

# Liftcrane Jib Capacities

Jib No. 117 on  
 Boom No. B10:290  
 73,000 lb Crane Counterweight  
 23,100 lb Carbody Counterweight  
 360 Degree Rating

## MLC90A-1 SERIES 2



**LIFTING CAPACITIES:** Chart supplements Boom Capacity chart No. 9747-A. Lifting capacities for various boom lengths, jib lengths, and jib operating radii are for freely suspended loads and may be based on percent of static tipping or strength of structural components. Capacities must be reduced by applicable deducts.

Weight of all load blocks, hooks, weight ball, slings, hoist lines, etc., beneath boom and jib point sheaves is considered part of load. Boom and jib are not to be lowered beyond radii where combined weights are greater than rated capacity. Where no capacity is shown, operation is not intended or approved.

**OPERATING CONDITIONS:** Machine to operate on a firm, level, and uniformly supporting surface. Refer to Boom Rigging No. 80121887, Jib Rigging No. 84054323, Wire Rope Specifications chart No. 9756-A, Counterweight Arrangements chart No. 9745-A, and Wind Conditions chart No. 9755-A. Crane operator judgment must be used to allow for dynamic load effects of swinging, hoisting or lowering, travel, wind conditions, as well as adverse operating conditions and physical machine depreciation. Refer to the Operator Manual for operating guidelines.

**MACHINE TRAVEL:** Machine to travel on a firm, level, and uniformly supporting surface. Boom must be within boom angle range shown in capacity chart. Refer to Maximum Allowable Travel Specifications chart No. 9754-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 ( $^{\circ}$ ) 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 21 ft 3 in. crawlers, 35 in. treads, 14 ft 5 in. gantry, 8 part boom hoist reeving, two 32 mm boom pendants, 73,000 lb crane counterweight, and 23,100 lb carbody counterweight.

Refer to Tables 1 and 2 for raising ability with the maximum weight of all load blocks, hooks, weight ball, slings, and hoist lines beneath boom and jib point sheaves. For block weights shown with # or (a), load blocks, hooks, weight ball, and slings must remain on ground until combined weights are within rated capacity of chart. For block weights shown with (a), optional 3rd sheave in boom top wire rope guide and 2nd anti-two-block on boom top must be removed, and boom must be rigged with a maximum of 2 load hoist lead lines. Raising is not permitted in shaded areas of table.

**Caution:** Combined weight beneath boom and jib point sheaves must not exceed block weight shown. Total weight beneath jib point must not exceed 700 lb.

**Table 1**

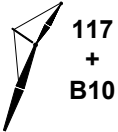



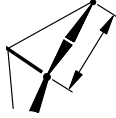

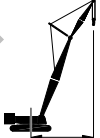



Over End or Side of Crawlers				
Boom Length (ft)	Jib No. 117			
	30.0 ft	40.0 ft	50.0 ft	60.0 ft
	Block Weight (lb)			
62.3 - 141.1	3,800	3,800	3,800	3,800
150.9	3,800	2,650	2,650	2,650
160.8	2,650	700	700	700
170.6	700	700	700	#
180.4	700	700	a	a
190.3	a	a		

**Table 2**

Over End of Blocked Crawlers				
Boom Length (ft)	Jib No. 117			
	30.0 ft	40.0 ft	50.0 ft	60.0 ft
	Block Weight (lb)			
62.3 - 141.1	3,800	3,800	3,800	3,800
150.9	3,800	2,650	2,650	2,650
160.8	2,650	700	700	700
170.6	700	700	700	#
180.4	700	700	a	a
190.3	a	a	a	a

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

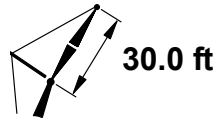
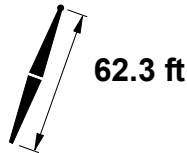
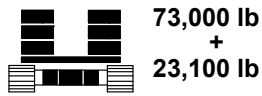
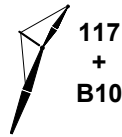
## Explanation of Symbols

	Jib No. 117 + Boom No. B10:290
	Crane Counterweight + Carbody Counterweight
	360 Degree Rating
	Boom Length
	Jib Length
	Jib Offset Angle
	Operating Radius (see page 1)
	Boom Angle (see page 1)
	Jib Point Elevation (see page 1)
	Lifting Capacities (see page 1)

REFERENCE ONLY!

# MLC90A-1 S-2

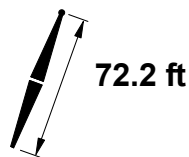
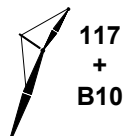
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	10°			30°			
	ft	o	ft	lb	ft	lb	
26	80.7	97.6	27,600				26
28	79.4	97.2	27,600				28
30	78.2	96.6	27,600				30
32	76.9	96.0	27,600				32
34	75.6	95.4	27,600	80.8	92.9	20,900	34
36	74.3	94.7	27,600	79.4	92.2	20,400	36
38	73.0	94.0	27,600	78.1	91.5	19,900	38
40	71.7	93.2	27,600	76.7	90.6	19,400	40
42	70.3	92.3	27,600	75.3	89.8	19,000	42
44	69.0	91.4	27,600	74.0	88.8	18,600	44
46	67.6	90.4	27,600	72.5	87.8	18,200	46
48	66.2	89.4	27,600	71.1	86.8	17,800	48
50	64.8	88.3	27,600	69.7	85.7	17,400	50
55	61.2	85.3	27,600	66.0	82.6	16,600	55
60	57.5	81.9	27,200	62.1	79.0	15,900	60
65	53.6	77.9	25,500	58.0	74.9	15,200	65
70	49.4	73.3	23,900	53.6	70.1	14,700	70
75	44.9	68.0	22,000	48.9	64.4	14,200	75
80	40.0	61.7	20,200	43.6	57.7	13,800	80
85	34.4	54.1	18,500	37.4	49.3	13,500	85
90	27.6	44.3	17,100				90

# MLC90A-1 S-2

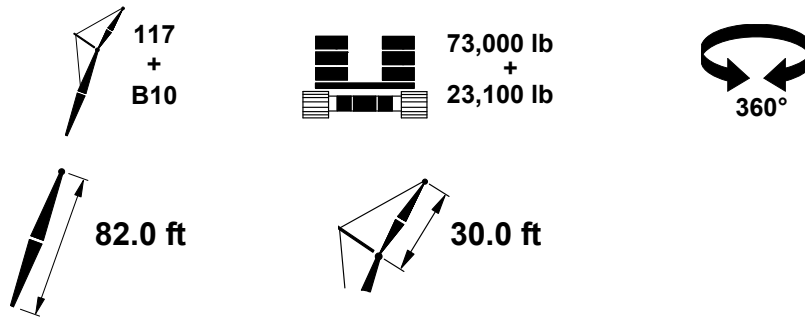
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ft	10°			30°			ft
	ft	ft	lb	ft	ft	lb	
28	80.5	107.3	27,600				28
30	79.3	106.8	27,600				30
32	78.2	106.2	27,600				32
34	77.0	105.7	27,600				34
36	75.9	105.1	27,600	80.5	102.5	20,800	36
38	74.7	104.4	27,600	79.3	101.8	20,300	38
40	73.5	103.7	27,600	78.1	101.1	19,900	40
42	72.3	102.9	27,600	76.9	100.3	19,500	42
44	71.1	102.1	27,600	75.6	99.5	19,100	44
46	69.9	101.3	27,600	74.4	98.6	18,700	46
48	68.7	100.4	27,600	73.1	97.7	18,300	48
50	67.5	99.4	27,600	71.9	96.7	18,000	50
55	64.3	96.8	27,600	68.6	94.0	17,200	55
60	61.1	93.8	27,600	65.3	90.9	16,400	60
65	57.7	90.4	26,400	61.8	87.4	15,800	65
70	54.2	86.5	23,900	58.2	83.4	15,200	70
75	50.5	82.2	21,800	54.3	78.8	14,700	75
80	46.6	77.2	20,000	50.2	73.5	14,300	80
85	42.3	71.4	18,400	45.7	67.4	13,900	85
90	37.6	64.6	16,900	40.6	60.1	13,600	90
95	32.3	56.4	15,700	34.7	51.1	13,400	95
100	25.8	45.8	14,500				100

# MLC90A-1 S-2

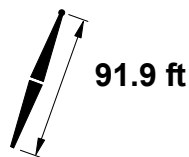
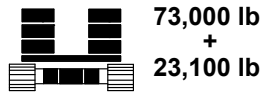
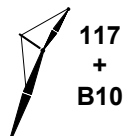
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	10°			30°			
	ft	°	ft	lb	ft	lb	
30	80.3	116.9	27,600				30
32	79.2	116.4	27,600				32
34	78.2	115.9	27,600				34
36	77.1	115.3	27,600				36
38	76.1	114.7	27,600	80.3	112.1	20,700	38
40	75.0	114.1	27,600	79.2	111.4	20,300	40
42	73.9	113.4	27,600	78.1	110.7	19,900	42
44	72.9	112.7	27,600	77.0	110.0	19,500	44
46	71.8	111.9	27,600	75.9	109.2	19,100	46
48	70.7	111.1	27,600	74.8	108.4	18,800	48
50	69.6	110.3	27,600	73.6	107.5	18,400	50
55	66.8	107.9	27,600	70.8	105.1	17,600	55
60	63.9	105.3	27,600	67.8	102.4	16,900	60
65	60.9	102.3	26,100	64.7	99.3	16,300	65
70	57.9	98.9	23,600	61.6	95.8	15,800	70
75	54.7	95.1	21,500	58.3	91.9	15,200	75
80	51.4	90.9	19,700	54.8	87.5	14,800	80
85	47.9	86.1	18,100	51.2	82.5	14,400	85
90	44.1	80.7	16,700	47.2	76.8	14,000	90
95	40.1	74.5	15,400	42.9	70.2	13,800	95
100	35.6	67.2	14,300	38.1	62.4	13,500	100
105	30.5	58.5	13,300	32.4	52.7	13,300	105
110	24.2	47.3	12,400				110

# MLC90A-1 S-2

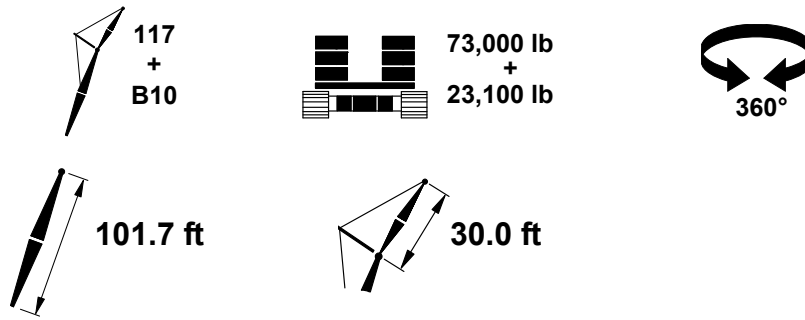
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	10°			30°				
	ft	°	ft	lb	ft	lb		ft
32	80.1		126.5	27,600			32	
34	79.2		126.0	27,600			34	
36	78.2		125.5	27,600			36	
38	77.2		125.0	27,600			38	
40	76.3		124.4	27,600	80.1	121.7	20,600	40
42	75.3		123.8	27,600	79.1	121.1	20,200	42
44	74.3		123.1	27,600	78.1	120.4	19,900	44
46	73.3		122.4	27,600	77.1	119.7	19,500	46
48	72.3		121.7	27,600	76.1	118.9	19,200	48
50	71.3		120.9	27,600	75.1	118.1	18,800	50
55	68.8		118.8	27,600	72.5	115.9	18,100	55
60	66.2		116.4	27,600	69.8	113.5	17,400	60
65	63.5		113.7	25,900	67.1	110.7	16,800	65
70	60.8		110.7	23,500	64.3	107.7	16,200	70
75	58.0		107.4	21,400	61.4	104.2	15,700	75
80	55.1		103.7	19,500	58.4	100.4	15,300	80
85	52.1		99.6	17,900	55.3	96.2	14,800	85
90	48.9		95.0	16,500	52.0	91.4	14,500	90
95	45.6		89.9	15,300	48.5	86.0	14,100	95
100	42.0		84.1	14,200	44.7	79.9	13,900	100
105	38.1		77.4	13,200	40.6	72.9	13,300	105
110	33.8		69.7	12,300	35.9	64.5	12,300	110
115	28.9		60.4	11,400	30.5	54.2	11,500	115
120	22.9		48.6	10,600				120

# MLC90A-1 S-2

ASME B30.5

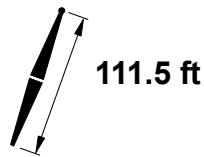
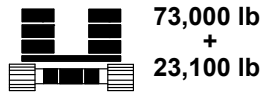
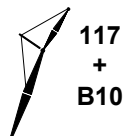


	10°			30°			
	ft	°	ft	lb	ft	lb	
32	80.9	136.6	27,600				32
34	80.0	136.1	27,600				34
36	79.1	135.7	27,600				36
38	78.2	135.2	27,600				38
40	77.3	134.6	27,600				40
42	76.4	134.1	27,600	80.9	131.9	20,900	42
44	75.5	133.4	27,600	80.0	131.3	20,500	44
46	74.6	132.8	27,600	79.1	130.7	20,200	46
48	73.7	132.1	27,600	78.1	130.0	19,800	48
50	72.8	131.4	27,600	77.2	129.3	19,500	50
55	70.4	129.5	27,600	76.3	128.6	19,200	55
60	68.1	127.3	27,600	73.9	126.6	18,500	60
65	65.7	124.9	25,700	71.5	124.4	17,800	65
70	63.2	122.2	23,200	69.0	121.9	17,200	70
75	60.7	119.2	21,100	66.5	119.1	16,600	75
80	58.1	115.9	19,300	63.9	116.1	16,100	80
85	55.4	112.3	17,700	61.2	112.7	15,700	85
90	52.7	108.3	16,300	58.5	108.9	15,300	90
95	49.8	103.8	15,000	55.6	104.8	14,900	95
100	46.8	98.9	13,900	52.6	100.2	14,500	100
105	43.5	93.4	12,900	49.5	95.1	14,100	105
110	40.1	87.3	12,000	46.1	89.3	13,100	110
115	36.4	80.2	11,200	42.5	82.8	12,100	115
120	32.2	72.1	10,400	38.5	75.3	11,300	120
125	27.5	62.3	9,700	34.0	66.5	10,500	125
130	21.7	49.8	9,100				130



# MLC90A-1 S-2

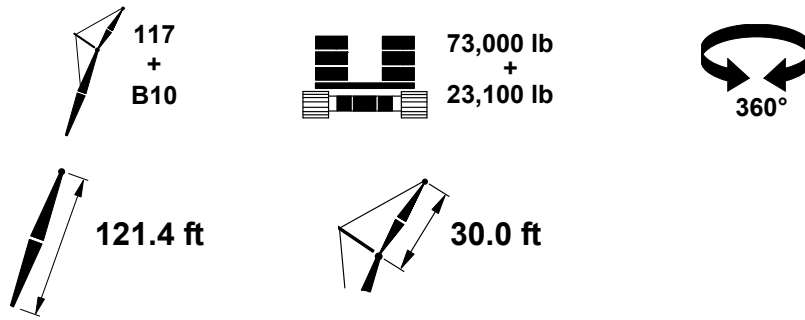
ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
34	80.7	146.2	27,600				34
36	79.9	145.8	27,600				36
38	79.0	145.3	27,600				38
40	78.2	144.8	27,600				40
42	77.4	144.3	27,600				42
44	76.5	143.7	27,600	80.7	141.5	20,800	44
46	75.7	143.1	27,600	79.9	140.9	20,500	46
48	74.9	142.5	27,600	79.0	140.3	20,100	48
50	74.0	141.8	27,600	78.2	139.7	19,800	50
55	71.9	140.1	27,600	77.3	139.0	19,500	55
60	69.7	138.1	27,600	75.1	137.2	18,800	60
65	67.5	135.8	25,500	72.9	135.1	18,200	65
70	65.3	133.4	23,000	70.6	132.8	17,600	70
75	63.0	130.6	20,900	68.3	130.3	17,000	75
80	60.6	127.7	19,000	66.0	127.5	16,500	80
85	58.2	124.4	17,500	63.6	124.5	16,100	85
90	55.7	120.8	16,000	61.1	121.1	15,600	90
95	53.2	116.9	14,800	58.6	117.4	15,300	95
100	50.5	112.6	13,700	55.9	113.4	14,900	100
105	47.7	107.8	12,700	53.2	108.9	13,900	105
110	44.8	102.6	11,800	50.3	104.0	12,900	110
115	41.7	96.8	11,000	47.3	98.6	12,000	115
120	38.4	90.3	10,200	44.0	92.5	11,100	120
125	34.8	82.9	9,500	40.5	85.6	10,300	125
130	30.8	74.3	8,900	36.7	77.7	9,600	130
135	26.2	64.0	8,300	32.4	68.4	8,900	135
140	20.6	50.9	7,700				140

# MLC90A-1 S-2

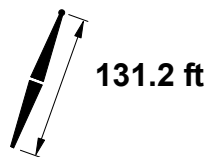
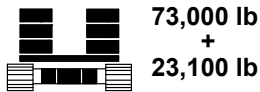
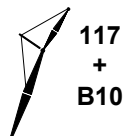
ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
36	80.5	155.8	27,600				36
38	79.8	155.4	27,600				38
40	79.0	154.9	27,600				40
42	78.2	154.4	27,600				42
44	77.4	153.9	27,600				44
46	76.7	153.4	27,600	80.6	151.1	20,700	46
48	75.9	152.8	27,600	79.8	150.5	20,400	48
50	75.1	152.2	27,600	79.0	149.9	20,100	50
55	73.1	150.5	27,600	78.2	149.3	19,800	55
60	71.1	148.7	27,600	76.1	147.6	19,100	60
65	69.1	146.6	25,200	74.1	145.7	18,500	65
70	67.0	144.3	22,700	72.0	143.6	17,900	70
75	64.9	141.8	20,600	69.9	141.3	17,400	75
80	62.7	139.1	18,800	67.7	138.8	16,900	80
85	60.5	136.1	17,200	65.5	136.0	16,400	85
90	58.3	132.9	15,800	63.3	132.9	16,000	90
95	56.0	129.4	14,500	61.0	129.6	15,600	95
100	53.6	125.5	13,400	58.6	125.9	14,900	100
105	51.2	121.3	12,400	56.2	122.0	13,700	105
110	48.6	116.7	11,500	53.6	117.6	12,700	110
115	45.9	111.7	10,700	51.0	112.9	11,700	115
120	43.1	106.1	9,900	48.2	107.7	10,900	120
125	40.1	100.0	9,300	45.3	101.9	10,100	125
130	36.9	93.2	8,600	42.2	95.5	9,400	130
135	33.5	85.4	8,000	38.8	88.2	8,700	135
140	29.6	76.4	7,500	35.1	79.9	8,100	140
145	25.1	65.6	7,000	30.9	70.2	7,500	145

# MLC90A-1 S-2

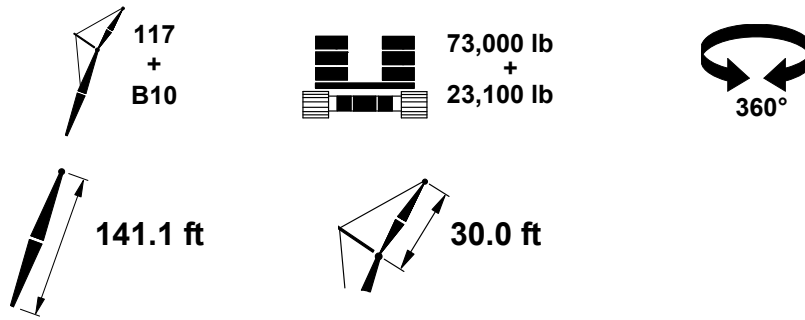
ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
38	80.4	165.5	27,600				38
40	79.7	165.0	27,600				40
42	78.9	164.6	27,600				42
44	78.2	164.1	27,600				44
46	77.5	163.6	27,600	80.4	160.7	20,700	46
48	76.8	163.0	27,600	79.7	160.1	20,400	48
50	76.0	162.5	27,600	78.9	159.6	20,100	50
55	74.2	160.9	27,600	77.0	158.0	19,400	55
60	72.3	159.2	27,600	75.1	156.2	18,800	60
65	70.4	157.3	25,000	73.2	154.3	18,200	65
70	68.5	155.2	22,500	71.2	152.1	17,700	70
75	66.5	152.8	20,400	69.2	149.8	17,200	75
80	64.6	150.3	18,600	67.2	147.2	16,800	80
85	62.5	147.6	17,000	65.2	144.4	16,400	85
90	60.5	144.6	15,600	63.1	141.3	16,000	90
95	58.4	141.4	14,300	60.9	138.0	14,700	95
100	56.2	137.9	13,200	58.7	134.4	13,500	100
105	54.0	134.1	12,200	56.4	130.5	12,500	105
110	51.7	130.0	11,300	54.0	126.3	11,600	110
115	49.3	125.5	10,500	51.6	121.7	10,700	115
120	46.9	120.6	9,800	49.0	116.7	9,900	120
125	44.3	115.3	9,100	46.4	111.1	9,200	125
130	41.6	109.5	8,400	43.5	105.1	8,600	130
135	38.7	103.1	7,900	40.5	98.3	8,000	135
140	35.6	95.9	7,300	37.2	90.7	7,400	140
145	32.2	87.8	6,800	33.6	82.1	6,900	145
150	28.5	78.4	6,300				150
155	24.1	67.2	5,900				155

# MLC90A-1 S-2

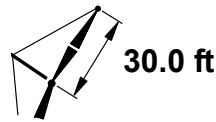
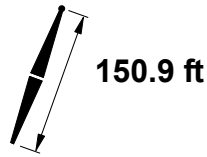
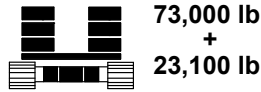
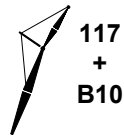
ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
38	81.0	175.5	27,600				38
40	80.3	175.1	27,600				40
42	79.6	174.7	27,600				42
44	78.9	174.2	27,600				44
46	78.2	173.7	27,600				46
48	77.5	173.2	27,600	81.0	170.8	20,900	48
50	76.8	172.7	27,600	80.3	170.3	20,600	50
55	75.1	171.2	27,600	79.6	169.8	20,300	55
60	73.4	169.6	27,600	77.8	168.3	19,700	60
65	71.6	167.8	24,700	76.0	166.6	19,100	65
70	69.8	165.8	22,300	74.2	164.8	18,500	70
75	68.0	163.7	20,100	72.4	162.8	18,000	75
80	66.1	161.4	18,300	70.6	160.6	17,500	80
85	64.3	158.8	16,700	68.7	158.2	17,100	85
90	62.4	156.1	15,300	66.8	155.6	16,700	90
95	60.4	153.1	14,100	64.8	152.8	15,800	95
100	58.4	149.9	13,000	62.8	149.8	14,500	100
105	56.4	146.4	12,000	60.8	146.5	13,300	105
110	54.3	142.7	11,100	58.7	142.9	12,300	110
115	52.2	138.6	10,300	56.6	139.1	11,300	115
120	50.0	134.3	9,500	54.4	134.9	10,500	120
125	47.7	129.6	8,800	52.1	130.5	9,700	125
130	45.3	124.4	8,200	49.7	125.6	9,000	130
135	42.8	118.9	7,600	47.3	120.3	8,300	135
140	40.2	112.8	7,100	44.7	114.5	7,700	140
145	37.4	106.0	6,500	41.9	108.1	7,200	145
150	34.4	98.5	6,100	39.0	101.1	6,600	150
155	31.1	90.1	5,600	35.8	93.1	6,100	155
160	27.4	80.3	5,200	32.3	84.1	5,700	160
165	23.2	68.6	4,800				165

# MLC90A-1 S-2

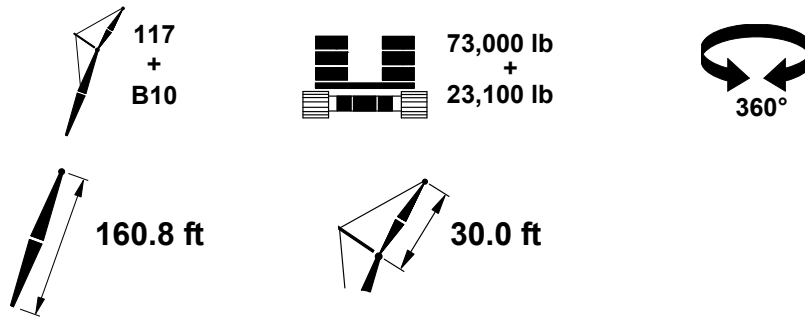
ASME B30.5



ft	10°			30°			ft
	ft	lb	ft	ft	lb	ft	
40	80.8	185.1	27,600				40
42	80.2	184.7	27,600				42
44	79.5	184.3	27,600				44
46	78.9	183.8	27,600				46
48	78.2	183.4	27,600				48
50	77.6	182.8	27,600	80.8	180.4	20,800	50
55	75.9	181.5	27,600	78.5	178.5	19,900	55
60	74.3	180.0	27,400	76.8	177.0	19,300	60
65	72.6	178.3	24,500	75.1	175.3	18,800	65
70	70.9	176.4	22,000	73.4	173.4	18,300	70
75	69.2	174.4	19,900	71.7	171.3	17,800	75
80	67.5	172.2	18,100	69.9	169.1	17,400	80
85	65.8	169.9	16,500	68.2	166.7	17,000	85
90	64.0	167.3	15,100	66.4	164.1	15,500	90
95	62.2	164.5	13,800	64.5	161.2	14,300	95
100	60.4	161.6	12,700	62.6	158.2	13,100	100
105	58.5	158.4	11,700	60.7	154.9	12,100	105
110	56.6	154.9	10,800	58.8	151.4	11,100	110
115	54.6	151.2	10,000	56.8	147.6	10,300	115
120	52.6	147.3	9,300	54.7	143.6	9,500	120
125	50.5	143.0	8,600	52.6	139.2	8,800	125
130	48.4	138.4	7,900	50.4	134.4	8,100	130
135	46.2	133.4	7,400	48.1	129.3	7,500	135
140	43.9	128.1	6,800	45.7	123.8	7,000	140
145	41.4	122.2	6,300	43.2	117.7	6,400	145
150	38.9	115.9	5,900	40.5	111.1	6,000	150
155	36.2	108.9	5,400	37.6	103.7	5,500	155
160	33.2	101.1	5,000	34.5	95.5	5,100	160
165	30.1	92.3	4,600	31.1	86.0	4,600	165
170	26.5	82.1	4,200				170
175	22.3	70.0	3,700				175

# MLC90A-1 S-2

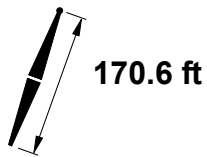
ASME B30.5



	10°			30°			
	ft	°	ft	lb	°	ft	
42	80.7	194.8	27,600				42
44	80.1	194.4	27,600				44
46	79.5	193.9	27,600				46
48	78.8	193.5	27,600				48
50	78.2	193.0	27,600	80.7	190.0	20,800	50
55	76.7	191.7	27,600	79.1	188.7	20,200	55
60	75.1	190.3	27,200	77.6	187.3	19,600	60
65	73.6	188.7	24,200	76.0	185.6	19,100	65
70	72.0	186.9	21,700	74.3	183.9	18,600	70
75	70.4	185.0	19,600	72.7	182.0	18,100	75
80	68.8	183.0	17,800	71.1	179.9	17,700	80
85	67.1	180.8	16,200	69.4	177.6	16,800	85
90	65.5	178.4	14,800	67.7	175.1	15,300	90
95	63.8	175.8	13,600	66.0	172.5	14,000	95
100	62.1	173.0	12,500	64.3	169.7	12,900	100
105	60.3	170.0	11,500	62.5	166.6	11,800	105
110	58.5	166.8	10,600	60.7	163.4	10,900	110
115	56.7	163.4	9,700	58.8	159.9	10,100	115
120	54.9	159.8	9,000	56.9	156.2	9,300	120
125	53.0	155.9	8,300	55.0	152.2	8,600	125
130	51.0	151.7	7,700	53.0	147.9	7,900	130
135	49.0	147.2	7,100	50.9	143.3	7,300	135
140	46.9	142.4	6,600	48.8	138.3	6,700	140
145	44.8	137.2	6,100	46.5	132.9	6,200	145
150	42.5	131.6	5,600	44.2	127.1	5,700	150
155	40.2	125.5	5,100	41.8	120.8	5,300	155
160	37.7	118.9	4,700	39.2	113.9	4,800	160
165	35.1	111.6	4,400	36.4	106.2	4,400	165
170	32.2	103.5	4,000	33.4	97.7	4,000	170
175	29.1	94.4	3,600				175
180	25.6	83.8	3,100				180
185	21.6	71.2	2,500				185

# MLC90A-1 S-2

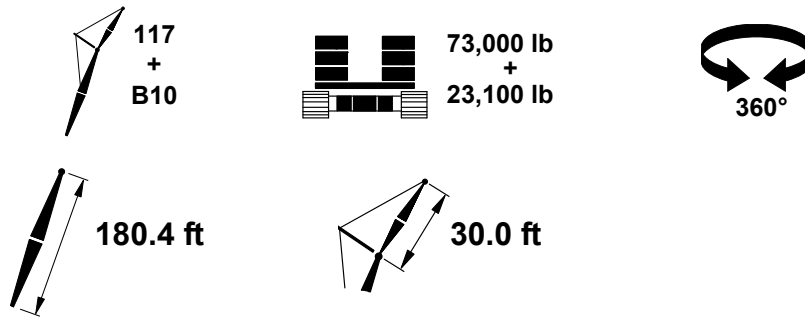
ASME B30.5



ft	10°			30°			ft
	ft	lb	ft	ft	lb	ft	
44	80.6	204.4	27,600				44
46	80.0	204.0	27,600				46
48	79.4	203.6	27,600				48
50	78.8	203.1	27,600				50
55	77.4	201.9	27,600	79.7	198.9	20,400	55
60	75.9	200.5	26,900	78.2	197.5	19,800	60
65	74.4	199.0	24,000	76.7	196.0	19,300	65
70	72.9	197.4	21,500	75.2	194.3	18,800	70
75	71.4	195.6	19,400	73.6	192.5	18,300	75
80	69.9	193.6	17,600	72.1	190.5	17,900	80
85	68.3	191.5	16,000	70.5	188.4	16,600	85
90	66.7	189.3	14,600	68.9	186.1	15,100	90
95	65.2	186.9	13,400	67.3	183.6	13,800	95
100	63.6	184.3	12,200	65.7	181.0	12,700	100
105	61.9	181.5	11,300	64.0	178.1	11,600	105
110	60.3	178.5	10,400	62.3	175.1	10,700	110
115	58.6	175.3	9,500	60.6	171.9	9,900	115
120	56.9	171.9	8,800	58.8	168.4	9,100	120
125	55.1	168.3	8,100	57.1	164.7	8,400	125
130	53.3	164.5	7,500	55.2	160.8	7,700	130
135	51.5	160.4	6,900	53.3	156.5	7,100	135
140	49.6	156.0	6,400	51.4	152.0	6,600	140
145	47.6	151.3	5,900	49.4	147.2	6,000	145
150	45.6	146.2	5,400	47.3	142.0	5,500	150
155	43.5	140.8	5,000	45.1	136.4	5,100	155
160	41.3	135.0	4,500	42.9	130.4	4,700	160
165	39.0	128.7	4,200	40.5	123.8	4,300	165
170	36.6	121.8	3,800	37.9	116.6	3,900	170
175	34.0	114.2	3,500	35.2	108.7	3,500	175
180	31.3	105.8	3,000	32.3	99.8	3,100	180
185	28.2	96.4	2,500				185
190	24.8	85.5	2,100				190

# MLC90A-1 S-2

ASME B30.5

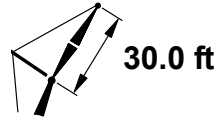
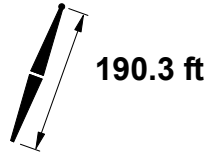
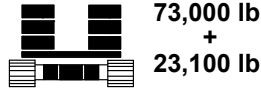
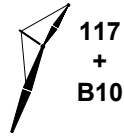


	10°			30°			
	ft	°	ft	lb	ft	lb	
46	80.5	214.0	27,600				46
48	79.9	213.6	27,600				48
50	79.3	213.2	27,600				50
55	78.0	212.0	27,600	80.2	209.0	20,500	55
60	76.6	210.7	26,700	78.8	207.7	20,000	60
65	75.1	209.3	23,700	77.3	206.3	19,500	65
70	73.7	207.7	21,300	75.9	204.7	19,000	70
75	72.3	206.0	19,200	74.4	202.9	18,600	75
80	70.8	204.2	17,300	73.0	201.1	18,000	80
85	69.4	202.2	15,700	71.5	199.1	16,300	85
90	67.9	200.1	14,300	70.0	196.9	14,900	90
95	66.4	197.8	13,100	68.5	194.6	13,600	95
100	64.9	195.4	12,000	66.9	192.1	12,500	100
105	63.4	192.7	11,000	65.4	189.4	11,400	105
110	61.8	189.9	10,100	63.8	186.6	10,500	110
115	60.2	187.0	9,300	62.2	183.5	9,600	115
120	58.6	183.8	8,500	60.5	180.3	8,900	120
125	57.0	180.4	7,800	58.9	176.9	8,100	125
130	55.3	176.9	7,200	57.2	173.2	7,500	130
135	53.6	173.1	6,600	55.4	169.3	6,900	135
140	51.9	169.0	6,100	53.6	165.2	6,300	140
145	50.1	164.7	5,600	51.8	160.8	5,800	145
150	48.2	160.1	5,100	49.9	156.1	5,300	150
155	46.3	155.2	4,700	48.0	151.0	4,900	155
160	44.4	150.0	4,300	45.9	145.6	4,400	160
165	42.3	144.3	3,900	43.8	139.8	4,000	165
170	40.2	138.3	3,500	41.6	133.5	3,600	170
175	38.0	131.7	3,200	39.3	126.7	3,300	175
180	35.6	124.6	2,800	36.8	119.2	2,900	180
185	33.1	116.8	2,300	34.2	111.0	2,400	185
190				31.3	101.8	2,000	190



# MLC90A-1 S-2

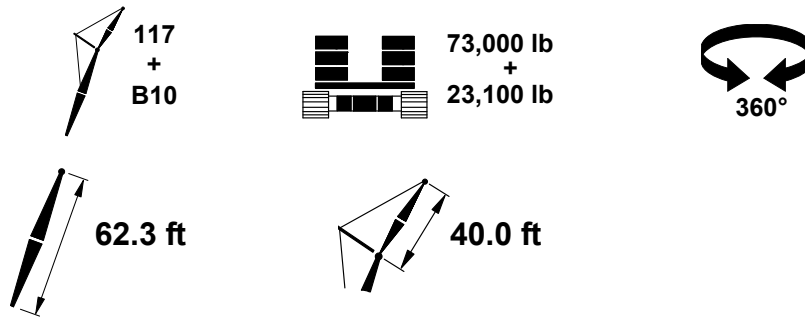
ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
46	80.9		224.0	27,600			46
48	80.4		223.7	27,600			48
50	79.8		223.2	27,600			50
55	78.5		222.1	27,000	80.6	219.1	55
60	77.2		220.9	26,200	79.3	217.9	60
65	75.8		219.5	23,400	77.9	216.5	65
70	74.5		218.1	21,000	76.6	215.0	70
75	73.1		216.5	18,900	75.2	213.3	75
80	71.7		214.7	17,000	73.8	211.6	80
85	70.4		212.8	15,500	72.4	209.7	85
90	69.0		210.8	14,100	71.0	207.6	90
95	67.5		208.6	12,800	69.5	205.4	95
100	66.1		206.3	11,700	68.1	203.1	100
105	64.7		203.8	10,700	66.6	200.5	105
110	63.2		201.2	9,800	65.1	197.9	110
115	61.7		198.4	9,000	63.6	195.0	115
120	60.2		195.4	8,200	62.1	192.0	120
125	58.7		192.3	7,600	60.5	188.8	125
130	57.1		189.0	6,900	58.9	185.4	130
135	55.5		185.4	6,300	57.3	181.8	135
140	53.9		181.6	5,800	55.6	177.9	140
145	52.2		177.6	5,300	53.9	173.8	145
150	50.5		173.4	4,800	52.2	169.5	150
155	48.8		168.9	4,400	50.4	164.9	155
160	47.0		164.1	4,000	48.6	160.0	160
165	45.2		159.0	3,600	46.7	154.7	165
170	43.2		153.6	3,300	44.7	149.1	170
175	41.2		147.7	2,900	42.6	143.1	175
180	39.2		141.4	2,500	40.5	136.6	180
185	37.0		134.7	2,100	38.2	129.5	185

# MLC90A-1 S-2

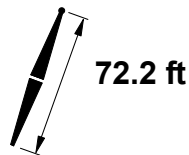
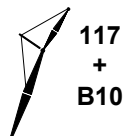
ASME B30.5



	10°			30°				
	ft	°	ft	lb	ft	lb		ft
30	80.9		106.8	26,500			30	
32	79.7		106.3	26,200			32	
34	78.6		105.7	25,900			34	
36	77.4		105.1	25,700			36	
38	76.2		104.4	25,400			38	
40	75.0		103.7	25,200			40	
42	73.8		102.9	25,000	80.1	99.8	16,400	42
44	72.6		102.1	24,700	78.8	99.0	16,100	44
46	71.4		101.3	24,600	77.6	98.1	15,700	46
48	70.2		100.4	24,300	76.3	97.1	15,300	48
50	69.0		99.4	24,100	75.0	96.2	15,000	50
55	65.8		96.8	23,700	71.8	93.4	14,300	55
60	62.6		93.8	23,300	68.4	90.3	13,600	60
65	59.2		90.4	22,500	64.9	86.8	13,000	65
70	55.7		86.5	21,100	61.2	82.7	12,500	70
75	52.0		82.2	19,900	57.3	78.1	12,000	75
80	48.1		77.2	18,900	53.1	72.8	11,600	80
85	43.8		71.4	17,900	48.6	66.6	11,300	85
90	39.1		64.6	17,100	43.4	59.2	11,000	90
95	33.8		56.4	16,200	37.4	49.9	10,800	95
100	27.3		45.9	15,000			100	

# MLC90A-1 S-2

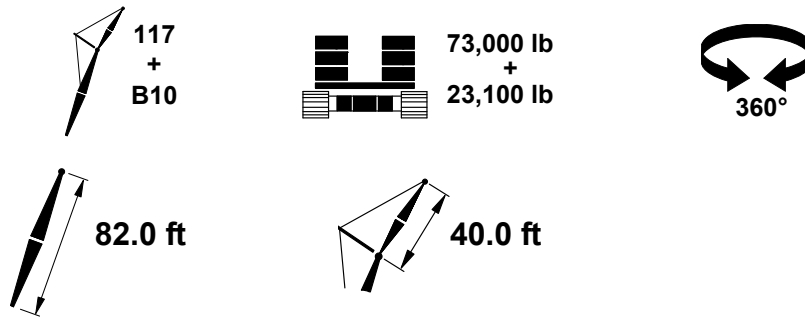
ASME B30.5



ft	10°			30°			ft
	ft	ft	lb	ft	ft	lb	
32	80.6	116.4	26,300				32
34	79.6	115.9	26,100				34
36	78.5	115.3	25,900				36
38	77.5	114.7	25,600				38
40	76.4	114.1	25,400				40
42	75.3	113.4	25,300	81.0	110.1	16,700	42
44	74.2	112.7	25,000	79.9	109.4	16,400	44
46	73.2	111.9	24,800	78.8	108.6	16,000	46
48	72.1	111.1	24,700	77.6	107.7	15,700	48
50	71.0	110.2	24,500	76.5	106.9	15,400	50
55	68.2	107.9	24,100	73.6	104.4	14,700	55
60	65.3	105.2	23,600	70.6	101.7	14,000	60
65	62.3	102.2	23,300	67.5	98.6	13,400	65
70	59.3	98.9	22,500	64.4	95.1	12,900	70
75	56.1	95.1	21,200	61.0	91.1	12,500	75
80	52.8	90.9	20,100	57.5	86.7	12,000	80
85	49.2	86.1	18,700	53.8	81.7	11,700	85
90	45.5	80.7	17,200	49.8	75.9	11,400	90
95	41.4	74.5	16,000	45.5	69.2	11,100	95
100	37.0	67.2	14,900	40.6	61.2	10,900	100
105	31.8	58.4	13,800	34.8	51.3	10,700	105
110	25.6	47.2	12,900				110

# MLC90A-1 S-2

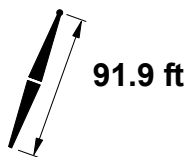
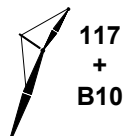
ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
34	80.4	126.0	26,200				34
36	79.5	125.5	26,100				36
38	78.5	124.9	25,800				38
40	77.5	124.4	25,600				40
42	76.6	123.7	25,500				42
44	75.6	123.1	25,300	80.8	119.7	16,600	44
46	74.6	122.4	25,100	79.8	119.0	16,300	46
48	73.6	121.6	24,900	78.7	118.2	16,000	48
50	72.6	120.9	24,700	77.7	117.4	15,700	50
55	70.0	118.7	24,400	75.1	115.2	15,000	55
60	67.5	116.4	24,000	72.4	112.7	14,400	60
65	64.8	113.7	23,600	69.7	110.0	13,800	65
70	62.1	110.7	23,300	66.8	106.9	13,300	70
75	59.3	107.4	21,800	63.9	103.4	12,800	75
80	56.4	103.7	20,000	60.9	99.6	12,400	80
85	53.3	99.6	18,400	57.7	95.3	12,100	85
90	50.2	95.0	17,000	54.4	90.4	11,700	90
95	46.8	89.8	15,700	50.8	85.0	11,400	95
100	43.2	84.0	14,600	47.0	78.8	11,200	100
105	39.4	77.4	13,600	42.8	71.6	10,900	105
110	35.1	69.7	12,700	38.1	63.1	10,800	110
115	30.1	60.4	11,800	32.5	52.5	10,700	115
120	24.1	48.5	11,100				120

# MLC90A-1 S-2

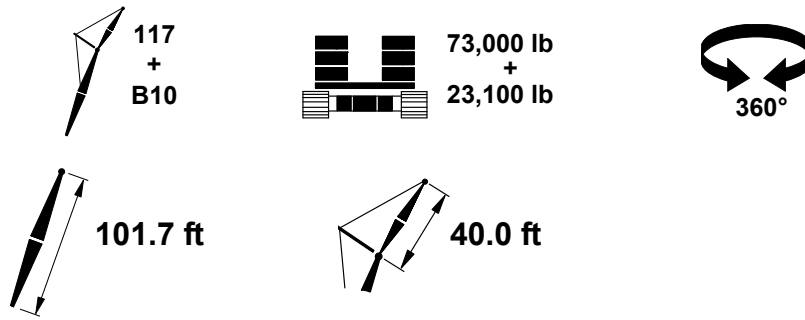
ASME B30.5



	10°			30°				
	ft	°	ft	lb	ft	lb		ft
36	80.3		135.6	26,200			36	
38	79.4		135.1	25,900			38	
40	78.5		134.6	25,800			40	
42	77.6		134.0	25,600			42	
44	76.7		133.4	25,400			44	
46	75.8		132.8	25,300	80.6	129.3	16,500	46
48	74.9		132.1	25,100	79.6	128.6	16,200	48
50	73.9		131.4	25,000	78.7	127.8	16,000	50
55	71.6		129.4	24,600	76.3	125.8	15,300	55
60	69.3		127.3	24,300	73.9	123.6	14,700	60
65	66.9		124.8	23,900	71.4	121.1	14,100	65
70	64.4		122.1	23,700	68.8	118.3	13,700	70
75	61.9		119.1	21,700	66.2	115.2	13,200	75
80	59.3		115.8	19,800	63.5	111.8	12,800	80
85	56.6		112.2	18,200	60.8	108.0	12,400	85
90	53.8		108.2	16,800	57.9	103.8	12,100	90
95	51.0		103.8	15,600	54.8	99.2	11,800	95
100	47.9		98.8	14,500	51.6	94.0	11,500	100
105	44.7		93.4	13,400	48.2	88.2	11,200	105
110	41.3		87.2	12,500	44.6	81.6	11,000	110
115	37.5		80.1	11,700	40.5	73.9	10,800	115
120	33.4		72.0	10,900	35.9	64.9	10,700	120
125	28.6		62.2	10,200				125
130	22.8		49.6	9,600				130

# MLC90A-1 S-2

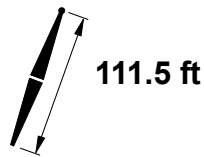
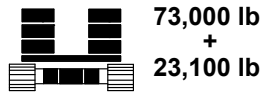
ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
36	81.0	145.7	26,100				36
38	80.1	145.2	26,000				38
40	79.3	144.7	25,800				40
42	78.5	144.2	25,700				42
44	77.6	143.7	25,500				44
46	76.8	143.1	25,400				46
48	76.0	142.4	25,200	80.4	138.8	16,500	48
50	75.1	141.8	25,100	79.5	138.2	16,200	50
55	73.0	140.0	24,800	77.3	136.3	15,600	55
60	70.8	138.0	24,500	75.1	134.3	15,000	60
65	68.6	135.8	24,200	72.8	132.0	14,500	65
70	66.3	133.3	23,500	70.5	129.4	14,000	70
75	64.1	130.6	21,400	68.2	126.6	13,500	75
80	61.7	127.6	19,600	65.7	123.5	13,100	80
85	59.3	124.3	18,000	63.2	120.2	12,700	85
90	56.8	120.7	16,600	60.7	116.4	12,400	90
95	54.3	116.8	15,300	58.0	112.3	12,100	95
100	51.6	112.5	14,200	55.2	107.8	11,800	100
105	48.8	107.8	13,200	52.3	102.9	11,500	105
110	45.9	102.5	12,300	49.2	97.3	11,300	110
115	42.8	96.7	11,400	46.0	91.2	11,100	115
120	39.5	90.2	10,700	42.4	84.2	10,800	120
125	35.9	82.8	10,000	38.5	76.1	10,100	125
130	31.9	74.2	9,300	34.1	66.6	9,400	130
135	27.3	63.9	8,700				135
140	21.6	50.7	8,200				140

# MLC90A-1 S-2

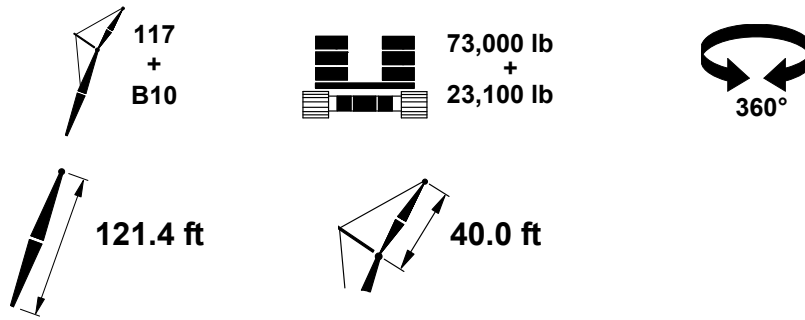
ASME B30.5



ft	10°			30°			ft
	ft	lb	ft	ft	lb	ft	
38	80.8	155.3	26,000				38
40	80.0	154.9	25,900				40
42	79.2	154.4	25,700				42
44	78.5	153.8	25,600				44
46	77.7	153.3	25,500				46
48	76.9	152.7	25,300				48
50	76.1	152.1	25,200	80.3	148.4	16,400	50
55	74.1	150.4	24,900	78.2	146.7	15,800	55
60	72.1	148.6	24,600	76.2	144.8	15,200	60
65	70.1	146.5	24,400	74.1	142.7	14,700	65
70	68.0	144.3	23,300	71.9	140.4	14,300	70
75	65.9	141.8	21,200	69.8	137.8	13,800	75
80	63.8	139.0	19,400	67.6	135.0	13,400	80
85	61.6	136.1	17,800	65.3	131.9	13,000	85
90	59.3	132.8	16,300	63.0	128.5	12,700	90
95	57.0	129.3	15,100	60.6	124.9	12,400	95
100	54.6	125.4	14,000	58.1	120.9	12,100	100
105	52.2	121.2	13,000	55.5	116.5	11,800	105
110	49.6	116.6	12,100	52.9	111.7	11,600	110
115	46.9	111.6	11,200	50.1	106.4	11,300	115
120	44.1	106.0	10,500	47.1	100.6	10,700	120
125	41.1	99.9	9,800	43.9	94.0	9,900	125
130	37.9	93.0	9,100	40.5	86.7	9,300	130
135	34.5	85.3	8,500	36.7	78.2	8,600	135
140	30.6	76.3	8,000	32.4	68.2	8,000	140
145	26.1	65.5	7,500				145
150	20.6	51.6	6,800				150

# MLC90A-1 S-2

ASME B30.5

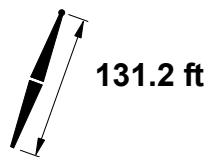
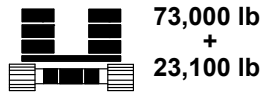
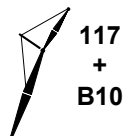


	10°			30°			
	ft	°	ft	lb	ft	lb	
40	80.6	164.9	25,900				40
42	79.9	164.5	25,700				42
44	79.2	164.0	25,600				44
46	78.5	163.5	25,500				46
48	77.7	162.9	25,400				48
50	77.0	162.4	25,300	80.9	158.6	16,600	50
55	75.1	160.8	25,000	79.0	157.0	16,000	55
60	73.3	159.1	24,800	77.1	155.3	15,500	60
65	71.4	157.2	24,500	75.1	153.3	15,000	65
70	69.4	155.1	23,100	73.2	151.1	14,500	70
75	67.5	152.8	20,900	71.2	148.8	14,100	75
80	65.5	150.2	19,100	69.1	146.2	13,700	80
85	63.5	147.5	17,500	67.0	143.4	13,300	85
90	61.4	144.5	16,100	64.9	140.3	13,000	90
95	59.3	141.3	14,800	62.7	136.9	12,700	95
100	57.2	137.8	13,700	60.5	133.3	12,400	100
105	54.9	134.0	12,700	58.2	129.4	12,100	105
110	52.7	129.9	11,800	55.8	125.1	11,800	110
115	50.3	125.4	11,000	53.3	120.5	11,300	115
120	47.8	120.5	10,200	50.8	115.4	10,500	120
125	45.2	115.2	9,500	48.1	109.8	9,700	125
130	42.5	109.4	8,900	45.2	103.6	9,100	130
135	39.6	103.0	8,300	42.1	96.8	8,400	135
140	36.5	95.8	7,700	38.8	89.1	7,800	140
145	33.1	87.6	7,200	35.1	80.2	7,300	145
150	29.4	78.2	6,700				150
155	25.0	67.0	6,300				155



# MLC90A-1 S-2

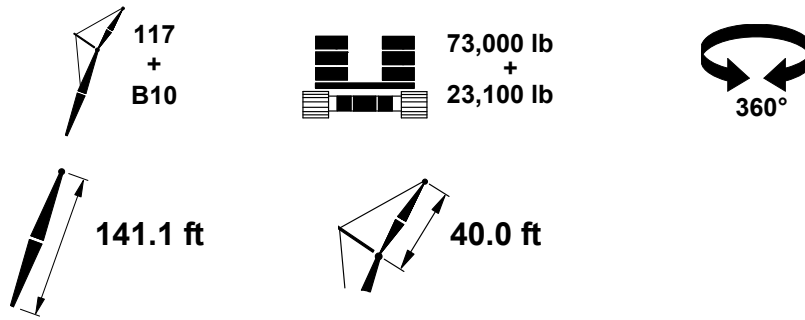
ASME B30.5



ft	10°			30°			ft
	ft	lb	ft	ft	lb	ft	
42	80.5	174.6	25,700				42
44	79.8	174.1	25,600				44
46	79.1	173.6	25,400				46
48	78.4	173.1	25,400				48
50	77.8	172.6	25,200				50
55	76.0	171.1	25,000	79.7	167.3	16,200	55
60	74.3	169.5	24,800	77.9	165.7	15,700	60
65	72.5	167.7	24,500	76.1	163.8	15,200	65
70	70.7	165.8	22,800	74.2	161.8	14,800	70
75	68.9	163.6	20,700	72.4	159.6	14,300	75
80	67.0	161.3	18,900	70.5	157.2	13,900	80
85	65.2	158.7	17,300	68.5	154.6	13,600	85
90	63.3	156.0	15,900	66.6	151.7	13,200	90
95	61.3	153.0	14,600	64.6	148.7	12,900	95
100	59.3	149.8	13,500	62.5	145.4	12,600	100
105	57.3	146.3	12,500	60.4	141.8	12,300	105
110	55.2	142.6	11,600	58.3	137.9	12,000	110
115	53.1	138.5	10,800	56.1	133.7	11,100	115
120	50.9	134.2	10,000	53.8	129.2	10,300	120
125	48.6	129.4	9,300	51.4	124.3	9,600	125
130	46.2	124.3	8,700	48.9	118.9	8,900	130
135	43.7	118.7	8,100	46.2	113.0	8,300	135
140	41.0	112.6	7,600	43.5	106.6	7,700	140
145	38.2	105.9	7,000	40.5	99.4	7,200	145
150	35.2	98.4	6,600	37.2	91.3	6,700	150
155	32.0	89.9	6,100	33.6	82.1	6,200	155
160	28.3	80.1	5,700				160
165	24.0	68.4	5,300				165

# MLC90A-1 S-2

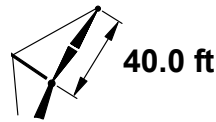
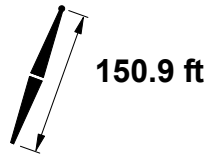
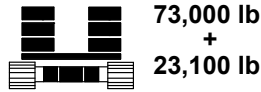
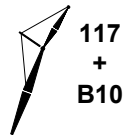
ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
44	80.4	184.2	25,500				44
46	79.7	183.7	25,400				46
48	79.1	183.3	25,300				48
50	78.4	182.8	25,200				50
55	76.8	181.4	25,000	80.3	177.5	16,400	55
60	75.1	179.9	24,800	78.6	176.0	15,900	60
65	73.5	178.2	24,600	76.9	174.2	15,400	65
70	71.8	176.3	22,600	75.1	172.4	15,000	70
75	70.1	174.3	20,500	73.4	170.3	14,600	75
80	68.4	172.1	18,600	71.6	168.0	14,200	80
85	66.6	169.8	17,000	69.8	165.6	13,800	85
90	64.9	167.2	15,600	68.0	163.0	13,500	90
95	63.1	164.4	14,400	66.2	160.1	13,200	95
100	61.2	161.4	13,300	64.3	157.1	12,900	100
105	59.3	158.2	12,300	62.4	153.8	12,600	105
110	57.4	154.8	11,300	60.4	150.2	11,700	110
115	55.5	151.1	10,500	58.4	146.4	10,900	115
120	53.5	147.1	9,800	56.3	142.3	10,100	120
125	51.4	142.9	9,100	54.1	137.9	9,400	125
130	49.2	138.3	8,400	51.9	133.1	8,700	130
135	47.0	133.3	7,800	49.6	127.9	8,100	135
140	44.7	127.9	7,300	47.2	122.3	7,500	140
145	42.3	122.1	6,800	44.6	116.2	7,000	145
150	39.7	115.7	6,300	41.9	109.4	6,500	150
155	37.0	108.7	5,900	39.0	101.9	6,000	155
160	34.1	100.9	5,500	35.8	93.5	5,500	160
165	30.9	92.1	5,100	32.3	83.9	5,100	165
170	27.3	81.9	4,700				170
175	23.1	69.7	4,300				175

# MLC90A-1 S-2

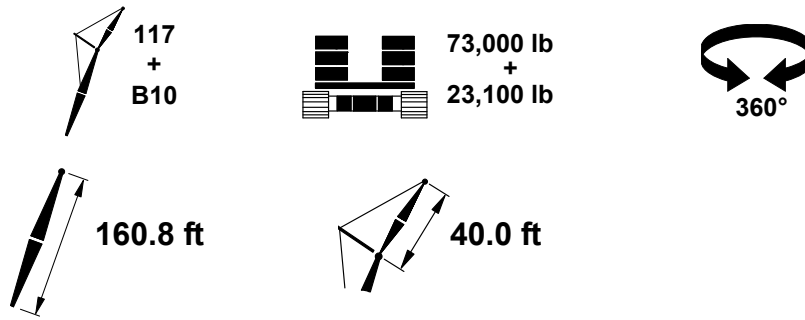
ASME B30.5



	10°			30°			
	ft	°	ft	lb	°	ft	
44	80.9	194.3	25,300				44
46	80.3	193.8	25,200				46
48	79.7	193.4	25,200				48
50	79.0	192.9	25,100				50
55	77.5	191.6	24,900	80.8	187.7	16,600	55
60	75.9	190.2	24,700	79.2	186.2	16,100	60
65	74.4	188.6	24,500	77.6	184.6	15,600	65
70	72.8	186.8	22,400	76.0	182.8	15,200	70
75	71.2	184.9	20,200	74.3	180.9	14,800	75
80	69.6	182.9	18,400	72.7	178.8	14,400	80
85	67.9	180.7	16,800	71.0	176.5	14,000	85
90	66.3	178.3	15,400	69.3	174.0	13,700	90
95	64.6	175.7	14,100	67.6	171.4	13,400	95
100	62.9	172.9	13,000	65.8	168.5	13,100	100
105	61.1	169.9	12,000	64.0	165.5	12,500	105
110	59.4	166.7	11,100	62.2	162.2	11,500	110
115	57.5	163.3	10,300	60.3	158.7	10,700	115
120	55.7	159.7	9,500	58.4	154.9	9,900	120
125	53.8	155.8	8,800	56.5	150.9	9,200	125
130	51.8	151.6	8,200	54.4	146.6	8,500	130
135	49.8	147.1	7,600	52.4	141.9	7,900	135
140	47.7	142.2	7,100	50.2	136.9	7,300	140
145	45.6	137.1	6,600	47.9	131.5	6,800	145
150	43.3	131.4	6,100	45.6	125.6	6,300	150
155	41.0	125.4	5,600	43.1	119.2	5,800	155
160	38.5	118.7	5,200	40.5	112.1	5,400	160
165	35.8	111.4	4,800	37.6	104.4	4,900	165
170	33.0	103.3	4,500	34.6	95.6	4,500	170
175	29.9	94.2	4,100	31.1	85.6	4,200	175
180	26.4	83.6	3,700				180
185	22.3	71.0	3,200				185

# MLC90A-1 S-2

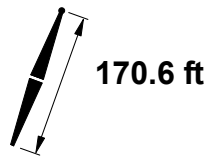
ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
46	80.8	203.9	25,000				46
48	80.2	203.4	25,000				48
50	79.6	203.0	24,900				50
55	78.1	201.8	24,700				55
60	76.6	200.4	24,600	79.8	196.4	16,200	60
65	75.2	198.9	24,400	78.2	194.9	15,800	65
70	73.7	197.3	22,100	76.7	193.2	15,400	70
75	72.2	195.5	20,000	75.2	191.4	15,000	75
80	70.6	193.5	18,100	73.6	189.4	14,600	80
85	69.1	191.4	16,500	72.0	187.3	14,200	85
90	67.5	189.2	15,100	70.4	185.0	13,900	90
95	65.9	186.7	13,900	68.8	182.5	13,600	95
100	64.3	184.1	12,800	67.2	179.8	13,300	100
105	62.7	181.4	11,800	65.5	177.0	12,300	105
110	61.0	178.4	10,800	63.8	173.9	11,300	110
115	59.4	175.2	10,000	62.1	170.6	10,500	115
120	57.6	171.8	9,300	60.3	167.2	9,700	120
125	55.9	168.2	8,600	58.5	163.4	8,900	125
130	54.1	164.3	7,900	56.6	159.5	8,300	130
135	52.2	160.2	7,300	54.7	155.2	7,600	135
140	50.3	155.8	6,800	52.8	150.6	7,100	140
145	48.4	151.1	6,300	50.7	145.8	6,500	145
150	46.4	146.1	5,800	48.6	140.5	6,000	150
155	44.3	140.7	5,400	46.4	134.9	5,600	155
160	42.1	134.8	5,000	44.1	128.7	5,100	160
165	39.8	128.5	4,600	41.7	122.1	4,700	165
170	37.4	121.6	4,200	39.2	114.8	4,300	170
175	34.8	114.0	3,900	36.4	106.7	4,000	175
180	32.0	105.6	3,500	33.4	97.6	3,600	180
185	28.9	96.2	3,100				185
190	25.5	85.2	2,600				190
195	21.5	72.1	2,100				195

# MLC90A-1 S-2

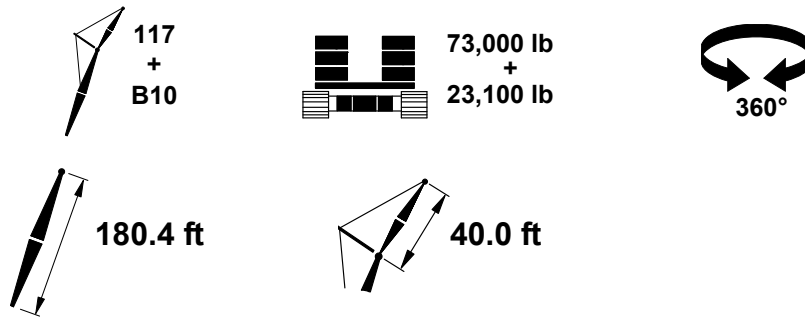
ASME B30.5



ft	10°			30°			ft
	°	ft	lb	°	ft	lb	
48	80.6	213.5	24,700				48
50	80.1	213.1	24,700				50
55	78.7	211.9	24,500				55
60	77.3	210.6	24,400	80.3	206.6	16,400	60
65	75.9	209.2	24,200	78.8	205.2	16,000	65
70	74.5	207.6	21,900	77.4	203.6	15,500	70
75	73.0	205.9	19,800	75.9	201.8	15,200	75
80	71.6	204.1	17,900	74.4	200.0	14,800	80
85	70.1	202.1	16,300	72.9	197.9	14,400	85
90	68.6	200.0	14,900	71.4	195.8	14,100	90
95	67.1	197.7	13,700	69.9	193.4	13,800	95
100	65.6	195.2	12,500	68.4	190.9	13,100	100
105	64.1	192.6	11,500	66.8	188.2	12,100	105
110	62.5	189.8	10,600	65.2	185.4	11,100	110
115	61.0	186.9	9,800	63.6	182.3	10,300	115
120	59.4	183.7	9,000	61.9	179.1	9,500	120
125	57.7	180.3	8,400	60.2	175.6	8,800	125
130	56.1	176.7	7,700	58.5	171.9	8,100	130
135	54.4	172.9	7,100	56.8	168.0	7,500	135
140	52.6	168.9	6,600	55.0	163.8	6,900	140
145	50.8	164.6	6,100	53.1	159.4	6,400	145
150	49.0	160.0	5,600	51.2	154.6	5,900	150
155	47.1	155.1	5,200	49.2	149.5	5,400	155
160	45.1	149.8	4,800	47.2	144.0	5,000	160
165	43.0	144.2	4,400	45.0	138.2	4,600	165
170	40.9	138.1	4,000	42.8	131.8	4,200	170
175	38.7	131.5	3,700	40.5	124.9	3,800	175
180	36.3	124.4	3,300	37.9	117.3	3,400	180
185	33.8	116.5	3,000	35.2	108.9	3,100	185
190	31.1	107.9	2,500	32.3	99.5	2,600	190
195	28.1	98.1	2,100				195

# MLC90A-1 S-2

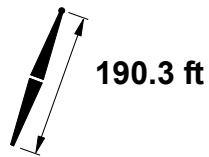
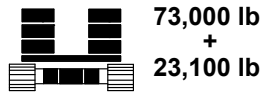
ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
50	80.5	223.1	24,300				50
55	79.2	222.0	24,200				55
60	77.9	220.8	24,100	80.7	216.8	16,500	60
65	76.5	219.4	24,000	79.3	215.4	16,100	65
70	75.2	217.9	21,600	78.0	213.9	15,700	70
75	73.8	216.3	19,500	76.6	212.2	15,300	75
80	72.4	214.6	17,700	75.2	210.4	15,000	80
85	71.1	212.7	16,100	73.8	208.5	14,600	85
90	69.7	210.7	14,700	72.3	206.5	14,300	90
95	68.2	208.5	13,400	70.9	204.2	14,000	95
100	66.8	206.2	12,300	69.4	201.9	12,900	100
105	65.4	203.7	11,300	67.9	199.4	11,900	105
110	63.9	201.1	10,400	66.4	196.7	10,900	110
115	62.4	198.3	9,500	64.9	193.8	10,000	115
120	60.9	195.3	8,800	63.4	190.7	9,300	120
125	59.4	192.2	8,100	61.8	187.5	8,500	125
130	57.8	188.8	7,500	60.2	184.1	7,900	130
135	56.2	185.3	6,900	58.6	180.4	7,200	135
140	54.6	181.5	6,300	56.9	176.6	6,700	140
145	52.9	177.5	5,800	55.2	172.4	6,100	145
150	51.2	173.3	5,400	53.4	168.1	5,600	150
155	49.5	168.8	4,900	51.6	163.4	5,200	155
160	47.7	164.0	4,500	49.8	158.4	4,700	160
165	45.8	158.9	4,100	47.9	153.1	4,300	165
170	43.9	153.4	3,800	45.9	147.5	3,900	170
175	41.9	147.5	3,400	43.8	141.4	3,600	175
180	39.8	141.3	3,100	41.6	134.8	3,200	180
185	37.6	134.5	2,800	39.3	127.6	2,900	185
190	35.3	127.1	2,300	36.8	119.8	2,500	190
195				34.2	111.1	2,000	195

# MLC90A-1 S-2

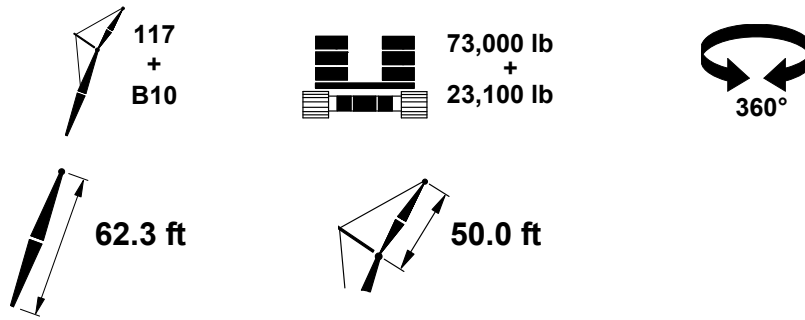
ASME B30.5



ft	10°			30°			ft
	ft	lb	ft	ft	lb	ft	
50	80.9	233.2	24,000				50
55	79.7	232.1	23,900				55
60	78.4	230.9	23,600				60
65	77.1	229.6	23,200	79.8	225.6	16,300	65
70	75.8	228.2	21,400	78.5	224.1	15,900	70
75	74.5	226.7	19,200	77.2	222.6	15,500	75
80	73.2	225.0	17,400	75.9	220.9	15,100	80
85	71.9	223.2	15,800	74.5	219.0	14,800	85
90	70.6	221.3	14,400	73.1	217.1	14,500	90
95	69.2	219.2	13,100	71.8	215.0	13,900	95
100	67.9	217.0	12,000	70.4	212.7	12,700	100
105	66.5	214.7	11,000	69.0	210.3	11,600	105
110	65.1	212.2	10,100	67.6	207.8	10,700	110
115	63.7	209.6	9,300	66.1	205.1	9,800	115
120	62.3	206.8	8,500	64.7	202.2	9,000	120
125	60.8	203.8	7,800	63.2	199.2	8,300	125
130	59.4	200.6	7,200	61.7	196.0	7,600	130
135	57.9	197.3	6,600	60.2	192.5	7,000	135
140	56.4	193.8	6,100	58.6	188.9	6,400	140
145	54.8	190.1	5,500	57.0	185.1	5,900	145
150	53.2	186.1	5,100	55.4	181.0	5,400	150
155	51.6	181.9	4,600	53.7	176.7	4,900	155
160	50.0	177.5	4,200	52.0	172.2	4,500	160
165	48.3	172.8	3,800	50.3	167.3	4,100	165
170	46.5	167.8	3,500	48.4	162.2	3,700	170
175	44.7	162.5	3,100	46.6	156.7	3,300	175
180	42.8	156.9	2,800	44.6	150.8	3,000	180
185	40.9	150.8	2,500	42.6	144.5	2,600	185
190	38.8	144.3	2,000	40.4	137.6	2,300	190

# MLC90A-1 S-2

ASME B30.5

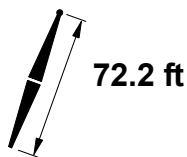
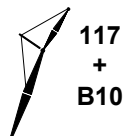


	10°			30°			
	ft	°	ft	lb	ft	lb	
34	80.5	116.0	23,000				34
36	79.4	115.5	22,800				36
38	78.4	114.9	22,500				38
40	77.3	114.3	22,300				40
42	76.2	113.6	22,100				42
44	75.2	112.8	21,900				44
46	74.1	112.1	21,700				46
48	73.0	111.3	21,500	80.1	107.8	14,200	48
50	71.9	110.4	21,300	79.0	106.9	13,800	50
55	69.1	108.1	20,900	76.1	104.4	13,100	55
60	66.2	105.4	20,500	73.1	101.7	12,400	60
65	63.3	102.4	19,600	70.1	98.6	11,800	65
70	60.2	99.1	18,300	66.9	95.1	11,300	70
75	57.0	95.3	17,100	63.5	91.2	10,900	75
80	53.7	91.1	16,000	60.0	86.7	10,400	80
85	50.2	86.4	15,100	56.3	81.7	10,100	85
90	46.5	80.9	14,300	52.4	75.9	9,700	90
95	42.4	74.8	13,600	48.0	69.2	9,400	95
100	38.0	67.5	13,000	43.1	61.2	9,200	100
105	32.9	58.8	12,500	37.3	51.3	9,000	105
110	26.7	47.7	12,200				110



# MLC90A-1 S-2

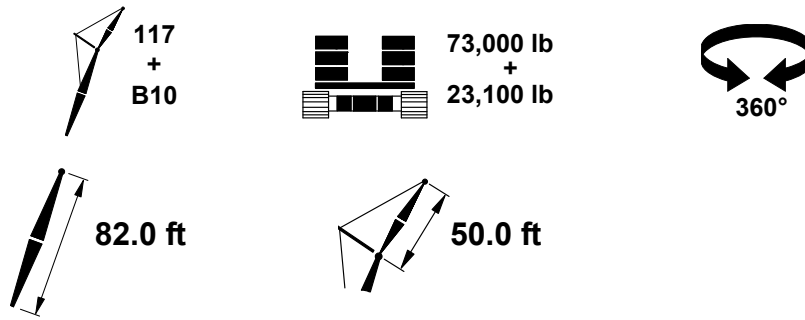
ASME B30.5



ft	10°			30°			ft
	ft	ft	lb	ft	ft	lb	
36	80.3	125.7	22,800				36
38	79.3	125.1	22,700				38
40	78.4	124.5	22,500				40
42	77.4	123.9	22,300				42
44	76.4	123.2	22,100				44
46	75.4	122.6	21,900				46
48	74.4	121.8	21,700				48
50	73.4	121.0	21,500	80.0	117.3	14,100	50
55	70.9	118.9	21,200	77.4	115.1	13,400	55
60	68.3	116.5	20,700	74.7	112.7	12,800	60
65	65.7	113.9	20,400	71.9	109.9	12,200	65
70	62.9	110.9	20,000	69.1	106.8	11,700	70
75	60.1	107.6	19,700	66.2	103.3	11,200	75
80	57.2	103.9	18,800	63.2	99.5	10,800	80
85	54.2	99.8	17,900	60.0	95.2	10,400	85
90	51.1	95.2	17,000	56.7	90.3	10,100	90
95	47.7	90.1	16,200	53.1	84.9	9,800	95
100	44.1	84.3	15,100	49.3	78.7	9,500	100
105	40.3	77.7	14,100	45.1	71.5	9,300	105
110	36.0	70.0	13,200	40.3	63.0	9,100	110
115	31.1	60.7	12,300	34.7	52.3	8,900	115
120	25.1	48.9	11,500				120

# MLC90A-1 S-2

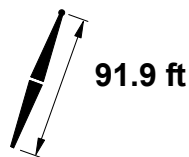
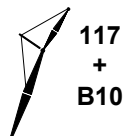
ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
38	80.2	135.3	22,800				38
40	79.3	134.7	22,600				40
42	78.4	134.2	22,400				42
44	77.5	133.6	22,200				44
46	76.5	132.9	22,100				46
48	75.6	132.2	21,900				48
50	74.7	131.5	21,700	80.8	127.7	14,300	50
55	72.4	129.6	21,400	78.4	125.7	13,600	55
60	70.0	127.4	21,000	76.0	123.4	13,000	60
65	67.6	125.0	20,700	73.5	120.9	12,500	65
70	65.2	122.3	20,300	70.9	118.1	12,000	70
75	62.7	119.3	20,000	68.3	115.0	11,500	75
80	60.1	116.0	19,800	65.6	111.6	11,100	80
85	57.4	112.4	18,600	62.8	107.8	10,700	85
90	54.6	108.4	17,200	59.9	103.6	10,400	90
95	51.8	104.0	16,000	56.9	99.0	10,100	95
100	48.7	99.1	14,800	53.7	93.8	9,800	100
105	45.5	93.6	13,800	50.3	87.9	9,600	105
110	42.1	87.4	12,900	46.6	81.3	9,300	110
115	38.4	80.4	12,100	42.5	73.7	9,200	115
120	34.3	72.3	11,300	37.9	64.6	9,000	120
125	29.5	62.5	10,600	32.4	53.2	8,900	125
130	23.7	50.1	9,900				130

# MLC90A-1 S-2

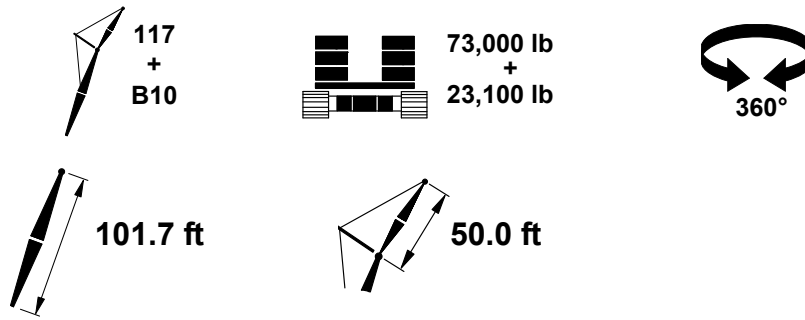
ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
38	80.9		145.4	22,800			38
40	80.0		144.9	22,700			40
42	79.2		144.4	22,500			42
44	78.4		143.8	22,300			44
46	77.5		143.2	22,200			46
48	76.7		142.6	22,000			48
50	75.8		141.9	21,900			50
55	73.7		140.1	21,600	79.3	136.1	55
60	71.5		138.1	21,200	77.1	134.0	60
65	69.3		135.9	20,900	74.8	131.7	65
70	67.1		133.5	20,700	72.5	129.2	70
75	64.8		130.7	20,300	70.1	126.4	75
80	62.4		127.8	20,000	67.7	123.3	80
85	60.0		124.5	18,400	65.2	119.9	85
90	57.6		120.9	17,000	62.6	116.2	90
95	55.0		117.0	15,800	59.9	112.1	95
100	52.4		112.7	14,700	57.1	107.6	100
105	49.6		108.0	13,600	54.2	102.6	105
110	46.7		102.7	12,700	51.1	97.0	110
115	43.6		96.9	11,900	47.8	90.8	115
120	40.3		90.4	11,100	44.3	83.8	120
125	36.7		83.0	10,400	40.3	75.7	125
130	32.7		74.5	9,800	35.9	66.1	130
135	28.1		64.2	9,200	30.5	54.1	135
140	22.5		51.1	8,600			140

# MLC90A-1 S-2

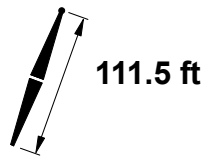
ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
40	80.7	155.0	22,700				40
42	79.9	154.5	22,600				42
44	79.1	154.0	22,400				44
46	78.3	153.4	22,300				46
48	77.6	152.9	22,100				48
50	76.8	152.2	22,000				50
55	74.8	150.6	21,700	80.0	146.5	14,100	55
60	72.8	148.7	21,400	78.0	144.5	13,500	60
65	70.8	146.7	21,100	75.9	142.4	13,000	65
70	68.7	144.4	20,900	73.7	140.1	12,500	70
75	66.6	141.9	20,600	71.6	137.5	12,100	75
80	64.4	139.2	19,800	69.4	134.7	11,700	80
85	62.2	136.2	18,200	67.1	131.6	11,300	85
90	60.0	133.0	16,800	64.8	128.2	11,000	90
95	57.7	129.4	15,500	62.4	124.6	10,700	95
100	55.3	125.6	14,400	59.9	120.5	10,400	100
105	52.9	121.4	13,400	57.3	116.1	10,100	105
110	50.3	116.8	12,500	54.6	111.3	9,900	110
115	47.6	111.8	11,600	51.8	106.0	9,700	115
120	44.8	106.2	10,900	48.8	100.2	9,500	120
125	41.9	100.1	10,200	45.6	93.6	9,300	125
130	38.7	93.3	9,500	42.2	86.2	9,100	130
135	35.2	85.5	9,000	38.4	77.7	9,000	135
140	31.3	76.5	8,400	34.0	67.5	8,500	140
145	26.9	65.8	7,900				145
150	21.4	52.1	7,300				150

# MLC90A-1 S-2

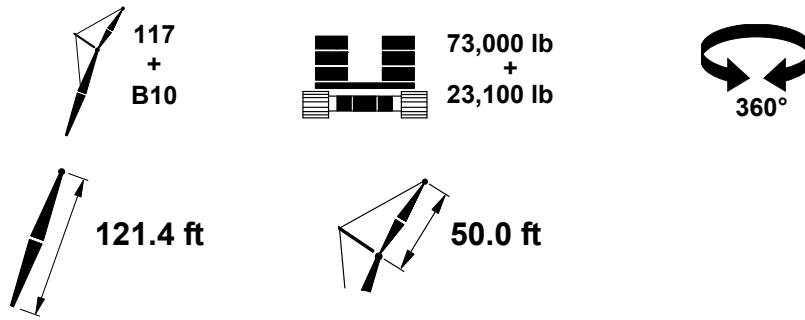
ASME B30.5



	10°			30°				
	ft	°	ft	lb	ft	lb		ft
42	80.5		164.6	22,500			42	
44	79.8		164.1	22,400			44	
46	79.1		163.6	22,300			46	
48	78.3		163.1	22,200			48	
50	77.6		162.5	22,100			50	
55	75.8		161.0	21,800	80.7	156.7	14,300	55
60	73.9		159.2	21,500	78.8	155.0	13,700	60
65	72.0		157.3	21,300	76.8	153.0	13,200	65
70	70.1		155.2	21,000	74.8	150.8	12,800	70
75	68.1		152.9	20,700	72.8	148.4	12,300	75
80	66.1		150.4	19,600	70.8	145.8	11,900	80
85	64.1		147.6	18,000	68.7	143.0	11,600	85
90	62.1		144.7	16,500	66.6	139.9	11,200	90
95	60.0		141.4	15,300	64.4	136.6	10,900	95
100	57.8		137.9	14,200	62.2	132.9	10,600	100
105	55.6		134.1	13,200	59.8	129.0	10,400	105
110	53.3		130.0	12,300	57.5	124.7	10,100	110
115	50.9		125.6	11,400	55.0	120.0	9,900	115
120	48.5		120.7	10,700	52.4	114.9	9,700	120
125	45.9		115.4	10,000	49.7	109.3	9,500	125
130	43.2		109.6	9,300	46.8	103.1	9,300	130
135	40.3		103.2	8,700	43.7	96.2	8,900	135
140	37.2		96.0	8,200	40.3	88.5	8,300	140
145	33.8		87.9	7,700	36.6	79.5	7,800	145
150	30.1		78.5	7,200	32.4	68.9	7,300	150
155	25.7		67.3	6,700				155
160	20.4		52.9	6,000				160

# MLC90A-1 S-2

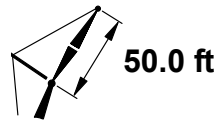
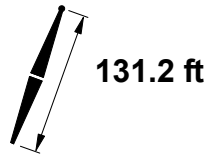
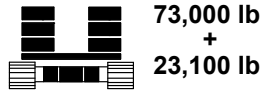
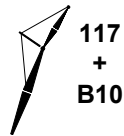
ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
44	80.4	174.2	22,400				44
46	79.7	173.8	22,300				46
48	79.0	173.2	22,200				48
50	78.3	172.7	22,100				50
55	76.6	171.3	21,800				55
60	74.9	169.6	21,600	79.5	165.3	13,900	60
65	73.1	167.9	21,300	77.6	163.5	13,400	65
70	71.3	165.9	21,100	75.8	161.4	13,000	70
75	69.5	163.7	20,900	73.9	159.2	12,600	75
80	67.6	161.4	19,300	72.0	156.8	12,200	80
85	65.8	158.9	17,700	70.1	154.2	11,800	85
90	63.9	156.1	16,300	68.1	151.3	11,500	90
95	61.9	153.1	15,000	66.1	148.3	11,200	95
100	59.9	149.9	13,900	64.1	144.9	10,900	100
105	57.9	146.4	12,900	62.0	141.3	10,600	105
110	55.8	142.7	12,000	59.8	137.5	10,400	110
115	53.7	138.7	11,200	57.6	133.3	10,100	115
120	51.5	134.3	10,400	55.3	128.7	9,900	120
125	49.2	129.6	9,700	52.9	123.8	9,700	125
130	46.8	124.5	9,100	50.4	118.4	9,400	130
135	44.3	118.9	8,500	47.7	112.5	8,700	135
140	41.7	112.8	7,900	44.9	106.0	8,100	140
145	38.9	106.1	7,400	41.9	98.8	7,600	145
150	35.9	98.6	6,900	38.7	90.6	7,100	150
155	32.6	90.1	6,500	35.0	81.3	6,600	155
160	28.9	80.4	6,100	30.9	70.2	6,100	160
165	24.7	68.7	5,700				165

# MLC90A-1 S-2

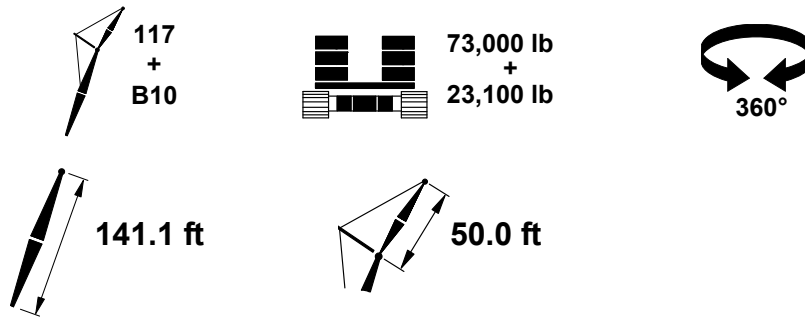
ASME B30.5



ft	10°			30°			ft
	ft	ft	lb	ft	ft	lb	
44	80.9	184.3	22,300				44
46	80.3	183.9	22,300				46
48	79.6	183.4	22,100				48
50	79.0	182.9	22,100				50
55	77.4	181.5	21,800				55
60	75.7	180.0	21,600	80.1	175.6	14,100	60
65	74.0	178.3	21,400	78.4	173.8	13,600	65
70	72.4	176.5	21,200	76.6	171.9	13,200	70
75	70.7	174.4	20,900	74.9	169.9	12,800	75
80	68.9	172.3	19,100	73.1	167.6	12,400	80
85	67.2	169.9	17,500	71.3	165.2	12,000	85
90	65.4	167.3	16,100	69.5	162.5	11,700	90
95	63.6	164.6	14,800	67.6	159.7	11,400	95
100	61.8	161.6	13,700	65.8	156.6	11,100	100
105	59.9	158.4	12,700	63.8	153.3	10,900	105
110	58.0	154.9	11,800	61.8	149.8	10,600	110
115	56.0	151.3	11,000	59.8	145.9	10,400	115
120	54.0	147.3	10,200	57.7	141.8	10,200	120
125	52.0	143.0	9,500	55.6	137.4	9,900	125
130	49.8	138.4	8,900	53.3	132.6	9,200	130
135	47.6	133.5	8,300	51.0	127.4	8,600	135
140	45.3	128.1	7,700	48.5	121.7	8,000	140
145	42.9	122.3	7,200	46.0	115.5	7,500	145
150	40.3	115.9	6,800	43.3	108.8	6,900	150
155	37.6	108.9	6,300	40.3	101.2	6,500	155
160	34.7	101.1	5,900	37.2	92.7	6,000	160
165	31.5	92.3	5,500	33.6	83.0	5,600	165
170	27.9	82.2	5,100				170
175	23.8	70.0	4,800				175

# MLC90A-1 S-2

ASME B30.5

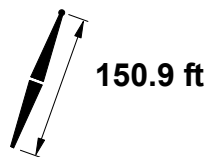
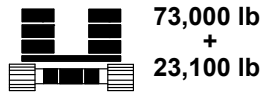
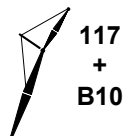


	10°			30°			
	ft	°	ft	lb	ft	lb	
46	80.8	193.9	22,100				46
48	80.2	193.5	22,000				48
50	79.6	193.0	22,000				50
55	78.0	191.7	21,800				55
60	76.5	190.3	21,500				60
65	74.9	188.7	21,400	80.6	185.8	14,200	65
70	73.3	187.0	21,200	79.0	184.2	13,800	70
75	71.7	185.1	20,700	77.4	182.4	13,300	75
80	70.1	183.0	18,900	75.7	180.4	13,000	80
85	68.5	180.8	17,300	74.1	178.3	12,600	85
90	66.8	178.4	15,800	72.4	176.0	12,200	90
95	65.1	175.8	14,600	70.7	173.6	11,900	95
100	63.4	173.0	13,500	69.0	170.9	11,600	100
105	61.7	170.0	12,500	67.2	168.1	11,300	105
110	59.9	166.9	11,500	65.4	165.0	11,100	110
115	58.1	163.4	10,700	63.6	161.7	10,800	115
120	56.2	159.8	10,000	61.7	158.2	10,600	120
125	54.3	155.9	9,300	59.8	154.4	10,400	125
130	52.4	151.7	8,600	57.8	150.3	9,700	130
135	50.4	147.2	8,000	55.8	146.0	9,000	135
140	48.3	142.4	7,500	53.7	141.3	8,400	140
145	46.1	137.2	7,000	51.5	136.3	7,800	145
150	43.9	131.6	6,500	49.3	130.8	7,200	150
155	41.5	125.5	6,100	46.9	124.9	6,700	155
160	39.0	118.9	5,600	44.4	118.5	6,300	160
165	36.4	111.6	5,200	41.7	111.4	5,800	165
170	33.6	103.5	4,900	38.9	103.6	5,400	170
175	30.4	94.4	4,500	35.8	94.7	5,000	175
180	27.0	83.9	4,200	32.3	84.6	4,600	180
185	22.9	71.3	3,700				185



# MLC90A-1 S-2

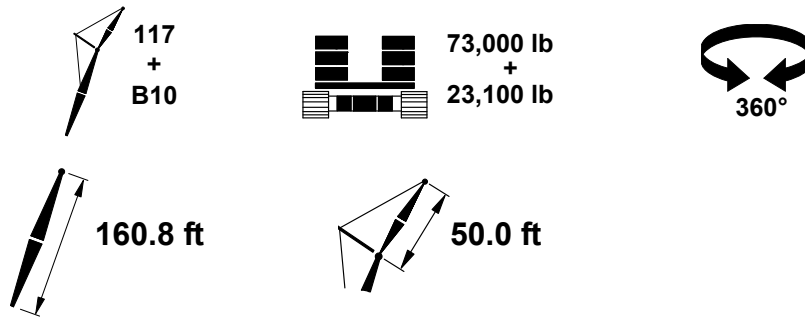
ASME B30.5



ft	10°			30°			ft
	ft	lb	ft	ft	lb	ft	
48	80.7	203.6	21,900				48
50	80.1	203.1	21,800				50
55	78.6	201.9	21,700				55
60	77.2	200.5	21,500				60
65	75.7	199.0	21,300	79.6	194.4	13,900	65
70	74.2	197.4	21,100	78.1	192.8	13,500	70
75	72.7	195.6	20,500	76.5	190.9	13,100	75
80	71.1	193.6	18,600	74.9	188.9	12,800	80
85	69.6	191.5	17,000	73.4	186.8	12,400	85
90	68.0	189.3	15,600	71.8	184.5	12,100	90
95	66.4	186.9	14,300	70.1	182.0	11,800	95
100	64.8	184.3	13,200	68.5	179.3	11,500	100
105	63.2	181.5	12,200	66.8	176.4	11,300	105
110	61.6	178.5	11,300	65.1	173.4	11,000	110
115	59.9	175.3	10,500	63.4	170.1	10,800	115
120	58.2	171.9	9,700	61.6	166.6	10,200	120
125	56.4	168.3	9,000	59.8	162.9	9,500	125
130	54.6	164.5	8,400	57.9	158.9	8,800	130
135	52.8	160.4	7,800	56.0	154.6	8,200	135
140	50.9	156.0	7,300	54.0	150.0	7,600	140
145	48.9	151.3	6,700	52.0	145.1	7,100	145
150	46.9	146.2	6,300	49.9	139.9	6,500	150
155	44.8	140.8	5,800	47.7	134.2	6,100	155
160	42.6	135.0	5,400	45.4	128.0	5,600	160
165	40.3	128.7	5,000	42.9	121.3	5,200	165
170	37.9	121.8	4,700	40.3	114.0	4,800	170
175	35.3	114.2	4,300	37.6	105.8	4,400	175
180	32.5	105.8	4,000	34.5	96.6	4,100	180
185	29.5	96.4	3,600	31.1	86.1	3,700	185
190	26.1	85.5	3,200				190
195	22.1	72.5	2,600				195

# MLC90A-1 S-2

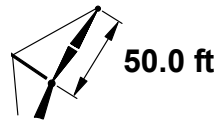
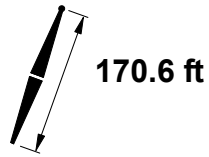
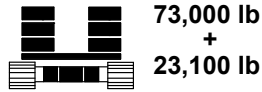
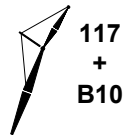
ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
50	80.6	213.2	21,600				50
55	79.2	212.0	21,500				55
60	77.8	210.7	21,300				60
65	76.4	209.3	21,200	80.1	204.7	14,100	65
70	74.9	207.7	21,000	78.6	203.1	13,700	70
75	73.5	206.0	20,200	77.2	201.3	13,300	75
80	72.1	204.2	18,400	75.7	199.5	12,900	80
85	70.6	202.2	16,800	74.2	197.4	12,600	85
90	69.1	200.1	15,400	72.7	195.2	12,300	90
95	67.6	197.8	14,100	71.2	192.9	12,000	95
100	66.1	195.3	13,000	69.6	190.4	11,700	100
105	64.6	192.7	12,000	68.0	187.7	11,500	105
110	63.0	189.9	11,000	66.4	184.8	11,200	110
115	61.5	187.0	10,200	64.8	181.8	10,800	115
120	59.9	183.8	9,500	63.2	178.5	10,000	120
125	58.2	180.4	8,800	61.5	175.0	9,300	125
130	56.5	176.9	8,100	59.8	171.3	8,600	130
135	54.8	173.1	7,500	58.0	167.4	8,000	135
140	53.1	169.0	7,000	56.2	163.2	7,400	140
145	51.3	164.7	6,500	54.3	158.7	6,800	145
150	49.5	160.1	6,000	52.4	153.9	6,300	150
155	47.6	155.2	5,600	50.4	148.8	5,900	155
160	45.6	149.9	5,200	48.4	143.3	5,400	160
165	43.6	144.3	4,800	46.2	137.4	5,000	165
170	41.4	138.2	4,400	44.0	131.0	4,600	170
175	39.2	131.7	4,100	41.6	124.1	4,200	175
180	36.8	124.6	3,700	39.1	116.4	3,900	180
185	34.3	116.7	3,400	36.3	108.0	3,500	185
190	31.6	108.1	3,000	33.4	98.5	3,200	190
195	28.6	98.3	2,600				195
200	25.3	87.1	2,100				200

# MLC90A-1 S-2

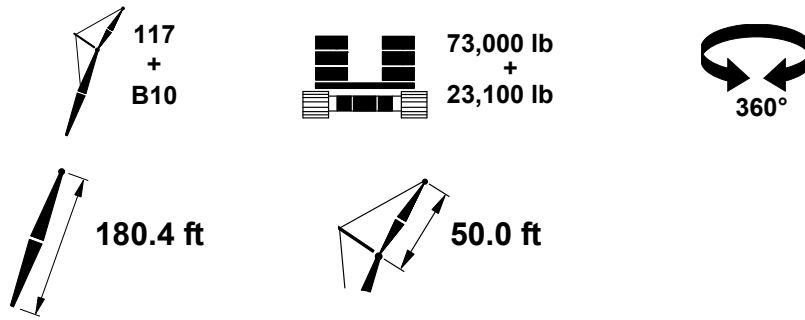
ASME B30.5



ft	10°			30°			ft
	°	ft	lb	°	ft	lb	
50	81.0	223.2	21,400				50
55	79.7	222.1	21,300				55
60	78.3	220.9	21,200				60
65	77.0	219.5	21,000	80.6	214.9	14,200	65
70	75.6	218.0	20,900	79.2	213.4	13,800	70
75	74.3	216.4	20,000	77.8	211.7	13,400	75
80	72.9	214.7	18,200	76.4	209.9	13,100	80
85	71.5	212.8	16,500	75.0	208.0	12,800	85
90	70.1	210.8	15,100	73.5	205.9	12,500	90
95	68.7	208.6	13,900	72.1	203.7	12,200	95
100	67.3	206.3	12,700	70.6	201.3	11,900	100
105	65.8	203.8	11,700	69.1	198.8	11,600	105
110	64.4	201.2	10,800	67.6	196.1	11,400	110
115	62.9	198.4	10,000	66.1	193.2	10,600	115
120	61.4	195.4	9,200	64.6	190.2	9,800	120
125	59.8	192.3	8,600	63.0	186.9	9,100	125
130	58.3	188.9	7,900	61.4	183.5	8,400	130
135	56.7	185.4	7,300	59.7	179.8	7,800	135
140	55.1	181.6	6,800	58.1	175.9	7,200	140
145	53.4	177.6	6,300	56.3	171.8	6,700	145
150	51.7	173.4	5,800	54.6	167.4	6,200	150
155	50.0	168.9	5,400	52.8	162.7	5,700	155
160	48.2	164.1	4,900	50.9	157.7	5,200	160
165	46.3	159.0	4,600	49.0	152.4	4,800	165
170	44.4	153.5	4,200	47.0	146.7	4,400	170
175	42.4	147.7	3,900	44.9	140.6	4,100	175
180	40.3	141.4	3,500	42.7	133.9	3,700	180
185	38.1	134.6	3,200	40.3	126.7	3,400	185
190	35.8	127.3	2,900	37.9	118.8	3,100	190
195	33.4	119.2	2,500	35.2	110.1	2,700	195
200	30.7	110.2	2,100	32.3	100.3	2,200	200

# MLC90A-1 S-2

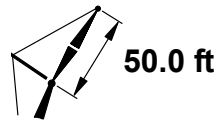
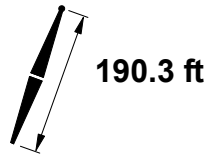
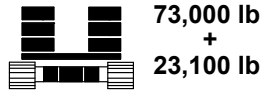
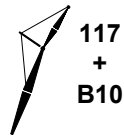
ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
55	80.1	232.2	21,000				55
60	78.8	231.0	20,900				60
65	77.6	229.7	20,700	81.0	225.0	14,300	65
70	76.3	228.3	20,700	79.7	223.6	13,900	70
75	75.0	226.8	19,800	78.3	222.0	13,600	75
80	73.7	225.1	17,900	77.0	220.3	13,200	80
85	72.3	223.3	16,300	75.7	218.5	12,900	85
90	71.0	221.4	14,900	74.3	216.5	12,600	90
95	69.7	219.3	13,600	72.9	214.4	12,300	95
100	68.3	217.1	12,500	71.5	212.2	12,100	100
105	66.9	214.8	11,500	70.1	209.8	11,800	105
110	65.6	212.3	10,600	68.7	207.2	11,300	110
115	64.2	209.7	9,700	67.3	204.5	10,400	115
120	62.7	206.9	9,000	65.8	201.6	9,600	120
125	61.3	203.9	8,300	64.3	198.6	8,900	125
130	59.8	200.8	7,700	62.8	195.3	8,200	130
135	58.3	197.4	7,100	61.3	191.9	7,600	135
140	56.8	193.9	6,500	59.7	188.3	7,000	140
145	55.3	190.2	6,000	58.1	184.4	6,400	145
150	53.7	186.2	5,500	56.5	180.4	5,900	150
155	52.1	182.1	5,100	54.8	176.1	5,500	155
160	50.4	177.6	4,700	53.1	171.5	5,000	160
165	48.7	173.0	4,300	51.3	166.6	4,600	165
170	47.0	168.0	3,900	49.5	161.4	4,200	170
175	45.1	162.7	3,600	47.6	155.9	3,800	175
180	43.3	157.0	3,300	45.7	150.0	3,500	180
185	41.3	151.0	3,000	43.6	143.6	3,200	185
190	39.3	144.5	2,700	41.5	136.7	2,800	190
195	37.2	137.5	2,300	39.2	129.3	2,500	195
200				36.8	121.1	2,100	200

# MLC90A-1 S-2

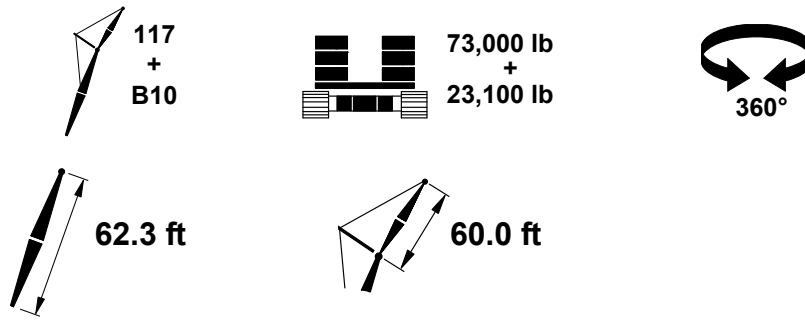
ASME B30.5



ft	10°			30°			ft
	ft	lb	ft	ft	lb	ft	
55	80.5	242.3	20,600				55
60	79.3	241.1	20,400				60
65	78.1	239.9	20,100				65
70	76.8	238.6	19,900	80.1	233.8	14,100	70
75	75.6	237.1	19,500	78.9	232.3	13,700	75
80	74.4	235.5	17,600	77.6	230.7	13,400	80
85	73.1	233.8	16,000	76.3	228.9	13,100	85
90	71.8	232.0	14,600	75.0	227.0	12,800	90
95	70.5	230.0	13,400	73.7	225.0	12,500	95
100	69.3	227.9	12,200	72.4	222.9	12,200	100
105	68.0	225.7	11,200	71.0	220.6	12,000	105
110	66.6	223.3	10,300	69.7	218.2	11,000	110
115	65.3	220.8	9,500	68.3	215.6	10,200	115
120	64.0	218.1	8,700	66.9	212.9	9,400	120
125	62.6	215.3	8,000	65.5	210.0	8,600	125
130	61.2	212.4	7,400	64.1	207.0	7,900	130
135	59.8	209.2	6,800	62.7	203.8	7,300	135
140	58.4	205.9	6,200	61.2	200.4	6,700	140
145	56.9	202.4	5,700	59.7	196.8	6,200	145
150	55.4	198.7	5,300	58.2	193.0	5,700	150
155	53.9	194.8	4,800	56.6	188.9	5,200	155
160	52.4	190.7	4,400	55.0	184.7	4,800	160
165	50.8	186.4	4,000	53.4	180.2	4,400	165
170	49.2	181.8	3,700	51.7	175.4	4,000	170
175	47.5	176.9	3,300	50.0	170.4	3,600	175
180	45.8	171.7	3,000	48.2	165.0	3,200	180
185	44.1	166.3	2,700	46.4	159.3	2,900	185
190	42.2	160.4	2,400	44.5	153.1	2,600	190
195	40.3	154.2	2,000	42.5	146.5	2,300	195

# MLC90A-1 S-2

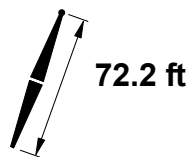
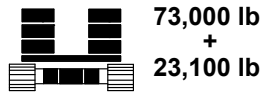
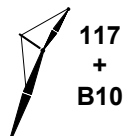
ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
36	80.7	126.0	20,600				36
38	79.7	125.4	20,300				38
40	78.7	124.8	20,200				40
42	77.8	124.2	20,000				42
44	76.8	123.5	19,800				44
46	75.8	122.9	19,600				46
48	74.8	122.1	19,400				48
50	73.8	121.3	19,300				50
55	71.3	119.2	18,800	79.3	115.6	12,500	55
60	68.7	116.9	18,400	76.6	113.1	11,800	60
65	66.1	114.2	18,000	73.9	110.3	11,200	65
70	63.4	111.2	16,800	71.1	107.2	10,700	70
75	60.6	107.9	15,600	68.2	103.8	10,200	75
80	57.7	104.2	14,600	65.1	100.0	9,800	80
85	54.7	100.1	13,600	62.0	95.7	9,400	85
90	51.5	95.6	12,800	58.7	90.9	9,000	90
95	48.2	90.5	12,100	55.1	85.5	8,700	95
100	44.6	84.7	11,500	51.4	79.3	8,400	100
105	40.8	78.2	11,000	47.2	72.2	8,100	105
110	36.5	70.5	10,400	42.5	63.8	7,900	110
115	31.7	61.4	10,100	37.0	53.3	7,800	115
120	25.8	49.8	9,800	29.6	38.9	7,700	120

# MLC90A-1 S-2

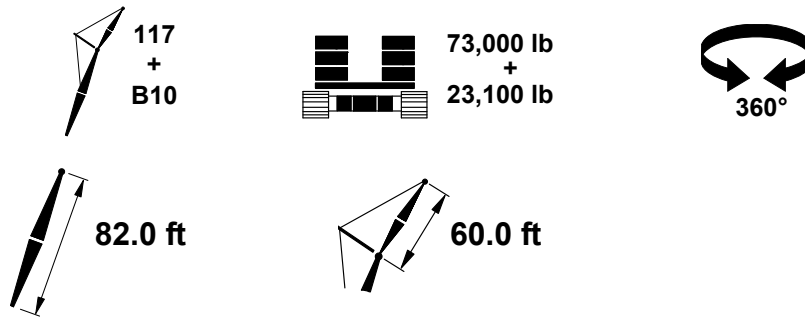
ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
38	80.5		135.6				38
40	79.6		135.0				40
42	78.7		134.5				42
44	77.8		133.8				44
46	76.9		133.2				46
48	76.0		132.5				48
50	75.1		131.8				50
55	72.8		129.9	80.2	126.0	12,800	55
60	70.4		127.7	77.7	123.8	12,100	60
65	68.0		125.3	75.3	121.3	11,500	65
70	65.6		122.6	72.7	118.5	11,000	70
75	63.1		119.6	70.1	115.4	10,500	75
80	60.5		116.4	67.4	112.0	10,100	80
85	57.8		112.7	64.7	108.2	9,700	85
90	55.1		108.8	61.8	104.0	9,300	90
95	52.2		104.3	58.7	99.4	9,000	95
100	49.2		99.5	55.6	94.2	8,700	100
105	46.0		94.0	52.2	88.4	8,500	105
110	42.6		87.9	48.5	81.9	8,200	110
115	38.9		80.9	44.5	74.3	8,000	115
120	34.8		72.8	39.9	65.3	7,800	120
125	30.1		63.2	34.5	54.1	7,700	125
130	24.4		50.9				130

# MLC90A-1 S-2

ASME B30.5

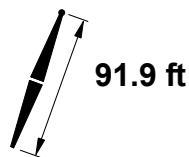
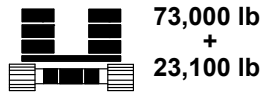
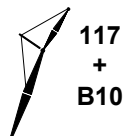


	10°			30°			
	ft	°	ft	lb	ft	lb	
40	80.3	145.2	20,400				40
42	79.5	144.6	20,200				42
44	78.7	144.1	20,100				44
46	77.8	143.5	19,900				46
48	77.0	142.9	19,700				48
50	76.2	142.2	19,600				50
55	74.0	140.4	19,200	80.9	136.4	13,000	55
60	71.9	138.4	18,800	78.7	134.3	12,300	60
65	69.7	136.2	18,500	76.4	132.0	11,800	65
70	67.4	133.8	18,200	74.1	129.5	11,300	70
75	65.1	131.1	17,800	71.7	126.7	10,800	75
80	62.8	128.1	17,500	69.3	123.6	10,400	80
85	60.4	124.8	17,100	66.8	120.2	10,000	85
90	57.9	121.3	16,800	64.2	116.5	9,600	90
95	55.4	117.4	16,100	61.6	112.4	9,300	95
100	52.7	113.1	15,000	58.8	107.9	9,000	100
105	50.0	108.3	14,000	55.9	102.9	8,700	105
110	47.1	103.1	13,100	52.8	97.4	8,500	110
115	44.0	97.4	12,200	49.6	91.3	8,300	115
120	40.7	90.9	11,500	46.0	84.3	8,100	120
125	37.2	83.5	10,800	42.1	76.2	7,900	125
130	33.2	75.0	10,100	37.7	66.7	7,800	130
135	28.7	64.9	9,500	32.3	54.8	7,700	135
140	23.1	52.0	9,000				140



# MLC90A-1 S-2

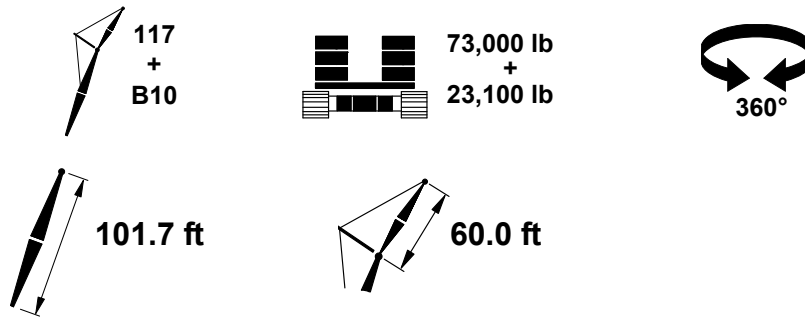
ASME B30.5



ft	10°			30°			ft
	ft	lb	ft	ft	lb	ft	
40	81.0	155.3	20,300				40
42	80.2	154.8	20,200				42
44	79.4	154.3	20,100				44
46	78.6	153.7	19,900				46
48	77.9	153.1	19,800				48
50	77.1	152.5	19,700				50
55	75.1	150.9	19,300				55
60	73.1	149.0	19,000	79.5	144.8	12,500	60
65	71.1	147.0	18,700	77.4	142.7	12,000	65
70	69.0	144.7	18,400	75.3	140.3	11,500	70
75	66.9	142.2	18,100	73.1	137.7	11,100	75
80	64.8	139.5	17,800	70.9	134.9	10,600	80
85	62.6	136.5	17,400	68.6	131.8	10,300	85
90	60.3	133.3	17,100	66.3	128.5	9,900	90
95	58.0	129.8	15,900	63.9	124.8	9,600	95
100	55.7	125.9	14,800	61.4	120.8	9,300	100
105	53.2	121.7	13,800	58.9	116.4	9,000	105
110	50.7	117.2	12,900	56.2	111.6	8,800	110
115	48.0	112.2	12,000	53.4	106.3	8,500	115
120	45.2	106.7	11,300	50.4	100.5	8,300	120
125	42.3	100.6	10,600	47.2	94.0	8,100	125
130	39.1	93.7	10,000	43.8	86.6	8,000	130
135	35.6	86.0	9,400	40.0	78.1	7,800	135
140	31.8	77.1	8,800	35.7	68.1	7,700	140
145	27.4	66.5	8,300	30.4	55.5	7,700	145
150	22.0	53.0	7,700				150

# MLC90A-1 S-2

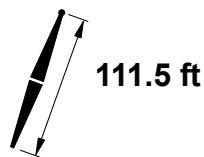
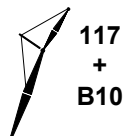
ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
42	80.8	164.9	20,200				42
44	80.1	164.4	20,100				44
46	79.4	163.9	20,000				46
48	78.6	163.3	19,800				48
50	77.9	162.8	19,700				50
55	76.0	161.2	19,400				55
60	74.2	159.5	19,100	80.2	155.1	12,700	60
65	72.3	157.6	18,800	78.2	153.2	12,200	65
70	70.4	155.5	18,500	76.3	151.0	11,700	70
75	68.4	153.2	18,300	74.3	148.6	11,300	75
80	66.5	150.7	18,000	72.2	146.0	10,900	80
85	64.4	148.0	17,600	70.1	143.2	10,500	85
90	62.4	145.0	16,900	68.0	140.1	10,200	90
95	60.3	141.8	15,700	65.8	136.8	9,800	95
100	58.1	138.3	14,500	63.6	133.2	9,600	100
105	55.9	134.5	13,500	61.3	129.2	9,300	105
110	53.6	130.4	12,600	58.9	124.9	9,000	110
115	51.3	125.9	11,800	56.4	120.3	8,800	115
120	48.8	121.1	11,000	53.8	115.2	8,600	120
125	46.3	115.8	10,300	51.1	109.6	8,400	125
130	43.6	110.0	9,700	48.2	103.4	8,200	130
135	40.7	103.6	9,100	45.2	96.5	8,000	135
140	37.6	96.5	8,600	41.8	88.8	7,900	140
145	34.3	88.4	8,000	38.1	79.9	7,800	145
150	30.5	79.1	7,600	33.9	69.3	7,700	150
155	26.2	68.0	7,100				155
160	20.9	53.9	6,300				160

# MLC90A-1 S-2

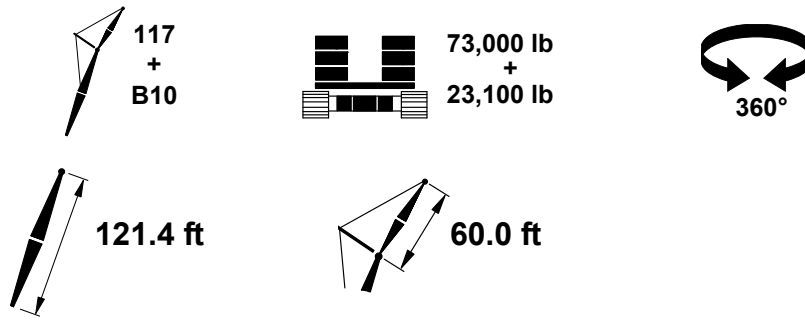
ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
44	80.7		174.5				44
46	80.0		174.0				46
48	79.3		173.5				48
50	78.6		173.0				50
55	76.9		171.5				55
60	75.1		169.9	80.8	165.4	12,900	60
65	73.4		168.1	79.0	163.6	12,400	65
70	71.6		166.2	77.1	161.6	11,900	70
75	69.8		164.0	75.3	159.4	11,500	75
80	67.9		161.7	73.4	156.9	11,100	80
85	66.1		159.2	71.4	154.3	10,700	85
90	64.2		156.4	69.5	151.5	10,400	90
95	62.2		153.4	67.5	148.4	10,100	95
100	60.2		150.2	65.4	145.1	9,800	100
105	58.2		146.8	63.3	141.5	9,500	105
110	56.1		143.0	61.2	137.6	9,300	110
115	54.0		139.0	58.9	133.4	9,000	115
120	51.8		134.7	56.6	128.9	8,800	120
125	49.5		130.0	54.2	124.0	8,600	125
130	47.1		124.9	51.7	118.6	8,400	130
135	44.7		119.3	49.1	112.7	8,200	135
140	42.0		113.2	46.3	106.2	8,100	140
145	39.2		106.5	43.3	99.0	8,000	145
150	36.3		99.1	40.1	90.9	7,500	150
155	33.0		90.7	36.4	81.6	7,000	155
160	29.4		81.0	32.3	70.5	6,600	160
165	25.2		69.4				165

# MLC90A-1 S-2

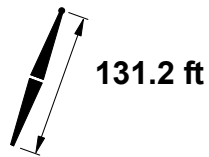
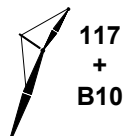
ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
46	80.5	184.1	19,900				46
48	79.9	183.6	19,800				48
50	79.2	183.1	19,700				50
55	77.6	181.8	19,500				55
60	76.0	180.3	19,200				60
65	74.3	178.6	18,900	79.6	173.9	12,600	65
70	72.6	176.7	18,700	77.9	172.0	12,100	70
75	70.9	174.7	18,500	76.1	170.0	11,700	75
80	69.2	172.5	18,300	74.4	167.7	11,300	80
85	67.5	170.2	17,800	72.6	165.3	10,900	85
90	65.7	167.6	16,400	70.8	162.6	10,600	90
95	63.9	164.9	15,200	68.9	159.8	10,300	95
100	62.1	161.9	14,000	67.0	156.7	10,000	100
105	60.2	158.7	13,000	65.1	153.4	9,700	105
110	58.3	155.3	12,100	63.1	149.9	9,500	110
115	56.3	151.6	11,300	61.1	146.0	9,200	115
120	54.3	147.6	10,500	59.0	141.9	9,000	120
125	52.3	143.4	9,800	56.8	137.5	8,800	125
130	50.1	138.8	9,200	54.6	132.7	8,600	130
135	47.9	133.9	8,600	52.3	127.5	8,500	135
140	45.6	128.5	8,100	49.8	121.9	8,300	140
145	43.2	122.7	7,600	47.3	115.7	7,800	145
150	40.6	116.4	7,100	44.5	108.9	7,300	150
155	37.9	109.4	6,600	41.6	101.4	6,900	155
160	35.0	101.6	6,200	38.5	92.9	6,400	160
165	31.9	92.9	5,800	34.9	83.2	6,000	165
170	28.3	82.8	5,500	30.9	71.6	5,500	170
175	24.2	70.8	5,100				175

# MLC90A-1 S-2

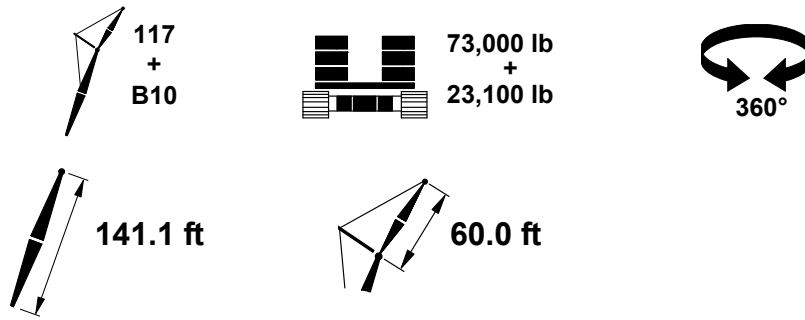
ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
48	80.4	193.7	19,700				48
50	79.8	193.3	19,600				50
55	78.3	192.0	19,400				55
60	76.7	190.5	19,200				60
65	75.1	189.0	18,900			12,700	65
70	73.6	187.2	18,800	80.2	184.2		70
75	72.0	185.3	18,500	78.6	182.5	12,300	75
80	70.3	183.3	18,300	76.9	180.5	11,900	80
85	68.7	181.1	17,600	75.3	178.4	11,500	85
90	67.1	178.7	16,200	73.6	176.1	11,100	90
95	65.4	176.1	15,000	71.9	173.6	10,800	95
100	63.7	173.3	13,800	70.1	171.0	10,500	100
105	61.9	170.3	12,800	68.4	168.1	10,200	105
110	60.2	167.2	11,900	66.6	165.1	9,900	110
115	58.4	163.8	11,100	64.8	161.8	9,700	115
120	56.5	160.1	10,300	62.9	158.3	9,500	120
125	54.6	156.2	9,600	61.0	154.5	9,200	125
130	52.7	152.1	9,000	59.0	150.4	9,000	130
135	50.7	147.6	8,400	57.0	146.1	8,800	135
140	48.6	142.8	7,900	54.9	141.4	8,700	140
145	46.4	137.6	7,400	52.7	136.4	8,200	145
150	44.2	132.0	6,900	50.5	130.9	7,700	150
155	41.8	125.9	6,500	48.1	125.0	7,200	155
160	39.4	119.3	6,000	45.6	118.6	6,700	160
165	36.7	112.1	5,600	42.9	111.5	6,300	165
170	33.9	104.0	5,300	40.1	103.7	5,800	170
175	30.8	95.0	4,900	37.0	94.9	5,400	175
180	27.4	84.5	4,600	33.5	84.7	5,000	180
185	23.3	72.1	4,200	29.5	72.7	4,700	185

# MLC90A-1 S-2

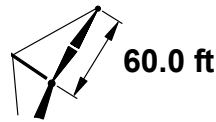
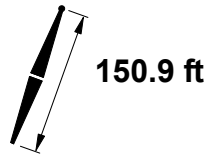
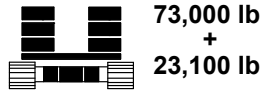
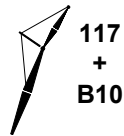
ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
48	80.9	203.8	19,600				48
50	80.3	203.4	19,500				50
55	78.9	202.1	19,300				55
60	77.4	200.8	19,100				60
65	75.9	199.3	18,900				65
70	74.4	197.6	18,700	80.7	194.5	12,900	70
75	72.9	195.9	18,500	79.2	192.8	12,400	75
80	71.4	193.9	18,400	77.6	191.0	12,000	80
85	69.8	191.8	17,400	76.1	189.0	11,700	85
90	68.3	189.6	16,000	74.5	186.8	11,300	90
95	66.7	187.1	14,700	72.9	184.5	11,000	95
100	65.1	184.6	13,600	71.2	182.0	10,700	100
105	63.5	181.8	12,600	69.6	179.3	10,400	105
110	61.8	178.8	11,700	67.9	176.5	10,100	110
115	60.1	175.6	10,800	66.2	173.4	9,900	115
120	58.4	172.3	10,100	64.5	170.1	9,700	120
125	56.7	168.7	9,400	62.7	166.6	9,400	125
130	54.9	164.8	8,800	60.9	162.9	9,200	130
135	53.0	160.7	8,200	59.0	158.9	9,000	135
140	51.1	156.3	7,600	57.1	154.7	8,600	140
145	49.2	151.6	7,100	55.1	150.1	8,000	145
150	47.2	146.6	6,600	53.1	145.2	7,500	150
155	45.1	141.2	6,200	51.0	139.9	7,000	155
160	42.9	135.4	5,800	48.8	134.2	6,500	160
165	40.6	129.1	5,400	46.5	128.1	6,100	165
170	38.2	122.2	5,000	44.1	121.4	5,600	170
175	35.6	114.7	4,700	41.5	114.0	5,200	175
180	32.9	106.4	4,300	38.7	105.9	4,900	180
185	29.8	97.0	4,000	35.7	96.7	4,500	185
190	26.5	86.2	3,600	32.3	86.2	4,100	190
195	22.5	73.2	3,100				195

# MLC90A-1 S-2

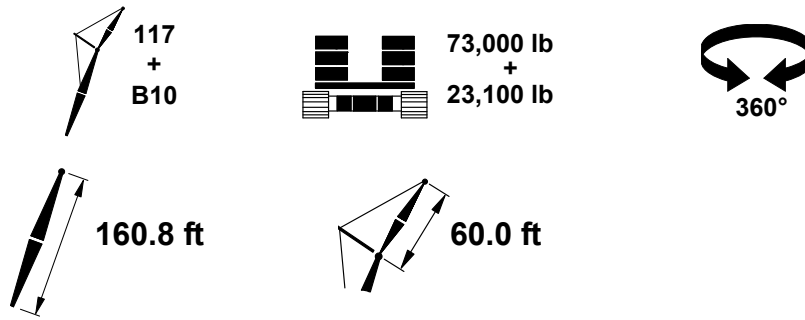
ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
50	80.8	213.4	19,400				50
55	79.4	212.3	19,200				55
60	78.0	211.0	19,000				60
65	76.6	209.6	18,800				65
70	75.2	208.0	18,700				70
75	73.7	206.3	18,400	79.7	203.1	12,600	75
80	72.3	204.5	18,300	78.2	201.4	12,200	80
85	70.8	202.5	17,100	76.8	199.5	11,800	85
90	69.4	200.4	15,700	75.3	197.4	11,500	90
95	67.9	198.1	14,500	73.8	195.3	11,200	95
100	66.4	195.6	13,400	72.2	192.9	10,900	100
105	64.8	193.0	12,300	70.7	190.4	10,600	105
110	63.3	190.2	11,400	69.1	187.7	10,300	110
115	61.7	187.3	10,600	67.5	184.8	10,100	115
120	60.1	184.1	9,800	65.9	181.8	9,800	120
125	58.5	180.8	9,200	64.2	178.5	9,600	125
130	56.8	177.2	8,500	62.5	175.0	9,400	130
135	55.1	173.4	7,900	60.8	171.3	9,000	135
140	53.4	169.3	7,400	59.1	167.4	8,400	140
145	51.6	165.0	6,900	57.2	163.2	7,800	145
150	49.7	160.5	6,400	55.4	158.7	7,300	150
155	47.8	155.6	6,000	53.5	154.0	6,800	155
160	45.9	150.3	5,600	51.5	148.8	6,300	160
165	43.8	144.7	5,200	49.4	143.3	5,900	165
170	41.7	138.7	4,800	47.3	137.4	5,400	170
175	39.5	132.1	4,500	45.0	131.0	5,000	175
180	37.1	125.0	4,100	42.7	124.1	4,700	180
185	34.6	117.2	3,800	40.1	116.4	4,300	185
190	31.9	108.6	3,500	37.4	108.0	4,000	190
195	28.9	98.9	3,100	34.4	98.5	3,600	195
200	25.6	87.7	2,700	31.1	87.6	3,200	200
205	21.8	74.4	2,100				205

# MLC90A-1 S-2

ASME B30.5

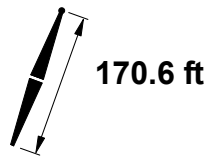
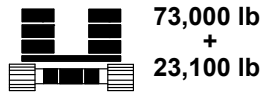
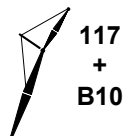


	10°			30°			
	ft	°	ft	lb	ft	lb	
55	79.9	222.4	19,000				55
60	78.5	221.2	18,900				60
65	77.2	219.8	18,600				65
70	75.8	218.3	18,400	80.2	213.3	12,700	70
75	74.5	216.7	18,200	78.8	211.7	12,300	75
80	73.1	215.0	17,900	77.4	209.9	12,000	80
85	71.7	213.1	16,900	76.0	208.0	11,600	85
90	70.3	211.1	15,500	74.6	205.9	11,300	90
95	68.9	208.9	14,200	73.1	203.7	11,000	95
100	67.5	206.6	13,100	71.6	201.3	10,800	100
105	66.0	204.1	12,100	70.2	198.8	10,500	105
110	64.6	201.5	11,200	68.7	196.1	10,300	110
115	63.1	198.7	10,300	67.1	193.2	10,000	115
120	61.6	195.7	9,600	65.6	190.1	9,800	120
125	60.1	192.6	8,900	64.0	186.9	9,500	125
130	58.5	189.2	8,300	62.4	183.5	8,800	130
135	56.9	185.7	7,700	60.8	179.8	8,200	135
140	55.3	181.9	7,100	59.1	175.9	7,600	140
145	53.6	178.0	6,600	57.4	171.8	7,100	145
150	52.0	173.7	6,100	55.6	167.4	6,600	150
155	50.2	169.2	5,700	53.8	162.7	6,100	155
160	48.4	164.5	5,300	51.9	157.7	5,600	160
165	46.6	159.4	4,900	50.0	152.4	5,200	165
170	44.7	153.9	4,500	48.0	146.7	4,800	170
175	42.7	148.1	4,200	45.9	140.5	4,500	175
180	40.6	141.8	3,900	43.7	133.9	4,100	180
185	38.4	135.1	3,600	41.4	126.7	3,800	185
190	36.1	127.7	3,300	38.9	118.8	3,400	190
195	33.7	119.7	2,900	36.2	110.0	3,100	195
200	31.0	110.8	2,400	33.3	100.2	2,700	200
205	28.1	100.8	2,000	30.0	88.9	2,200	205



# MLC90A-1 S-2

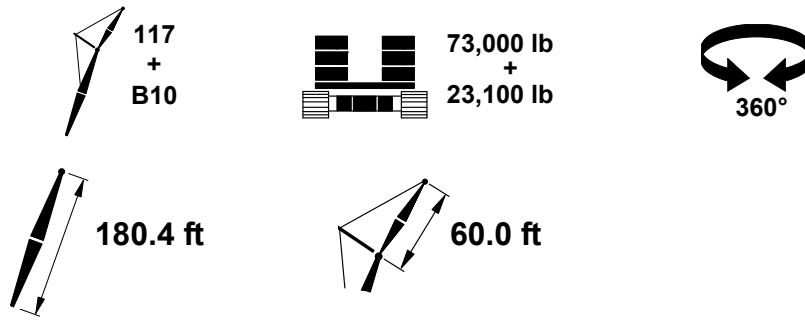
ASME B30.5



ft	10°			30°			ft
	ft	lb	ft	ft	lb	ft	
55	80.3	232.5	18,500				55
60	79.0	231.3	18,300				60
65	77.8	230.0	18,100				65
70	76.5	228.6	17,800	80.6	223.6	12,800	70
75	75.2	227.0	17,600	79.3	222.0	12,500	75
80	73.9	225.4	17,400	78.0	220.3	12,100	80
85	72.5	223.6	16,700	76.6	218.4	11,800	85
90	71.2	221.7	15,300	75.3	216.5	11,500	90
95	69.9	219.6	14,000	73.9	214.4	11,200	95
100	68.5	217.4	12,900	72.5	212.1	10,900	100
105	67.2	215.1	11,900	71.1	209.7	10,700	105
110	65.8	212.6	11,000	69.7	207.2	10,400	110
115	64.4	210.0	10,100	68.2	204.5	10,200	115
120	62.9	207.2	9,400	66.8	201.6	10,000	120
125	61.5	204.2	8,700	65.3	198.5	9,300	125
130	60.0	201.1	8,000	63.8	195.3	8,700	130
135	58.6	197.7	7,500	62.3	191.9	8,000	135
140	57.0	194.2	6,900	60.7	188.2	7,400	140
145	55.5	190.5	6,400	59.1	184.4	6,900	145
150	53.9	186.6	5,900	57.5	180.3	6,400	150
155	52.3	182.4	5,500	55.8	176.0	5,900	155
160	50.6	178.0	5,100	54.1	171.4	5,500	160
165	48.9	173.3	4,700	52.3	166.5	5,100	165
170	47.2	168.3	4,300	50.5	161.4	4,700	170
175	45.4	163.1	4,000	48.6	155.8	4,300	175
180	43.5	157.4	3,700	46.6	149.9	3,900	180
185	41.6	151.4	3,400	44.6	143.5	3,600	185
190	39.6	144.9	3,100	42.4	136.7	3,300	190
195	37.4	137.9	2,800	40.2	129.2	3,000	195
200	35.2	130.3	2,400	37.7	121.1	2,600	200
205	32.8	122.0	2,000	35.1	112.0	2,200	205

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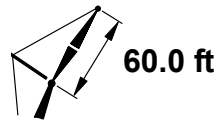
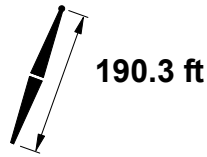
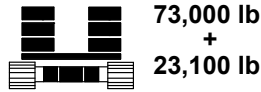
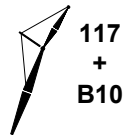
ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
55	80.7	242.5	17,700				55
60	79.5	241.4	17,500				60
65	78.3	240.2	17,400				65
70	77.0	238.8	17,100				70
75	75.8	237.3	17,000	79.8	232.2	12,600	75
80	74.5	235.8	16,800	78.5	230.6	12,300	80
85	73.3	234.1	16,400	77.2	228.9	11,900	85
90	72.0	232.2	15,000	75.9	227.0	11,600	90
95	70.7	230.3	13,800	74.6	225.0	11,300	95
100	69.5	228.2	12,600	73.3	222.8	11,100	100
105	68.2	225.9	11,600	72.0	220.6	10,800	105
110	66.8	223.6	10,700	70.6	218.1	10,600	110
115	65.5	221.1	9,900	69.2	215.6	10,300	115
120	64.2	218.4	9,100	67.9	212.8	9,900	120
125	62.8	215.6	8,400	66.5	210.0	9,100	125
130	61.4	212.7	7,800	65.0	206.9	8,400	130
135	60.0	209.5	7,200	63.6	203.7	7,800	135
140	58.6	206.2	6,700	62.1	200.3	7,200	140
145	57.1	202.7	6,100	60.6	196.7	6,700	145
150	55.7	199.0	5,700	59.1	192.9	6,200	150
155	54.2	195.2	5,200	57.6	188.9	5,700	155
160	52.6	191.1	4,800	56.0	184.6	5,300	160
165	51.0	186.7	4,400	54.3	180.1	4,800	165
170	49.4	182.1	4,100	52.7	175.3	4,400	170
175	47.8	177.3	3,700	50.9	170.3	4,100	175
180	46.1	172.1	3,400	49.1	164.9	3,700	180
185	44.3	166.6	3,100	47.3	159.2	3,400	185
190	42.5	160.8	2,800	45.4	153.0	3,100	190
195	40.6	154.6	2,500	43.4	146.5	2,800	195
200	38.6	147.9	2,100	41.3	139.4	2,500	200
205				39.0	131.7	2,100	205

# MLC90A-1 S-2

ASME B30.5



	10°			30°			
	ft	°	ft	lb	ft	lb	
60	79.9		251.5	16,700			60
65	78.7		250.3	16,500			65
70	77.6		249.0	16,400			70
75	76.4		247.6	16,200	80.2	242.4	12,700
80	75.2		246.1	16,000	79.0	240.9	12,400
85	74.0		244.5	15,900	77.8	239.2	12,100
90	72.8		242.7	14,700	76.5	237.4	11,800
95	71.5		240.8	13,500	75.3	235.5	11,500
100	70.3		238.8	12,400	74.0	233.5	11,200
105	69.1		236.7	11,300	72.7	231.3	11,000
110	67.8		234.5	10,400	71.5	229.0	10,700
115	66.6		232.1	9,600	70.2	226.6	10,500
120	65.3		229.6	8,800	68.9	224.0	9,600
125	64.0		226.9	8,100	67.5	221.2	8,900
130	62.7		224.1	7,500	66.2	218.4	8,200
135	61.3		221.1	6,900	64.8	215.3	7,600
140	60.0		218.0	6,400	63.4	212.1	7,000
145	58.6		214.7	5,900	62.0	208.7	6,400
150	57.2		211.2	5,400	60.6	205.1	5,900
155	55.8		207.6	5,000	59.1	201.4	5,500
160	54.4		203.7	4,500	57.6	197.4	5,000
165	52.9		199.7	4,200	56.1	193.2	4,600
170	51.4		195.4	3,800	54.6	188.8	4,200
175	49.9		190.9	3,400	53.0	184.1	3,800
180	48.3		186.1	3,100	51.3	179.2	3,500
185	46.7		181.1	2,800	49.6	173.9	3,100
190	45.0		175.8	2,500	47.9	168.3	2,800
195	43.3		170.1	2,200	46.1	162.4	2,500
200					44.2	156.1	2,200