

# MANITOWOC ENGINEERING CO.

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



## WIRE ROPE SPECIFICATIONS \_\_\_\_\_ 4100W SERIES 2 LIFTCRANE - BOOM NO. 22C WITH OPEN THROAT TOP INLINE OR OFFSET 4-1/2 DEGREES

WIRE ROPE LENGTHS									
BOOM OR BOOM AND JIB LENGTH		WHIP LINE REAR OR RIGHT REAR DRUM				HOIST LINE FRONT DRUM		MAXIMUM REQUIRED PARTS OF LINE	
		1 PART		2 PART					
FT.	METERS	FT.	METERS	FT.	METERS	FT.	METERS	TOP INLINE	TOP OFFSET
70	21.3	165	50	235	72	1135	346	14	13
80	24.4	185	56	265	81	1135	346	12	10
90	27.4	205	62	295	90	1135	346	11	9
100	30.5	225	69	325	99	1255	383	11	8
110	33.5	245	75	355	108	1255	383	9	8
120	36.6	265	81	385	117	1255	383	9	8
130	39.6	285	87	415	126	1255	383	8	7
140	42.7	305	93	445	136	1315	401	8	7
150	45.7	325	99	475	145	1315	401	7	6
160	48.8	345	105	505	154	1315	401	7	6
170	51.8	365	111	535	163	1315	401	6	6
180	54.9	385	117	565	172	1315	401	6	5
190	57.9	405	123	595	181	1360	415	6	5
200	61.0	425	130	625	191	1360	415	5	5
210	64.0	445	136	655	200	1360	415	5	5
220	67.1	465	142	685	209	1360	415	5	4
230	70.1	485	148	715	218	1405	428	5	4
240	73.2	505	154	745	227	1405	428	4	4
250	76.2	525	160	775	236	1405	428	4	4
260	79.2	545	166	805	245	1405	428	4	3
270	82.3	565	172	835	255				
280	85.3	585	178	865	264				
290	88.4	605	184	---	---				

**NOTE:** HOIST LINE AND WHIP LINE LENGTHS GIVEN IN TABLE WILL ALLOW BLOCK TRAVEL DOWN TO LEVEL OF ROLLER PATH. WHEN BLOCK TRAVEL BELOW ROLLER PATH 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 ROLLER PATH IS REQUIRED.

HOIST REEVING FOR MAIN LOAD BLOCK							
NO. PARTS OF LINE	1	2	3	4	5	6	7
MAXIMUM LOAD-LBS.	32,500	65,000	97,500	130,000	162,500	195,000	227,500
MAXIMUM LOAD-kg	14,740	29,480	44,230	58,970	73,710	88,460	103,190
NO. PARTS OF LINE	8	9	10	11	12	13	14
MAXIMUM LOAD-LBS.	260,000	292,500	325,000	357,500	400,000	430,000	460,000
MAXIMUM LOAD-kg	117,930	132,680	147,420	162,160	181,440	195,040	208,650
HOIST LINE:	1-1/8" (29 mm) - 6 X 31 WARRINGTON-SEALE, EXTRA IMPROVED PLOW STEEL, REGULAR LAY, IWRC. MINIMUM BREAKING STRENGTH 130,000 LBS. (58,970 kg) APPROX. WEIGHT = 2.34 LBS. PER FT. (3.48 kg/m)						
WHIP LINE:	1-1/8" (29 mm) - 6 X 31 WARRINGTON-SEALE, IMPROVED PLOW STEEL, REGULAR LAY, IWRC. MINIMUM BREAKING STRENGTH 113,000 LBS. (51,260 kg) MAXIMUM LOAD = 28,300 LBS. (12,840 kg) PER LINE APPROX. WEIGHT = 2.34 LBS. PER FT. (3.48 kg/m)						

MAXIMUM SPOOLING CAPACITIES	
FRONT DRUM: (HOIST LINE)	1-1/8" (29 mm) WIRE ROPE - 7 LAYERS - 1,488' (454m)
REAR DRUM: (WHIP LINE)	1-1/8" (29 mm) WIRE ROPE - 3 LAYERS - 721' (220m) WITH 27-5/8" (702 mm) DIA. LAGGING
RIGHT REAR DRUM: (WHIP LINE)	1-1/8" (29 mm) WIRE ROPE - 6 LAYERS - 604' (184m) WITH 21" (533 mm) DIA. LAGGING
LEFT REAR DRUM: (AUXILIARY LINE)	1" (26 mm) WIRE ROPE - 8 LAYERS - 830' (253m)
17' (5m) (23' (7m) WITH 27-5/8" (702 mm) DIA. LAGGING) IS DEDUCTED FROM MAXIMUM SPOOLING CAPACITIES FOR 3 DEAD WRAPS PER DRUM OR LAGGING.	

REFER TO DRUM AND LAGGING CHART NO. 6105.