



Manitowoc Cranes, Inc.
Manitowoc, Wisconsin 54220 U.S.A.

Maximum Allowable Travel Specifications

Model 8500 Main Boom
Model 8500 Fixed Jib

Jobsite Travel

8500 must be equipped with 54,900 lb (24 900 kg) crane counterweight and 14,700 (6 700 kg) carbody counterweight.

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, jib and rigging.

2. Machine Travel Without Load

- A. Load blocks and/or hook and weight balls may be suspended beneath lower boom point, upper boom point and jib point. Total combined suspended weight beneath lower and upper boom points must not exceed 2,900 lb (1 320 kg) or 2,200 lb (1 000 kg) on lower point when jib is attached. Total suspended weight beneath jib point must not exceed 700 lb (320 kg).
- B. Machine to travel on a firm and uniformly supporting surface with crane upperworks in-line with crawlers and travel drive to rear. Grade in direction of travel should not exceed 20 percent (11.3 degrees); side-to-side grade must not exceed 2 percent (1.1 degrees) measured at boom hinge pins.
- C. See tables on pages 2-3 for boom angle, boom length and direction for various grades. Adjust boom within boom angle range shown in tables on pages 2-3 with machine in a level position before traveling onto grade. Do not change boom angle after crane has traveled onto grade. Boom angle is angle between horizontal and centerline of boom butt and inserts. See table below for grade vs. angle when traveling.
- D. Do not exceed 2 percent (1.1 degrees) side-to-side grade at boom hinge pins when cutting (turning on grade). Travel with crane upperworks in-line with grade at all times.
- E. Boom lengths shown in tables on page 2 do not include jib. Boom lengths shown in tables on page 3 include all jib lengths and offset angles.
- F. **Warning:** Travel prohibited for boom lengths not shown in table on page 2 and page 3. *Crane could tip.*

Refer to capacity charts for maximum boom and jib length raising.

Percent Grade Vs. Angle In Degrees	
Percent Grade	Angle
10	5.7
20	11.3



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Machine Travel Without Load - Boom Facing Downhill		
0 -1% Percent Grade		
Boom Angle Range in Degrees	Boom Length	
	54,900 lb (24 900 kg)	
	Crane Counterweight	
	14,700 lb (6 700 kg)	
	Carbody Counterweight	
	Feet	Meters
30 - 40	50 - 60	15,2 - 18,3
30 - 65	70 - 120	21,3 - 36,6
30 - 65	130 - 140	39,6 - 42,7
40 - 70	150 - 160	45,7 - 48,8
50 - 70	170 - 200	51,8 - 61,0
2 -10% Percent Grade		
30 - 60	50 - 120	15,2 - 36,6
30 - 70	130 - 140	39,6 - 42,7
40 - 70	150 - 160	45,7 - 48,8
60 - 70	170 - 200	51,8 - 61,0
11 -20% Percent Grade		
30 - 60	50 - 120	15,2 - 36,6
40 - 70	130 - 140	39,6 - 42,7
60 - 70	150 - 160	45,7 - 48,8
70 - 80	170 - 200	51,8 - 61,0

Machine Travel Without Load - Boom Facing Uphill		
0 -1% Percent Grade		
Boom Angle Range in Degrees	Boom Length	
	54,900 lb (24 900 kg)	
	Crane Counterweight	
	14,700 lb (6 700 kg)	
	Carbody Counterweight	
	Feet	Meters
30 - 40	50	15,2
30 - 50	60 - 120	18,3 - 36,6
30 - 70	130 - 140	39,6 - 42,7
40 - 70	150 - 160	45,7 - 48,8
60 - 70	170 - 200	51,8 - 61,0
2 -10% Percent Grade		
30 - 40	90 - 100	27,4 - 30,5
30 - 50	110 - 140	33,5 - 42,7
40 - 60	150 - 160	45,7 - 48,8
50 - 65	170 - 200	51,8 - 61,0
11 -20% Percent Grade		
30 - 40	90 - 120	27,4 - 36,6
30 - 55	130 - 150	39,6 - 45,7
40 - 60	160 - 170	48,8 - 51,8
50 - 60	180 - 200	54,9 - 61,0



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Machine Travel Without Load - Boom Facing Downhill		
0 -1% Percent Grade		
Boom Angle Range in Degrees	Boom Length (Including all jib lengths and offset angles)	
	54,900 lb (24 900 kg)	
	Crane Counterweight	
	14,700 lb (6 700 kg)	
	Carbody Counterweight	
	Feet	Meters
30 - 60	80 - 100	24,4 - 30,5
30 - 70	110 - 130	33,5 - 39,6
45 - 70	140 - 150	42,7 - 45,7
55 - 70	160 - 180	48,8 - 54,9
2 -10% Percent Grade		
30 - 70	80 - 120	24,4 - 36,6
45 - 70	130 - 140	39,6 - 42,7
60 - 70	150 - 160	45,7 - 48,8
65 - 70	170 - 180	51,8 - 54,9
11 -20% Percent Grade		
30 - 70	80 - 110	24,4 - 33,5
50 - 70	120 - 130	36,6 - 39,6
65 - 70	140 - 150	42,7 - 45,7

Machine Travel Without Load - Boom Facing Uphill		
0 -1% Percent Grade		
Boom Angle Range in Degrees	Boom Length (Including all jib lengths and offset angles)	
	54,900 lb (24 900 kg)	
	Crane Counterweight	
	14,700 lb (6 700 kg)	
	Carbody Counterweight	
	Feet	Meters
30 - 55	80 - 90	24,4 - 27,4
30 - 65	100 - 110	30,5 - 33,5
30 - 70	120 - 130	36,6 - 39,6
40 - 70	140 - 150	42,7 - 45,7
55 - 70	160 - 180	48,8 - 54,9
2 -10% Percent Grade		
30 - 45	80 - 90	24,4 - 27,4
30 - 55	100 - 110	30,5 - 33,5
30 - 60	120 - 140	36,6 - 42,7
40 - 65	150 - 160	45,7 - 48,8
50 - 70	170 - 180	51,8 - 54,9
11 -20% Percent Grade		
30 - 35	90 - 100	27,4 - 30,5
30 - 45	110 - 130	33,5 - 39,6
30 - 55	140 - 150	42,7 - 45,7
40 - 60	160 - 180	48,8 - 54,9