

MANITOWOC ENGINEERING CO.

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



WIRE ROPE SPECIFICATIONS

LIFTCRANE - BOOM NO. 22E WITH OPEN THROAT TOP
INLINE OR OFFSET 4-1/2 DEGREES

888 SERIES 1
888 SERIES 2

WIRE ROPE LENGTHS													
BOOM OR BOOM AND JIB LENGTH		REAR DRUM				FRONT DRUM				AUXILIARY DRUM			
		WHIP LINE				HOIST LINE		MAXIMUM REQUIRED PARTS OF LINE		AUXILIARY HOIST LINE		MAXIMUM REQUIRED PARTS OF LINE	
		1 PART		2 PART		FT.	METERS	TOP INLINE	TOP OFFSET	FT.	METERS	TOP INLINE	TOP OFFSET
FT.	METERS	FT.	METERS										
70	21.3	180	55	260	79	1150	351	14	14	---	---	--	--
80	24.4	200	61	290	88	1300	396	14	12	1300	396	14	14
90	27.4	220	67	320	98	1350	411	13	11	1450	442	14	14
100	30.5	240	73	350	107	1500	457	13	10	1600	488	14	14
110	33.5	260	79	380	116	1500	457	11	10	1750	533	14	14
120	36.6	280	85	410	125	1525	465	11	9	1900	579	14	13
130	39.6	300	91	440	134	1525	465	10	8	2050	625	14	12
140	42.7	320	98	470	143	1525	465	9	8	2200*	671	14	12
150	45.7	340	104	500	152	1575	480	9	8	2200*	671	13	11
160	48.8	360	110	530	162	1575	480	8	8	2200*	671	12	11
170	51.8	380	116	560	171	1600	488	8	7	2200*	671	11	10
180	54.9	400	122	590	180	1600	488	7	7	2200*	671	10	10
190	57.9	420	128	620	189	1600	488	7	6	2200*	671	10	9
200	61.0	440	134	650	198	1600	488	6	6	2200*	671	9	9
210	64.0	460	140	680	207	1600	488	6	6	2200*	671	8	8
220	67.1	480	146	710	216	1600	488	6	5	2200*	671	8	8
230	70.1	500	152	740	226	1600	488	5	5	2200*	671	7	7
240	73.2	520	158	770	235	1600	488	5	4	2200*	671	7	6
250	76.2	540	165	800	244	1600	488	4	4	2200*	671	6	6
260	79.2	560	171	830	253	1600	488	4	4	2200*	671	6	5
270	82.3	580	177	860	262	1600	488	4	3	2200*	671	5	5
280	85.3	600	183	890	271	1600	488	3	3	2200*	671	5	4
290	88.4	620	189	920	280	1600	488	3	3	2200*	671	4	4
300	91.4	640	195	950	290								
310	94.5	660	201	---	---								
320	97.5	680	207	---	---								

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. MAXIMUM BLOCK TRAVEL WILL BE RESTRICTED WHEN HOIST LINE LENGTH EXCEEDS 1,600' (488m) USING AUXILIARY DRUM. (*) WIRE ROPE LENGTHS GREATER THAN 2,050' (625m) CAN NOT BE STORED ON AUXILIARY DRUM. AUXILIARY DRUM CAN NOT BE USED WITH 70' (21.3m) BOOM LENGTH.

CAPACITY CHART RESTRICTIONS WILL OCCUR WHEN AUXILIARY DRUM IS USED. MAXIMUM CAPACITY IS 280,000 LBS. (127 010 kg) WITH 14 PARTS LINE.

HOIST REEVING FOR MAIN LOAD BLOCK - FRONT 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	14
MAXIMUM LOAD-LBS.	236,000	265,500	295,000	324,500	354,000	383,500	460,000
MAXIMUM LOAD-kg	107 050	120 430	133 810	147 190	160 570	173 950	208 600

AUXILIARY HOIST REEVING FOR MAIN LOAD BLOCK - AUXILIARY DRUM							
NO. PARTS OF LINE	1	2	3	4	5	6	7
MAXIMUM LOAD-LBS.	20,000	40,000	60,000	80,000	100,000	120,000	140,000
MAXIMUM LOAD-kg	9 070	18 140	27 220	36 290	45 360	54 430	63 500
NO. PARTS OF LINE	8	9	10	11	12	13	14
MAXIMUM LOAD-LBS.	160,000	180,000	200,000	220,000	240,000	260,000	280,000
MAXIMUM LOAD-kg	72 570	81 650	90 720	99 790	108 860	117 930	127 010

WIRE ROPE SPECIFICATIONS

**LIFTCRANE - BOOM NO. 22E WITH OPEN THROAT TOP
INLINE OR OFFSET 4-1/2 DEGREES**

888 SERIES 1

888 SERIES 2

MAXIMUM SPOOLING CAPACITIES	
FRONT 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
REAR 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: (AUX. HOIST 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	
ROTATION RESISTANT WIRE ROPE - 5 :1 SAFETY FACTOR	
HOIST LINE:	26 mm - 2 160 N/mm ² WIRE ROPE (REF. MCC 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. MCC 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 HOIST LINE:	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)
OR	
HOIST LINE:	1" - 2 160 N/mm ² WIRE ROPE (MCC 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 (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 HOIST LINE:	1" - 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)
MCC PART NO. 719379 HAS A MINIMUM BREAKING STRENGTH OF 161,070 LBS. (716.5 kN) AND A MINIMUM CAPACITY WITH 14 PARTS HOIST LINE OF 450,800 LBS. (204 480 kg).	

NOTE: 26 mm AND 1" ROTATION RESISTANT WIRE ROPE NOT AVAILABLE FOR 460,000 LB. (208 600 kg)
MAXIMUM CAPACITY WITH 14 PARTS OF LINE.

WIRE ROPE SPECIFICATIONS

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WIRE ROPE SPECIFICATIONS

OPTIONAL WIRE ROPE - 3.5 :1 SAFETY FACTOR

HOIST LINE: 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 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 (MCC 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 HOIST LINE: 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)

OR

HOIST LINE: 1" - 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 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 (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 HOIST LINE: 1" - 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)

WIRE ROPE REQUIRED FOR 460,000 LB. (208 600 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 (MCC 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 (MCC 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.