

# Load Rating Chart

"X" SPREAD IS 22' 8"

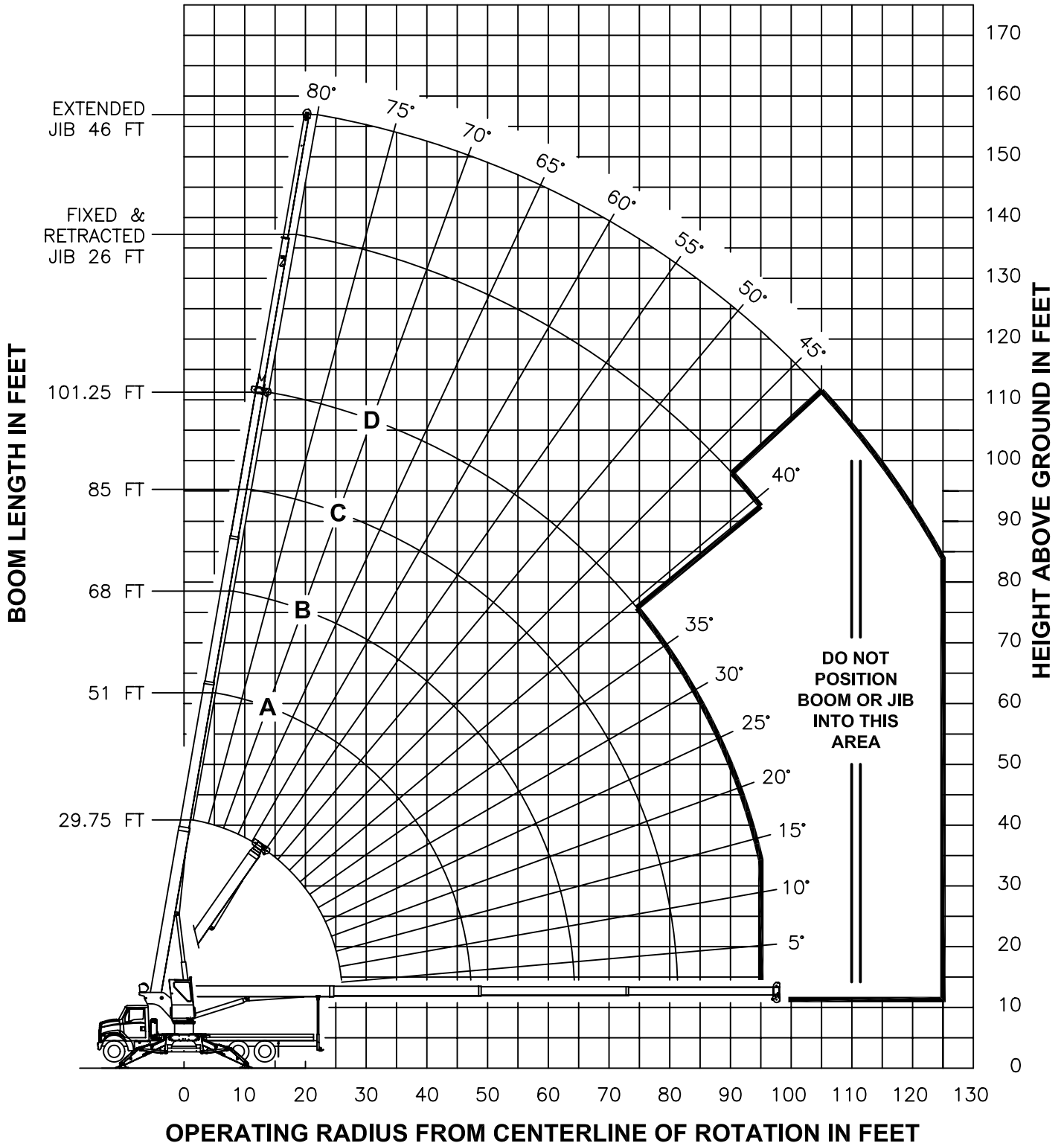
***Model 102SX***

***Manitex***

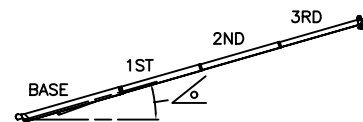
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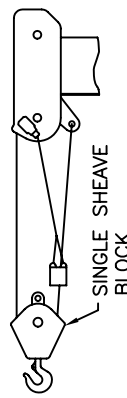
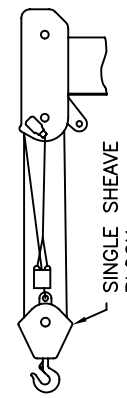
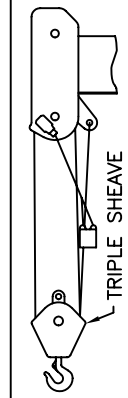
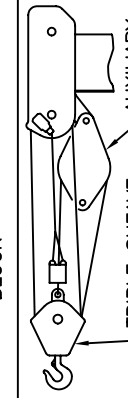
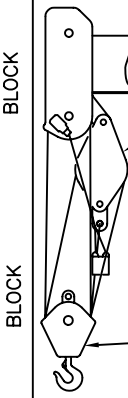

**NOTE:** Additional copies of this Load Rating Chart can be purchased from your Manitex Distributor. When ordering, use the part number shown in the bottom left corner of this page.

# - RANGE DIAGRAM -

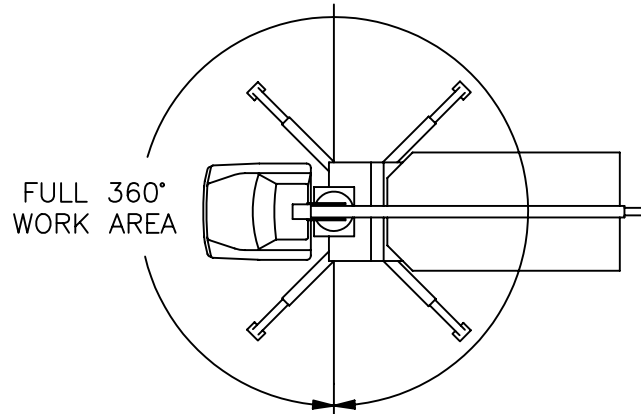


## - 102SX LOAD CHART ON OUTRIGGERS -

MAIN BOOM LOAD RATINGS IN LBS WITH OUTRIGGERS EXTENDED AND THE CRANE LEVEL											JIB LOAD RATINGS IN LBS WITH OUTRIGGERS EXTENDED AND THE CRANE LEVEL						
LMI CODE #1																	
OPERATING RADIUS FT	LOADED BOOM ANGLE BOOM LENGTH AND MARKER										FIXED JIB		TELESCOPIC JIB				
			A		B		C		D		LMI CODE #2		LMI CODE #3		LMI CODE #4		
			/°	29.8 FT	/°	51 FT	/°	68 FT	/°	85 FT	/°	101.3 FT	/°	26 FT	/°	26 FT	/°
5	74	60000															
8	68	46690															
10	64	40260	76	22500							10						
12	59	35620	73	22500	79	22500					12						
15	52	30220	70	22500	76	21050	80	14840			15						
20	39	22370	64	22500	72	17920	76	13050	79	10080	20						
25	17	16930	57	17550	67	15760	73	11500	76	9110	25	79	5300	79	5100		
30			50	13960	63	13860	69	10070	73	8200	30	77	5200	77	4920	80	3050
35			42	11070	58	11290	66	8880	70	6900	35	75	4760	75	4470	78	3050
40			32	8630	52	8850	62	8150	67	5900	40	73	4350	73	4060	76	3050
45			19	6870	46	7110	58	7230	64	5090	45	71	3970	71	3680	74	2980
50					40	5800	53	5920	61	4430	50	68	3630	68	3260	72	2810
55					32	4780	49	4910	57	3890	55	66	3170	66	2790	70	2650
60					22	3960	44	4090	54	3410	60	63	2760	63	2380	68	2470
65							38	3420	50	3000	65	61	2410	61	2030	66	2210
70							32	2860	46	2650	70	58	2110	58	1730	64	1930
75							24	2390	42	2350	75	55	1830	55	1450	61	1670
80							12	1970	37	2060	80	52	1590	52	1210	59	1440
85									32	1710	85	49	1380	49	1000	57	1240
90									25	1400	90	46	1190	46	810	54	1060
95									16	1120	95	42	1010	42	630	52	890
100											100	38	850			49	740
105											105	34	710			46	600
			480 LBS	280 LBS	210 LBS	170 LBS	140 LBS	DEDUCTIONS FOR STOWED FIXED JIB									
			710 LBS	420 LBS	320 LBS	250 LBS	210 LBS	DEDUCTIONS FOR STOWED TELESCOPIC JIB									

<b>ALLOWABLE LINE PULL</b>							<b>WARNING</b>
1 PART LINE	2 PART LINE	3 PART LINE	4 PART LINE	5 PART LINE	6 PART LINE	7 PART LINE	
							
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	<p>ANTI-TWO-BLOCK SYSTEM MUST BE IN GOOD OPERATING CONDITION BEFORE OPERATING CRANE.</p> <p>REFER TO THE OWNER'S MANUAL.</p> <p>KEEP AT LEAST 3 WRAPS OF LOAD LINE ON THE DRUM AT ALL TIMES.</p>
							<p>9/16" 6X25 IWRC (3.5:1 SF) - 29750 LBS MIN BREAKING STRENGTH</p> <p>9/16" ROT RESISTANT (5.0:1 SF) - 37000 LBS MIN BREAKING STRENGTH</p>

### AREA OF OPERATION



### **DEDUCTIONS FROM RATED LOADS FOR LOAD HANDLING DEVICES SUPPLIED BY MANITEX**

AUXILIARY BLOCK	-----	50 LBS
AUXILIARY SHEAVE	-----	50 LBS
OVERHAUL BALL	-----	SEE OVERHAUL BALL MANUFACTURER NAMEPLATE
LOAD BLOCK	-----	SEE BLOCK MANUFACTURER NAMEPLATE
SWING AROUND JIB (STOWED)	-----	SEE LOAD CHART

# LMI OPERATING CODES

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## SETTING   CRANE CONFIGURATION

- #1 — — MAIN BOOM
  - #2 — — FIXED JIB
  - #3 — — TELESCOPIC JIB—RETRACTED
  - #4 — — TELESCOPIC JIB—EXTENDED
- 
- #5 — — PERSONNEL LIFTING PLATFORM ON MAIN BOOM
  - #6 — — PERSONNEL LIFTING PLATFORM ON FIXED JIB
  - #7 — — PERSONNEL LIFTING PLATFORM ON TELESCOPIC JIB—RETRACTED
  - #8 — — PERSONNEL LIFTING PLATFORM ON TELESCOPIC JIB—EXTENDED

## 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. FOR BOOM ANGLES NOT SHOWN ON JIB LOAD RATING CHART, USE RATING OF NEXT LOWER BOOM ANGLE.
6. 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.
7. 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.

## **WARNING (CONTINUED)**

8. 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.
9. 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.
10. LIFTING OFF THE MAIN BOOM POINT WHILE THE SWING AROUND JIB IS ERECTED IS NOT INTENDED OR APPROVED.

## **INFORMATION**

1. DEDUCTIONS MUST BE MADE FROM RATED LOADS FOR STOWED JIB, OPTIONAL ATTACHMENTS, HOOKS, AND LOADBLOCKS (SEE DEDUCTION CHART). WEIGHTS OF SLINGS AND ALL OTHER LOAD HANDLING DEVICES SHALL BE CONSIDERED A PART OF THE LOAD.
2. 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  $\angle$ , IS THE INCLUDED ANGLE BETWEEN THE HORIZONTAL AND LONGITUDINAL AXES OF THE BOOM BASE AFTER LIFTING RATED LOAD AT RATED RADIUS.