

Wire Rope Specifications

Liftcrane - Boom No. 83

Wire Rope Lengths											
Boom or Boom and Jib Length		Whip Line Rear Drum				Front Drum					
						38 mm Wire Rope			32 mm Wire Rope		
		38 mm Or 32 mm Wire rope 1 Part		32 mm Wire Rope 2 Part		Hoist Line		Maximum Required Parts of Line	Hoist Line		Maximum Required Parts of Line
Ft.	Meters	Ft.	Meters	Ft.	Meters	Ft.	Meters		Ft.	Meters	
50	15.2	160	49	210	64	325	99	4	400	122	5
60	18.3	180	55	240	73	375	114	4	450	137	5
70	21.3	200	61	270	82	425	130	4	500	152	5
80	24.4	220	67	300	91	475	145	4	575	175	5
90	27.4	240	73	330	101	475	145	3	625	191	5
100	30.5	260	79	360	110	475	145	3	625	191	4
110	33.5	280	85	390	119	525	160	3	625	191	4
120	36.6	300	91	420	128	550	168	3	675	206	4
130	39.6	320	98	450	137	550	168	2	675	206	3
140	42.7	340	104	480	146	550	168	2	675	206	3
150	45.7	360	110	510	155	550	168	2	675	206	3
160	48.8	380	116	540	165	550	168	2	700	213	3
170	51.8	400	122	570	174	575	175	2	750	229	3
180	54.9	420	128	600	183	600	183	2	750	229	2
190	57.9	440	134	630	192	600	183	1	750	229	2
200	61.0	460	140	660	201	600	183	1	750	229	2
210	64.0	480	146								
220	67.1	500	152								

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.

Auxiliary drum may be used for whip line application using 28 mm wire rope. Maximum capacity is 33,000 Lbs. (14 970 kg) per line.

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Hoist Reeving for Main Load Block - 38 mm Wire Rope				
No. Parts of Line	1	2	3	4
Maximum Load Lbs.	66,000	132,000	198,000	264,600
Maximum Load kg	29 940	59 870	89 810	120 000

Hoist Reeving for Main Load Block - 32 mm Wire Rope					
No. Parts of Line	1	2	3	4	5
Maximum Load Lbs.	44,000	88,000	132,000	176,000	220,000
Maximum Load kg	19 960	39 920	59 870	79 830	99 790

Maximum Spooling Capacities	
Front Drum: (Hoist Line)	38 mm Wire Rope - 4 Layers - 657 Ft. (200m)
Front Drum: (Hoist Line - Optional)	32 mm Wire Rope - 4 Layers - 725 Ft. (221m)
Rear Drum: (Whip Line)	38 mm Wire Rope - 4 Layers - 657 Ft. (200m)
Rear Drum: (Whip Line - Optional)	32 mm Wire Rope - 4 Layers - 725 Ft. (221m)
Auxiliary Drum: (Whip Line)	28 mm Wire Rope - 6 Layers - 962 Ft. (293m)
28 Ft. (9m) is deducted from maximum spooling capacities for 3 dead wraps per drum on front and rear drum. 18 Ft. (5m) is deducted from maximum spooling capacity for 3 dead wraps on auxiliary drum.	

Refer to Drum and Lagging Chart **No. 8471-A**.

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Rotation Resistant Wire Rope - 5:1 Safety Factor

Hoist Line: 38 mm - Wire Rope With Pad Eye (MCC Part No. A00839)
Right Hand Lang Lay
Minimum Breaking Strength = 330,800 Lbs. (1471.4 kN)
Maximum Load = 66,000 Lbs. (29 940 kg) Per Line
Approx. Weight = 4.92 Lbs Per Ft. (7.32 kg/m)
No Load Dia. = 1.526 in. (38.76 mm) to 1.556 in. (39.52 mm)

Whip Line: 38 mm - Wire Rope With Pad Eye (MCC Part No. A00839)
Right Hand Lang Lay
Minimum Breaking Strength = 330,800 Lbs. (1471.4 kN)
Maximum Load = 66,000 Lbs. (29 940 kg) Per Line
Approx. Weight = 4.92 Lbs Per Ft. (7.32 kg/m)
No Load Dia. = 1.526 in. (38.76 mm) to 1.556 in. (39.52 mm)

Auxiliary Line: 28 mm - Wire Rope With Pad Eye (MCC Part No. A00840)
Right Hand Lang Lay
Minimum Breaking Strength = 168,800 Lbs. (750.8 kN)
Maximum Load = 33,000 Lbs. (14 970 kg) Per Line
Approx. Weight = 2.63 Lbs Per Ft. (3.91 kg/m)
No Load Dia. = 1.124 in. (28.55 mm) to 1.146 in. (29.11 mm)

OR

Hoist Line: 32 mm - Wire Rope With Pad Eye (MCC Part No. A00218)
(Optional) Right Hand Lang Lay
Minimum Breaking Strength = 220,400 Lbs. (980.3 kN)
Maximum Load = 44,000 Lbs. (19 960 kg) Per Line
Approx. Weight = 3.37 Lbs Per Ft. (5.01 kg/m)
No Load Dia. = 1.285 in. (32.64 mm) to 1.304 in. (33.12 mm)

Whip Line: 32 mm - Wire Rope With Pad Eye (MCC Part No. A00218)
(Optional) Right Hand Lang Lay
Minimum Breaking Strength = 220,400 Lbs. (980.3 kN)
Maximum Load = 44,000 Lbs. (19 960 kg) Per Line
Approx. Weight = 3.37 Lbs Per Ft. (5.01 kg/m)
No Load Dia. = 1.285 in. (32.64 mm) to 1.304 in. (33.12 mm)

Non-Rotation Resistant Wire Rope - 3.5:1 Safety Factor

Auxiliary Line: 28 mm - 6 X 36 Extra Extra Improved Plow Steel Wire Rope
With Pad Eye (MCC Part No. A02479)
Right Hand Regular Lay, IWRC
Minimum Breaking Strength = 135,600 Lbs. (603.1 kN)
Maximum Load = 33,000 Lbs. (14 970 kg) Per Line
Approx. Weight = 2.24 Lbs Per Ft. (3.33 kg/m)
No Load Dia. = 1.124 in. (28.55 mm) to 1.146 in. (29.11 mm)