
WIND CONDITIONS

Model 111

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General

Wind adversely affects lifting capacity and stability. The result could be loss of control over the load and crane, even if the load is within the crane's capacity.

WARNING



TIPPING CRANE HAZARD Judgment and experience of qualified operators, job planners, and supervisors must be used to compensate for affect of wind on lifted load and boom by reducing ratings, reducing operating speeds, or a combination of both.

Failing to observe this precaution can cause crane to tip or boom and/or jib to collapse. Death or serious injury to personnel can result.

Wind speed (to include wind gusts) must be monitored by job planners and supervisors.

Beware that wind speed at the boom or jib point can be greater than wind speed at ground level. Also beware that the larger the sail area of the load, the greater the wind's affect on the load.

As a general rule, ratings and operating speeds must be reduced when:

Wind causes load to swing forward past allowable operating radius or sideways past either boom hinge pin.

Manitowoc Recommendations

Operation Permitted

Operation is permitted in steady winds or wind gusts up to 35 mph (16 m/s). However, ratings must be reduced the amount given in the following tables for the corresponding attachment.

Table 1
Rating Reductions for Various Wind Speeds and Wind Gusts
WHEN EQUIPPED WITH BOOM ONLY

Boom Length ft (m)		40–120 (12.2–36.6)	130–190 (39.6–57.9)
Maximum Wind Speed		Percent Rating Reduction	
mph	m/s		
15	7	0	0
20	9	0	10
25	11	0	20
30	13	10	30
35	16	10	
Above 35 mph (16 m/s)		OPERATION NOT PERMITTED	

For operation in winds above 25 mph (11 m/s) with boom positioned above 70°, load block must weigh at least 2,470 lb (1 120 kg). *Boom may be blown over backwards if this precaution is not observed.*

Table 2
Rating Reductions for Various Wind Speeds and Wind Gusts
WHEN EQUIPPED WITH BOOM AND FIXED JIB

Boom Length ft (m)		70–140 (21.3–42.7)		150–180 (45.7–54.9)	
Fixed Jib Length ft (m)		30–40 (9.1–12.2)	50–60 (15.2–18.3)	30–40 (9.1–12.2)	50–60 (15.2–18.3)
Maximum Wind Speed		Percent Rating Reduction			
mph	m/s				
11	5	0	0	0	0
15	7	0	20	10	20
20	9	0	20	10	30
25	11	10	20	30	50
30	13	10	30	40	
35	16	20	40		
Above 35 mph (16 m/s)		OPERATION NOT PERMITTED			

For operation in winds above 25 mph (11 m/s) with boom positioned above 65°, load block must weigh at least 2,470 lb (1 120 kg) and hook and weight ball must weigh at least 610 lb (276 kg). *Boom and jib may be blown over backwards if this precaution is not observed.*

Operation Not Permitted

Boom Only

- Above 35 mph (16 m/s) —
Retracted crawler position not allowed. Crawlers must be extended.
- Up to 45 mph (20 m/s) —
Park crane (upper in line with crawlers) and position boom at 70°.
- 45 mph (20 m/s) and Above —
Lower boom onto blocking at ground level.

Boom with Fixed Jib

- Up to 45 mph (20 m/s) —
Park crane (upper in line with crawlers) and position boom at 60°.
- 45 mph (20 m/s) and Above —
Lower boom and jib onto blocking at ground level.

