

# Wire Rope Specifications

Liftcrane - Luffing Jib No. 139 On  
Boom No. 78T With Heavy Lift Top

Wire Rope Lengths - Front Drum									
Boom and Luffing Jib Length		Luffing Jib Hoist Line Front Drum							
		4 Part		3 Part		2 Part		1 Part	
Ft.	Meters	Ft.	Meters	Ft.	Meters	Ft.	Meters	Ft.	Meters
130	39.6	725	221					300	91
140	42.7	775	236					320	98
150	45.7	825	251	650	198			340	104
160	48.8	875	267	700	213			360	110
170	51.8	925	282	750	229			380	116
180	54.9	975	297	775	236			400	122
190	57.9	1025	312	825	251	625	191	420	128
200	61.0	1075	328	850	259	650	198	440	134
210	64.0	1125	343	900	274	675	206	460	140
220	67.1	1175	358	950	290	700	213	480	146
230	70.1	—	—	975	297	750	229	500	152
240	73.2	—	—	1025	312	775	236	520	158
250	76.2	—	—	1050	320	800	244	540	165
260	79.2	—	—	1100	335	825	251	560	171
270	82.3	—	—	—	—	850	259	580	177
280	85.3	—	—	—	—	875	267	600	183
290	88.4	—	—	—	—	925	282	620	189
300	91.4	—	—	—	—	950	290	640	195
310	94.5	—	—	—	—	975	297	660	201
320	97.5	—	—	—	—	1000	305	680	207
330	100.6	—	—	—	—	1025	312	700	213
340	103.6	—	—	—	—	—	—	720	219
350	106.7	—	—	—	—	—	—	740	226

**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.

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	105,000
Maximum Load - kg	13 380	26 760	40 140	47 600

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Wire Rope Lengths - Auxiliary Drum									
Boom and Luffing Jib Length		Luffing Jib Hoist Line Auxiliary Drum							
		4 Part		3 Part		2 Part		1 Part	
Ft.	Meters	Ft.	Meters	Ft.	Meters	Ft.	Meters	Ft.	Meters
130	39.6	725	221					300	91
140	42.7	775	236					320	98
150	45.7	825	251					340	104
160	48.8	875	267					360	110
170	51.8	925	282					380	116
180	54.9	975	297					400	122
190	57.9	1025	312	825	251			420	128
200	61.0	1075	328	850	259			440	134
210	64.0	1125	343	900	274			460	140
220	67.1	1175	358	950	290	700	213	480	146
230	70.1	1225	373	975	297	750	229	500	152
240	73.2	1275	389	1025	312	775	236	520	158
250	76.2	1325	404	1050	320	800	244	540	165
260	79.2	1375	419	1100	335	825	251	560	171
270	82.3	---	---	1150	351	850	259	580	177
280	85.3	---	---	1175	358	875	267	600	183
290	88.4	---	---	1225	373	925	282	620	189
300	91.4	---	---	1250	381	950	290	640	195
310	94.5	---	---	---	---	975	297	660	201
320	97.5	---	---	---	---	1000	305	680	207
330	100.6	---	---	---	---	1025	312	700	213

**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.

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: 1 in. - 2 160 N/mm<sup>2</sup> Wire Rope (MCC Part No. 719392)  
 Front Drum Minimum Breaking Strength = 153,800 Lbs. (684.2 kN)  
 Approx. Weight = 2.03 Lbs Per Ft. (3.02 kg/m)

Hoist Line: 1 in. - 1 960 N/mm<sup>2</sup> Wire Rope (MCC Part No. 719393)  
 Auxiliary Drum 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<sup>2</sup> 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)

### Optional Wire Rope - 3.5 : 1 Safety Factor

Hoist Line: 1 in. - 6 X 25 Filler Wire, Extra Improved Plow Steel,  
 Front Drum 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)

Hoist Line: 1 in. - 6 X 25 Filler Wire, Improved Plow Steel,  
 Auxiliary Drum 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)

**Note:** Block Spin May Occur With 6 X 25 Construction Wire Rope Under Certain Operating Conditions.

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

