



Swing and Travel Specifications

Boom No. 80 With 140 Ft. (42.7m) Mast No. 81
458,700 Lb. (208 060 kg) Crane Counterweight
200,000 Lb. (90 720 kg) Carbody Counterweight
Hanging Counterweight

A. Jobsite Travel

1. MACHINE SWING AND TRAVEL WITH LOAD AND HANGING COUNTERWEIGHT

- A. **Narrow crawler arrangement (30 Ft. 0 in. [9.1m]) travel allowed only with upperworks centered over front or rear of lowerworks (no swing) with outrigger jacks retracted or outriggers removed.** Wide crawler arrangement (47 Ft. 6 in. [14.5m]) travel allowed with 360 degree rating. 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 and rigging.
- C. 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.
- D. 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 lower and upper boom point. Total combined suspended weight beneath lower and upper boom points must not exceed 70,000 Lbs. (31 750 kg) thru 300 Ft. (91.4m) boom and 50,000 Lbs. (22 680 kg) on 320 Ft. (97.5m) thru 380 Ft. (115.8m) boom.
- B. Machine to travel on a firm and uniformly supporting surface with crane upperworks centered over front or rear of lowerworks (no swing) with outrigger jacks retracted or outriggers removed. Wide crawler arrangement (47 Ft. 6 in. [14.5m]) travel allowed with 360 degree swing up to 1 percent (0.5 degrees) grade. **Grade in direction of travel should not exceed 5 percent (2.86 degrees);** side-to-side grade must not exceed 2 percent (1.1 degrees) measured at boom hinge pins.
- C. See tables below for boom angle, boom length and direction for various grades. Adjust boom within boom angle range shown in tables below with machine in a level position before traveling onto grade. Do not change boom angle after crane has been traveled onto grade. Boom angle is angle between horizontal and centerline of boom butt and inserts.
- D. **Travel with crane upperworks in-line with grade at all times.** Do not exceed 2 percent (1.1 degrees) side-to-side grade at boom hinge pins with wide crawler arrangement when cutting (turning on grade). **Cutting on grade not allowed with narrow crawler arrangement.** Adjust boom angle within angle range shown in tables to shift machine center of gravity to allow cutting on level travel surface with narrow crawler arrangement.
- E. Hanging counterweight must be clear of ground before swinging or traveling machine. Do not allow hanging counterweight to contact ground.

Machine Swing and Travel Without Load			
Hanging Counterweight at 72 Ft. 6 in. (22m) Position			
Boom Length		Boom Angle Range In Degrees	
Feet	Meters	247,300 Lb. (112 170 kg) Hanging Counterweight	423,300 Lb. (192 010 kg) Hanging Counterweight
240	73.2	—	—
260	79.2	30 - 35	—
280	85.3	30 - 40	—
300	91.4	30 - 45	—
320	97.5	30 - 45	—
340	103.6	30 - 50	—
360	109.7	35 - 55	30 - 35
380	115.8	40 - 55	30 - 45

Machine Swing and Travel Without Load			
Hanging Counterweight at 58 Ft. 9 in. (18m) Position			
Boom Length		Boom Angle Range In Degrees	
Feet	Meters	247,300 Lb. (112 170 kg) Hanging Counterweight	423,300 Lb. (192 010 kg) Hanging Counterweight
240	73.2	30 - 35	—
260	79.2	30 - 40	—
280	85.3	30 - 45	—
300	91.4	30 - 50	30 - 35
320	97.5	30 - 50	30 - 35
340	103.6	35 - 55	30 - 40
360	109.7	40 - 60	30 - 45
380	115.8	45 - 60	35 - 50



Maximum Allowable Travel Specifications

21000
With Mast - 140 Ft. (42.7m)

Boom No. 80 With 140 Ft. (42.7m) Mast No. 81
458,700 Lb. (208 060 kg) Crane Counterweight
200,000 Lb. (90 720 kg) Carbody Counterweight
0 Lb. (0 kg) Hanging Counterweight

A. Jobsite Travel

1. MACHINE 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 and rigging.
- C. Refer to operators manual for maximum wind speed for various boom lengths.

2. MACHINE TRAVEL WITHOUT LOAD

- A. Load blocks and/or hook and weight balls may be suspended beneath lower and upper boom point. Total combined suspended weight beneath lower and upper boom points must not exceed 70,000 Lbs. (31 750 kg) thru 160 Ft. (48.8m) boom and 50,000 Lbs. (22 680 kg) on 180 Ft. (54.9m) thru 360 Ft. (109.7m) boom.
- B. **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.
- C. Machine to travel on a firm and uniformly supporting surface. **Grade in direction of travel should not exceed 20 percent** (11.3 degrees); side-to-side grade must not exceed 1 percent (0.5 degrees) measured at boom hinge pins. See tables on page 3 for boom angle and position for various grades. Adjust boom within boom angle range shown in tables on page 3 with machine in a level position. Travel may be limited depending upon ground conditions.



21000

Maximum Allowable Travel Specifications

With Mast - 140 Ft. (42.7m)

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458,700 Lb. (208 060 kg) Crane Counterweight
200,000 Lb. (90 720 kg) Carbody Counterweight
0 Lb. (0 kg) Hanging Counterweight

Machine Travel Without Load - Boom Facing Downhill				
0 Lb. (0 kg) Hanging Counterweight				
Boom Length		Boom Angle Range In Degrees		
		Percent Grade		
Feet	Meters	0 - 1%	2 - 10%	11 - 20%
140	42.7	30 - 72	30 - 72	30 - 72
160	48.8	30 - 72	30 - 72	30 - 72
180	54.9	30 - 72	30 - 72	30 - 72
200	61.0	30 - 72	30 - 72	30 - 72
220	67.1	30 - 72	30 - 72	45 - 72
240	73.2	30 - 72	40 - 72	55 - 72
260	79.2	40 - 72	50 - 72	60 - 72
280	85.3	45 - 72	55 - 72	65 - 72
300	91.4	50 - 72	60 - 72	67 - 72
320	97.5	50 - 72	60 - 72	*
340	103.6	50 - 72	65 - 72	*
360	109.7	55 - 72	67 - 72	*

* Boom must face uphill

Machine Travel Without Load - Boom Facing Uphill				
0 Lb. (0 kg) Hanging Counterweight				
Boom Length		Boom Angle Range In Degrees		
		Percent Grade		
Feet	Meters	0 - 1%	2 - 10%	11 - 20%
140	42.7	30 - 72	30 - 65	30 - 50
160	48.8	30 - 72	30 - 66	30 - 55
180	54.9	30 - 72	30 - 66	30 - 60
200	61.0	30 - 72	30 - 66	30 - 60
220	67.1	30 - 72	30 - 66	30 - 60
240	73.2	30 - 72	30 - 66	30 - 60
260	79.2	40 - 72	30 - 66	30 - 60
280	85.3	45 - 72	40 - 66	30 - 60
300	91.4	50 - 72	45 - 66	35 - 60
320	97.5	50 - 72	45 - 66	35 - 60
340	103.6	50 - 72	45 - 66	35 - 60
360	109.7	55 - 72	50 - 66	40 - 60