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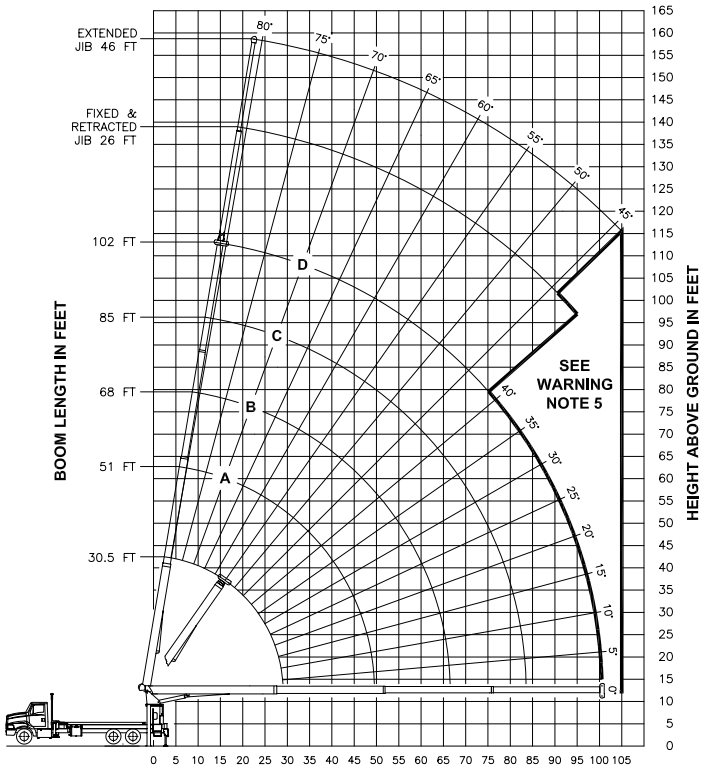
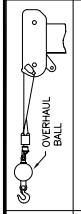
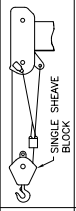
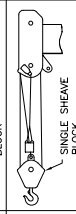
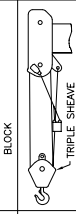
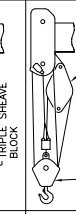
RANGE DIAGRAM



LMI OPERATING CODES

SETTING	CRANE CONFIGURATION	SETTING	CRANE WITH PERSONNEL LIFTING PLATFORM
#1	MAIN BOOM	#5	PERSONNEL LIFTING PLATFORM ON MAIN BOOM
#2	FIXED JIB	#6	PERSONNEL LIFTING PLATFORM ON FIXED JIB
#3	TELESCOPIC JIB–RETRACTED	#7	PERSONNEL LIFTING PLATFORM ON TELESCOPIC JIB–RETRACTED
#4	TELESCOPIC JIB–EXTENDED	#8	PERSONNEL LIFTING PLATFORM ON TELESCOPIC JIB–EXTENDED

ALLOWABLE LINE PULL

1 PART	2 PART	3 PART	4 PART	5 PART	6 PART	7 PART
						
8500 LBS	17000 LBS	25500 LBS	34000 LBS	42500 LBS	51000 LBS	60000 LBS
7400 LBS	14800 LBS	22200 LBS	29600 LBS	37000 LBS	44400 LBS	51800 LBS

WARNING

ANTI–TWO–BLOCK SYSTEM MUST BE IN GOOD OPERATING CONDITION BEFORE OPERATING CRANE.

REFER TO THE OWNER'S MANUAL.

KEEP AT LEAST 3 WRAPS OF LOAD LINE ON THE DRUM AT ALL TIMES.

9/16" 6X25 IWRC (3.5:1 SF) – 29750 LBS MIN BREAKING STRENGTH

9/16" ROT RESISTANT (5.0:1 SF) – 37000 LBS MIN BREAKING STRENGTH

DEDUCTIONS FROM RATED LOADS FOR LOAD HANDLING DEVICES SUPPLIED BY MANITEX

AUXILIARY BLOCK	50 LBS
WIRELINE SHEAVE HEAD	100 LBS
AUXILIARY WINCH	200 LBS
OVERHAUL BALL	SEE OVERHAUL BALL MFGR. NAMEPLATE
LOAD BLOCK	SEE BLOCK MFGR. NAMEPLATE
HOSE REEL	140 LBS
SWING AROUND JIB	SEE LOAD CHART

WARNING
LIFTING OFF THE MAIN BOOM POINT WHILE THE JIB IS ERECTED IS NOT INTENDED OR APPROVED.

LOAD RATINGS IN LBS WITH OUTRIGGERS AND STABILIZERS EXTENDED

LMI CODE #1

OPERATING RADIUS FT	LOADED BOOM ANGLE ∠	A 30.5 FT	A 51 FT	B 68 FT	B 85 FT	C 85 FT	C 102 FT	D 102 FT
5	80	60000						
8	75	39690						
10	71	33510	79	22500				
12	67	29120	77	22500				
15	60	24440	73	21710	79	20590		
20	48	19280	67	16910	74	15830	78	14420	81	10500
25	33	15480	61	13850	70	12840	75	12180	78	9650
30			54	11700	65	10770	72	10140	76	8670
35			47	9770	60	9240	68	8640	73	7670
40			38	7510	55	7720	64	7490	70	6490
45			27	5910	50	6110	60	6220	66	5590
50					43	4920	56	5030	63	4860
55					36	3990	51	4100	60	4160
60					28	3250	47	3360	56	3420
65					15	2630	41	2760	53	2820
70							36	2250	49	2320
75							29	1820	45	1890
80							19	1450	40	1530
85									36	1210
90									29	930
95									22	690
100										
105										
		490 LBS	290 LBS	220 LBS	180 LBS		150 LBS	
		730 LBS	440 LBS	330 LBS	260 LBS		220 LBS	

JIB LOAD RATINGS WITH OUTRIGGERS AND STABILIZERS EXTENDED

	FIXED JIB		TELESCOPIC JIB			
	LMI CODE #2		LMI CODE #3		LMI CODE #4	
OPERATING RADIUS FT	LOADED BOOM ANG ∠	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4	LOADED BOOM ANG ∠	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4	LOADED BOOM ANG ∠	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4
	∠	26 FT	∠	26 FT	∠	46 FT
10						
12						
15						
20						
25	81	5300	81	5100		
30	79	5300	79	5100	81	3050
35	77	4990	77	4730	79	3050
40	75	4580	75	4310	77	3050
45	72	4190	72	3910	76	3050
50	70	3830	70	3550	74	2910
55	68	3480	68	3110	72	2740
60	65	3020	65	2670	70	2590
65	63	2630	63	2280	68	2410
70	60	2310	60	1950	66	2130
75	57	2010	57	1670	63	1880
80	54	1640	54	1340	61	1610
85	51	1320	51	1030	59	1400
90	48	1050	48	750	56	1200
95	45	800	45	500	54	970
100	42	580			51	750
105					48	550
	DEDUCTIONS FOR STOWED FIXED JIB					
	DEDUCTIONS FOR STOWED TELESCOPIC JIB					

WARNING

1. THE OPERATOR MUST READ AND UNDERSTAND THE OWNER'S MANUAL BEFORE OPERATING THIS CRANE.
2. POSITIONING OR OPERATION OF CRANE BEYOND AREAS SHOWN ON THIS CHART IS NOT INTENDED OR APPROVED EXCEPT WHERE SPECIFIED IN OWNER'S MANUAL.
3. LOADED BOOM ANGLES AT SPECIFIED BOOM LENGTHS GIVE ONLY AN APPROXIMATION OF THE OPERATING RADIUS. THE BOOM ANGLE BEFORE LOADING SHOULD BE GREATER TO ACCOUNT FOR DEFLECTIONS. DO NOT EXCEED THE OPERATING RADIUS FOR RATED LOADS.
4. THE OPERATING RADIUS SHOWN IN THE JIB RATING CHART IS FOR FULLY EXTENDED BOOM ONLY. WHEN BOOM IS NOT FULLY EXTENDED, USE ONLY LOADED BOOM ANGLE TO DETERMINE LOAD RATING OF JIB.
5. BOOM MUST BE FULLY RETRACTED WHEN JIB IS ERECTED, BEFORE LOWERING BOOM THRU THIS AREA.
6. FOR BOOM ANGLES NOT SHOWN ON JIB LOAD RATING CHART, USE RATING OF NEXT LOWER BOOM ANGLE.
7. FOR BOOM LENGTHS NOT SHOWN, USE RATING OF NEXT SHORTER OR LONGER BOOM LENGTH, WHICHEVER IS LESS. FOR RADII NOT SHOWN, USE RATING OF NEXT LONGER RADIUS.
8. CRANE LOAD RATINGS ON OUTRIGGERS ARE BASED ON FREELY SUSPENDED LOADS WITH THE MACHINE LEVELED AND STANDING ON A FIRM UNIFORM SUPPORTING SURFACE. NO ATTEMPT SHALL BE MADE TO MOVE A LOAD HORIZONTALLY ON THE GROUND IN ANY DIRECTION.
9. PRACTICAL WORKING LOADS DEPEND ON SUPPORTING SURFACE, WIND, AND OTHER FACTORS AFFECTING STABILITY SUCH AS HAZARDOUS SURROUNDINGS, EXPERIENCE OF PERSONNEL, AND PROPER HANDLING, ALL OF WHICH MUST BE TAKEN INTO ACCOUNT BY THE OPERATOR.
10. THE MAXIMUM LOAD WHICH MAY BE TELESCOPED IS LIMITED BY HYDRAULIC PRESSURE, BOOM ANGLE, AND BOOM LUBRICATION. IT IS SAFE TO ATTEMPT TO TELESCOPE ANY LOAD WITHIN THE LIMITS OF THE LOAD RATING CHART. BOOM MUST BE FULLY RETRACTED AGAINST BOOM STOPS AT ALL TIMES WHEN LIFTING MINIMUM BOOM LENGTH CAPACITY LOADS.

INFORMATION

1. DEDUCTIONS MUST BE MADE FROM RATED LOADS FOR STOWED JIB, OPTIONAL ATTACHMENTS, HOOKS, AND LOAD–BLOCKS (SEE DEDUCTION CHART). WEIGHTS OF SLINGS AND ALL OTHER LOAD HANDLING DEVICES SHALL BE CONSIDERED A PART OF THE LOAD.
2. CRANE LOAD RATINGS WITH OUTRIGGERS ARE BASED ON OUTRIGGERS AND STABILIZERS EXTENDED AND SET WITH MACHINE LEVELED.
3. LOAD RATINGS ABOVE THE HEAVY LINE ARE STRUCTURALLY LIMITED CAPACITIES. LOAD RATINGS BELOW THE HEAVY LINE ARE STABILITY LIMITED CAPACITIES AND DO NOT EXCEED 85% OF TIPPING.

DEFINITIONS

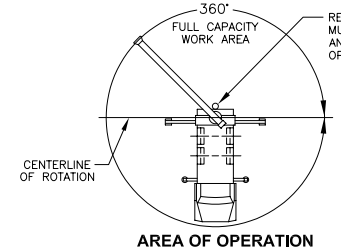
1. OPERATING RADIUS IS THE HORIZONTAL DISTANCE FROM THE AXIS OF ROTATION TO THE CENTER OF THE VERTICAL HOIST LINE OR TACKLE WITH LOAD APPLIED.
2. LOADED BOOM ANGLE AS SHOWN IN THE COLUMN HEADED BY ∠, IS THE INCLUDED ANGLE BETWEEN THE HORIZONTAL AND LONGITUDINAL AXES OF THE BOOM BASE AFTER LIFTING RATED LOAD AT RATED RADIUS.

Manitex

MODEL 102WL

CRANE MEETS ANSI B30.5 REQUIREMENTS

7300096–006 NR



AREA OF OPERATION