

Wire Rope Specifications

999 SERIES 1, 2, 3

Liftcrane - Boom No. 82 or 22EL

Wire Rope Lengths								
Boom or Boom and Jib Length		Whip Line Front or Auxiliary Drum				Hoist Line Rear Drum		Maximum Required Parts of Line
		1 Part		2 Part				
Ft.	Meters	Ft.	Meters	Ft.	Meters	Ft.	Meters	
70	21.3	180	55	270	82	1325	404	16
80	24.4	200	61	300	91	1500	457	16
90	27.4	220	67	330	101	1500	457	14
100	30.5	240	73	360	110	1625	495	14
110	33.5	260	79	390	119	1625	495	12
120	36.6	280	85	420	128	1625	495	11
130	39.6	300	91	450	137	1625	495	10
140	42.7	320	98	480	146	1625	495	10
150	45.7	340	104	500	152	1625	495	9
160	48.8	360	110	530	162	1625	495	8
170	51.8	380	116	560	171	1625	495	8
180	54.9	400	122	590	180	1625	495	7
190	57.9	420	128	620	189	1625	495	7
200	61.0	440	134	650	198	1625	495	6
210	64.0	460	140	680	207	1625	495	6
220	67.1	480	146	710	216	1625	495	6
230	70.1	500	152	740	226	1625	495	5
240	73.2	520	158	770	235	1625	495	5
250	76.2	540	165	800	244	1625	495	4
260	79.2	560	171	830	253	1625	495	4
270	82.3	580	177	860	262	1625	495	4
280	85.3	600	183	890	271	1625	495	3
290	88.4	620	189	920	280	1625	495	3
300	91.4	640	195	950	290			
310	94.5	660	201	980	299			
320	97.5	680	207	1010	308			
330	100.6	700	213					

Note: Hoist line and whip line lengths 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.



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Hoist Reeving for Main Load Block								
No. Parts of Line	1	2	3	4	5	6	7	8
Maximum Load Lbs.	29,500	59,000	88,500	118,000	147,500	177,000	206,500	236,000
Maximum Load kg	13 380	26 760	40 140	53 520	66 900	80 290	93 670	107 050
No. Parts of Line	9	10	11	12	13	14	15	16
Maximum Load Lbs.	265,500	295,000	324,500	354,000	383,500	413,000	442,500	500,000
Maximum Load kg	120 430	133 810	147 190	160 570	173 950	187 330	200 720	226 700

Maximum Spooling Capacities	
Rear Drum: (Hoist Line)	26 mm Wire Rope - 7 Layers - 1,727 Ft. (526m)
Front Drum: (Whip Line)	26 mm Wire Rope - 7 Layers - 1,727 Ft. (526m)
Auxiliary Drum: (Whip Line)	26 mm Wire Rope - 6 Layers - 1,323 Ft. (403m) 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. 8222-A**.

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Rotation Resistant Wire Rope - 5:1 Safety Factor

Hoist Line:	26 mm -	2 160 N/mm ² Wire Rope With Pad Eye (MCC Part No. 719430) Right Hand Regular Lay Minimum Breaking Strength = 161,200 Lbs. (717.0 kN) Approx. Weight = 2.13 Lbs Per Ft. (3.17 kg/m) No Load Dia. = 1.033 in. (26.24 mm) to 1.045 in. (26.54 mm)
	Or	
	26 mm -	Wire Rope With Pad Eye (MCC Part No. 719432) Right Hand Lang Lay Minimum Breaking Strength = 156,400 Lbs. (695.7 kN) Approx. Weight = 2.39 Lbs Per Ft. (3.56 kg/m) No Load Dia. = 1.034 in. (26.26 mm) to 1.054 in. (26.77 mm)
	Or	
Whip Line:	26 mm -	2 160 N/mm ² Wire Rope With Pad Eye (MCC Part No. 719430) Right Hand Regular Lay Minimum Breaking Strength Required = 147,500 Lbs. (656.1 kN) Maximum Load = 29,500 Lbs. (13 380 kg) Per Line Approx. Weight = 2.13 Lbs Per Ft. (3.17 kg/m) No Load Dia. = 1.033 in. (26.24 mm) to 1.045 in. (26.54 mm)
	Or	
	26 mm -	Wire Rope With Pad Eye (MCC Part No. 719432) Right Hand Lang Lay Minimum Breaking Strength Required = 147,500 Lbs. (656.1 kN) Maximum Load = 29,500 Lbs. (13 380 kg) Per Line Approx. Weight = 2.39 Lbs Per Ft. (3.56 kg/m) No Load Dia. = 1.034 in. (26.26 mm) to 1.054 in. (26.77 mm)
	Or	



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Rotation Resistant Wire Rope - 5:1 Safety Factor

Auxiliary Line:	26 mm -	1 960 N/mm ² Wire Rope (MCC Part No. 719378) Right Hand Regular Lay Minimum Breaking Strength Required = 100,000 Lbs. (445.0 kN) Maximum Load = 20,000 Lbs. (9 070 kg) Per Line Approx. Weight = 2.13 Lbs. Per Ft. (3.17 kg/m) No Load Dia. (required for lagging) = 1.033 in. (26.24 mm) to 1.045 in. (26.54 mm)
	Or	
	26 mm -	Wire Rope With Pad Eye (MCC Part No. 719432) Right Hand Lang Lay Minimum Breaking Strength Required = 100,000 Lbs. (445.0 kN) Maximum Load = 20,000 Lbs. (9 070 kg) Per Line Approx. Weight = 2.39 Lbs. Per Ft. (3.56 kg/m) No Load Dia. (required for lagging) = 1.034 in. (26.26 mm) to 1.054 in. (26.77 mm)
	Or	
1 in. -	1 960 N/mm ² Wire Rope (MCC Part No. 719393) Right Hand Regular Lay Minimum Breaking Strength Required = 100,000 Lbs. (445.0 kN) Maximum Load = 20,000 Lbs. (9 070 kg) Per Line Approx. Weight = 2.03 Lbs. Per Ft. (3.02 kg/m) No Load Dia. (required for lagging) = 1.012 in. (25.70 mm) to 1.028 in. (26.11 mm)	
	Or	
	1 in. -	Wire Rope (MCC Part No. 719436) Right Hand Lang Lay Minimum Breaking Strength Required = 100,000 Lbs. (445.0 kN) Maximum Load = 20,000 Lbs. (9 070 kg) Per Line Approx. Weight = 2.26 Lbs. Per Ft. (3.26 kg/m) No Load Dia. (required for lagging) = 1.020 in. (25.91 mm) to 1.036 in. (26.31 mm)

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<u>Optional Wire Rope - 3.5 : 1 Safety Factor</u>		
Hoist Line:	26 mm -	6 X 25 Filler Wire, Extra Improved Plow Steel Right Hand Regular Lay, IWRC (MCC Part No. 719387) Minimum Breaking Strength Required = 103,250 Lbs. (459.5 kN) Maximum Capacity With 16 Parts Hoist Line = 472,000 Lbs. (214 100 kg) Approx. Weight = 1.94 Lbs. Per. Ft. (2.89 kg/m) No Load Dia. = 1.034 in. (26.26 mm) to 1.054 in. (26.77 mm)
Whip Line:	26 mm -	6 X 25 Filler Wire, Extra Improved Plow Steel Right Hand Regular Lay, IWRC (MCC Part No. 719387) Minimum Breaking Strength Required = 103,250 Lbs. (459.5 kN) Maximum Load = 29,500 Lbs. (13 380 kg) Per Line Approx. Weight = 1.94 Lbs. Per. Ft. (2.89 kg/m) No Load Dia. = 1.034 in. (26.26 mm) to 1.054 in. (26.77 mm)
Auxiliary Line:	26 mm -	6 X 25 Filler Wire, Extra Improved Plow Steel Right Hand Regular Lay, IWRC (MCC Part No. 719387) Minimum Breaking Strength Required = 70,000 Lbs. (311.5 kN) Maximum Load = 20,000 Lbs. (9 070 kg) Per Line Approx. Weight = 1.94 Lbs. Per. Ft. (2.89 kg/m) No Load Dia. (required for lagging) = 1.034 in. (26.26 mm) to 1.054 in. (26.77 mm)
Or		
	1 in. -	6 X 25 Filler Wire, Improved Plow Steel Right Hand Regular Lay, IWRC (MCC Part No. 719433) Minimum Breaking Strength Required = 70,000 Lbs. (311.5 kN) Maximum Load = 20,000 Lbs. (9 070 kg) Per Line Approx. Weight = 1.85 Lbs. Per. Ft. (2.75 kg/m) No Load Dia. (required for lagging) = 1.020 in. (25.91 mm) to 1.038 in. (26.37 mm)
Wire rope required for 500,000 Lb. (226 700 kg) maximum capacity with 16 parts of line:		
Hoist Line:	26 mm -	6 X 25 Filler Wire, Extra Extra Improved Plow Steel Right Hand Regular Lay, IWRC (MCC Part No. 719383) Minimum Breaking Strength Required = 109,400 Lbs. (49 620 kg) Approx. Weight = 1.94 Lbs. Per. Ft. (2.89 kg/m) No Load Dia. = 1.034 in. (26.26 mm) to 1.054 in. (26.77 mm)

Note: Block spin may occur with 6 X 25 construction wire rope under certain operating conditions.