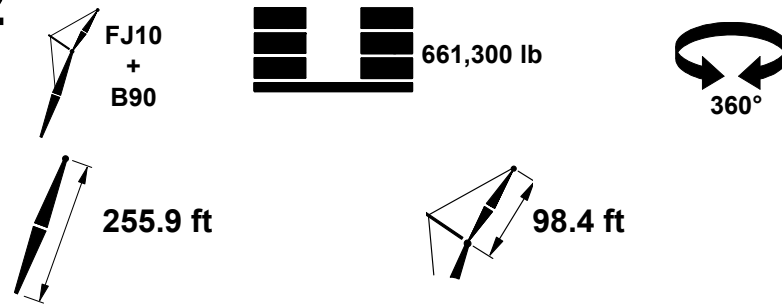
ASME B30.5



	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	ft	lb	lb	ft
67	84.7	497.3	309,600	309,600									67
68	84.6	497.2	309,600	309,600									68
69	84.5	497.1	309,600	309,600									69
70	84.4	497.0	309,300	309,300									70
72	84.1	496.7	308,200	308,200	84.8	495.7	277,700	277,700					72
73	84.0	496.5	307,700	307,700	84.7	495.6	276,200	276,200					73
74	83.9	496.4	307,100	307,100	84.6	495.4	274,700	274,700					74
75	83.8	496.3	306,600	306,600	84.4	495.3	273,200	273,200					75
77	83.6	496.0	305,700	305,700	84.2	495.0	270,400	270,400	84.8	493.8	231,600	231,600	77
80	83.2	495.5	304,300	304,300	83.9	494.5	266,000	266,000	84.4	493.3	228,200	228,200	80
90	82.0	493.9	289,100	289,100	82.7	492.9	252,100	252,100	83.3	491.7	217,400	217,400	90
100	80.8	492.0	273,700	273,700	81.5	491.0	239,400	239,400	82.1	489.8	207,500	207,500	100
110	79.6	489.9	254,600	259,700	80.3	488.9	227,900	227,900	80.9	487.7	198,600	198,600	110
120	78.5	487.6	230,800	246,900	79.1	486.6	217,400	217,400	79.7	485.4	190,300	190,300	120
130	77.2	485.1	209,400	235,200	77.9	484.1	207,800	207,800	78.5	482.9	182,600	182,600	130
140	76.0	482.4	190,200	224,700	76.7	481.3	193,600	199,000	77.2	480.1	175,600	175,600	140
150	74.8	479.4	172,700	214,900	75.4	478.4	176,000	191,000	76.0	477.1	169,100	169,100	150
160	73.6	476.2	156,900	205,900	74.2	475.1	160,000	183,500	74.8	473.9	162,900	163,100	160
170	72.4	472.7	142,400	197,600	73.0	471.7	145,400	176,500	73.5	470.4	148,100	157,400	170
180	71.1	469.0	129,200	190,000	71.7	468.0	132,000	170,100	72.3	466.7	134,600	152,200	180
190	69.9	465.1	116,900	182,900	70.5	464.0	119,500	164,200	71.0	462.8	121,700	147,300	190
200	68.6	460.9	105,000	168,000	69.2	459.8	107,300	158,600	69.8	458.5	109,500	142,700	200
210	67.3	456.4	94,200	154,000	67.9	455.4	96,500	153,300	68.5	454.1	98,400	138,300	210
220	66.0	451.7	84,500	141,400	66.6	450.6	86,600	143,500	67.2	449.3	88,500	134,300	220
230	64.7	446.7	75,700	130,000	65.3	445.6	77,600	131,900	65.9	444.3	79,400	130,500	230
240	63.4	441.4	67,600	119,500	64.0	440.3	69,500	121,300	64.5	438.9	71,100	123,000	240
250	62.1	435.8	60,300	109,900	62.7	434.7	62,000	111,700	63.2	433.3	63,500	113,200	250
260	60.7	429.9	53,500	101,100	61.3	428.7	55,100	102,800	61.8	427.3	56,600	104,200	260
270	59.3	423.6	47,200	93,000	59.9	422.5	48,700	94,500	60.4	421.1	50,100	95,900	270
280	57.9	417.0	41,400	85,500	58.5	415.9	42,800	86,900	59.0	414.4	44,100	88,200	280
290	56.5	410.1	35,300	78,500	57.1	408.9	37,100	79,800	57.6	407.4	38,600	81,100	290
300	55.1	402.8	29,300	72,000	55.6	401.6	30,900	73,200	56.2	400.1	32,400	74,400	300
310	53.6	395.1	23,600	65,900	54.2	393.8	25,200	67,100	54.7	392.3	26,600	68,200	310
320	52.1	386.9	18,300	60,200	52.7	385.7	19,800	61,300	53.2	384.1	21,100	62,300	320
330	50.6	378.3	13,400	54,800	51.1	377.0	14,800	55,900	51.6	375.4	16,000	56,900	330
340	49.0	369.3		49,800	49.5	367.9		50,800	50.0	366.3		51,700	340
350	47.4	359.7		45,100	47.9	358.3		46,000	48.4	356.6		46,900	350
360	45.7	349.5		40,600	46.2	348.1		41,500	46.7	346.4		42,300	360
370	44.0	338.7		36,400	44.5	337.3		37,200	45.0	335.5		37,900	370
380	42.2	327.3		32,300	42.7	325.7		33,100	43.2	323.9		33,800	380
390	40.4	315.0		28,500	40.9	313.5		29,200	41.3	311.5		29,900	390
400	38.4	302.0		24,900	38.9	300.3		25,600	39.4	298.3		26,100	400
410	36.4	287.9		21,000	36.9	286.2		21,800	37.3	284.1		22,400	410
415	35.4	280.5		18,900	35.9	278.7		19,700	36.3	276.5		20,300	415

MLC650 VPC-MAX S-2

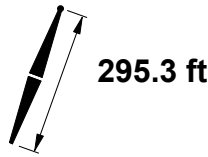
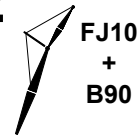
ASME B30.5



	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	ft	lb	lb	ft
51	85.0	360.9	364,600	364,600									51
52	84.8	360.8	363,500	363,500									52
53	84.6	360.7	362,300	362,300									53
54	84.5	360.5	361,200	361,200									54
56	84.1	360.3	358,800	358,800									56
57	84.0	360.1	357,700	357,700	84.9	359.4	306,700	306,700					57
58	83.8	360.0	356,500	356,500	84.8	359.2	303,500	303,500					58
59	83.6	359.8	355,400	355,400	84.6	359.1	300,400	300,400					59
60	83.5	359.6	354,300	354,300	84.4	358.9	297,400	297,400					60
63	83.0	359.1	347,200	347,200	83.9	358.4	288,900	288,900	85.0	357.3	236,300	236,300	63
64	82.8	359.0	344,800	344,800	83.8	358.3	286,000	286,000	84.8	357.2	234,300	234,300	64
65	82.7	358.8	342,400	342,400	83.6	358.1	283,100	283,100	84.7	357.0	232,400	232,400	65
66	82.5	358.6	338,800	338,800	83.4	357.9	280,500	280,500	84.5	356.8	230,500	230,500	66
70	81.8	357.9	324,300	324,300	82.8	357.2	270,200	270,200	83.8	356.1	223,100	223,100	70
75	81.0	357.0	308,000	308,000	82.0	356.2	258,300	258,300	83.0	355.1	214,500	214,500	75
80	80.2	355.9	293,100	293,100	81.1	355.2	247,300	247,300	82.2	354.1	206,500	206,500	80
85	79.4	354.8	279,500	279,500	80.3	354.1	237,200	237,200	81.3	352.9	199,100	199,100	85
90	78.5	353.6	267,100	267,100	79.5	352.9	227,800	227,800	80.5	351.7	192,100	192,100	90
95	77.7	352.3	255,700	255,700	78.6	351.6	219,200	219,200	79.7	350.4	185,600	185,600	95
100	76.8	351.0	245,100	245,100	77.8	350.2	211,000	211,000	78.8	349.1	179,500	179,500	100
105	76.0	349.5	235,400	235,400	76.9	348.8	203,600	203,600	78.0	347.6	173,800	173,800	105
110	75.2	348.0	226,300	226,300	76.1	347.3	196,500	196,500	77.1	346.1	168,400	168,400	110
115	74.3	346.4	218,000	218,000	75.2	345.7	190,000	190,000	76.3	344.5	163,300	163,300	115
120	73.5	344.7	210,200	210,200	74.4	344.0	183,800	183,800	75.4	342.8	158,600	158,600	120
125	72.6	343.0	202,800	202,800	73.5	342.2	178,000	178,000	74.5	341.0	154,000	154,000	125
130	71.7	341.1	196,000	196,000	72.7	340.4	172,500	172,500	73.7	339.2	149,800	149,800	130
140	70.0	337.2	183,500	183,500	70.9	336.4	162,500	162,500	71.9	335.2	141,800	141,800	140
150	68.2	332.9	172,400	172,400	69.1	332.1	153,500	153,500	70.1	330.9	134,600	134,600	150
160	66.4	328.2	162,500	162,500	67.4	327.4	145,400	145,400	68.3	326.2	128,100	128,100	160
170	64.6	323.1	153,600	153,600	65.5	322.3	138,100	138,100	66.5	321.1	122,200	122,200	170
180	62.8	317.6	145,600	145,600	63.7	316.8	131,400	131,400	64.7	315.5	116,700	116,700	180
190	60.9	311.7	137,100	138,200	61.8	310.9	125,200	125,200	62.8	309.6	111,800	111,800	190
200	59.0	305.3	125,500	131,600	59.9	304.5	119,700	119,700	60.8	303.2	107,200	107,200	200
210	57.0	298.5	115,000	125,500	57.9	297.6	114,500	114,500	58.8	296.3	102,900	102,900	210
220	55.0	291.1	105,500	119,900	55.9	290.2	106,900	109,800	56.8	288.8	98,900	98,900	220
230	52.9	283.2	96,800	114,800	53.8	282.2	98,200	105,400	54.7	280.8	95,300	95,300	230
240	50.8	274.6	89,000	110,000	51.7	273.7	90,200	101,300	52.6	272.2	91,500	91,900	240
250	48.6	265.4	81,700	105,500	49.4	264.4	82,900	97,500	50.3	262.8	84,100	88,700	250
260	46.3	255.4	75,100	101,500	47.1	254.3	76,100	93,900	48.0	252.8	77,200	85,800	260
270	43.9	244.5	68,900	97,600	44.7	243.5	69,900	90,700	45.6	241.8	70,900	83,000	270
280	41.4	232.7	63,200	94,100	42.2	231.6	64,100	87,600	43.1	229.8	65,000	80,500	280
290	38.8	219.7	57,900	90,800	39.6	218.5	58,700	84,800	40.4	216.7	59,500	78,100	290
300	35.9	205.4	52,900	87,600	36.7	204.1	53,600	82,100	37.5	202.1	54,300	75,900	300
305									36.0	194.2	51,900	74,800	305

MLC650 VPC-MAX S-2

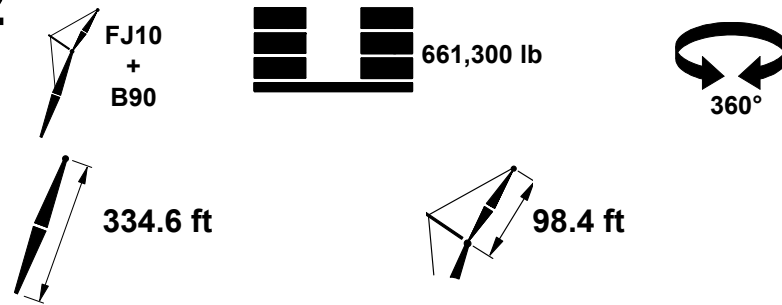
ASME B30.5



	10°				15°				20°				
	ft	o	ft	lb	lb	ft	lb	lb	ft	lb	lb	ft	
57	85.0	399.5	345,600	345,600									57
58	84.9	399.4	344,700	344,700									58
59	84.7	399.2	343,800	343,800									59
60	84.6	399.1	342,900	342,900									60
63	84.1	398.6	337,000	337,000	85.0	397.8	280,400	280,400					63
64	84.0	398.5	335,100	335,100	84.8	397.6	278,100	278,100					64
65	83.8	398.4	333,100	333,100	84.7	397.5	275,800	275,800					65
66	83.7	398.2	330,000	330,000	84.5	397.3	273,500	273,500					66
69	83.2	397.7	320,700	320,700	84.1	396.8	266,900	266,900	85.0	395.5	220,200	220,200	69
70	83.1	397.5	317,600	317,600	83.9	396.7	264,700	264,700	84.9	395.3	218,600	218,600	70
71	82.9	397.4	314,800	314,800	83.8	396.5	262,600	262,600	84.7	395.2	217,100	217,100	71
72	82.8	397.2	312,000	312,000	83.6	396.3	260,600	260,600	84.6	395.0	215,700	215,700	72
75	82.3	396.7	303,500	303,500	83.2	395.8	254,400	254,400	84.1	394.5	211,300	211,300	75
80	81.6	395.7	290,500	290,500	82.4	394.8	244,800	244,800	83.4	393.5	204,300	204,300	80
85	80.9	394.7	278,500	278,500	81.7	393.8	235,900	235,900	82.6	392.5	197,800	197,800	85
90	80.1	393.7	267,400	267,400	81.0	392.8	227,600	227,600	81.9	391.4	191,600	191,600	90
95	79.4	392.5	257,100	257,100	80.2	391.6	219,900	219,900	81.1	390.3	185,800	185,800	95
100	78.6	391.3	247,600	247,600	79.4	390.4	212,600	212,600	80.4	389.1	180,300	180,300	100
105	77.9	390.0	238,700	238,700	78.7	389.1	205,800	205,800	79.6	387.8	175,200	175,200	105
110	77.1	388.7	230,400	230,400	77.9	387.8	199,400	199,400	78.8	386.4	170,300	170,300	110
115	76.3	387.2	222,700	222,700	77.2	386.3	193,300	193,300	78.1	385.0	165,700	165,700	115
120	75.6	385.7	215,400	215,400	76.4	384.8	187,700	187,700	77.3	383.5	161,300	161,300	120
130	74.1	382.5	202,100	202,100	74.9	381.6	177,100	177,100	75.8	380.2	153,200	153,200	130
140	72.5	379.0	190,200	190,200	73.3	378.1	167,700	167,700	74.2	376.7	145,800	145,800	140
150	70.9	375.2	179,600	179,600	71.8	374.3	159,200	159,200	72.6	372.9	139,100	139,100	150
160	69.4	371.1	170,100	170,100	70.2	370.1	151,500	151,500	71.1	368.7	132,900	132,900	160
170	67.8	366.6	159,000	161,500	68.6	365.7	144,400	144,400	69.5	364.2	127,300	127,300	170
180	66.1	361.8	144,200	153,700	67.0	360.8	138,000	138,000	67.8	359.4	122,100	122,100	180
190	64.5	356.7	131,000	146,500	65.3	355.7	132,000	132,000	66.2	354.2	117,300	117,300	190
200	62.8	351.1	119,200	140,000	63.6	350.1	121,200	126,600	64.5	348.6	112,800	112,800	200
210	61.1	345.2	108,600	133,900	61.9	344.2	110,500	121,500	62.8	342.7	108,700	108,700	210
220	59.4	338.9	99,100	128,300	60.2	337.8	100,800	116,900	61.0	336.3	102,600	104,800	220
230	57.7	332.1	90,400	123,200	58.4	331.1	91,900	112,500	59.3	329.5	93,600	101,200	230
240	55.9	324.9	82,400	118,400	56.6	323.8	83,900	108,500	57.5	322.2	85,500	97,900	240
250	54.0	317.2	75,100	114,000	54.8	316.1	76,500	104,700	55.6	314.4	78,000	94,700	250
260	52.1	308.9	68,400	109,800	52.9	307.8	69,700	101,200	53.7	306.1	71,000	91,800	260
270	50.2	300.1	62,200	105,900	50.9	298.9	63,400	97,900	51.7	297.1	64,600	89,000	270
280	48.2	290.6	56,400	100,500	48.9	289.4	57,500	94,800	49.7	287.6	58,700	86,500	280
290	46.1	280.4	51,100	93,600	46.8	279.2	52,100	91,800	47.6	277.3	53,200	84,000	290
300	43.9	269.5	46,100	87,100	44.6	268.2	47,000	88,000	45.4	266.2	48,000	81,800	300
310	41.7	257.7	41,400	81,100	42.4	256.3	42,300	81,900	43.1	254.2	43,200	79,600	310
320	39.3	244.8	37,000	75,400	40.0	243.3	37,800	76,200	40.7	241.1	38,600	77,000	320
330	36.8	230.7	32,900	70,000	37.4	229.2	33,600	70,700	38.1	226.8	34,300	71,500	330
335					36.1	221.6	31,600	68,100	36.8	219.1	32,300	68,800	335

MLC650 VPC-MAX S-2

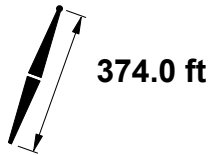
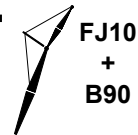
ASME B30.5



	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	ft	lb	lb	ft
62	85.0	438.3	320,400	320,400									62
63	84.9	438.1	319,700	319,700									63
64	84.8	438.0	319,000	319,000									64
65	84.6	437.9	318,400	318,400									65
67	84.4	437.6	315,400	315,400	85.1	436.6	264,700	264,700					67
68	84.2	437.4	313,900	313,900	85.0	436.4	262,800	262,800					68
69	84.1	437.3	312,400	312,400	84.9	436.3	260,900	260,900					69
70	84.0	437.1	310,900	310,900	84.7	436.1	259,100	259,100					70
74	83.4	436.5	301,100	301,100	84.2	435.5	252,000	252,000	85.0	434.0	208,800	208,800	74
75	83.3	436.3	298,600	298,600	84.1	435.3	250,200	250,200	84.9	433.9	207,600	207,600	75
76	83.2	436.2	296,300	296,300	83.9	435.2	248,500	248,500	84.8	433.7	206,400	206,400	76
77	83.0	436.0	294,100	294,100	83.8	435.0	246,800	246,800	84.6	433.5	205,100	205,100	77
80	82.6	435.5	287,300	287,300	83.4	434.5	241,900	241,900	84.2	433.0	201,600	201,600	80
85	81.9	434.6	276,600	276,600	82.7	433.6	234,000	234,000	83.5	432.1	195,800	195,800	85
90	81.3	433.6	266,700	266,700	82.0	432.6	226,600	226,600	82.9	431.1	190,400	190,400	90
100	79.9	431.5	248,800	248,800	80.7	430.4	213,100	213,100	81.5	429.0	180,300	180,300	100
110	78.5	429.1	233,100	233,100	79.3	428.1	201,000	201,000	80.1	426.6	171,200	171,200	110
120	77.2	426.4	219,000	219,000	77.9	425.4	190,200	190,200	78.7	423.9	162,900	162,900	120
130	75.8	423.6	206,700	206,700	76.5	422.5	180,400	180,400	77.4	421.0	155,400	155,400	130
140	74.4	420.4	195,400	195,400	75.1	419.4	171,600	171,600	76.0	417.8	148,500	148,500	140
150	73.0	417.0	185,400	185,400	73.7	415.9	163,600	163,600	74.5	414.4	142,300	142,300	150
160	71.6	413.3	173,800	176,200	72.3	412.2	156,200	156,200	73.1	410.7	136,400	136,400	160
170	70.2	409.3	156,800	167,900	70.9	408.2	149,500	149,500	71.7	406.6	131,100	131,100	170
180	68.7	405.0	141,800	160,300	69.4	403.9	143,200	143,200	70.2	402.3	126,100	126,100	180
190	67.3	400.4	128,600	153,300	68.0	399.3	130,800	137,500	68.8	397.7	121,500	121,500	190
200	65.8	395.5	116,700	146,900	66.5	394.4	118,800	132,200	67.3	392.8	117,200	117,200	200
210	64.3	390.3	106,100	140,900	65.0	389.2	108,000	127,300	65.8	387.5	110,100	113,200	210
220	62.8	384.7	96,400	135,400	63.5	383.6	98,300	122,600	64.2	381.9	100,200	109,400	220
230	61.2	378.8	87,700	130,300	61.9	377.6	89,400	118,400	62.7	375.9	91,200	105,900	230
240	59.7	372.5	79,700	125,500	60.4	371.3	81,300	114,300	61.1	369.6	83,000	102,600	240
250	58.1	365.8	72,300	121,100	58.8	364.6	73,900	110,600	59.5	362.9	75,500	99,600	250
260	56.4	358.7	65,600	113,300	57.1	357.5	67,000	107,000	57.8	355.7	68,500	96,600	260
270	54.8	351.2	59,400	105,200	55.4	349.9	60,700	103,700	56.2	348.1	62,100	93,900	270
280	53.1	343.2	53,600	97,700	53.7	341.9	54,800	98,900	54.5	340.0	56,100	91,300	280
290	51.3	334.6	48,200	90,700	52.0	333.3	49,400	91,900	52.7	331.4	50,600	88,800	290
300	49.5	325.6	43,200	84,200	50.2	324.2	44,300	85,300	50.9	322.2	45,400	86,400	300
310	47.7	315.9	38,500	78,200	48.3	314.5	39,500	79,200	49.0	312.5	40,600	80,200	310
320	45.8	305.6	34,100	72,500	46.4	304.1	35,100	73,400	47.1	302.0	36,100	74,400	320
330	43.8	294.6	30,000	67,100	44.4	293.0	30,900	68,000	45.1	290.9	31,800	68,900	330
340	41.7	282.7	25,900	62,100	42.4	281.1	26,900	62,900	43.0	278.8	27,800	63,700	340
350	39.6	269.9	21,400	57,400	40.2	268.3	22,400	58,100	40.8	265.9	23,400	58,900	350
360	37.3	256.1	17,200	52,900	37.9	254.3	18,100	53,600	38.5	251.8	18,900	54,200	360
365	36.1	248.7	15,200	50,700	36.7	246.9	16,000	51,400	37.3	244.3	16,800	52,000	365
370					35.5	239.1	14,000	49,200	36.1	236.4	14,700	49,800	370

MLC650 VPC-MAX S-2

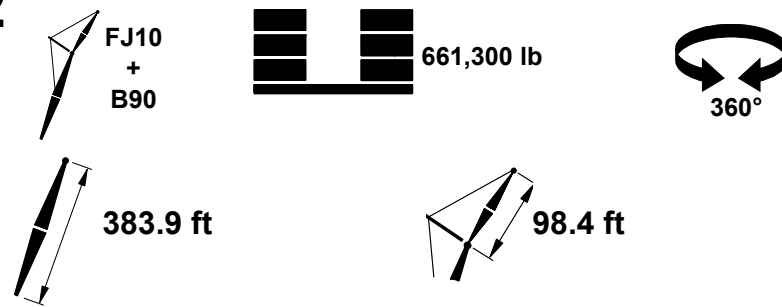
ASME B30.5



	10°				15°				20°				
ft	°	ft	lb	lb	°	ft	lb	lb	°	ft	lb	lb	ft
66	85.0	477.4	300,700	300,700									66
67	84.8	477.3	300,200	300,200									67
68	84.7	477.1	299,600	299,600									68
69	84.6	477.0	299,100	299,100									69
70	84.5	476.9	298,600	298,600									70
72	84.2	476.6	296,900	296,900	85.0	475.5	251,300	251,300					72
73	84.1	476.4	296,000	296,000	84.8	475.3	249,700	249,700					73
74	84.0	476.3	295,200	295,200	84.7	475.2	248,100	248,100					74
75	83.9	476.1	294,300	294,300	84.6	475.0	246,600	246,600					75
78	83.5	475.7	288,200	288,200	84.2	474.6	242,200	242,200	85.0	473.0	201,300	201,300	78
80	83.2	475.4	284,200	284,200	84.0	474.3	239,200	239,200	84.8	472.7	199,100	199,100	80
90	82.0	473.6	265,900	265,900	82.7	472.5	225,500	225,500	83.5	471.0	189,100	189,100	90
100	80.8	471.7	249,600	249,600	81.5	470.6	213,200	213,200	82.3	469.0	179,900	179,900	100
110	79.5	469.5	235,100	235,100	80.3	468.4	202,200	202,200	81.0	466.8	171,700	171,700	110
120	78.3	467.1	222,200	222,200	79.0	466.0	192,200	192,200	79.8	464.4	164,100	164,100	120
130	77.0	464.5	210,400	210,400	77.7	463.4	183,100	183,100	78.5	461.8	157,100	157,100	130
140	75.8	461.6	199,900	199,900	76.5	460.5	174,800	174,800	77.2	458.9	150,700	150,700	140
150	74.5	458.5	182,700	190,400	75.2	457.4	167,200	167,200	76.0	455.8	144,800	144,800	150
160	73.2	455.1	166,500	181,600	73.9	454.0	160,200	160,200	74.7	452.4	139,300	139,300	160
170	71.9	451.5	151,100	173,600	72.6	450.4	153,700	153,700	73.4	448.7	134,200	134,200	170
180	70.6	447.7	136,100	166,200	71.3	446.5	138,800	147,800	72.1	444.8	129,500	129,500	180
190	69.3	443.5	122,700	159,300	70.0	442.4	125,200	142,200	70.7	440.7	125,000	125,000	190
200	68.0	439.1	110,800	153,000	68.7	437.9	113,100	137,000	69.4	436.3	115,600	120,900	200
210	66.6	434.4	100,100	147,200	67.3	433.2	102,200	132,200	68.0	431.5	104,600	117,000	210
220	65.3	429.5	90,300	141,800	65.9	428.2	92,400	127,700	66.7	426.5	94,600	113,300	220
230	63.9	424.2	81,500	135,800	64.6	422.9	83,500	123,500	65.3	421.2	85,500	110,000	230
240	62.5	418.6	73,500	125,300	63.2	417.3	75,300	119,600	63.9	415.6	77,200	106,700	240
250	61.1	412.7	66,100	115,800	61.8	411.4	67,800	115,900	62.5	409.6	69,600	103,700	250
260	59.6	406.4	59,300	107,000	60.3	405.1	60,900	108,600	61.0	403.3	62,600	100,800	260
270	58.2	399.8	53,000	98,800	58.8	398.5	54,600	100,400	59.5	396.6	56,200	98,100	270
280	56.7	392.8	47,200	91,300	57.4	391.5	48,700	92,700	58.0	389.6	50,200	94,300	280
290	55.2	385.4	41,800	84,300	55.8	384.0	43,200	85,700	56.5	382.1	44,600	87,100	290
300	53.6	377.6	36,800	77,800	54.3	376.2	38,100	79,100	55.0	374.2	39,400	80,400	300
310	52.1	369.3	31,700	71,700	52.7	367.9	33,300	72,900	53.4	365.9	34,500	74,200	310
320	50.4	360.6	26,400	66,000	51.1	359.1	27,900	67,100	51.7	357.1	29,400	68,300	320
330	48.8	351.3	21,400	60,700	49.4	349.8	22,800	61,700	50.1	347.7	24,200	62,800	330
340	47.1	341.5	16,700	55,600	47.7	340.0	18,000	56,600	48.3	337.8	19,300	57,700	340
350	45.3	331.1	12,300	50,900	45.9	329.5	13,500	51,800	46.6	327.2	14,700	52,800	350
360	43.5	320.0		46,400	44.1	318.3		47,300	44.7	316.0	10,300	48,200	360
370	41.6	308.2		42,200	42.2	306.4		43,000	42.8	304.0		43,800	370
380	39.7	295.5		38,200	40.2	293.7		38,900	40.8	291.1		39,600	380
390	37.6	281.8		34,300	38.2	279.9		35,000	38.7	277.2		35,700	390
400	35.4	267.1		30,700	36.0	265.1		31,300	36.5	262.2		31,900	400
405									35.4	254.2		30,100	405

MLC650 VPC-MAX S-2

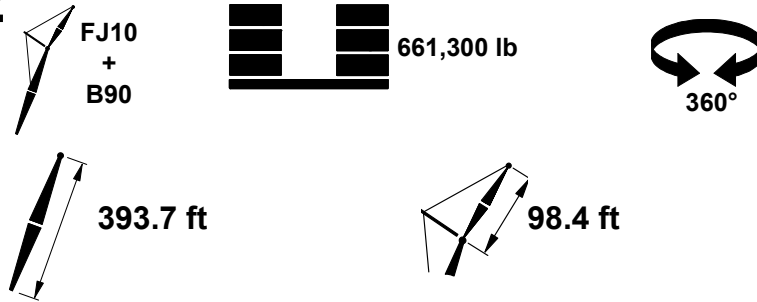
ASME B30.5



	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	ft	lb	lb	ft
65	84.8	487.9	299,400	299,400									65
66	84.7	487.7	298,900	298,900									66
67	84.6	487.6	298,300	298,300									67
68	84.5	487.5	297,800	297,800									68
70	84.2	487.2	296,800	296,800	85.0	486.2	275,600	275,600					70
71	84.1	487.1	296,300	296,300	84.9	486.1	273,800	273,800					71
72	84.0	486.9	295,700	295,700	84.7	486.0	272,000	272,000					72
73	83.9	486.8	295,200	295,200	84.6	485.8	270,200	270,200					73
76	83.5	486.3	293,600	293,600	84.3	485.4	265,200	265,200	84.9	484.2	225,000	225,000	76
80	83.0	485.7	291,400	291,400	83.8	484.8	258,500	258,500	84.4	483.6	220,000	220,000	80
90	81.8	484.1	285,200	285,200	82.6	483.1	243,200	243,200	83.2	481.9	208,400	208,400	90
100	80.6	482.2	268,200	268,200	81.4	481.2	229,600	229,600	82.0	480.0	197,800	197,800	100
110	79.4	480.0	252,900	252,900	80.1	479.0	217,300	217,300	80.8	477.9	188,400	188,400	110
120	78.2	477.7	235,200	239,200	78.9	476.7	206,300	206,300	79.6	475.5	179,600	179,600	120
130	76.9	475.1	213,900	226,800	77.7	474.1	196,200	196,200	78.3	472.9	171,700	171,700	130
140	75.7	472.3	194,700	215,300	76.4	471.3	187,100	187,100	77.1	470.1	164,400	164,400	140
150	74.5	469.3	177,300	204,700	75.2	468.3	178,700	178,700	75.8	467.0	157,700	157,700	150
160	73.2	466.0	161,500	194,900	73.9	465.0	164,800	171,000	74.6	463.8	151,500	151,500	160
170	71.9	462.5	147,100	186,100	72.7	461.4	150,300	164,000	73.3	460.2	145,800	145,800	170
180	70.7	458.7	133,500	177,900	71.4	457.7	136,400	157,400	72.0	456.4	139,000	140,400	180
190	69.4	454.7	120,200	170,400	70.1	453.6	122,900	151,400	70.7	452.4	125,300	135,500	190
200	68.1	450.4	108,400	163,400	68.8	449.3	110,800	145,700	69.4	448.0	113,100	130,800	200
210	66.8	445.8	97,700	157,000	67.5	444.7	100,000	140,500	68.1	443.5	102,100	126,400	210
220	65.5	440.9	88,000	144,900	66.2	439.9	90,200	135,500	66.8	438.6	92,200	122,400	220
230	64.1	435.8	79,300	133,500	64.8	434.7	81,300	131,000	65.4	433.4	83,200	118,600	230
240	62.8	430.4	71,300	123,100	63.5	429.3	73,200	125,100	64.1	427.9	75,000	115,000	240
250	61.4	424.6	63,900	113,600	62.1	423.5	65,800	115,400	62.7	422.2	67,400	111,600	250
260	60.0	418.5	57,200	104,900	60.7	417.4	58,900	106,600	61.3	416.0	60,500	108,100	260
270	58.6	412.1	51,000	96,800	59.3	411.0	52,600	98,400	59.9	409.6	54,100	99,900	270
280	57.2	405.3	45,200	89,300	57.8	404.2	46,700	90,800	58.4	402.8	48,100	92,200	280
290	55.7	398.2	39,900	82,300	56.4	397.0	41,300	83,800	57.0	395.6	42,600	85,100	290
300	54.2	390.6	34,700	75,900	54.9	389.4	36,200	77,200	55.5	388.0	37,500	78,500	300
310	52.7	382.7	29,100	69,800	53.3	381.4	30,700	71,100	53.9	379.9	32,200	72,300	310
320	51.1	374.3	23,800	64,200	51.8	373.0	25,400	65,400	52.4	371.5	26,800	66,500	320
330	49.5	365.4	18,900	58,800	50.2	364.1	20,300	60,000	50.7	362.5	21,700	61,000	330
340	47.9	355.9	14,200	53,800	48.5	354.6	15,600	54,900	49.1	353.0	16,800	55,900	340
350	46.2	346.0		49,100	46.9	344.6	11,100	50,100	47.4	342.9	12,300	51,000	350
360	44.5	335.4		44,700	45.1	333.9		45,600	45.7	332.2		46,500	360
370	42.7	324.1		40,500	43.3	322.6		41,400	43.8	320.9		42,100	370
380	40.8	312.1		36,500	41.4	310.6		37,300	42.0	308.7		38,000	380
390	38.9	299.2		32,700	39.5	297.6		33,400	40.0	295.7		34,100	390
400	36.9	285.4		29,100	37.5	283.7		29,800	37.9	281.7		30,400	400
405	35.8	278.1		27,400	36.4	276.3		28,000	36.9	274.3		28,600	405
410									35.8	266.5		26,800	410

MLC650 VPC-MAX S-2

ASME B30.5



	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	ft	lb	lb	ft
66	84.8	497.7	296,900	296,900									66
67	84.7	497.6	296,400	296,400									67
68	84.6	497.4	295,900	295,900									68
69	84.4	497.3	295,400	295,400									69
70	84.3	497.2	294,900	294,900									70
71	84.2	497.0	294,400	294,400	84.9	496.1	273,000	273,000					71
72	84.1	496.9	293,900	293,900	84.8	496.0	271,200	271,200					72
73	84.0	496.7	293,400	293,400	84.7	495.8	269,500	269,500					73
77	83.5	496.2	291,300	291,300	84.2	495.2	263,000	263,000	84.9	494.0	223,100	223,100	77
80	83.1	495.7	289,800	289,800	83.9	494.8	258,100	258,100	84.5	493.6	219,500	219,500	80
90	82.0	494.1	284,900	284,900	82.7	493.1	243,100	243,100	83.3	491.9	208,200	208,200	90
100	80.8	492.2	268,500	268,500	81.5	491.3	229,800	229,800	82.2	490.1	197,900	197,900	100
110	79.6	490.1	253,600	253,600	80.3	489.2	217,800	217,800	81.0	488.0	188,600	188,600	110
120	78.4	487.8	231,200	240,100	79.1	486.9	207,000	207,000	79.8	485.7	180,100	180,100	120
130	77.2	485.3	210,000	227,900	77.9	484.3	197,100	197,100	78.5	483.1	172,200	172,200	130
140	76.0	482.6	190,800	216,800	76.7	481.6	188,000	188,000	77.3	480.4	165,100	165,100	140
150	74.8	479.6	173,500	206,200	75.5	478.6	177,100	179,700	76.1	477.4	158,500	158,500	150
160	73.5	476.4	157,800	196,500	74.2	475.4	161,200	172,200	74.9	474.2	152,300	152,300	160
170	72.3	472.9	143,500	187,700	73.0	472.0	146,700	165,100	73.6	470.7	146,700	146,700	170
180	71.1	469.3	130,300	179,600	71.8	468.3	133,400	158,600	72.4	467.0	136,200	141,400	180
190	69.8	465.3	117,900	172,100	70.5	464.3	120,700	152,600	71.1	463.0	123,200	136,500	190
200	68.5	461.1	106,000	165,200	69.2	460.1	108,600	147,000	69.9	458.8	110,900	131,800	200
210	67.3	456.7	95,300	155,100	67.9	455.6	97,700	141,800	68.6	454.3	99,900	127,500	210
220	66.0	451.9	85,600	142,500	66.7	450.9	87,900	136,900	67.3	449.6	90,000	123,400	220
230	64.7	446.9	76,900	131,100	65.3	445.9	79,000	132,400	66.0	444.6	80,900	119,700	230
240	63.3	441.6	68,800	120,700	64.0	440.6	70,900	122,700	64.6	439.2	72,700	116,100	240
250	62.0	436.0	61,500	111,200	62.7	435.0	63,400	113,100	63.3	433.6	65,100	112,700	250
260	60.7	430.1	54,700	102,400	61.3	429.0	56,500	104,200	61.9	427.6	58,100	105,800	260
270	59.3	423.9	48,500	94,300	59.9	422.8	50,200	96,000	60.5	421.4	51,700	97,500	270
280	57.9	417.3	42,700	86,800	58.5	416.2	44,300	88,400	59.1	414.8	45,700	89,800	280
290	56.5	410.4	37,100	79,800	57.1	409.2	38,800	81,300	57.7	407.8	40,200	82,700	290
300	55.0	403.0	31,100	73,300	55.7	401.9	33,000	74,800	56.3	400.4	34,600	76,000	300
310	53.6	395.3	25,500	67,300	54.2	394.1	27,300	68,600	54.8	392.6	28,800	69,800	310
320	52.0	387.2	20,300	61,600	52.7	386.0	21,900	62,900	53.3	384.4	23,400	64,000	320
330	50.5	378.6	15,300	56,300	51.1	377.4	16,900	57,500	51.7	375.8	18,300	58,600	330
340	48.9	369.5	10,700	51,300	49.6	368.3	12,100	52,400	50.1	366.7	13,400	53,400	340
350	47.3	360.0		46,600	47.9	358.6		47,600	48.5	357.0		48,600	350
360	45.7	349.8		42,100	46.3	348.5		43,100	46.8	346.7		44,000	360
370	43.9	339.0		37,900	44.6	337.6		38,800	45.1	335.9		39,600	370
380	42.2	327.6		33,900	42.8	326.1		34,800	43.3	324.3		35,500	380
390	40.3	315.4		30,100	40.9	313.9		30,900	41.4	312.0		31,600	390
400	38.4	302.3		26,500	39.0	300.7		27,200	39.5	298.7		27,900	400
410	36.4	288.3		23,100	37.0	286.6		23,700	37.5	284.5		24,300	410
415	35.4	280.8		21,100	35.9	279.2		21,900	36.4	277.0		22,600	415