

# Wire Rope Specifications

**MLC650  
VPC-MAX**

Luffing Jib No. LJ11:680-681-682 on  
Boom No. B65:685-680  
with Mast No. M11:684

**Table 1**

Maximum Required Parts of Line - Tandem Hoist Drums										
Boom Length		Luffing Jib Length								
		Meters (Feet)								
Meters	Feet	26,0 (85.3)	29,0 (95.1)	32,0 (105.0)	35,0 (114.8)	38,0 (124.7)	41,0 (134.5)	44,0 (144.4)	47,0 (154.2)	50,0 (164.0)
56,0	183.7	16	16	16	16	14	14	12	12	10
62,0	203.4	16	16	14	14	12	12	10	10	10
68,0	223.1	16	16	14	14	12	12	12	10	10
74,0	242.8	14	14	14	12	12	12	10	10	10
80,0	262.5	14	12	12	12	10	10	10	8	8
86,0	282.2	12	12	10	10	10	8	8	8	8
92,0	301.8	12	10	10	10	8	8	8	8	6
98,0	321.5	10	10	8	8	8	8	6	6	6
104,0	341.2	8	8	8	8	8	6	6	6	6

**Table 1 (continued)**

Maximum Required Parts of Line - Tandem Hoist Drums										
Boom Length		Luffing Jib Length								
		Meters (Feet)								
Meters	Feet	53,0 (173.9)	59,0 (193.6)	65,0 (213.3)	71,0 (232.9)	77,0 (252.6)	83,0 (272.3)	89,0 (292.0)	95,0 (311.7)	101,0 (331.4)
56,0	183.7	10	8	8	6	6	6	4	4	4
62,0	203.4	8	8	6	6	6	4	4	4	4
68,0	223.1	10	8	6	6	6	6	4	4	4
74,0	242.8	8	8	6	6	6	4	4	4	4
80,0	262.5	8	6	6	6	4	4	4	4	4
86,0	282.2	8	6	6	6	4	4	4	4	4
92,0	301.8	6	6	6	4	4	4	4	4	4
98,0	321.5	6	6	4	4	4	4	4	4	4
104,0	341.2	6	6	4	4	4	4	—	—	—

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Table 2

Maximum Parts of Line For Full Hoisting Range Single Hoist Drum										
Boom Length		Luffing Jib Length Meters (Feet)								
Meters	Feet	26,0 (85.3)	29,0 (95.1)	32,0 (105.0)	35,0 (114.8)	38,0 (124.7)	41,0 (134.5)	44,0 (144.4)	47,0 (154.2)	50,0 (164.0)
56,0	183.7	12	12	11	11	11	10	10	10	9
62,0	203.4	11	11	11	10	10	10	9	9	9
68,0	223.1	11	10	10	10	9	9	9	8	8
74,0	242.8	10	10	9	9	9	8	8	8	8
80,0	262.5	9	9	9	8	8	8	8	7	7
86,0	282.2	9	8	8	8	8	7	7	7	7
92,0	301.8	8	8	8	7	7	7	7	7	6
98,0	321.5	8	7	7	7	7	7	6	6	6
104,0	341.2	7	7	7	7	7	6	6	6	5

Table 2 (continued)

Maximum Parts of Line For Full Hoisting Range Single Hoist Drum										
Boom Length		Luffing Jib Length Meters (Feet)								
Meters	Feet	53,0 (173.9)	59,0 (193.6)	65,0 (213.3)	71,0 (232.9)	77,0 (252.6)	83,0 (272.3)	89,0 (292.0)	95,0 (311.7)	101,0 (331.4)
56,0	183.7	9	8	7	6	5	5	4	4	3
62,0	203.4	8	7	6	6	5	4	4	4	3
68,0	223.1	8	7	6	6	5	5	4	4	3
74,0	242.8	8	7	6	5	5	4	4	4	3
80,0	262.5	7	6	6	5	4	4	4	3	3
86,0	282.2	7	6	5	5	4	4	3	3	3
92,0	301.8	6	5	5	4	4	4	3	3	3
98,0	321.5	5	5	4	4	4	3	3	3	2
104,0	341.2	5	5	4	4	3	3	—	—	—

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Table 3

Maximum Parts of Whip Line For Full Hoisting Range Drum 3										
Boom Length		Luffing Jib Length Meters (Feet)								
Meters	Feet	26,0 (85.3)	29,0 (95.1)	32,0 (105.0)	35,0 (114.8)	38,0 (124.7)	41,0 (134.5)	44,0 (144.4)	47,0 (154.2)	50,0 (164.0)
56,0	183.7	2	2	2	2	2	2	2	2	2
62,0	203.4	2	2	2	2	2	2	2	2	2
68,0	223.1	2	2	2	2	2	2	2	2	2
74,0	242.8	2	2	2	2	2	2	2	2	2
80,0	262.5	2	2	2	2	2	2	2	2	2
86,0	282.2	2	2	2	2	2	2	2	2	2
92,0	301.8	2	2	2	2	2	2	2	2	2
98,0	321.5	2	2	2	2	2	2	2	2	2
104,0	341.2	2	2	2	2	2	2	2	2	2

Table 3 (continued)

Maximum Parts of Whip Line For Full Hoisting Range Drum 3										
Boom Length		Luffing Jib Length Meters (Feet)								
Meters	Feet	53,0 (173.9)	59,0 (193.6)	65,0 (213.3)	71,0 (232.9)	77,0 (252.6)	83,0 (272.3)	89,0 (292.0)	95,0 (311.7)	101,0 (331.4)
56,0	183.7	2	2	2	2	2	2	2	2	2
62,0	203.4	2	2	2	2	2	2	2	2	2
68,0	223.1	2	2	2	2	2	2	2	2	2
74,0	242.8	2	2	2	2	2	2	2	2	2
80,0	262.5	2	2	2	2	2	2	2	2	2
86,0	282.2	2	2	2	2	2	2	2	2	2
92,0	301.8	2	2	2	2	2	2	2	2	2
98,0	321.5	2	2	2	2	2	2	2	2	2
104,0	341.2	2	2	2	2	2	2	—	—	—

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Table 4

Maximum Parts of Whip Line For Full Hoisting Range Drums 1 or 2										
Boom Length		Luffing Jib Length Meters (Feet)								
Meters	Feet	26,0 (85.3)	29,0 (95.1)	32,0 (105.0)	35,0 (114.8)	38,0 (124.7)	41,0 (134.5)	44,0 (144.4)	47,0 (154.2)	50,0 (164.0)
56,0	183.7	2	2	2	2	2	2	2	2	2
62,0	203.4	2	2	2	2	2	2	2	2	2
68,0	223.1	2	2	2	2	2	2	2	2	2
74,0	242.8	2	2	2	2	2	2	2	2	2
80,0	262.5	2	2	2	2	2	2	2	2	2
86,0	282.2	2	2	2	2	2	2	2	2	2
92,0	301.8	2	2	2	2	2	2	2	2	2
98,0	321.5	2	2	2	2	2	2	2	2	2
104,0	341.2	2	2	2	2	2	2	2	2	2

Table 4 (continued)

Maximum Parts of Whip Line For Full Hoisting Range Drums 1 or 2										
Boom Length		Luffing Jib Length Meters (Feet)								
Meters	Feet	53,0 (173.9)	59,0 (193.6)	65,0 (213.3)	71,0 (232.9)	77,0 (252.6)	83,0 (272.3)	89,0 (292.0)	95,0 (311.7)	101,0 (331.4)
56,0	183.7	2	2	2	2	2	2	2	2	2
62,0	203.4	2	2	2	2	2	2	2	2	2
68,0	223.1	2	2	2	2	2	2	2	2	2
74,0	242.8	2	2	2	2	2	2	2	2	2
80,0	262.5	2	2	2	2	2	2	2	2	2
86,0	282.2	2	2	2	2	2	2	2	2	2
92,0	301.8	2	2	2	2	2	2	2	2	2
98,0	321.5	2	2	2	2	2	2	2	2	2
104,0	341.2	2	2	2	2	2	2	—	—	—

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Table 5

Wire Rope Lengths - Tandem Hoist Drums (Includes all Luffing Jib lengths)									
Boom Length		Whip Line Drum 3				Hoist Line Drum 1		Hoist Line Drum 2	
		1 Part		2 Parts					
Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet
56,0	183.7	330	1,080	490	1,610	830	2,720	830	2,720
62,0	203.4	345	1,130	505	1,660	830	2,720	830	2,720
68,0	223.1	355	1,160	525	1,720	885	2,900	885	2,900
74,0	242.8	365	1,200	540	1,770	860	2,820	860	2,820
80,0	262.5	380	1,240	560	1,830	860	2,820	860	2,820
86,0	282.2	390	1,280	580	1,900	815	2,670	815	2,670
92,0	301.8	405	1,330	595	1,950	840	2,750	840	2,750
98,0	321.5	415	1,360	615	2,018	775	2,540	775	2,540
104,0	341.2	390	1,280	580	1,900	720	2,360	720	2,360

**Note:** Above hoist line lengths are based on tandem drums both reeved to main load block. Each drum is dead ended in main load block reeving. Total parts of line requires using both Drums 1 and 2. Hoist and whip line lengths will allow hook to touch ground. When block travel below ground is required, add additional rope equal to parts of line times added travel distance. Hoisting distance or line pull may be limited when block travel below ground is required.

Table 6

Hoist Reeving for Main Load Block - Two Lead Lines				
No. Parts of Line	2	4	6	8
Maximum Load - kg	44 260	88 520	132 780	177 040
Maximum Load - lb	97,600	195,200	292,800	390,400
Maximum Load per Part of Line - kg	22 130	22 130	22 130	22 130
Maximum Load per Part of Line - lb	48,800	48,800	48,800	48,800
No. Parts of Line	10	12	14	16
Maximum Load - kg	221 300	265 560	309 820	350 000
Maximum Load - lb	488,000	585,600	683,200	771,600
Maximum Load per Part of Line - kg	22 130	22 130	22 130	21 875
Maximum Load per Part of Line - lb	48,800	48,800	48,800	48,225

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Table 7

Wire Rope Lengths - Single Hoist Drum (Includes all Luffing Jib lengths)							
Boom Length		Whip Line Drum 1 or 2 or 3				Hoist Line Drum 1 or 2	
		1 Part		2 Parts			
Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet
56,0	183.7	330	1,080	490	1,610	1 140	3,740
62,0	203.4	345	1,130	505	1,660	1 140	3,740
68,0	223.1	355	1,160	525	1,720	1 140	3,740
74,0	242.8	365	1,200	540	1,770	1 143	3,750
80,0	262.5	380	1,240	560	1,830	1 130	3,710
86,0	282.2	390	1,280	580	1,900	1 130	3,710
92,0	301.8	405	1,330	595	1,950	1 125	3,690
98,0	321.5	415	1,360	615	2,018	1 130	3,710
104,0	341.2	390	1,280	580	1,900	1 143	3,750

**Note:** Above hoist line lengths are based on single part lead line. Hoist and whip line lengths will allow hook to touch ground. When block travel below ground is required, add additional rope equal to parts of line times added travel distance. Hoisting distance or line pull may be limited when block travel below ground is required.

Table 8

Hoist Reeving for Main Load Block - Single Lead Lines						
No. Parts of Line	1	2	3	4	5	6
Maximum Load - kg	22 130	44 260	66 390	88 520	110 650	132 780
Maximum Load - lb	48,800	97,600	146,400	195,200	244,000	292,800
Maximum Load per Part of Line - kg	22 130	22 130	22 130	22 130	22 130	22 130
Maximum Load per Part of Line - lb	48,800	48,800	48,800	48,800	48,800	48,800
No. Parts of Line	7	8	9	10	11	12
Maximum Load - kg	154 910	177 040	199 170	221 300	242 320	263 050
Maximum Load - lb	341,600	390,400	439,200	488,000	534,230	579,940
Maximum Load per Part of Line - kg	22 130	22 130	22 130	22 130	22 029	21 920
Maximum Load per Part of Line - lb	48,800	48,800	48,800	48,800	48,566	48,328

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**Table 9**

<b>Hoist Reeving for Whip Load Block - Single Lead Line (Drum 3)</b>		
No. Parts of Line	1	2
Maximum Load - kg	13 600	27 200
Maximum Load - lb	30,000	60,000
Maximum Load per Part of Line - kg	13 600	13 600
Maximum Load per Part of Line - lb	30,000	30,000

**Table 10**

<b>Hoist Reeving for Whip Load Block - Single Lead Line (Drum 1 or 2)</b>		
No. Parts of Line	1	2
Maximum Load - kg	22 100	33 300
Maximum Load - lb	48,800	73,500
Maximum Load per Part of Line - kg	22 100	16 650
Maximum Load per Part of Line - lb	48,800	36,750

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Table 11

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<p><u>Rotation Resistant Wire Rope</u></p> <p><b>Hoist or Whip Line:</b>  <b>32 mm</b> (Drum 1 &amp; 2):            Wire Rope with Spelter Button and Pad Eye            Right Hand Lang Lay            Minimum Breaking Strength = 110 680 kg (244,000 lb)            Approx. Weight = 5,6 kg/m (3.7 lb/ft)</p> <p><b>Whip Line:</b>  <b>28 mm</b> (Drum 3):            Wire Rope with Spelter Button and Pad Eye            Right Hand Lang Lay            Minimum Breaking Strength = 72 580 kg (160,000 lb)            Approx. Weight = 3,9 kg/m (2.6 lb/ft)</p>

Table 12

Maximum Spooling Capacities	
Drum 1: (Hoist or Whip Line)	32 mm Wire Rope - 10 Layers - 1 100 m (3,608 ft)
Drum 2: (Hoist or Whip Line)	32 mm Wire Rope - 10 Layers - 1 100 m (3,608 ft)
Drum 3: (Whip Line)	28 mm Wire Rope - 8 Layers - 579 m (1,900 ft)
7 m (22 ft) is deducted from maximum spooling capacity for 3 dead wraps per drum.	

Refer to Drum and Lagging chart **No. 9351-A** and Load Block Reeving in the Operator Manual.

Refer to Block Overhaul Weights chart **No. 9409-A** for minimum weight required for block lowering.