

MANITOWOC ENGINEERING CO.

Division of the Manitowoc Company, Inc. Manitowoc, Wisconsin 54220



WIRE ROPE SPECIFICATIONS

LIFTCRANE - BOOM NO. 22EL

888 SERIES 1
888 SERIES 2

WIRE ROPE LENGTHS								
BOOM OR BOOM AND JIB LENGTH		WHIP LINE FRONT OR AUXILIARY DRUM				HOIST LINE REAR DRUM		MAXIMUM REQUIRED PARTS OF LINE
		1 PART		2 PART				
FT.	METERS	FT.	METERS	FT.	METERS	FT.	METERS	
70	21.3	180	55	270	82	1175	358	14
80	24.4	200	61	300	91	1325	404	14
90	27.4	220	67	330	101	1375	419	13
100	30.5	240	73	360	110	1400	427	12
110	33.5	260	79	390	119	1425	434	11
120	36.6	280	85	420	128	1550	472	11
130	39.6	300	91	450	137	1550	472	10
140	42.7	320	98	480	146	1625	465	10
150	45.7	340	104	500	152	1625	495	9
160	48.8	360	110	530	162	1625	495	8
170	51.8	380	116	560	171	1625	495	8
180	54.9	400	122	590	180	1625	495	7
190	57.9	420	128	620	189	1625	495	7
200	61.0	440	134	650	198	1625	495	6
210	64.0	460	140	680	207	1625	495	6
220	67.1	480	146	710	216	1625	495	5
230	70.1	500	152	740	226	1625	495	5
240	73.2	520	158	770	235	1625	495	5
250	76.2	540	165	800	244	1625	495	4
260	79.2	560	171	830	253	1625	495	4
270	82.3	580	177	860	262	1625	495	4
280	85.3	600	183	890	271	1625	495	3
290	88.4	620	189	920	280	1625	495	3
300	91.4	640	195	950	290			
310	94.5	660	201	980	299			
320	97.5	680	207	1010	308			
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.

HOIST REEVING FOR MAIN LOAD BLOCK							
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	14
MAXIMUM LOAD-LBS.	236,000	265,500	295,000	324,500	354,000	383,500	441,000
MAXIMUM LOAD-kg	107 050	120 430	133 810	147 190	160 570	173 950	200 000

MAXIMUM SPOOLING CAPACITIES	
REAR DRUM: (HOIST LINE)	26 mm WIRE ROPE - 7 LAYERS - 1,609' (490m) 7 LAYERS - 1,716' (523m) WITH 21-1/4" (540 mm) DIA. LAGGING 1" WIRE ROPE - 7 LAYERS - 1,623' (495m) 7 LAYERS - 1,731' (528m) WITH 21-1/4" (540 mm) DIA. LAGGING
FRONT DRUM: (WHIP LINE)	26 mm WIRE ROPE - 7 LAYERS - 1,609' (490m) 7 LAYERS - 1,716' (523m) WITH 21-1/4" (540 mm) DIA. LAGGING 4 LAYERS - 1,061' (323m) WITH 27" (686 mm) DIA. LAGGING 1" WIRE ROPE - 7 LAYERS - 1,623' (495m) 7 LAYERS - 1,731' (528m) WITH 21-1/4" (540 mm) DIA. LAGGING 4 LAYERS - 1,074' (327m) WITH 27" (686 mm) DIA. LAGGING
AUXILIARY DRUM: (WHIP LINE)	26 mm WIRE ROPE - 6 LAYERS - 1,323' (403m) 6 LAYERS - 1,415' (431m) WITH 21-1/4" (540 mm) DIA. LAGGING 1" WIRE ROPE - 6 LAYERS - 1,335' (407m) 6 LAYERS - 1,428' (435m) WITH 21-1/4" (540 mm) DIA. LAGGING
17' (5m) (22' (7m) WITH 27" (686 mm) DIA. LAGGING) 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.



WIRE ROPE SPECIFICATIONS

LIFTCRANE - BOOM NO. 22EL

888 SERIES 1

888 SERIES 2

WIRE ROPE SPECIFICATIONS	
<u>ROTATION RESISTANT WIRE ROPE - 5 :1 SAFETY FACTOR</u>	
HOIST LINE:	26 mm - 2 160 N/mm ² WIRE ROPE (REF. MEC PART NO. 719379) MINIMUM BREAKING STRENGTH REQUIRED = 147,500 LBS. (656.1 KN) MAXIMUM CAPACITY WITH 14 PARTS HOIST LINE = 413,000 LBS. (187 330 kg) APPROX. WEIGHT = 2.13 LBS. PER FT. (3.17 kg/m)
WHIP LINE:	26 mm - 2 160 N/mm ² WIRE ROPE (REF. MEC PART NO. 719379) MINIMUM BREAKING STRENGTH REQUIRED = 147,500 LBS. (656.1 KN) MAXIMUM LOAD = 29,500 LBS. (13 380 kg) PER LINE APPROX. WEIGHT = 2.13 LBS. PER FT. (3.17 kg/m)
AUXILIARY LINE:	26 mm - 1 960 N/mm ² WIRE ROPE (MEC 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)
OR	
HOIST LINE:	1" - 2 160 N/mm ² WIRE ROPE (MEC PART NO. 719392) MINIMUM BREAKING STRENGTH = 153,800 LBS. (684.2 KN) MAXIMUM CAPACITY WITH 14 PARTS HOIST LINE = 413,000 LBS. (187 330 kg) APPROX. WEIGHT = 2.03 LBS. PER FT. (3.02 kg/m)
WHIP LINE:	1" - 2 160 N/mm ² WIRE ROPE (MEC 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" - 1 960 N/mm ² WIRE ROPE (MEC 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)
WIRE ROPE REQUIRED FOR 441,000 LB. (200 000 kg) MAXIMUM CAPACITY WITH 14 PARTS OF LINE	
HOIST LINE:	26 mm - 2 160 N/mm ² WIRE ROPE (MEC PART NO. 719379) MINIMUM BREAKING STRENGTH REQUIRED = 161,070 LBS. (716.5 KN) MAXIMUM CAPACITY WITH 14 PARTS HOIST LINE = 441,000 LBS. (200 000 kg) APPROX. WEIGHT = 2.13 LBS. PER FT. (3.17 kg/m)

NOTE: 1" ROTATION RESISTANT WIRE ROPE NOT AVAILABLE FOR 441,000 LB. (200 000 kg) MAXIMUM CAPACITY WITH 14 PARTS OF LINE.

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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 REGULAR LAY, IWRC (MEC PART NO. 719387) MINIMUM BREAKING STRENGTH 108,600 LBS. (483.1 KN) MAXIMUM CAPACITY WITH 14 PARTS HOIST LINE = 434,000 LBS. (196 860 kg) APPROX. WEIGHT = 1.94 LBS. PER FT. (2.89 kg/m)
WHIP LINE:	26 mm - 6 X 25 FILLER WIRE, EXTRA IMPROVED PLOW STEEL, RIGHT REGULAR LAY, IWRC (MEC PART NO. 719387) MINIMUM BREAKING STRENGTH 108,600 LBS. (483.1 KN) MAXIMUM LOAD = 29,500 LBS. (13 380 kg) PER LINE APPROX. WEIGHT = 1.94 LBS. PER FT. (2.89 kg/m)
AUXILIARY LINE:	26 mm - 6 X 25 FILLER WIRE, EXTRA IMPROVED PLOW STEEL, RIGHT REGULAR LAY, IWRC (MEC 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)
OR	
HOIST LINE:	1" - 6 X 25 FILLER WIRE, EXTRA IMPROVED PLOW STEEL, RIGHT REGULAR LAY, IWRC (MEC PART NO. 719060) MINIMUM BREAKING STRENGTH 103,400 LBS. (460 KN) MAXIMUM CAPACITY WITH 14 PARTS HOIST LINE = 413,000 LBS. (187 330 kg) APPROX. WEIGHT = 1.85 LBS. PER FT. (2.75 kg/m)
WHIP LINE:	1" - 6 X 25 FILLER WIRE, EXTRA IMPROVED PLOW STEEL, RIGHT REGULAR LAY, IWRC (MEC 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" - 6 X 25 FILLER WIRE, IMPROVED PLOW STEEL, RIGHT REGULAR LAY, IWRC (MEC 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)
WIRE ROPE REQUIRED FOR 441,000 LB. (200 000 kg) MAXIMUM CAPACITY WITH 14 PARTS OF LINE	
HOIST LINE:	26 mm - 6 X 25 FILLER WIRE, EXTRA EXTRA IMPROVED PLOW STEEL, RIGHT REGULAR LAY, IWRC (MEC PART NO. 719383) MINIMUM BREAKING STRENGTH 119,400 LBS. (54 160 kg) APPROX. WEIGHT = 1.94 LBS. PER FT. (2.70 kg/m)
OR	
HOIST LINE:	1" - 6 X 25 FILLER WIRE, EXTRA EXTRA IMPROVED PLOW STEEL, RIGHT REGULAR LAY, IWRC (MEC PART NO. 719386) MINIMUM BREAKING STRENGTH 115,000 LBS. (52 160 kg) APPROX. WEIGHT = 1.85 LBS. PER FT. (2.75 kg/m)

NOTE: BLOCK SPIN MAY OCCUR WITH 6 X 25 CONSTRUCTION WIRE ROPE UNDER CERTAIN OPERATING CONDITIONS.

REFERENCE
ONLY!