

# Maximum Allowable Travel Specifications

## MAX-ER 225 On 2250 or M-250

Boom No. 49A-44 With Heavy Lift Top  
Luffing Jib No. 133 or No. 133A  
169,200 Lb. (76 750 kg) [2250] Crane Counterweight  
or 167,000 Lb. (75 750 kg) [M-250] Crane Counterweight  
60,000 Lb. (27 220 kg) Carbody Counterweight  
55,000 Lb. (24 950 kg) Thru 225,000 Lb. (102 060 kg)  
Hanging Counterweight

### A. Jobsite Travel

#### 1. MACHINE SWING AND TRAVEL WITH LOAD

- a. Travel with crane upperworks in-line with crawlers. Grade in any direction must not exceed 1 percent (0.5 degrees).
- b. Travel surface must be firm, level and uniformly supporting. Capacity charts are based on static conditions; therefore judgment must be used to allow for dynamic effects of traveling with load. Carry load as close to ground as possible. Stabilize load with taglines. Travel slowly and smoothly to avoid shock loading boom, luffing jib and rigging.
- c. Refer to operators manual for maximum wind speed for various boom and luffing jib lengths.
- d. Minimum capacity to raise hanging counterweight free of ground support is required for swing and travel. Machine can swing and travel in normal manner with load between minimum and rated capacity.
- e. Do not allow hanging counterweight to contact ground while swinging and traveling.

#### 2. MACHINE SWING AND TRAVEL WITHOUT LOAD AND WITH HANGING COUNTERWEIGHT

- a. Load blocks and/or hook and weight balls may be suspended beneath boom point and luffing jib point. Total combined suspended weight beneath boom point must not exceed 8,000 Lbs. (3 630 kg). Total suspended weight beneath luffing jib point must not exceed 4,800 Lbs. (2 180 kg).
- b. Suspend load blocks below boom and luffing jib point or tie off to machine rotating bed.
- c. Travel with crane upperworks in-line with crawlers. Maintain 1 percent (0.5 degrees) grade at boom hinge pins when cutting (steering on grade). Return to in-line position for continuation of travel.
- d. Machine to swing and travel without load on a firm and uniformly supporting surface. Grade in direction of travel should not exceed 5 percent (3 degrees); side-to-side grade must not exceed 1 percent (0.5 degrees). With machine on level ground, adjust boom angle to 70 degrees and luffing jib angle to range shown in appropriate table. Boom and luffing jib angle are angles between horizontal and boom/luffing jib centerline. Travel may be limited depending upon ground conditions.
- e. Rate of change in grade must not exceed 5 percent (3 degrees) in 50 Ft. (15.2m).
- f. Refer to operators manual for maximum wind speed for various boom and luffing jib lengths.
- g. Hanging counterweight must be clear of ground before swinging or traveling machine. Do not allow hanging counterweight to contact ground.



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**Hanging Counterweight**

Machine Swing and Travel Without Load - Boom Facing Downhill						
Boom Length		Jib Length(s)		Boom Angle = 70 Degrees, Luffing Jib Angle Range In Degrees		
Feet	Meters	Feet	Meters	55,000 Lb. (24 950 kg) Hanging Counterweight	135,000 Lb. (61 230 kg) Hanging Counterweight	225,000 Lb. (102 060 kg) Hanging Counterweight
140	42.7	70 - 170	21.3 - 51.8	35 - 56	*	*
140	42.7	180 - 200	54.9 - 61.0	35 - 56	*	*
160	48.8	70 - 120	21.3 - 36.6	35 - 53	*	*
160	48.8	130 - 140	39.6 - 42.7	35 - 56	35 - 41	*
160	48.8	150 - 200	45.7 - 61.0	35 - 57	35 - 54	*
180	54.9	70 - 90	21.3 - 27.4	35 - 55	*	*
180	54.9	100 - 110	30.5 - 33.5	35 - 56	35 - 45	*
180	54.9	120 - 200	36.6 - 61.0	35 - 56	35 - 56	*
200	61.0	70	21.3	35 - 54	35 - 40	*
200	61.0	80 - 180	24.4 - 54.9	35 - 54	35 - 54	*
200	61.0	190 - 200	57.9 - 61.0	35 - 57	35 - 57	35 - 41
220	67.1	70 - 150	21.3 - 45.7	35 - 53	35 - 53	*
220	67.1	160 - 200	48.8 - 61.0	35 - 57	35 - 57	35 - 37
240	73.2	70 - 120	21.3 - 36.6	35 - 55	35 - 55	*
240	73.2	130	39.6	35 - 57	35 - 57	35 - 46
240	73.2	140 - 200	42.7 - 61.0	48 - 55	35 - 55	35 - 55
260	79.2	70 - 90	21.3 - 27.4	---	35 - 54	*
260	79.2	100 - 110	30.5 - 33.5	---	35 - 54	35 - 43
260	79.2	120 - 200	36.6 - 61.0	---	35 - 55	35 - 55
280	85.3	70	21.3	---	35 - 54	*
280	85.3	80 - 200	24.4 - 61.0	---	35 - 55	35 - 55
300	91.4	70 - 200	21.3 - 61.0	---	---	35 - 55

\* Swing and/or travel not allowed.  
 --- Boom and jib combination not allowed on chart for specified counterweight.



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55,000 Lb. (24 950 kg) Thru 225,000 Lb. (102 060 kg)  
Hanging Counterweight

Machine Swing and Travel Without Load - Boom Facing Uphill						
Boom Length		Jib Length(s)		Boom Angle = 70 Degrees, Luffing Jib Angle Range In Degrees		
Feet	Meters	Feet	Meters	55,000 Lb. (24 950 kg) Hanging Counterweight	135,000 Lb. (61 230 kg) Hanging Counterweight	225,000 Lb. (102 060 kg) Hanging Counterweight
140	42.7	70 - 120	21.3 - 39.6	*	*	*
140	42.7	130	39.6	35 - 46	*	*
140	42.7	140 - 200	42.7 - 61.0	35 - 53	*	*
160	48.8	70 - 90	21.3 - 27.4	*	*	*
160	48.8	100 - 110	30.5 - 33.5	35 - 43	*	*
160	48.8	120 - 200	36.6 - 61.0	35 - 56	*	*
180	54.9	70	21.3	35 - 49	*	*
180	54.9	80 - 190	24.4 - 57.9	35 - 55	*	*
180	54.9	200	61.0	35 - 56	35 - 56	*
200	61.0	70 - 130	21.3 - 39.6	35 - 54	*	*
200	61.0	140 - 170	42.7 - 51.8	35 - 56	*	*
200	61.0	180 - 200	54.9 - 61.0	35 - 57	35 - 42	*
220	67.1	70 - 150	21.3 - 45.7	35 - 53	*	*
220	67.1	160 - 180	48.8 - 54.9	35 - 57	35 - 43	*
220	67.1	190 - 200	57.9 - 61.0	35 - 57	35 - 53	*
240	73.2	70 - 100	21.3 - 30.5	35 - 55	*	*
240	73.2	110 - 120	33.5 - 36.6	35 - 57	35 - 43	*
240	73.2	130 - 200	39.6 - 61.0	35 - 55	35 - 55	*
260	79.2	70 - 90	21.3 - 27.4	---	*	*
260	79.2	100 - 200	30.5 - 61.0	---	35 - 54	*
280	85.3	70 - 200	21.3 - 61.0	---	35 - 54	*
300	91.4	70 - 170	21.3 - 51.8	---	---	*
300	91.4	180 - 200	54.9 - 61.0	---	---	35 - 41

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--- Boom and jib combination not allowed on chart for specified counterweight.



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60,000 Lb. (27 220 kg) Carbody Counterweight  
0 Lb. (0 kg) Hanging Counterweight

### 3. MACHINE SWING AND TRAVEL WITHOUT LOAD AND WITH 0 LBS. HANGING COUNTERWEIGHT

- a. Position boom to approximately 75 degree boom angle (plus or minus 1 degree) and position luffing jib at 35 to 50 degrees above horizontal.
- b. Suspend load blocks below boom and luffing jib point or tie off to machine rotating bed.
- c. Travel with crane upperworks in-line with crawlers. Maintain 1 percent (0.5 degrees) grade at boom hinge pins when cutting (steering on grade). Return to in-line position for continuation of travel.
- d. Machine to swing and travel on a firm and uniformly supporting surface. Grade in direction of travel should not exceed 5 percent (3 degrees). See table below for grade vs. angle and boom angle setting. When traveling on uphill grade, lower boom the corresponding degrees for grade to be traveled. When traveling on downhill grade, raise boom the corresponding degrees for grade to be traveled. Side-to-side grade must not exceed 1 percent (0.5 degrees) measured at boom hinge pins.
- e. Rate of change in grade must not exceed 5 percent (3 degrees) in 50 Ft. (15.2m).

Percent Grade Vs. Angle In Degrees and Boom Angle Setting			
Percent Grade	Angle	Uphill Boom Angle	Downhill Boom Angle
1	0.5°	74.5°	75.5°
3	1.7°	73.3°	76.7°
5	3.0°	72.0°	78.0°