



Maximum Allowable Travel Specifications

999 SERIES 1, 2, 3

Boom No. 82LR
Jib No. 134 or 123 With 12 Ft. 6 in. (3 810 mm) Strut

Jobsite Travel

999 SERIES 1 must be equipped with 149,600 Lb. (67 860 kg) counterweight; 999 SERIES 2 must be equipped with 184,600 Lb. (83 730 kg) crane counterweight and 44,000 Lb. (19 960 kg) carbody counterweight; 999 SERIES 3 must be equipped with 219,600 Lb. (99 610 kg) crane counterweight and 80,000 Lb. (36 290 kg) carbody counterweight. Refer to capacity charts for maximum wind speed for various boom and jib lengths, and for maximum boom and jib lengths lifted unassisted.

1. Machine Travel With Load

- A. Machine can swing and travel with 360 degree rating.
- B. Grade in any direction must not exceed 1 percent (0.5 degrees). *Travel with 100 percent of rated load prohibited.* Travel restricted to 90 percent of rated capacity with speed not to exceed 0,4 m/s.
- C. 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 and upper boom points, jib point, or tied off to machine. Total combined suspended weight beneath lower and upper boom points must not exceed 6,000 Lbs. (2 720 kg). Total suspended weight beneath jib point must not exceed 2,000 Lbs. (910 kg).
- B. Machine to travel on a firm and uniformly supporting surface. Travel allowed with 360 degree swing up to 1 percent grade; crane upperworks must be in-line with crawlers and grade when grade exceeds 1 percent. Grade in direction of travel should not exceed 30 percent (16.7 degrees); side-to-side grade must not exceed 2 percent (1.1 degrees) measured at boom hinge pins.
- C. Refer to tables on pages 2 thru 5 for boom angle, boom length and direction for various grades. Adjust boom within boom angle range shown in table, 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. Refer to 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).
- E. Boom lengths shown in tables on pages 2 and 3 do not include jib. Boom lengths shown in tables on pages 4 and 5 include all jib No. 134 or No. 123 lengths and offset angles.
- F. **Warning:** Travel prohibited for boom lengths not shown in tables on pages 2 thru 5. *Crane could tip.*

Percent Grade Vs. Angle In Degrees	
Percent Grade	Angle
1	0.5
10	5.7
20	11.3
30	16.7



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Machine Travel Without Load - Boom Facing Downhill							
Boom Angle Range in Degrees	Boom Length (not including jib)						Boom Angle Range in Degrees
	999 SERIES 1		999 SERIES 2		999 SERIES 3		
	Feet	Meters	Feet	Meters	Feet	Meters	
0 - 1% Percent Grade							
30 - 72	120 - 210	36.6 - 64.0	120 - 240	36.6 - 73.2	120 - 270	36.6 - 82.3	30 - 72
40 - 72	220 - 230	67.1 - 70.1	250 - 260	76.2 - 79.2	280 - 290	85.3 - 88.4	40 - 72
50 - 72	240 - 260	73.2 - 79.2	270 - 290	82.3 - 88.4	300 - 320	91.4 - 97.5	50 - 72
60 - 72	270 - 280	82.3 - 85.3	300 - 320	91.4 - 97.5	330 - 340	100.6 - 103.6	60 - 72
2 - 10% Percent Grade							
30 - 72	120 - 200	36.6 - 61.0	120 - 230	36.6 - 70.1	120 - 250	36.6 - 76.2	30 - 72
40 - 72	210	64.0	240	73.2	260 - 270	79.2 - 82.3	40 - 72
50 - 72	220 - 230	67.1 - 70.1	250 - 270	76.2 - 82.3	280 - 290	85.3 - 88.4	50 - 72
60 - 72	240 - 270	73.2 - 82.3	280 - 300	85.3 - 91.4	300 - 330	91.4 - 100.6	60 - 72
65 - 72	280	85.3	310 - 320	94.5 - 97.5	340	103.6	65 - 72
11 - 20% Percent Grade							
30 - 72	120 - 160	36.6 - 48.8	120 - 210	36.6 - 64.0	120 - 230	36.6 - 70.1	30 - 72
40 - 72	170 - 190	51.8 - 57.9	220	67.1	240 - 250	73.2 - 76.2	40 - 72
50 - 72	200 - 210	61.0 - 64.0	230 - 240	70.1 - 73.2	260 - 270	79.2 - 82.3	50 - 72
60 - 72	220 - 230	67.1 - 70.1	250 - 270	76.2 - 82.3	280 - 300	85.3 - 91.4	60 - 72
65 - 72	240 - 250	73.2 - 76.2	280 - 290	85.3 - 88.4	310 - 320	94.5 - 97.5	65 - 72
21 - 30% Percent Grade							
30 - 70	120 - 170	36.6 - 51.8	120 - 190	36.6 - 57.9	120 - 220	36.6 - 67.1	30 - 70
40 - 70	180	54.9	200	61.0	230	70.1	40 - 70
50 - 70	190	57.9	210 - 220	64.0 - 67.1	240	73.2	50 - 70
60 - 70	200 - 210	61.0 - 64.0	230 - 240	70.1 - 73.2	250 - 270	76.2 - 82.3	60 - 70
65 - 70	220	67.1	250 - 260	76.2 - 79.2	280 - 290	85.3 - 88.4	65 - 70



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Boom No. 82LR

Machine Travel Without Load - Boom Facing Uphill							
Boom Angle Range in Degrees	Boom Length (not including jib)						Boom Angle Range in Degrees
	999 SERIES 1		999 SERIES 2		999 SERIES 3		
	Feet	Meters	Feet	Meters	Feet	Meters	
0 - 1% Percent Grade							
30 - 72	120 - 210	36.6 - 64.0	120 - 240	36.6 - 73.2	120 - 270	36.6 - 82.3	30 - 72
40 - 72	220 - 230	67.1 - 70.1	250 - 260	76.2 - 79.2	280 - 290	85.3 - 88.4	40 - 72
50 - 72	240 - 260	73.2 - 79.2	270 - 290	82.3 - 88.4	300 - 320	91.4 - 97.5	50 - 72
60 - 72	270 - 280	82.3 - 85.3	300 - 320	91.4 - 97.5	330 - 340	100.6 - 103.6	60 - 72
2 - 10% Percent Grade							
30 - 66	120 - 210	36.6 - 64.0	120 - 240	36.6 - 73.2	120 - 270	36.6 - 82.3	30 - 66
40 - 66	220 - 230	67.1 - 70.1	250 - 260	76.2 - 79.2	280 - 290	85.3 - 88.4	40 - 66
50 - 66	240 - 250	73.2 - 76.2	270 - 280	82.3 - 85.3	300 - 310	91.4 - 94.5	50 - 66
60 - 66	260 - 280	79.2 - 85.3	290 - 320	88.4 - 97.5	320 - 340	97.5 - 103.6	60 - 66
11 - 20% Percent Grade							
30 - 60	120 - 200	36.6 - 61.0	120 - 230	36.6 - 70.1	120 - 260	36.6 - 79.2	30 - 60
40 - 60	210 - 220	64.0 - 67.1	240	73.2	270	82.3	40 - 60
50 - 60	230	70.1	250 - 260	76.2 - 79.2	280	85.3	50 - 60
55 - 60	240	73.2	270 - 280	82.3 - 85.3	290 - 300	88.4 - 91.4	55 - 60
21 - 30% Percent Grade							
30 - 40	120	36.6	120 - 160	36.6 - 48.8	120 - 180	36.6 - 54.9	30 - 40
30 - 55	130 - 190	39.6 - 57.9	170 - 220	51.8 - 67.1	190 - 240	57.9 - 73.2	30 - 55
40 - 55	200	61.0	230	70.1	250	76.2	40 - 55
50 - 55	210	64.0	240	73.2	260	79.2	50 - 55



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Boom No. 82LR
Jib No. 134 or 123 With 12 Ft. 6 in. (3 810 mm) Strut

Machine Travel Without Load - Boom Facing Downhill							
Boom Angle Range in Degrees	Boom Length (including all jib No. 134 or 123 lengths and offset angles)						Boom Angle Range in Degrees
	999 SERIES 1		999 SERIES 2		999 SERIES 3		
	Feet	Meters	Feet	Meters	Feet	Meters	
0 - 1% Percent Grade							
50 - 72	120 - 210	36.6 - 64.0	120 - 240	36.6 - 73.2	120 - 270	36.6 - 82.3	50 - 72
55 - 72	220 - 230	67.1 - 70.1	250 - 270	76.2 - 82.3	280 - 290	85.3 - 88.4	55 - 72
60 - 72	240 - 250	73.2 - 76.2	280 - 300	85.3 - 91.4	300	91.4	60 - 72
65 - 72	260	79.2	—	—	—	—	65 - 72
2 - 10% Percent Grade							
50 - 72	120 - 190	36.6 - 57.9	120 - 220	36.6 - 67.1	120 - 250	36.6 - 76.2	50 - 72
55 - 72	200 - 210	61.0 - 64.0	230	70.1	260	79.2	55 - 72
60 - 72	220	67.1	240 - 250	73.2 - 76.2	270 - 280	82.3 - 85.3	60 - 72
65 - 72	230 - 240	70.1 - 73.2	260 - 270	79.2 - 82.3	290 - 300	88.4 - 91.4	65 - 72
11 - 20% Percent Grade							
50 - 72	120 - 170	36.6 - 51.8	120 - 190	36.6 - 57.9	120 - 220	36.6 - 67.1	50 - 72
55 - 72	180	54.9	200	61.0	230	70.1	55 - 72
60 - 72	190	57.9	210 - 220	64.0 - 67.1	240 - 250	73.2 - 76.2	60 - 72
65 - 72	200 - 210	61.0 - 64.0	230 - 240	70.1 - 73.2	260 - 270	79.2 - 82.3	65 - 72
21 - 30% Percent Grade							
50 - 70	120 - 140	36.6 - 42.7	120 - 170	36.6 - 51.8	120 - 200	36.6 - 61.0	50 - 70
55 - 70	150	45.7	180	54.9	210	64.0	55 - 70
60 - 70	160	48.8	190	57.9	220	67.1	60 - 70
65 - 70	170 - 180	51.8 - 54.9	200 - 210	61.0 - 64.0	230 - 240	70.1 - 73.2	65 - 70



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Boom No. 82LR
Jib No. 134 or 123 With 12 Ft. 6 in. (3 810 mm) Strut

Machine Travel Without Load - Boom Facing Uphill							
Boom Angle Range in Degrees	Boom Length (including all jib No. 134 or 123 lengths and offset angles)						Boom Angle Range in Degrees
	999 SERIES 1		999 SERIES 2		999 SERIES 3		
	Feet	Meters	Feet	Meters	Feet	Meters	
0 - 1% Percent Grade							
50 - 72	120 - 210	36.6 - 64.0	120 - 240	36.6 - 73.2	120 - 270	36.6 - 82.3	50 - 72
55 - 72	220 - 230	67.1 - 70.1	250 - 270	76.2 - 82.3	280 - 290	85.3 - 88.4	55 - 72
60 - 72	240 - 250	73.2 - 76.2	280 - 300	85.3 - 91.4	300	91.4	60 - 72
65 - 72	260	79.2	—	—	—	—	65 - 72
2 - 10% Percent Grade							
50 - 66	120 - 200	36.6 - 61.0	120 - 240	36.6 - 73.2	120 - 270	36.6 - 82.3	50 - 66
60 - 66	210 - 230	64.0 - 70.1	250 - 270	76.2 - 82.3	280 - 300	85.3 - 91.4	60 - 66
11 - 20% Percent Grade							
50 - 60	120 - 180	36.6 - 54.9	120 - 210	36.6 - 64.0	120 - 240	36.6 - 73.2	50 - 60
55 - 60	190	57.9	220 - 230	67.1 - 70.1	250	76.2	55 - 60
21 - 30% Percent Grade							
45 - 50	120 - 130	36.6 - 39.6	120 - 140	36.6 - 42.7	120 - 140	36.6 - 42.7	45 - 50
45 - 55	140 - 160	42.7 - 48.8	150 - 190	45.7 - 57.9	150 - 210	45.7 - 64.0	45 - 55
50 - 55	—	—	—	—	220	67.1	50 - 55