

# Liftcrane Jib Capacities

Jib No. 117 on  
 Boom No. B10:290  
 20 610 kg Crane Counterweight  
 0 kg Carbody Counterweight  
 360 Degree Rating

## MLC90A-1 SERIES 1



**LIFTING CAPACITIES:** Chart supplements Boom Capacity chart **No. 9748-AM**. 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 (°) 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 6 480 mm crawlers, 900 mm treads, 4 390 mm gantry, 8 part boom hoist reeving, two 32 mm boom pendants, 20 610 kg crane counterweight, and 0 kg 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 #, load blocks, hooks, weight ball, and slings must remain on ground until combined weights are within rated capacity of chart. Raising is not permitted in shaded areas of table.

**Caution:** Combined weight beneath boom and jib point sheaves must not exceed block weight shown. Total weight beneath jib point must not exceed 325 kg.

**Table 1**

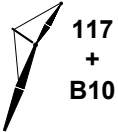
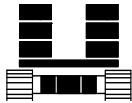


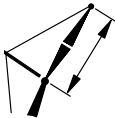



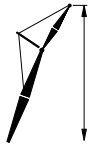

Over End or Side of Crawlers				
Boom Length (m)	Jib No. 117			
	9,1 m	12,2 m	15,2 m	18,3 m
	Block Weight (kg)			
19,0 - 31,0	1 725	1 725	1 725	1 725
34,0	1 725	1 725	1 200	1 200
37,0	1 200	325	325	325
40,0	325	325	325	#
43,0	#	#	#	
46,0	<b>Raising Not Permitted</b>			

**Table 2**

Over End of Blocked Crawlers				
Boom Length (m)	Jib No. 117			
	9,1 m	12,2 m	15,2 m	18,3 m
	Block Weight (kg)			
19,0 - 31,0	1 725	1 725	1 725	1 725
34,0	1 725	1 725	1 725	1 725
37,0	1 725	1 725	1 725	1 200
40,0	1 200	1 200	1 200	325
43,0	325	325	325	325
46,0	325	325	#	#
49,0	#	<b>Raising Not Permitted</b>		

**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.*

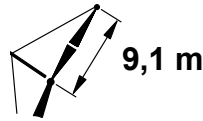
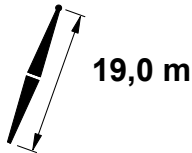
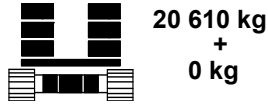
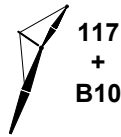
## Explanation of Symbols

	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-1

ASME B30.5

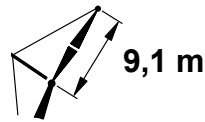
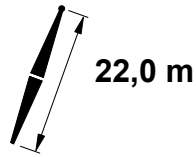
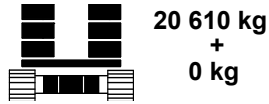
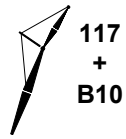


	10°			30°			
	m	m	kg	m	m	kg	m
7,9	80,7	29,8	12 500				7,9
8,0	80,5	29,7	12 500				8,0
10,0	76,4	29,2	12 500				10,0
12,0	72,1	28,5	12 500	77,1	27,7	8 900	12,0
14,0	67,6	27,6	12 500	72,6	26,8	8 200	14,0
16,0	63,0	26,5	10 500	67,8	25,6	7 700	16,0
18,0	58,2	25,2	8 900	62,8	24,3	7 200	18,0
20,0	53,1	23,6	7 700	57,5	22,6	6 900	20,0
22,0	47,5	21,7	6 700	51,6	20,6	6 500	22,0
24,0	41,3	19,3	5 900	44,9	18,1	6 000	24,0
26,0	34,0	16,3	5 200				26,0

REFERENCE ONLY

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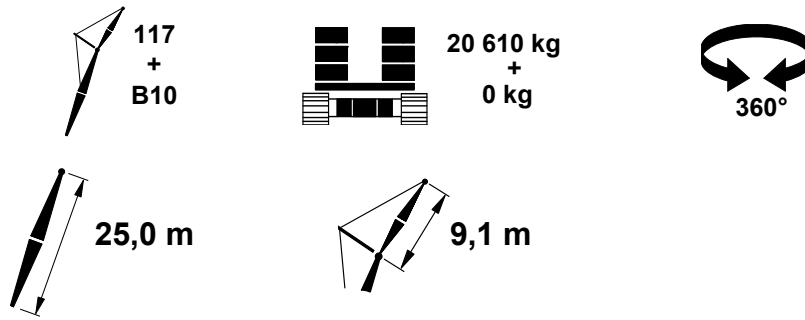


	10°			30°			
	°	m	kg	°	m	kg	m
8,5	80,5	32,7	12 500				8,5
10,0	77,7	32,3	12 500				10,0
12,0	73,9	31,7	12 500	78,5	30,9	9 100	12,0
14,0	70,0	30,9	12 500	74,4	30,1	8 400	14,0
16,0	65,9	29,9	10 500	70,3	29,1	7 900	16,0
18,0	61,7	28,8	8 800	65,9	27,9	7 500	18,0
20,0	57,3	27,4	7 600	61,4	26,5	7 100	20,0
22,0	52,6	25,8	6 600	56,5	24,8	6 700	22,0
24,0	47,6	23,9	5 800	51,2	22,9	5 900	24,0
26,0	42,0	21,6	5 100	45,4	20,4	5 200	26,0
28,0	35,7	18,8	4 500	38,6	17,4	4 600	28,0
30,0	28,0	15,1	4 000				30,0

REFERENCE ONLY

# MLC90A-1 S-1

ASME B30.5

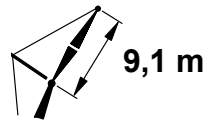
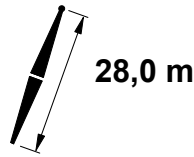
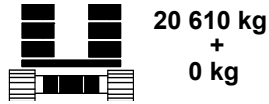
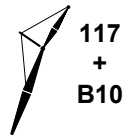


	10°			30°			
	m	°	m	kg	°	m	
9,1	80,3	35,6	12 500				9,1
10,0	78,8	35,4	12 500				10,0
12,0	75,3	34,8	12 500	79,6	34,0	9 200	12,0
14,0	71,8	34,1	12 400	75,9	33,3	8 600	14,0
16,0	68,2	33,3	10 300	72,2	32,4	8 200	16,0
18,0	64,4	32,2	8 700	68,4	31,4	7 700	18,0
20,0	60,5	31,0	7 500	64,4	30,1	7 300	20,0
22,0	56,5	29,7	6 500	60,2	28,7	6 700	22,0
24,0	52,2	28,0	5 700	55,7	27,0	5 800	24,0
26,0	47,6	26,2	5 000	50,9	25,0	5 100	26,0
28,0	42,6	23,9	4 400	45,7	22,7	4 500	28,0
30,0	37,0	21,2	3 900	39,7	19,8	4 000	30,0
32,0	30,4	17,8	3 500	32,4	16,1	3 500	32,0

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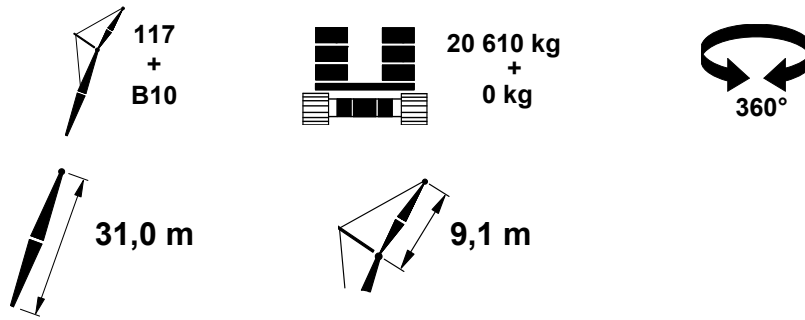


	10°			30°			
	°	m	kg	°	m	kg	
9,8	80,1	38,6	12 500				9,8
10,0	79,7	38,5	12 500				10,0
12,0	76,6	38,0	12 500				12,0
14,0	73,3	37,3	12 300	77,2	36,5	8 800	14,0
16,0	70,0	36,6	10 300	73,8	35,7	8 300	16,0
18,0	66,7	35,6	8 600	70,3	34,8	7 900	18,0
20,0	63,2	34,6	7 400	66,8	33,7	7 500	20,0
22,0	59,6	33,3	6 400	63,0	32,4	6 600	22,0
24,0	55,9	31,9	5 600	59,2	30,9	5 800	24,0
26,0	51,9	30,3	4 900	55,1	29,2	5 100	26,0
28,0	47,7	28,4	4 400	50,7	27,3	4 500	28,0
30,0	43,2	26,2	3 900	45,9	25,0	3 900	30,0
32,0	38,1	23,6	3 400	40,6	22,2	3 500	32,0
34,0	32,4	20,5	3 100	34,4	18,8	3 100	34,0
36,0	25,4	16,3	2 700				36,0

REFERENCE ONLY

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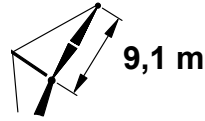
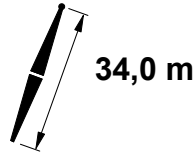
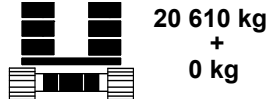
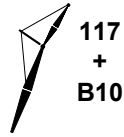


m	10°			30°			m
	°	m	kg	°	m	kg	
9,8	80,9	41,6	12 500				9,8
10,0	80,5	41,6	12 500				10,0
12,0	77,6	41,1	12 500				12,0
14,0	74,6	40,5	12 200	78,2	39,6	9 000	14,0
16,0	71,6	39,8	10 100	75,1	38,9	8 500	16,0
18,0	68,5	38,9	8 500	71,9	38,0	8 100	18,0
20,0	65,4	38,0	7 300	68,7	37,1	7 500	20,0
22,0	62,1	36,9	6 300	65,4	35,9	6 500	22,0
24,0	58,8	35,6	5 500	61,9	34,6	5 700	24,0
26,0	55,3	34,1	4 800	58,3	33,1	5 000	26,0
28,0	51,6	32,5	4 200	54,5	31,4	4 400	28,0
30,0	47,7	30,6	3 800	50,5	29,5	3 800	30,0
32,0	43,5	28,5	3 300	46,1	27,2	3 400	32,0
34,0	39,0	26,0	2 900	41,3	24,6	3 000	34,0
36,0	33,9	23,0	2 600	35,8	21,3	2 600	36,0
38,0	27,8	19,2	2 300				38,0



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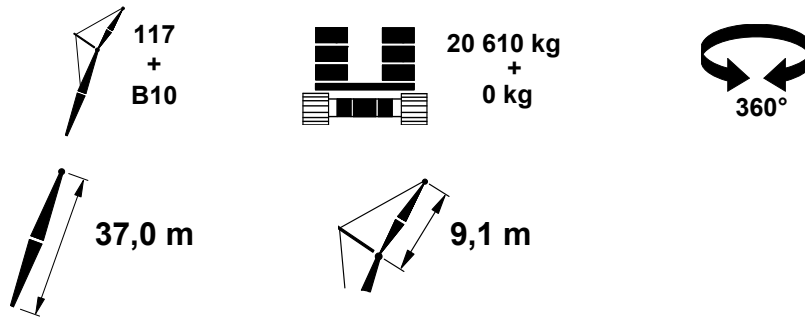


	10°			30°				
	Diagram	Diagram	Diagram	Diagram	Diagram	Diagram		
	m	°	m	kg	°	m	kg	m
10,4	80,7	44,6	12 500					10,4
12,0	78,5	44,2	12 500					12,0
14,0	75,7	43,6	12 100	79,0	42,8	9 100		14,0
16,0	72,9	43,0	10 000	76,2	42,1	8 700		16,0
18,0	70,1	42,2	8 400	73,3	41,3	8 300		18,0
20,0	67,2	41,3	7 200	70,3	40,4	7 500		20,0
22,0	64,2	40,3	6 200	67,3	39,3	6 400		22,0
24,0	61,2	39,1	5 400	64,2	38,2	5 600		24,0
26,0	58,1	37,8	4 700	60,9	36,8	4 900		26,0
28,0	54,8	36,4	4 100	57,6	35,3	4 300		28,0
30,0	51,3	34,7	3 700	54,0	33,6	3 800		30,0
32,0	47,7	32,9	3 200	50,3	31,7	3 300		32,0
34,0	43,9	30,7	2 800	46,3	29,5	2 900		34,0
36,0	39,7	28,3	2 500	41,9	26,9	2 600		36,0
38,0	35,1	25,4	2 200	36,9	23,8	2 300		38,0
40,0	29,7	21,9	1 900					40,0
42,0	23,2	17,4	1 700					42,0

REFERENCE ONLY

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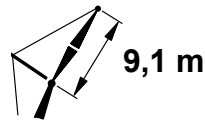
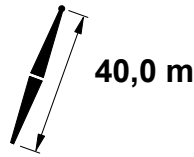
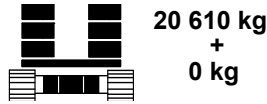
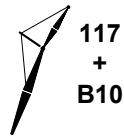
ASME B30.5



m	10°			30°			m
	°	m	kg	°	m	kg	
11,0	80,5	47,5	12 500				11,0
12,0	79,2	47,3	12 500				12,0
14,0	76,7	46,8	12 000	79,8	45,9	9 200	14,0
16,0	74,1	46,1	9 900	77,2	45,3	8 800	16,0
18,0	71,5	45,4	8 300	74,5	44,5	8 400	18,0
20,0	68,8	44,6	7 100	71,7	43,7	7 400	20,0
22,0	66,1	43,7	6 100	69,0	42,7	6 300	22,0
24,0	63,3	42,6	5 300	66,1	41,7	5 500	24,0
26,0	60,4	41,4	4 600	63,2	40,5	4 800	26,0
28,0	57,4	40,1	4 000	60,1	39,1	4 200	28,0
30,0	54,4	38,6	3 500	57,0	37,6	3 700	30,0
32,0	51,2	37,0	3 100	53,6	35,9	3 200	32,0
34,0	47,8	35,1	2 700	50,1	33,9	2 800	34,0
36,0	44,2	33,0	2 400	46,4	31,7	2 500	36,0
38,0	40,3	30,6	2 100	42,4	29,2	2 200	38,0
40,0	36,1	27,8	1 800	37,9	26,3	1 900	40,0
42,0	31,4	24,6	1 600	32,8	22,8	1 600	42,0
44,0	25,7	20,5	1 400				44,0

# MLC90A-1 S-1

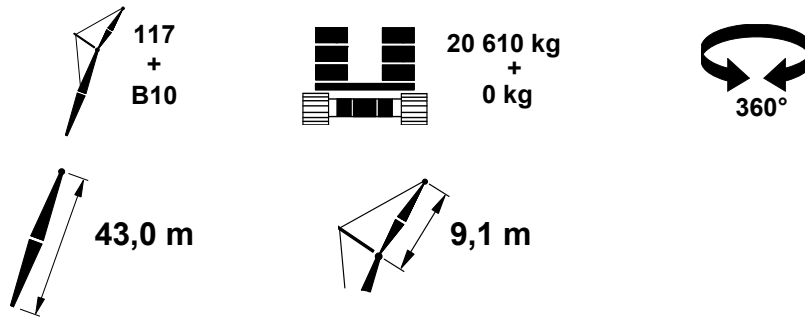
ASME B30.5



	10°			30°			
	m	°	m	kg	°	m	
11,6	80,4	50,4	12 500				11,6
12,0	79,9	50,3	12 500				12,0
14,0	77,5	49,8	11 900	80,4	49,0	9 300	14,0
16,0	75,1	49,3	9 800	78,0	48,4	8 900	16,0
18,0	72,6	48,6	8 200	75,5	47,7	8 400	18,0
20,0	70,2	47,8	7 000	72,9	46,9	7 300	20,0
22,0	67,6	47,0	6 000	70,4	46,0	6 300	22,0
24,0	65,0	46,0	5 200	67,7	45,1	5 400	24,0
26,0	62,4	44,9	4 500	65,0	43,9	4 700	26,0
28,0	59,7	43,7	3 900	62,2	42,7	4 100	28,0
30,0	56,9	42,4	3 400	59,4	41,3	3 600	30,0
32,0	54,0	40,9	3 000	56,4	39,8	3 100	32,0
34,0	51,0	39,2	2 600	53,3	38,1	2 800	34,0
36,0	47,8	37,3	2 300	50,0	36,1	2 400	36,0
38,0	44,4	35,3	2 000	46,5	34,0	2 100	38,0
40,0	40,9	32,9	1 800	42,8	31,5	1 800	40,0
42,0	37,0	30,2	1 500	38,7	28,7	1 600	42,0
44,0	32,7	27,1	1 300	34,1	25,4	1 300	44,0
46,0	27,7	23,3	1 100				46,0

# MLC90A-1 S-1

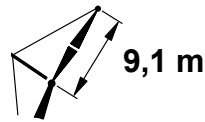
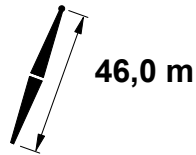
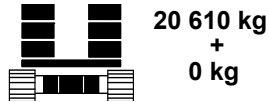
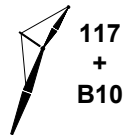
ASME B30.5



m	10°			30°			m
	°	m	kg	°	m	kg	
11,6	80,9	53,5	12 500				11,6
12,0	80,5	53,4	12 500				12,0
14,0	78,2	53,0	11 800	81,0	52,1	9 400	14,0
16,0	76,0	52,4	9 700	78,7	51,5	9 100	16,0
18,0	73,7	51,8	8 100	76,4	50,9	8 400	18,0
20,0	71,4	51,1	6 900	74,0	50,2	7 200	20,0
22,0	69,0	50,3	5 900	71,6	49,3	6 200	22,0
24,0	66,6	49,4	5 100	69,2	48,4	5 300	24,0
26,0	64,2	48,4	4 400	66,7	47,4	4 600	26,0
28,0	61,6	47,2	3 800	64,1	46,2	4 000	28,0
30,0	59,1	46,0	3 300	61,5	45,0	3 500	30,0
32,0	56,4	44,6	2 900	58,7	43,6	3 000	32,0
34,0	53,7	43,1	2 500	55,9	42,0	2 700	34,0
36,0	50,8	41,4	2 200	53,0	40,3	2 300	36,0
38,0	47,8	39,6	1 900	49,9	38,4	2 000	38,0
40,0	44,7	37,5	1 600	46,7	36,3	1 700	40,0
42,0	41,4	35,2	1 400	43,2	33,8	1 500	42,0
44,0	37,7	32,6	1 200	39,4	31,1	1 200	44,0
46,0	33,8	29,6	1 000	35,2	27,9	1 000	46,0

# MLC90A-1 S-1

ASME B30.5

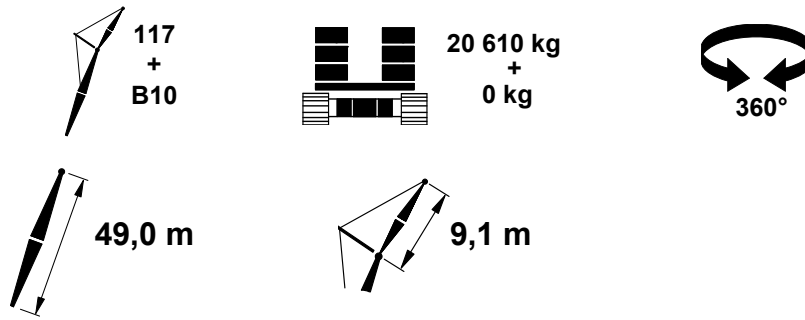


	10°			30°				
	Diagram	Diagram	Diagram	Diagram	Diagram	Diagram		
	m	°	m	kg	°	m	kg	m
12,2	80,8	56,4	12 500					12,2
14,0	78,9	56,0	11 700					14,0
16,0	76,8	55,5	9 600	79,3	54,6	9 200		16,0
18,0	74,6	54,9	8 000	77,2	54,0	8 300		18,0
20,0	72,4	54,3	6 800	74,9	53,3	7 100		20,0
22,0	70,2	53,5	5 800	72,7	52,6	6 100		22,0
24,0	68,0	52,7	5 000	70,4	51,7	5 200		24,0
26,0	65,7	51,7	4 300	68,1	50,8	4 500		26,0
28,0	63,3	50,7	3 700	65,7	49,7	3 900		28,0
30,0	60,9	49,5	3 200	63,2	48,5	3 400		30,0
32,0	58,5	48,3	2 800	60,7	47,2	2 900		32,0
34,0	56,0	46,9	2 400	58,1	45,8	2 600		34,0
36,0	53,4	45,3	2 100	55,5	44,2	2 200		36,0
38,0	50,7	43,7	1 800	52,7	42,5	1 900		38,0
40,0	47,8	41,8	1 500	49,8	40,6	1 600		40,0
42,0	44,9	39,8	1 300	46,7	38,5	1 400		42,0
44,0	41,7	37,5	1 100	43,5	36,1	1 100		44,0

REFERENCE ONLY

# MLC90A-1 S-1

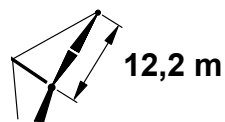
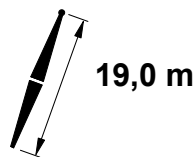
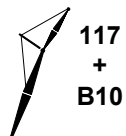
ASME B30.5



	10°			30°			
	m	°	m	kg	°	m	
12,8	80,7	59,4	12 500				12,8
14,0	79,5	59,1	11 600				14,0
16,0	77,5	58,6	9 500	79,9	57,7	9 300	16,0
18,0	75,4	58,1	7 900	77,9	57,2	8 300	18,0
20,0	73,4	57,5	6 600	75,8	56,5	7 000	20,0
22,0	71,3	56,7	5 700	73,6	55,8	6 000	22,0
24,0	69,2	55,9	4 800	71,5	55,0	5 100	24,0
26,0	67,0	55,1	4 200	69,3	54,1	4 400	26,0
28,0	64,8	54,1	3 600	67,1	53,1	3 800	28,0
30,0	62,6	53,0	3 100	64,8	52,0	3 300	30,0
32,0	60,3	51,8	2 700	62,5	50,8	2 800	32,0
34,0	58,0	50,6	2 300	60,1	49,5	2 500	34,0
36,0	55,6	49,1	2 000	57,6	48,1	2 100	36,0
38,0	53,1	47,6	1 700	55,1	46,5	1 800	38,0
40,0	50,6	45,9	1 400	52,5	44,8	1 500	40,0
42,0	47,9	44,1	1 200	49,7	42,9	1 300	42,0
44,0	45,1	42,0	1 000	46,8	40,8	1 000	44,0

# MLC90A-1 S-1

ASME B30.5

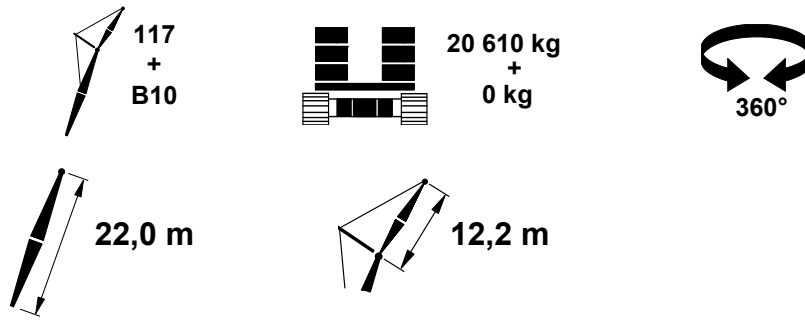


m	10°			30°			m
	°	m	kg	°	m	kg	
9,1	80,9	32,5	12 000				9,1
10,0	79,2	32,3	11 800				10,0
12,0	75,4	31,7	11 400				12,0
14,0	71,5	30,9	11 100	77,6	29,9	7 100	14,0
16,0	67,4	29,9	10 500	73,4	28,9	6 600	16,0
18,0	63,2	28,8	9 100	69,0	27,7	6 200	18,0
20,0	58,8	27,4	7 800	64,4	26,3	5 800	20,0
22,0	54,1	25,8	6 900	59,5	24,6	5 500	22,0
24,0	49,1	23,9	6 000	54,2	22,6	5 300	24,0
26,0	43,5	21,6	5 300	48,2	20,2	5 100	26,0
28,0	37,2	18,8	4 800	41,3	17,0	4 800	28,0
30,0	29,5	15,1	4 300				30,0

REFERENCE ONLY

# MLC90A-1 S-1

ASME B30.5



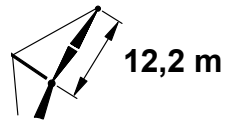
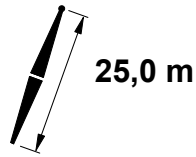
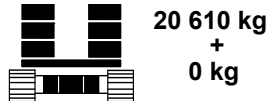
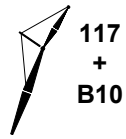
m	10°			30°			m
	°	m	kg	°	m	kg	
9,8	80,6	35,5	11 900				9,8
10,0	80,2	35,4	11 900				10,0
12,0	76,7	34,8	11 500				12,0
14,0	73,2	34,1	11 200	78,8	33,1	7 200	14,0
16,0	69,6	33,3	10 500	75,1	32,2	6 800	16,0
18,0	65,8	32,2	9 000	71,2	31,2	6 400	18,0
20,0	61,9	31,1	7 800	67,2	29,9	6 000	20,0
22,0	57,9	29,7	6 800	62,9	28,5	5 700	22,0
24,0	53,6	28,0	5 900	58,4	26,8	5 500	24,0
26,0	49,0	26,2	5 300	53,6	24,8	5 200	26,0
28,0	44,0	23,9	4 700	48,3	22,4	4 800	28,0
30,0	38,4	21,2	4 200	42,2	19,5	4 300	30,0
32,0	31,9	17,8	3 700	34,8	15,7	3 800	32,0

REFERENCE ONLY



# MLC90A-1 S-1

ASME B30.5

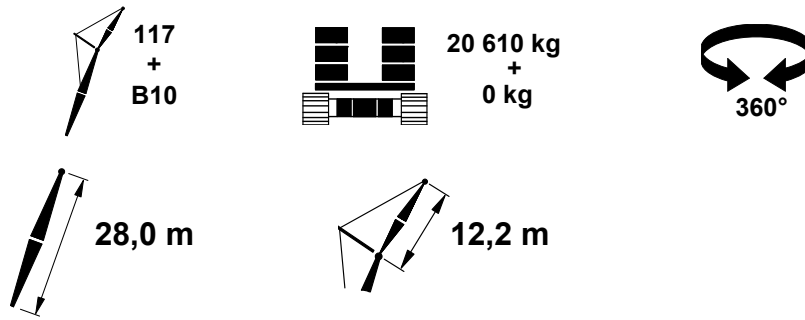


	10°			30°			
	°	m	kg	°	m	kg	m
10,4	80,4	38,4	11 900				10,4
12,0	77,8	38,0	11 600				12,0
14,0	74,6	37,3	11 300	79,8	36,3	7 400	14,0
16,0	71,3	36,5	10 500	76,4	35,5	6 900	16,0
18,0	67,9	35,6	8 900	72,9	34,5	6 500	18,0
20,0	64,5	34,5	7 600	69,3	33,4	6 200	20,0
22,0	60,9	33,3	6 600	65,6	32,1	5 900	22,0
24,0	57,1	31,9	5 800	61,6	30,6	5 700	24,0
26,0	53,1	30,3	5 100	57,5	28,9	5 300	26,0
28,0	48,9	28,4	4 600	53,1	27,0	4 700	28,0
30,0	44,4	26,2	4 100	48,2	24,6	4 200	30,0
32,0	39,4	23,6	3 600	42,8	21,8	3 700	32,0
34,0	33,6	20,4	3 200	36,4	18,3	3 300	34,0
36,0	26,5	16,3	2 900				36,0

REFERENCED

# MLC90A-1 S-1

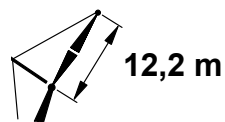
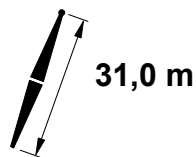
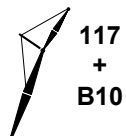
ASME B30.5



	10°			30°			
	m	°	m	kg	°	m	
11,0	80,3	41,3	11 800				11,0
12,0	78,8	41,1	11 700				12,0
14,0	75,8	40,5	11 400	80,6	39,4	7 500	14,0
16,0	72,8	39,8	10 400	77,5	38,7	7 100	16,0
18,0	69,7	38,9	8 800	74,3	37,8	6 700	18,0
20,0	66,6	38,0	7 600	71,1	36,8	6 400	20,0
22,0	63,3	36,9	6 600	67,7	35,7	6 100	22,0
24,0	60,0	35,6	5 700	64,2	34,4	5 800	24,0
26,0	56,5	34,1	5 100	60,6	32,9	5 200	26,0
28,0	52,8	32,5	4 500	56,8	31,1	4 600	28,0
30,0	48,9	30,6	4 000	52,7	29,2	4 100	30,0
32,0	44,7	28,5	3 600	48,3	26,9	3 700	32,0
34,0	40,2	26,0	3 200	43,4	24,2	3 300	34,0
36,0	35,0	22,9	2 800	37,8	20,9	2 900	36,0
38,0	29,0	19,2	2 500				38,0

# MLC90A-1 S-1

ASME B30.5

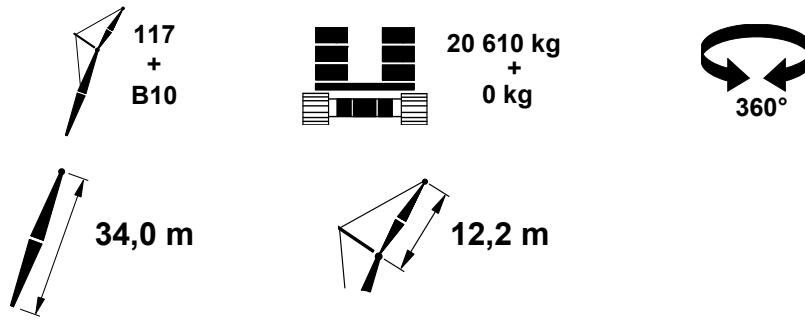


m	10°			30°			m
	°	m	kg	°	m	kg	
11,0	81,0	44,4	11 800				11,0
12,0	79,6	44,2	11 700				12,0
14,0	76,8	43,6	11 500				14,0
16,0	74,0	42,9	10 300	78,4	41,8	7 200	16,0
18,0	71,2	42,2	8 700	75,5	41,0	6 800	18,0
20,0	68,3	41,3	7 400	72,5	40,1	6 500	20,0
22,0	65,4	40,3	6 500	69,5	39,1	6 200	22,0
24,0	62,3	39,1	5 600	66,3	37,9	5 800	24,0
26,0	59,2	37,8	5 000	63,1	36,6	5 200	26,0
28,0	55,9	36,4	4 400	59,7	35,0	4 600	28,0
30,0	52,4	34,7	3 900	56,1	33,3	4 000	30,0
32,0	48,8	32,8	3 400	52,3	31,4	3 600	32,0
34,0	45,0	30,7	3 100	48,2	29,1	3 200	34,0
36,0	40,8	28,3	2 700	43,8	26,5	2 800	36,0
38,0	36,2	25,4	2 400	38,8	23,4	2 500	38,0
40,0	30,8	21,9	2 200				40,0
42,0	24,3	17,4	1 900				42,0

REFERENCE ONLY

# MLC90A-1 S-1

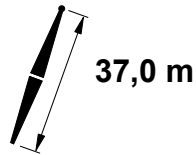
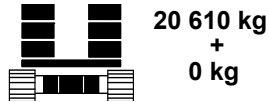
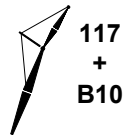
ASME B30.5



m	10°			30°			m
	°	m	kg	°	m	kg	
11,6	80,8	47,3	11 800				11,6
12,0	80,3	47,2	11 700				12,0
14,0	77,7	46,7	11 500				14,0
16,0	75,1	46,1	10 200	79,2	45,0	7 300	16,0
18,0	72,5	45,4	8 600	76,5	44,2	6 900	18,0
20,0	69,8	44,6	7 300	73,8	43,4	6 600	20,0
22,0	67,1	43,6	6 400	71,0	42,4	6 300	22,0
24,0	64,3	42,6	5 500	68,1	41,3	5 800	24,0
26,0	61,4	41,4	4 800	65,1	40,1	5 100	26,0
28,0	58,5	40,1	4 300	62,1	38,8	4 500	28,0
30,0	55,4	38,6	3 800	58,9	37,2	3 900	30,0
32,0	52,2	36,9	3 300	55,5	35,5	3 500	32,0
34,0	48,8	35,1	3 000	52,0	33,5	3 100	34,0
36,0	45,2	33,0	2 600	48,2	31,3	2 700	36,0
38,0	41,3	30,6	2 300	44,1	28,8	2 400	38,0
40,0	37,1	27,8	2 100	39,6	25,8	2 100	40,0
42,0	32,3	24,5	1 800	34,3	22,2	1 900	42,0
44,0	26,7	20,4	1 600				44,0

# MLC90A-1 S-1

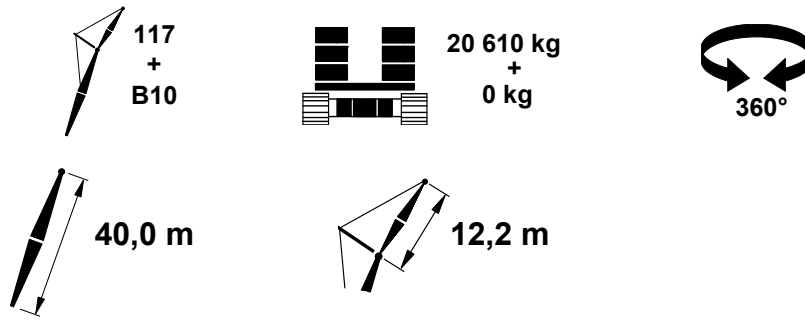
ASME B30.5



m	10°			30°			m
	°	m	kg	°	m	kg	
12,2	80,6	50,3	11 700				12,2
14,0	78,5	49,8	11 500				14,0
16,0	76,1	49,3	10 100	79,9	48,1	7 400	16,0
18,0	73,6	48,6	8 500	77,4	47,4	7 000	18,0
20,0	71,1	47,8	7 200	74,9	46,7	6 700	20,0
22,0	68,6	47,0	6 200	72,3	45,8	6 400	22,0
24,0	66,0	46,0	5 400	69,6	44,8	5 700	24,0
26,0	63,4	44,9	4 700	66,9	43,6	5 000	26,0
28,0	60,7	43,7	4 200	64,1	42,4	4 400	28,0
30,0	57,9	42,3	3 700	61,2	41,0	3 900	30,0
32,0	54,9	40,8	3 200	58,2	39,4	3 400	32,0
34,0	51,9	39,2	2 900	55,1	37,7	3 000	34,0
36,0	48,8	37,3	2 500	51,8	35,8	2 600	36,0
38,0	45,4	35,2	2 200	48,2	33,6	2 300	38,0
40,0	41,8	32,9	1 900	44,4	31,1	2 000	40,0
42,0	37,9	30,2	1 700	40,3	28,2	1 800	42,0
44,0	33,6	27,1	1 500	35,6	24,8	1 500	44,0
46,0	28,6	23,3	1 300				46,0

# MLC90A-1 S-1

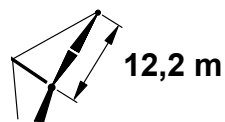
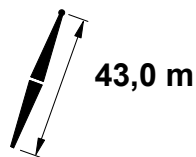
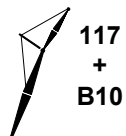
ASME B30.5



	10°			30°			
	m	°	m	kg	°	m	
12,8	80,5	53,2	11 600				12,8
14,0	79,1	52,9	11 500				14,0
16,0	76,9	52,4	10 000				16,0
18,0	74,6	51,8	8 400	78,2	50,6	7 100	18,0
20,0	72,3	51,0	7 100	75,8	49,8	6 800	20,0
22,0	69,9	50,2	6 100	73,4	49,0	6 400	22,0
24,0	67,5	49,3	5 300	70,9	48,1	5 600	24,0
26,0	65,0	48,3	4 600	68,4	47,1	4 900	26,0
28,0	62,5	47,2	4 100	65,8	45,9	4 300	28,0
30,0	60,0	46,0	3 600	63,2	44,6	3 800	30,0
32,0	57,3	44,6	3 100	60,4	43,2	3 300	32,0
34,0	54,6	43,1	2 800	57,6	41,6	2 900	34,0
36,0	51,7	41,4	2 400	54,6	39,9	2 600	36,0
38,0	48,7	39,5	2 100	51,5	38,0	2 300	38,0
40,0	45,6	37,5	1 900	48,2	35,8	2 000	40,0
42,0	42,2	35,2	1 600	44,7	33,4	1 700	42,0
44,0	38,6	32,5	1 400	40,9	30,6	1 500	44,0
46,0	34,6	29,5	1 200	36,6	27,3	1 200	46,0
48,0	30,2	26,0	1 000				48,0

# MLC90A-1 S-1

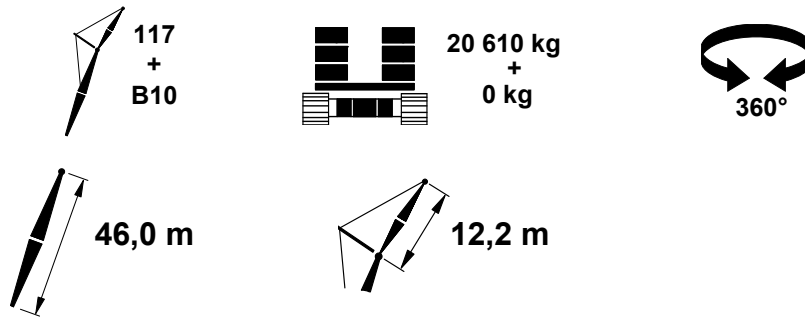
ASME B30.5



	10°			30°			
	m	°	m	kg	°	m	
13,4	80,4	56,1	11 500				13,4
14,0	79,8	56,0	11 500				14,0
16,0	77,6	55,5	9 900				16,0
18,0	75,5	54,9	8 300	78,9	53,7	7 200	18,0
20,0	73,3	54,3	7 000	76,7	53,1	6 900	20,0
22,0	71,1	53,5	6 000	74,4	52,3	6 400	22,0
24,0	68,8	52,6	5 200	72,1	51,4	5 500	24,0
26,0	66,5	51,7	4 500	69,7	50,4	4 800	26,0
28,0	64,2	50,7	4 000	67,3	49,4	4 200	28,0
30,0	61,8	49,5	3 500	64,9	48,2	3 700	30,0
32,0	59,3	48,2	3 000	62,4	46,9	3 200	32,0
34,0	56,8	46,9	2 700	59,8	45,4	2 800	34,0
36,0	54,2	45,3	2 300	57,1	43,9	2 500	36,0
38,0	51,5	43,6	2 000	54,3	42,1	2 200	38,0
40,0	48,7	41,8	1 800	51,3	40,2	1 900	40,0
42,0	45,7	39,7	1 500	48,2	38,1	1 600	42,0
44,0	42,6	37,5	1 300	44,9	35,7	1 400	44,0
46,0	39,2	34,9	1 100	41,4	33,0	1 200	46,0
48,0				37,5	29,8	1 000	48,0

# MLC90A-1 S-1

ASME B30.5



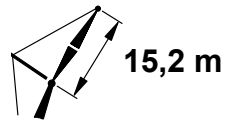
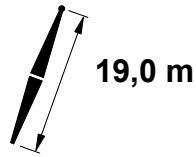
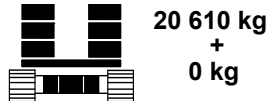
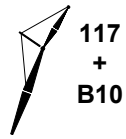
m	10°			30°			m
	°	m	kg	°	m	kg	
13,4	80,9	59,2	11 500				13,4
14,0	80,3	59,1	11 400				14,0
16,0	78,3	58,6	9 800				16,0
18,0	76,2	58,0	8 200	79,5	56,8	7 300	18,0
20,0	74,2	57,4	6 900	77,4	56,2	7 000	20,0
22,0	72,1	56,7	5 900	75,3	55,5	6 300	22,0
24,0	70,0	55,9	5 100	73,1	54,7	5 500	24,0
26,0	67,8	55,0	4 400	70,9	53,7	4 700	26,0
28,0	65,6	54,0	3 800	68,6	52,7	4 100	28,0
30,0	63,4	53,0	3 400	66,4	51,6	3 600	30,0
32,0	61,1	51,8	2 900	64,0	50,4	3 100	32,0
34,0	58,8	50,5	2 500	61,6	49,1	2 700	34,0
36,0	56,4	49,1	2 200	59,1	47,7	2 400	36,0
38,0	53,9	47,5	1 900	56,6	46,1	2 100	38,0
40,0	51,3	45,9	1 600	53,9	44,3	1 800	40,0
42,0	48,7	44,0	1 400	51,1	42,4	1 500	42,0
44,0	45,9	42,0	1 200	48,2	40,3	1 300	44,0
46,0	42,9	39,7	1 000	45,1	37,9	1 100	46,0

REFERENCE ONLY



# MLC90A-1 S-1

ASME B30.5

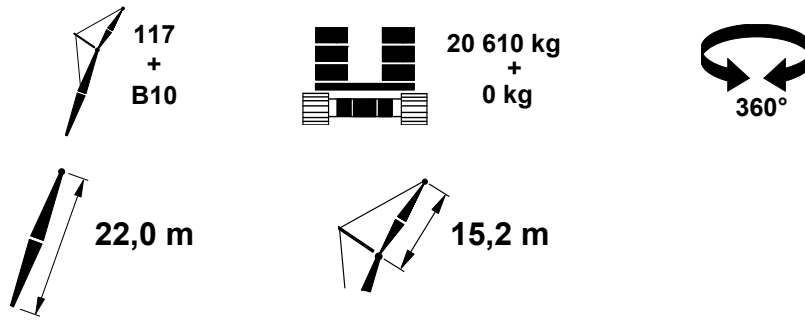


m	10°			30°			m
	°	m	kg	°	m	kg	
10,4	80,5	35,4	10 400				10,4
12,0	77,6	34,9	10 100				12,0
14,0	74,1	34,2	9 800				14,0
16,0	70,5	33,3	9 500	77,6	32,2	6 100	16,0
18,0	66,7	32,3	9 100	73,7	31,2	5 700	18,0
20,0	62,9	31,1	7 900	69,7	29,9	5 300	20,0
22,0	58,8	29,7	7 000	65,4	28,5	5 000	22,0
24,0	54,5	28,1	6 100	60,9	26,8	4 800	24,0
26,0	50,0	26,2	5 500	56,1	24,8	4 500	26,0
28,0	45,0	24,0	4 900	50,8	22,4	4 300	28,0
30,0	39,4	21,3	4 400	44,7	19,5	4 200	30,0
32,0	32,9	17,9	3 900	37,2	15,6	4 000	32,0

REFERENCE ONLY

# MLC90A-1 S-1

ASME B30.5

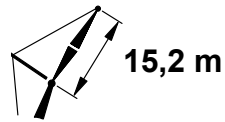
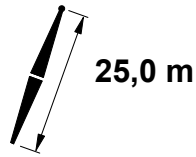
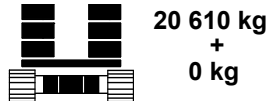
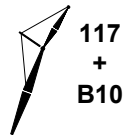


m	10°			30°			m
	°	m	kg	°	m	kg	
11,0	80,3	38,3	10 300				11,0
12,0	78,7	38,0	10 200				12,0
14,0	75,4	37,4	9 900				14,0
16,0	72,2	36,6	9 700	78,7	35,4	6 200	16,0
18,0	68,8	35,7	9 000	75,2	34,5	5 800	18,0
20,0	65,3	34,6	7 900	71,6	33,4	5 500	20,0
22,0	61,7	33,4	6 900	67,9	32,1	5 200	22,0
24,0	58,0	32,0	6 000	63,9	30,6	4 900	24,0
26,0	54,0	30,3	5 400	59,8	28,9	4 700	26,0
28,0	49,8	28,5	4 800	55,4	26,9	4 500	28,0
30,0	45,3	26,3	4 300	50,5	24,6	4 300	30,0
32,0	40,3	23,7	3 800	45,1	21,8	3 900	32,0
34,0	34,6	20,5	3 500	38,7	18,3	3 500	34,0
36,0	27,6	16,4	3 100				36,0

REFERENCE ONLY

# MLC90A-1 S-1

ASME B30.5

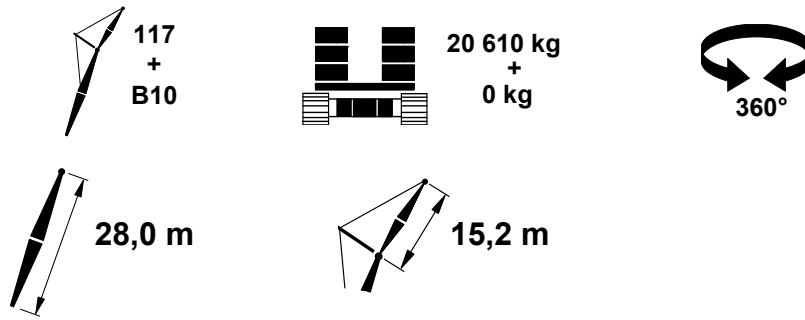


m	10°			30°			m
	°	m	kg	°	m	kg	
11,6	80,2	41,2	10 300				11,6
12,0	79,5	41,1	10 200				12,0
14,0	76,6	40,5	10 000				14,0
16,0	73,6	39,8	9 700	79,6	38,6	6 300	16,0
18,0	70,5	39,0	8 900	76,4	37,7	5 900	18,0
20,0	67,3	38,0	7 700	73,2	36,7	5 600	20,0
22,0	64,1	36,9	6 700	69,8	35,6	5 300	22,0
24,0	60,7	35,6	5 900	66,3	34,3	5 100	24,0
26,0	57,2	34,2	5 200	62,7	32,8	4 800	26,0
28,0	53,6	32,5	4 700	58,8	31,1	4 600	28,0
30,0	49,7	30,7	4 200	54,7	29,1	4 300	30,0
32,0	45,5	28,5	3 700	50,3	26,8	3 900	32,0
34,0	41,0	26,0	3 400	45,4	24,1	3 500	34,0
36,0	35,9	23,0	3 000	39,7	20,8	3 100	36,0
38,0	29,8	19,3	2 700	32,8	16,5	2 700	38,0

REFERENCE ONLY

# MLC90A-1 S-1

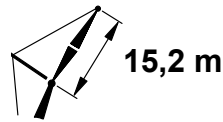
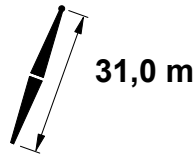
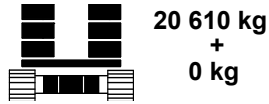
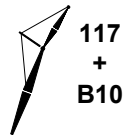
ASME B30.5



m	10°			30°			m
	°	m	kg	°	m	kg	
11,6	80,9	44,3	10 300				11,6
12,0	80,3	44,2	10 300				12,0
14,0	77,5	43,7	10 100				14,0
16,0	74,8	43,0	9 800				16,0
18,0	71,9	42,2	8 900	77,5	41,0	6 100	18,0
20,0	69,0	41,4	7 700	74,5	40,1	5 700	20,0
22,0	66,1	40,3	6 700	71,4	39,0	5 500	22,0
24,0	63,0	39,2	5 800	68,3	37,8	5 200	24,0
26,0	59,9	37,9	5 200	65,0	36,5	5 000	26,0
28,0	56,6	36,4	4 600	61,6	35,0	4 700	28,0
30,0	53,2	34,8	4 100	58,0	33,2	4 300	30,0
32,0	49,6	32,9	3 700	54,2	31,3	3 800	32,0
34,0	45,8	30,8	3 300	50,1	29,0	3 400	34,0
36,0	41,6	28,4	2 900	45,7	26,4	3 000	36,0
38,0	37,0	25,5	2 600	40,6	23,3	2 700	38,0
40,0	31,7	22,0	2 400	34,7	19,4	2 400	40,0
42,0	25,2	17,5	2 100				42,0

# MLC90A-1 S-1

ASME B30.5

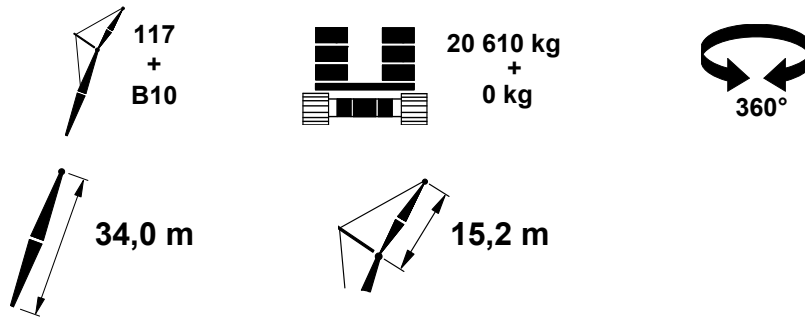


m	10°			30°			m
	°	m	kg	°	m	kg	
12,2	80,7	47,2	10 300				12,2
14,0	78,4	46,8	10 100				14,0
16,0	75,8	46,2	9 800				16,0
18,0	73,2	45,4	8 800	78,4	44,2	6 200	18,0
20,0	70,5	44,6	7 600	75,6	43,3	5 800	20,0
22,0	67,8	43,7	6 600	72,8	42,4	5 600	22,0
24,0	65,0	42,6	5 700	69,9	41,3	5 300	24,0
26,0	62,1	41,5	5 000	66,9	40,1	5 100	26,0
28,0	59,1	40,1	4 500	63,9	38,7	4 700	28,0
30,0	56,1	38,7	4 000	60,7	37,1	4 200	30,0
32,0	52,9	37,0	3 500	57,3	35,4	3 700	32,0
34,0	49,5	35,1	3 200	53,8	33,4	3 300	34,0
36,0	45,9	33,0	2 800	50,0	31,2	3 000	36,0
38,0	42,1	30,6	2 500	45,9	28,7	2 600	38,0
40,0	37,8	27,9	2 300	41,3	25,7	2 300	40,0
42,0	33,1	24,6	2 000	36,0	22,0	2 100	42,0
44,0	27,5	20,5	1 800				44,0

REFERENCE ONLY

# MLC90A-1 S-1

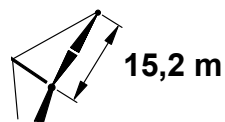
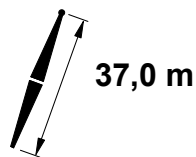
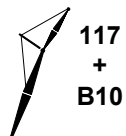
ASME B30.5



m	10°			30°			m
	°	m	kg	°	m	kg	
12,8	80,5	50,2	10 200				12,8
14,0	79,1	49,9	10 100				14,0
16,0	76,7	49,3	9 800				16,0
18,0	74,2	48,6	8 700	79,1	47,3	6 200	18,0
20,0	71,7	47,9	7 500	76,6	46,5	5 900	20,0
22,0	69,2	47,0	6 500	74,0	45,6	5 700	22,0
24,0	66,6	46,0	5 600	71,3	44,6	5 400	24,0
26,0	64,0	44,9	4 900	68,6	43,5	5 200	26,0
28,0	61,3	43,7	4 400	65,8	42,3	4 600	28,0
30,0	58,5	42,4	3 900	62,9	40,9	4 100	30,0
32,0	55,6	40,9	3 400	59,8	39,3	3 600	32,0
34,0	52,6	39,2	3 100	56,7	37,6	3 200	34,0
36,0	49,4	37,3	2 700	53,4	35,6	2 900	36,0
38,0	46,0	35,3	2 400	49,8	33,4	2 600	38,0
40,0	42,5	32,9	2 200	46,0	30,9	2 300	40,0
42,0	38,6	30,2	1 900	41,8	28,0	2 000	42,0
44,0	34,3	27,1	1 700	37,1	24,6	1 700	44,0
46,0	29,3	23,3	1 500				46,0
48,0	23,2	18,5	1 300				48,0

# MLC90A-1 S-1

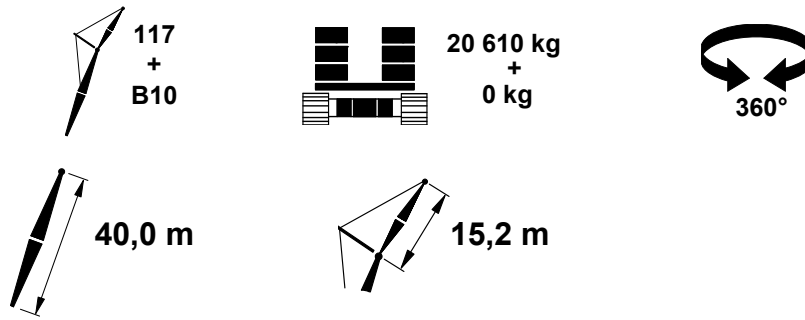
ASME B30.5



m	10°			30°			m
	°	m	kg	°	m	kg	
13,4	80,4	53,1	10 100				13,4
14,0	79,7	53,0	10 100				14,0
16,0	77,5	52,4	9 800				16,0
18,0	75,2	51,8	8 600				18,0
20,0	72,9	51,1	7 300				20,0
22,0	70,5	50,3	6 300	77,4	49,8	6 000	22,0
24,0	68,1	49,4	5 500	75,0	48,9	5 800	24,0
26,0	65,6	48,4	4 800	72,5	48,0	5 500	26,0
28,0	63,1	47,3	4 300	70,0	46,9	5 200	28,0
30,0	60,6	46,0	3 800	67,4	45,8	4 500	30,0
32,0	57,9	44,6	3 300	64,7	44,5	4 000	32,0
34,0	55,2	43,1	2 900	62,0	43,1	3 500	34,0
36,0	52,3	41,5	2 600	59,1	41,5	3 100	36,0
38,0	49,3	39,6	2 300	56,2	39,8	2 800	38,0
40,0	46,2	37,5	2 000	53,0	37,8	2 500	40,0
42,0	42,9	35,2	1 800	49,7	35,7	2 200	42,0
44,0	39,3	32,6	1 600	46,2	33,2	1 900	44,0
46,0	35,3	29,6	1 400	42,3	30,4	1 700	46,0
48,0	30,8	26,1	1 200	38,0	27,1	1 400	48,0
50,0	25,6	21,7	1 000	33,1	23,2	1 200	50,0

# MLC90A-1 S-1

ASME B30.5

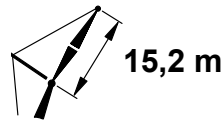
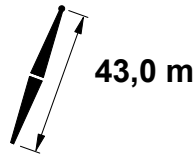
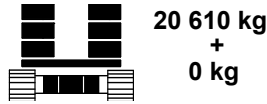
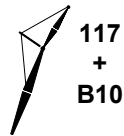


m	10°			30°			m
	°	m	kg	°	m	kg	
13,4	80,9	56,2	10 100				13,4
14,0	80,3	56,0	10 100				14,0
16,0	78,2	55,5	9 700				16,0
18,0	76,0	54,9	8 500				18,0
20,0	73,8	54,3	7 200				20,0
22,0	71,6	53,5	6 300	78,2	52,9	6 100	22,0
24,0	69,4	52,7	5 400	73,6	51,3	5 600	24,0
26,0	67,1	51,7	4 700	71,2	50,3	5 100	26,0
28,0	64,7	50,7	4 200	68,8	49,2	4 500	28,0
30,0	62,4	49,5	3 700	66,3	48,0	3 900	30,0
32,0	59,9	48,3	3 200	63,8	46,7	3 500	32,0
34,0	57,4	46,9	2 900	61,2	45,3	3 100	34,0
36,0	54,8	45,3	2 500	58,5	43,7	2 700	36,0
38,0	52,1	43,7	2 200	55,7	41,9	2 400	38,0
40,0	49,3	41,8	2 000	52,7	40,0	2 100	40,0
42,0	46,3	39,8	1 700	49,6	37,9	1 800	42,0
44,0	43,2	37,5	1 500	46,3	35,5	1 600	44,0
46,0	39,8	34,9	1 300	42,7	32,7	1 400	46,0
48,0	36,1	32,0	1 100	38,8	29,6	1 200	48,0
50,0	32,1	28,7	900	34,3	25,9	1 000	50,0



# MLC90A-1 S-1

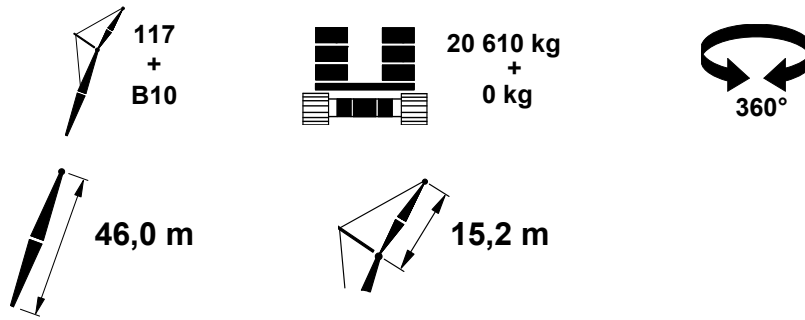
ASME B30.5



	10°			30°			
	m	°	m	kg	°	m	
14,0	80,8	59,1	10 000				14,0
16,0	78,8	58,6	9 600				16,0
18,0	76,8	58,1	8 400				18,0
20,0	74,7	57,5	7 100	78,8	56,1	6 200	20,0
22,0	72,6	56,7	6 100	76,7	55,3	5 900	22,0
24,0	70,5	55,9	5 300	74,5	54,5	5 600	24,0
26,0	68,4	55,1	4 600	72,3	53,6	5 000	26,0
28,0	66,2	54,1	4 100	70,1	52,6	4 400	28,0
30,0	63,9	53,0	3 600	67,8	51,5	3 800	30,0
32,0	61,7	51,8	3 100	65,4	50,3	3 400	32,0
34,0	59,3	50,6	2 700	63,0	49,0	3 000	34,0
36,0	56,9	49,1	2 400	60,5	47,5	2 600	36,0
38,0	54,5	47,6	2 100	57,9	45,9	2 300	38,0
40,0	51,9	45,9	1 800	55,3	44,2	2 000	40,0
42,0	49,2	44,1	1 600	52,5	42,2	1 700	42,0
44,0	46,4	42,0	1 400	49,6	40,1	1 500	44,0
46,0	43,5	39,8	1 200	46,4	37,7	1 300	46,0
48,0	40,3	37,3	1 000	43,1	35,1	1 100	48,0
50,0				39,5	32,1	900	50,0

# MLC90A-1 S-1

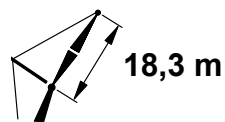
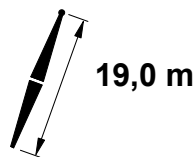
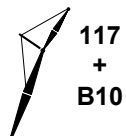
ASME B30.5

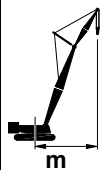
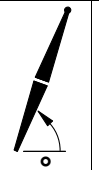
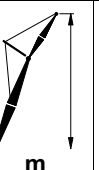

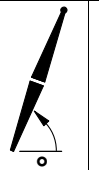



	10°			30°			
	m	°	m	kg	°	m	
14,6	80,7	62,0	9 900				14,6
16,0	79,4	61,7	9 500				16,0
18,0	77,4	61,2	8 300				18,0
20,0	75,5	60,6	7 000	79,4	59,2	6 300	20,0
22,0	73,5	59,9	6 000	77,4	58,5	6 000	22,0
24,0	71,5	59,2	5 200	75,3	57,7	5 600	24,0
26,0	69,5	58,3	4 500	73,3	56,9	4 900	26,0
28,0	67,4	57,4	3 900	71,1	55,9	4 300	28,0
30,0	65,3	56,4	3 400	69,0	54,9	3 800	30,0
32,0	63,2	55,3	3 000	66,8	53,8	3 300	32,0
34,0	61,0	54,1	2 600	64,6	52,5	2 900	34,0
36,0	58,8	52,8	2 300	62,2	51,2	2 500	36,0
38,0	56,5	51,4	2 000	59,9	49,7	2 200	38,0
40,0	54,1	49,8	1 700	57,4	48,1	1 900	40,0
42,0	51,7	48,1	1 500	54,9	46,4	1 700	42,0
44,0	49,2	46,3	1 300	52,2	44,4	1 400	44,0
46,0	46,5	44,3	1 100	49,5	42,3	1 200	46,0
48,0				46,5	40,0	1 000	48,0

# MLC90A-1 S-1

ASME B30.5

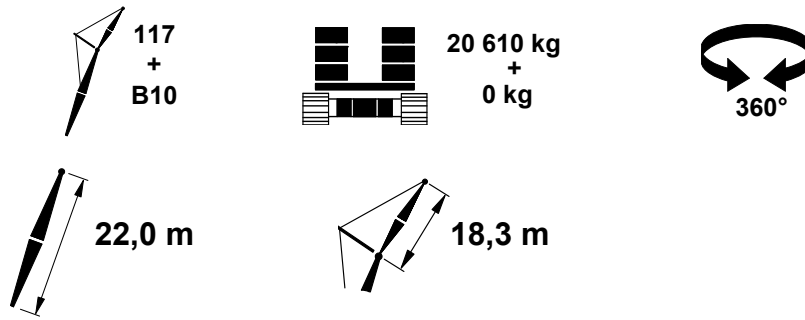


	10°			30°			
	 m	 °	 m	 kg	 °	 m	
11,0	80,7	38,4	9 300				11,0
12,0	79,0	38,1	9 200				12,0
14,0	75,8	37,4	8 900				14,0
16,0	72,5	36,7	8 600				16,0
18,0	69,2	35,7	8 300				18,0
20,0	65,7	34,7	8 000	77,1	34,6	5 400	20,0
22,0	62,1	33,5	7 000	69,8	32,2	4 700	22,0
24,0	58,4	32,0	6 200	65,9	30,8	4 500	24,0
26,0	54,5	30,4	5 500	61,8	29,1	4 200	26,0
28,0	50,3	28,6	4 900	57,4	27,1	4 000	28,0
30,0	45,8	26,4	4 500	52,6	24,8	3 800	30,0
32,0	40,8	23,8	4 000	47,2	22,0	3 700	32,0
34,0	35,1	20,7	3 600	40,9	18,5	3 500	34,0
36,0	28,2	16,6	3 300	32,7	13,7	3 300	36,0

REFERENCE ONLY

# MLC90A-1 S-1

ASME B30.5

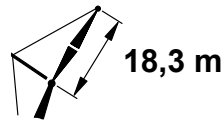
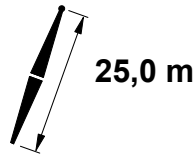
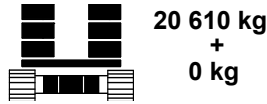
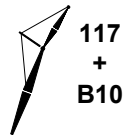


m	10°			30°			m
	°	m	kg	°	m	kg	
11,6	80,5	41,3	9 300				11,6
12,0	79,9	41,2	9 200				12,0
14,0	76,9	40,6	8 900				14,0
16,0	73,9	39,9	8 700				16,0
18,0	70,9	39,1	8 500	78,2	37,9	5 500	18,0
20,0	67,7	38,1	7 900	74,9	36,9	5 200	20,0
22,0	64,5	37,0	6 900	71,6	35,7	4 900	22,0
24,0	61,1	35,7	6 100	68,1	34,4	4 600	24,0
26,0	57,7	34,3	5 400	64,5	32,9	4 400	26,0
28,0	54,0	32,7	4 800	60,7	31,2	4 200	28,0
30,0	50,1	30,8	4 400	56,6	29,2	4 000	30,0
32,0	46,0	28,7	3 900	52,2	27,0	3 800	32,0
34,0	41,5	26,2	3 500	47,3	24,3	3 600	34,0
36,0	36,4	23,2	3 200	41,7	21,0	3 300	36,0
38,0	30,4	19,5	2 900	34,9	16,8	3 000	38,0

REFERENCE ONLY

# MLC90A-1 S-1

ASME B30.5

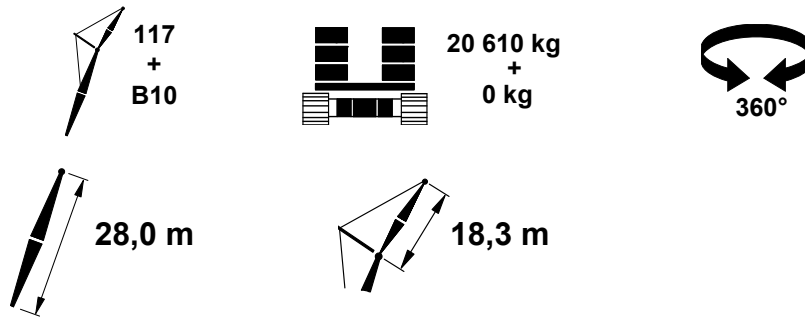


m	10°			30°			m
	°	m	kg	°	m	kg	
12,2	80,3	44,2	9 200				12,2
14,0	77,9	43,7	9 000				14,0
16,0	75,1	43,1	8 800				16,0
18,0	72,3	42,3	8 600	79,1	41,1	5 600	18,0
20,0	69,4	41,4	7 800	76,1	40,1	5 300	20,0
22,0	66,4	40,4	6 800	73,1	39,1	5 000	22,0
24,0	63,4	39,3	6 000	69,9	37,9	4 700	24,0
26,0	60,2	38,0	5 300	66,7	36,6	4 500	26,0
28,0	57,0	36,5	4 700	63,3	35,1	4 300	28,0
30,0	53,6	34,9	4 200	59,7	33,3	4 100	30,0
32,0	50,0	33,0	3 800	55,9	31,4	3 900	32,0
34,0	46,1	30,9	3 400	51,8	29,1	3 600	34,0
36,0	42,0	28,5	3 100	47,4	26,5	3 200	36,0
38,0	37,4	25,6	2 800	42,4	23,4	2 900	38,0
40,0	32,1	22,2	2 500	36,4	19,5	2 600	40,0
42,0	25,7	17,7	2 300				42,0

REFERENCED ONLY

# MLC90A-1 S-1

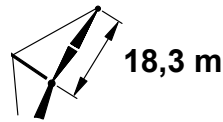
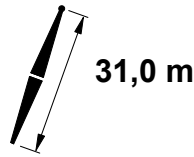
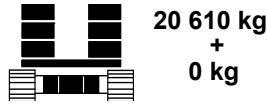
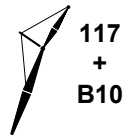
ASME B30.5



	10°			30°			
	m	°	m	kg	m	°	
12,2	81,0	47,3	9 200				12,2
14,0	78,7	46,9	9 000				14,0
16,0	76,1	46,3	8 800				16,0
18,0	73,5	45,5	8 600				18,0
20,0	70,8	44,7	7 700	77,1	43,4	5 400	20,0
22,0	68,1	43,8	6 700	74,3	42,4	5 100	22,0
24,0	65,3	42,7	5 900	71,4	41,4	4 800	24,0
26,0	62,5	41,6	5 200	68,5	40,1	4 600	26,0
28,0	59,5	40,3	4 600	65,4	38,8	4 400	28,0
30,0	56,4	38,8	4 200	62,2	37,2	4 200	30,0
32,0	53,2	37,1	3 700	58,9	35,5	3 900	32,0
34,0	49,9	35,3	3 300	55,3	33,6	3 500	34,0
36,0	46,3	33,2	3 000	51,6	31,3	3 200	36,0
38,0	42,5	30,8	2 700	47,5	28,8	2 800	38,0
40,0	38,3	28,0	2 400	42,9	25,8	2 500	40,0
42,0	33,6	24,8	2 200	37,7	22,2	2 300	42,0
44,0	28,0	20,8	2 000	31,2	17,5	2 000	44,0

# MLC90A-1 S-1

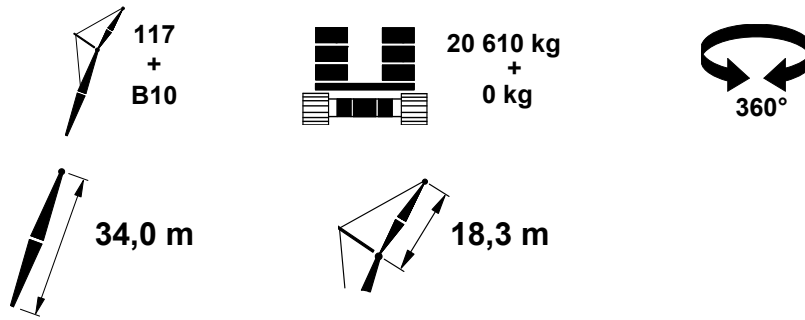
ASME B30.5



m	10°			30°			m
	°	m	kg	°	m	kg	
12,8	80,8	50,3	9 100				12,8
14,0	79,4	50,0	9 000				14,0
16,0	77,0	49,4	8 800				16,0
18,0	74,5	48,7	8 700				18,0
20,0	72,0	48,0	7 600				20,0
22,0	69,5	47,1	6 600	78,0	46,6	5 500	22,0
24,0	67,0	46,1	5 800	72,7	44,7	5 000	24,0
26,0	64,3	45,0	5 100	70,0	43,6	4 700	26,0
28,0	61,6	43,8	4 500	67,2	42,3	4 500	28,0
30,0	58,8	42,5	4 000	64,3	40,9	4 300	30,0
32,0	55,9	41,0	3 600	61,3	39,4	3 800	32,0
34,0	52,9	39,3	3 200	58,1	37,6	3 400	34,0
36,0	49,8	37,5	2 900	54,8	35,7	3 100	36,0
38,0	46,4	35,4	2 600	51,3	33,5	2 700	38,0
40,0	42,9	33,1	2 300	47,5	31,0	2 500	40,0
42,0	39,0	30,4	2 100	43,3	28,1	2 200	42,0
44,0	34,7	27,3	1 900	38,6	24,7	1 900	44,0
46,0	29,8	23,5	1 700				46,0
48,0	23,8	18,7	1 500				48,0

# MLC90A-1 S-1

ASME B30.5

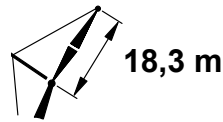
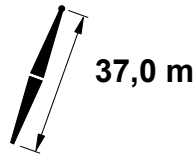
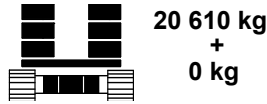
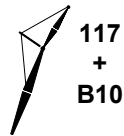


m	10°			30°			m
	°	m	kg	°	m	kg	
13,4	80,7	53,2	9 100				13,4
14,0	80,0	53,0	9 000				14,0
16,0	77,7	52,5	8 900				16,0
18,0	75,4	51,9	8 600				18,0
20,0	73,1	51,2	7 500	78,7	49,8	5 600	20,0
22,0	70,8	50,4	6 500	76,3	48,9	5 300	22,0
24,0	68,4	49,5	5 700	73,8	48,0	5 100	24,0
26,0	65,9	48,4	5 000	71,3	47,0	4 800	26,0
28,0	63,4	47,3	4 400	68,7	45,8	4 600	28,0
30,0	60,9	46,1	3 900	66,1	44,5	4 200	30,0
32,0	58,2	44,7	3 500	63,3	43,1	3 800	32,0
34,0	55,5	43,2	3 100	60,5	41,5	3 400	34,0
36,0	52,6	41,5	2 800	57,5	39,8	3 000	36,0
38,0	49,6	39,7	2 500	54,4	37,9	2 700	38,0
40,0	46,5	37,6	2 200	51,1	35,7	2 400	40,0
42,0	43,2	35,3	2 000	47,5	33,2	2 100	42,0
44,0	39,6	32,7	1 800	43,7	30,4	1 900	44,0
46,0	35,7	29,7	1 600	39,4	27,2	1 600	46,0
48,0	31,2	26,2	1 400	34,4	23,2	1 400	48,0
50,0	26,0	21,9	1 200				50,0



# MLC90A-1 S-1

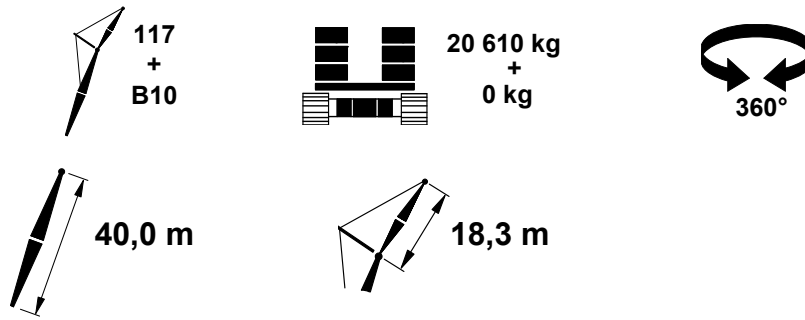
ASME B30.5



m	10°			30°			m
	°	m	kg	°	m	kg	
14,0	80,5	56,1	9 000				14,0
16,0	78,4	55,6	8 900				16,0
18,0	76,3	55,0	8 500				18,0
20,0	74,1	54,4	7 400	79,4	53,0	5 600	20,0
22,0	71,9	53,6	6 400	77,1	52,2	5 400	22,0
24,0	69,6	52,8	5 600	74,8	51,3	5 100	24,0
26,0	67,4	51,8	4 900	72,5	50,3	4 900	26,0
28,0	65,0	50,8	4 300	70,1	49,3	4 600	28,0
30,0	62,6	49,6	3 800	67,6	48,1	4 100	30,0
32,0	60,2	48,4	3 400	65,1	46,8	3 700	32,0
34,0	57,7	47,0	3 000	62,5	45,3	3 300	34,0
36,0	55,1	45,5	2 700	59,8	43,8	2 900	36,0
38,0	52,4	43,8	2 400	57,0	42,0	2 600	38,0
40,0	49,6	41,9	2 100	54,0	40,1	2 300	40,0
42,0	46,6	39,9	1 900	50,9	37,9	2 000	42,0
44,0	43,5	37,6	1 600	47,6	35,5	1 800	44,0
46,0	40,2	35,1	1 400	44,0	32,8	1 600	46,0
48,0	36,5	32,2	1 300	40,1	29,7	1 300	48,0
50,0	32,5	28,9	1 100	35,6	26,0	1 100	50,0

# MLC90A-1 S-1

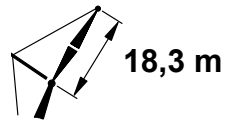
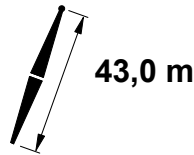
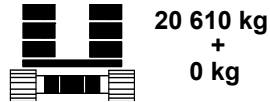
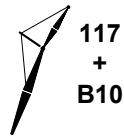
ASME B30.5



m	10°			30°			m
	°	m	kg	°	m	kg	
14,6	80,4	59,1	8 900				14,6
16,0	79,0	58,7	8 800				16,0
18,0	77,0	58,2	8 400				18,0
20,0	74,9	57,5	7 300	80,0	56,1	5 700	20,0
22,0	72,9	56,8	6 300	77,9	55,3	5 500	22,0
24,0	70,7	56,0	5 500	75,7	54,5	5 200	24,0
26,0	68,6	55,1	4 800	73,5	53,6	5 000	26,0
28,0	66,4	54,2	4 200	71,2	52,6	4 600	28,0
30,0	64,2	53,1	3 700	68,9	51,5	4 100	30,0
32,0	61,9	51,9	3 300	66,6	50,3	3 600	32,0
34,0	59,6	50,6	2 900	64,2	49,0	3 200	34,0
36,0	57,2	49,2	2 600	61,7	47,5	2 800	36,0
38,0	54,7	47,7	2 300	59,1	45,9	2 500	38,0
40,0	52,2	46,0	2 000	56,5	44,2	2 200	40,0
42,0	49,5	44,2	1 800	53,7	42,2	1 900	42,0
44,0	46,7	42,1	1 600	50,7	40,1	1 700	44,0
46,0	43,8	39,9	1 400	47,6	37,7	1 500	46,0
48,0	40,6	37,4	1 200	44,3	35,1	1 300	48,0
50,0	37,2	34,6	1 000	40,6	32,1	1 100	50,0

# MLC90A-1 S-1

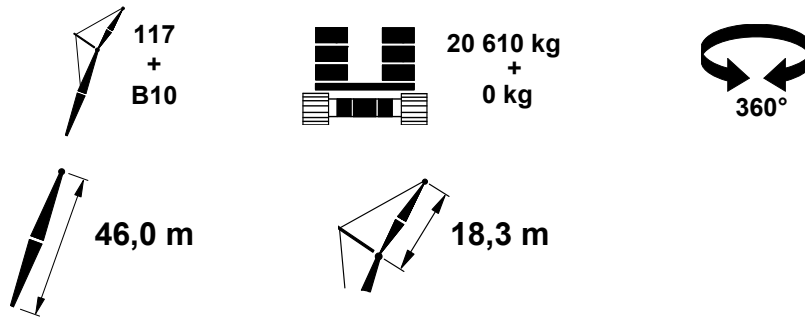
ASME B30.5



m	10°			30°			m
	°	m	kg	°	m	kg	
14,6	80,9	62,1	8 900				14,6
16,0	79,6	61,8	8 800				16,0
18,0	77,7	61,3	8 300				18,0
20,0	75,7	60,7	7 200	80,5	59,2	5 800	20,0
22,0	73,7	60,0	6 200	78,5	58,5	5 500	22,0
24,0	71,7	59,3	5 400	76,5	57,8	5 300	24,0
26,0	69,7	58,4	4 700	74,4	56,9	5 100	26,0
28,0	67,7	57,5	4 100	72,3	56,0	4 500	28,0
30,0	65,6	56,5	3 600	70,1	54,9	4 000	30,0
32,0	63,5	55,4	3 200	67,9	53,8	3 500	32,0
34,0	61,3	54,2	2 800	65,7	52,6	3 100	34,0
36,0	59,1	52,9	2 500	63,4	51,2	2 700	36,0
38,0	56,8	51,5	2 200	61,0	49,7	2 400	38,0
40,0	54,4	49,9	1 900	58,6	48,1	2 100	40,0
42,0	52,0	48,3	1 700	56,0	46,4	1 900	42,0
44,0	49,4	46,4	1 400	53,4	44,5	1 600	44,0
46,0	46,8	44,4	1 200	50,6	42,3	1 400	46,0
48,0	44,0	42,2	1 100	47,7	40,0	1 200	48,0
50,0	41,1	39,7	900	44,5	37,4	1 000	50,0

# MLC90A-1 S-1

ASME B30.5



m	10°			30°			m
	°	m	kg	°	m	kg	
15,2	80,8	65,1	8 800				15,2
16,0	80,1	64,9	8 700				16,0
18,0	78,2	64,4	8 200				18,0
20,0	76,4	63,8	7 100				20,0
22,0	74,5	63,2	6 100	79,1	61,7	5 600	22,0
24,0	72,6	62,5	5 300	77,1	60,9	5 400	24,0
26,0	70,7	61,7	4 600	75,2	60,1	5 100	26,0
28,0	68,8	60,8	4 000	73,2	59,2	4 400	28,0
30,0	66,8	59,9	3 500	71,2	58,3	3 900	30,0
32,0	64,8	58,8	3 100	69,1	57,2	3 400	32,0
34,0	62,8	57,7	2 700	67,0	56,0	3 000	34,0
36,0	60,7	56,5	2 400	64,8	54,8	2 600	36,0
38,0	58,6	55,2	2 100	62,6	53,4	2 300	38,0
40,0	56,4	53,7	1 800	60,4	51,9	2 000	40,0
42,0	54,1	52,2	1 600	58,0	50,3	1 800	42,0
44,0	51,8	50,5	1 300	55,6	48,6	1 500	44,0
46,0	49,4	48,6	1 100	53,1	46,6	1 300	46,0
48,0	46,9	46,6	1 000	50,5	44,5	1 100	48,0
50,0				47,7	42,2	900	50,0