

Liftcrane Jib Capacities

Jib No. FJ10:687 on
 Boom No. B90:686-685-680-681-682
 with Mast No. M11:684
 881,800 lb VPC (Variable Position Counterweight)
 360 Degree Rating

MLC650 VPC-MAX SERIES 3



LIFTING CAPACITIES: Lifting capacities for various boom lengths, 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 881,800 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.

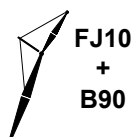
Table 1:

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	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
334.6	30,000	29,800	20,000	20,000	15,000	15,000	15,000	30,000	30,000	20,000	20,000	20,000	20,000	20,000
374.0	7,500	#	#	#	(a)			30,000	30,000	30,000	30,000	30,000	30,000	25,000
383.9	#	(a)						30,000	30,000	30,000	30,000	30,000	30,000	25,000
393.7								30,000	30,000	30,000	30,000	30,000	28,700	25,000
403.5	Raising Not Permitted							30,000	30,000	30,000	28,350	25,300	23,300	20,400

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	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
334.6	30,000	30,000	20,000	20,000	20,000	20,000	20,000	30,000	30,000	20,000	20,000	20,000	20,000	20,000
374.0	19,350	16,400	13,500	11,750	8,950	7,300	#	30,000	30,000	30,000	30,000	30,000	30,000	25,000
383.9	13,750	10,900	8,200	6,500	#	#	#	30,000	30,000	30,000	30,000	30,000	30,000	25,000
393.7	6,000	#	#	(a)	(a)			30,000	30,000	30,000	30,000	30,000	30,000	25,000
403.5	#	(a)	Raising Not Permitted					30,000	30,000	30,000	30,000	30,000	30,000	25,000
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



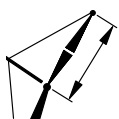
VPC (Variable Position Counterweight)



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)



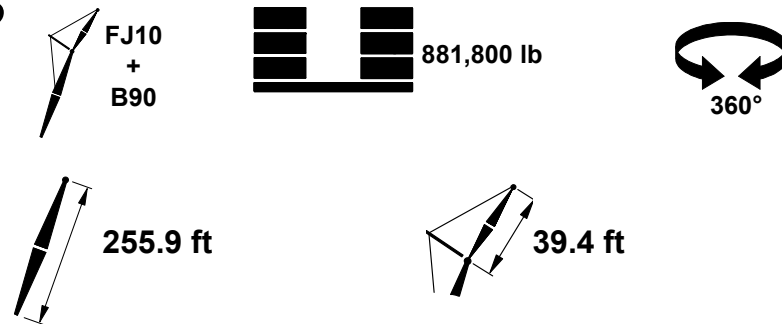
Counterweight Position
from Axis of Rotation



Lifting Capacities
(see page 1)

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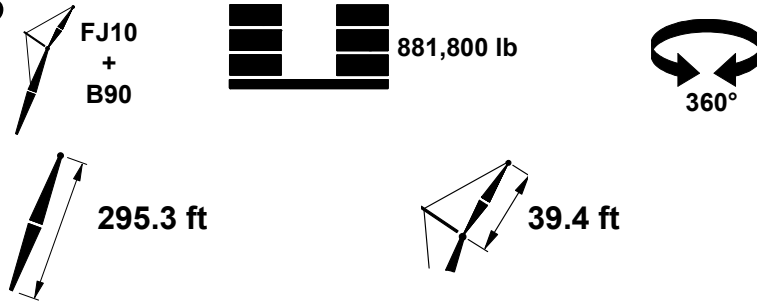
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	 10°				 15°				 20°				
			 38.7 ft 	 60.0 ft 			 38.7 ft 	 60.0 ft 			 38.7 ft 	 60.0 ft 	
ft	°	ft	lb	lb	°	ft	lb	lb	°	ft	lb	lb	ft
38	85.3	303.1	488,000	488,000									38
39	85.1	303.0	486,200	486,200									39
40	85.0	302.9	486,200	486,200									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	486,200	486,200	78.5	296.0	450,100	450,100	79.0	295.3	381,800	381,800	75
80	77.0	295.2	486,200	486,200	77.5	294.7	434,000	434,000	78.0	294.0	369,900	369,900	80
85	76.0	293.9	469,800	469,800	76.5	293.4	419,200	419,200	77.0	292.6	358,500	358,500	85
90	75.0	292.4	452,200	452,200	75.5	291.9	405,500	405,500	75.9	291.2	347,900	347,900	90
95	74.0	290.9	435,900	435,900	74.4	290.4	392,500	392,500	74.9	289.6	337,900	337,900	95
100	73.0	289.2	420,800	420,800	73.4	288.7	380,500	380,500	73.9	288.0	328,500	328,500	100
105	71.9	287.5	402,400	406,700	72.4	287.0	369,100	369,100	72.9	286.2	319,700	319,700	105
110	70.9	285.6	382,300	393,500	71.3	285.1	358,500	358,500	71.8	284.3	311,300	311,300	110
115	69.9	283.6	363,800	381,100	70.3	283.1	348,500	348,500	70.8	282.4	303,400	303,400	115
120	68.8	281.6	346,500	369,600	69.2	281.1	339,100	339,100	69.7	280.3	295,900	295,900	120
125	67.7	279.4	330,400	358,700	68.2	278.9	330,200	330,200	68.6	278.1	288,800	288,800	125
130	66.7	277.1	315,000	348,500	67.1	276.6	316,300	321,700	67.6	275.8	282,100	282,100	130
135	65.6	274.7	298,500	338,900	66.0	274.2	299,700	313,800	66.5	273.4	275,700	275,700	135
140	64.5	272.2	283,400	329,800	64.9	271.7	284,500	306,200	65.4	270.9	269,600	269,600	140
145	63.4	269.6	269,400	321,100	63.8	269.0	270,400	299,000	64.3	268.2	263,800	263,800	145
150	62.3	266.8	256,400	313,000	62.7	266.3	257,400	292,200	63.2	265.4	258,300	258,300	150
160	60.0	260.9	233,000	298,000	60.5	260.3	233,900	279,600	60.9	259.5	234,900	248,000	160
170	57.7	254.4	212,600	284,300	58.1	253.9	213,500	268,100	58.6	253.0	214,400	238,700	170
180	55.3	247.4	194,700	272,100	55.8	246.8	195,400	257,600	56.2	245.9	196,200	230,100	180
190	52.9	239.7	178,700	260,800	53.3	239.0	179,400	248,100	53.7	238.1	180,100	222,300	190
200	50.3	231.2	164,400	246,300	50.7	230.6	165,100	239,300	51.1	229.6	165,700	215,100	200
210	47.7	222.0	151,600	229,300	48.1	221.3	152,100	229,900	48.5	220.3	152,700	208,500	210
220	44.9	211.8	140,000	213,900	45.3	211.1	140,500	214,400	45.7	210.1	141,000	202,500	220
230	42.0	200.6	129,400	199,900	42.4	199.8	129,800	200,400	42.7	198.7	130,300	197,100	230
240	38.9	188.1	119,700	187,100	39.2	187.3	120,100	187,500	39.6	186.1	120,500	187,900	240
250	35.5	174.0	110,800	175,400	35.9	173.2	111,100	175,700	36.2	171.9	111,400	176,000	250

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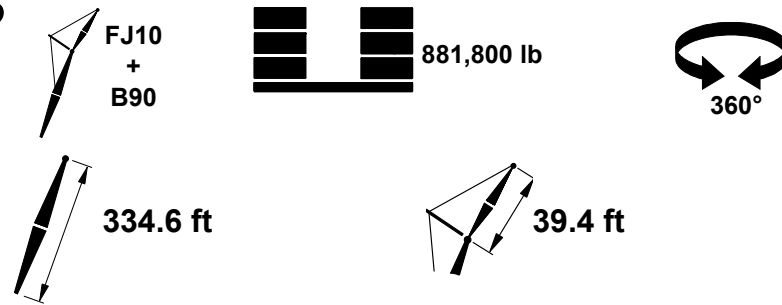
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	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	ft	lb	lb	ft
43	85.2	342.0	488,000	488,000									43
44	85.0	341.9	488,000	488,000									44
45	84.8	341.7	488,000	488,000	85.2	341.2	488,000	488,000					45
46	84.7	341.6	488,000	488,000	85.1	341.1	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	488,000	488,000	80.0	336.2	446,000	446,000	80.4	335.4	386,900	386,900	75
80	78.7	335.6	487,100	487,100	79.1	335.1	432,100	432,100	79.6	334.3	376,000	376,000	80
85	77.9	334.4	470,300	470,300	78.2	333.9	419,000	419,000	78.7	333.1	365,800	365,800	85
90	77.0	333.1	453,500	454,600	77.4	332.6	406,700	406,700	77.8	331.8	356,100	356,100	90
95	76.1	331.8	429,000	440,000	76.5	331.2	395,200	395,200	76.9	330.4	347,000	347,000	95
100	75.2	330.3	406,400	426,300	75.6	329.8	384,300	384,300	76.0	329.0	338,400	338,400	100
105	74.3	328.8	385,500	413,500	74.7	328.2	374,100	374,100	75.1	327.5	330,200	330,200	105
110	73.4	327.2	366,100	401,400	73.8	326.6	364,400	364,400	74.2	325.8	322,500	322,500	110
115	72.5	325.5	348,100	390,100	72.9	324.9	349,800	355,300	73.3	324.1	315,100	315,100	115
120	71.6	323.7	331,300	379,400	72.0	323.1	333,000	346,600	72.4	322.3	308,100	308,100	120
125	70.7	321.8	315,600	369,200	71.0	321.3	317,200	338,300	71.4	320.4	301,400	301,400	125
130	69.7	319.9	301,000	359,600	70.1	319.3	302,500	330,500	70.5	318.5	295,100	295,100	130
135	68.8	317.8	287,200	350,600	69.2	317.2	288,700	323,100	69.6	316.4	289,100	289,100	135
140	67.9	315.6	274,300	342,000	68.2	315.0	275,700	316,000	68.6	314.2	277,200	283,200	140
150	66.0	311.0	250,300	326,100	66.3	310.4	251,500	302,800	66.7	309.6	252,700	272,400	150
160	64.1	306.0	226,800	311,600	64.4	305.4	227,900	290,700	64.8	304.5	229,000	262,500	160
170	62.1	300.5	206,300	298,500	62.5	299.9	207,300	279,700	62.8	299.0	208,300	253,300	170
180	60.1	294.6	188,300	280,000	60.5	294.0	189,200	269,600	60.8	293.1	190,100	245,000	180
190	58.1	288.2	172,300	258,800	58.4	287.6	173,100	259,600	58.8	286.7	173,900	237,200	190
200	56.0	281.3	157,900	239,800	56.3	280.6	158,700	240,600	56.7	279.7	159,400	230,100	200
210	53.8	273.8	145,100	222,800	54.2	273.1	145,700	223,500	54.5	272.2	146,400	223,500	210
220	51.6	265.7	133,400	207,400	52.0	265.0	134,000	208,000	52.3	264.0	134,600	208,600	220
230	49.4	257.0	122,800	193,300	49.7	256.2	123,300	193,900	50.0	255.2	123,900	194,500	230
240	47.0	247.4	113,100	180,500	47.3	246.7	113,600	181,000	47.6	245.6	114,100	181,600	240
250	44.5	237.1	104,200	168,800	44.8	236.3	104,700	169,300	45.1	235.2	105,100	169,700	250
260	41.9	225.8	96,000	158,000	42.2	225.0	96,400	158,400	42.5	223.8	96,800	158,800	260
270	39.2	213.4	88,500	148,000	39.5	212.5	88,800	148,400	39.8	211.3	89,200	148,700	270
280	36.3	199.6	81,400	138,700	36.6	198.7	81,700	139,000	36.8	197.3	82,000	139,300	280
285									35.3	189.8	78,600	134,900	285

MLC650 VPC-MAX S-3

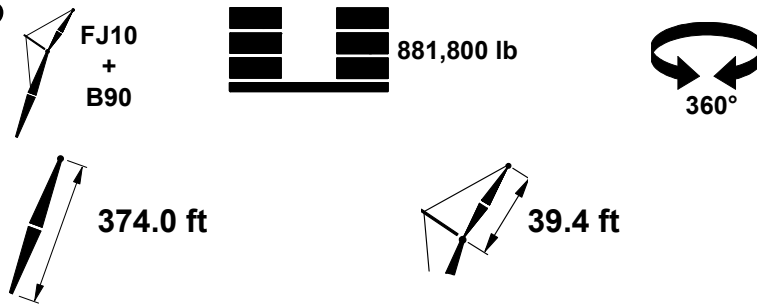
ASME B30.5



	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	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	488,000	488,000	81.9	377.1	451,200	451,200	82.3	376.3	396,800	396,800	70
75	80.8	376.8	488,000	488,000	81.1	376.2	438,500	438,500	81.5	375.4	386,700	386,700	75
80	80.0	375.8	480,400	480,400	80.4	375.2	426,500	426,500	80.7	374.4	377,100	377,100	80
85	79.2	374.7	457,000	465,900	79.6	374.2	415,200	415,200	80.0	373.3	368,100	368,100	85
90	78.4	373.6	432,600	452,200	78.8	373.0	404,400	404,400	79.2	372.2	359,500	359,500	90
95	77.7	372.4	410,000	439,300	78.0	371.8	394,200	394,200	78.4	371.0	351,300	351,300	95
100	76.9	371.1	389,000	427,100	77.2	370.5	384,600	384,600	77.6	369.7	343,500	343,500	100
105	76.1	369.7	369,500	415,700	76.4	369.2	371,400	375,400	76.8	368.3	336,100	336,100	105
110	75.3	368.3	351,300	404,800	75.6	367.7	353,100	366,700	76.0	366.9	329,000	329,000	110
115	74.5	366.8	334,400	394,500	74.8	366.2	336,100	358,400	75.2	365.4	322,300	322,300	115
120	73.7	365.2	318,500	384,800	74.0	364.7	320,200	350,500	74.4	363.8	315,800	315,800	120
130	72.0	361.8	289,700	366,600	72.4	361.3	291,300	335,800	72.7	360.4	292,900	303,700	130
140	70.4	358.1	264,300	350,200	70.7	357.5	265,700	322,300	71.1	356.7	267,300	292,500	140
150	68.7	354.1	241,600	335,300	69.1	353.5	243,000	310,000	69.4	352.6	244,400	282,200	150
160	67.1	349.7	221,400	321,600	67.4	349.1	222,600	298,700	67.7	348.2	223,900	272,700	160
170	65.4	344.9	203,100	302,100	65.7	344.3	204,300	288,200	66.0	343.4	205,500	263,900	170
180	63.6	339.8	186,400	278,100	64.0	339.2	187,300	278,600	64.3	338.3	188,300	255,800	180
190	61.9	334.3	170,300	256,800	62.2	333.7	171,200	257,700	62.5	332.7	172,100	248,200	190
200	60.1	328.4	155,900	237,800	60.4	327.7	156,700	238,600	60.8	326.8	157,600	239,500	200
210	58.3	322.0	143,000	220,800	58.6	321.4	143,800	221,500	58.9	320.4	144,500	222,300	210
220	56.4	315.2	131,300	205,300	56.7	314.6	132,000	206,000	57.1	313.6	132,700	206,700	220
230	54.5	307.9	120,700	191,300	54.8	307.2	121,300	191,900	55.1	306.2	122,000	192,600	230
240	52.6	300.1	111,000	178,500	52.9	299.4	111,600	179,000	53.2	298.4	112,200	179,600	240
250	50.6	291.7	102,100	166,700	50.9	291.0	102,700	167,200	51.2	289.9	103,200	167,800	250
260	48.5	282.7	93,900	155,900	48.8	281.9	94,400	156,400	49.1	280.8	94,900	156,900	260
270	46.4	273.0	86,400	145,900	46.6	272.2	86,800	146,400	46.9	271.0	87,300	146,800	270
280	44.1	262.5	79,400	136,700	44.4	261.7	79,800	137,100	44.7	260.5	80,200	137,500	280
290	41.8	251.1	72,800	128,100	42.1	250.3	73,200	128,400	42.3	249.0	73,500	128,800	290
300	39.4	238.8	66,700	120,100	39.6	237.9	67,100	120,400	39.9	236.5	67,400	120,700	300
310	36.8	225.2	60,800	112,600	37.0	224.3	61,200	112,800	37.3	222.9	61,500	113,100	310
315	35.4	218.0	57,900	109,000	35.7	217.0	58,200	109,200	35.9	215.5	58,500	109,500	315

MLC650 VPC-MAX S-3

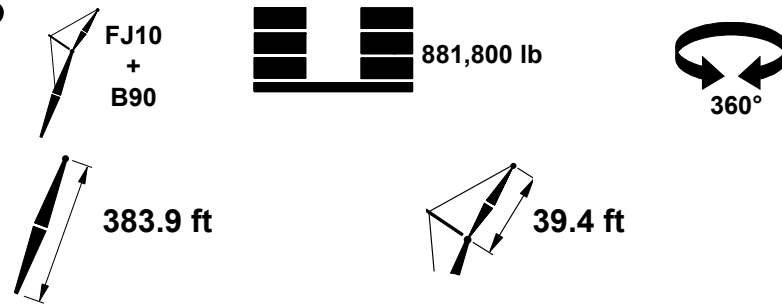
ASME B30.5



	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	ft	lb	lb	ft
50	85.2	420.3	488,000	488,000									50
51	85.1	420.2	488,000	488,000									51
52	84.9	420.0	488,000	488,000	85.3	419.4	486,300	486,300					52
53	84.8	419.9	488,000	488,000	85.1	419.3	483,700	483,700					53
54	84.7	419.8	488,000	488,000	85.0	419.2	481,000	481,000					54
55	84.5	419.7	488,000	488,000	84.8	419.1	478,400	478,400	85.2	418.3	417,600	417,600	55
56	84.4	419.6	488,000	488,000	84.7	419.0	475,800	475,800	85.0	418.1	415,600	415,600	56
57	84.2	419.4	486,900	486,900	84.6	418.8	473,300	473,300	84.9	418.0	413,700	413,700	57
58	84.1	419.3	485,800	485,800	84.4	418.7	470,700	470,700	84.8	417.9	411,800	411,800	58
60	83.8	419.0	480,300	480,300	84.1	418.4	465,700	465,700	84.5	417.6	407,900	407,900	60
65	83.1	418.3	467,100	467,100	83.4	417.7	453,500	453,500	83.8	416.9	398,800	398,800	65
70	82.4	417.6	454,200	454,200	82.7	417.0	442,000	442,000	83.1	416.2	389,800	389,800	70
75	81.7	416.7	441,800	441,800	82.0	416.1	431,100	431,100	82.4	415.3	381,400	381,400	75
80	81.0	415.8	429,800	429,800	81.3	415.3	420,700	420,700	81.7	414.4	373,400	373,400	80
85	80.3	414.9	418,200	418,200	80.6	414.3	410,800	410,800	81.0	413.5	365,700	365,700	85
90	79.6	413.9	403,900	412,600	79.9	413.3	401,400	401,400	80.2	412.4	358,400	358,400	90
95	78.9	412.8	383,300	412,600	79.2	412.2	385,400	392,400	79.5	411.4	351,300	351,300	95
100	78.2	411.6	364,100	412,600	78.5	411.0	366,100	383,800	78.8	410.2	344,600	344,600	100
110	76.7	409.1	329,400	406,500	77.0	408.5	331,300	367,800	77.4	407.7	331,900	331,900	110
120	75.3	406.4	298,800	388,300	75.6	405.8	300,600	353,100	75.9	404.9	302,500	320,300	120
130	73.8	403.3	271,800	371,800	74.1	402.7	273,400	339,700	74.5	401.9	275,100	309,300	130
140	72.4	400.0	247,700	356,600	72.7	399.4	249,200	327,200	73.0	398.5	250,800	298,800	140
150	70.9	396.4	226,100	339,500	71.2	395.8	227,500	315,800	71.5	394.9	229,100	289,200	150
160	69.4	392.5	206,700	314,800	69.7	391.9	208,100	305,100	70.0	391.0	209,500	280,300	160
170	67.9	388.3	189,200	292,400	68.2	387.6	190,500	293,600	68.5	386.8	191,800	271,900	170
180	66.4	383.8	173,300	272,000	66.7	383.1	174,500	273,100	67.0	382.2	175,700	264,200	180
190	64.8	378.9	158,800	250,700	65.1	378.3	159,900	251,700	65.4	377.3	161,100	252,800	190
200	63.3	373.7	145,600	231,700	63.6	373.1	146,600	232,600	63.9	372.1	147,700	233,500	200
210	61.7	368.2	133,400	214,500	62.0	367.5	134,400	215,400	62.3	366.6	135,400	216,300	210
220	60.1	362.3	122,200	199,100	60.3	361.6	123,100	199,800	60.6	360.6	124,000	200,700	220
230	58.4	356.0	111,800	185,000	58.7	355.3	112,700	185,700	59.0	354.3	113,500	186,500	230
240	56.7	349.2	102,200	172,100	57.0	348.5	103,000	172,800	57.3	347.5	103,800	173,500	240
250	55.0	342.1	93,300	160,400	55.3	341.4	94,000	161,000	55.6	340.3	94,800	161,700	250
260	53.3	334.5	84,900	149,600	53.6	333.7	85,600	150,100	53.8	332.7	86,300	150,700	260
270	51.5	326.3	77,200	139,600	51.8	325.6	77,800	140,100	52.0	324.5	78,500	140,700	270
280	49.7	317.7	69,900	130,300	49.9	316.9	70,500	130,800	50.2	315.8	71,100	131,300	280
290	47.8	308.4	63,000	121,700	48.0	307.6	63,600	122,200	48.3	306.5	64,100	122,600	290
300	45.8	298.6	56,600	113,700	46.1	297.7	57,100	114,100	46.3	296.5	57,600	114,500	300
310	43.8	288.0	50,500	106,200	44.0	287.1	51,000	106,600	44.3	285.9	51,400	107,000	310
320	41.7	276.6	44,800	99,200	41.9	275.6	45,200	99,500	42.2	274.4	45,600	99,900	320
330	39.5	264.3	39,300	92,600	39.7	263.3	39,700	92,900	39.9	262.0	40,100	93,200	330
340	37.2	250.9	34,200	86,400	37.4	249.9	34,500	86,700	37.6	248.5	34,800	86,900	340
345	36.0	243.8	31,700	83,400	36.2	242.8	32,000	83,700	36.4	241.3	32,300	83,900	345
350									35.1	233.8	29,900	81,000	350

MLC650 VPC-MAX S-3

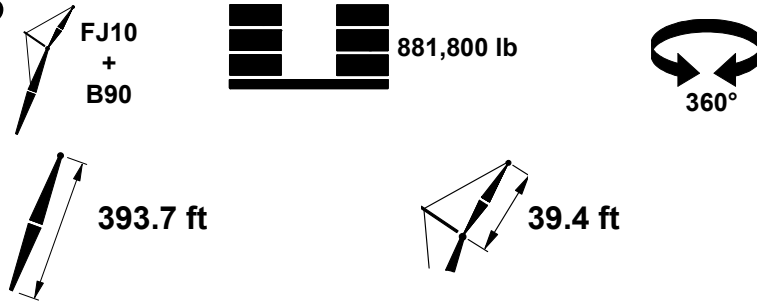
ASME B30.5



	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	ft	lb	lb	ft
50	85.2	430.4	485,500	485,500									50
51	85.0	430.3	482,800	482,800									51
52	84.9	430.2	480,200	480,200	85.2	429.6	476,100	476,100					52
53	84.8	430.1	477,600	477,600	85.1	429.5	474,400	474,400					53
54	84.6	429.9	475,000	475,000	84.9	429.4	472,700	472,700	85.2	428.8	446,000	446,000	54
55	84.5	429.8	472,400	472,400	84.8	429.3	470,900	470,900	85.1	428.7	443,800	443,800	55
56	84.4	429.7	469,800	469,800	84.7	429.2	469,200	469,200	85.0	428.5	441,700	441,700	56
57	84.2	429.6	467,200	467,200	84.5	429.0	467,400	467,400	84.8	428.4	439,500	439,500	57
58	84.1	429.5	464,700	464,700	84.4	428.9	465,600	465,600	84.7	428.3	437,400	437,400	58
60	83.8	429.2	459,700	459,700	84.1	428.7	461,000	461,000	84.4	428.0	433,200	433,200	60
65	83.1	428.5	447,300	447,300	83.4	428.0	448,700	448,700	83.7	427.3	422,900	422,900	65
70	82.4	427.8	435,400	435,400	82.8	427.2	436,800	436,800	83.1	426.6	413,200	413,200	70
75	81.7	427.0	423,900	423,900	82.1	426.4	425,200	425,200	82.4	425.8	403,900	403,900	75
80	81.1	426.1	412,700	412,700	81.4	425.6	414,000	414,000	81.7	424.9	395,100	395,100	80
85	80.4	425.2	401,800	401,800	80.7	424.6	403,100	403,100	81.0	424.0	386,600	386,600	85
90	79.7	424.2	391,300	391,300	80.0	423.6	392,600	392,600	80.3	423.0	378,600	378,600	90
95	79.0	423.1	374,500	391,300	79.3	422.6	376,700	392,600	79.6	421.9	370,800	370,800	95
100	78.3	422.0	356,000	391,300	78.6	421.4	358,100	386,600	78.9	420.8	360,000	363,500	100
110	76.9	419.5	322,300	374,700	77.2	419.0	324,300	369,100	77.5	418.3	326,000	349,500	110
120	75.5	416.8	292,600	357,900	75.8	416.3	294,400	352,900	76.1	415.6	296,100	336,700	120
130	74.1	413.9	266,200	342,100	74.4	413.3	267,900	337,700	74.7	412.7	269,400	324,900	130
140	72.7	410.6	242,600	327,300	73.0	410.1	244,200	323,400	73.2	409.4	245,700	313,900	140
150	71.2	407.1	221,500	313,600	71.5	406.6	223,000	310,000	71.8	405.9	224,400	303,800	150
160	69.8	403.3	202,500	300,800	70.1	402.8	203,900	297,600	70.3	402.1	205,200	294,300	160
170	68.3	399.2	185,300	287,400	68.6	398.7	186,600	286,100	68.9	398.0	187,800	283,900	170
180	66.8	394.9	169,600	267,400	67.1	394.3	170,800	268,600	67.4	393.6	172,000	269,700	180
190	65.3	390.1	155,300	249,100	65.6	389.6	156,500	250,100	65.9	388.9	157,500	251,100	190
200	63.8	385.1	142,300	230,000	64.1	384.5	143,300	231,000	64.4	383.8	144,300	231,900	200
210	62.3	379.7	130,200	212,900	62.6	379.1	131,300	213,800	62.8	378.4	132,200	214,600	210
220	60.7	374.0	119,100	197,500	61.0	373.4	120,100	198,300	61.3	372.7	121,000	199,100	220
230	59.1	367.9	108,900	183,400	59.4	367.3	109,800	184,200	59.7	366.5	110,600	184,900	230
240	57.5	361.4	99,400	170,600	57.8	360.8	100,200	171,300	58.0	360.0	101,000	172,000	240
250	55.8	354.5	90,500	158,900	56.1	353.9	91,300	159,500	56.4	353.1	92,000	160,100	250
260	54.2	347.2	82,300	148,100	54.4	346.5	83,000	148,700	54.7	345.7	83,700	149,200	260
270	52.4	339.4	74,600	138,100	52.7	338.7	75,300	138,700	53.0	337.9	75,900	139,200	270
280	50.7	331.1	67,400	128,800	51.0	330.4	68,000	129,400	51.2	329.5	68,600	129,900	280
290	48.9	322.2	60,600	120,300	49.1	321.5	61,200	120,800	49.4	320.6	61,700	121,200	290
300	47.0	312.8	54,200	112,300	47.3	312.1	54,800	112,700	47.5	311.2	55,300	113,100	300
310	45.1	302.7	48,200	104,800	45.3	301.9	48,700	105,200	45.6	301.0	49,200	105,600	310
320	43.1	291.9	42,500	97,800	43.3	291.1	43,000	98,200	43.6	290.2	43,400	98,500	320
330	41.0	280.3	37,100	91,300	41.3	279.5	37,600	91,600	41.5	278.5	37,900	91,900	330
340	38.8	267.8	32,000	85,100	39.1	266.9	32,400	85,400	39.3	265.9	32,800	85,700	340
350	36.6	254.2	27,200	79,300	36.8	253.3	27,500	79,500	37.0	252.2	27,800	79,800	350
355	35.4	247.0	24,800	76,500	35.6	246.1	25,200	76,700	35.8	244.9	25,400	77,000	355

MLC650 VPC-MAX S-3

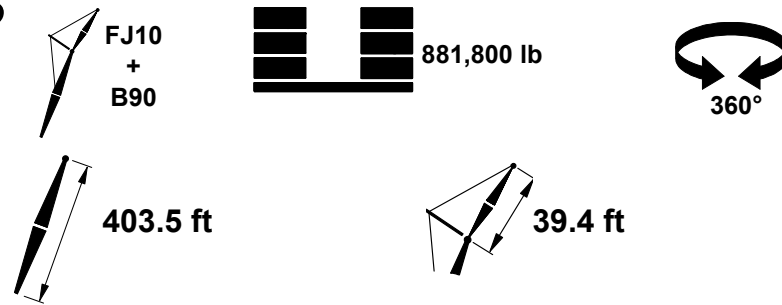
ASME B30.5



	10°				15°				20°				
	ft	ft	lb	lb	ft	ft	lb	lb	ft	ft	lb	lb	ft
51	85.1	440.2	471,500	471,500									51
52	85.0	440.1	468,900	468,900									52
53	84.9	440.0	466,400	466,400	85.2	439.4	467,800	467,800					53
54	84.7	439.8	463,800	463,800	85.1	439.3	465,200	465,200					54
55	84.6	439.7	461,300	461,300	84.9	439.2	462,700	462,700	85.2	438.6	441,400	441,400	55
56	84.5	439.6	458,800	458,800	84.8	439.1	460,200	460,200	85.1	438.5	439,300	439,300	56
57	84.3	439.5	456,400	456,400	84.7	439.0	457,700	457,700	84.9	438.3	437,200	437,200	57
58	84.2	439.4	453,900	453,900	84.5	438.8	455,300	455,300	84.8	438.2	435,200	435,200	58
60	83.9	439.1	449,000	449,000	84.3	438.6	450,400	450,400	84.5	438.0	431,200	431,200	60
65	83.3	438.5	437,100	437,100	83.6	437.9	438,400	438,400	83.9	437.3	421,200	421,200	65
70	82.6	437.7	425,500	425,500	82.9	437.2	426,800	426,800	83.2	436.6	411,900	411,900	70
75	81.9	436.9	414,300	414,300	82.2	436.4	415,600	415,600	82.5	435.8	402,900	402,900	75
80	81.3	436.1	403,400	403,400	81.6	435.5	404,700	404,700	81.9	434.9	394,400	394,400	80
85	80.6	435.2	392,800	392,800	80.9	434.6	394,100	394,100	81.2	434.0	386,200	386,200	85
90	79.9	434.2	382,600	382,600	80.2	433.7	383,800	383,800	80.5	433.0	378,400	378,400	90
95	79.2	433.2	368,800	379,500	79.5	432.6	371,000	379,000	79.8	432.0	370,800	370,800	95
100	78.6	432.1	350,500	379,500	78.9	431.5	352,600	379,000	79.1	430.9	354,600	363,600	100
110	77.2	429.7	317,200	379,500	77.5	429.2	319,200	379,000	77.8	428.5	321,000	350,100	110
120	75.8	427.1	287,700	379,500	76.1	426.5	289,600	368,600	76.4	425.9	291,300	337,600	120
130	74.5	424.2	261,600	367,300	74.8	423.6	263,300	354,500	75.0	423.0	264,900	325,900	130
140	73.1	421.0	238,200	353,000	73.4	420.5	239,800	341,600	73.6	419.8	241,300	315,200	140
150	71.7	417.6	217,200	328,400	72.0	417.0	218,700	329,600	72.2	416.4	220,100	305,200	150
160	70.2	413.9	198,300	304,500	70.5	413.3	199,700	305,900	70.8	412.7	201,000	295,900	160
170	68.8	409.9	181,100	282,700	69.1	409.3	182,500	284,100	69.4	408.7	183,700	285,300	170
180	67.4	405.6	165,500	262,900	67.7	405.1	166,800	264,100	67.9	404.4	167,900	265,300	180
190	65.9	401.1	151,300	244,700	66.2	400.5	152,500	245,900	66.5	399.8	153,600	246,900	190
200	64.4	396.2	138,200	227,500	64.7	395.6	139,400	228,500	65.0	394.9	140,400	229,400	200
210	63.0	391.0	126,200	210,400	63.2	390.4	127,300	211,300	63.5	389.6	128,300	212,100	210
220	61.4	385.4	115,200	194,900	61.7	384.8	116,200	195,800	62.0	384.1	117,100	196,500	220
230	59.9	379.5	104,900	180,800	60.2	378.9	105,900	181,600	60.4	378.1	106,700	182,400	230
240	58.3	373.2	95,500	168,000	58.6	372.6	96,300	168,700	58.9	371.8	97,100	169,400	240
250	56.7	366.5	86,600	156,200	57.0	365.9	87,500	156,900	57.3	365.1	88,200	157,600	250
260	55.1	359.4	78,400	145,400	55.4	358.8	79,200	146,100	55.6	358.0	79,900	146,700	260
270	53.5	351.9	70,700	135,400	53.7	351.3	71,400	136,000	54.0	350.5	72,100	136,600	270
280	51.8	343.9	63,500	126,200	52.0	343.2	64,200	126,800	52.3	342.4	64,800	127,300	280
290	50.0	335.4	56,700	117,600	50.3	334.7	57,300	118,100	50.5	333.9	57,900	118,600	290
300	48.2	326.4	50,300	109,600	48.5	325.7	50,900	110,100	48.7	324.8	51,400	110,500	300
310	46.4	316.7	44,300	102,100	46.6	316.0	44,900	102,600	46.9	315.1	45,300	103,000	310
320	44.5	306.5	38,600	95,100	44.7	305.7	39,100	95,600	45.0	304.8	39,600	95,900	320
330	42.5	295.5	33,200	88,600	42.8	294.7	33,700	89,000	43.0	293.7	34,100	89,300	330
340	40.5	283.6	28,100	82,400	40.7	282.8	28,600	82,700	40.9	281.8	28,900	83,000	340
350	38.3	270.9	23,300	76,600	38.6	270.0	23,700	76,900	38.7	269.0	24,000	77,100	350
360	36.1	257.1	18,700	71,100	36.3	256.2	19,000	71,300	36.5	255.1	19,300	71,600	360
365					35.1	248.8	16,800	68,700	35.3	247.7	17,000	68,900	365

MLC650 VPC-MAX S-3

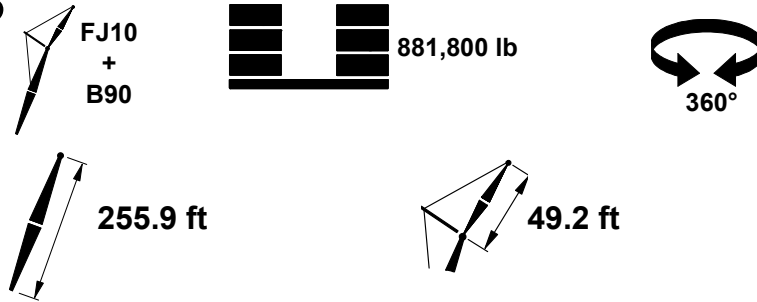
ASME B30.5



	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	ft	lb	lb	ft
51	85.3	450.1	449,200	449,200									51
52	85.1	450.0	449,200	449,200									52
53	85.0	449.9	449,200	449,200									53
54	84.9	449.8	449,200	449,200	85.2	449.2	445,700	445,700					54
55	84.7	449.6	448,100	448,100	85.0	449.1	445,600	445,600					55
56	84.6	449.5	447,000	447,000	84.9	449.0	445,500	445,500	85.2	448.3	433,600	433,600	56
57	84.5	449.4	444,600	444,600	84.8	448.9	445,500	445,500	85.1	448.2	431,700	431,700	57
58	84.3	449.3	442,300	442,300	84.7	448.7	443,600	443,600	84.9	448.1	429,700	429,700	58
59	84.2	449.2	439,900	439,900	84.5	448.6	441,300	441,300	84.8	448.0	427,800	427,800	59
60	84.1	449.0	437,600	437,600	84.4	448.5	439,000	439,000	84.7	447.9	425,900	425,900	60
65	83.4	448.4	426,200	426,200	83.7	447.8	427,500	427,500	84.0	447.2	416,400	416,400	65
70	82.8	447.7	415,100	415,100	83.1	447.1	416,400	416,400	83.4	446.5	407,500	407,500	70
75	82.1	446.9	404,300	404,300	82.4	446.3	405,700	405,700	82.7	445.7	399,000	399,000	75
80	81.5	446.1	393,900	393,900	81.8	445.5	395,200	395,200	82.1	444.9	390,800	390,800	80
85	80.8	445.2	383,800	383,800	81.1	444.6	385,000	385,000	81.4	444.0	383,000	383,000	85
90	80.1	444.2	373,900	373,900	80.5	443.7	375,200	375,200	80.7	443.0	375,500	375,500	90
100	78.8	442.2	345,900	365,200	79.1	441.6	348,000	365,600	79.4	441.0	350,000	361,300	100
110	77.5	439.8	313,100	363,600	77.8	439.3	315,100	358,500	78.1	438.6	317,000	348,200	110
120	76.2	437.3	284,100	348,200	76.5	436.7	286,000	343,600	76.7	436.0	287,700	336,100	120
130	74.8	434.4	258,300	333,600	75.1	433.9	260,100	329,500	75.4	433.2	261,700	324,900	130
140	73.5	431.4	235,200	319,800	73.8	430.8	236,800	316,100	74.0	430.1	238,300	313,200	140
150	72.1	428.0	214,400	307,000	72.4	427.5	216,000	303,600	72.6	426.8	217,400	301,000	150
160	70.7	424.4	195,600	294,900	71.0	423.8	197,100	291,900	71.3	423.2	198,400	289,600	160
170	69.3	420.5	178,600	279,600	69.6	420.0	180,000	280,900	69.9	419.3	181,200	278,800	170
180	67.9	416.4	163,100	259,900	68.2	415.8	164,400	261,200	68.5	415.1	165,600	262,300	180
190	66.5	411.9	149,000	241,900	66.8	411.3	150,200	243,100	67.0	410.6	151,300	244,100	190
200	65.1	407.2	136,000	225,300	65.4	406.6	137,200	226,400	65.6	405.9	138,200	227,400	200
210	63.6	402.1	124,100	209,200	63.9	401.5	125,200	210,100	64.1	400.8	126,100	211,000	210
220	62.1	396.7	113,100	193,700	62.4	396.1	114,100	194,600	62.7	395.4	115,000	195,400	220
230	60.6	391.0	102,900	179,600	60.9	390.3	103,800	180,500	61.2	389.6	104,700	181,200	230
240	59.1	384.9	93,400	166,800	59.4	384.2	94,300	167,600	59.6	383.5	95,100	168,300	240
250	57.6	378.4	84,600	155,000	57.9	377.8	85,500	155,800	58.1	377.0	86,200	156,400	250
260	56.0	371.6	76,400	144,200	56.3	370.9	77,200	144,900	56.5	370.1	77,900	145,500	260
270	54.4	364.3	68,700	134,200	54.7	363.6	69,500	134,900	54.9	362.8	70,200	135,400	270
280	52.8	356.6	61,500	125,000	53.0	355.9	62,200	125,600	53.3	355.1	62,900	126,100	280
290	51.1	348.4	54,800	116,400	51.4	347.7	55,400	116,900	51.6	346.9	56,000	117,400	290
300	49.4	339.7	48,400	108,400	49.6	339.0	49,000	108,900	49.9	338.1	49,600	109,400	300
310	47.6	330.5	42,400	100,900	47.9	329.7	43,000	101,400	48.1	328.9	43,500	101,800	310
320	45.8	320.6	36,800	93,900	46.1	319.9	37,300	94,400	46.3	319.0	37,700	94,700	320
330	43.9	310.2	31,400	87,400	44.2	309.4	31,900	87,800	44.4	308.4	32,300	88,100	330
340	42.0	299.0	26,300	81,200	42.2	298.1	26,800	81,600	42.4	297.2	27,100	81,900	340
350	40.0	286.9	21,500	75,400	40.2	286.1	21,900	75,700	40.4	285.1	22,200	76,000	350
360	37.8	274.0	16,900	69,900	38.1	273.1	17,200	70,200	38.2	272.0	17,500	70,400	360
370	35.6	260.0	12,500	64,700	35.8	259.0	12,800	64,900	36.0	257.9	13,100	65,200	370

MLC650 VPC-MAX S-3

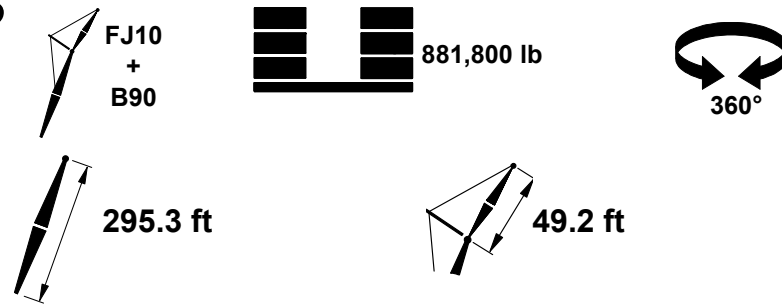
ASME B30.5



	10°				15°				20°				
	ft	°	ft	lb	lb	ft	°	ft	lb	lb	ft	°	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	358,400	358,400	74.5	298.7	324,400	324,400	75.1	297.8	293,100	293,100	100
105	73.0	297.7	346,600	346,600	73.5	297.0	314,900	314,900	74.1	296.1	285,400	285,400	105
110	72.0	295.9	335,500	335,500	72.5	295.2	305,900	305,900	73.1	294.3	278,300	278,300	110
115	71.0	294.0	325,100	325,100	71.5	293.3	297,500	297,500	72.1	292.4	271,400	271,400	115
120	70.0	292.0	315,400	315,400	70.5	291.3	289,400	289,400	71.1	290.4	264,700	264,700	120
125	68.9	289.9	306,200	306,200	69.5	289.2	281,900	281,900	70.0	288.3	258,400	258,400	125
130	67.9	287.7	297,600	297,600	68.4	287.0	274,800	274,800	69.0	286.1	252,400	252,400	130
135	66.9	285.4	289,500	289,500	67.4	284.7	268,000	268,000	68.0	283.8	246,700	246,700	135
140	65.8	283.0	281,800	281,800	66.4	282.3	261,600	261,600	66.9	281.3	241,300	241,300	140
145	64.8	280.4	271,400	274,500	65.3	279.8	255,500	255,500	65.9	278.8	236,100	236,100	145
150	63.7	277.8	258,300	267,500	64.2	277.1	249,700	249,700	64.8	276.1	231,200	231,200	150
160	61.6	272.1	234,900	254,800	62.1	271.4	236,100	238,900	62.6	270.4	222,000	222,000	160
170	59.3	265.9	214,500	243,100	59.8	265.2	215,500	229,100	60.4	264.2	213,600	213,600	170
180	57.1	259.2	196,400	232,600	57.6	258.5	197,400	220,100	58.1	257.4	198,400	205,900	180
190	54.7	251.9	180,400	223,100	55.2	251.1	181,300	211,900	55.7	250.0	182,200	198,900	190
200	52.3	243.9	166,100	214,300	52.8	243.1	166,900	204,400	53.3	241.9	167,700	192,400	200
210	49.8	235.2	153,300	206,400	50.3	234.3	154,000	197,500	50.8	233.1	154,700	186,500	210
220	47.2	225.6	141,600	198,900	47.7	224.8	142,200	191,200	48.2	223.5	142,900	181,000	220
230	44.5	215.2	131,000	192,200	44.9	214.3	131,600	185,400	45.4	212.9	132,100	176,000	230
240	41.6	203.6	121,300	186,000	42.1	202.7	121,800	180,100	42.5	201.3	122,300	171,400	240
250	38.6	190.8	112,400	177,000	39.0	189.7	112,800	175,200	39.4	188.3	113,200	167,300	250
260	35.3	176.3	104,100	166,100	35.7	175.2	104,500	166,500	36.0	173.6	104,900	163,600	260

MLC650 VPC-MAX S-3

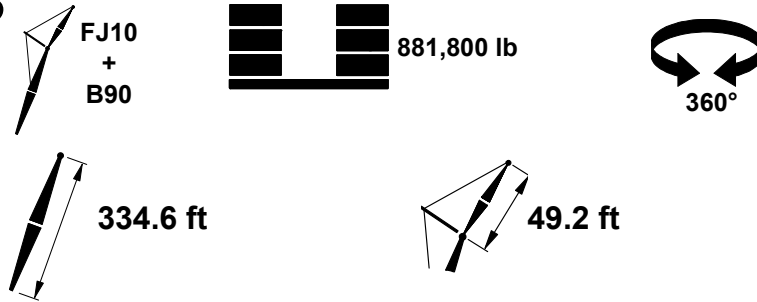
ASME B30.5



	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	385,600	385,600	78.3	342.3	345,600	345,600	78.8	341.3	309,100	309,100	90
95	76.9	341.7	373,500	373,500	77.4	341.0	335,900	335,900	77.9	340.0	301,600	301,600	95
100	76.0	340.3	362,100	362,100	76.5	339.6	326,800	326,800	77.0	338.6	294,400	294,400	100
105	75.2	338.8	351,300	351,300	75.6	338.1	318,200	318,200	76.2	337.1	287,600	287,600	105
110	74.3	337.3	341,200	341,200	74.8	336.5	310,000	310,000	75.3	335.6	281,100	281,100	110
115	73.4	335.6	331,700	331,700	73.9	334.9	302,300	302,300	74.4	333.9	274,900	274,900	115
120	72.5	333.9	322,700	322,700	73.0	333.2	295,000	295,000	73.5	332.2	269,000	269,000	120
125	71.7	332.1	314,200	314,200	72.1	331.3	288,000	288,000	72.6	330.3	263,400	263,400	125
130	70.8	330.1	301,900	306,200	71.2	329.4	281,500	281,500	71.7	328.4	258,100	258,100	130
135	69.9	328.1	288,200	298,500	70.3	327.4	275,100	275,100	70.8	326.4	252,900	252,900	135
140	69.0	326.1	275,400	291,300	69.4	325.3	269,200	269,200	69.9	324.3	248,000	248,000	140
150	67.1	321.6	251,900	277,800	67.6	320.8	253,500	258,000	68.1	319.8	238,800	238,800	150
160	65.3	316.7	228,900	265,700	65.7	316.0	230,200	247,800	66.2	314.9	230,400	230,400	160
170	63.4	311.5	208,300	254,500	63.8	310.7	209,500	238,400	64.3	309.6	210,800	222,700	170
180	61.5	305.8	190,200	244,300	61.9	305.0	191,300	229,700	62.4	303.9	192,500	215,500	180
190	59.5	299.6	174,100	235,000	59.9	298.8	175,100	221,900	60.4	297.7	176,200	208,900	190
200	57.5	293.0	159,700	226,400	57.9	292.2	160,600	214,500	58.4	291.0	161,600	202,800	200
210	55.5	285.8	146,800	218,600	55.9	285.0	147,600	207,800	56.3	283.8	148,500	197,100	210
220	53.4	278.1	135,100	209,000	53.8	277.2	135,800	201,500	54.2	276.0	136,700	191,800	220
230	51.2	269.7	124,400	195,000	51.6	268.8	125,100	195,700	52.0	267.6	125,900	187,000	230
240	48.9	260.7	114,700	182,100	49.3	259.8	115,400	182,800	49.7	258.5	116,000	182,500	240
250	46.6	251.0	105,800	170,400	47.0	250.0	106,400	171,000	47.4	248.6	107,000	171,600	250
260	44.2	240.3	97,600	159,500	44.5	239.3	98,100	160,100	44.9	237.9	98,600	160,600	260
270	41.6	228.7	90,000	149,500	42.0	227.7	90,400	150,000	42.3	226.2	90,900	150,500	270
280	38.9	216.0	82,900	140,200	39.3	214.9	83,300	140,600	39.6	213.3	83,700	141,000	280
290	36.0	201.9	76,300	131,600	36.4	200.7	76,700	131,900	36.7	199.0	77,000	132,300	290
295									35.1	191.2	73,900	128,100	295

MLC650 VPC-MAX S-3

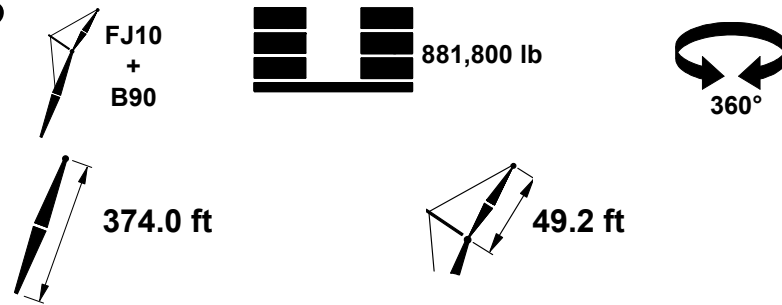
ASME B30.5



	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	395,100	395,100	80.3	383.8	352,500	352,500	80.8	382.7	313,900	313,900	85
90	79.1	383.4	383,700	383,700	79.6	382.6	343,500	343,500	80.0	381.6	307,000	307,000	90
95	78.4	382.2	372,900	372,900	78.8	381.5	334,900	334,900	79.3	380.4	300,200	300,200	95
100	77.6	381.0	362,600	362,600	78.0	380.2	326,700	326,700	78.5	379.2	293,900	293,900	100
105	76.8	379.6	353,100	353,100	77.2	378.9	319,100	319,100	77.7	377.8	287,700	287,700	105
110	76.0	378.3	343,900	343,900	76.5	377.5	311,700	311,700	76.9	376.4	281,900	281,900	110
115	75.3	376.8	334,400	335,300	75.7	376.0	304,800	304,800	76.1	375.0	276,300	276,300	115
120	74.5	375.3	318,700	327,100	74.9	374.5	298,100	298,100	75.4	373.4	271,000	271,000	120
130	72.9	372.0	290,200	311,800	73.3	371.2	285,600	285,600	73.8	370.1	261,000	261,000	130
140	71.3	368.3	265,000	298,000	71.7	367.6	266,700	274,200	72.2	366.5	251,800	251,800	140
150	69.7	364.4	242,500	285,400	70.1	363.6	244,100	263,800	70.6	362.5	243,200	243,200	150
160	68.1	360.1	222,400	273,800	68.5	359.4	223,900	254,200	68.9	358.2	225,500	235,300	160
170	66.4	355.5	204,200	263,200	66.8	354.8	205,600	245,300	67.3	353.6	207,200	228,100	170
180	64.8	350.6	187,800	253,400	65.2	349.8	189,100	237,100	65.6	348.6	190,600	221,300	180
190	63.1	345.3	172,000	244,500	63.5	344.4	173,100	229,500	63.9	343.3	174,300	215,000	190
200	61.3	339.5	157,600	236,100	61.7	338.7	158,600	222,500	62.1	337.5	159,700	209,000	200
210	59.6	333.4	144,600	222,400	60.0	332.6	145,600	215,800	60.4	331.4	146,600	203,600	210
220	57.8	326.8	132,900	206,900	58.2	326.0	133,800	207,700	58.6	324.7	134,700	198,400	220
230	56.0	319.8	122,200	192,800	56.3	318.9	123,000	193,600	56.7	317.7	123,900	193,700	230
240	54.1	312.3	112,500	179,900	54.5	311.4	113,200	180,700	54.8	310.1	114,000	181,400	240
250	52.2	304.2	103,600	168,200	52.5	303.3	104,200	168,800	52.9	302.0	105,000	169,500	250
260	50.2	295.6	95,300	157,300	50.5	294.7	96,000	157,900	50.9	293.3	96,600	158,600	260
270	48.1	286.4	87,800	147,300	48.5	285.4	88,300	147,900	48.9	283.9	88,900	148,500	270
280	46.0	276.4	80,700	138,000	46.4	275.4	81,200	138,500	46.7	273.9	81,800	139,100	280
290	43.8	265.7	74,200	129,400	44.2	264.6	74,600	129,900	44.5	263.1	75,100	130,300	290
300	41.5	254.0	68,000	121,400	41.9	252.9	68,500	121,800	42.2	251.3	68,900	122,200	300
310	39.1	241.4	62,100	113,800	39.4	240.2	62,600	114,200	39.7	238.5	63,000	114,600	310
320	36.6	227.6	56,300	106,800	36.9	226.3	56,700	107,100	37.2	224.5	57,100	107,400	320
325	35.2	220.2	53,500	103,400	35.5	218.9	53,800	103,700	35.8	217.0	54,200	104,000	325

MLC650 VPC-MAX S-3

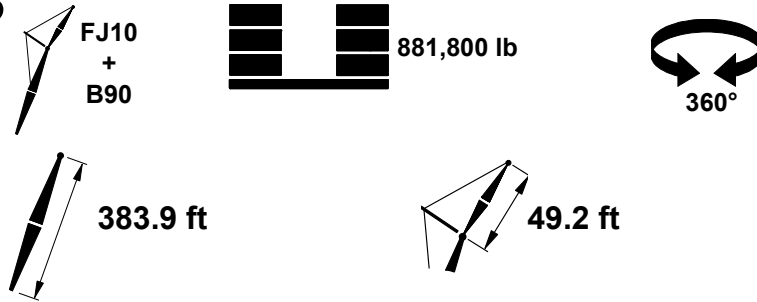
ASME B30.5



	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	ft	lb	lb	ft
53	85.3	429.5	469,900	469,900									53
54	85.1	429.4	467,000	467,000									54
55	85.0	429.3	464,100	464,100									55
56	84.9	429.1	461,300	461,300	85.3	428.4	403,700	403,700					56
57	84.7	429.0	458,500	458,500	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	412,700	412,700	82.6	425.7	366,000	366,000	83.1	424.6	324,000	324,000	75
80	81.6	425.5	401,600	401,600	82.0	424.8	357,300	357,300	82.4	423.7	317,200	317,200	80
85	80.9	424.6	391,000	391,000	81.3	423.8	349,000	349,000	81.7	422.8	310,700	310,700	85
90	80.2	423.6	381,000	381,000	80.6	422.9	341,000	341,000	81.0	421.8	304,600	304,600	90
95	79.5	422.5	371,400	371,400	79.9	421.8	333,400	333,400	80.3	420.7	298,600	298,600	95
100	78.8	421.4	362,400	362,400	79.2	420.7	326,200	326,200	79.6	419.6	292,900	292,900	100
110	77.4	419.0	328,800	345,500	77.8	418.2	312,600	312,600	78.2	417.1	282,200	282,200	110
120	76.0	416.3	298,700	330,100	76.4	415.5	300,200	300,200	76.8	414.4	272,300	272,300	120
130	74.6	413.3	272,000	316,200	75.0	412.5	274,000	288,800	75.4	411.5	263,100	263,100	130
140	73.2	410.1	248,200	303,300	73.5	409.3	250,100	278,200	73.9	408.2	252,100	254,600	140
150	71.7	406.5	226,900	291,500	72.1	405.8	228,600	268,600	72.5	404.7	230,500	246,700	150
160	70.3	402.7	207,600	280,600	70.6	402.0	209,300	259,500	71.0	400.8	211,000	239,300	160
170	68.8	398.6	190,200	270,600	69.2	397.9	191,800	251,100	69.6	396.7	193,400	232,400	170
180	67.3	394.2	174,400	261,200	67.7	393.5	175,900	243,300	68.1	392.3	177,400	226,100	180
190	65.8	389.5	160,000	252,600	66.2	388.7	161,400	236,100	66.6	387.6	162,800	220,100	190
200	64.3	384.5	146,800	233,400	64.6	383.7	148,100	229,200	65.0	382.5	149,400	214,400	200
210	62.8	379.1	134,700	216,200	63.1	378.3	135,900	217,300	63.5	377.1	137,100	209,100	210
220	61.2	373.4	123,500	200,700	61.5	372.5	124,600	201,700	61.9	371.3	125,800	202,700	220
230	59.6	367.3	113,100	186,600	59.9	366.4	114,200	187,500	60.3	365.2	115,300	188,400	230
240	58.0	360.8	103,500	173,700	58.3	359.9	104,500	174,500	58.7	358.6	105,500	175,400	240
250	56.3	353.8	94,600	161,900	56.7	353.0	95,500	162,700	57.0	351.7	96,500	163,500	250
260	54.6	346.5	86,300	151,000	55.0	345.6	87,100	151,700	55.3	344.3	88,000	152,500	260
270	52.9	338.7	78,500	141,000	53.2	337.7	79,300	141,700	53.6	336.4	80,100	142,400	270
280	51.2	330.3	71,200	131,700	51.5	329.4	71,900	132,300	51.8	328.0	72,700	133,000	280
290	49.3	321.5	64,300	123,100	49.6	320.5	65,000	123,600	50.0	319.1	65,800	124,200	290
300	47.5	312.0	57,900	115,000	47.8	311.0	58,500	115,600	48.1	309.5	59,200	116,100	300
310	45.5	301.9	51,800	107,500	45.8	300.9	52,400	108,000	46.1	299.3	53,000	108,500	310
320	43.5	291.1	46,100	100,500	43.8	290.0	46,600	100,900	44.1	288.4	47,200	101,400	320
330	41.5	279.4	40,600	93,900	41.7	278.3	41,100	94,300	42.0	276.7	41,600	94,700	330
340	39.3	266.9	35,500	87,600	39.5	265.7	35,900	88,000	39.8	264.0	36,300	88,400	340
350	37.0	253.3	30,500	81,800	37.2	252.0	30,900	82,100	37.5	250.2	31,300	82,400	350
355	35.8	246.0	28,200	78,900	36.0	244.7	28,600	79,300	36.3	242.8	28,900	79,500	355

MLC650 VPC-MAX S-3

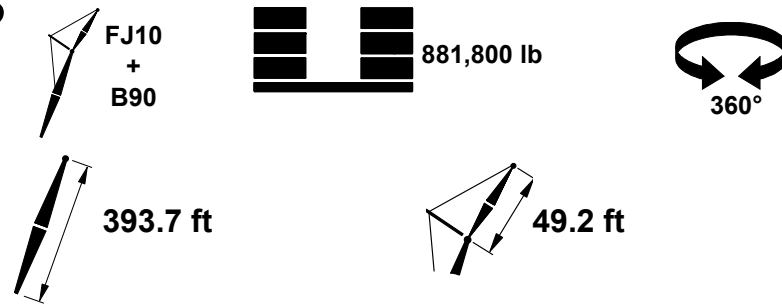
ASME B30.5



	10°				15°				20°				
	ft	ft	lb	lb	ft	lb	lb	lb	ft	lb	lb	lb	ft
53	85.2	439.7	448,700	448,700									53
54	85.1	439.6	447,100	447,100									54
55	84.9	439.5	445,500	445,500	85.3	438.8	425,800	425,800					55
56	84.8	439.4	443,800	443,800	85.2	438.7	423,400	423,400					56
57	84.7	439.2	442,100	442,100	85.1	438.6	421,100	421,100					57
58	84.5	439.1	440,500	440,500	84.9	438.4	418,800	418,800	85.3	437.6	371,900	371,900	58
59	84.4	439.0	438,800	438,800	84.8	438.3	416,600	416,600	85.2	437.5	370,200	370,200	59
60	84.3	438.9	437,100	437,100	84.7	438.2	414,300	414,300	85.0	437.4	368,400	368,400	60
61	84.1	438.7	435,400	435,400	84.5	438.0	412,200	412,200	84.9	437.3	366,600	366,600	61
65	83.6	438.2	428,500	428,500	84.0	437.5	403,500	403,500	84.4	436.7	359,800	359,800	65
70	82.9	437.5	419,300	419,300	83.3	436.8	393,000	393,000	83.7	436.0	351,400	351,400	70
75	82.3	436.7	410,500	410,500	82.7	436.0	383,200	383,200	83.0	435.2	343,600	343,600	75
80	81.6	435.8	401,600	401,600	82.0	435.1	373,900	373,900	82.3	434.3	336,200	336,200	80
85	80.9	434.9	392,800	392,800	81.3	434.2	364,900	364,900	81.7	433.4	329,000	329,000	85
90	80.2	433.9	383,200	383,200	80.6	433.2	356,400	356,400	81.0	432.4	322,100	322,100	90
95	79.6	432.9	372,400	375,400	79.9	432.2	348,300	348,300	80.3	431.4	315,600	315,600	95
100	78.9	431.8	354,300	366,900	79.3	431.1	340,600	340,600	79.6	430.3	309,300	309,300	100
110	77.5	429.4	321,300	350,400	77.9	428.7	323,700	326,100	78.3	427.9	297,500	297,500	110
120	76.1	426.8	292,100	335,100	76.5	426.1	294,300	312,800	76.9	425.3	286,600	286,600	120
130	74.8	423.9	266,100	320,800	75.1	423.2	268,200	300,600	75.5	422.4	270,100	276,500	130
140	73.4	420.8	242,900	307,300	73.8	420.0	244,800	289,400	74.1	419.2	246,600	267,200	140
150	72.0	417.3	222,000	294,700	72.4	416.6	223,800	279,000	72.7	415.8	225,500	258,500	150
160	70.6	413.6	203,200	282,800	70.9	412.9	204,900	269,400	71.3	412.1	206,500	250,500	160
170	69.1	409.6	186,100	271,800	69.5	408.9	187,700	260,500	69.8	408.1	189,200	243,000	170
180	67.7	405.4	170,500	261,700	68.1	404.6	172,000	252,100	68.4	403.8	173,400	235,900	180
190	66.2	400.8	156,300	249,400	66.6	400.0	157,800	244,300	66.9	399.2	159,100	229,400	190
200	64.8	395.9	143,300	231,700	65.1	395.1	144,700	232,900	65.4	394.2	145,900	223,200	200
210	63.3	390.7	131,300	214,500	63.6	389.9	132,600	215,600	63.9	389.0	133,800	216,700	210
220	61.7	385.1	120,300	199,000	62.1	384.3	121,500	200,000	62.4	383.4	122,600	201,000	220
230	60.2	379.2	110,100	184,900	60.6	378.4	111,200	185,900	60.9	377.5	112,200	186,800	230
240	58.6	372.9	100,600	172,000	59.0	372.1	101,600	172,900	59.3	371.2	102,600	173,800	240
250	57.0	366.2	91,700	160,200	57.4	365.4	92,700	161,100	57.7	364.4	93,600	161,900	250
260	55.4	359.1	83,500	149,400	55.8	358.3	84,400	150,200	56.1	357.3	85,300	150,900	260
270	53.8	351.6	75,800	139,400	54.1	350.7	76,700	140,200	54.4	349.7	77,500	140,800	270
280	52.1	343.6	68,600	130,100	52.4	342.7	69,400	130,800	52.7	341.7	70,100	131,400	280
290	50.3	335.1	61,800	121,500	50.6	334.2	62,600	122,200	50.9	333.1	63,200	122,700	290
300	48.5	326.0	55,400	113,500	48.9	325.1	56,100	114,100	49.1	324.0	56,800	114,600	300
310	46.7	316.4	49,400	106,000	47.0	315.4	50,100	106,600	47.3	314.3	50,600	107,100	310
320	44.8	306.1	43,700	99,000	45.1	305.1	44,300	99,500	45.4	303.9	44,900	100,000	320
330	42.8	295.1	38,300	92,400	43.1	294.0	38,900	92,900	43.4	292.8	39,400	93,300	330
340	40.8	283.2	33,200	86,200	41.1	282.2	33,700	86,700	41.3	280.9	34,200	87,000	340
350	38.6	270.5	28,400	80,400	38.9	269.4	28,800	80,800	39.1	268.1	29,200	81,100	350
360	36.3	256.7	23,700	74,900	36.6	255.5	24,200	75,200	36.8	254.1	24,500	75,500	360
365	35.2	249.3	21,500	72,200	35.4	248.1	21,900	72,600	35.7	246.7	22,200	72,800	365

MLC650 VPC-MAX S-3

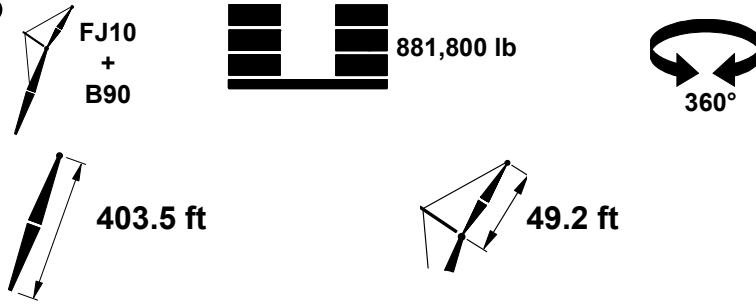
ASME B30.5



	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	ft	lb	lb	ft
54	85.2	449.5	444,000	444,000									54
55	85.0	449.4	443,900	443,900									55
56	84.9	449.3	443,900	443,900	85.3	448.6	421,100	421,100					56
57	84.8	449.2	443,900	443,900	85.2	448.5	418,900	418,900					57
58	84.7	449.0	442,300	442,300	85.0	448.4	416,700	416,700					58
59	84.5	448.9	440,000	440,000	84.9	448.2	414,500	414,500	85.3	447.5	368,500	368,500	59
60	84.4	448.8	437,700	437,700	84.8	448.1	412,400	412,400	85.1	447.3	366,700	366,700	60
61	84.3	448.7	435,500	435,500	84.6	448.0	410,300	410,300	85.0	447.2	365,100	365,100	61
62	84.1	448.5	433,200	433,200	84.5	447.9	408,200	408,200	84.9	447.1	363,400	363,400	62
65	83.7	448.1	426,500	426,500	84.1	447.5	401,900	401,900	84.5	446.7	358,500	358,500	65
70	83.1	447.4	415,500	415,500	83.5	446.7	391,800	391,800	83.8	446.0	350,400	350,400	70
75	82.4	446.6	404,900	404,900	82.8	446.0	382,300	382,300	83.2	445.2	342,800	342,800	75
80	81.8	445.8	394,600	394,600	82.1	445.1	373,300	373,300	82.5	444.3	335,600	335,600	80
85	81.1	444.9	384,500	384,500	81.5	444.2	364,600	364,600	81.8	443.5	328,600	328,600	85
90	80.5	444.0	374,800	374,800	80.8	443.3	356,400	356,400	81.2	442.5	321,900	321,900	90
100	79.1	441.9	348,900	365,300	79.5	441.2	340,900	340,900	79.8	440.4	309,500	309,500	100
110	77.8	439.6	316,300	363,900	78.2	438.9	318,700	326,800	78.5	438.1	297,900	297,900	110
120	76.5	437.0	287,400	347,700	76.8	436.3	289,700	313,800	77.2	435.5	287,300	287,300	120
130	75.1	434.2	261,600	332,900	75.5	433.5	263,700	301,800	75.8	432.7	265,700	277,400	130
140	73.8	431.1	238,500	319,300	74.1	430.4	240,500	290,800	74.5	429.6	242,400	268,300	140
150	72.4	427.8	217,700	306,700	72.8	427.1	219,600	280,500	73.1	426.2	221,400	259,700	150
160	71.0	424.2	199,000	295,200	71.4	423.4	200,800	271,100	71.7	422.6	202,400	251,800	160
170	69.6	420.3	182,000	282,700	70.0	419.6	183,700	262,200	70.3	418.7	185,200	244,300	170
180	68.2	416.1	166,500	263,000	68.6	415.4	168,100	254,000	68.9	414.5	169,500	237,400	180
190	66.8	411.6	152,300	245,000	67.1	410.9	153,800	246,300	67.5	410.1	155,200	230,900	190
200	65.4	406.9	139,400	228,400	65.7	406.1	140,800	229,800	66.0	405.3	142,000	224,800	200
210	63.9	401.8	127,400	212,000	64.3	401.1	128,700	213,200	64.6	400.2	129,900	214,200	210
220	62.4	396.4	116,400	196,400	62.8	395.6	117,600	197,500	63.1	394.8	118,700	198,500	220
230	60.9	390.7	106,200	182,300	61.3	389.9	107,300	183,400	61.6	389.0	108,400	184,300	230
240	59.4	384.6	96,700	169,500	59.8	383.8	97,800	170,400	60.1	382.9	98,800	171,300	240
250	57.9	378.1	87,900	157,700	58.2	377.3	88,900	158,600	58.5	376.4	89,800	159,400	250
260	56.3	371.2	79,600	146,800	56.6	370.4	80,600	147,700	56.9	369.5	81,500	148,400	260
270	54.7	364.0	71,900	136,800	55.0	363.1	72,900	137,600	55.3	362.2	73,700	138,300	270
280	53.1	356.3	64,700	127,500	53.4	355.4	65,600	128,300	53.7	354.4	66,400	128,900	280
290	51.4	348.1	58,000	118,900	51.7	347.2	58,800	119,600	52.0	346.2	59,500	120,200	290
300	49.7	339.4	51,600	110,900	50.0	338.5	52,300	111,500	50.3	337.4	53,000	112,100	300
310	47.9	330.1	45,600	103,400	48.2	329.2	46,300	104,000	48.5	328.1	46,900	104,500	310
320	46.1	320.3	39,900	96,400	46.4	319.3	40,500	96,900	46.7	318.2	41,100	97,400	320
330	44.2	309.8	34,500	89,800	44.5	308.8	35,100	90,300	44.8	307.7	35,600	90,700	330
340	42.3	298.6	29,400	83,600	42.6	297.5	29,900	84,000	42.8	296.3	30,400	84,400	340
350	40.2	286.5	24,500	77,700	40.5	285.5	25,000	78,200	40.8	284.2	25,500	78,500	350
360	38.1	273.6	19,900	72,200	38.4	272.4	20,400	72,600	38.6	271.1	20,700	72,900	360
370	35.9	259.5	15,500	67,000	36.1	258.3	15,900	67,300	36.4	256.9	16,200	67,600	370
375									35.2	249.4	14,100	65,000	375

MLC650 VPC-MAX S-3

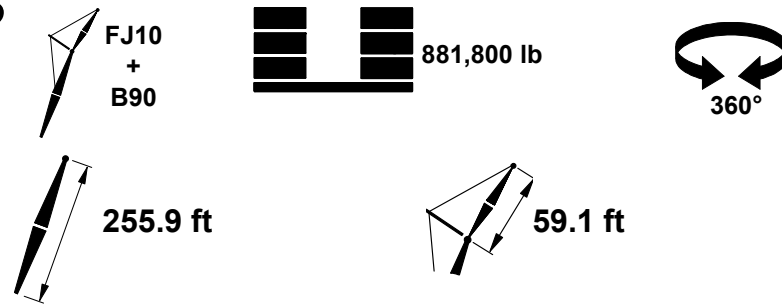
ASME B30.5



	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	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	416,500	416,500	85.2	458.3	409,600	409,600					58
59	84.6	458.8	416,500	416,500	85.0	458.1	409,200	409,200					59
60	84.5	458.7	416,400	416,400	84.9	458.0	407,100	407,100	85.2	457.2	362,800	362,800	60
61	84.4	458.6	415,200	415,200	84.8	457.9	405,100	405,100	85.1	457.1	361,200	361,200	61
62	84.3	458.4	414,000	414,000	84.6	457.7	403,200	403,200	85.0	457.0	359,600	359,600	62
63	84.1	458.3	412,900	412,900	84.5	457.6	401,200	401,200	84.9	456.8	358,000	358,000	63
65	83.9	458.1	410,500	410,500	84.3	457.4	397,200	397,200	84.6	456.6	354,900	354,900	65
70	83.2	457.4	402,600	402,600	83.6	456.7	387,600	387,600	84.0	455.9	347,100	347,100	70
75	82.6	456.6	394,700	394,700	83.0	455.9	378,500	378,500	83.3	455.1	339,900	339,900	75
80	82.0	455.8	385,200	385,200	82.3	455.1	369,800	369,800	82.7	454.3	332,900	332,900	80
90	80.7	454.0	366,200	366,200	81.0	453.3	353,600	353,600	81.4	452.5	319,800	319,800	90
100	79.4	452.0	344,200	355,200	79.7	451.3	338,800	338,800	80.1	450.5	307,700	307,700	100
110	78.1	449.7	312,200	340,400	78.4	449.0	314,600	325,100	78.8	448.2	296,600	296,600	110
120	76.8	447.2	283,700	326,300	77.1	446.5	286,000	312,600	77.5	445.7	286,200	286,200	120
130	75.4	444.4	258,300	313,000	75.8	443.7	260,400	301,000	76.1	442.9	262,400	276,700	130
140	74.1	441.4	235,500	300,500	74.5	440.7	237,500	290,200	74.8	439.9	239,400	267,700	140
150	72.8	438.2	214,900	288,700	73.2	437.4	216,900	280,300	73.5	436.6	218,600	259,500	150
160	71.4	434.6	196,400	277,500	71.8	433.9	198,200	271,000	72.1	433.1	199,800	251,700	160
170	70.1	430.9	179,500	267,200	70.4	430.1	181,200	262,400	70.8	429.3	182,700	244,400	170
180	68.7	426.8	164,100	257,400	69.1	426.1	165,700	254,400	69.4	425.2	167,200	237,700	180
190	67.3	422.5	150,000	242,200	67.7	421.7	151,600	243,600	68.0	420.8	152,900	231,300	190
200	65.9	417.8	137,100	225,700	66.3	417.1	138,600	227,100	66.6	416.2	139,800	225,300	200
210	64.5	412.9	125,200	210,600	64.9	412.1	126,600	211,900	65.2	411.2	127,800	213,100	210
220	63.1	407.6	114,300	195,300	63.4	406.9	115,500	196,400	63.7	406.0	116,700	197,400	220
230	61.6	402.1	104,100	181,100	62.0	401.3	105,300	182,200	62.3	400.4	106,400	183,100	230
240	60.2	396.1	94,700	168,300	60.5	395.3	95,800	169,200	60.8	394.4	96,800	170,100	240
250	58.7	389.9	85,900	156,500	59.0	389.1	86,900	157,400	59.3	388.1	87,900	158,200	250
260	57.1	383.2	77,700	145,600	57.5	382.4	78,700	146,500	57.8	381.4	79,600	147,200	260
270	55.6	376.2	70,000	135,600	55.9	375.3	70,900	136,400	56.2	374.4	71,800	137,100	270
280	54.0	368.7	62,800	126,300	54.3	367.9	63,700	127,100	54.6	366.9	64,500	127,700	280
290	52.4	360.8	56,000	117,700	52.7	360.0	56,900	118,400	53.0	358.9	57,600	119,000	290
300	50.7	352.5	49,700	109,700	51.1	351.6	50,500	110,300	51.3	350.5	51,100	110,900	300
310	49.1	343.6	43,700	102,200	49.4	342.7	44,400	102,800	49.6	341.6	45,000	103,300	310
320	47.3	334.2	38,000	95,200	47.6	333.2	38,700	95,700	47.9	332.1	39,300	96,200	320
330	45.5	324.1	32,600	88,600	45.8	323.1	33,300	89,100	46.1	322.0	33,800	89,500	330
340	43.7	313.4	27,500	82,400	44.0	312.4	28,100	82,900	44.2	311.2	28,600	83,300	340
350	41.7	302.0	22,700	76,500	42.0	300.9	23,200	77,000	42.3	299.7	23,700	77,300	350
360	39.7	289.8	18,100	71,000	40.0	288.6	18,600	71,400	40.2	287.4	19,000	71,800	360
370	37.6	276.6	13,700	65,800	37.9	275.4	14,100	66,200	38.1	274.1	14,500	66,500	370
380	35.4	262.3		60,800	35.7	261.1		61,200	35.9	259.6	10,200	61,400	380

MLC650 VPC-MAX S-3

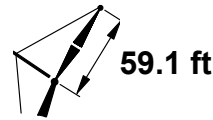
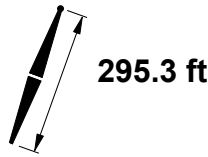
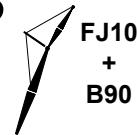
ASME B30.5



	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	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	281,600	281,600	71.6	301.8	258,100	258,100	72.2	300.7	229,200	229,200	120
125	70.0	300.5	273,300	273,300	70.6	299.7	251,200	251,200	71.2	298.7	223,600	223,600	125
130	69.0	298.4	265,600	265,600	69.6	297.6	244,700	244,700	70.2	296.6	218,300	218,300	130
140	67.0	293.8	251,100	251,100	67.6	293.0	232,700	232,700	68.2	292.0	208,600	208,600	140
150	64.9	288.8	238,300	238,300	65.5	288.1	221,900	221,900	66.2	287.0	199,600	199,600	150
160	62.9	283.4	226,700	226,700	63.4	282.6	212,200	212,200	64.1	281.5	191,600	191,600	160
170	60.7	277.5	215,900	216,200	61.3	276.7	203,300	203,300	61.9	275.5	184,100	184,100	170
180	58.6	271.0	197,800	206,700	59.1	270.2	195,100	195,100	59.7	269.0	177,300	177,300	180
190	56.3	264.0	181,800	198,000	56.9	263.2	182,900	187,600	57.5	262.0	171,100	171,100	190
200	54.0	256.4	167,500	190,000	54.6	255.6	168,500	180,800	55.2	254.3	165,300	165,300	200
210	51.7	248.2	154,600	182,800	52.2	247.3	155,500	174,500	52.8	246.0	156,400	159,900	210
220	49.2	239.2	142,900	176,100	49.8	238.2	143,700	168,800	50.3	236.9	144,600	155,000	220
230	46.7	229.4	132,300	169,900	47.2	228.4	133,000	163,400	47.7	227.0	133,800	150,500	230
240	44.0	218.6	122,600	164,200	44.5	217.6	123,300	158,500	45.0	216.1	123,900	146,300	240
250	41.2	206.7	113,700	158,900	41.7	205.6	114,300	154,000	42.2	204.1	114,800	142,500	250
260	38.1	193.6	105,500	154,100	38.6	192.4	106,000	149,800	39.1	190.8	106,500	139,000	260
265	36.5	186.4	101,600	151,800	37.0	185.2	102,100	147,700	37.5	183.5	102,500	137,300	265
270					35.4	177.5	98,300	145,800	35.8	175.7	98,700	135,800	270

MLC650 VPC-MAX S-3

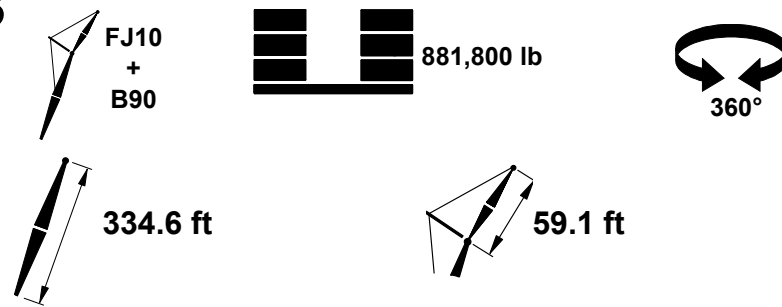
ASME B30.5



	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	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	295,700	295,700	74.8	345.0	269,000	269,000	75.4	343.8	239,700	239,700	115
120	73.4	344.1	287,600	287,600	73.9	343.3	262,400	262,400	74.5	342.1	234,300	234,300	120
125	72.5	342.4	279,900	279,900	73.1	341.5	256,100	256,100	73.7	340.4	229,200	229,200	125
130	71.7	340.5	272,600	272,600	72.2	339.7	250,200	250,200	72.8	338.5	224,300	224,300	130
135	70.8	338.6	265,700	265,700	71.3	337.7	244,400	244,400	71.9	336.5	219,700	219,700	135
140	69.9	336.6	259,200	259,200	70.4	335.7	239,000	239,000	71.0	334.5	215,200	215,200	140
150	68.1	332.2	247,000	247,000	68.7	331.4	228,900	228,900	69.3	330.2	206,900	206,900	150
160	66.4	327.6	230,500	236,000	66.9	326.7	219,700	219,700	67.5	325.4	199,200	199,200	160
170	64.5	322.5	209,800	225,900	65.1	321.6	211,100	211,100	65.6	320.3	192,100	192,100	170
180	62.7	317.0	191,700	216,700	63.2	316.1	193,000	203,300	63.8	314.8	185,600	185,600	180
190	60.8	311.1	175,500	208,200	61.3	310.1	176,800	196,200	61.9	308.8	178,100	179,600	190
200	58.9	304.7	161,100	200,500	59.4	303.7	162,300	189,500	59.9	302.4	163,500	174,000	200
210	56.9	297.8	148,200	193,300	57.4	296.8	149,200	183,400	57.9	295.5	150,300	168,700	210
220	54.9	290.4	136,400	186,700	55.4	289.4	137,400	177,700	55.9	288.0	138,400	163,900	220
230	52.8	282.4	125,800	180,500	53.3	281.4	126,700	172,400	53.8	280.0	127,600	159,400	230
240	50.7	273.9	116,000	174,900	51.1	272.8	116,800	167,500	51.6	271.3	117,700	155,200	240
250	48.5	264.6	107,100	169,500	48.9	263.5	107,800	163,000	49.4	261.9	108,600	151,300	250
260	46.2	254.6	98,900	160,800	46.6	253.4	99,500	158,700	47.1	251.8	100,200	147,700	260
270	43.8	243.7	91,300	150,800	44.2	242.5	91,900	151,400	44.7	240.8	92,500	144,300	270
280	41.2	231.8	84,200	141,500	41.7	230.6	84,700	142,100	42.1	228.8	85,300	141,200	280
290	38.6	218.8	77,600	132,900	39.0	217.5	78,100	133,300	39.4	215.6	78,600	133,800	290
300	35.7	204.4	71,500	124,800	36.1	203.0	71,900	125,200	36.5	200.9	72,300	125,600	300

MLC650 VPC-MAX S-3

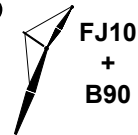
ASME B30.5



	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	ft	lb	lb	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	314,700	314,700	78.0	388.8	283,900	283,900	78.5	387.6	252,800	252,800	105
110	76.7	388.3	306,500	306,500	77.2	387.4	277,200	277,200	77.7	386.2	247,400	247,400	110
120	75.2	385.4	291,200	291,200	75.7	384.5	264,900	264,900	76.2	383.3	237,400	237,400	120
130	73.7	382.2	277,400	277,400	74.1	381.3	253,600	253,600	74.7	380.1	228,200	228,200	130
140	72.1	378.7	264,900	264,900	72.6	377.8	243,400	243,400	73.1	376.5	219,700	219,700	140
150	70.5	374.8	242,700	253,500	71.0	373.9	233,900	233,900	71.5	372.7	211,900	211,900	150
160	69.0	370.7	222,700	243,000	69.4	369.8	224,500	225,200	70.0	368.5	204,700	204,700	160
170	67.4	366.2	204,700	233,500	67.8	365.3	206,400	217,200	68.3	364.0	197,900	197,900	170
180	65.7	361.4	188,400	224,600	66.2	360.5	190,000	209,700	66.7	359.2	191,700	191,700	180
190	64.1	356.3	173,400	216,500	64.6	355.3	174,700	202,800	65.1	354.0	176,200	185,900	190
200	62.4	350.7	158,900	208,900	62.9	349.8	160,200	196,400	63.4	348.4	161,500	180,500	200
210	60.7	344.8	145,900	201,900	61.2	343.8	147,100	190,500	61.7	342.5	148,300	175,400	210
220	59.0	338.5	134,200	195,400	59.5	337.5	135,200	185,000	59.9	336.1	136,300	170,700	220
230	57.2	331.7	123,500	189,400	57.7	330.7	124,400	179,700	58.2	329.3	125,500	166,200	230
240	55.4	324.5	113,700	181,100	55.9	323.4	114,600	174,900	56.3	322.0	115,600	162,100	240
250	53.6	316.7	104,800	169,300	54.0	315.7	105,600	170,200	54.5	314.2	106,500	158,200	250
260	51.7	308.5	96,500	158,500	52.1	307.4	97,300	159,300	52.6	305.8	98,100	154,500	260
270	49.8	299.6	88,900	148,500	50.2	298.5	89,600	149,200	50.6	296.9	90,400	149,900	270
280	47.7	290.1	81,800	139,200	48.1	289.0	82,500	139,800	48.6	287.3	83,200	140,500	280
290	45.7	279.9	75,300	130,500	46.1	278.7	75,900	131,100	46.5	277.0	76,500	131,700	290
300	43.5	269.0	69,200	122,500	43.9	267.7	69,700	123,000	44.3	265.9	70,300	123,600	300
310	41.2	257.1	63,200	114,900	41.6	255.8	63,800	115,400	42.0	253.9	64,400	115,900	310
320	38.8	244.2	57,300	107,900	39.2	242.8	57,900	108,300	39.6	240.9	58,400	108,800	320
330	36.3	230.1	51,800	101,300	36.7	228.6	52,300	101,600	37.0	226.5	52,700	102,000	330
335					35.3	221.0	49,600	98,400	35.6	218.8	50,000	98,800	335

MLC650 VPC-MAX S-3

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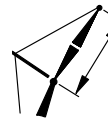
881,800 lb



360°



374.0 ft

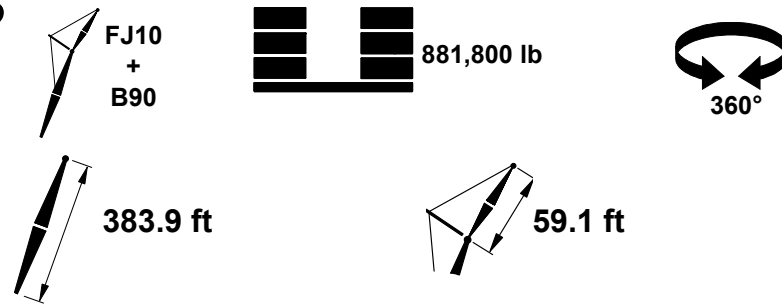


59.1 ft

	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	340,100	340,100	81.1	432.6	303,700	303,700	81.7	431.4	269,800	269,800	90
100	79.3	431.3	323,200	323,200	79.8	430.5	290,200	290,200	80.3	429.2	258,900	258,900	100
110	78.0	428.9	307,900	307,900	78.4	428.1	277,900	277,900	78.9	426.8	248,900	248,900	110
120	76.6	426.3	293,900	293,900	77.0	425.4	266,700	266,700	77.5	424.2	239,600	239,600	120
130	75.2	423.4	271,500	271,500	75.7	422.5	256,400	256,400	76.1	421.3	231,100	231,100	130
140	73.8	420.3	248,000	248,000	74.3	419.4	246,800	246,800	74.8	418.1	223,200	223,200	140
150	72.4	416.8	227,000	227,000	72.9	415.9	229,000	229,000	73.3	414.7	215,900	215,900	150
160	71.0	413.1	207,900	207,900	71.4	412.2	209,900	209,900	71.9	410.9	209,100	209,100	160
170	69.6	409.1	190,700	190,700	70.0	408.2	192,500	192,500	70.5	406.9	194,500	194,500	170
180	68.1	404.8	175,000	175,000	68.6	403.9	176,700	176,700	69.0	402.6	178,600	178,600	180
190	66.7	400.3	160,700	160,700	67.1	399.3	162,300	162,300	67.6	398.0	164,100	164,100	190
200	65.2	395.4	147,600	147,600	65.6	394.4	149,100	149,100	66.1	393.1	150,700	150,700	200
210	63.7	390.1	135,500	135,500	64.1	389.2	136,900	136,900	64.6	387.8	138,500	138,500	210
220	62.2	384.6	124,300	124,300	62.6	383.6	125,700	125,700	63.0	382.2	127,100	127,100	220
230	60.6	378.6	114,000	114,000	61.0	377.7	115,300	115,300	61.5	376.2	116,700	116,700	230
240	59.1	372.3	104,500	104,500	59.5	371.3	105,700	105,700	59.9	369.9	106,900	106,900	240
250	57.5	365.6	95,600	95,600	57.9	364.6	96,700	96,700	58.3	363.2	97,900	97,900	250
260	55.8	358.5	87,300	87,300	56.2	357.5	88,300	88,300	56.7	356.0	89,400	89,400	260
270	54.2	351.0	79,500	79,500	54.6	349.9	80,500	80,500	55.0	348.4	81,500	81,500	270
280	52.5	343.0	72,200	72,200	52.9	341.9	73,100	73,100	53.3	340.3	74,100	74,100	280
290	50.7	334.5	65,400	65,400	51.1	333.4	66,200	66,200	51.5	331.7	67,100	67,100	290
300	48.9	325.4	58,900	58,900	49.3	324.3	59,700	59,700	49.7	322.6	60,600	60,600	300
310	47.1	315.7	52,900	52,900	47.5	314.5	53,600	53,600	47.8	312.8	54,400	54,400	310
320	45.2	305.4	47,100	47,100	45.5	304.2	47,800	47,800	45.9	302.4	48,500	48,500	320
330	43.2	294.4	41,700	41,700	43.6	293.1	42,300	42,300	43.9	291.2	43,000	43,000	330
340	41.2	282.5	36,500	36,500	41.5	281.2	37,100	37,100	41.8	279.2	37,700	37,700	340
350	39.0	269.7	31,600	31,600	39.3	268.3	32,100	32,100	39.6	266.3	32,700	32,700	350
360	36.7	255.8	26,900	26,900	37.0	254.4	27,400	27,400	37.3	252.2	27,900	27,900	360
365	35.6	248.5	24,700	24,700	35.9	246.9	25,100	25,100	36.1	244.7	25,600	25,600	365

MLC650 VPC-MAX S-3

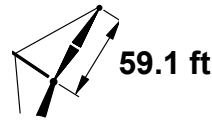
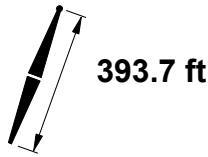
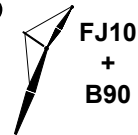
ASME B30.5



	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	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	359,000	359,000	81.1	443.1	318,000	318,000	81.6	442.1	286,800	286,800	90
100	79.4	441.8	340,700	340,700	79.8	441.0	303,600	303,600	80.2	440.0	275,100	275,100	100
110	78.0	439.4	319,600	324,100	78.5	438.7	290,400	290,400	78.9	437.7	264,400	264,400	110
120	76.7	436.9	291,000	309,000	77.1	436.1	278,300	278,300	77.6	435.1	254,500	254,500	120
130	75.3	434.1	265,400	295,200	75.8	433.3	267,300	267,300	76.2	432.3	245,300	245,300	130
140	74.0	431.0	242,500	282,600	74.4	430.2	244,300	257,100	74.8	429.2	236,900	236,900	140
150	72.6	427.6	221,900	271,100	73.1	426.8	224,100	247,700	73.5	425.8	226,100	229,000	150
160	71.2	424.0	203,300	260,500	71.7	423.2	205,300	239,000	72.1	422.2	207,200	221,700	160
170	69.8	420.1	186,300	250,600	70.3	419.3	188,300	230,900	70.7	418.3	190,000	214,900	170
180	68.4	416.0	170,900	241,600	68.9	415.1	172,700	223,300	69.3	414.1	174,400	208,600	180
190	67.0	411.5	156,800	233,100	67.5	410.7	158,600	216,300	67.8	409.6	160,100	202,500	190
200	65.6	406.7	143,900	225,200	66.0	405.9	145,500	209,700	66.4	404.9	147,000	197,000	200
210	64.1	401.7	132,000	215,700	64.6	400.8	133,500	203,500	64.9	399.8	134,900	191,700	210
220	62.7	396.3	121,000	200,200	63.1	395.4	122,500	197,800	63.5	394.3	123,800	186,800	220
230	61.2	390.5	110,800	186,000	61.6	389.6	112,200	187,200	62.0	388.6	113,400	182,200	230
240	59.6	384.4	101,400	173,200	60.1	383.5	102,700	174,300	60.4	382.4	103,800	175,300	240
250	58.1	378.0	92,600	161,400	58.5	377.0	93,800	162,400	58.9	375.9	94,900	163,300	250
260	56.5	371.1	84,400	150,500	56.9	370.2	85,500	151,500	57.3	369.0	86,500	152,400	260
270	54.9	363.8	76,700	140,500	55.3	362.9	77,800	141,400	55.7	361.7	78,700	142,200	270
280	53.3	356.1	69,500	131,200	53.7	355.1	70,500	132,100	54.0	353.9	71,400	132,800	280
290	51.6	347.9	62,700	122,600	52.0	346.9	63,700	123,400	52.4	345.7	64,500	124,100	290
300	49.9	339.2	56,400	114,500	50.3	338.2	57,200	115,300	50.6	336.9	58,000	115,900	300
310	48.1	330.0	50,300	107,000	48.5	328.9	51,200	107,700	48.8	327.6	51,900	108,300	310
320	46.3	320.1	44,700	100,000	46.7	319.0	45,400	100,700	47.0	317.7	46,100	101,200	320
330	44.4	309.6	39,300	93,400	44.8	308.5	40,000	94,000	45.1	307.1	40,600	94,500	330
340	42.5	298.4	34,200	87,200	42.8	297.2	34,800	87,800	43.1	295.8	35,400	88,200	340
350	40.4	286.3	29,300	81,400	40.8	285.1	29,900	81,900	41.1	283.6	30,500	82,300	350
360	38.3	273.3	24,700	75,900	38.7	272.1	25,300	76,300	38.9	270.5	25,700	76,700	360
370	36.1	259.3	20,300	70,600	36.4	257.9	20,800	71,000	36.7	256.3	21,200	71,400	370
375					35.2	250.4	18,700	68,500	35.5	248.7	19,000	68,800	375

MLC650 VPC-MAX S-3

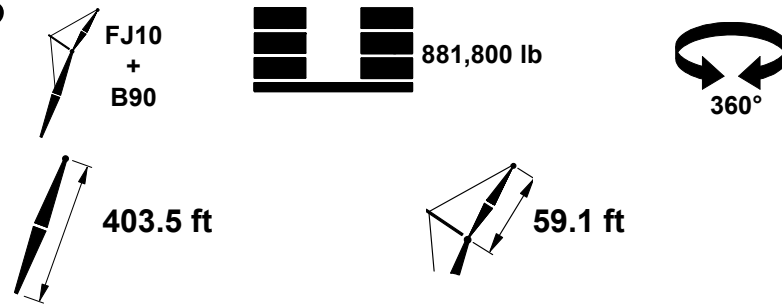
ASME B30.5



	10°				15°				20°				
	ft	ft	lb	lb	ft	lb	lb	lb	ft	lb	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	410,900	410,900	85.2	457.8	369,200	369,200					60
61	84.6	458.5	410,900	410,900	85.1	457.7	367,200	367,200					61
62	84.5	458.3	410,900	410,900	84.9	457.6	365,300	365,300	85.4	456.6	324,300	324,300	62
63	84.3	458.2	410,800	410,800	84.8	457.4	363,400	363,400	85.2	456.5	322,800	322,800	63
64	84.2	458.1	410,800	410,800	84.7	457.3	361,500	361,500	85.1	456.4	321,300	321,300	64
65	84.1	458.0	410,800	410,800	84.6	457.2	359,600	359,600	85.0	456.3	319,800	319,800	65
70	83.5	457.3	400,700	400,700	83.9	456.5	350,500	350,500	84.3	455.6	312,600	312,600	70
75	82.8	456.5	389,500	389,500	83.3	455.7	341,600	341,600	83.7	454.8	305,600	305,600	75
80	82.2	455.7	378,800	378,800	82.6	454.9	333,400	333,400	83.0	454.0	298,900	298,900	80
85	81.5	454.8	368,700	368,700	82.0	454.0	325,500	325,500	82.4	453.1	292,600	292,600	85
90	80.9	453.9	359,100	359,100	81.3	453.1	318,000	318,000	81.7	452.2	286,500	286,500	90
100	79.6	451.9	341,200	341,200	80.0	451.1	303,900	303,900	80.4	450.1	275,100	275,100	100
110	78.3	449.6	314,600	325,000	78.7	448.8	291,000	291,000	79.1	447.9	264,700	264,700	110
120	77.0	447.1	286,300	310,200	77.4	446.3	279,200	279,200	77.8	445.3	255,000	255,000	120
130	75.7	444.3	260,900	296,700	76.1	443.5	263,500	268,400	76.5	442.6	246,100	246,100	130
140	74.3	441.3	238,200	284,300	74.8	440.5	240,600	258,300	75.2	439.5	237,800	237,800	140
150	73.0	438.1	217,700	272,900	73.4	437.2	220,000	249,000	73.8	436.3	222,000	230,100	150
160	71.7	434.5	199,200	262,300	72.1	433.7	201,300	240,400	72.5	432.7	203,200	222,800	160
170	70.3	430.7	182,300	252,700	70.7	429.9	184,300	232,400	71.1	428.9	186,100	216,100	170
180	68.9	426.7	167,000	243,600	69.4	425.8	168,900	224,900	69.7	424.9	170,600	209,800	180
190	67.5	422.3	152,900	235,300	68.0	421.5	154,700	218,000	68.4	420.5	156,300	203,900	190
200	66.1	417.7	140,000	227,400	66.6	416.8	141,700	211,400	67.0	415.8	143,200	198,400	200
210	64.7	412.8	128,100	213,200	65.2	411.9	129,700	205,300	65.5	410.9	131,200	193,200	210
220	63.3	407.5	117,200	197,700	63.7	406.6	118,700	199,000	64.1	405.6	120,000	188,300	220
230	61.9	401.9	107,000	183,500	62.3	401.0	108,400	184,800	62.6	400.0	109,700	183,700	230
240	60.4	396.0	97,600	170,600	60.8	395.1	98,900	171,800	61.2	394.0	100,100	172,800	240
250	58.9	389.7	88,800	158,800	59.3	388.8	90,000	159,900	59.6	387.7	91,200	160,900	250
260	57.4	383.1	80,600	147,900	57.8	382.2	81,800	149,000	58.1	381.1	82,800	149,900	260
270	55.8	376.1	72,900	137,900	56.2	375.1	74,000	138,900	56.6	374.0	75,000	139,700	270
280	54.2	368.6	65,700	128,600	54.6	367.6	66,800	129,500	55.0	366.5	67,700	130,300	280
290	52.6	360.7	58,900	120,000	53.0	359.7	59,900	120,800	53.3	358.5	60,800	121,600	290
300	51.0	352.3	52,600	111,900	51.3	351.3	53,500	112,700	51.7	350.1	54,300	113,400	300
310	49.3	343.4	46,500	104,400	49.6	342.4	47,400	105,200	50.0	341.2	48,200	105,800	310
320	47.5	334.0	40,900	97,400	47.9	332.9	41,700	98,100	48.2	331.7	42,400	98,700	320
330	45.7	324.0	35,500	90,800	46.1	322.8	36,300	91,400	46.4	321.5	36,900	92,000	330
340	43.9	313.3	30,400	84,600	44.2	312.1	31,100	85,200	44.5	310.8	31,700	85,700	340
350	41.9	301.8	25,500	78,700	42.3	300.6	26,200	79,300	42.6	299.2	26,700	79,700	350
360	39.9	289.6	20,900	73,200	40.3	288.3	21,500	73,700	40.6	286.8	22,000	74,100	360
370	37.8	276.4	16,500	68,000	38.2	275.1	17,100	68,400	38.4	273.5	17,500	68,800	370
380	35.6	262.1	12,300	63,000	35.9	260.7	12,800	63,400	36.2	259.1	13,200	63,700	380

MLC650 VPC-MAX S-3

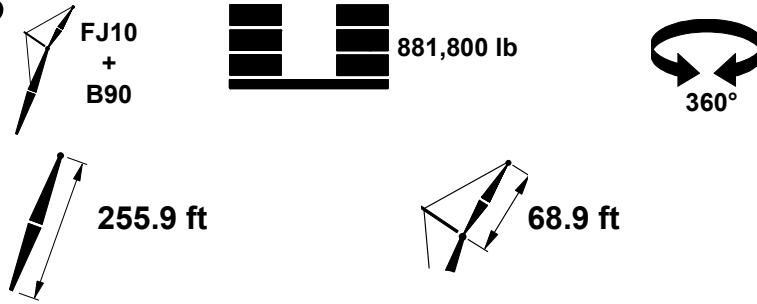
ASME B30.5



	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	362,700	362,700	82.8	464.9	332,100	332,100	83.2	463.9	297,900	297,900	80
90	81.1	463.9	348,400	348,400	81.5	463.1	317,200	317,200	81.9	462.2	285,900	285,900	90
100	79.8	461.9	334,500	334,500	80.3	461.1	303,500	303,500	80.7	460.2	274,800	274,800	100
110	78.5	459.7	310,500	320,800	79.0	458.9	290,800	290,800	79.4	457.9	264,600	264,600	110
120	77.3	457.2	282,600	307,800	77.7	456.4	279,300	279,300	78.1	455.5	255,100	255,100	120
130	76.0	454.5	257,600	295,700	76.4	453.7	260,100	268,700	76.8	452.8	246,300	246,300	130
140	74.7	451.6	235,100	284,100	75.1	450.8	237,500	258,900	75.5	449.8	238,200	238,200	140
150	73.4	448.4	214,900	273,200	73.8	447.6	217,100	249,800	74.2	446.6	219,200	230,600	150
160	72.1	445.0	196,500	262,900	72.5	444.2	198,600	241,300	72.9	443.2	200,600	223,500	160
170	70.8	441.3	179,800	253,200	71.2	440.5	181,800	233,400	71.6	439.5	183,700	216,900	170
180	69.4	437.3	164,600	244,200	69.8	436.5	166,500	226,000	70.2	435.5	168,200	210,700	180
190	68.1	433.1	150,600	235,600	68.5	432.2	152,400	219,100	68.9	431.2	154,000	204,900	190
200	66.7	428.6	137,800	225,700	67.1	427.7	139,500	212,700	67.5	426.7	141,000	199,400	200
210	65.3	423.8	126,000	210,700	65.7	422.9	127,600	206,600	66.1	421.9	129,000	194,300	210
220	63.9	418.6	115,000	196,500	64.3	417.8	116,600	197,800	64.7	416.7	118,000	189,400	220
230	62.5	413.2	104,900	182,300	62.9	412.3	106,400	183,600	63.3	411.3	107,700	184,800	230
240	61.1	407.5	95,500	169,400	61.5	406.6	96,900	170,600	61.9	405.5	98,100	171,700	240
250	59.6	401.4	86,800	157,600	60.0	400.5	88,100	158,700	60.4	399.4	89,200	159,700	250
260	58.2	394.9	78,600	146,700	58.6	394.0	79,800	147,800	58.9	392.9	80,900	148,700	260
270	56.7	388.1	70,900	136,700	57.0	387.2	72,100	137,700	57.4	386.0	73,100	138,500	270
280	55.1	380.9	63,700	127,400	55.5	380.0	64,800	128,300	55.9	378.8	65,800	129,100	280
290	53.6	373.3	57,000	118,800	53.9	372.3	58,000	119,600	54.3	371.1	58,900	120,400	290
300	52.0	365.2	50,600	110,700	52.3	364.2	51,600	111,500	52.7	363.0	52,500	112,200	300
310	50.3	356.6	44,700	103,200	50.7	355.6	45,600	104,000	51.0	354.4	46,300	104,600	310
320	48.7	347.6	39,000	96,200	49.0	346.5	39,800	96,900	49.3	345.2	40,600	97,500	320
330	46.9	338.0	33,600	89,600	47.3	336.9	34,400	90,200	47.6	335.6	35,100	90,800	330
340	45.2	327.7	28,500	83,400	45.5	326.6	29,300	84,000	45.8	325.2	29,900	84,500	340
350	43.3	316.8	23,700	77,500	43.7	315.7	24,400	78,100	44.0	314.3	25,000	78,600	350
360	41.4	305.2	19,100	72,000	41.8	304.0	19,700	72,500	42.1	302.5	20,300	72,900	360
370	39.4	292.7	14,700	66,800	39.8	291.5	15,300	67,200	40.0	289.9	15,800	67,600	370
380	37.4	279.3	10,500	61,800	37.7	278.0	11,000	62,200	38.0	276.4	11,500	62,600	380
390	35.2	264.8		56,900	35.5	263.4		57,400	35.7	261.7		57,700	390

MLC650 VPC-MAX S-3

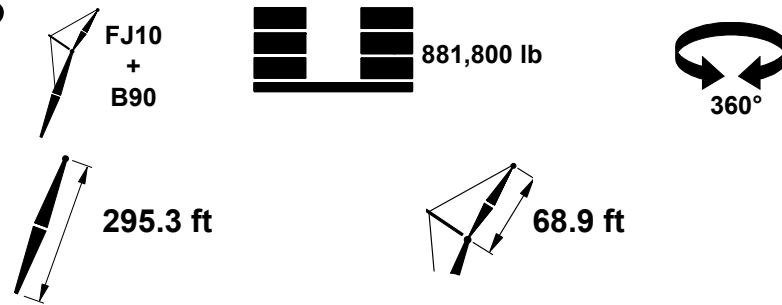
ASME B30.5

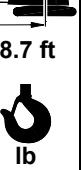
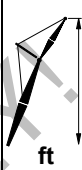
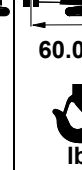


	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	ft	lb	lb	ft
45	85.6	331.6	453,300	453,300									45
46	85.4	331.5	451,900	451,900									46
47	85.2	331.3	450,600	450,600									47
48	85.0	331.2	449,200	449,200									48
49	84.8	331.0	445,800	445,800	85.6	330.3	381,400	381,400					49
50	84.7	330.9	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	225,500	225,500	68.7	303.7	205,400	205,400	69.4	302.6	181,400	181,400	140
150	66.0	299.8	213,800	213,800	66.7	298.9	195,500	195,500	67.5	297.7	173,600	173,600	150
160	64.1	294.6	203,200	203,200	64.7	293.7	186,500	186,500	65.4	292.5	166,300	166,300	160
170	62.0	288.9	193,700	193,700	62.7	288.0	178,300	178,300	63.4	286.7	159,700	159,700	170
180	59.9	282.7	184,900	184,900	60.6	281.8	170,800	170,800	61.3	280.5	153,600	153,600	180
190	57.8	276.0	177,000	177,000	58.5	275.1	163,900	163,900	59.1	273.8	148,000	148,000	190
200	55.6	268.8	169,500	169,500	56.3	267.8	157,700	157,700	56.9	266.5	142,800	142,800	200
210	53.4	260.9	156,600	156,600	54.0	259.9	151,900	151,900	54.7	258.5	138,000	138,000	210
220	51.0	252.4	144,900	144,900	51.7	251.4	145,800	145,800	52.3	249.9	133,600	133,600	220
230	48.6	243.1	134,300	134,300	49.3	242.1	135,100	135,100	49.9	240.6	129,500	129,500	230
240	46.1	233.0	124,600	124,600	46.7	231.9	125,300	125,300	47.3	230.4	125,700	125,700	240
250	43.5	222.0	115,600	115,600	44.1	220.8	116,300	116,300	44.7	219.2	117,100	117,100	250
260	40.7	209.8	107,400	107,400	41.3	208.6	108,000	108,000	41.9	206.9	108,700	108,700	260
270	37.7	196.4	99,800	99,800	38.3	195.0	100,400	100,400	38.8	193.2	100,900	100,900	270
275	36.2	189.0	96,200	96,200	36.7	187.6	96,700	96,700	37.2	185.7	97,200	97,200	275
280									35.6	177.7	93,700	93,700	280

MLC650 VPC-MAX S-3

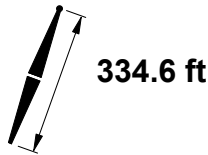
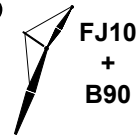
ASME B30.5



	10°				15°				20°				
													
	ft	°	ft	lb	lb	ft	°	ft	lb	lb	ft	°	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	58
59	84.1		369.0	390,400	390,400	84.8	368.1	338,900	338,900	85.5	366.9	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	60
61	83.8		368.7	384,100	384,100	84.4	367.8	334,100	334,100	85.1	366.6	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	65
70	82.3		367.2	357,500	357,500	83.0	366.3	313,900	313,900	83.7	365.0	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	75
80	80.7		365.2	332,000	332,000	81.4	364.3	294,000	294,000	82.1	363.1	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	85
90	79.1		363.0	309,700	309,700	79.8	362.0	276,300	276,300	80.4	360.8	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	95
100	77.5		360.4	290,300	290,300	78.1	359.5	260,400	260,400	78.8	358.2	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	105
110	75.8		357.5	273,200	273,200	76.5	356.6	246,400	246,400	77.1	355.3	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	115
120	74.2		354.4	258,000	258,000	74.8	353.4	233,900	233,900	75.5	352.1	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	125
130	72.5		350.9	244,400	244,400	73.1	349.9	222,500	222,500	73.8	348.6	195,100	130
140	70.8		347.0	232,200	232,200	71.4	346.0	212,300	212,300	72.1	344.7	187,000	140
150	69.1		342.8	221,100	221,100	69.7	341.8	202,900	202,900	70.4	340.5	179,500	150
160	67.4		338.3	211,100	211,100	68.0	337.3	194,400	194,400	68.6	335.9	172,700	160
170	65.6		333.4	201,900	201,900	66.2	332.4	186,500	186,500	66.8	331.0	166,400	170
180	63.8		328.1	193,500	193,500	64.4	327.0	179,400	179,400	65.0	325.7	160,600	180
190	62.0		322.4	177,600	177,600	62.6	321.3	172,700	172,700	63.2	319.9	155,200	190
200	60.2		316.2	163,200	163,200	60.8	315.1	164,500	166,600	61.3	313.7	150,200	200
210	58.3		309.6	150,200	172,200	58.9	308.5	151,400	160,900	59.4	307.0	145,500	210
220	56.3		302.5	138,500	166,200	56.9	301.4	139,600	155,600	57.5	299.9	140,800	220
230	54.3		294.9	127,800	160,600	54.9	293.7	128,800	150,700	55.5	292.2	129,900	230
240	52.3		286.7	118,000	155,400	52.9	285.5	119,000	146,100	53.4	283.9	120,000	240
250	50.2		277.9	109,100	150,500	50.7	276.6	110,000	141,800	51.3	275.0	110,900	250
260	48.0		268.4	100,800	146,100	48.6	267.1	101,600	137,800	49.1	265.4	102,500	260
270	45.7		258.1	93,200	141,900	46.3	256.7	93,900	134,100	46.8	255.0	94,700	270
280	43.4		246.9	86,100	137,900	43.9	245.5	86,800	130,600	44.4	243.7	87,500	280
290	40.9		234.8	79,600	134,300	41.4	233.3	80,200	127,400	41.9	231.4	80,800	290
300	38.3		221.5	73,400	126,700	38.8	219.9	73,900	124,400	39.2	217.8	74,500	300
310	35.5		206.8	67,700	119,200	35.9	205.1	68,100	119,600	36.3	202.8	68,600	310

MLC650 VPC-MAX S-3

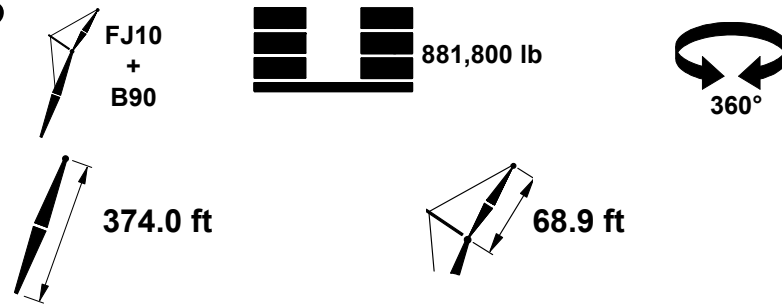
ASME B30.5



	10°				15°				20°				
ft	°	ft	lb	lb	°	ft	lb	lb	°	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	251,500	251,500	75.0	391.3	229,400	229,400	75.6	389.9	200,200	200,200	130
140	72.9	388.9	239,900	239,900	73.5	387.9	219,600	219,600	74.0	386.5	192,500	192,500	140
150	71.4	385.2	229,300	229,300	71.9	384.2	210,600	210,600	72.5	382.8	185,400	185,400	150
160	69.8	381.2	219,600	219,600	70.4	380.1	202,400	202,400	71.0	378.7	178,900	178,900	160
170	68.3	376.8	206,000	210,700	68.8	375.8	194,800	194,800	69.4	374.3	172,800	172,800	170
180	66.7	372.2	189,800	202,500	67.3	371.1	187,700	187,700	67.8	369.6	167,200	167,200	180
190	65.1	367.2	175,100	195,000	65.7	366.1	176,800	181,200	66.2	364.6	161,900	161,900	190
200	63.5	361.8	160,900	188,000	64.0	360.7	162,400	175,100	64.6	359.2	157,000	157,000	200
210	61.8	356.1	147,900	181,400	62.4	354.9	149,200	169,500	62.9	353.4	150,700	152,500	210
220	60.2	349.9	136,100	175,500	60.7	348.8	137,300	164,200	61.2	347.2	138,700	148,100	220
230	58.5	343.4	125,400	169,900	59.0	342.2	126,500	159,300	59.5	340.6	127,800	144,200	230
240	56.7	336.4	115,600	164,600	57.3	335.2	116,700	154,700	57.8	333.6	117,800	140,400	240
250	55.0	329.0	106,600	159,700	55.5	327.8	107,600	150,300	56.0	326.1	108,700	136,800	250
260	53.1	321.0	98,400	155,100	53.6	319.8	99,300	146,300	54.2	318.1	100,300	133,500	260
270	51.3	312.6	90,700	150,300	51.8	311.3	91,600	142,500	52.3	309.5	92,500	130,400	270
280	49.3	303.5	83,700	141,000	49.8	302.2	84,500	138,900	50.3	300.4	85,300	127,500	280
290	47.4	293.8	77,100	132,300	47.8	292.4	77,800	133,100	48.3	290.5	78,600	124,700	290
300	45.3	283.4	71,000	124,300	45.8	281.9	71,600	124,900	46.2	280.0	72,300	122,200	300
310	43.2	272.2	65,100	116,700	43.6	270.7	65,800	117,300	44.1	268.6	66,400	118,000	310
320	40.9	260.1	59,300	109,700	41.4	258.5	60,000	110,200	41.8	256.4	60,700	110,800	320
330	38.6	246.9	53,800	103,000	39.0	245.2	54,400	103,500	39.4	243.0	55,000	104,000	330
340	36.1	232.5	48,600	96,800	36.5	230.8	49,100	97,200	36.9	228.4	49,600	97,600	340
345									35.5	220.5	47,000	94,600	345

MLC650 VPC-MAX S-3

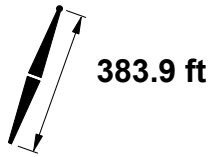
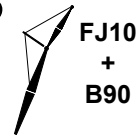
ASME B30.5



	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	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	279,700	279,700	79.0	437.9	251,700	251,700	79.6	436.5	218,800	218,800	110
120	77.2	436.3	266,600	266,600	77.7	435.3	241,200	241,200	78.3	433.9	210,400	210,400	120
130	75.9	433.5	254,800	254,800	76.4	432.5	231,600	231,600	76.9	431.1	202,600	202,600	130
140	74.5	430.4	244,000	244,000	75.0	429.4	222,700	222,700	75.6	428.0	195,500	195,500	140
150	73.1	427.1	227,800	234,000	73.6	426.1	214,600	214,600	74.2	424.6	188,800	188,800	150
160	71.7	423.4	209,000	224,900	72.2	422.4	207,000	207,000	72.8	421.0	182,700	182,700	160
170	70.4	419.5	191,900	216,400	70.8	418.5	194,000	200,000	71.4	417.0	176,900	176,900	170
180	68.9	415.4	176,400	208,600	69.4	414.3	178,400	193,400	70.0	412.8	171,500	171,500	180
190	67.5	410.9	162,200	201,300	68.0	409.9	164,100	187,200	68.5	408.4	166,100	166,500	190
200	66.1	406.1	149,100	194,600	66.6	405.1	150,900	181,300	67.1	403.5	152,800	161,800	200
210	64.6	401.1	137,100	188,300	65.1	400.0	138,800	175,800	65.6	398.4	140,600	157,300	210
220	63.2	395.6	126,100	182,400	63.6	394.6	127,600	170,600	64.1	393.0	129,300	153,200	220
230	61.7	389.9	115,800	176,800	62.1	388.8	117,300	165,800	62.6	387.2	118,900	149,200	230
240	60.1	383.8	106,300	171,700	60.6	382.7	107,700	161,200	61.1	381.0	109,200	145,600	240
250	58.6	377.3	97,400	165,000	59.0	376.2	98,700	156,900	59.5	374.5	100,100	142,100	250
260	57.0	370.4	89,100	154,100	57.5	369.3	90,400	152,900	58.0	367.6	91,700	138,800	260
270	55.4	363.1	81,400	144,000	55.8	362.0	82,600	145,000	56.3	360.2	83,800	135,600	270
280	53.8	355.4	74,100	134,700	54.2	354.2	75,200	135,600	54.7	352.4	76,400	132,700	280
290	52.1	347.2	67,300	126,000	52.5	346.0	68,300	126,900	53.0	344.1	69,400	127,800	290
300	50.4	338.5	60,900	117,900	50.8	337.2	61,900	118,700	51.2	335.3	62,900	119,600	300
310	48.6	329.2	54,800	110,400	49.0	327.9	55,700	111,100	49.5	326.0	56,700	111,900	310
320	46.8	319.3	49,100	103,300	47.2	318.0	49,900	104,000	47.6	316.0	50,800	104,700	320
330	44.9	308.8	43,700	96,700	45.3	307.4	44,400	97,300	45.7	305.4	45,200	98,000	330
340	42.9	297.5	38,500	90,500	43.3	296.1	39,200	91,100	43.7	294.0	40,000	91,600	340
350	40.9	285.4	33,600	84,600	41.3	283.9	34,300	85,100	41.7	281.7	34,900	85,600	350
360	38.8	272.4	29,000	79,000	39.1	270.8	29,600	79,500	39.5	268.5	30,100	80,000	360
370	36.5	258.3	24,500	73,700	36.9	256.6	25,000	74,200	37.2	254.2	25,600	74,600	370
375	35.3	250.8	22,400	71,200	35.7	249.1	22,900	71,600	36.0	246.5	23,300	72,000	375

MLC650 VPC-MAX S-3

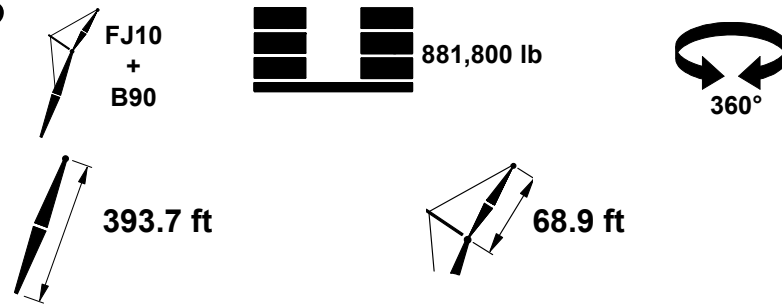
ASME B30.5



	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	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	327,800	327,800	81.7	452.8	289,300	289,300	82.2	451.8	259,700	259,700	90
100	79.8	451.7	310,600	310,600	80.4	450.8	275,800	275,800	80.9	449.7	248,400	248,400	100
110	78.5	449.4	295,000	295,000	79.1	448.5	263,400	263,400	79.5	447.4	238,000	238,000	110
120	77.2	446.9	280,900	280,900	77.8	446.0	252,200	252,200	78.2	444.9	228,500	228,500	120
130	75.9	444.1	265,300	268,000	76.4	443.2	241,900	241,900	76.9	442.1	219,800	219,800	130
140	74.6	441.1	242,800	256,300	75.1	440.2	232,400	232,400	75.6	439.1	211,700	211,700	140
150	73.3	437.9	222,500	245,500	73.8	436.9	223,700	223,700	74.2	435.8	204,200	204,200	150
160	71.9	434.4	204,100	235,600	72.4	433.4	206,500	215,600	72.9	432.3	197,200	197,200	160
170	70.6	430.6	187,400	226,500	71.1	429.6	189,600	208,000	71.5	428.5	190,800	190,800	170
180	69.2	426.5	172,100	218,100	69.7	425.5	174,200	201,000	70.1	424.4	176,100	184,800	180
190	67.8	422.2	158,200	210,200	68.3	421.2	160,100	194,500	68.8	420.0	162,000	179,100	190
200	66.4	417.5	145,300	202,900	66.9	416.5	147,200	188,400	67.3	415.4	148,900	173,800	200
210	65.0	412.6	133,500	196,200	65.5	411.6	135,300	182,700	65.9	410.4	136,900	168,800	210
220	63.6	407.3	122,600	189,800	64.1	406.3	124,300	177,400	64.5	405.1	125,800	164,200	220
230	62.1	401.7	112,500	183,800	62.6	400.7	114,100	172,300	63.0	399.5	115,500	159,800	230
240	60.6	395.8	103,100	175,000	61.1	394.8	104,600	167,600	61.5	393.6	105,900	155,600	240
250	59.1	389.6	94,300	163,200	59.6	388.5	95,700	163,200	60.0	387.3	97,000	151,800	250
260	57.6	382.9	86,100	152,300	58.1	381.8	87,500	153,500	58.5	380.6	88,700	148,000	260
270	56.1	375.9	78,500	142,300	56.5	374.8	79,700	143,300	56.9	373.5	80,900	144,300	270
280	54.5	368.4	71,300	133,000	54.9	367.3	72,500	134,000	55.3	366.0	73,600	134,900	280
290	52.9	360.5	64,600	124,300	53.3	359.3	65,700	125,300	53.7	358.0	66,700	126,100	290
300	51.2	352.1	58,200	116,300	51.7	350.9	59,300	117,200	52.0	349.6	60,200	118,000	300
310	49.5	343.2	52,200	108,800	50.0	342.0	53,200	109,600	50.3	340.6	54,100	110,300	310
320	47.8	333.8	46,600	101,700	48.2	332.5	47,500	102,500	48.6	331.1	48,300	103,200	320
330	46.0	323.7	41,200	95,100	46.4	322.4	42,000	95,800	46.8	321.0	42,800	96,500	330
340	44.1	313.0	36,100	88,900	44.5	311.7	36,900	89,600	44.9	310.2	37,600	90,200	340
350	42.2	301.6	31,300	83,100	42.6	300.2	32,000	83,700	42.9	298.6	32,600	84,200	350
360	40.2	289.3	26,700	77,500	40.6	287.9	27,300	78,100	40.9	286.2	27,900	78,600	360
370	38.1	276.1	22,300	72,300	38.5	274.6	22,900	72,800	38.8	272.8	23,400	73,200	370
380	35.8	261.8	18,100	67,300	36.2	260.2	18,600	67,800	36.5	258.3	19,100	68,200	380
385									35.4	250.6	17,000	65,700	385

MLC650 VPC-MAX S-3

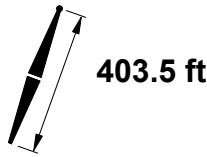
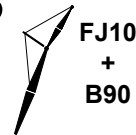
ASME B30.5

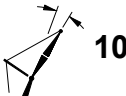
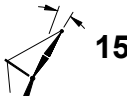
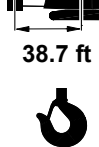
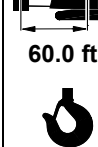
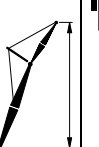
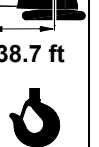
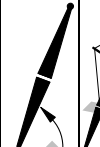
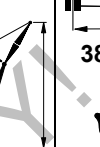
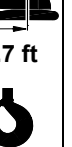


	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	ft	lb	lb	ft
58	85.3	468.6	373,200	373,200									58
59	85.2	468.5	372,700	372,700									59
60	85.1	468.4	372,100	372,100									60
61	85.0	468.2	371,600	371,600									61
62	84.8	468.1	371,000	371,000	85.4	467.2	333,600	333,600					62
63	84.7	468.0	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	327,800	327,800	81.8	462.8	289,100	289,100	82.3	461.8	259,600	259,600	90
100	80.1	461.8	311,000	311,000	80.6	460.9	276,000	276,000	81.0	459.8	248,500	248,500	100
110	78.8	459.5	295,800	295,800	79.3	458.6	264,000	264,000	79.8	457.6	238,400	238,400	110
120	77.5	457.1	282,000	282,000	78.0	456.2	253,000	253,000	78.5	455.1	229,000	229,000	120
130	76.2	454.4	260,900	269,400	76.7	453.5	242,800	242,800	77.2	452.4	220,400	220,400	130
140	74.9	451.5	238,600	257,800	75.4	450.5	233,500	233,500	75.9	449.5	212,500	212,500	140
150	73.6	448.3	218,400	247,200	74.1	447.3	221,000	224,900	74.6	446.3	205,100	205,100	150
160	72.3	444.8	200,100	237,400	72.8	443.9	202,500	216,900	73.3	442.8	198,200	198,200	160
170	71.0	441.1	183,400	228,300	71.5	440.2	185,700	209,400	71.9	439.1	187,800	191,800	170
180	69.6	437.2	168,200	219,900	70.1	436.2	170,400	202,500	70.6	435.1	172,400	185,900	180
190	68.3	432.9	154,300	212,200	68.8	432.0	156,400	196,000	69.2	430.8	158,200	180,300	190
200	66.9	428.4	141,500	204,900	67.4	427.4	143,500	190,000	67.9	426.3	145,200	175,100	200
210	65.6	423.6	129,700	198,200	66.0	422.6	131,600	184,300	66.5	421.5	133,200	170,100	210
220	64.2	418.5	118,800	191,800	64.6	417.5	120,600	179,000	65.1	416.3	122,100	165,500	220
230	62.7	413.1	108,700	185,400	63.2	412.1	110,400	173,900	63.7	410.9	111,800	161,100	230
240	61.3	407.3	99,300	172,500	61.8	406.3	100,900	169,300	62.2	405.1	102,300	157,000	240
250	59.9	401.2	90,600	160,700	60.3	400.2	92,000	162,000	60.7	399.0	93,400	153,100	250
260	58.4	394.8	82,400	149,800	58.9	393.7	83,800	151,000	59.3	392.5	85,000	149,400	260
270	56.9	388.0	74,700	139,700	57.3	386.9	76,100	140,900	57.7	385.6	77,200	141,900	270
280	55.4	380.7	67,600	130,400	55.8	379.6	68,800	131,500	56.2	378.4	69,900	132,400	280
290	53.8	373.1	60,800	121,800	54.2	372.0	62,000	122,800	54.6	370.7	63,000	123,600	290
300	52.2	365.0	54,500	113,700	52.6	363.9	55,600	114,600	53.0	362.5	56,600	115,500	300
310	50.6	356.5	48,500	106,200	51.0	355.3	49,500	107,100	51.4	353.9	50,400	107,800	310
320	48.9	347.4	42,800	99,100	49.3	346.2	43,800	100,000	49.7	344.8	44,600	100,700	320
330	47.2	337.8	37,400	92,500	47.6	336.5	38,400	93,300	48.0	335.1	39,100	94,000	330
340	45.4	327.5	32,300	86,300	45.8	326.2	33,200	87,000	46.2	324.7	33,900	87,600	340
350	43.5	316.6	27,500	80,500	44.0	315.3	28,300	81,100	44.3	313.7	29,000	81,700	350
360	41.6	305.0	22,900	74,900	42.0	303.6	23,600	75,500	42.4	302.0	24,200	76,000	360
370	39.7	292.5	18,500	69,700	40.1	291.1	19,200	70,200	40.4	289.4	19,700	70,700	370
380	37.6	279.1	14,300	64,700	38.0	277.6	14,900	65,200	38.3	275.8	15,400	65,600	380
390	35.4	264.6	10,300	60,000	35.8	263.0	10,800	60,400	36.1	261.1	11,300	60,800	390

MLC650 VPC-MAX S-3

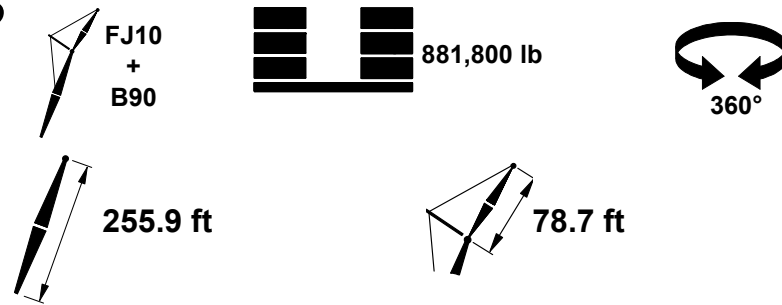
ASME B30.5



	 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	325,300	325,300	82.0	472.8	287,300	287,300	82.5	471.8	258,200	258,200	90
100	80.3	471.8	309,200	309,200	80.8	470.9	274,600	274,600	81.2	469.8	247,800	247,800	100
110	79.0	469.6	294,500	294,500	79.5	468.7	263,000	263,000	80.0	467.7	238,000	238,000	110
120	77.8	467.2	281,000	281,000	78.3	466.3	252,200	252,200	78.7	465.3	228,800	228,800	120
130	76.5	464.6	257,600	268,700	77.0	463.7	242,400	242,400	77.5	462.6	220,500	220,500	130
140	75.3	461.7	235,500	257,500	75.7	460.8	233,300	233,300	76.2	459.7	212,600	212,600	140
150	74.0	458.6	215,500	247,100	74.5	457.7	218,100	224,900	74.9	456.6	205,400	205,400	150
160	72.7	455.2	197,400	237,600	73.2	454.3	199,900	217,000	73.6	453.2	198,700	198,700	160
170	71.4	451.6	180,900	228,700	71.9	450.7	183,200	209,700	72.3	449.6	185,300	192,400	170
180	70.1	447.8	165,800	220,500	70.6	446.8	168,000	202,900	71.0	445.7	170,000	186,500	180
190	68.8	443.6	152,000	212,900	69.3	442.7	154,100	196,600	69.7	441.6	156,000	181,000	190
200	67.5	439.2	139,300	205,700	67.9	438.3	141,300	190,600	68.4	437.1	143,000	175,800	200
210	66.1	434.5	127,500	199,000	66.6	433.6	129,400	185,000	67.0	432.4	131,100	170,900	210
220	64.8	429.6	116,700	192,800	65.2	428.6	118,500	179,800	65.6	427.4	120,100	166,300	220
230	63.4	424.3	106,600	184,200	63.8	423.3	108,300	174,800	64.3	422.1	109,800	162,000	230
240	62.0	418.7	97,300	171,300	62.4	417.7	98,900	170,200	62.9	416.5	100,300	158,000	240
250	60.6	412.8	88,500	159,500	61.0	411.7	90,100	160,800	61.4	410.5	91,400	154,100	250
260	59.1	406.5	80,400	148,600	59.6	405.5	81,800	149,800	60.0	404.2	83,100	150,500	260
270	57.7	399.9	72,800	138,500	58.1	398.8	74,100	139,700	58.5	397.6	75,300	140,700	270
280	56.2	392.9	65,600	129,200	56.6	391.8	66,900	130,300	57.0	390.6	68,000	131,200	280
290	54.7	385.5	58,900	120,500	55.1	384.4	60,100	121,600	55.5	383.1	61,200	122,500	290
300	53.2	377.7	52,500	112,500	53.6	376.6	53,700	113,400	54.0	375.3	54,700	114,300	300
310	51.6	369.5	46,600	105,000	52.0	368.3	47,600	105,900	52.4	366.9	48,600	106,600	310
320	50.0	360.7	40,900	97,900	50.4	359.5	41,900	98,800	50.7	358.2	42,800	99,500	320
330	48.3	351.5	35,600	91,300	48.7	350.3	36,500	92,100	49.1	348.8	37,300	92,800	330
340	46.6	341.7	30,500	85,100	47.0	340.4	31,400	85,800	47.4	338.9	32,100	86,500	340
350	44.8	331.2	25,600	79,200	45.2	329.9	26,500	79,900	45.6	328.4	27,200	80,500	350
360	43.0	320.1	21,000	73,700	43.4	318.8	21,800	74,300	43.8	317.2	22,500	74,900	360
370	41.1	308.3	16,700	68,500	41.5	306.9	17,400	69,000	41.9	305.3	18,000	69,500	370
380	39.2	295.6	12,500	63,500	39.6	294.2	13,100	64,000	39.9	292.5	13,700	64,500	380
390	37.1	282.0		58,700	37.5	280.5		59,300	37.8	278.7		59,700	390
395	36.1	274.7		56,200	36.4	273.2		56,800	36.7	271.3		57,300	395
400					35.3	265.6		54,300	35.6	263.7		54,800	400

MLC650 VPC-MAX S-3

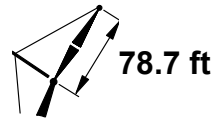
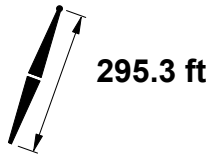
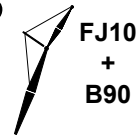
ASME B30.5



	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	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	187,100	187,100	65.7	305.0	168,600	168,600	66.5	303.8	149,800	149,800	160
170	63.0	300.4	177,700	177,700	63.8	299.5	160,800	160,800	64.5	298.3	143,500	143,500	170
180	61.0	294.5	169,200	169,200	61.8	293.6	153,700	153,700	62.5	292.3	137,700	137,700	180
190	59.0	288.0	161,400	161,400	59.7	287.2	147,200	147,200	60.5	285.8	132,400	132,400	190
200	56.9	281.1	154,300	154,300	57.6	280.2	141,200	141,200	58.4	278.9	127,400	127,400	200
210	54.7	273.6	147,800	147,800	55.5	272.7	135,700	135,700	56.2	271.3	122,900	122,900	210
220	52.5	265.5	141,800	141,800	53.2	264.6	130,700	130,700	54.0	263.1	118,700	118,700	220
230	50.3	256.8	135,000	136,300	51.0	255.8	126,000	126,000	51.7	254.3	114,800	114,800	230
240	47.9	247.3	125,300	131,200	48.6	246.2	121,600	121,600	49.3	244.7	111,200	111,200	240
250	45.4	236.9	116,500	126,400	46.1	235.8	117,300	117,600	46.8	234.2	107,900	107,900	250
260	42.8	225.6	108,300	122,000	43.5	224.4	109,000	113,800	44.2	222.7	104,700	104,700	260
270	40.1	213.2	100,700	117,900	40.7	211.9	101,400	110,300	41.4	210.1	101,900	101,900	270
280	37.2	199.4	93,600	114,100	37.8	198.1	94,200	107,100	38.4	196.1	94,900	99,200	280
285	35.6	191.9	90,300	112,300	36.2	190.5	90,900	105,600	36.8	188.5	91,400	98,100	285

MLC650 VPC-MAX S-3

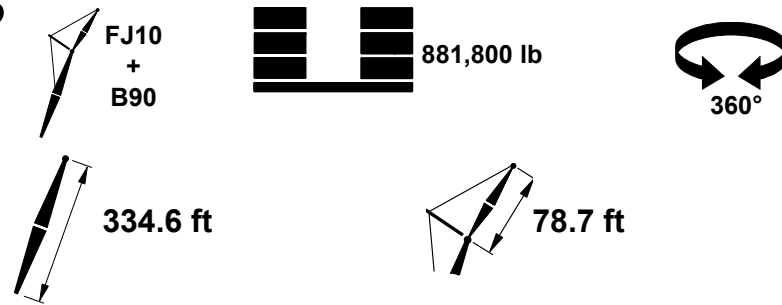
ASME B30.5



	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	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	219,000	219,000	72.2	356.7	194,600	194,600	72.9	355.4	170,500	170,500	140
150	69.8	353.6	207,900	207,900	70.5	352.7	185,500	185,500	71.2	351.3	163,300	163,300	150
160	68.2	349.2	197,700	197,700	68.8	348.3	177,200	177,200	69.5	346.9	156,700	156,700	160
170	66.5	344.5	188,500	188,500	67.1	343.5	169,700	169,700	67.8	342.1	150,700	150,700	170
180	64.7	339.3	180,100	180,100	65.4	338.4	162,800	162,800	66.1	336.9	145,100	145,100	180
190	63.0	333.8	172,400	172,400	63.6	332.8	156,400	156,400	64.3	331.4	139,900	139,900	190
200	61.2	327.9	163,900	163,900	61.8	326.9	150,500	150,500	62.5	325.4	135,100	135,100	200
210	59.4	321.5	151,000	158,800	60.0	320.5	145,000	145,000	60.7	319.0	130,600	130,600	210
220	57.5	314.7	139,200	152,700	58.1	313.7	139,900	139,900	58.8	312.1	126,400	126,400	220
230	55.6	307.4	128,500	147,100	56.2	306.3	129,800	135,200	56.9	304.7	122,500	122,500	230
240	53.6	299.6	118,800	142,000	54.2	298.4	119,900	130,800	54.9	296.8	119,000	119,000	240
250	51.6	291.1	109,900	137,100	52.2	290.0	110,900	126,700	52.9	288.3	112,000	115,600	250
260	49.6	282.1	101,600	132,600	50.1	280.9	102,600	122,900	50.8	279.2	103,600	112,400	260
270	47.4	272.4	94,000	128,400	48.0	271.1	94,900	119,300	48.6	269.3	95,800	109,500	270
280	45.2	261.9	87,000	124,400	45.8	260.6	87,800	116,000	46.3	258.7	88,600	106,700	280
290	42.9	250.5	80,400	120,800	43.4	249.1	81,100	112,900	44.0	247.2	81,900	104,100	290
300	40.4	238.1	74,300	117,300	40.9	236.7	74,900	109,900	41.5	234.6	75,600	101,800	300
310	37.8	224.5	68,500	114,000	38.3	223.0	69,100	107,200	38.9	220.8	69,700	99,500	310
315	36.5	217.2	65,800	112,500	37.0	215.7	66,400	105,900	37.5	213.4	66,900	98,500	315
320					35.5	207.9	63,700	104,700	36.0	205.5	64,200	97,500	320

MLC650 VPC-MAX S-3

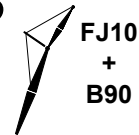
ASME B30.5



	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	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	223,800	223,800	74.1	398.4	199,200	199,200	74.8	396.9	173,900	173,900	140
150	72.0	395.8	213,400	213,400	72.6	394.7	190,600	190,600	73.3	393.2	167,200	167,200	150
160	70.5	391.9	204,000	204,000	71.1	390.8	182,700	182,700	71.8	389.3	160,900	160,900	160
170	69.0	387.7	195,400	195,400	69.6	386.6	175,500	175,500	70.3	385.0	155,200	155,200	170
180	67.4	383.1	187,500	187,500	68.1	382.1	168,900	168,900	68.7	380.5	149,800	149,800	180
190	65.9	378.3	174,900	180,100	66.5	377.2	162,700	162,700	67.2	375.6	144,900	144,900	190
200	64.3	373.1	161,600	173,300	64.9	372.0	157,000	157,000	65.6	370.3	140,200	140,200	200
210	62.7	367.5	148,600	166,800	63.3	366.4	150,100	151,600	64.0	364.7	135,900	135,900	210
220	61.1	361.6	136,800	160,900	61.7	360.4	138,200	146,600	62.4	358.8	131,800	131,800	220
230	59.5	355.3	126,000	155,400	60.1	354.1	127,400	142,000	60.7	352.4	128,000	128,000	230
240	57.8	348.6	116,300	150,200	58.4	347.4	117,500	137,700	59.0	345.6	118,800	124,400	240
250	56.1	341.4	107,300	145,300	56.7	340.2	108,500	133,600	57.3	338.4	109,700	121,100	250
260	54.3	333.7	99,000	140,800	54.9	332.5	100,100	129,800	55.5	330.7	101,300	118,000	260
270	52.5	325.6	91,400	136,500	53.1	324.3	92,400	126,200	53.7	322.5	93,500	115,000	270
280	50.7	316.9	84,400	132,500	51.3	315.6	85,300	122,800	51.8	313.7	86,300	112,200	280
290	48.8	307.7	77,800	128,800	49.4	306.3	78,700	119,600	49.9	304.3	79,600	109,600	290
300	46.8	297.7	71,700	125,000	47.4	296.3	72,500	116,600	47.9	294.3	73,300	107,200	300
310	44.8	287.1	65,700	117,400	45.3	285.6	66,600	113,800	45.9	283.5	67,400	104,900	310
320	42.7	275.7	59,900	110,400	43.2	274.1	60,700	111,100	43.7	271.9	61,600	102,600	320
330	40.5	263.3	54,400	103,800	41.0	261.7	55,200	104,400	41.5	259.4	56,000	100,600	330
340	38.2	250.0	49,200	97,500	38.7	248.3	49,900	98,100	39.1	245.8	50,600	98,600	340
350	35.7	235.3	44,300	91,700	36.2	233.5	44,900	92,100	36.6	230.9	45,500	92,600	350
355									35.3	222.9	43,000	89,700	355

MLC650 VPC-MAX S-3

ASME B30.5



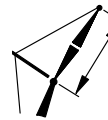
881,800 lb



360°



374.0 ft

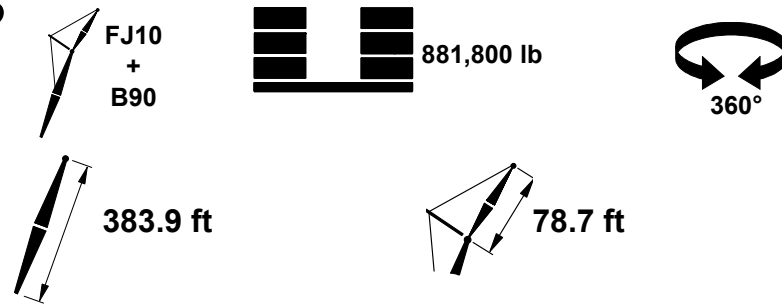


78.7 ft

	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	249,700	249,700	78.2	445.5	221,200	221,200	78.8	444.0	190,600	190,600	120
130	76.3	443.8	238,100	238,100	76.9	442.8	211,700	211,700	77.5	441.3	183,300	183,300	130
140	75.0	440.8	227,500	227,500	75.5	439.7	202,900	202,900	76.2	438.2	176,500	176,500	140
150	73.6	437.5	217,800	217,800	74.2	436.5	194,800	194,800	74.8	435.0	170,200	170,200	150
160	72.3	434.0	208,200	209,000	72.9	432.9	187,400	187,400	73.5	431.4	164,300	164,300	160
170	70.9	430.2	191,400	200,700	71.5	429.1	180,500	180,500	72.1	427.6	158,900	158,900	170
180	69.6	426.2	176,000	193,100	70.1	425.1	174,100	174,100	70.7	423.5	153,800	153,800	180
190	68.2	421.8	162,000	186,100	68.7	420.7	164,100	168,200	69.3	419.1	149,000	149,000	190
200	66.8	417.2	149,100	179,500	67.3	416.0	151,100	162,600	67.9	414.5	144,500	144,500	200
210	65.4	412.2	137,200	173,500	65.9	411.1	139,100	157,400	66.5	409.5	140,400	140,400	210
220	63.9	407.0	126,200	167,800	64.5	405.8	128,000	152,600	65.0	404.2	129,900	136,400	220
230	62.5	401.4	116,000	162,500	63.0	400.2	117,700	148,000	63.6	398.6	119,600	132,700	230
240	61.0	395.4	106,500	157,500	61.5	394.3	108,200	143,700	62.1	392.6	109,900	129,200	240
250	59.5	389.2	97,700	152,700	60.0	388.0	99,300	139,600	60.6	386.3	100,900	125,900	250
260	58.0	382.5	89,500	148,200	58.5	381.3	90,900	135,800	59.0	379.6	92,500	122,800	260
270	56.4	375.5	81,800	143,900	56.9	374.2	83,200	132,300	57.5	372.4	84,600	119,900	270
280	54.8	368.0	74,600	135,300	55.3	366.7	75,900	128,900	55.9	364.9	77,200	117,100	280
290	53.2	360.1	67,800	126,700	53.7	358.8	69,000	125,600	54.2	356.9	70,300	114,400	290
300	51.6	351.7	61,400	118,600	52.1	350.3	62,500	119,600	52.6	348.5	63,700	112,000	300
310	49.9	342.8	55,400	111,100	50.4	341.4	56,400	112,000	50.9	339.5	57,600	109,600	310
320	48.1	333.3	49,700	104,000	48.6	331.9	50,700	104,800	49.1	329.9	51,700	105,700	320
330	46.3	323.3	44,300	97,400	46.8	321.8	45,200	98,200	47.3	319.7	46,200	99,000	330
340	44.4	312.5	39,100	91,200	44.9	311.0	40,000	91,900	45.4	308.9	40,900	92,600	340
350	42.5	301.1	34,300	85,300	43.0	299.5	35,100	85,900	43.4	297.3	35,900	86,600	350
360	40.5	288.8	29,600	79,700	40.9	287.1	30,400	80,300	41.4	284.8	31,100	80,900	360
370	38.4	275.6	25,200	74,500	38.8	273.8	25,900	75,000	39.3	271.4	26,500	75,600	370
380	36.2	261.2	21,000	69,500	36.6	259.4	21,600	70,000	37.0	256.8	22,200	70,500	380
385					35.4	251.7	19,500	67,500	35.8	249.0	20,100	68,000	385

MLC650 VPC-MAX S-3

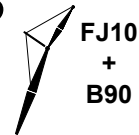
ASME B30.5



	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	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	293,000	293,000	80.7	460.9	258,800	258,800	81.3	459.7	226,700	226,700	100
110	78.9	459.6	277,600	277,600	79.5	458.7	246,700	246,700	80.0	457.5	216,800	216,800	110
120	77.6	457.2	263,700	263,700	78.2	456.2	235,600	235,600	78.7	455.1	207,700	207,700	120
130	76.3	454.5	251,100	251,100	76.9	453.5	225,600	225,600	77.4	452.3	199,300	199,300	130
140	75.0	451.5	239,600	239,600	75.6	450.6	216,300	216,300	76.1	449.4	191,600	191,600	140
150	73.7	448.3	221,300	221,300	74.3	447.4	207,400	207,400	74.8	446.2	184,500	184,500	150
160	72.4	444.9	203,200	219,500	73.0	443.9	199,300	199,300	73.5	442.7	177,900	177,900	160
170	71.1	441.2	186,700	210,600	71.7	440.2	189,200	191,800	72.2	439.0	171,800	171,800	170
180	69.7	437.3	171,600	202,400	70.3	436.3	174,000	184,700	70.8	435.0	166,000	166,000	180
190	68.4	433.0	157,800	194,800	69.0	432.0	160,100	178,300	69.5	430.8	160,600	160,600	190
200	67.0	428.5	145,100	187,700	67.6	427.5	147,200	172,200	68.1	426.2	149,200	155,600	200
210	65.7	423.7	133,400	181,100	66.2	422.7	135,400	166,600	66.7	421.4	137,300	151,000	210
220	64.3	418.6	122,600	175,000	64.8	417.5	124,500	161,300	65.3	416.3	126,200	146,500	220
230	62.8	413.2	112,500	169,300	63.4	412.1	114,300	156,300	63.9	410.8	116,000	142,400	230
240	61.4	407.4	103,200	163,900	62.0	406.3	104,900	151,700	62.5	405.0	106,500	138,500	240
250	60.0	401.3	94,500	158,900	60.5	400.2	96,100	147,300	61.0	398.9	97,600	134,800	250
260	58.5	394.9	86,400	152,900	59.0	393.8	87,900	143,200	59.5	392.4	89,300	131,400	260
270	57.0	388.1	78,800	142,800	57.5	386.9	80,200	139,200	58.0	385.6	81,600	128,100	270
280	55.4	380.8	71,600	133,500	56.0	379.7	73,000	134,700	56.5	378.3	74,300	125,000	280
290	53.9	373.2	64,900	124,900	54.4	372.0	66,200	126,000	54.9	370.6	67,400	122,000	290
300	52.3	365.1	58,600	116,900	52.8	363.9	59,800	117,900	53.3	362.5	60,900	118,800	300
310	50.7	356.6	52,600	109,400	51.2	355.3	53,800	110,300	51.6	353.8	54,800	111,200	310
320	49.0	347.5	47,000	102,300	49.5	346.2	48,100	103,200	49.9	344.7	49,100	104,100	320
330	47.3	337.9	41,700	95,700	47.8	336.6	42,700	96,600	48.2	335.0	43,600	97,300	330
340	45.5	327.6	36,600	89,500	46.0	326.3	37,600	90,300	46.4	324.7	38,400	91,000	340
350	43.6	316.7	31,800	83,700	44.1	315.4	32,700	84,400	44.6	313.7	33,500	85,100	350
360	41.7	305.1	27,200	78,200	42.2	303.7	28,000	78,800	42.6	301.9	28,800	79,400	360
370	39.8	292.6	22,800	72,900	40.2	291.1	23,600	73,600	40.6	289.3	24,300	74,100	370
380	37.7	279.2	18,700	68,000	38.1	277.6	19,400	68,600	38.5	275.7	20,000	69,000	380
390	35.5	264.7	14,700	63,300	35.9	263.0	15,300	63,800	36.3	261.0	15,800	64,200	390

MLC650 VPC-MAX S-3

ASME B30.5



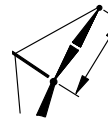
881,800 lb



360°



393.7 ft

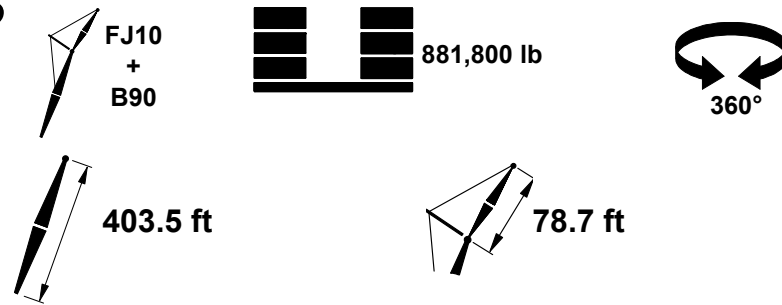


78.7 ft

	10°				15°				20°				
ft	°	ft	lb	lb	°	ft	lb	lb	°	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	293,400	293,400	80.9	471.0	258,900	258,900	81.5	469.9	226,800	226,800	100
110	79.1	469.7	278,400	278,400	79.7	468.8	247,200	247,200	80.2	467.7	217,100	217,100	110
120	77.8	467.3	264,800	264,800	78.4	466.4	236,300	236,300	78.9	465.3	208,200	208,200	120
130	76.6	464.7	252,400	252,400	77.2	463.7	226,400	226,400	77.7	462.6	199,900	199,900	130
140	75.3	461.8	237,100	241,000	75.9	460.9	217,300	217,300	76.4	459.7	192,400	192,400	140
150	74.0	458.7	217,200	230,700	74.6	457.8	208,600	208,600	75.1	456.6	185,300	185,300	150
160	72.8	455.4	199,200	221,100	73.3	454.4	200,500	200,500	73.8	453.2	178,800	178,800	160
170	71.5	451.8	182,800	212,300	72.0	450.8	185,400	193,100	72.5	449.6	172,700	172,700	170
180	70.2	447.9	167,800	204,100	70.7	446.9	170,200	186,200	71.2	445.7	167,100	167,100	180
190	68.9	443.8	154,000	196,600	69.4	442.8	156,300	179,700	69.9	441.6	158,500	161,800	190
200	67.5	439.3	141,300	189,600	68.1	438.3	143,500	173,700	68.6	437.2	145,600	156,800	200
210	66.2	434.7	129,600	183,000	66.7	433.6	131,700	168,100	67.2	432.4	133,700	152,200	210
220	64.8	429.7	118,800	176,900	65.4	428.7	120,800	162,800	65.9	427.4	122,600	147,800	220
230	63.5	424.4	108,800	171,200	64.0	423.4	110,700	157,900	64.5	422.1	112,400	143,600	230
240	62.1	418.8	99,500	165,900	62.6	417.8	101,300	153,200	63.1	416.5	102,900	139,800	240
250	60.6	412.9	90,800	160,800	61.2	411.8	92,500	148,800	61.7	410.6	94,000	136,100	250
260	59.2	406.6	82,700	150,300	59.8	405.6	84,300	144,700	60.2	404.3	85,700	132,600	260
270	57.8	400.0	75,000	140,300	58.3	398.9	76,600	140,800	58.8	397.6	78,000	129,300	270
280	56.3	393.0	67,900	131,000	56.8	391.9	69,400	132,200	57.3	390.6	70,700	126,200	280
290	54.8	385.7	61,200	122,400	55.3	384.5	62,600	123,500	55.7	383.1	63,800	123,300	290
300	53.2	377.9	54,900	114,300	53.7	376.7	56,200	115,400	54.2	375.3	57,300	116,400	300
310	51.6	369.6	48,900	106,800	52.2	368.4	50,200	107,800	52.6	367.0	51,200	108,700	310
320	50.0	360.9	43,300	99,800	50.5	359.6	44,400	100,700	51.0	358.2	45,500	101,600	320
330	48.4	351.6	37,900	93,100	48.9	350.3	39,000	94,100	49.3	348.9	40,000	94,800	330
340	46.7	341.8	32,900	86,900	47.2	340.5	33,900	87,800	47.6	339.0	34,800	88,500	340
350	44.9	331.4	28,100	81,100	45.4	330.0	29,000	81,900	45.8	328.5	29,800	82,600	350
360	43.1	320.3	23,500	75,600	43.6	318.9	24,400	76,300	44.0	317.3	25,100	76,900	360
370	41.2	308.5	19,100	70,300	41.7	307.0	19,900	71,000	42.1	305.3	20,600	71,600	370
380	39.3	295.8	14,900	65,400	39.7	294.3	15,700	66,000	40.1	292.5	16,300	66,500	380
390	37.2	282.2	10,900	60,700	37.7	280.6	11,600	61,200	38.0	278.7	12,200	61,700	390
395	36.1	274.9		58,400	36.6	273.3		58,900	36.9	271.4	10,200	59,400	395
400					35.5	265.7		56,700	35.8	263.7		57,100	400

MLC650 VPC-MAX S-3

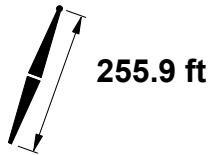
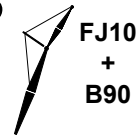
ASME B30.5



	10°				15°				20°				
	ft	°	ft	lb	lb	ft	°	ft	lb	lb	ft	°	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	291,700	291,700	81.1	481.0	257,600	257,600	81.6	479.9	226,100	226,100	100
110	79.3	479.8	277,100	277,100	79.9	478.9	246,200	246,200	80.4	477.8	216,700	216,700	110
120	78.1	477.5	263,900	263,900	78.7	476.5	235,600	235,600	79.2	475.4	208,000	208,000	120
130	76.9	474.9	251,800	251,800	77.4	473.9	226,000	226,000	77.9	472.8	200,000	200,000	130
140	75.6	472.1	234,000	240,900	76.2	471.1	217,200	217,200	76.7	470.0	192,500	192,500	140
150	74.4	469.0	214,300	230,700	74.9	468.1	208,900	208,900	75.5	466.9	185,600	185,600	150
160	73.1	465.8	196,500	221,300	73.7	464.8	199,300	201,000	74.2	463.6	179,200	179,200	160
170	71.9	462.2	180,200	212,700	72.4	461.3	182,900	193,700	72.9	460.1	173,200	173,200	170
180	70.6	458.5	165,300	204,700	71.2	457.5	167,800	186,900	71.6	456.3	167,600	167,600	180
190	69.3	454.4	151,600	197,300	69.9	453.4	154,000	180,500	70.4	452.3	156,200	162,400	190
200	68.0	450.1	139,100	190,300	68.6	449.1	141,300	174,600	69.1	447.9	143,400	157,500	200
210	66.7	445.6	127,400	184,000	67.3	444.5	129,600	169,100	67.7	443.3	131,500	152,900	210
220	65.4	440.7	116,700	177,900	65.9	439.7	118,700	163,800	66.4	438.5	120,600	148,600	220
230	64.0	435.6	106,700	172,200	64.6	434.5	108,600	158,900	65.1	433.3	110,400	144,500	230
240	62.7	430.1	97,400	166,900	63.2	429.1	99,200	154,300	63.7	427.8	100,900	140,600	240
250	61.3	424.4	88,700	160,000	61.8	423.3	90,500	150,000	62.3	422.0	92,100	137,000	250
260	59.9	418.3	80,600	149,100	60.5	417.2	82,300	145,900	60.9	415.9	83,800	133,600	260
270	58.5	411.9	73,100	139,100	59.0	410.8	74,600	140,400	59.5	409.5	76,000	130,300	270
280	57.1	405.1	65,900	129,700	57.6	404.0	67,400	131,000	58.0	402.6	68,800	127,200	280
290	55.6	397.9	59,300	121,100	56.1	396.8	60,700	122,300	56.6	395.4	61,900	123,400	290
300	54.1	390.4	52,900	113,100	54.6	389.2	54,300	114,200	55.1	387.8	55,500	115,200	300
310	52.6	382.4	47,000	105,500	53.1	381.2	48,300	106,600	53.5	379.8	49,400	107,500	310
320	51.0	374.0	41,400	98,500	51.5	372.8	42,600	99,500	52.0	371.3	43,600	100,400	320
330	49.4	365.1	36,000	91,900	49.9	363.8	37,200	92,800	50.4	362.3	38,200	93,700	330
340	47.8	355.7	31,000	85,700	48.3	354.4	32,000	86,600	48.7	352.8	33,000	87,300	340
350	46.1	345.7	26,200	79,800	46.6	344.3	27,200	80,700	47.0	342.8	28,000	81,400	350
360	44.4	335.1	21,600	74,300	44.9	333.7	22,500	75,100	45.3	332.1	23,300	75,700	360
370	42.6	323.8	17,200	69,100	43.1	322.4	18,100	69,800	43.4	320.7	18,900	70,400	370
380	40.7	311.8	13,100	64,100	41.2	310.3	13,900	64,800	41.6	308.5	14,600	65,400	380
390	38.8	298.9		59,300	39.2	297.3		60,000	39.6	295.5	10,500	60,500	390
400	36.8	285.0		54,300	37.2	283.4		55,000	37.5	281.5		55,600	400
405	35.7	277.7		52,000	36.1	276.0		52,600	36.5	274.1		53,100	405
410									35.4	266.3		50,700	410

MLC650 VPC-MAX S-3

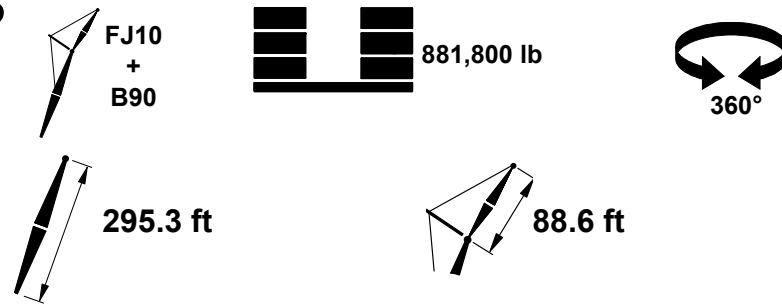
ASME B30.5

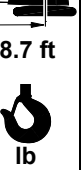
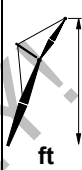
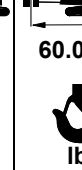


	10°				15°				20°				
	ft	ft	lb	lb	ft	ft	lb	lb	ft	ft	lb	lb	ft
51	85.0	350.8	383,600	383,600									51
52	84.8	350.7	382,400	382,400									52
53	84.6	350.5	381,200	381,200									53
54	84.4	350.4	380,100	380,100									54
56	84.1	350.1	377,700	377,700									56
57	83.9	350.0	373,800	373,800	84.8	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	154,600	154,600	62.9	305.1	140,000	140,000	63.8	303.8	125,100	125,100	180
190	60.1	299.9	147,200	147,200	60.9	299.0	133,900	133,900	61.8	297.6	120,100	120,100	190
200	58.1	293.2	140,600	140,600	58.9	292.3	128,400	128,400	59.8	290.9	115,500	115,500	200
210	56.0	286.1	134,400	134,400	56.8	285.1	123,200	123,200	57.7	283.7	111,200	111,200	210
220	53.9	278.4	128,800	128,800	54.7	277.4	118,400	118,400	55.6	275.9	107,200	107,200	220
230	51.8	270.0	123,600	123,600	52.5	269.0	114,000	114,000	53.4	267.5	103,500	103,500	230
240	49.5	261.0	118,700	118,700	50.3	260.0	109,800	109,800	51.1	258.4	100,100	100,100	240
250	47.2	251.3	114,300	114,300	47.9	250.2	106,000	106,000	48.8	248.5	96,900	96,900	250
260	44.7	240.7	109,800	110,100	45.5	239.5	102,400	102,400	46.3	237.8	93,900	93,900	260
270	42.2	229.1	102,200	106,200	42.9	227.9	99,100	99,100	43.7	226.0	91,200	91,200	270
280	39.5	216.4	95,200	102,600	40.2	215.1	95,900	96,000	41.0	213.1	88,700	88,700	280
290	36.6	202.3	88,600	99,300	37.3	201.0	89,300	93,200	38.1	198.8	86,300	86,300	290
295					35.8	193.3	86,100	91,800	36.5	191.1	85,200	85,200	295

MLC650 VPC-MAX S-3

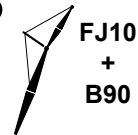
ASME B30.5



	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	180,800	180,800	69.6	359.1	161,700	161,700	70.4	357.6	142,600	142,600	160
170	67.2	355.5	172,100	172,100	68.0	354.4	154,600	154,600	68.8	353.0	136,900	136,900	170
180	65.6	350.5	164,200	164,200	66.3	349.5	148,000	148,000	67.1	348.0	131,600	131,600	180
190	63.9	345.2	157,000	157,000	64.6	344.1	142,000	142,000	65.4	342.6	126,700	126,700	190
200	62.1	339.5	150,300	150,300	62.9	338.4	136,500	136,500	63.6	336.9	122,200	122,200	200
210	60.4	333.3	144,200	144,200	61.1	332.2	131,400	131,400	61.9	330.7	117,900	117,900	210
220	58.6	326.8	138,500	138,500	59.3	325.6	126,600	126,600	60.1	324.0	114,100	114,100	220
230	56.8	319.7	130,000	133,300	57.5	318.6	122,200	122,200	58.2	317.0	110,400	110,400	230
240	54.9	312.2	120,300	128,400	55.6	311.0	118,000	118,000	56.3	309.4	107,000	107,000	240
250	53.0	304.2	111,400	123,800	53.7	303.0	112,600	114,200	54.4	301.2	103,800	103,800	250
260	51.0	295.5	103,100	119,600	51.7	294.3	104,200	110,600	52.4	292.5	100,800	100,800	260
270	49.0	286.3	95,500	115,600	49.6	285.0	96,600	107,200	50.3	283.1	97,600	98,000	270
280	46.8	276.3	88,500	111,900	47.5	275.0	89,400	104,000	48.2	273.1	90,400	95,400	280
290	44.6	265.6	81,900	108,400	45.3	264.2	82,800	101,000	46.0	262.2	83,700	92,900	290
300	42.3	253.9	75,800	105,200	43.0	252.5	76,600	98,300	43.6	250.4	77,400	90,700	300
310	39.9	241.3	70,100	102,200	40.6	239.8	70,800	95,700	41.2	237.6	71,600	88,500	310
320	37.4	227.5	64,700	99,300	38.0	225.8	65,400	93,300	38.6	223.5	66,000	86,500	320
325	36.0	220.0	62,200	97,900	36.6	218.4	62,800	92,100	37.2	215.9	63,400	85,600	325
330									35.8	207.9	60,800	84,700	330

MLC650 VPC-MAX S-3

ASME B30.5



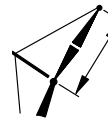
881,800 lb



360°



334.6 ft

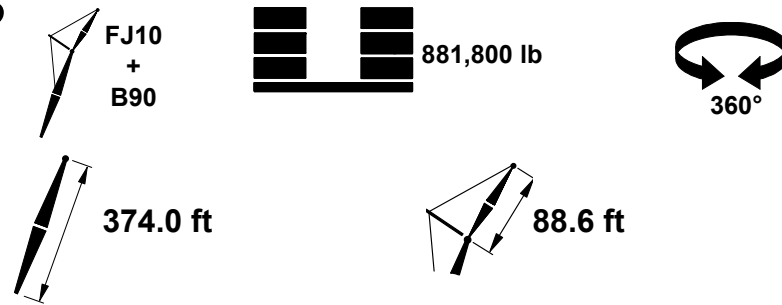


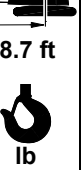
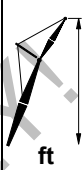
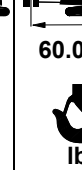
88.6 ft

	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	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	196,300	196,300	73.3	405.2	174,000	174,000	74.0	403.6	152,200	152,200	150
160	71.2	402.5	187,100	187,100	71.8	401.3	166,600	166,600	72.6	399.7	146,300	146,300	160
170	69.7	398.4	178,700	178,700	70.4	397.2	159,800	159,800	71.1	395.6	140,900	140,900	170
180	68.2	394.0	171,100	171,100	68.9	392.8	153,500	153,500	69.6	391.2	135,800	135,800	180
190	66.7	389.2	164,000	164,000	67.4	388.1	147,800	147,800	68.1	386.4	131,100	131,100	190
200	65.2	384.2	157,500	157,500	65.8	383.0	142,300	142,300	66.6	381.3	126,800	126,800	200
210	63.6	378.8	150,000	151,500	64.3	377.6	137,400	137,400	65.0	375.9	122,800	122,800	210
220	62.1	373.1	138,200	145,900	62.7	371.8	132,700	132,700	63.4	370.1	118,900	118,900	220
230	60.5	367.0	127,500	140,700	61.1	365.7	128,300	128,300	61.8	364.0	115,400	115,400	230
240	58.9	360.4	117,700	135,800	59.5	359.2	119,100	124,200	60.2	357.4	111,900	111,900	240
250	57.2	353.5	108,700	131,300	57.8	352.2	110,000	120,400	58.5	350.4	108,900	108,900	250
260	55.5	346.2	100,500	127,000	56.1	344.8	101,700	116,800	56.8	343.0	103,000	105,900	260
270	53.8	338.3	92,800	123,100	54.4	337.0	94,000	113,400	55.1	335.1	95,200	103,100	270
280	52.0	330.0	85,800	119,300	52.6	328.6	86,900	110,200	53.3	326.7	88,000	100,400	280
290	50.2	321.1	79,200	115,700	50.8	319.7	80,200	107,200	51.4	317.7	81,300	98,000	290
300	48.3	311.6	73,100	112,500	48.9	310.2	74,000	104,400	49.6	308.1	75,000	95,700	300
310	46.4	301.5	67,200	109,400	47.0	300.0	68,200	101,800	47.6	297.9	69,100	93,500	310
320	44.4	290.7	61,500	106,400	45.0	289.1	62,400	99,200	45.6	286.9	63,400	91,400	320
330	42.3	279.0	56,000	103,600	42.9	277.4	56,900	96,900	43.5	275.0	57,800	89,400	330
340	40.1	266.5	50,800	99,000	40.7	264.7	51,700	94,700	41.2	262.3	52,500	87,600	340
350	37.8	252.8	45,900	93,100	38.4	251.0	46,700	92,600	38.9	248.4	47,400	85,900	350
355	36.6	245.6	43,500	90,300	37.2	243.7	44,200	90,900	37.7	241.0	45,000	85,100	355
360					35.9	236.0	41,900	88,100	36.4	233.2	42,600	84,300	360

MLC650 VPC-MAX S-3

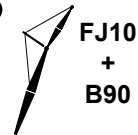
ASME B30.5



	10°				15°				20°				
													
	ft	°	ft	lb	lb	ft	°	ft	lb	lb	ft	°	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	210,900	210,900	76.1	449.9	185,400	185,400	76.8	448.4	160,800	160,800	140
150	74.2	447.9	201,300	201,300	74.8	446.8	177,800	177,800	75.5	445.1	154,900	154,900	150
160	72.9	444.4	192,600	192,600	73.5	443.3	170,800	170,800	74.2	441.7	149,300	149,300	160
170	71.5	440.7	184,600	184,600	72.2	439.6	164,300	164,300	72.8	438.0	144,200	144,200	170
180	70.2	436.8	176,600	177,200	70.8	435.6	158,200	158,200	71.5	434.0	139,400	139,400	180
190	68.8	432.5	162,700	170,300	69.5	431.4	152,600	152,600	70.1	429.7	134,900	134,900	190
200	67.5	428.0	149,900	163,900	68.1	426.8	147,400	147,400	68.8	425.1	130,700	130,700	200
210	66.1	423.2	138,100	158,000	66.7	422.0	140,300	142,600	67.4	420.3	126,700	126,700	210
220	64.7	418.1	127,200	152,500	65.3	416.9	129,300	138,000	66.0	415.1	123,100	123,100	220
230	63.3	412.7	117,100	147,300	63.9	411.4	119,100	133,700	64.5	409.7	119,600	119,600	230
240	61.9	406.9	107,700	142,500	62.5	405.6	109,600	129,700	63.1	403.9	111,500	116,300	240
250	60.4	400.8	99,000	138,000	61.0	399.5	100,700	125,900	61.6	397.7	102,600	113,200	250
260	58.9	394.4	90,800	133,800	59.5	393.1	92,400	122,300	60.1	391.2	94,200	110,200	260
270	57.4	387.5	83,200	129,700	58.0	386.2	84,700	119,000	58.6	384.3	86,400	107,500	270
280	55.9	380.3	76,000	126,000	56.5	379.0	77,400	115,800	57.1	377.0	79,000	104,800	280
290	54.3	372.7	69,200	122,500	54.9	371.3	70,600	112,700	55.5	369.3	72,100	102,400	290
300	52.7	364.6	62,900	119,000	53.3	363.2	64,200	109,900	53.9	361.2	65,600	100,000	300
310	51.1	356.0	56,900	112,500	51.6	354.5	58,100	107,200	52.2	352.5	59,400	97,800	310
320	49.4	346.9	51,200	105,400	50.0	345.4	52,300	104,700	50.5	343.3	53,600	95,700	320
330	47.7	337.3	45,800	98,800	48.2	335.7	46,900	99,700	48.8	333.6	48,000	93,700	330
340	45.9	327.0	40,700	92,600	46.4	325.4	41,700	93,400	47.0	323.2	42,800	91,900	340
350	44.1	316.1	35,900	86,700	44.6	314.5	36,800	87,500	45.1	312.2	37,800	88,300	350
360	42.2	304.4	31,300	81,200	42.7	302.7	32,100	81,900	43.2	300.3	33,000	82,600	360
370	40.2	291.9	26,900	75,900	40.7	290.2	27,700	76,600	41.2	287.6	28,500	77,300	370
380	38.1	278.5	22,600	70,900	38.6	276.6	23,400	71,500	39.0	274.0	24,100	72,100	380
390	35.9	263.9	18,600	66,200	36.4	261.9	19,300	66,800	36.8	259.1	20,000	67,300	390
395									35.6	251.2	17,900	64,900	395

MLC650 VPC-MAX S-3

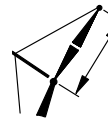
ASME B30.5



881,800 lb



383.9 ft

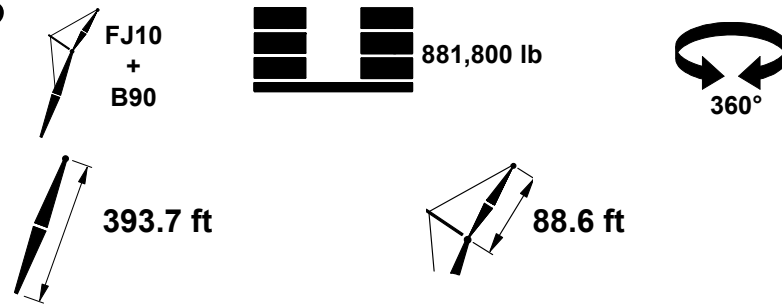


88.6 ft

	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	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	246,700	246,700	78.6	466.3	217,000	217,000	79.2	465.1	190,100	190,100	120
130	76.7	464.7	234,500	234,500	77.4	463.7	206,900	206,900	78.0	462.5	182,200	182,200	130
140	75.5	461.8	223,500	223,500	76.1	460.8	197,900	197,900	76.7	459.6	174,900	174,900	140
150	74.2	458.7	213,500	213,500	74.8	457.7	189,600	189,600	75.4	456.5	168,100	168,100	150
160	72.9	455.3	203,100	204,200	73.5	454.3	181,900	181,900	74.1	453.1	161,900	161,900	160
170	71.6	451.7	186,900	195,700	72.2	450.7	174,700	174,700	72.8	449.5	156,100	156,100	170
180	70.3	447.9	172,000	187,800	70.9	446.8	168,200	168,200	71.5	445.6	150,700	150,700	180
190	69.0	443.7	158,300	180,500	69.6	442.7	160,900	162,000	70.2	441.4	145,700	145,700	190
200	67.7	439.3	145,800	173,800	68.3	438.3	148,200	156,400	68.9	437.0	141,000	141,000	200
210	66.3	434.6	134,200	167,500	66.9	433.6	136,500	151,100	67.5	432.3	136,500	136,500	210
220	65.0	429.7	123,500	161,700	65.6	428.6	125,600	146,100	66.2	427.3	127,600	132,400	220
230	63.6	424.4	113,500	156,300	64.2	423.3	115,600	141,400	64.8	422.0	117,400	128,600	230
240	62.2	418.8	104,300	151,100	62.8	417.7	106,200	137,100	63.4	416.3	108,000	124,800	240
250	60.8	412.9	95,600	146,200	61.4	411.8	97,500	133,000	61.9	410.4	99,200	121,400	250
260	59.4	406.6	87,600	141,600	60.0	405.5	89,300	129,100	60.5	404.1	90,900	118,100	260
270	57.9	400.0	80,000	137,200	58.5	398.9	81,700	125,400	59.0	397.4	83,200	115,100	270
280	56.4	393.0	72,900	133,100	57.0	391.9	74,500	122,000	57.5	390.4	75,900	112,200	280
290	54.9	385.6	66,200	126,200	55.5	384.4	67,700	118,700	56.0	382.9	69,100	109,400	290
300	53.4	377.8	60,000	118,200	53.9	376.6	61,400	115,700	54.5	375.1	62,600	106,800	300
310	51.8	369.6	54,000	110,700	52.4	368.3	55,400	111,800	52.9	366.8	56,600	104,300	310
320	50.2	360.8	48,400	103,700	50.7	359.6	49,700	104,700	51.3	358.0	50,800	102,000	320
330	48.5	351.6	43,100	97,100	49.1	350.3	44,300	98,100	49.6	348.6	45,400	98,900	330
340	46.8	341.8	38,100	90,900	47.4	340.4	39,200	91,800	47.9	338.7	40,200	92,600	340
350	45.1	331.4	33,300	85,000	45.6	330.0	34,300	85,900	46.1	328.2	35,300	86,700	350
360	43.2	320.3	28,700	79,500	43.8	318.8	29,700	80,300	44.3	317.0	30,600	81,000	360
370	41.4	308.4	24,400	74,300	41.9	306.9	25,300	75,100	42.4	305.1	26,100	75,700	370
380	39.4	295.8	20,200	69,400	39.9	294.2	21,100	70,100	40.4	292.2	21,800	70,600	380
390	37.3	282.1	16,300	64,700	37.9	280.5	17,000	65,300	38.3	278.4	17,700	65,800	390
395	36.3	274.9	14,400	62,400	36.8	273.2	15,100	63,000	37.2	271.1	15,700	63,500	395
400					35.7	265.6	13,200	60,800	36.1	263.5	13,800	61,300	400

MLC650 VPC-MAX S-3

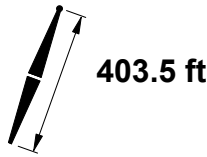
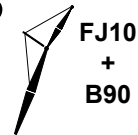
ASME B30.5



	10°				15°				20°				
	ft	°	ft	lb	lb	ft	°	ft	lb	lb	ft	°	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	260,800	260,800	80.1	478.9	228,400	228,400	80.7	477.7	198,900	198,900	110
120	78.2	477.5	247,600	247,600	78.9	476.5	217,600	217,600	79.4	475.3	190,500	190,500	120
130	77.0	474.9	235,700	235,700	77.6	473.9	207,800	207,800	78.2	472.7	182,700	182,700	130
140	75.7	472.1	224,800	224,800	76.4	471.1	198,800	198,800	77.0	469.9	175,500	175,500	140
150	74.5	469.1	214,800	214,800	75.1	468.1	190,600	190,600	75.7	466.9	168,900	168,900	150
160	73.2	465.8	199,200	205,700	73.9	464.8	183,000	183,000	74.4	463.6	162,800	162,800	160
170	72.0	462.3	183,000	197,200	72.6	461.2	175,900	175,900	73.2	460.0	157,000	157,000	170
180	70.7	458.5	168,200	189,400	71.3	457.5	169,400	169,400	71.9	456.2	151,700	151,700	180
190	69.4	454.5	154,600	182,200	70.1	453.4	157,200	163,300	70.6	452.2	146,700	146,700	190
200	68.1	450.2	142,100	175,500	68.8	449.1	144,500	157,700	69.3	447.8	142,000	142,000	200
210	66.8	445.6	130,500	169,300	67.4	444.5	132,800	152,500	68.0	443.3	135,000	137,700	210
220	65.5	440.7	119,800	163,500	66.1	439.7	122,000	147,500	66.7	438.4	124,000	133,500	220
230	64.2	435.6	109,800	158,000	64.8	434.5	112,000	142,800	65.3	433.2	113,900	129,700	230
240	62.8	430.2	100,600	152,900	63.4	429.0	102,600	138,500	63.9	427.7	104,400	126,000	240
250	61.4	424.4	91,900	148,000	62.0	423.3	93,900	134,400	62.6	421.9	95,600	122,600	250
260	60.0	418.3	83,900	143,400	60.6	417.2	85,700	130,600	61.2	415.8	87,400	119,300	260
270	58.6	411.9	76,300	139,000	59.2	410.7	78,100	126,900	59.7	409.4	79,600	116,300	270
280	57.2	405.1	69,200	132,300	57.8	403.9	70,900	123,400	58.3	402.5	72,400	113,300	280
290	55.7	398.0	62,600	123,700	56.3	396.8	64,100	120,200	56.8	395.3	65,500	110,500	290
300	54.2	390.4	56,300	115,700	54.8	389.2	57,800	116,900	55.3	387.7	59,100	108,000	300
310	52.7	382.4	50,300	108,100	53.3	381.2	51,800	109,300	53.8	379.7	53,000	105,400	310
320	51.1	374.0	44,700	101,100	51.7	372.7	46,100	102,200	52.2	371.2	47,200	103,000	320
330	49.6	365.1	39,400	94,500	50.1	363.8	40,700	95,600	50.6	362.2	41,800	96,500	330
340	47.9	355.7	34,400	88,300	48.5	354.3	35,600	89,300	49.0	352.7	36,600	90,200	340
350	46.2	345.7	29,600	82,500	46.8	344.3	30,700	83,400	47.3	342.7	31,700	84,200	350
360	44.5	335.1	25,000	76,900	45.0	333.7	26,100	77,800	45.5	332.0	27,000	78,600	360
370	42.7	323.8	20,700	71,700	43.2	322.3	21,700	72,500	43.7	320.6	22,500	73,200	370
380	40.8	311.8	16,500	66,800	41.4	310.3	17,400	67,500	41.8	308.4	18,200	68,200	380
390	38.9	298.9	12,600	62,100	39.4	297.3	13,400	62,800	39.8	295.4	14,100	63,300	390
400	36.9	285.1		57,600	37.4	283.4		58,200	37.8	281.4	10,200	58,800	400
405	35.8	277.7		55,400	36.3	276.0		56,000	36.7	273.9		56,500	405
410									35.6	266.2		54,400	410

MLC650 VPC-MAX S-3

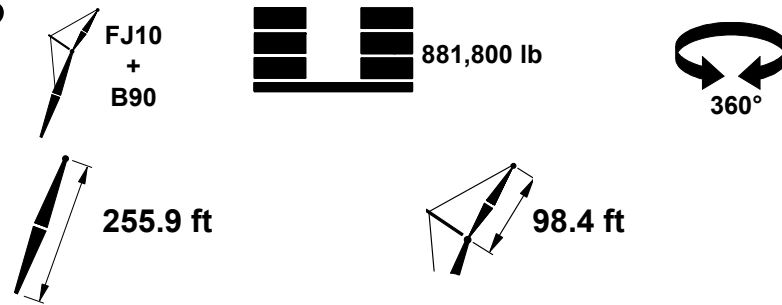
ASME B30.5



	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	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	259,700	259,700	80.3	488.9	227,900	227,900	80.9	487.7	198,600	198,600	110
120	78.5	487.6	246,900	246,900	79.1	486.6	217,400	217,400	79.7	485.4	190,300	190,300	120
130	77.2	485.1	235,200	235,200	77.9	484.1	207,800	207,800	78.5	482.9	182,600	182,600	130
140	76.0	482.4	224,700	224,700	76.7	481.3	199,000	199,000	77.2	480.1	175,600	175,600	140
150	74.8	479.4	214,000	214,000	75.4	478.4	191,000	191,000	76.0	477.1	169,100	169,100	150
160	73.6	476.2	196,500	205,900	74.2	475.1	183,500	183,500	74.8	473.9	163,100	163,100	160
170	72.4	472.7	180,400	197,600	73.0	471.7	176,500	176,500	73.5	470.4	157,400	157,400	170
180	71.1	469.0	165,700	190,000	71.7	468.0	168,500	170,100	72.3	466.7	152,200	152,200	180
190	69.9	465.1	152,200	182,900	70.5	464.0	154,900	164,200	71.0	462.8	147,300	147,300	190
200	68.6	460.9	139,800	176,300	69.2	459.8	142,300	158,600	69.8	458.5	142,700	142,700	200
210	67.3	456.4	128,300	170,200	67.9	455.4	130,700	153,300	68.5	454.1	132,800	138,300	210
220	66.0	451.7	117,600	164,400	66.6	450.6	119,900	148,400	67.2	449.3	122,000	134,300	220
230	64.7	446.7	107,700	159,000	65.3	445.6	109,900	143,800	65.9	444.3	111,800	130,500	230
240	63.4	441.4	98,500	154,000	64.0	440.3	100,600	139,500	64.5	438.9	102,400	126,800	240
250	62.1	435.8	89,900	149,200	62.7	434.7	91,900	135,400	63.2	433.3	93,600	123,400	250
260	60.7	429.9	81,900	144,700	61.3	428.7	83,700	131,600	61.8	427.3	85,400	120,200	260
270	59.3	423.6	74,300	140,300	59.9	422.5	76,100	128,000	60.4	421.1	77,700	117,100	270
280	57.9	417.0	67,300	131,100	58.5	415.9	69,000	124,500	59.0	414.4	70,500	114,200	280
290	56.5	410.1	60,600	122,400	57.1	408.9	62,200	121,300	57.6	407.4	63,600	111,500	290
300	55.1	402.8	54,300	114,400	55.6	401.6	55,900	115,700	56.2	400.1	57,200	108,900	300
310	53.6	395.1	48,400	106,900	54.2	393.8	49,900	108,100	54.7	392.3	51,100	106,400	310
320	52.1	386.9	42,800	99,800	52.7	385.7	44,200	101,000	53.2	384.1	45,400	102,000	320
330	50.6	378.3	37,500	93,200	51.1	377.0	38,800	94,300	51.6	375.4	40,000	95,300	330
340	49.0	369.3	32,500	87,000	49.5	367.9	33,700	88,100	50.0	366.3	34,800	89,000	340
350	47.4	359.7	27,700	81,200	47.9	358.3	28,900	82,200	48.4	356.6	29,900	83,000	350
360	45.7	349.5	23,100	75,700	46.2	348.1	24,200	76,600	46.7	346.4	25,200	77,400	360
370	44.0	338.7	18,800	70,500	44.5	337.3	19,800	71,300	45.0	335.5	20,700	72,000	370
380	42.2	327.3	14,700	65,500	42.7	325.7	15,600	66,300	43.2	323.9	16,400	67,000	380
390	40.4	315.0	10,700	60,700	40.9	313.5	11,600	61,500	41.3	311.5	12,300	62,200	390
400	38.4	302.0		55,900	38.9	300.3		56,700	39.4	298.3		57,300	400
410	36.4	287.9		51,200	36.9	286.2		51,900	37.3	284.1		52,500	410
415	35.4	280.5		48,900	35.9	278.7		49,600	36.3	276.5		50,200	415

MLC650 VPC-MAX S-3

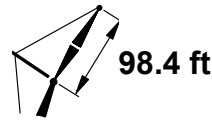
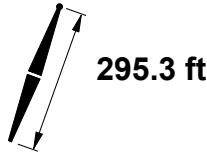
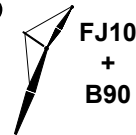
ASME B30.5

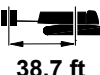
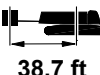


	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	ft	lb	lb	ft
51	85.0	360.9	364,600	364,600									51
52	84.8	360.8	363,500	363,500									52
53	84.6	360.7	362,300	362,300									53
54	84.5	360.5	361,200	361,200									54
56	84.1	360.3	358,800	358,800									56
57	84.0	360.1	357,700	357,700	84.9	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	138,200	138,200	61.8	310.9	125,200	125,200	62.8	309.6	111,800	111,800	190
200	59.0	305.3	131,600	131,600	59.9	304.5	119,700	119,700	60.8	303.2	107,200	107,200	200
210	57.0	298.5	125,500	125,500	57.9	297.6	114,500	114,500	58.8	296.3	102,900	102,900	210
220	55.0	291.1	119,900	119,900	55.9	290.2	109,800	109,800	56.8	288.8	98,900	98,900	220
230	52.9	283.2	114,800	114,800	53.8	282.2	105,400	105,400	54.7	280.8	95,300	95,300	230
240	50.8	274.6	110,000	110,000	51.7	273.7	101,300	101,300	52.6	272.2	91,900	91,900	240
250	48.6	265.4	105,500	105,500	49.4	264.4	97,500	97,500	50.3	262.8	88,700	88,700	250
260	46.3	255.4	101,500	101,500	47.1	254.3	93,900	93,900	48.0	252.8	85,800	85,800	260
270	43.9	244.5	97,600	97,600	44.7	243.5	90,700	90,700	45.6	241.8	83,000	83,000	270
280	41.4	232.7	94,100	94,100	42.2	231.6	87,600	87,600	43.1	229.8	80,500	80,500	280
290	38.8	219.7	89,100	90,800	39.6	218.5	84,800	84,800	40.4	216.7	78,100	78,100	290
300	35.9	205.4	83,000	87,600	36.7	204.1	82,100	82,100	37.5	202.1	75,900	75,900	300
305									36.0	194.2	74,800	74,800	305

MLC650 VPC-MAX S-3

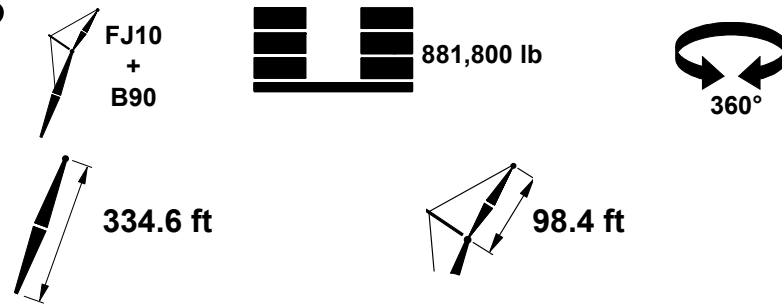
ASME B30.5



	 10°				 15°				 20°				
													
ft	°	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	161,500	161,500	68.6	365.7	144,400	144,400	69.5	364.2	127,300	127,300	170
180	66.1	361.8	153,700	153,700	67.0	360.8	138,000	138,000	67.8	359.4	122,100	122,100	180
190	64.5	356.7	146,500	146,500	65.3	355.7	132,000	132,000	66.2	354.2	117,300	117,300	190
200	62.8	351.1	140,000	140,000	63.6	350.1	126,600	126,600	64.5	348.6	112,800	112,800	200
210	61.1	345.2	133,900	133,900	61.9	344.2	121,500	121,500	62.8	342.7	108,700	108,700	210
220	59.4	338.9	128,300	128,300	60.2	337.8	116,900	116,900	61.0	336.3	104,800	104,800	220
230	57.7	332.1	123,200	123,200	58.4	331.1	112,500	112,500	59.3	329.5	101,200	101,200	230
240	55.9	324.9	118,400	118,400	56.6	323.8	108,500	108,500	57.5	322.2	97,900	97,900	240
250	54.0	317.2	111,600	111,600	54.8	316.1	104,700	104,700	55.6	314.4	94,700	94,700	250
260	52.1	308.9	103,400	109,800	52.9	307.8	101,200	101,200	53.7	306.1	91,800	91,800	260
270	50.2	300.1	95,900	105,900	50.9	298.9	97,000	97,900	51.7	297.1	89,000	89,000	270
280	48.2	290.6	88,800	102,300	48.9	289.4	89,900	94,800	49.7	287.6	86,500	86,500	280
290	46.1	280.4	82,300	99,000	46.8	279.2	83,300	91,800	47.6	277.3	84,000	84,000	290
300	43.9	269.5	76,200	95,800	44.6	268.2	77,200	89,100	45.4	266.2	78,200	81,800	300
310	41.7	257.7	70,600	92,700	42.4	256.3	71,400	86,500	43.1	254.2	72,300	79,600	310
320	39.3	244.8	65,200	90,000	40.0	243.3	66,000	84,200	40.7	241.1	66,800	77,600	320
330	36.8	230.7	60,200	87,300	37.4	229.2	60,900	81,900	38.1	226.8	61,600	75,800	330
335					36.1	221.6	58,500	80,800	36.8	219.1	59,100	74,900	335

MLC650 VPC-MAX S-3

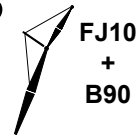
ASME B30.5



	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	176,200	176,200	72.3	412.2	156,200	156,200	73.1	410.7	136,400	136,400	160
170	70.2	409.3	167,900	167,900	70.9	408.2	149,500	149,500	71.7	406.6	131,100	131,100	170
180	68.7	405.0	160,300	160,300	69.4	403.9	143,200	143,200	70.2	402.3	126,100	126,100	180
190	67.3	400.4	153,300	153,300	68.0	399.3	137,500	137,500	68.8	397.7	121,500	121,500	190
200	65.8	395.5	146,900	146,900	66.5	394.4	132,200	132,200	67.3	392.8	117,200	117,200	200
210	64.3	390.3	140,900	140,900	65.0	389.2	127,300	127,300	65.8	387.5	113,200	113,200	210
220	62.8	384.7	135,400	135,400	63.5	383.6	122,600	122,600	64.2	381.9	109,400	109,400	220
230	61.2	378.8	127,600	130,300	61.9	377.6	118,400	118,400	62.7	375.9	105,900	105,900	230
240	59.7	372.5	117,800	125,500	60.4	371.3	114,300	114,300	61.1	369.6	102,600	102,600	240
250	58.1	365.8	108,900	121,100	58.8	364.6	110,400	110,600	59.5	362.9	99,600	99,600	250
260	56.4	358.7	100,600	116,900	57.1	357.5	102,000	107,000	57.8	355.7	96,600	96,600	260
270	54.8	351.2	93,000	113,000	55.4	349.9	94,400	103,700	56.2	348.1	93,900	93,900	270
280	53.1	343.2	86,000	109,300	53.7	341.9	87,200	100,600	54.5	340.0	88,500	91,300	280
290	51.3	334.6	79,400	105,900	52.0	333.3	80,600	97,700	52.7	331.4	81,800	88,800	290
300	49.5	325.6	73,300	102,700	50.2	324.2	74,400	95,000	50.9	322.2	75,600	86,500	300
310	47.7	315.9	67,300	99,600	48.3	314.5	68,500	92,300	49.0	312.5	69,700	84,400	310
320	45.8	305.6	61,600	96,700	46.4	304.1	62,700	89,900	47.1	302.0	63,900	82,300	320
330	43.8	294.6	56,200	94,000	44.4	293.0	57,200	87,500	45.1	290.9	58,300	80,400	330
340	41.7	282.7	51,000	91,400	42.4	281.1	52,000	85,400	43.0	278.8	53,000	78,600	340
350	39.6	269.9	46,200	89,000	40.2	268.3	47,100	83,300	40.8	265.9	48,000	76,800	350
360	37.3	256.1	41,500	86,700	37.9	254.3	42,300	81,300	38.5	251.8	43,200	75,300	360
365	36.1	248.7	39,300	85,300	36.7	246.9	40,100	80,400	37.3	244.3	40,900	74,500	365
370					35.5	239.1	37,800	79,400	36.1	236.4	38,600	73,700	370

MLC650 VPC-MAX S-3

ASME B30.5



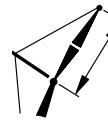
881,800 lb



360°



374.0 ft

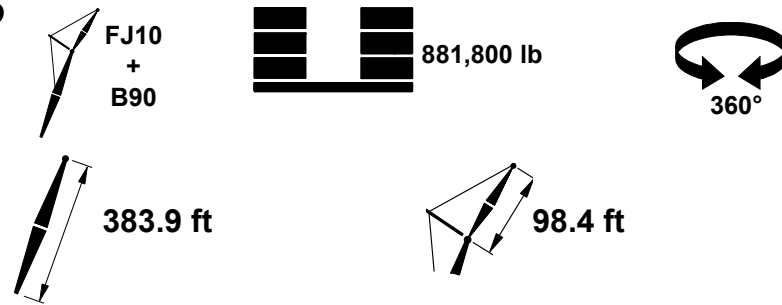


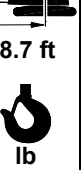
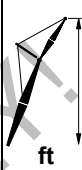
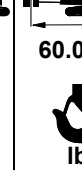
98.4 ft

	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	190,400	190,400	75.2	457.4	167,200	167,200	76.0	455.8	144,800	144,800	150
160	73.2	455.1	181,600	181,600	73.9	454.0	160,200	160,200	74.7	452.4	139,300	139,300	160
170	71.9	451.5	173,600	173,600	72.6	450.4	153,700	153,700	73.4	448.7	134,200	134,200	170
180	70.6	447.7	166,200	166,200	71.3	446.5	147,800	147,800	72.1	444.8	129,500	129,500	180
190	69.3	443.5	159,300	159,300	70.0	442.4	142,200	142,200	70.7	440.7	125,000	125,000	190
200	68.0	439.1	149,000	153,000	68.7	437.9	137,000	137,000	69.4	436.3	120,900	120,900	200
210	66.6	434.4	137,400	147,200	67.3	433.2	132,200	132,200	68.0	431.5	117,000	117,000	210
220	65.3	429.5	126,600	141,800	65.9	428.2	127,700	127,700	66.7	426.5	113,300	113,300	220
230	63.9	424.2	116,600	136,700	64.6	422.9	118,800	123,500	65.3	421.2	110,000	110,000	230
240	62.5	418.6	107,300	131,900	63.2	417.3	109,400	119,600	63.9	415.6	106,700	106,700	240
250	61.1	412.7	98,600	127,500	61.8	411.4	100,600	115,900	62.5	409.6	102,700	103,700	250
260	59.6	406.4	90,500	123,300	60.3	405.1	92,400	112,300	61.0	403.3	94,400	100,800	260
270	58.2	399.8	82,900	119,400	58.8	398.5	84,700	109,100	59.5	396.6	86,600	98,100	270
280	56.7	392.8	75,800	115,700	57.4	391.5	77,500	105,900	58.0	389.6	79,300	95,500	280
290	55.2	385.4	69,100	112,300	55.8	384.0	70,700	103,000	56.5	382.1	72,400	93,100	290
300	53.6	377.6	62,800	108,900	54.3	376.2	64,300	100,200	55.0	374.2	65,900	90,800	300
310	52.1	369.3	56,900	105,800	52.7	367.9	58,300	97,600	53.4	365.9	59,800	88,600	310
320	50.4	360.6	51,200	102,900	51.1	359.1	52,600	95,100	51.7	357.1	54,000	86,600	320
330	48.8	351.3	45,900	99,100	49.4	349.8	47,200	92,700	50.1	347.7	48,500	84,500	330
340	47.1	341.5	40,800	92,900	47.7	340.0	42,000	90,500	48.3	337.8	43,300	82,700	340
350	45.3	331.1	36,000	87,000	45.9	329.5	37,100	88,000	46.6	327.2	38,300	80,900	350
360	43.5	320.0	31,500	81,500	44.1	318.3	32,500	82,400	44.7	316.0	33,600	79,200	360
370	41.6	308.2	27,100	76,300	42.2	306.4	28,100	77,100	42.8	304.0	29,100	77,700	370
380	39.7	295.5	22,900	71,300	40.2	293.7	23,800	72,100	40.8	291.1	24,700	72,800	380
390	37.6	281.8	19,000	66,600	38.2	279.9	19,800	67,300	38.7	277.2	20,600	68,000	390
400	35.4	267.1	15,100	62,100	36.0	265.1	15,900	62,800	36.5	262.2	16,600	63,400	400
405									35.4	254.2	14,700	61,100	405

MLC650 VPC-MAX S-3

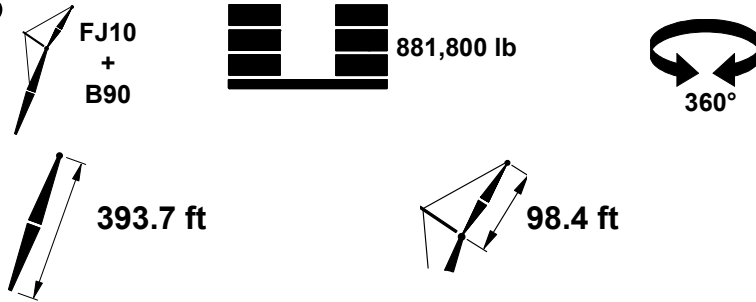
ASME B30.5



	10°				15°				20°				
													
	ft	°	ft	lb	lb	ft	°	ft	lb	lb	ft	°	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	239,200	239,200	78.9	476.7	206,300	206,300	79.6	475.5	179,600	179,600	120
130	76.9	475.1	226,800	226,800	77.7	474.1	196,200	196,200	78.3	472.9	171,700	171,700	130
140	75.7	472.3	215,300	215,300	76.4	471.3	187,100	187,100	77.1	470.1	164,400	164,400	140
150	74.5	469.3	204,700	204,700	75.2	468.3	178,700	178,700	75.8	467.0	157,700	157,700	150
160	73.2	466.0	194,900	194,900	73.9	465.0	171,000	171,000	74.6	463.8	151,500	151,500	160
170	71.9	462.5	185,200	186,100	72.7	461.4	164,000	164,000	73.3	460.2	145,800	145,800	170
180	70.7	458.7	170,600	177,900	71.4	457.7	157,400	157,400	72.0	456.4	140,400	140,400	180
190	69.4	454.7	157,100	170,400	70.1	453.6	151,400	151,400	70.7	452.4	135,500	135,500	190
200	68.1	450.4	144,700	163,400	68.8	449.3	145,700	145,700	69.4	448.0	130,800	130,800	200
210	66.8	445.8	133,300	157,000	67.5	444.7	135,800	140,500	68.1	443.5	126,400	126,400	210
220	65.5	440.9	122,700	151,000	66.2	439.9	125,100	135,500	66.8	438.6	122,400	122,400	220
230	64.1	435.8	112,800	145,400	64.8	434.7	115,100	131,000	65.4	433.4	117,200	118,600	230
240	62.8	430.4	103,700	140,300	63.5	429.3	105,900	126,700	64.1	427.9	107,800	115,000	240
250	61.4	424.6	95,100	135,400	62.1	423.5	97,200	122,700	62.7	422.2	99,100	111,600	250
260	60.0	418.5	87,100	130,800	60.7	417.4	89,100	118,800	61.3	416.0	90,900	108,300	260
270	58.6	412.1	79,700	126,600	59.3	411.0	81,500	115,300	59.9	409.6	83,200	105,300	270
280	57.2	405.3	72,600	122,600	57.8	404.2	74,400	111,900	58.4	402.8	76,000	102,500	280
290	55.7	398.2	66,000	118,800	56.4	397.0	67,700	108,700	57.0	395.6	69,200	99,800	290
300	54.2	390.6	59,800	115,200	54.9	389.4	61,400	105,700	55.5	388.0	62,900	97,200	300
310	52.7	382.7	53,900	110,800	53.3	381.4	55,400	102,800	53.9	379.9	56,800	94,800	310
320	51.1	374.3	48,400	103,800	51.8	373.0	49,800	100,100	52.4	371.5	51,100	92,500	320
330	49.5	365.4	43,100	97,300	50.2	364.1	44,500	97,500	50.7	362.5	45,700	90,200	330
340	47.9	355.9	38,100	91,100	48.5	354.6	39,400	92,200	49.1	353.0	40,500	88,200	340
350	46.2	346.0	33,300	85,300	46.9	344.6	34,600	86,300	47.4	342.9	35,600	86,200	350
360	44.5	335.4	28,800	79,800	45.1	333.9	30,000	80,700	45.7	332.2	31,000	81,600	360
370	42.7	324.1	24,500	74,600	43.3	322.6	25,600	75,500	43.8	320.9	26,500	76,200	370
380	40.8	312.1	20,400	69,700	41.4	310.6	21,400	70,500	42.0	308.7	22,300	71,200	380
390	38.9	299.2	16,500	65,000	39.5	297.6	17,400	65,700	40.0	295.7	18,200	66,400	390
400	36.9	285.4	12,700	60,600	37.5	283.7	13,600	61,200	37.9	281.7	14,300	61,800	400
405	35.8	278.1	10,900	58,400	36.4	276.3	11,700	59,100	36.9	274.3	12,400	59,600	405
410									35.8	266.5	10,600	57,500	410

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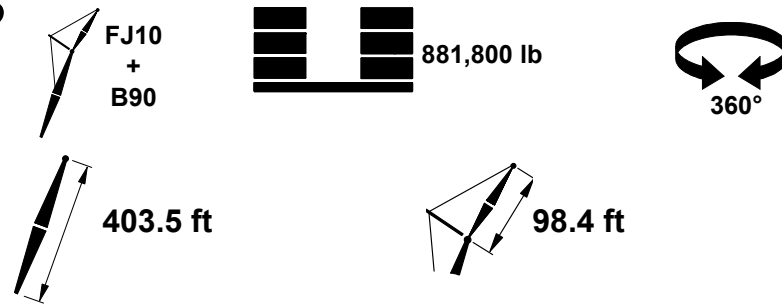
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	10°				15°				20°				
ft	o	ft	lb	lb	o	ft	lb	lb	o	ft	lb	lb	ft
66	84.8	497.7	296,900	296,900									66
67	84.7	497.6	296,400	296,400									67
68	84.6	497.4	295,900	295,900									68
69	84.4	497.3	295,400	295,400									69
70	84.3	497.2	294,900	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	240,100	240,100	79.1	486.9	207,000	207,000	79.8	485.7	180,100	180,100	120
130	77.2	485.3	227,900	227,900	77.9	484.3	197,100	197,100	78.5	483.1	172,200	172,200	130
140	76.0	482.6	216,800	216,800	76.7	481.6	188,000	188,000	77.3	480.4	165,100	165,100	140
150	74.8	479.6	206,200	206,200	75.5	478.6	179,700	179,700	76.1	477.4	158,500	158,500	150
160	73.5	476.4	196,500	196,500	74.2	475.4	172,200	172,200	74.9	474.2	152,300	152,300	160
170	72.3	472.9	181,400	187,700	73.0	472.0	165,100	165,100	73.6	470.7	146,700	146,700	170
180	71.1	469.3	166,800	179,600	71.8	468.3	158,600	158,600	72.4	467.0	141,400	141,400	180
190	69.8	465.3	153,400	172,100	70.5	464.3	152,600	152,600	71.1	463.0	136,500	136,500	190
200	68.5	461.1	141,000	165,200	69.2	460.1	143,800	147,000	69.9	458.8	131,800	131,800	200
210	67.3	456.7	129,600	158,700	67.9	455.6	132,200	141,800	68.6	454.3	127,500	127,500	210
220	66.0	451.9	119,000	152,800	66.7	450.9	121,500	136,900	67.3	449.6	123,400	123,400	220
230	64.7	446.9	109,200	147,200	65.3	445.9	111,600	132,400	66.0	444.6	113,700	119,700	230
240	63.3	441.6	100,000	142,000	64.0	440.6	102,300	128,000	64.6	439.2	104,300	116,100	240
250	62.0	436.0	91,500	137,100	62.7	435.0	93,600	124,000	63.3	433.6	95,600	112,700	250
260	60.7	430.1	83,500	132,600	61.3	429.0	85,500	120,200	61.9	427.6	87,400	109,400	260
270	59.3	423.9	76,000	128,300	59.9	422.8	78,000	116,600	60.5	421.4	79,700	106,400	270
280	57.9	417.3	69,000	124,300	58.5	416.2	70,800	113,200	59.1	414.8	72,500	103,600	280
290	56.5	410.4	62,400	120,400	57.1	409.2	64,100	110,000	57.7	407.8	65,700	100,900	290
300	55.0	403.0	56,100	115,800	55.7	401.9	57,800	107,000	56.3	400.4	59,300	98,300	300
310	53.6	395.3	50,200	108,300	54.2	394.1	51,900	104,200	54.8	392.6	53,300	95,800	310
320	52.0	387.2	44,700	101,300	52.7	386.0	46,200	101,500	53.3	384.4	47,600	93,600	320
330	50.5	378.6	39,400	94,700	51.1	377.4	40,900	95,900	51.7	375.8	42,100	91,300	330
340	48.9	369.5	34,400	88,500	49.6	368.3	35,800	89,700	50.1	366.7	37,000	89,200	340
350	47.3	360.0	29,700	82,700	47.9	358.6	31,000	83,800	48.5	357.0	32,100	84,700	350
360	45.7	349.8	25,100	77,200	46.3	348.5	26,400	78,200	46.8	346.7	27,400	79,100	360
370	43.9	339.0	20,800	72,000	44.6	337.6	22,000	72,900	45.1	335.9	23,000	73,800	370
380	42.2	327.6	16,700	67,100	42.8	326.1	17,800	67,900	43.3	324.3	18,700	68,700	380
390	40.3	315.4	12,800	62,400	40.9	313.9	13,800	63,200	41.4	312.0	14,700	63,900	390
400	38.4	302.3		57,900	39.0	300.7	10,000	58,700	39.5	298.7	10,800	59,400	400
410	36.4	288.3		53,300	37.0	286.6		54,100	37.5	284.5		54,800	410
415	35.4	280.8		51,000	35.9	279.2		51,800	36.4	277.0		52,500	415

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	10°				15°				20°				
ft	ft	ft	lb	lb	ft	ft	lb	lb	ft	ft	lb	lb	ft
67	84.8	507.5	287,400	287,400									67
68	84.7	507.3	287,000	287,000									68
69	84.6	507.2	286,500	286,500									69
70	84.4	507.1	286,100	286,100									70
73	84.1	506.7	284,500	284,500	84.8	505.8	268,500	268,500					73
74	84.0	506.5	284,000	284,000	84.7	505.6	266,900	266,900					74
75	83.9	506.4	283,500	283,500	84.5	505.5	265,300	265,300					75
78	83.5	506.0	282,100	282,100	84.2	505.0	260,600	260,600	84.9	503.9	221,200	221,200	78
80	83.3	505.7	281,200	281,200	84.0	504.8	257,400	257,400	84.6	503.6	218,900	218,900	80
90	82.1	504.1	276,800	276,800	82.8	503.1	242,900	242,900	83.5	501.9	207,800	207,800	90
100	81.0	502.2	268,900	268,900	81.6	501.3	229,800	229,800	82.3	500.1	197,800	197,800	100
110	79.8	500.2	254,200	254,200	80.5	499.3	218,000	218,000	81.1	498.1	188,700	188,700	110
120	78.6	497.9	241,000	241,000	79.3	497.0	207,400	207,400	79.9	495.8	180,300	180,300	120
130	77.4	495.5	228,900	228,900	78.1	494.5	197,600	197,600	78.8	493.3	172,600	172,600	130
140	76.3	492.8	217,700	217,700	76.9	491.8	188,700	188,700	77.6	490.6	165,600	165,600	140
150	75.1	489.9	207,300	207,300	75.7	488.9	180,500	180,500	76.4	487.7	159,100	159,100	150
160	73.9	486.7	194,500	197,700	74.5	485.8	173,000	173,000	75.2	484.6	153,000	153,000	160
170	72.7	483.4	178,800	188,900	73.3	482.4	166,100	166,100	74.0	481.2	147,400	147,400	170
180	71.5	479.8	164,300	180,900	72.1	478.8	159,600	159,600	72.7	477.5	142,100	142,100	180
190	70.2	475.9	151,000	173,500	70.9	474.9	153,700	153,700	71.5	473.7	137,300	137,300	190
200	69.0	471.8	138,700	166,600	69.6	470.8	141,500	148,100	70.3	469.6	132,700	132,700	200
210	67.7	467.5	127,400	160,200	68.4	466.5	130,000	142,900	69.0	465.2	128,400	128,400	210
220	66.5	462.9	116,800	154,200	67.1	461.8	119,400	138,100	67.7	460.5	121,700	124,400	220
230	65.2	458.0	107,000	148,700	65.9	456.9	109,500	133,600	66.5	455.6	111,700	120,600	230
240	63.9	452.8	97,900	143,500	64.6	451.8	100,200	129,300	65.2	450.4	102,300	117,100	240
250	62.6	447.3	89,400	138,600	63.3	446.3	91,600	125,200	63.9	445.0	93,600	113,700	250
260	61.3	441.6	81,500	134,100	61.9	440.5	83,600	121,500	62.5	439.2	85,400	110,500	260
270	60.0	435.5	74,000	129,900	60.6	434.4	76,000	117,900	61.2	433.1	77,800	107,500	270
280	58.6	429.1	67,000	125,800	59.2	428.0	68,900	114,500	59.8	426.6	70,600	104,700	280
290	57.2	422.4	60,400	122,000	57.9	421.3	62,200	111,300	58.4	419.8	63,800	102,000	290
300	55.8	415.3	54,200	114,500	56.4	414.2	55,900	108,300	57.0	412.7	57,400	99,400	300
310	54.4	407.8	48,300	107,000	55.0	406.7	49,900	105,400	55.6	405.2	51,400	96,900	310
320	52.9	399.9	42,700	100,000	53.6	398.8	44,300	101,300	54.1	397.3	45,700	94,600	320
330	51.5	391.6	37,500	93,400	52.1	390.4	39,000	94,700	52.6	388.9	40,300	92,400	330
340	49.9	382.9	32,500	87,200	50.5	381.7	33,900	88,400	51.1	380.1	35,100	89,400	340
350	48.4	373.6	27,700	81,400	49.0	372.4	29,100	82,500	49.5	370.8	30,300	83,500	350
360	46.8	363.9	23,200	75,900	47.4	362.6	24,500	76,900	47.9	360.9	25,600	77,900	360
370	45.1	353.6	18,900	70,700	45.7	352.2	20,100	71,700	46.3	350.5	21,200	72,500	370
380	43.4	342.6	14,800	65,800	44.0	341.2	15,900	66,700	44.5	339.5	16,900	67,500	380
390	41.7	331.0	10,900	60,800	42.3	329.5	11,900	61,900	42.8	327.7	12,900	62,700	390
400	39.9	318.6		56,000	40.4	317.1		56,900	40.9	315.2		57,800	400
410	38.0	305.3		51,300	38.5	303.8		52,200	39.0	301.8		53,000	410
420	36.0	291.1		46,900	36.5	289.4		47,700	37.0	287.3		48,400	420
425					35.5	281.9		45,500	36.0	279.7		46,200	425