

# MANITOWOC ENGINEERING CO.

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



## LIFTCRANE LUFFING JIB CONTAINER HANDLING CAPACITIES

DESIGNED AND TESTED  
WITH THE INTENT TO BE  
THE SCOPE OF ANSI B30.5

**M-250** SERIES 2  
SPECIAL

### 5,000 LB. MINIMUM WEIGHT REQUIRED ON CAPACITIES INDICATED BY (b)

**LUFFING JIB NO. 136  
BOOM NO. 44 WITH HEAVY LIFT TOP  
207,000 LB. CRANE COUNTERWEIGHT  
150,000 LB. CARBODY COUNTERWEIGHT  
360 DEGREE RATING**

CAPACITIES FOR BOOM AND LUFFING JIB LENGTH, VARIOUS BOOM ANGLES AND LUFFING JIB OPERATING RADIUS ARE FOR FREELY SUSPENDED LOADS AND DO NOT EXCEED 75% OF A STATIC TIPPING LOAD. CAPACITIES BASED ON STRUCTURAL COMPETENCE ARE DENOTED BY AN ASTERISK (\*). CAPACITIES INDICATED BY (b) REQUIRE 5,000 LB. MINIMUM WEIGHT (BLOCK PLUS LOAD RIGGING) SUSPENDED FROM LUFFING JIB.

CAPACITIES ARE BASED ON USING TWO - 2 PART HOIST LINES WITH A MAXIMUM LOAD OF 60,000 LBS. ON EITHER BLOCK. TOTAL MAXIMUM ALLOWABLE LOAD IS 100,000 LBS. AND LIMITED TO TWO LAYERS OF ROPE.

WEIGHT OF ALL LOAD BLOCKS, HOOKS, WEIGHT BALL, SLINGS, CONTAINER HANDLING DEVICES, HOIST LINES, ETC., BENEATH BOOM AND LUFFING JIB POINT SHEAVES, IS CONSIDERED PART OF LUFFING JIB LOAD. BOOM AND LUFFING JIB ARE NOT TO BE LOWERED BEYOND RADIUS WHERE COMBINED WEIGHTS ARE GREATER THAN RATED CAPACITY. WHERE NO CAPACITY IS SHOWN, OPERATION IS NOT INTENDED OR APPROVED.

MACHINE TO OPERATE IN A LEVEL POSITION ON A FIRM UNIFORMLY SUPPORTING SURFACE WITH GANTRY UP. REFER TO LUFFING JIB ASSEMBLY NO. 177438, WIRE ROPE SPECIFICATION CHART NO. 7881-A, LUFFING JIB RAISING PROCEDURE CHART NO. 7878-A AND COUNTERWEIGHT ARRANGEMENT CHART NO. 7692-A. CRANE OPERATOR JUDGMENT MUST BE USED TO ALLOW FOR DYNAMIC LOAD EFFECTS OF SWINGING, HOISTING OR LOWERING, TRAVEL, WIND CONDITIONS, AS WELL AS ADVERSE OPERATING CONDITIONS AND PHYSICAL MACHINE DEPRECIATION.

MACHINE MAY BE OPERATED IN WINDS UP TO 30 MPH PROVIDED CRANE OPERATOR JUDGMENT IS USED TO ALLOW FOR WIND EFFECT ON LIFTED LOAD AND OTHER CONSIDERATIONS NOTED ON CAPACITY CHART ARE FOLLOWED. WIND WILL HAVE A CONSIDERABLE EFFECT ON A LOAD WITH A LARGE 'SAIL AREA' AND MUST BE COMPENSATED FOR ACCORDINGLY BY REDUCING LOAD RATINGS, REDUCING OPERATING SPEEDS OR BY A COMBINATION OF BOTH. RECOMMEND STOPPING OPERATION WHEN WIND IS ABOVE 30 MPH. LOWER BOOM AND LUFFING JIB TO GROUND WHEN WIND IS ABOVE 50 MPH.

MACHINE TO TRAVEL ON A FIRM, LEVEL AND UNIFORMLY SUPPORTING SURFACE WITH BOOM AND LUFFING JIB WITHIN ANGLE RANGE SHOWN IN CAPACITY CHART.

OPERATING RADIUS IS HORIZONTAL DISTANCE FROM AXIS OF ROTATION TO CENTER OF VERTICAL HOIST LINE OR LOAD BLOCK. BOOM ANGLE IS ANGLE BETWEEN HORIZONTAL AND CENTERLINE OF BOOM BUTT AND INSERTS. LUFFING JIB ANGLE IS ANGLE BETWEEN HORIZONTAL AND CENTERLINE OF LUFFING JIB BUTT AND INSERTS, AND IS AN INDICATION OF OPERATING RADIUS. IN ALL CASES, OPERATING RADIUS SHALL GOVERN CAPACITY. LUFFING JIB POINT ELEVATION IS VERTICAL DISTANCE FROM GROUND LEVEL TO CENTERLINE OF LUFFING JIB POINT SHAFT.

MACHINE EQUIPPED WITH 30' 9" CRAWLERS, 48" TREADS, 28' RETRACTABLE GANTRY, 12 PART BOOM HOIST REEVING, FOUR 1-1/2" BOOM PENDANTS, 10 PART LUFFING JIB HOIST REEVING, TWO 1-3/4" LUFFING JIB PENDANTS AND BACKSTAYS, 207,000 LB. CRANE COUNTERWEIGHT, TWO 30,000 LB. AND FOUR 22,500 LB. CARBODY COUNTERWEIGHTS.

CONSULT CHART NO. 7879-A FOR LIFTING OFF LOWER BOOM POINT WITH LUFFING JIB ATTACHED.

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**360 DEGREE RATING**

### 80 FT. BOOM, 70 FT. JIB

JIB OPER. RAD. FEET	88 DEGREE BOOM ANGLE			83 DEGREE BOOM ANGLE			80 DEGREE BOOM ANGLE			75 DEGREE BOOM ANGLE			70 DEGREE BOOM ANGLE			65 DEGREE BOOM ANGLE			60 DEGREE BOOM ANGLE			JIB OPER. RAD. FEET
	JIB ANG. DEG.	JIB POINT ELEV. FEET	LUFFING JIB CAPACI TY POUNDS																			
40	65.3	153.7	100,000*b																			40
45	60.7	151.2	100,000*b																			45
50	55.8	148.1	100,000*b	62.7	151.7	100,000*b																50
55	50.7	144.4	100,000*b	57.9	148.8	100,000*b	62.0	150.6	100,000*b													55
60	45.2	139.9	100,000*	53.0	145.4	100,000*b	57.2	147.6	100,000*b													60
65	39.1	134.3	95,400*	47.7	141.2	100,000*b	52.2	144.1	100,000*b	59.1	147.2	100,000*b										65
70	32.1	127.4	89,100*	41.8	136.2	98,400*	46.8	139.8	100,000*b	54.2	143.9	100,000*b										70
75	23.3	117.8	82,400*	35.3	129.9	91,800*	40.9	134.6	97,400*	49.0	139.9	100,000*b	56.0	142.9	100,000*b							75
80	8.1	100.1	61,400*	27.4	121.7	86,000*	34.2	128.1	91,000*	43.3	135.1	100,000*	50.9	139.2	100,000*b							80
85				16.4	109.2	76,200*	26.0	119.5	85,200*	37.0	129.2	93,600*	45.4	134.7	100,000*	52.6	137.6	100,000*b				85
90							14.1	105.8	75,700*	29.5	121.6	87,600*	39.4	129.2	96,000	47.2	133.4	93,600				90
95										19.6	110.6	82,200*	32.4	122.3	89,900	41.4	128.2	87,600				95
100													23.7	112.9	84,200*	34.7	121.9	82,200	43.0	126.3	80,100	100
105													9.1	95.9	78,800*	26.7	113.4	77,400	36.6	120.3	75,500	105
110																15.3	100.4	73,000	29.0	112.5	71,300	110
115																			18.9	101.3	67,400	115