

Wire Rope Specifications

Liftcrane - Boom No. 78T

Wire Rope Lengths											
Boom or Boom and Jib Length		Whip Line				Front or Rear Drum			Auxiliary Drum		
		Front, Rear or Auxiliary Drum				Hoist Line		Maximum Required Parts of Line	Auxiliary Hoist Line		Maximum Required Parts of Line
		1 Part		2 Part		Ft.	Meters		Ft.	Meters	
42.5	13.0	160	49	220	67	725	221	13	700	214	12
60	18.3	170	52	240	73	975	297	13	900	274	12
70	21.3	190	58	270	82	975	297	11	1025	312	12
80	24.4	210	64	300	91	1000	305	10	1150	351	12
90	27.4	230	70	330	101	1100	335	10	1300	396	12
100	30.5	250	76	360	110	1100	335	9	1425	434	12
110	33.5	270	82	390	119	1100	335	8	1425	434	11
120	36.6	290	88	420	128	1100	335	7	1425	434	10
130	39.6	310	94	450	137	1125	343	7	1425	434	9
140	42.7	330	101	480	146	1125	343	6	1500	457	9
150	45.7	350	107	510	155	1125	343	5	1500	457	8
160	48.8	370	113	540	165	1125	343	5	1500	457	7
170	51.8	390	119	570	174	1125	343	5	1500	457	7
180	54.9	410	125	600	183	1150	351	5	1500	457	6
190	57.9	430	131	630	192	1200	366	5	1500	457	6
200	61.0	450	137	660	201	1200	366	4	1500	457	6
210	64.0	470	143	690	210	1200	366	4	1550	472	6
220	67.1	490	149	720	219	1200	366	4	1600	488	6
230	70.1	510	155	750	229	1200	366	4	1600	488	5
240	73.2	530	162	780	238	1200	366	3	1600	488	5
250	76.2	550	168	810	247	1200	366	3	1600	488	5
260	79.2	570	174	840	256	1200	366	3	1600	488	5
270	82.3	590	180	870	265	1200	366	3	1600	488	4
280	85.3	610	186	900	274						
290	88.4	630	192								
300	91.4	650	198								

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.

13 parts of line requires upper boom point.

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

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Hoist Reeving for Main Load Block - Front or Rear Drum							
No. Parts of Line	1	2	3	4	5	6	7
Maximum Load Lbs.	29,500	59,000	88,500	118,000	147,500	177,000	206,500
Maximum Load kg	13 380	26 760	40 140	53 520	66 900	80 290	93 670
No. Parts of Line	8	9	10	11	12	13	
Maximum Load Lbs.	236,000	265,500	295,000	324,500	354,000	364,000	
Maximum Load kg	107 050	120 430	133 810	147 190	160 570	165 100	

Auxiliary 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

Maximum Spooling Capacities	
Front Drum: (Hoist or Whip Line)	1 in. Wire Rope - 5 Layers - 928 Ft. (283m)
Rear Drum (Hoist or Whip Line)	1 in. Wire Rope - 5 Layers - 928 Ft. (283m)
Auxiliary Drum: (Hoist or 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. 8093-A**.

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<u>Rotation Resistant Wire Rope - 5:1 Safety Factor</u>		
Hoist Line:	1 in. -	2 160 N/mm ² Wire Rope (MCC Part No. 719392) Minimum Breaking Strength = 153,800 Lbs. (684.2 kN) Approx. Weight = 2.03 Lbs Per Ft. (3.02 kg/m)
Whip Line:	1 in. -	2 160 N/mm ² Wire Rope (MCC Part No. 719392) Minimum Breaking Strength = 153,800 Lbs. (684.2 kN) Maximum Load = 29,500 Lbs. (13 380 kg) Per Line Approx. Weight = 2.03 Lbs. Per Ft. (3.02 kg/m)
Auxiliary Line:	1 in. -	1 960 N/mm ² Wire Rope (MCC Part No. 719393) Minimum Breaking Strength = 139,600 Lbs. (620.9 kN) Maximum Load = 20,000 Lbs. (9 070 kg) per line Approx. Weight = 2.03 Lbs. Per Ft. (3.02 kg/m)
Or		
	26 mm -	1 960 N/mm ² Wire Rope (MCC Part No. 719378) Minimum Breaking Strength = 146,200 Lbs. (650.6 kN) Maximum Load = 20,000 Lbs. (9 070 kg) Per Line. Approx. Weight = 2.13 Lbs. Per Ft. (3.17 kg/m)

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<u>Optional Wire Rope - 3.5 : 1 Safety Factor</u>		
Hoist Line:	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)
Whip Line:	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) Maximum Load = 29,500 Lbs. (13 380 kg) Per Line Approx. Weight = 1.85 Lbs. Per. Ft. (2.75 kg/m)
Auxiliary Line:	1 in.-	6 X 25 Filler Wire, Improved Plow Steel, Right Regular Lay, IWRC (MCC Part No. 719073) Minimum Breaking Strength= 89,800 Lbs. (40 730 kg) Maximum Load = 20,000 Lbs. (9 070 kg) Per Line Approx. Weight = 1.85 Lbs. Per. Ft. (2.75 kg/m)
		Or
	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) Maximum Load = 20,000 Lbs. (9 070 kg) Per Line Approx. Weight = 1.94 Lbs. Per. Ft. (2.89 kg/m) 6 X 25 Filler Wire, Extra Improved Plow Steel,
Note: Block Spin May Occur With 6 X 25 Construction Wire Rope Under Certain Operating Conditions.		