

Wire Rope Specifications

Liftcrane - Boom No. 22EL

1-1/8 in. Wire Rope

888 SERIES 1
888 SERIES 2

Wire Rope Lengths						
Boom or Boom and Jib Length		Whip Line Front Drum		Hoist Line Rear Drum		Maximum Required Parts of Line
		1 Part				
Ft.	Meters	Ft.	Meters	Ft.	Meters	
70	21.3	180	55	1025	312	12
80	24.4	200	61	1050	320	11
90	27.4	220	67	1075	328	10
100	30.5	240	73	1100	335	9
110	33.5	260	79	1100	335	8
120	36.6	280	85	1175	358	8
130	39.6	300	91	1250	381	8
140	42.7	320	98	1250	381	7
150	45.7	340	104	1275	389	7
160	48.8	360	110	1275	389	6
170	51.8	380	116	1275	389	6
180	54.9	400	122	1275	389	5
190	57.9	420	128	1275	389	5
200	61.0	440	134	1275	389	5
210	64.0	460	140	1275	389	4
220	67.1	480	146	1275	389	4
230	70.1	500	152	1275	389	4
240	73.2	520	158	1275	389	4
250	76.2	540	165	1275	389	3
260	79.2	560	171	1275	389	3
270	82.3	580	177	1275	389	3
280	85.3	600	183	1275	389	3
290	88.4	620	189	1275	389	2
300	91.4	640	195			
310	94.5	660	201			
320	97.5	680	207			
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. Load block hoisting distance will be restricted using wire rope lengths shown. Maximum block travel may be restricted when hoist line length exceeds 750 Ft. (229m) with bare rear drum or 800 Ft. (244m) using 21-1/4 in. (540 mm) Dia. lagging on rear drum. Maximum hook travel for upper boom point application may be restricted when whip line length exceeds 620 Ft. (189m) with bare front drum or 660 Ft. (201m) using 21-1/4 in. (540 mm) Dia. lagging on front drum.

Hoist Reeving for Main Load Block - Rear Drum (3 Layers Maximum)						
No. Parts of Line	1	2	3	4	5	6
Maximum Load Lbs.	40,000	80,000	120,000	160,000	200,000	240,000
Maximum Load kg	18 140	36 290	54 430	72 570	90 720	108 860
No. Parts of Line	7	8	9	10	11	12
Maximum Load Lbs.	280,000	320,000	360,000	400,000	440,000	441,000
Maximum Load kg	127 010	145 150	163 290	181 440	199 580	200 000



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Maximum Spooling Capacities

Rear Drum:	1-1/8 in. Wire Rope - 3 Layers - 527 Ft. (161m)
(Hoist Line)	3 Layers - 569 Ft. (173m) with 21-1/4 in. (540 mm) Dia. Lagging
Front Drum:	1-1/8 in. Wire Rope - 3 Layers - 527 Ft. (161m)
(Whip Line)	3 Layers - 569 Ft. (173m) with 21-1/4 in. (540 mm) Dia. Lagging

18 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. 6119-A**.

Lagging No. 502400 grooved for 1-1/8 in. wire rope with 21-1/4 in. (540 mm) root Dia. is optional for liftcrane application on front and rear drum No. 176516.

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3.5 : 1 Safety Factor

Hoist Line:	1-1/8 in. -	6 X 31 Warrington-Seale, Extra Extra Improved Plow Steel, Regular Lay, IWRC (MCC Part No. 719284) Minimum Breaking Strength 143,000 Lbs. (64 860 kg) Approx. Weight = 2.34 Lbs. Per Ft. (3.48 kg/m)
Whip Line:	1-1/8 in. -	6 X 31 Warrington-Seale, Extra Extra Improved Plow Steel, Regular Lay, IWRC (MCC Part No. 719284) Minimum Breaking Strength 143,000 Lbs. (64 860 kg) Maximum Load = 40,000 Lbs. (18 140 kg) Approx. Weight = 2.34 Lbs. Per Ft. (3.48 kg/m)

Note: Block Spin May Occur With 6 X 31 Construction Wire Rope Under Certain Operating Conditions.

Warning! Single part whip line is maximum for upper boom point application with 1-1/8 in. wire rope (greater than 29,500 Lbs. [13 380 kg]) for liftcrane service. Two part whip line not allowed with 1-1/8 in. wire rope.

Jib capacity with single part whip line is limited to 29,500 Lbs. (13 380 kg) or 59,000 Lbs. (26 760 kg) with two part whip line for 1-1/8 in. wire rope. 40,000 Lb. (18 140 kg) line pull not allowed.