

Wire Rope Specifications

Liftcrane - Boom No. 78

Luffing Jib No. 139 Attached

777 SERIES 1

777 SERIES 2

Wire Rope Lengths - Front Drum				
Boom Length		Hoist Line		Maximum Required Parts of Line
Ft.	Meters	Ft.	Meters	
70	21.3	850	259	10
80	24.4	900	274	9
90	27.4	900	274	8
100	30.5	900	274	7
110	33.5	975	297	7
120	36.6	975	297	6
130	39.6	975	297	6
140	42.7	975	297	5
150	45.7	975	297	5
160	48.8	1025	312	5
170	51.8	1025	312	4

Note: Hoist line length given in table 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.

Hoist Reeving for Main Load Block - Front Drum					
No. Parts of Line	1	2	3	4	5
Maximum Load Lbs.	29,500	59,000	88,500	118,000	147,500
Maximum Load kg	13 380	26 760	40 140	53 520	66 900
No. Parts of Line	6	7	8	9	10
Maximum Load Lbs.	177,000	206,500	236,000	265,500	283,600
Maximum Load kg	80 290	93 670	107 050	120 430	128 600

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Wire Rope Lengths - Auxiliary Drum				
Boom Length		Hoist Line		Maximum Required Parts of Line
Ft.	Meters	Ft.	Meters	
70	21.3	1000	304	12
80	24.4	1150	350	12
90	27.4	1275	368	12
100	30.5	1275	368	10
110	33.5	1300	395	10
120	36.6	1300	395	9
130	39.6	1300	395	8
140	42.7	1300	395	7
150	45.7	1300	395	7
160	48.8	1350	410	7
170	51.8	1350	410	6

Note: Hoist line length given in table 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.

Capacity chart restrictions will occur when auxiliary drum is used. Maximum capacity is 240,000 Lbs,(108 860 kg) with 12 parts line.

Hoist Reeving for Main Load Block - Auxiliary Drum						
No. Parts of Line	1	2	3	4	5	6
Maximum Load Lbs.	20,000	40,000	60,000	80,000	100,000	120,000
Maximum Load kg	9 070	18 140	27 220	36 290	45 360	54 430
No. Parts of Line	7	8	9	10	11	12
Maximum Load Lbs.	140,000	160,000	180,000	200,000	220,000	240,000
Maximum Load kg	63 500	72 570	81 650	90 720	99 790	108 860

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<u>Rotation Resistant Wire Rope - 5:1 Safety Factor</u>		
Hoist Line:	26 mm -	2 160 N/mm ² Wire Rope (Ref. MCC Part No. 719379) Minimum Breaking Strength Required = 147,500 Lbs. (656.1 kN) Approx. Weight = 2.13 Lbs. Per Ft. (3.17 kg/m)
	Or	
	1 in. -	2 160 N/mm ² Wire Rope (MCC Part No. 719392) Minimum Breaking Strength Required = 153,800 Lbs. (684.2 kN) Approx. Weight = 2.03 Lbs. Per Ft. (3.02 kg/m)
<u>Optional Wire Rope - 3.5:1 Safety Factor</u>		
Hoist Line	26 mm -	6 x 25 Filler Wire, Extra Improved Plow Steel Right Regular Lay, IWRC (MCC Part No. 719387) Minimum Breaking Strength = 108,600 Lbs. (483.1 kN) Approx. Weight = 1.94 Lbs. Per Ft. (2.89 kg/m)
	Or	
	1 in. -	6 x 25 Filler Wire, Extra Improved Plow Steel Right Regular Lay, IWRC (MCC Part No. 719060) Minimum Breaking Strength = 103,400 Lbs. (460 kN) Approx. Weight = 1.85 Lbs. Per Ft. (2.75 kg/m)
Note: Block spin may occur with 6 x 25 construction wire rope under certain operating conditions.		



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Maximum Spooling Capacities	
Front Drum:	26 mm Wire Rope - 6 Layers - 1,074 Ft. (327m)
(Hoist Line)	5 Layers - 918 Ft. (280m) with 21-1/4 in. (540 mm) Dia. Lagging
	1 in. Wire Rope - 6 Layers - 1,084 Ft. (330m)
	5 Layers - 928 Ft. (283m) with 21-1/4 in. (540 mm) Dia. Lagging
Auxiliary Drum:	26 mm Wire Rope - 6 Layers - 1,323 Ft. (403m)
(Hoist Line)	6 Layers - 1,415 Ft. (431m) with 21-1/4 in. (540 mm) Dia. Lagging
	1 in. Wire Rope - 6 Layers - 1,335 Ft. (407m)
	6 Layers - 1,428 Ft. (435m) with 21-1/4 in. (540 mm) Dia. Lagging
17 Ft. (5m) is deducted from maximum spooling capacities for 3 dead wraps per drum or lagging.	

Note: When optional laggings are used, the recommended lagging for specific wire rope Dia. must be used.

Refer to drum and lagging chart **No. 6123-A**