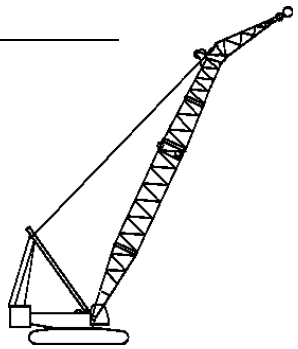
Liftcrane Boom Extended Upper Point Capacities



Boom No. 58WA with 7,6 m Extended Upper Boom Point
166 920 kgCrane Counterweight
18 730 kg Auxiliary Counterweight
54 430 kg Carbody Counterweight
360 Degree Rating

16000
SERIES 5

LIFTING CAPACITIES: Lifting capacities for various boom lengths and operating radii are for freely suspended loads and do not exceed 75% of a static tipping load. Capacities based on structural competence are denoted by an asterisk (*).

Upper boom point (upper sheave) capacity for liftcrane service with single part whip line is 13 610 kg or 27 220 kg with two part line. In all cases, upper boom point capacities cannot exceed those listed for extended upper boom point (lower sheave) capacity.

Weight of all load blocks, hooks, weight ball, slings, hoist lines, etc., beneath upper boom point sheaves, is considered part of extended upper boom point load. Boom is not to be lowered beyond radii where combined weights are greater than rated capacity. Where no capacity is shown, operation is not intended or approved.

OPERATING CONDITIONS: Machine to operate in a level position on a firm uniformly supporting surface. Refer to boom rigging **No. 81018003,** Wire Rope Specification chart **No. 8889-A,** Counterweight Arrangement chart **No. 8682-A** and Wind Conditions chart **No. 8688-A**. Crane operator judgment must be used to allow for dynamic load effects of swinging, hoisting or lowering, travel, wind conditions, as well as adverse operating conditions and physical machine depreciation. Refer to Operator's Manual for operating guidelines.

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).

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 and rigging.

MACHINE TRAVEL WITHOUT LOAD:

A. Load blocks and/or hook and weight balls may be suspended beneath upper boom points or tied off to machine. Total combined suspended weight beneath upper boom points must not exceed 6 580 kg.

B. Machine to travel on a firm and uniformly supporting surface. Travel allowed with 360 degree swing up to 1 percent (0.5 degrees) grade; crane upperworks must be in-line with crawlers and grade when grade exceeds 1 percent. Grade in direction of travel should not exceed 10 percent (5.7 degrees); side-to-side grade must not exceed 2 percent (1.1 degrees) measured at boom hinge pins.

C. Refer to table 1 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.

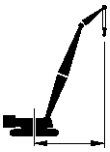
D. Do not exceed 2 percent (1.1 degrees) side-to-side grade at boom hinge pins when cutting (turning on grade).

E. ***Warning:*** Travel prohibited for boom angle range not shown in table 1. *Crane could tip.*

Percent Grade Vs. Angle In Degrees	
Percent Grade	Angle
1	0.5
5	2.8
10	5.7

Table 1

MACHINE TRAVEL WITHOUT LOAD			
Boom Length	**Boom Angle Range in Degrees**		
	Percent Grade		
Meters	0 - 1%	2 - 5%	6 - 10%
BOOM FACING UPHILL OR DOWNHILL			
95,0	55 - 72	60 - 66	60 - 63



OPERATING RADIUS: Operating radius is horizontal distance from axis of rotation to center of vertical hoist line or load block.

BOOM ANGLE: Boom angle in degrees (°) is angle between horizontal and centerline of boom butt and inserts, and is an indication of operating radius. In all cases, operating radius shall govern capacity.

EXTENDED UPPER BOOM POINT ELEVATION: Extended upper boom point elevation is vertical distance from ground level to centerline of extended upper boom point (lower sheave) shaft.

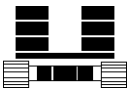
MACHINE EQUIPMENT: Machine equipped with 10 363 mm crawlers, 1 524 mm treads, 9 754 mm live mast, 26 part boom hoist reeving, boom support straps, 166 920 kg crane counterweight, auxiliary counterweight tray and two 7 938 kg counterweights, two 13 610 kg and four 6 800 kg carbody counterweights.

WITH OR WITHOUT BOOM CATWALKS
Maximum Boom Length Lifted Unassisted
Over End of Blocked Crawlers
Boom Length
95,0 m (a)
Load block, hook and weight ball on ground at start. (a) When equipped with boom catwalks, boom must be rigged with one load hoist lead line and luffing jib hoist drum must be removed from boom butt.

Optional Block Reeving
When block is reeved with optional 6 or 8 part reeving with wire rope dead end on upper boom point (upper sheave), deduct 1 600 kg from capacities. Refer to reeving diagram **No. 81022461** for optional reeving.

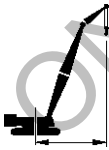
Explanation of Symbols

Boom No. 58 WA with 7,6 m Extended Upper Boom Point



Crane Counterweight
+
Auxiliary Counterweight
+
Carbody Counterweight

360 Degree Rating

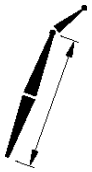


Operating Radius
(see page 2)

Boom Angle
(see page 2)

Extended Upper Boom Point Elevation
(see page 2)

Lifting Capacities
(see page 1)



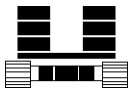
Boom Length

Extended Upper Boom Point Offset Angle

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

16000 S-5

ANSI B30.5



166 920 kg
+
18 730 kg
+
54 430 kg

95,0 m

m	28° °	m	kg	35° °	m	kg	m
18,3	82,6	103,5	100 800 *				18,3
20,0	81,6	103,2	99 300 *	82,0	102,9	92 700 *	20,0
22,0	80,5	102,9	94 900 *	80,9	102,5	90 700 *	22,0
24,0	79,3	102,4	83 500	79,7	102,1	84 900	24,0
26,0	78,2	102,0	74 100	78,6	101,6	74 800	26,0
28,0	77,0	101,4	66 100	77,4	101,1	66 700	28,0
30,0	75,9	100,9	59 400	76,3	100,6	59 900	30,0
32,0	74,7	100,3	53 600	75,1	100,0	54 100	32,0
34,0	73,5	99,6	48 500	73,9	99,3	49 000	34,0
36,0	72,3	98,9	44 100	72,7	98,6	44 500	36,0
38,0	71,1	98,2	40 200	71,5	97,9	40 600	38,0
40,0	69,9	97,4	36 700	70,3	97,1	37 100	40,0
42,0	68,7	96,6	33 500 *	69,1	96,2	33 900	42,0
44,0	67,5	95,7	30 500 *	67,9	95,3	30 900 *	44,0
46,0	66,3	94,7	27 800 *	66,6	94,4	28 200 *	46,0
48,0	65,0	93,8	25 300 *	65,4	93,4	25 700 *	48,0
50,0	63,7	92,7	23 100 *	64,1	92,4	23 400 *	50,0
52,0	62,5	91,6	20 900 *	62,8	91,2	21 300 *	52,0
54,0	61,2	90,4	19 000 *	61,5	90,1	19 300 *	54,0
56,0	59,8	89,2	17 200 *	60,2	88,8	17 500 *	56,0
58,0	58,5	87,9	15 500 *	58,8	87,5	15 800 *	58,0
60,0	57,2	86,6	13 900 *	57,5	86,2	14 200 *	60,0
62,0	55,8	85,1	12 500 *	56,1	84,7	12 700 *	62,0
64,0	54,4	83,6	11 100 *	54,7	83,2	11 300 *	64,0
66,0	52,9	82,0	9 800 *	53,2	81,6	10 000 *	66,0
68,0	51,5	80,4	8 600 *	51,8	80,0	8 800 *	68,0
70,0	50,0	78,6	7 400 *	50,3	78,2	7 600 *	70,0
72,0	48,5	76,8	6 300 *	48,7	76,3	6 500 *	72,0
74,0	46,9	74,8	5 300 *	47,2	74,4	5 400 *	74,0