

Wire Rope Specifications

999 SERIES 1, 2, 3

Liftcrane - Luffing Jib No. 135 on Boom No. 82 or 22EL

Wire Rope Lengths - Front Drum											
Boom and Luffing Jib Length		Luffing Jib Hoist Line Front Drum								Intermediate Fall Front Drum	
		4 Part		3 Part		2 Part		1 Part		1 Part	
Ft.	Meters	Ft.	Meters	Ft.	Meters	Ft.	Meters	Ft.	Meters	Ft.	Meters
140	42.7	750	229					310	95		
150	45.7	800	244					330	101		
160	48.8	850	259	700	213			350	107		
170	51.8	900	274	725	221			370	113		
180	54.9	950	290	775	236			390	119	320	98
190	57.9	1000	305	800	244			410	125	340	104
200	61.0	1050	320	850	259	650	198	430	131	360	110
210	64.0	1100	335	900	274	675	206	450	137	380	116
220	67.1	1150	351	925	282	700	213	470	143	400	122
230	70.1	1200	366	975	297	750	229	490	149	420	128
240	73.2	1250	381	1000	305	775	236	510	155	440	134
250	76.2	—	—	1050	320	800	244	530	162	460	140
260	79.2	—	—	1100	335	825	251	550	168	480	146
270	82.3	—	—	1125	343	850	259	570	174	500	152
280	85.3	—	—	1175	358	875	267	590	180	520	158
290	88.4	—	—	1200	366	925	282	610	186	540	165
300	91.4	—	—	—	—	950	290	630	192	560	171
310	94.5	—	—	—	—	975	297	650	198	580	177
320	97.5	—	—	—	—	1000	305	670	204	580	177
330	100.6	—	—	—	—	1025	312	690	210	580	177
340	103.6	—	—	—	—	1050	320	710	216	580	177
350	106.7	—	—	—	—	1100	335	730	223	580	177
360	109.7	—	—	—	—	1125	343	750	229	580	177
370	112.8	—	—	—	—	1150	351	770	235	—	—

Note: Hoist 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. See tables on page 2 for auxiliary drum application.

Intermediate fall maximum capacity is 15,000 Lbs. (6 800 kg). Intermediate fall must be completely removed before use of 999 SERIES 1 chart.

Hoist Reeving for Main Load Block - Front Drum				
No. Parts of Line	1	2	3	4
Maximum Load - Lbs.	29,500	59,000	88,500	105,500
Maximum Load - kg	13 380	26 760	40 140	47 400



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Wire Rope Lengths - Auxiliary Drum											
Boom and Luffing Jib Length		Luffing Jib Hoist Line Auxiliary Drum								Intermediate Fall Auxiliary Drum	
		4 Part		3 Part		2 Part		1 Part		1 Part	
Ft.	Meters	Ft.	Meters	Ft.	Meters	Ft.	Meters	Ft.	Meters	Ft.	Meters
150	45.7	800	244					330	101		
160	48.8	850	259					350	107		
170	51.8	900	274					370	113		
180	54.9	950	290					390	119		
190	57.9	1000	305					410	125	340	104
200	61.0	1050	320	850	259			430	131	360	110
210	64.0	1100	335	900	274			450	137	380	116
220	67.1	1150	351	925	282			470	143	400	122
230	70.1	1200	366	975	297	750	229	490	149	420	128
240	73.2	1250	381	1000	305	775	236	510	155	440	134
250	76.2	1300	396	1050	320	800	244	530	162	460	140
260	79.2	1350	411	1100	335	825	251	550	168	480	146
270	82.3	1400	427	1125	343	850	259	570	174	500	152
280	85.3	1450	442	1175	358	875	267	590	180	520	158
290	88.4	1500	457	1200	366	925	282	610	186	540	165
300	91.4	—	—	1225	373	950	290	630	192	560	171
310	94.5	—	—	1275	389	975	297	650	198	580	177
320	97.5	—	—	1300	396	1000	305	670	204	580	177
330	100.6	—	—	1350	411	1025	312	690	210	580	177
340	103.6	—	—	1400	427	1050	320	710	216	580	177
350	106.7	—	—	—	—	1100	335	730	223	580	177
360	109.7	—	—	—	—	1125	343	750	229	580	177
370	112.8	—	—	—	—	1150	351	770	235	—	—

Note: Hoist 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.

Capacity chart restrictions will occur when auxiliary drum is used. Maximum capacity is 80,000 Lbs. (36 290 kg) with four parts line. Intermediate fall maximum capacity is 15,000 Lbs. (6 800 kg). Intermediate fall must be completely removed before use of 999 SERIES 1 chart.

Hoist Reeving for Main Load Block - Auxiliary Drum				
No. Parts of Line	1	2	3	4
Maximum Load - Lbs.	20,000	40,000	60,000	80,000
Maximum Load - kg	9 070	18 140	27 220	36 290

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Wire Rope Specifications

Rotation Resistant Wire Rope - 5:1 Safety Factor

Hoist Line: 26 mm - 2 160 N/mm² 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)

Hoist Line: 26 mm - 1 960 N/mm² Wire Rope (MCC Part No. 719378)
(Auxiliary Drum) 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/mm² 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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Wire Rope Specifications	
<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)
Hoist Line: (Auxiliary Drum)	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)

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

Maximum Spooling Capacities	
Front Drum: (Hoist Line)	26 mm Wire Rope - 7 Layers - 1,727 Ft. (526m)
Auxiliary Drum: (Hoist 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**.