

# MANITOWOC ENGINEERING CO.

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



## CLAMSHELL/GRAPPLE CAPACITIES \_\_\_\_\_ 888 SERIES 1

**BOOM NO. 22EL**  
**109,100 LB. COUNTERWEIGHT**  
**28'2" CRAWLERS EXTENDED**  
**CRAWLER MACHINE ON A BARGE**  
**0 DEGREE THRU 1 DEGREE AND 1 DEGREE THRU 3 DEGREE MACHINE LIST**  
**360 DEGREE RATING**

CAPACITIES ARE FOR A CRAWLER MACHINE WHEN OPERATING ON A BARGE. MACHINE SHALL BE POSITIVELY SECURED TO PREVENT SHIFTING. CAPACITIES FOR VARIOUS BOOM LENGTHS AND OPERATING RADI I ARE FOR FREELY SUSPENDED LOADS AND DO NOT EXCEED 67.5% OF A STATIC TIPPING LOAD. CAPACITIES ARE BASED ON TIPPING, STRUCTURAL COMPETENCE (\*), OPERATING SPEEDS AND OTHER FACTORS.

WEIGHT OF BUCKET IS CONSIDERED PART OF LOAD. WHERE NO CAPACITY IS SHOWN, OPERATION IS NOT INTENDED OR APPROVED.

MACHINE TO OPERATE ON A FIRM UNIFORMLY SUPPORTING SURFACE WITH CRAWLERS FULLY EXTENDED, GANTRY UP AND MACHINE LIST NOT TO EXCEED DEGREES NOTED. REFER TO BOOM RIGGING NO. 177156 OR NO. 177353 AND WIRE ROPE SPECIFICATION CHART NO. 7963-A. CRANE OPERATOR JUDGMENT MUST BE USED TO ALLOW FOR ADVERSE OPERATING CONDITIONS AND PHYSICAL MACHINE DEPRECIATION.

OPERATING RADIUS IS HORIZONTAL DISTANCE FROM AXIS OF ROTATION AT BARGE DECK TO CENTER OF GRAVITY OF FREELY SUSPENDED LOAD. BOOM ANGLE IS ANGLE ABOVE TRUE HORIZONTAL AND A LINE DRAWN THROUGH BOOM HINGE PIN AND BOOM POINT SHAFT CENTERLINE.

MACHINE EQUIPPED WITH 28' 2" EXTENDIBLE CRAWLERS, 48" TREADS, 10' 3" RETRACTABLE GANTRY, 30' LIVE MAST, 20 PART BOOM HOIST REEVING, FOUR 1-3/8" BOOM PENDANTS, AND 109,100 LB. COUNTERWEIGHT.

BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	0 DEGREE THRU 1 DEGREE MACHINE LIST	1 DEGREE THRU 3 DEGREE MACHINE LIST	BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	0 DEGREE THRU 1 DEGREE MACHINE LIST	1 DEGREE THRU 3 DEGREE MACHINE LIST
			CAPACITY POUNDS	CAPACITY POUNDS				CAPACITY POUNDS	CAPACITY POUNDS
<b>70</b>	35	67.5	30,000*	30,000*	<b>110</b>	50	67.7	30,000*	30,000*
	40	63.0	30,000*	30,000*		55	64.8	30,000*	30,000*
	45	58.2	30,000*	30,000*		60	61.9	30,000*	30,000*
	50	53.1	30,000*	30,000*		65	58.8	30,000*	30,000*
	55	47.6	30,000*	30,000*		70	55.7	30,000*	30,000*
	60	41.6	30,000*	30,000*		75	52.4	30,000*	30,000*
<b>80</b>	65	34.7	30,000*	30,000*	80	49.0	30,000*	27,900	
	70	26.1	30,000*	30,000*	85	45.4	27,300	25,300	
	40	66.6	30,000*	30,000*	90	41.5	24,800	23,100	
	45	62.6	30,000*	30,000*	95	37.3	22,500	21,000	
	50	58.4	30,000*	30,000*	100	32.6	20,500	19,200	
	55	54.0	30,000*	30,000*	105	27.2	18,700	17,600	
<b>90</b>	60	49.3	30,000*	30,000*	<b>120</b>	55	67.1	30,000*	30,000*
	65	44.3	30,000*	30,000*		60	64.4	30,000*	30,000*
	70	38.7	30,000*	30,000*		65	61.7	30,000*	30,000*
	75	32.3	30,000*	30,000*		70	58.9	30,000*	30,000*
	45	65.9	30,000*	30,000*		75	56.1	30,000*	30,000*
	50	62.3	30,000*	30,000*		80	53.1	30,000*	27,400
<b>100</b>	55	58.6	30,000*	30,000*	85	50.0	27,100	24,900	
	60	54.7	30,000*	30,000*	90	46.8	24,600	22,600	
	65	50.6	30,000*	30,000*	95	43.3	22,300	20,600	
	70	46.3	30,000*	30,000*	100	39.6	20,300	18,800	
	75	41.6	30,000*	30,000*	105	35.6	18,500	17,200	
	80	36.3	30,000*	28,100*	110	31.2	16,900	15,800	
<b>110</b>	85	30.3	27,700	26,000*	115	26.0	15,400	14,400	
	45	68.4	30,000*	30,000*					
	50	65.3	30,000*	30,000*					
	55	62.1	30,000*	30,000*					
	60	58.7	30,000*	30,000*					
	65	55.3	30,000*	30,000*					
70	51.6	30,000*	30,000*						
75	47.8	30,000*	30,000*						
80	43.7	30,000*	28,100*						
85	39.3	27,700	25,900						
90	34.3	25,100	23,600						
95	28.7	22,800	21,600						