

# RT60

**ZOOMLION****RT60 PRODUCT GUIDE**

Complies with ANSI B30.5

## Rough Terrain Crane

60 metric ton (66 U.S. ton) capacity

43 m (141.1') main boom

10 - 17 m (33' - 56') jib



# RT60

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crane-sales@calcrane.com • www.calcrane.com

### FEATURES



Formed boom made with high-yield steel which reduces the operating weight of the boom and maximizes performance.

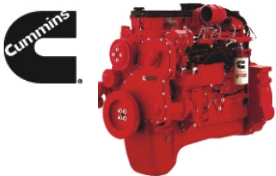
**KESSLER·CO**

We chose the Kessler Co. brand axle because Kessler Co. offers the most reliable product on the market and has years of experience in manufacturing mobile crane axles.



Full-vision operator cab is designed for maximum comfort and ease of operation.

The Dana 13.5HR 32662 transmission offers the latest technology for the diverse needs of off-road cranes.



The Cummins QSB 6.7 diesel engine is TIER-III compliant and is proven to have superior performance and durability.

PAT Hirschmann HC4900 LMI (load moment indicator) is the industry's leading electronic monitoring system available.



### STANDARD EQUIPMENT

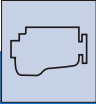
- Formed boom
- Offsettable jib 0° - 20° - 40°
- Auxiliary winch
- Cameras
- Auxiliary lifting sheave
- 60 ton (66 U.S. ton) hook block
- 5.5 ton (6.1 U.S. ton) hook ball
- Rotation-resistant wire rope
- Deluxe tilt seat
- Air conditioner / Heater
- Work light package: boom, cab and super structure
- Revolving amber light
- AM/FM radio
- Battery disconnect switch
- Front and rear lift lugs

**ANSI & CE Standard**

### KEY / SYMBOLS

	Engine	p4		Load Moment Indicator (LMI)	p5
	Transmission	p4		Max. boom length with jib ext.	p5
	Axles	p4		Main boom	p6
	Steering	p4		Main and auxiliary winches	p6
	Gradeability	p4		Cameras	p6
	Brakes	p4		Hook block	p6
	Tires and wheels	p4		Hook ball	p6
	Outrigger system (100%, 50%, 0% extended)	p4		Crane with counterweight	p7
	Hydraulic system	p5		Side-stowed jib	p7
	Operator cab	p5		Distance from the hook to the head	p8
	Counterweight	p5		Tip height	p9
	Swing	p5		Working radius	p9

## TECHNICAL DESCRIPTION



### ENGINE

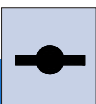
Cummins QSB 6.7 ..... Inline 6 cylinder intercooled turbo diesel.  
 Kilowatts kW (Hp) ..... 160 (215) @ 2500 rpm.  
 Peak torque Nm (ft. lb.) ..... 888 (655) @ 1500 rpm.  
 303 liter (80 gal) fuel tank capacity.

USA Federal EPA / California ARB / European EU / Tier III emission rating.



### TRANSMISSION

Dana powershift transmission - 6 speeds forward and 6 speeds reverse.  
 Front axle disconnect offering both 4x4 and 4x2 operation.  
 Max. speed ..... 41.4 km/hr (25.7 mph).



### AXLES

Kessler front and rear steering axles with planetary reduction.

**Front** - Rigid mount.

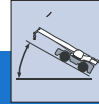
**Rear** - Full-floating rear axle. Automatic rear axle oscillating lock occurs when superstructure is swung 3° from centerline in either direction.



### STEERING

Power steering with four independent modes:

- Front-Wheel
- Rear-Wheel
- All-Wheel
- Crab



### GRADEABILITY

149% max. gradeability in 1st gear 4x4.  
 5.2% max. gradeability in 6th gear 4x2.



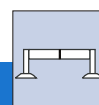
### BRAKES

470 millimeters (18.5 in) diameter disc brakes on all wheels hydraulically operated.



### TIRES AND WHEELS

26.5 x 25 - 32 ply rating, earthmoving-style tires. Steel disc wheels.

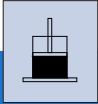


### OUTRIGGER SYSTEM

Four independent horizontal beams and vertical jacks with integral holding valves, each independently controlled from operator cab.

100% - Fully extended outriggers  
 footprint ..... 47.6 sq. m (512.5 sq. ft.).  
 50% - Mid position outriggers  
 footprint ..... 33.32 sq. m (358.7 sq. ft.).  
 0% - Fully retracted outriggers  
 footprint ..... 19 sq. m (205 sq. ft.).  
 Octagonal, steel fabricated  
 pontoon ..... 0.25 sq. m (2.74 sq. ft.).  
 Total floating ground bearing  
 area ..... 1.02 sq. m (10.9 sq. ft.).  
 Outrigger span ..... Length 6.9 m (22.8 ft.).  
 Width 6.9 m (22.8 ft.).

## TECHNICAL DESCRIPTION



### HYDRAULIC SYSTEM

PERMCO hydraulic pumps:  
 Gear pump for main and auxiliary winches, boom hoist and telescope cylinders.  
 Gear pump for steering.  
 Gear pump for outriggers and slewing.  
 700 liter (185 gal) hydraulic reservoir with external sight and temperature gauge.

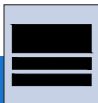
Easily accessible (10 micron) cartridge-style full-flow filters with bypass protection.  
 Max. operating pressure: .... 28MPa (4060 psi, 279.9 bar).



### OPERATOR CAB

Full-vision operator cab designed for maximum comfort. All steel fabrication with acoustical lining and tinted safety glass throughout. The cab has a sliding door on the left and a sliding window on the right with a swing-up skylight with retractable shade and wiper motor. Fully adjustable deluxe seat with tilt. Foot controls for boom telescope, service brake and engine throttle. Tilt steering.

Temperature control is provided by a hydraulically driven air conditioning unit. Easy view dashboard with gauges for all engine sensors and rocker switch outrigger controls. Standard amenities also include bubble level, dome light, left-side rearview mirror, seat belt, travel swing lock and signal horn.



### COUNTERWEIGHT

Single 7,000 kg (15,430 lbs.) fixed counterweight.  
 Length ..... 2.6 m (8.5 ft.).  
 Width ..... 0.6 m (1.9 ft.).  
 Height ..... 0.7 m (2.3 ft.).



### SWING

Bi-directional hydraulic swing drive with multi-disc wet brake and planetary reduction gearbox. Spring-applied hydraulically released swing brake and 360° pneumatic positive swing lock.  
 Max. swing speed: ..... 2.5 rpm.



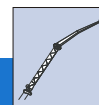
### LOAD MOMENT INDICATOR (LMI)

PAT Hirschmann HC4900 LMI control system. iSCOUT IC4600 graphic display load moment and anti-two block system with audio-visual warning and function limiter.

System displays the following information: crane configuration, boom length, boom angle, load radius, allowed capacity, actual load, and load percentage of allowed capacity.

System includes settable work parameters: min./max. boom length, min./max. boom angle, defined swing area.

GREER RCI 777 LMI system also available for North America.



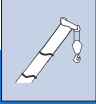
### MAX. BOOM LENGTH WITH JIB EXTENSION

10-17 m (33-56 ft.) jib consisting of 10 m (33 ft.) lattice side stow jib and 7 m (23 ft.) manual pull out section. Main jib is offsettable at 0° - 20° and 40°.

Max. tip height with 10 m (33 ft.) jib erected is 55.7 m (182.6 ft.).

Max. tip height with 10 m (33 ft.) jib + 7 m (23 ft.) fixed pullout extension is 61.4 m (201.5 ft.).

## TECHNICAL DESCRIPTION



### MAIN BOOM

Five section, full power boom. Boom is constructed of high-yield steel with two telescoping cylinders. 5 sheave quick reeve boom tip with removable rope guards. Rope termination lugs on both sides of boom head. Auxiliary lifting sheave and manual indicator are included.

Fully extended boom length: ..... 43 m (141.1 ft.).  
Fully retracted boom length: ..... 11 m (35 ft.).  
Max. tip height, main boom: ..... 43.8 m (143.8 ft.).

Boom angle range (min./max.) .....  $-3^{\circ}$  /  $+78^{\circ}$ .  
Boom raising / lowering time ..... 56 sec. / 63 sec.  
Boom extension / retraction time ..... 100 sec. / 80 sec.



### MAIN AND AUXILIARY WINCHES

Standard two speed main and auxiliary hoists, each with planetary reduction and spring applied multi-disc wet brake.

Each hoist features:

Grooved drum lagging.

Hoist drum cable followers.

Max. permissible line pull: ..... 7,000 kg (15,432 lbs.).

Winch speed: ..... 0 - 150 m/min (0 - 492 fpm.).

Power up / power down.

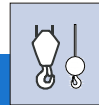
Electronic drum rotation indicators.

Rope construction: ..... 19 mm (0.75 in.) rotation-resistant compacted strand.



### CAMERAS

The crane comes equipped with two cameras—a winch camera for viewing hoist operation and a rear camera for viewing the rear of the crane. The monitor is located in the cab, and one can easily toggle between both camera views.



### HOOK BLOCK AND HOOK BALL

60-ton (66 U.S. ton), 5 sheave (steel), standard reeve hook block with odd part pin-off and safety latch.

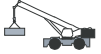
Hook block weight ..... 650 kg (1,433 lbs.).





5.5-ton (6.1 U.S. ton) top swivel hook ball with safety latch.

Hook ball weight ..... 120 kg (265 lbs.).



## CRANE AND COMPONENT WEIGHTS

CRANE OPERATING WEIGHTS						
 Crane with cwt.	Gross Vehicle Weight		Front Axle Load		Rear Axle Load	
	kg	lb	kg	lb	kg	lb
	44,260	97,576	25,220	55,600	19,040	41,976

DEDUCTIONS FOR LOAD HANDLING					
 Jib stowed aside boom   Auxiliary head	kg	lb		kg	lb
		952	2,099	 5 sheave 66 U.S. ton hook block	650
	55	121	 6.1 U.S. ton hook ball	120	265

## TURNING RADIUS

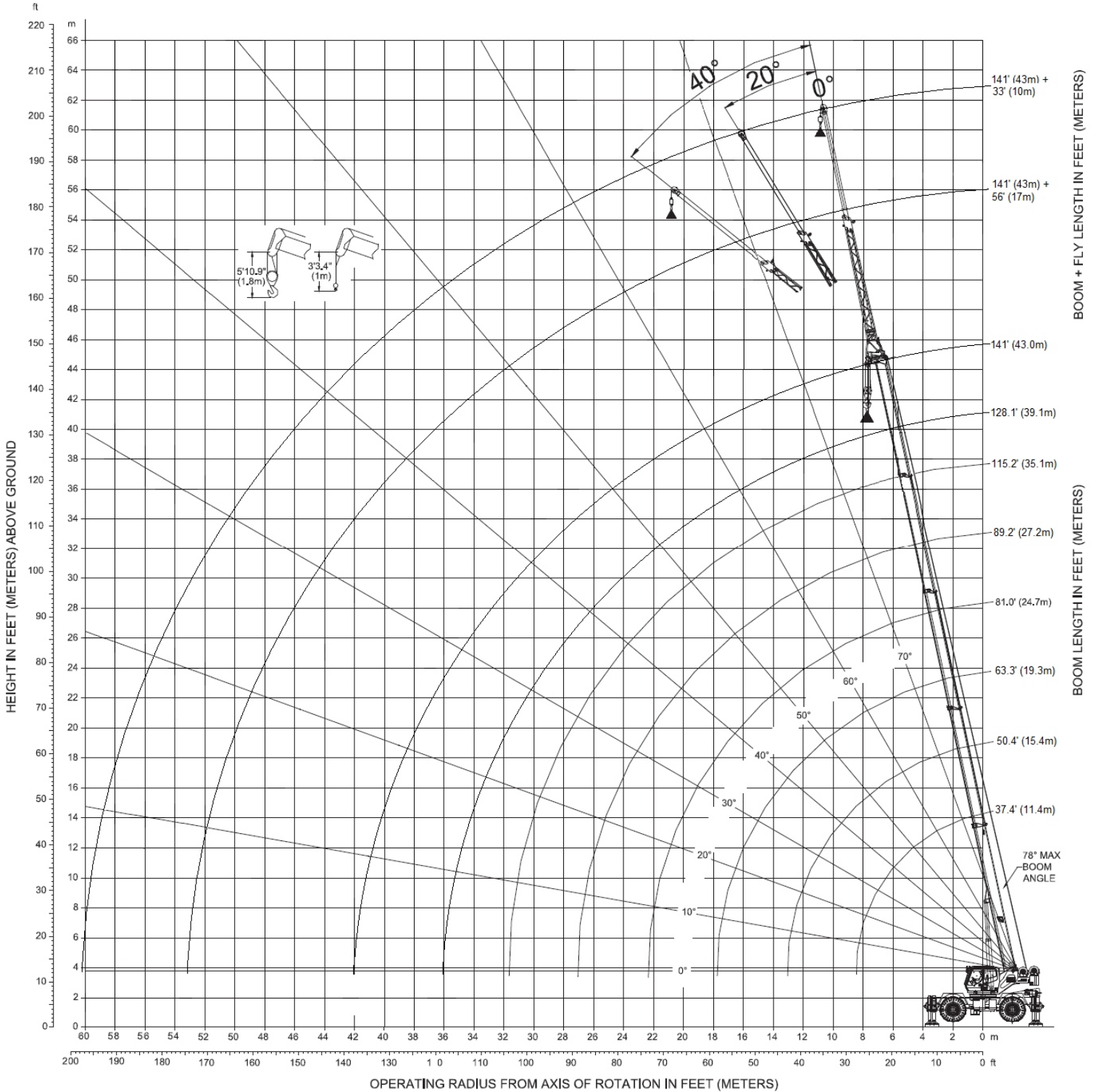
Front Wheel (4x2) Steering		Metric	Imperial
Wall to wall over boom attached		15.7 m	51.5 ft.
Wall to wall over carrier		13.1 m	43 ft.
Curb to curb		12.3 m	40.4 ft.
All Wheel (4x4) Steering		Metric	Imperial
Wall to wall over boom attached		11.1 m	36.4 ft.
Wall to wall over carrier		8.1 m	26.6 ft.
Curb to curb		7.3 m	23.9 ft.
Tail Swing		Metric	Imperial
With counterweight		3.78 m	12.4 ft.








## WORKING RANGE DIAGRAM




ACTUAL BOOM AND JIB LENGTHS ARE METRIC. THE FIGURES SHOWN ABOVE ARE APPROXIMATE CONVERSIONS TO FEET.

 <b>FULLY EXTENDED OUTRIGGERS - MAIN BOOM CAPACITY</b>							
5,000 kg. ctwt.		ANSI B30.5			85%		360°
BOOM LENGTH IN METERS - CAPACITY LISTED IN KILOGRAMS							
RADIUS	11.4	15.4	19.3	27.2	35.1	43.0	RADIUS
M							M
2.8	60000						2.8
3.0	55000	45000	35000				3.0
3.5	51150	45000	35000				3.5
4.0	47150	42690	35000				4.0
4.5	42800	39890	32950				4.5
5.0	39100	37440	30950	20590			5.0
5.5	35900	35420	29150	20590			5.5
6.0	33080	32690	27550	20590			6.0
6.5	30650	30240	26100	19640	13590		6.5
7.0	28640	28040	24800	18790	13590		7.0
7.5	26560	26150	23600	18040	13590		7.5
8.0	24000	23340	22500	17340	13590	9190	8.0
9.0	18960	18390	17960	16040	12840	9190	9.0
10.0		14950	14510	14890	12090	8690	10.0
11.0		12360	11950	13040	11490	8190	11.0
12.0		10370	10000	11050	10840	7740	12.0
14.0			7200	8200	8630	7040	14.0
16.0			5280	6260	6680	6390	16.0
18.0				4850	5270	5490	18.0
20.0				3780	4200	4430	20.0
22.0				2940	3360	3590	22.0
24.0				2260	2690	2910	24.0
26.0					2130	2360	26.0
28.0					1670	1900	28.0
30.0					1280	1510	30.0
32.0					940	1170	32.0


### NOTES TO LIFTING CAPACITY


Rated lifting capacities shown do not exceed 85% of the tipping loads. The weight of the hook block, hook ball and any additional auxiliary lifting devices are not calculated into the rated lifting capacity and must be deducted prior to operation.


 <b>MID POSITION OUTRIGGERS - MAIN BOOM CAPACITY</b>							
5,000 kg. ctwt.		ANSI B30.5			85%		360°
BOOM LENGTH IN METERS - CAPACITY LISTED IN KILOGRAMS							
RADIUS	11.4	15.4	19.3	27.2	35.1	43.0	RADIUS
M							M
3.0	51050	45000	35000				3.0
3.5	45350	44940	35000				3.5
4.0	40650	40190	35000				4.0
4.5	36700	36240	32950				4.5
5.0	33350	32890	30950	20590			5.0
5.5	28370	27620	27030	20590			5.5
6.0	23910	23230	22690	20590			6.0
6.5	20540	19910	19420	19640	13590		6.5
7.0	17910	17320	16870	17830	13590		7.0
7.5	15800	15240	14760	15750	13590		7.5
8.0	14060	13490	13020	14040	13590	9190	8.0
9.0	11310	10760	10340	11350	11740	9190	9.0
10.0		8750	8360	9340	9730	8690	10.0
11.0		7200	6840	7790	8180	8190	11.0
12.0		5970	5630	6570	6950	7140	12.0
14.0			3830	4750	5140	5330	14.0
16.0			2560	3460	3850	4050	16.0
18.0				2500	2900	3100	18.0
20.0				1760	2160	2370	20.0
22.0				1170	1580	1790	22.0
24.0					1100	1310	24.0

### NOTES TO LIFTING CAPACITY


Rated lifting capacities shown do not exceed 85% of the tipping loads. The weight of the hook block, hook ball and any additional auxiliary lifting devices are not calculated into the rated lifting capacity and must be deducted prior to operation.


 <b>FULLY RETRACTED OUTRIGGERS - MAIN BOOM CAPACITY</b>							
5,000 kg. cwt.		ANSI B30.5			85%		360°
BOOM LENGTH IN METERS - CAPACITY LISTED IN KILOGRAMS							
RADIUS	11.4	15.4	19.3	27.2	35.1	43.0	RADIUS
M							M
3.0	40960	39640	35000				3.0
3.5	30170	29340	28650				3.5
4.0	23710	22990	22390				4.0
4.5	19330	18680	18160				4.5
5.0	16170	15580	15080	15970			5.0
5.5	13780	13210	12700	13620			5.5
6.0	11910	11300	10820	11770			6.0
6.5	10350	9760	9310	10240	10570		6.5
7.0	9060	8500	8070	8980	9310		7.0
7.5	7980	7440	7020	7920	8260		7.5
8.0	7060	6540	6140	7030	7360	7490	8.0
9.0	5570	5080	4710	5580	5920	6060	9.0
10.0		3960	3610	4470	4810	4960	10.0
11.0		3070	2740	3590	3940	4100	11.0
12.0		2350	2030	2880	3220	3390	12.0
14.0				1790	2140	2310	14.0
16.0					1350	1540	16.0

 <b>5,000 kg. cwt.</b>		<b>ON TIRES BOOM CENTERED</b> <b>ANSI B30.5</b>		<b>75%</b> <b>OVER FRONT</b>	
<b>BOOM LENGTH IN METERS - CAPACITY LISTED IN KILOGRAMS</b>					
<b>RADIUS</b>	<b>11.4</b>	<b>15.4</b>	<b>19.3</b>	<b>RADIUS</b>	
<b>M</b>				<b>M</b>	
3.0	26800	26350	25900	3.0	
3.5	23800	23350	22950	3.5	
4.0	21300	20850	20470	4.0	
4.5	19200	18740	18380	4.5	
5.0	17410	16940	16610	5.0	
5.5	15870	15420	15040	5.5	
6.0	14520	14060	13740	6.0	
6.5	13350	12880	12540	6.5	
7.0	12280	11850	11520	7.0	
7.5	11360	10920	10570	7.5	
8.0	10490	10070	9740	8.0	
9.0	9030	8610	8310	9.0	
10.0		7100	6730	10.0	
11.0		5800	5450	11.0	
12.0		4760	4430	12.0	
14.0			2900	14.0	
16.0			1790	16.0	

 <b>5,000 kg. cwt.</b>		<b>360° ON TIRES</b> <b>ANSI B30.5</b>		<b>75%</b>	<b>360°</b>
<b>BOOM LENGTH IN METERS - CAPACITY LISTED IN KILOGRAMS</b>					
RADIUS	11.4	15.4	19.3	RADIUS	
M					M
3.0	21000	20640	19950	3.0	
3.5	18050	17500	17030	3.5	
4.0	15670	15120	14700	4.0	
4.5	13740	13210	12800	4.5	
5.0	12160	11630	11220	5.0	
5.5	10780	10290	9840	5.5	
6.0	9650	9100	8730	6.0	
6.5	8630	8110	7760	6.5	
7.0	7770	7260	6880	7.0	
7.5	6990	6510	6100	7.5	
8.0	6320	5800	5460	8.0	
9.0	5100	4670	4300	9.0	
10.0		3650	3300	10.0	
11.0		2800	2470	11.0	
12.0		2100	1790	12.0	



 <b>JIB CAPACITY AT RADIUS</b> <b>ANSI B30.5</b>							
10m (33ft.)							85%
	0° OFFSET		20° OFFSET		40° OFFSET		
Boom Angle (°)	Load Radius (m)	Capacity (kg)	Load Radius (m)	Capacity (kg)	Load Radius (m)	Capacity (kg)	Boom Angle (°)
78	9.0	5140	11.9	2840	14.2	2090	78
76	10.8	4740	13.6	2740	15.9	2040	76
74	12.6	4390	15.4	2640	17.5	1990	74
72	14.4	4090	17.1	2540	19.2	1940	72
70	16.1	3840	18.8	2440	20.8	1890	70
68	17.9	3640	20.5	2340	22.4	1840	68
66	19.6	3440	22.1	2290	23.9	1840	66
64	21.2	3240	23.7	2240	25.5	1790	64
62	22.9	3090	25.3	2140	27.0	1790	62
60	24.5	2940	26.9	2090	28.4	1740	60
58	26.1	2540	28.4	2040	29.8	1740	58
56	27.6	2190	29.9	1990	31.2	1740	56
54	29.2	1890	31.3	1740	32.6	1650	54
52	30.6	1630	32.7	1510	33.9	1440	52
50	32.1	1400	34.1	1310	35.1	1250	50
48	33.5	1200	35.4	1130	36.3	1080	48
46	34.8	1030	36.6	970	37.5	930	46
44	36.1	870	37.9	820	38.6	790	44

 <b>JIB CAPACITY AT RADIUS</b> <b>ANSI B30.5</b>							
17m (56ft.)							85%
	0° OFFSET		20° OFFSET		40° OFFSET		
Boom Angle (°)	Load Radius (m)	Capacity (kg)	Load Radius (m)	Capacity (kg)	Load Radius (m)	Capacity (kg)	Boom Angle (°)
78	10.5	2640	15.6	1390	19.7	1040	78
76	12.5	2390	17.6	1340	21.5	990	76
74	14.5	2240	19.5	1290	23.3	990	74
72	16.5	2090	21.4	1240	25.1	940	72
70	18.5	1940	23.3	1190	26.9	940	70
68	20.5	1840	25.2	1190	28.6	940	68
66	22.4	1740	27.0	1140	30.2	890	66
64	24.3	1640	28.8	1090	31.9	890	64
62	26.2	1540	30.5	1090	33.4	890	62
60	28.0	1490	32.2	1040	35.0	890	60
58	29.8	1390	33.9	1040	36.5	890	58
56	31.6	1340	35.5	990	37.9	840	56
54	33.3	1290	37.1	990	39.4	840	54
52	34.9	1240	38.6	940	40.7	840	52
50	36.6	1180	40.1	940	42.0	840	50
48	38.1	1010	41.6	910	43.3	840	48
46	39.7	860	42.9	780	44.5	730	46
44	41.2	720	44.3	660	45.6	620	44