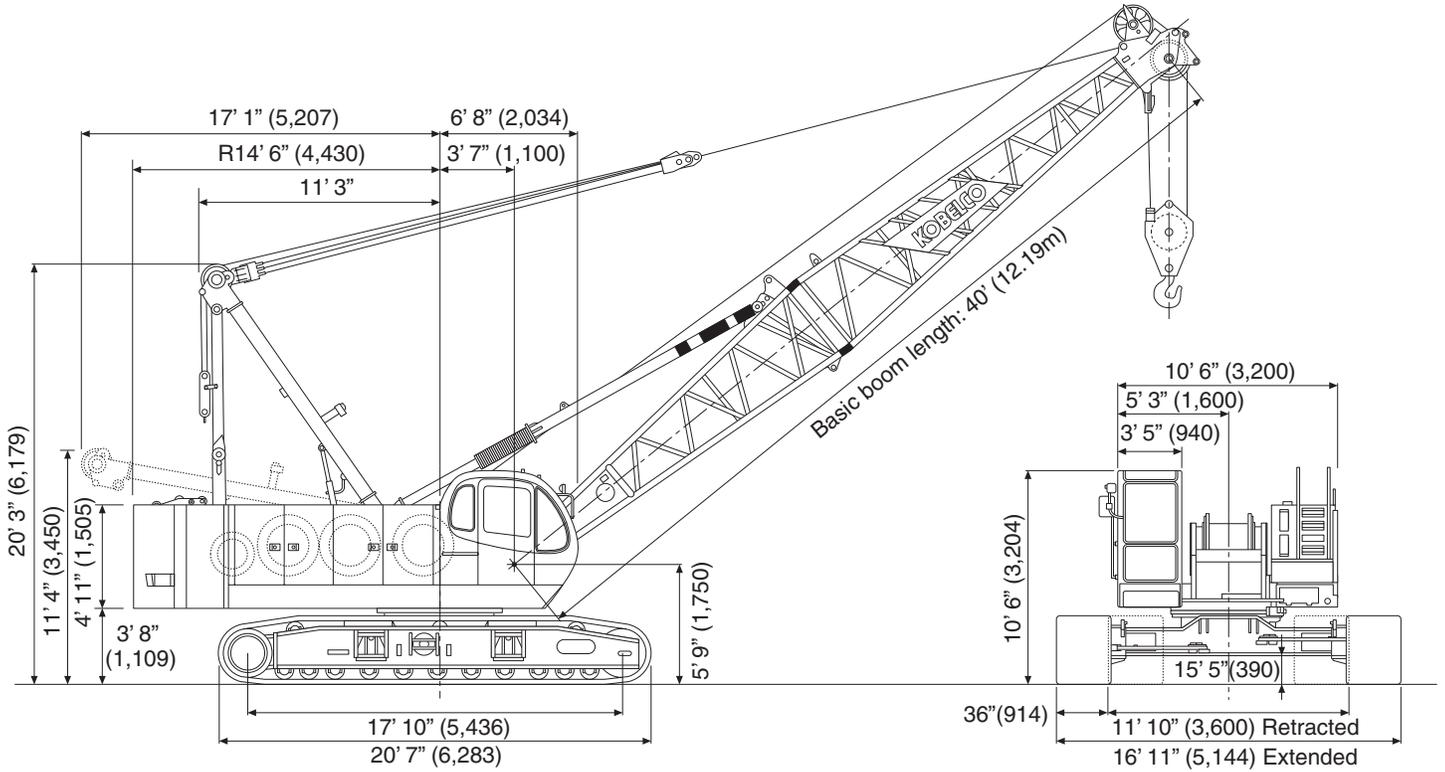


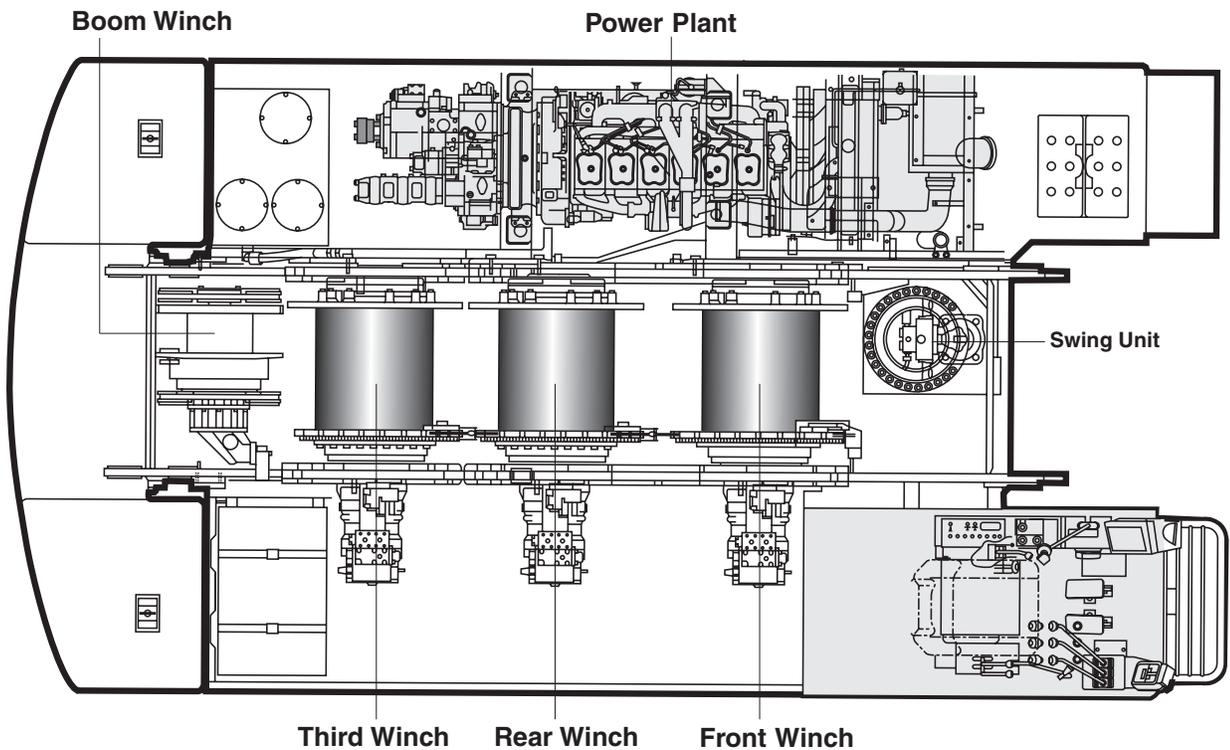
**Kobelco CK1000 Crawler Crane
Load Charts & Specifications**

GENERAL DIMENSIONS

Unit: ft-in(mm)



UPPER MACHINERY LAYOUT



SPECIFICATIONS

UPPER MACHINERY



Power plant

Model	Mitsubishi 6D24-TEG
Type	Water-cooled diesel, direct fuel injection with turbocharger
No. of cylinder	6
Bore and stroke	5.1" x 5.9" (130 mm x 150 mm)
Displacement	729 cu in (11.945 liters)
Rated power	265 HP (198 kW) Net at 2,000 rpm (SAE J 1349)
Max. torque	784 lb•ft (1,059 N•m) Net at 1,400 rpm (SAE J 1349)
Cooling system	Liquid, recirculating bypass
Starter	24 V, 5.5 kW
Alternator	24 V, 80 AMP
Cycles	4
Radiator	Corrugated type core, thermostatically controlled
Air cleaner	Dry type with replaceable paper element
Fuel tank capacity	105 US gal (400 liters)
Batteries	Two 12V, 150 AH capacity batteries, connected in parallel



Hydraulic System

Pumps: All three variable displacement piston-type pumps are driven by a heavy-duty pump drive. One of these pumps is used in the right propel circuit and hook hoist circuit, and can accommodate an optional third circuit. Another is used in the left propel circuit, boom hoist circuit and hook hoist circuit. The third variable displacement pump is used in the swing circuit. In addition, two gear pumps are used in the control system and auxiliary equipment. One of these serves the clutch and brakes.

Control: Full-flow hydraulic control system for constant variable pressure to front and rear drums, boom hoist brakes and clutches. Controls respond instantly to the touch, delivering smooth function operation.

Relief valve pressure:

Load hoist, boom hoist

and propel system 4,480 psi (315 kg/cm²)

Swing system 3,980 psi (280 kg/cm²)

Control system 1,140 psi (80 kg/cm²)

Reservoir capacity: 119 US gal (450 liters)

Cooling: Oil-to-air heat exchanger (plate-fin type)

Filtration: Full-flow and bypass type with replaceable paper element

Electrical wiring: All wiring harnesses and connectors are numbered for easier servicing. Machine is equipped with individual fused branch circuits.



Boom hoisting system

Powered by a hydraulic axial piston motor through a planetary reducer.

Brake: A spring-set, hydraulically released multiple-disc brake is internally fitted in the boom hoist motor and operated through a counter-balance valve.

Drum: Single drum, grooved for 5/8 in (15.8 mm) dia. wire rope

Line speed: Single line on first drum layer

Hoisting 213 ft/min (65 m/min)

Lowering 213 ft/min (65 m/min)



Load Hoist system

Front and rear drums for load hoist powered by hydraulic variable displacement piston-type motors, driven through planetary reducers.

Brakes & Clutches (compatible): Forced-circulation oil-cooled wet-type multi-disc brakes, each using positive and negative actuation.

Drums: (front and rear): 24.1" (613 mm) P.C.D. x 24.5" (622 mm) wide drums, each grooved for 1" (25.4 mm) wire rope.

Wire rope capacity:

Front drum 623 ft (190 m) working length

Rear drum 525 ft (160 m) working length

Optional third drum 623 ft (190 m) working length

Storage length (each drum) 984 ft (300 m)

Line speed: Single line on the first drum layer

Hoisting 328 ft/min (100m/min)

Lowering 328 ft/min (100m/min)

Optional third drum: with the same dimensions as front and rear drums



Swing system

Swing unit: Powered by a hydraulic piston-type motor driving spur gears through planetary reducers, the swing system provides 360° rotation.

Swing speed 3.5 rpm

Swing brake: A spring-set, hydraulically released multiple-disc brake is internally fitted in swing motor.

Swing circle: Single-row ball bearing with an integral internally cut swing gear.



Operator's Cab

Totally enclosed, full vision cab fitted with tinted safety glass and a sliding front window. A fully adjustable, high-backed seat with arm rests permits operators to set their ideal working position. Side mounted console for auxiliary controls and instruments. An air conditioner, a signal horn, cigarette lighter, windshield wiper and inspection lamp socket are standard features.



Controls

In front of operator are the foot pedals for front and rear drum brakes. At operator's right side are the travel (propel) control levers and the function lock lever. To the operator's right front are the boom hoist control lever, main (front) and auxiliary (rear) winch control levers and the free-fall select switches for the main and auxiliary winches. To the operators left front are the swing control lever and third drum control lever (if the machine is so equipped). To the operator's left are the crawler extend/retract lever and the positive swing lock. The left-hand console contains toggle switches for travel (propel) speed, free-fall high/low select, gantry control, crane-clamshell select switch and the anti-two-block/boom over-hoist switches. Directly in front of the console are the drum pawl lock for boom, front, rear and third drum (if so equipped) and the engine ignition key. The swing brake and signal horn are mounted on the swing control lever.

Gauges: Fuel gauge, engine water temperature gauge, hour meter and tachometer are located on the monitor display.

Warning display: All potential warnings, including battery charge, engine oil pressure, air cleaner, engine oil filter, control main pressure, and hydraulic oil temperature will appear on the monitor display when a fault occurs.

Safety device: Function lock lever, anti-two-block, boom over hoist limit switch, boom angle indicator, signal horn, boom hoist drum lock, front and rear drum lock, swing lock, swing alarm (buzzer and lamps), boom backstops, safety latch on hook blocks, and optional load moment indicator

ATTACHMENT



Boom:

Welded lattice construction using tubular, high-tensile steel chords with pin connections between sections. Boom tip is open throat construction. Two idler sheaves and three point sheaves are standard.

Max. lifting capacity	100 US tons (90,700kg)
Basic boom length	40 ft (12.19 m)
Max. boom length	200 ft (61.0 m)

Boom	Weight
Boom tip	2,650 lbs (1,200 kg)
Boom base	2,600 lbs (1,180 kg)
Insert (10 ft)	680 lbs (310 kg)
Insert (20 ft)	1,150 lbs (520 kg)
Insert (40 ft)	2,120 lbs (960 kg)



Gantry

High folding type, fitted with sheave frame for boom hoist reeving. Hydraulic lift is standard. Positions full up and full down.

Counterweights

Three-piece, vertically arranged, mounted behind the machinery compartment.

Total counterweight 63,000 lbs (28,600kg)

Carbody counterweight:

Total weight (Two-pieces)..... 8,800 lbs (4,000 kg)

Self-handling devices:

Optional counterweight self-removal device

Optional crawler frame self-removal device



Jib (optional):

Welded lattice construction using tubular, high-tensile steel chords with pin connections between sections.

Max. lifting capacity	24,000 lbs (10,900 kg)
Max. jib length	60 ft (18.3 m)
Max. total length of boom and jib	190 ft (57.9 m) + 60 ft (18.3 m)

Jib	Weight
Jib tip	620 lbs (280 kg)
Jib base	440 lbs (200 kg)
Insert (10 ft)	220 lbs (100 kg)
Insert (20 ft)	400 lbs (180 kg)

Diameter of wire ropes

Standard:

Load hoist (front, rear and third) 1 in (25.4 mm)

Boom hoist (12-part line) 5/8 in (15.8 mm)

Boom suspension rope (2 sets) 1 3/16 in (30 mm)

Wire ropes IWRC, 6 x Fi (25) c/o (Front and rear)

Optional:

Jib back stay guy line (2 lines)..... 7/8 in (22 mm)

Boom backstops: telescopic type with spring bumper

Line pull

	Rated line pull	Maximum line pull
Front	25,100 lbs (11,400 kg)	44,100 lbs (20,000 kg)
Rear	25,100 lbs (11,400 kg)	44,100 lbs (20,000 kg)
Third (optional)	25,100 lbs (11,400 kg)	44,100 lbs (20,000 kg)



Weight

Operating weight: Approx. 173,000 lbs (including 40 ft boom and 100 US-ton hook block)

Ground pressure:

Average 10.8 psi (0.76 kg/cm²) with standard 36" shoes

Max. gradeability: 40%

LOWER MACHINERY

Carbody: Steel-welded carbody with axles

Crawler: Crawler assemblies can be hydraulically extended/retracted. Crawler track tension is maintained by hydraulic jack force on the track-adjusting bearing block.

Crawler drive: Independent hydraulic propel drive is built into each side frame, each with a hydraulic motor propelling a drive tumbler through a planetary gear box.

Crawler brakes: Spring-set, hydraulically released multiple-disc parking brakes are built into each propel drive.

Steering mechanism: A hydraulic travel system provides skid steering (driving one track only) and counter-rotation of tracks (driving tracks in opposite directions) and differential track speed.

Track rollers: 11 lower rollers and 3 upper rollers are fitted to each side frame, sealed and maintenance-free.

Shoes:

Number 66 per side

Shoes (flat):

Shoe width 36" (914 mm)

Max. travel speed:

High range 1.1 mph (1.7km/h)

Low range 0.7 mph (1.1km/h)

NOTES

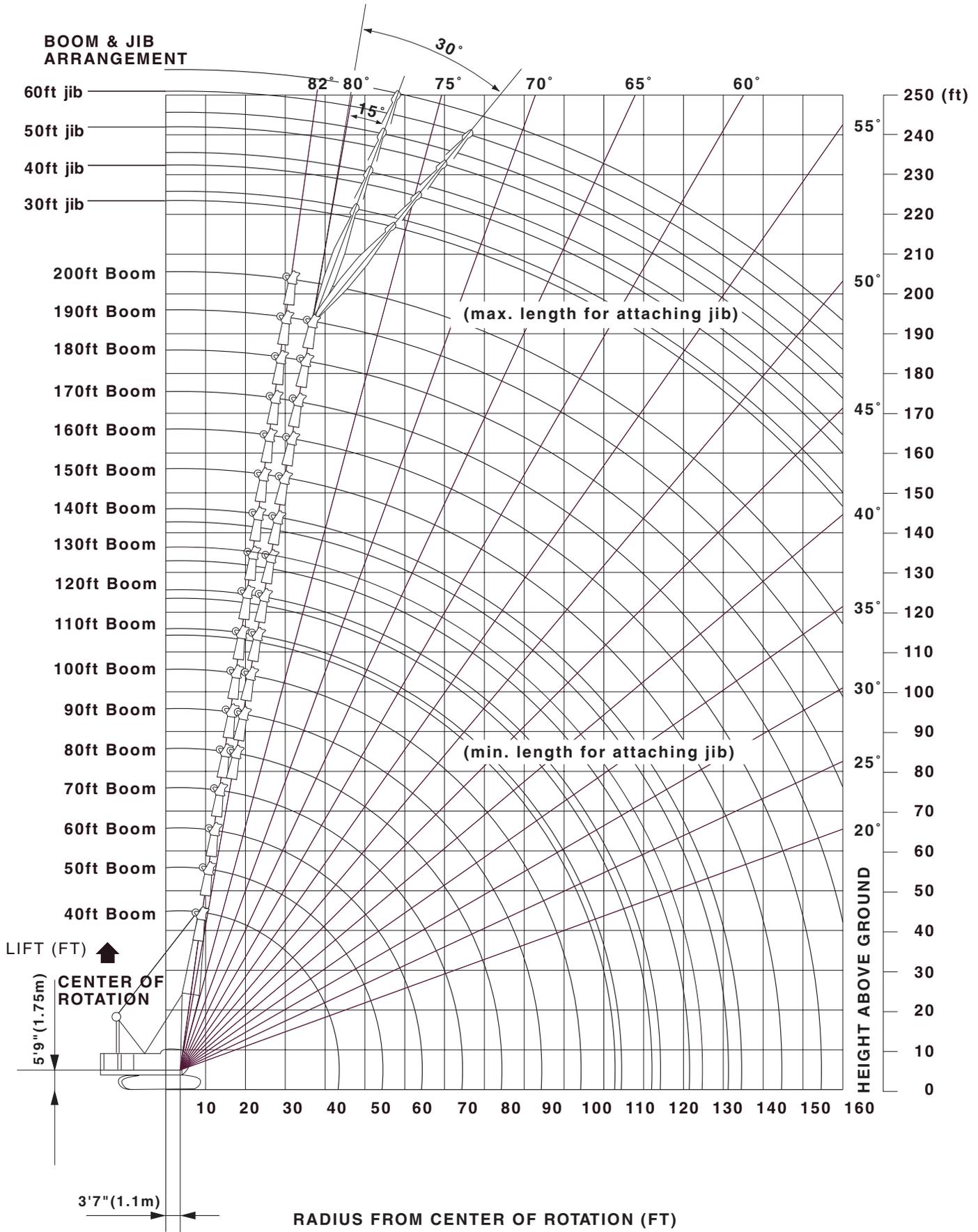
The following guidelines should be referred to when when interpreting the load rating charts.

1. Rated loads included in the charts are the maximum allowable freely suspended loads at a given boom length, boom angle and load radius, and have been determined for the machine standing on level and firm supporting surface under ideal operating conditions. The user must limit or de-rate rated loads to allow for adverse conditions (such as soft or uneven grounds, out-of-level conditions, wind, side loads, pendulum action, jerking or sudden stopping of loads, inexperience of personnel, multiple machine lifts, and traveling with a load).
2. Capacities do not exceed 75% of minimum tipping loads. Capacities based on factors other than machine stability such as structural competence are shown by asterisk * in the charts.
3. The machine must be reeved and set-up as stated in the operator's manual and all the instruction manuals. If these manuals are missing, obtain replacements. Boom backstops are required for all boom lengths. Gantry must be in the fully raised position for all operations. Crawlers must be fully extended and be locked in position. The crane must be leveled to within 1% on a firm supporting surface.
4. Do not attempt to lift where no radius on load is listed as crane may tip or collapse.
5. Attempting to lift more than rated loads may cause machine to tip or collapse. Do not tip machine to determine capacity.
6. Weight of hooks, hook blocks, slings and other lifting devices are part of the total load. Their total weight must be subtracted from the rated load to obtain the weight that can be lifted.
7. When lifting over boom point with jib or auxiliary sheave, rated loads for the boom must be deducted as shown below.

Jib length	Aux. Sheave	30 ft	40 ft	50 ft	60 ft
Deduct (lbs)	420	2,400	3,200	4,200	5,200

8. The total load that can be lifted with the jib is limited by rated jib loads. The total load that can be lifted with the auxiliary sheave is limited by rated auxiliary sheave loads.
9. Boom lengths for jib mounting are from 80 ft (24.4 m) to 190 ft (57.9 m).
10. An auxiliary sheave cannot be used on a 200 ft (61.0 m) boom length.
11. The boom should be erected over the front of the crawlers, not laterally.
12. Least stable position is over the side.
13. Lifting capacities listed apply only to the machine as originally manufactured and designed by KOBELCO CONSTRUCTION MACHINERY CO., LTD. Modifications to this machine or use of equipment other than that specified can reduce operating capacity.
14. Designed and rated to comply with ANSI Code B30.5.

WORKING RANGES (with fixed jib)

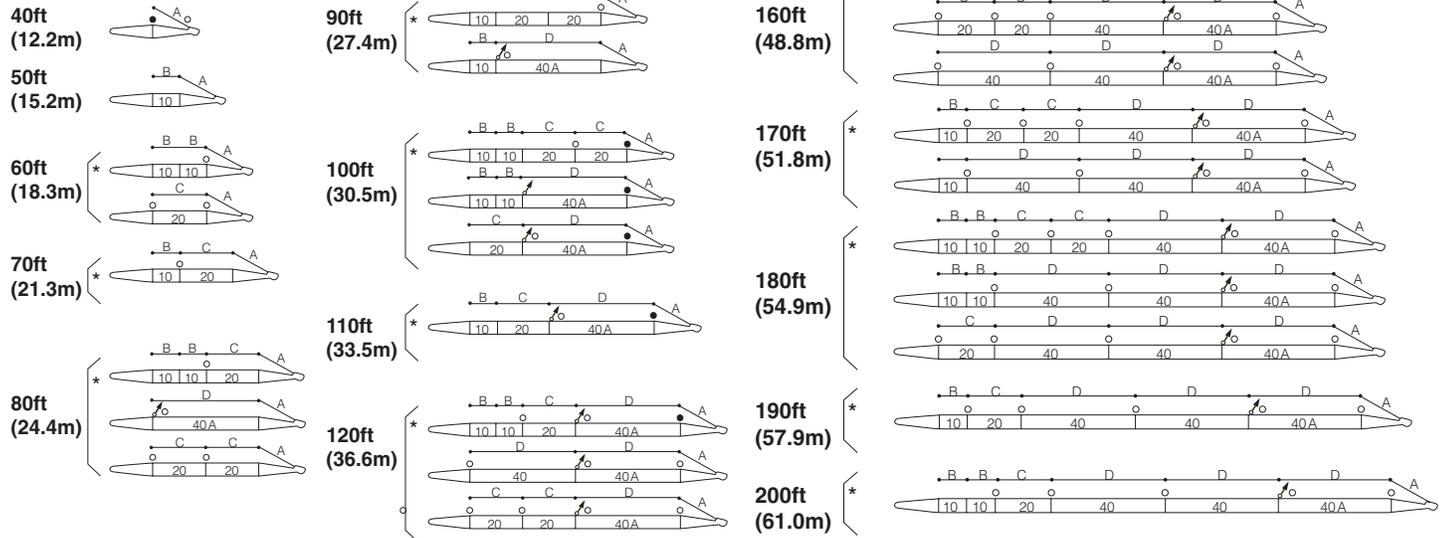


BOOM AND GUY LINE ARRANGEMENT

Symbol	Dimensions of Guy Line	
	Diameter in (mm)	Length ft-in (m)
A	13/16 (30)	20-3 (6.17)
B	13/16 (30)	10-0 (3.05)
C	13/16 (30)	20-0 (6.10)
D	13/16 (30)	40-0 (12.20)

For most efficient use of this machine, boom and guy line arrangement must be correctly observed as shown in this figure.

- 📍 Location of jib backstay lug
- Location of cable roller on boom tip
- Location of cable roller on boom insert

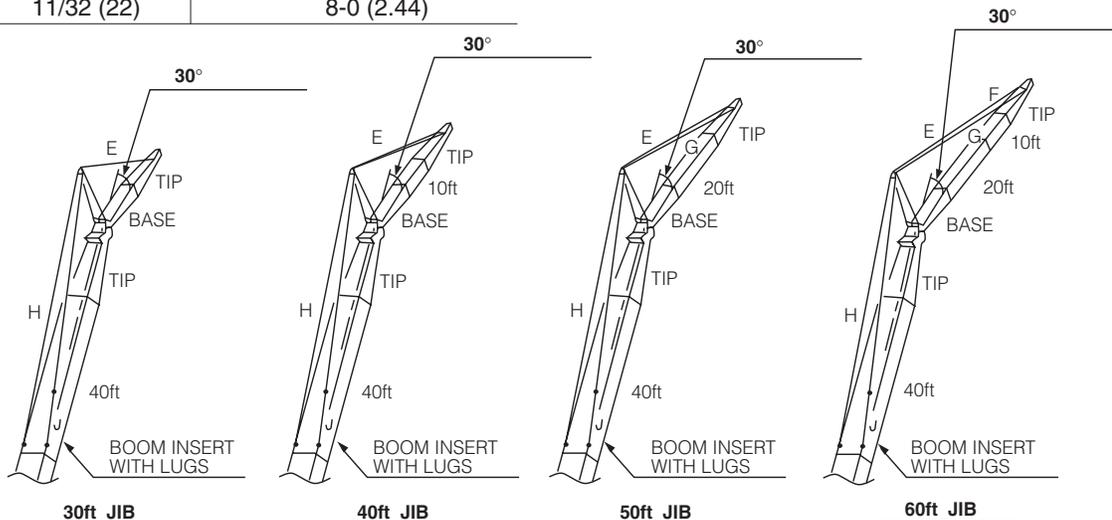


* Manufacturer's recommended boom arrangement makes shorter boom arrangements possible.

JIB AND GUY LINE ARRANGEMENT

Symbol	Dimensions of Guy Line	
	Diameter in (mm)	Length ft-in (m)
E	11/32 (22)	63-5 (19.34)
F	11/32 (22)	19-3 (5.88)
G	11/32 (22)	38-7 (11.75)
H	11/32 (22)	123-2 (37.54)
J	11/32 (22)	8-0 (2.44)

- This figure shows the arrangement when the jib offset angle is 30 degrees.
- When setting the offset angle to 10 degrees, deduct the additional guy line J from the boom side guy line H.
- For jib use with 80-100 ft of main boom, you must use the 40 ft boom insert that has lugs.
- Jib use is from 80-190 ft of main boom only.



CK1000 Lifting Capacity

LIFT CRANE SERVICE

Refer to notes page 4.

3 Counterweights, 2 Carbody weights, Crawler Fully Extended

Boom Length (ft)	Load Radius (ft)	Boom Angle (degree)	Boom Point Elev. (ft)	360° Rated Load (lbs)	Boom Length (ft)	Load Radius (ft)	Boom Angle (degree)	Boom Point Elev. (ft)	360° Rated Load (lbs)
40	10.0	81.9	45.3	*200,000	50	12.0	81.2	55.1	*185,180
	11.0	80.5	45.2	*200,000		13.0	80.1	55.0	*171,950
	12.0	79.0	45.0	*185,400		14.0	78.9	54.8	*160,050
	13.0	77.5	44.8	*172,170		15.0	77.7	54.6	*150,130
	14.0	76.1	44.6	*160,270		16.0	76.5	54.4	*140,870
	15.0	74.6	44.3	*150,350		17.0	75.4	54.1	*133,150
	16.0	73.1	44.0	*141,090		18.0	74.2	53.8	*125,880
	17.0	71.5	43.7	*133,370		19.0	73.0	53.5	*119,040
	18.0	70.0	43.3	*126,100		20.0	71.7	53.2	*111,330
	19.0	68.5	42.9	*119,040		22.0	69.3	52.5	*98,760
	20.0	66.9	42.5	*111,110		24.0	66.8	51.7	87,520
	22.0	63.7	41.6	*97,440		26.0	64.3	50.8	77,820
	24.0	60.5	40.5	*86,420		28.0	61.7	49.8	70,100
	26.0	57.1	39.3	*76,940		30.0	59.0	48.6	63,710
	28.0	53.5	37.9	*69,000		32.0	56.3	47.3	58,420
	30.0	49.8	36.3	*62,160		34.0	53.5	45.9	53,790
	32.0	45.9	34.5	*55,990		36.0	50.5	44.3	50,040
34.0	41.7	32.3	*50,260	38.0	47.4	42.5	46,510		
36.0	37.0	29.8	*45,190	40.0	44.2	40.6	43,430		
38.0	31.8	26.8	*40,120	45.0	35.0	34.4	*35,270		
40.0	25.7	23.1	*35,270	50.0	22.8	25.1	*27,110		
60	13.0	81.7	65.1	*171,730	70	15.0	81.3	74.9	*149,690
	14.0	80.8	65.0	*159,830		16.0	80.4	74.8	*140,430
	15.0	79.8	64.8	*149,910		17.0	79.6	74.6	*131,830
	16.0	78.8	64.6	*140,650		18.0	78.8	74.4	*122,570
	17.0	77.8	64.4	*132,930		19.0	77.9	74.2	*114,630
	18.0	76.9	64.2	*124,330		20.0	77.1	74.0	*107,580
	19.0	75.9	63.9	*116,180		22.0	75.4	73.5	*95,900
	20.0	74.9	63.7	*109,120		24.0	73.7	72.9	*86,420
	22.0	72.9	63.1	*97,000		26.0	72.0	72.3	77,600
	24.0	70.9	62.4	*87,300		28.0	70.2	71.6	69,880
	26.0	68.8	61.7	77,600		30.0	68.5	70.9	63,490
	28.0	66.8	60.9	69,880		32.0	66.7	70.0	57,980
	30.0	64.6	59.9	63,490		34.0	64.9	69.1	53,350
	32.0	62.5	58.9	58,200		36.0	63.1	68.1	49,600
	34.0	60.3	57.8	53,570		38.0	61.2	67.1	46,070
	36.0	58.1	56.7	49,600		40.0	59.3	65.9	42,980
	38.0	55.8	55.3	46,070		45.0	54.4	62.6	37,030
40.0	53.4	53.9	43,210	50.0	49.1	58.6	32,180		
45.0	47.1	49.7	37,030	55.0	43.4	53.8	28,650		
50.0	40.1	44.4	32,400	60.0	37.0	47.9	25,570		
55.0	31.8	37.3	*27,330	65.0	29.4	40.1	*22,040		
60.0	20.7	26.9	*21,600						
80	16.0	81.6	84.9	*138,660	80	34.0	68.2	80.0	53,130
	17.0	80.9	84.7	*128,300		36.0	66.7	79.2	49,160
	18.0	80.2	84.6	*119,260		38.0	65.1	78.3	45,850
	19.0	79.5	84.4	*111,550		40.0	63.5	77.3	42,760
	20.0	78.7	84.2	*104,710		45.0	59.4	74.6	36,590
	22.0	77.3	83.8	*93,250		50.0	55.1	71.3	31,960
	24.0	75.8	83.3	*84,210		55.0	50.6	67.5	28,210
	26.0	74.3	82.7	*76,720		60.0	45.7	63.0	25,130
	28.0	72.8	82.1	69,440		65.0	40.4	57.6	22,700
	30.0	71.3	81.5	63,050		70.0	34.5	51.0	20,720
32.0	69.8	80.8	57,760	75.0	27.4	42.5	*17,850		

CK1000 Lifting Capacity

LIFT CRANE SERVICE

Refer to notes page 4.

3 Counterweights, 2 Carbody weights, Crawler Fully Extended

Boom Length (ft)	Load Radius (ft)	Boom Angle (degree)	Boom Point Elev. (ft)	360° Rated Load (lbs)	Boom Length (ft)	Load Radius (ft)	Boom Angle (degree)	Boom Point Elev. (ft)	360° Rated Load (lbs)
90	17.0	81.9	94.8	*125,660	100	19.0	81.6	104.7	*107,360
	18.0	81.3	94.7	*117,720		20.0	81.0	104.5	*100,750
	19.0	80.6	94.5	*109,780		22.0	79.8	104.1	*89,500
	20.0	80.0	94.4	*103,170		24.0	78.7	103.8	*80,680
	22.0	78.7	94.0	*91,710		26.0	77.5	103.4	*73,410
	24.0	77.4	93.6	*82,670		28.0	76.3	102.9	*67,460
	26.0	76.1	93.1	*75,390		30.0	75.1	102.4	*62,390
	28.0	74.8	92.6	*69,220		32.0	73.9	101.8	57,310
	30.0	73.4	92.0	63,050		34.0	72.7	101.2	52,680
	32.0	72.1	91.4	57,540		36.0	71.5	100.6	48,720
	34.0	70.8	90.7	52,910		38.0	70.3	99.9	45,410
	36.0	69.4	90.0	49,160		40.0	69.1	99.1	42,320
	38.0	68.0	89.2	45,630		45.0	66.0	97.1	36,150
	40.0	66.6	88.3	42,540		50.0	62.8	94.7	31,520
	45.0	63.1	86.0	36,370		55.0	59.5	91.9	27,770
	50.0	59.5	83.3	31,740		60.0	56.1	88.7	24,690
	55.0	55.7	80.1	27,990		65.0	52.6	85.2	22,260
	60.0	51.7	76.3	25,130		70.0	48.8	81.0	20,060
	65.0	47.5	72.1	22,480		75.0	44.9	76.3	18,290
	70.0	43.0	67.1	20,500		80.0	40.6	70.8	16,750
75.0	38.0	61.1	18,730	85.0	36.0	64.5	15,430		
80.0	32.4	53.9	*17,190	90.0	30.7	56.8	*14,320		
85.0	25.8	44.9	*14,770	95.0	24.4	47.0	*12,340		
110	20.0	81.8	114.6	*100,300	120	22.0	81.6	124.4	*87,080
	22.0	80.8	114.3	*89,060		24.0	80.6	124.1	*78,480
	24.0	79.7	114.0	*80,020		26.0	79.6	123.8	*71,200
	26.0	78.7	113.6	*72,750		28.0	78.6	123.4	*65,250
	28.0	77.6	113.2	*66,790		30.0	77.7	123.0	*60,180
	30.0	76.5	112.7	*61,720		32.0	76.7	122.5	*55,990
	32.0	75.4	112.2	*57,310		34.0	75.7	122.0	*52,240
	34.0	74.4	111.7	52,680		36.0	74.7	121.5	48,500
	36.0	73.3	111.1	48,720		38.0	73.7	120.9	44,970
	38.0	72.2	110.5	45,410		40.0	72.7	120.3	42,100
	40.0	71.1	109.8	42,320		45.0	70.2	118.6	35,930
	45.0	68.3	107.9	36,150		50.0	67.6	116.7	31,080
	50.0	65.5	105.8	31,520		55.0	65.0	114.5	27,330
	55.0	62.6	103.4	27,770		60.0	62.3	112.0	24,470
	60.0	59.6	100.6	24,690		65.0	59.6	109.2	21,820
	65.0	56.5	97.4	22,260		70.0	56.8	106.1	19,840
	70.0	53.3	93.9	20,060		75.0	53.9	102.7	18,070
	75.0	49.9	89.9	18,290		80.0	50.8	98.7	16,530
	80.0	46.4	85.4	16,750		85.0	47.7	94.5	15,210
	85.0	42.7	80.3	15,430		90.0	44.3	89.5	13,880
90.0	38.6	74.3	14,320	95.0	40.8	84.1	13,000		
95.0	34.2	67.5	13,220	100.0	36.9	77.8	12,120		
100.0	29.2	59.4	*12,120	105.0	32.7	70.5	11,240		
105.0	23.2	49.1	*10,360	110.0	27.9	61.9	*10,140		
				115.0	22.2	51.1	*8,590		

CK1000 Lifting Capacity

LIFT CRANE SERVICE

Refer to notes page 4.

3 Counterweights, 2 Carbody weights, Crawler Fully Extended

Boom Length (ft)	Load Radius (ft)	Boom Angle (degree)	Boom Point Elev. (ft)	360° Rated Load (lbs)	Boom Length (ft)	Load Radius (ft)	Boom Angle (degree)	Boom Point Elev. (ft)	360° Rated Load (lbs)
130	24.0	81.3	134.2	*71,860	140	24.0	81.9	144.3	*61,720
	26.0	80.4	133.9	*70,980		26.0	81.1	144.0	*60,840
	28.0	79.5	133.5	*65,030		28.0	80.3	143.7	*59,960
	30.0	78.6	133.2	*59,960		30.0	79.4	143.3	*58,640
	32.0	77.7	132.7	*55,550		32.0	78.6	143.0	*54,450
	34.0	76.8	132.3	*51,800		34.0	77.8	142.6	*50,700
	36.0	75.9	131.8	*48,500		36.0	76.9	142.1	*47,390
	38.0	75.0	131.3	44,970		38.0	76.1	141.6	*44,530
	40.0	74.1	130.7	41,880		40.0	75.2	141.1	41,660
	45.0	71.8	129.2	35,710		45.0	73.1	139.7	35,490
	50.0	69.4	127.4	31,080		50.0	71.0	138.1	30,860
	55.0	67.1	125.5	27,330		55.0	68.8	136.2	27,110
	60.0	64.6	123.1	24,250		60.0	66.6	134.2	24,030
	65.0	62.2	120.7	21,820		65.0	64.3	131.9	21,380
	70.0	59.6	117.8	19,620		70.0	62.0	129.3	19,400
	75.0	57.0	114.7	17,850		75.0	59.7	126.6	17,630
	80.0	54.4	111.4	16,310		80.0	57.2	123.4	16,090
	85.0	51.6	107.6	14,990		85.0	54.8	120.1	14,770
	90.0	48.7	103.4	13,880		90.0	52.2	116.3	13,440
	95.0	45.7	98.7	12,780		95.0	49.6	112.3	12,560
100.0	42.5	93.5	11,900	100.0	46.8	107.8	11,460		
105.0	39.1	87.7	11,020	105.0	43.9	102.8	10,800		
110.0	35.4	81.0	10,360	110.0	40.9	97.4	9,920		
115.0	31.4	73.4	*9,470	115.0	37.6	91.1	9,250		
120.0	26.8	64.3	*8,370	120.0	34.1	84.2	8,590		
125.0	21.3	52.9	*7,050	125.0	30.2	76.1	*7,710		
				130.0	25.8	66.6	*6,830		
				135.0	20.5	54.7	*5,730		
150	26.0	81.7	154.2	*52,680	160	28.0	81.5	164.0	*44,090
	28.0	80.9	153.8	*51,800		30.0	80.8	163.7	*43,430
	30.0	80.2	153.5	*51,140		32.0	80.1	163.3	*42,760
	32.0	79.4	153.2	*50,260		34.0	79.3	162.9	*42,100
	34.0	78.6	152.8	*49,600		36.0	78.6	162.6	*41,440
	36.0	77.8	152.3	*46,510		38.0	77.9	162.2	*40,780
	38.0	77.0	151.9	*43,650		40.0	77.1	161.7	*40,340
	40.0	76.3	151.4	*41,220		45.0	75.3	160.5	35,270
	45.0	74.3	150.1	35,720		50.0	73.4	159.0	30,640
	50.0	72.3	148.6	30,640		55.0	71.5	157.4	26,890
	55.0	70.3	146.9	26,890		60.0	69.6	155.7	23,800
	60.0	68.2	145.0	23,800		65.0	67.7	153.7	21,160
	65.0	66.1	142.8	21,380		70.0	65.8	151.6	19,180
	70.0	64.0	140.5	19,180		75.0	63.8	149.3	17,410
	75.0	61.9	138.0	17,410		80.0	61.8	146.7	15,870
	80.0	59.7	135.2	15,870		85.0	59.7	143.8	14,320
	85.0	57.4	132.1	14,550		90.0	57.6	140.8	13,220
	90.0	55.1	128.7	13,440		95.0	55.4	137.4	12,120
	95.0	52.8	125.2	12,340		100.0	53.2	133.8	11,240
	100.0	50.3	121.1	11,460		105.0	51.0	130.0	10,360
105.0	47.8	116.8	10,580	110.0	48.6	125.7	9,700		
110.0	45.1	112.0	9,700	115.0	46.2	121.2	9,030		
115.0	42.3	106.7	9,030	120.0	43.6	116.0	8,370		
120.0	39.4	100.9	8,590	125.0	40.9	110.5	7,710		
125.0	36.3	94.5	7,930	130.0	38.1	104.4	7,270		
130.0	32.9	87.2	*7,490	135.0	35.1	97.1	*6,830		
135.0	29.1	78.7	*6,610	140.0	31.8	90.0	*5,950		
140.0	24.9	68.9	*5,730	145.0	28.2	81.3	*5,290		
				150.0	24.1	71.0	*4,400		

CK1000 Lifting Capacity

LIFT CRANE SERVICE

Refer to notes page 4.

3 Counterweights, 2 Carbody weights, Crawler Fully Extended

Boom Length (ft)	Load Radius (ft)	Boom Angle (degree)	Boom Point Elev. (ft)	360° Rated Load (lbs)	Boom Length (ft)	Load Radius (ft)	Boom Angle (degree)	Boom Point Elev. (ft)	360° Rated Load (lbs)
170	28.0	82.0	174.1	*38,800	180	30.0	81.8	183.9	*33,730
	30.0	81.3	173.8	*38,130		32.0	81.2	183.6	*33,060
	32.0	80.6	173.4	*37,470		34.0	80.5	183.3	*32,620
	34.0	80.0	173.1	*37,030		36.0	79.9	182.9	*31,960
	36.0	79.3	172.8	*36,370		38.0	79.2	182.5	*31,520
	38.0	78.6	172.4	*35,710		40.0	78.6	182.5	*31,080
	40.0	77.9	171.9	*35,270		45.0	77.0	181.1	*29,760
	45.0	76.2	170.8	*33,950		50.0	75.3	179.8	*28,650
	50.0	74.4	169.4	30,420		55.0	73.7	178.5	26,230
	55.0	72.7	168.0	26,670		60.0	72.0	176.9	23,360
	60.0	70.9	166.3	23,580		65.0	70.3	175.2	20,720
	65.0	69.1	164.5	20,940		70.0	68.6	173.3	18,730
	70.0	67.3	162.5	18,950		75.0	66.9	171.3	16,750
	75.0	65.4	160.3	17,190		80.0	65.1	169.0	15,210
	80.0	63.6	158.0	15,650		85.0	63.4	166.6	13,880
	85.0	61.7	155.4	14,100		90.0	61.6	164.0	12,780
	90.0	59.7	152.5	13,000		95.0	59.7	161.1	11,680
	95.0	57.7	149.4	11,900		100.0	57.9	158.2	10,800
	100.0	55.7	146.1	11,020		105.0	56.0	154.9	9,920
	105.0	53.6	142.5	10,140		110.0	54.0	151.3	9,030
	110.0	51.5	138.7	9,470		115.0	52.0	147.5	8,370
115.0	49.3	134.6	8,810	120.0	50.0	143.6	7,710		
120.0	47.1	130.2	8,150	125.0	47.8	139.0	7,270		
125.0	44.7	125.3	7,490	130.0	45.6	134.3	6,830		
130.0	42.2	119.9	7,050	135.0	43.4	129.4	6,170		
135.0	39.6	114.1	6,610	140.0	41.0	123.8	5,730		
140.0	36.9	107.8	*6,170	145.0	38.5	117.7	*5,290		
145.0	34.0	100.8	*5,510	150.0	35.8	111.0	*4,850		
150.0	30.8	92.7	*4,850	155.0	33.0	103.7	*4,180		
155.0	27.3	83.7	*4,180	160.0	29.9	95.4	*3,520		
160.0	23.3	73.0	*3,520	165.0	26.5	86.0	*3,080		
190	32.0	81.6	193.7	*29,540	200	34.0	81.5	203.5	*25,790
	34.0	81.0	193.4	*28,880		36.0	80.9	203.2	*25,350
	36.0	80.4	193.1	*28,430		38.0	80.3	202.9	*24,910
	38.0	79.8	192.7	*27,990		40.0	79.7	202.5	*24,470
	40.0	79.2	192.4	*27,550		45.0	78.3	201.6	*23,360
	45.0	77.6	191.3	*26,450		50.0	76.8	200.4	*22,480
	50.0	76.1	190.1	*25,350		55.0	75.3	199.2	*21,380
	55.0	74.5	188.8	*24,250		60.0	73.8	197.8	*19,840
	60.0	73.0	187.4	*22,700		65.0	72.3	196.2	*18,510
	65.0	71.4	185.8	20,500		70.0	70.8	194.6	*16,970
	70.0	69.8	184.0	18,510		75.0	69.3	192.8	*15,650
	75.0	68.2	182.1	16,750		80.0	67.8	190.9	*14,550
	80.0	66.5	179.9	15,210		85.0	66.2	188.7	13,440
	85.0	64.9	177.8	13,660		90.0	64.6	186.4	12,340
	90.0	63.2	175.3	12,560		95.0	63.0	183.9	11,240
	95.0	61.5	172.7	11,460		100.0	61.4	181.3	10,360
	100.0	59.7	169.7	10,580		105.0	59.8	178.5	9,470
	105.0	58.0	166.8	9,700		110.0	58.1	175.5	8,590
	110.0	56.2	163.6	9,030		115.0	56.4	172.3	7,930
	115.0	54.3	160.0	8,370		120.0	54.6	168.7	7,270
	120.0	52.5	156.4	7,710		125.0	52.9	165.2	*6,610
125.0	50.5	152.3	7,050	130.0	51.0	161.1	*5,950		
130.0	48.5	148.0	6,610	135.0	49.2	157.1	*5,290		
135.0	46.5	143.5	6,170	140.0	47.2	152.4	*4,620		
140.0	44.4	138.6	5,730	145.0	45.2	147.6	*4,180		
145.0	42.1	133.1	*5,290	150.0	43.2	142.6	*3,520		
150.0	39.8	127.3	*4,850	155.0	41.0	136.9	*3,080		
155.0	37.4	121.1	*4,180						
160.0	34.8	114.1	*3,740						
165.0	32.1	106.7	*3,300						

CK1000 Jib Lifting Capacity

LIFT CRANE SERVICE

Refer to notes page 4.

80 ft Boom					90 ft Boom												
Load Radius (ft)	30 ft Jib Offset Angle		40 ft Jib Offset Angle		50 ft Jib Offset Angle		60 ft Jib Offset Angle		Load Radius (ft)	30 ft Jib Offset Angle		40 ft Jib Offset Angle		50 ft Jib Offset Angle		60 ft Jib Offset Angle	
	10°	30°	10°	30°	10°	30°	10°	30°		10°	30°	10°	30°	10°	30°	10°	30°
30	*24,000								32	*24,000							
32	*24,000								34	*24,000							
34	*24,000		*24,000						36	*24,000		*24,000					
36	*24,000		*24,000						38	*24,000		*24,000			*20,000		
38	*24,000	*21,000	*24,000			*20,000			40	*24,000	*21,000	*24,000			*20,000		
40	*24,000	*21,000	*24,000			*20,000		*18,000	45	*24,000	*21,000	*24,000			*20,000		*18,000
45	*24,000	*20,700	*24,000	*15,360		*20,000		*18,000	50	*24,000	*20,100	*24,000	*14,810		*20,000		*18,000
50	*24,000	*19,510	*24,000	*14,480		*20,000		*17,850	55	*24,000	*19,020	*23,890	*14,020		*19,550	*11,300	*16,970
55	*24,000	*18,380	*22,480	*13,640		*18,560	*11,080	*16,180	60	*24,000	*18,120	*22,020	*13,330		*18,000	*10,730	*15,630
60	*24,000	*17,500	*20,700	*12,980		*17,080	*10,490	*14,850	65	22,660	*17,320	*20,410	*12,360		*16,730	*10,250	*14,460
65	22,920	*16,710	*19,180	*12,360		*15,800	*9,980	*13,730	70	20,540	*16,620	*19,040	*12,760		*15,580	*9,780	*13,470
70	20,810	*16,020	*17,870	*11,830		*14,720	*9,540	*12,760	75	18,620	*15,960	*17,760	*12,230		*14,520	*9,360	*12,520
75	18,910	*15,380	*16,660	*11,350		*13,710	*9,100	*11,860	80	17,080	*15,430	*16,730	*11,720		*13,660	*8,990	*11,770
80	17,370	*14,850	*15,670	*10,930		*12,870	*8,730	*11,130	85	15,760	*14,940	*15,800	*11,300		*12,890	*8,680	*11,080
85	16,020		*14,810	*10,560		*12,140	*8,420	*10,470	90	14,570		14,740	*10,930		*12,210	*8,370	*10,470
90	14,850		*14,040	*10,250		*11,500	*8,130	*9,870	95	13,470		13,620	*10,580		*11,570	*8,110	*9,890
95	13,750		*13,310			*10,890	*7,840	*9,320	100	12,540		12,690	*10,270		*11,020	*7,870	*9,390
100	12,830		*12,690			*10,360	*7,620	*8,860	105	11,700		11,860			*10,530	*7,640	*8,950
105			12,120			*9,890		*8,440	110			10,080			*10,070		*8,550
110			*12,350			*9,470		*8,060	115			10,360			*9,650		*8,150
115						*9,080		*7,690	120						*9,300		*7,820
120								*7,380	125						*8,970		*7,530
125								*7,120	130								*7,270
									135								*7,010

100 ft Boom					110 ft Boom												
Load Radius (ft)	30 ft Jib Offset Angle		40 ft Jib Offset Angle		50 ft Jib Offset Angle		60 ft Jib Offset Angle		Load Radius (ft)	30 ft Jib Offset Angle		40 ft Jib Offset Angle		50 ft Jib Offset Angle		60 ft Jib Offset Angle	
	10°	30°	10°	30°	10°	30°	10°	30°		10°	30°	10°	30°	10°	30°	10°	30°
32	*24,000								30								
34	*24,000								32								
36	*24,000		*24,000						34	*24,000							
38	*24,000		*24,000						36	*24,000							
40	*24,000		*24,000			*20,000			38	*24,000		*24,000					
45	*24,000	*21,000	*24,000			*20,000		18,000	40	*24,000		*24,000					
50	*24,000	*20,650	*24,000	*15,100		*20,000		18,000	45	*24,000	*21,000	*24,000			*20,000		*18,000
55	*24,000	*19,570	*24,000	*14,320		*20,000	*11,500	*17,720	50	*24,000	*21,000	*24,000	*15,360		*20,000		*18,000
60	*24,000	*18,690	*23,280	*13,660		*18,930	*10,950	*16,350	55	*24,000	*20,100	*24,000	*14,610		*20,000		*18,000
65	22,440	*17,900	*21,620	*13,090		*17,590	*10,470	*15,160	60	*24,000	*19,220	*24,000	*13,970		*19,810	*11,150	*17,040
70	20,320	*17,190	*20,190	*12,560		*16,420	*10,030	*14,130	65	22,260	*18,430	22,500	*13,400		*18,430	*10,670	*15,820
75	18,400	*16,510	18,620	*12,050		*15,340	*9,610	*13,160	70	20,150	*17,700	20,370	*12,870		*17,230	*10,250	*14,770
80	16,860	*15,960	17,060	*11,640		*14,440	*9,230	*12,360	75	18,230	*17,040	18,450	*12,380		*16,110	*9,830	*13,800
85	15,520	*15,450	15,710	*11,260		*13,640	*8,920	*11,660	80	16,680	*16,460	16,880	*11,940		*15,160	*9,470	*12,960
90	14,320	14,570	14,500	*10,910		*12,910	*8,610	*11,040	85	15,340	15,650	15,520	*11,570		*14,350	*9,140	*12,230
95	13,220	13,420	13,380	*10,580		*12,230	*8,330	*10,420	90	14,150	14,440	14,320	*11,220		*13,600	*8,840	*11,590
100	12,270		12,450	*10,310		*11,660	*8,090	*9,920	95	13,020	13,270	13,200	*10,890		*12,890	*8,550	*10,950
105	11,460		11,590			*11,150	*7,870	*9,450	100	12,100	12,320	12,250	*10,600		*12,300	*8,310	*10,420
110	10,690		10,840			*10,670	*7,690	*9,030	105	11,260		11,410	*10,330		*11,530	*8,090	*9,940
115	9,980		10,110			*10,200		*8,610	110	10,510		10,640	*10,110		10,780	*7,890	*9,500
120			9,470			9,590		*8,280	115	9,780		9,920			10,030	*7,690	*9,080
125			*8,860			9,010		*7,950	120	9,170		9,300			9,390		*8,700
130						8,480		*7,670	125	*8,420		8,730			8,810		*8,370
135						*7,800		*7,400	130			8,200			8,280		*8,060
140								*7,140	135			*7,420			7,800		*7,780
145								*6,810	140						*7,250		7,380
									145								6,960
									150								*6,370

CK1000 Jib Lifting Capacity

LIFT CRANE SERVICE

Refer to notes page 4.

120 ft Boom					130 ft Boom												
Load Radius (ft)	30 ft Jib Offset Angle		40 ft Jib Offset Angle		50 ft Jib Offset Angle		60 ft Jib Offset Angle		Load Radius (ft)	30 ft Jib Offset Angle		40 ft Jib Offset Angle		50 ft Jib Offset Angle		60 ft Jib Offset Angle	
	10°	30°	10°	30°	10°	30°	10°	30°		10°	30°	10°	30°	10°	30°	10°	30°
32									32								
34									34								
36	*24,000								36								
38	*24,000								38	*24,000							
40	*24,000				*24,000				40	*24,000							
45	*24,000	*21,000	*24,000		*20,000				45	*24,000		*24,000		*20,000			
50	*24,000	*21,000	*24,000		*20,000		*18,000		50	*24,000	*21,000	*24,000		*20,000		*18,000	
55	*24,000	*20,560	*24,000	*14,880	*20,000		*18,000		55	*24,000	*20,980	*24,000	*15,100	*20,000		*18,000	
60	*24,000	*19,680	*24,000	*14,240	*20,000	*11,330	*17,720		60	*24,000	*20,120	*24,000	*14,500	*20,000	*11,480	*18,000	
65	21,970	18,910	22,240	13,690	19,240	10,860	16,460	9,080	65	21,730	19,350	22,000	13,930	20,010	11,020	17,100	
70	19,860	*18,180	20,100	*13,160	*18,010	*10,420	*15,380	*8,700	70	19,620	*18,650	19,860	*13,420	*18,760	*10,620	*16,000	*8,840
75	17,940	17,500	18,160	12,670	16,840	10,030	14,390	8,350	75	17,680	17,960	17,920	12,940	17,570	10,200	14,960	8,480
80	16,400	16,790	16,620	*12,250	*15,890	*9,670	*13,550	*8,040	80	16,130	16,600	16,350	*12,520	16,530	*9,850	*14,100	*8,170
85	15,050	15,410	15,250	11,860	15,030	9,340	12,780	7,730	85	14,790	15,180	14,990	12,140	15,160	9,540	13,330	7,890
90	13,860	14,170	14,040	*11,500	14,190	*9,060	*12,120	*7,470	90	13,600	13,950	13,800	*11,770	13,950	*9,230	*12,630	*7,620
95	12,740	13,020	12,910	11,170	13,050	8,770	11,480	7,230	95	12,470	12,780	12,650	11,440	12,800	8,950	11,970	7,360
100	11,790	12,050	11,970	*10,860	12,100	*8,500	*10,930	*7,010	100	11,530	11,810	11,700	*11,130	11,860	*8,700	*11,410	*7,140
105	10,950	11,170	11,130	10,600	11,260	8,280	10,420	6,790	105	10,690	10,950	10,860	10,860	11,000	8,480	10,890	6,940
110	10,200		10,360	*10,360	10,490	*8,060	*9,960	*6,610	110	9,940	10,160	10,090	10,420	10,220	*8,260	10,310	*6,740
115	9,470		9,630	9,870	9,740	8,780	9,520	6,410	115	9,210		9,360	9,650	9,470	8,040	9,560	6,560
120	8,860		8,990		9,100	*7,690	*9,140	*6,260	120	8,570		8,730	8,990	8,840	*7,870	8,920	*6,390
125	8,280		8,420		8,530	7,530	8,610	6,100	125	8,020		8,150		8,260	7,710	8,350	6,230
130	*7,690		7,890		8,000		8,060	*5,970	130	7,490		7,620		7,730	*7,560	7,820	*6,100
135	*6,830		7,420		7,510		7,580	5,860	135	*6,940		7,140		7,250		7,310	5,970
140			*6,700		7,030		7,090		140	*6,150		6,670		6,760		6,830	*5,860
145					*6,540		6,670		145			*6,040		6,340		6,410	
150					*5,880		6,300		150			*5,370		*5,860		6,040	
155							*5,730		155					*5,260		*5,620	
160							*5,090		160					*4,650		*5,040	
165									165							*4,540	
170									170							*4,010	

140 ft Boom					150 ft Boom												
Load Radius (ft)	30 ft Jib Offset Angle		40 ft Jib Offset Angle		50 ft Jib Offset Angle		60 ft Jib Offset Angle		Load Radius (ft)	30 ft Jib Offset Angle		40 ft Jib Offset Angle		50 ft Jib Offset Angle		60 ft Jib Offset Angle	
	10°	30°	10°	30°	10°	30°	10°	30°		10°	30°	10°	30°	10°	30°	10°	30°
40	*24,000								45	*24,000		*24,000					
45	*24,000								50	*24,000	*21,000	*24,000		*20,000			
50	*24,000	*21,000	*24,000		*20,000				55	*24,000	*21,000	*24,000		*20,000		*18,000	
55	*24,000	*21,000	*24,000	*15,320	*20,000		*18,000		60	23,800	*20,890	*24,000	*14,920	*20,000		*18,000	
60	23,980	*20,540	*24,000	*14,720	*20,000		*18,000		65	21,270	*20,150	21,580	*14,390	*20,000	*11,330	*18,000	
65	21,450	19,770	21,730	14,170	20,000	11,170	17,700		70	19,150	19,440	19,420	13,910	19,640	10,930	17,120	9,060
70	19,330	*19,060	19,590	*13,690	*19,480	*10,780	*16,570	*8,950	75	17,210	17,810	17,480	*13,420	17,680	*10,530	*16,040	*8,700
75	17,390	17,940	17,650	13,180	17,850	10,380	15,520	8,590	80	15,670	16,200	15,890	13,000	16,090	10,200	15,160	8,420
80	15,850	16,330	16,090	*12,760	16,260	*10,030	*14,630	*8,310	85	14,300	14,790	14,520	*12,630	14,700	*9,870	*14,350	*8,130
85	14,480	14,940	14,720	12,380	14,880	9,720	13,840	8,020	90	13,110	13,530	13,310	12,270	13,490	9,590	13,620	7,890
90	13,290	13,690	13,510	*12,030	13,660	*9,430	*13,130	*7,760	95	11,990	12,360	12,190	*11,920	12,340	*9,300	12,450	*7,620
95	12,160	12,540	12,360	11,680	12,520	9,120	12,450	7,510	100	11,040	11,390	11,240	11,610	11,390	9,060	11,500	7,400
100	11,220	11,550	11,410	*11,370	11,570	*8,880	11,680	*7,270	105	10,200	10,510	10,380	10,820	10,530	*8,810	10,640	*7,200
105	10,380	10,690	10,580	10,970	10,710	8,660	10,820	7,070	110	9,430	9,720	9,610	10,030	9,760	8,590	9,850	7,010
110	9,630	9,890	9,810	10,180	9,940	*8,440	10,050	*6,870	115	8,700	8,970	8,860	9,230	9,010	*8,390	9,100	*6,830
115	8,900	9,120	9,060	9,410	9,190	8,220	9,300	6,700	120	8,090	8,310	8,240	8,570	8,370	8,200	8,460	6,650
120	8,260	8,480	8,420	8,730	8,550	*8,040	8,660	*6,520	125	7,510	7,710	7,670	7,950	7,780	*8,020	7,870	*6,500
125	7,690		7,840	8,130	7,980	7,870	8,060	6,370	130	6,980		7,140	7,400	7,250	7,620	7,340	6,370
130	7,180		7,310		7,450	*7,710	7,530	*6,230	135	6,500		6,630		6,740	7,090	6,830	*6,210
135	6,700		6,830		6,940	7,250	7,030	6,100	140	*6,010		6,170		6,260	6,590	6,340	6,080
140	*6,060		6,370		6,450		6,540	*5,970	145	5,750		5,750		5,840		5,930	*5,970
145	*5,400		*5,880		6,040		6,120	5,860	150	*4,820		*4,820		5,460		5,530	5,880
150	*4,760		*5,290		*5,640		5,730		155	*4,250		*4,690		*4,980		*5,150	
155			*4,690		*5,090		*5,350		160	*3,650		*4,140		*4,450		*4,670	
160			*4,070		*4,540		*4,820		165			*3,610		*3,990		*4,230	
165					*4,010		*4,340		170					*3,520		*3,790	
170					*3,500		*3,880		175					*3,060		*3,370	
175							*3,410										

CK1000 Jib Lifting Capacity

LIFT CRANE SERVICE

Refer to notes page 4.

160 ft Boom					170 ft Boom					180 ft Boom					190 ft Boom																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Load Radius (ft)	30 ft Jib Offset Angle		40 ft Jib Offset Angle		50 ft Jib Offset Angle		60 ft Jib Offset Angle		Load Radius (ft)	30 ft Jib Offset Angle		40 ft Jib Offset Angle		50 ft Jib Offset Angle		60 ft Jib Offset Angle		Load Radius (ft)	30 ft Jib Offset Angle		40 ft Jib Offset Angle		50 ft Jib Offset Angle		60 ft Jib Offset Angle																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	10°	30°	10°	30°	10°	30°	10°	30°		10°	30°	10°	30°	10°	30°	10°	30°		10°	30°	10°	30°	10°	30°	10°	30°																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
	45	*24,000									40										45									50	*24,000								45	*24,000								50	*24,000								55	*24,000	*21,000							55	*24,000	*21,000							60	*24,000	*21,000							60	23,720	*21,000							60	23,500	*21,000							65	20,940	*20,830							65	21,180	*20,500	21,470	*14,590					65	20,940	20,830							70	18,820	19,530							70	19,040	19,730	19,310	*14,100					70	18,820	19,530						75	16,880	17,520								75	17,100	17,720	17,370	*13,640	17,570	*10,670			75	16,880	17,520						80	15,320	15,890								80	15,540	16,090	17,580	*13,220	15,980	*10,330			80	15,320	15,890						85	13,950	14,480								85	14,190	14,680	14,410	*12,850	14,590	*10,030			85	13,950	14,480						90	12,740	13,240								90	12,980	13,440	13,200	*12,500	13,350	*9,740			90	12,740	13,240						95	11,610	12,050								95	11,860	12,270	12,050	*12,140	12,210	*9,450			95	11,610	12,050						100	10,670	11,080								100	10,910	11,280	11,110	11,640	11,260	*9,210			100	10,670	11,080						105	9,810	10,200								105	10,070	10,400	10,250	10,730	10,400	*8,970			105	9,810	10,200						110	9,060	9,390								110	9,300	9,610	9,470	9,920	9,610	*8,770			110	9,060	9,390						115	8,310	8,610								115	8,550	8,840	8,730	9,120	8,860	*8,550			115	8,310	8,610						120	7,670	7,980								120	7,930	8,200	8,090	8,460	8,220	*8,350			120	7,670	7,980						125	7,090	7,360								125	7,360	7,580	7,510	7,840	7,620	8,090			125	7,090	7,360						130	6,560	6,810								130	6,830	7,030	6,960	7,270	7,090	7,510			130	6,560	6,810						135	6,080	6,300								135	6,320		6,480	6,760	6,590	6,980			135	6,080	6,300						140	5,590	5,750								140	5,860		5,990	6,260	6,100	6,450			140	5,590	5,750						145	*5,040									145	*5,310		5,570		5,680	5,990			145	*5,040							150	*4,540									150	*4,760		*5,090		5,290	5,570			150	*4,540							155	*4,030									155	*4,230		*4,580		*4,800				155	*4,030							160	*3,520									160	*3,680		*4,050		*4,320				160	*3,520							165	*3,040									165	*3,170		*3,590		*3,880				165	*3,040							170										170			*3,100		*3,430				170								175						
50	*24,000								45	*24,000								50	*24,000								55	*24,000	*21,000							55	*24,000	*21,000							60	*24,000	*21,000							60	23,720	*21,000							60	23,500	*21,000							65	20,940	*20,830							65	21,180	*20,500	21,470	*14,590					65	20,940	20,830							70	18,820	19,530							70	19,040	19,730	19,310	*14,100					70	18,820	19,530						75	16,880	17,520								75	17,100	17,720	17,370	*13,640	17,570	*10,670			75	16,880	17,520						80	15,320	15,890								80	15,540	16,090	17,580	*13,220	15,980	*10,330			80	15,320	15,890						85	13,950	14,480								85	14,190	14,680	14,410	*12,850	14,590	*10,030			85	13,950	14,480						90	12,740	13,240								90	12,980	13,440	13,200	*12,500	13,350	*9,740			90	12,740	13,240						95	11,610	12,050								95	11,860	12,270	12,050	*12,140	12,210	*9,450			95	11,610	12,050						100	10,670	11,080								100	10,910	11,280	11,110	11,640	11,260	*9,210			100	10,670	11,080						105	9,810	10,200								105	10,070	10,400	10,250	10,730	10,400	*8,970			105	9,810	10,200						110	9,060	9,390								110	9,300	9,610	9,470	9,920	9,610	*8,770			110	9,060	9,390						115	8,310	8,610								115	8,550	8,840	8,730	9,120	8,860	*8,550			115	8,310	8,610						120	7,670	7,980								120	7,930	8,200	8,090	8,460	8,220	*8,350			120	7,670	7,980						125	7,090	7,360								125	7,360	7,580	7,510	7,840	7,620	8,090			125	7,090	7,360						130	6,560	6,810								130	6,830	7,030	6,960	7,270	7,090	7,510			130	6,560	6,810						135	6,080	6,300								135	6,320		6,480	6,760	6,590	6,980			135	6,080	6,300						140	5,590	5,750								140	5,860		5,990	6,260	6,100	6,450			140	5,590	5,750						145	*5,040									145	*5,310		5,570		5,680	5,990			145	*5,040							150	*4,540									150	*4,760		*5,090		5,290	5,570			150	*4,540							155	*4,030									155	*4,230		*4,580		*4,800				155	*4,030							160	*3,520									160	*3,680		*4,050		*4,320				160	*3,520							165	*3,040									165	*3,170		*3,590		*3,880				165	*3,040							170										170			*3,100		*3,430				170								175																																				
55	*24,000	*21,000							55	*24,000	*21,000							60	*24,000	*21,000							60	23,720	*21,000							60	23,500	*21,000							65	20,940	*20,830							65	21,180	*20,500	21,470	*14,590					65	20,940	20,830							70	18,820	19,530							70	19,040	19,730	19,310	*14,100					70	18,820	19,530						75	16,880	17,520								75	17,100	17,720	17,370	*13,640	17,570	*10,670			75	16,880	17,520						80	15,320	15,890								80	15,540	16,090	17,580	*13,220	15,980	*10,330			80	15,320	15,890						85	13,950	14,480								85	14,190	14,680	14,410	*12,850	14,590	*10,030			85	13,950	14,480						90	12,740	13,240								90	12,980	13,440	13,200	*12,500	13,350	*9,740			90	12,740	13,240						95	11,610	12,050								95	11,860	12,270	12,050	*12,140	12,210	*9,450			95	11,610	12,050						100	10,670	11,080								100	10,910	11,280	11,110	11,640	11,260	*9,210			100	10,670	11,080						105	9,810	10,200								105	10,070	10,400	10,250	10,730	10,400	*8,970			105	9,810	10,200						110	9,060	9,390								110	9,300	9,610	9,470	9,920	9,610	*8,770			110	9,060	9,390						115	8,310	8,610								115	8,550	8,840	8,730	9,120	8,860	*8,550			115	8,310	8,610						120	7,670	7,980								120	7,930	8,200	8,090	8,460	8,220	*8,350			120	7,670	7,980						125	7,090	7,360								125	7,360	7,580	7,510	7,840	7,620	8,090			125	7,090	7,360						130	6,560	6,810								130	6,830	7,030	6,960	7,270	7,090	7,510			130	6,560	6,810						135	6,080	6,300								135	6,320		6,480	6,760	6,590	6,980			135	6,080	6,300						140	5,590	5,750								140	5,860		5,990	6,260	6,100	6,450			140	5,590	5,750						145	*5,040									145	*5,310		5,570		5,680	5,990			145	*5,040							150	*4,540									150	*4,760		*5,090		5,290	5,570			150	*4,540							155	*4,030									155	*4,230		*4,580		*4,800				155	*4,030							160	*3,520									160	*3,680		*4,050		*4,320				160	*3,520							165	*3,040									165	*3,170		*3,590		*3,880				165	*3,040							170										170			*3,100		*3,430				170								175																																																															
60	23,720	*21,000							60	23,500	*21,000							65	20,940	*20,830							65	21,180	*20,500	21,470	*14,590					65	20,940	20,830							70	18,820	19,530							70	19,040	19,730	19,310	*14,100					70	18,820	19,530						75	16,880	17,520								75	17,100	17,720	17,370	*13,640	17,570	*10,670			75	16,880	17,520						80	15,320	15,890								80	15,540	16,090	17,580	*13,220	15,980	*10,330			80	15,320	15,890						85	13,950	14,480								85	14,190	14,680	14,410	*12,850	14,590	*10,030			85	13,950	14,480						90	12,740	13,240								90	12,980	13,440	13,200	*12,500	13,350	*9,740			90	12,740	13,240						95	11,610	12,050								95	11,860	12,270	12,050	*12,140	12,210	*9,450			95	11,610	12,050						100	10,670	11,080								100	10,910	11,280	11,110	11,640	11,260	*9,210			100	10,670	11,080						105	9,810	10,200								105	10,070	10,400	10,250	10,730	10,400	*8,970			105	9,810	10,200						110	9,060	9,390								110	9,300	9,610	9,470	9,920	9,610	*8,770			110	9,060	9,390						115	8,310	8,610								115	8,550	8,840	8,730	9,120	8,860	*8,550			115	8,310	8,610						120	7,670	7,980								120	7,930	8,200	8,090	8,460	8,220	*8,350			120	7,670	7,980						125	7,090	7,360								125	7,360	7,580	7,510	7,840	7,620	8,090			125	7,090	7,360						130	6,560	6,810								130	6,830	7,030	6,960	7,270	7,090	7,510			130	6,560	6,810						135	6,080	6,300								135	6,320		6,480	6,760	6,590	6,980			135	6,080	6,300						140	5,590	5,750								140	5,860		5,990	6,260	6,100	6,450			140	5,590	5,750						145	*5,040									145	*5,310		5,570		5,680	5,990			145	*5,040							150	*4,540									150	*4,760		*5,090		5,290	5,570			150	*4,540							155	*4,030									155	*4,230		*4,580		*4,800				155	*4,030							160	*3,520									160	*3,680		*4,050		*4,320				160	*3,520							165	*3,040									165	*3,170		*3,590		*3,880				165	*3,040							170										170			*3,100		*3,430				170								175																																																																																										
65	21,180	*20,500	21,470	*14,590					65	20,940	20,830							70	18,820	19,530							70	19,040	19,730	19,310	*14,100					70	18,820	19,530						75	16,880	17,520								75	17,100	17,720	17,370	*13,640	17,570	*10,670			75	16,880	17,520						80	15,320	15,890								80	15,540	16,090	17,580	*13,220	15,980	*10,330			80	15,320	15,890						85	13,950	14,480								85	14,190	14,680	14,410	*12,850	14,590	*10,030			85	13,950	14,480						90	12,740	13,240								90	12,980	13,440	13,200	*12,500	13,350	*9,740			90	12,740	13,240						95	11,610	12,050								95	11,860	12,270	12,050	*12,140	12,210	*9,450			95	11,610	12,050						100	10,670	11,080								100	10,910	11,280	11,110	11,640	11,260	*9,210			100	10,670	11,080						105	9,810	10,200								105	10,070	10,400	10,250	10,730	10,400	*8,970			105	9,810	10,200						110	9,060	9,390								110	9,300	9,610	9,470	9,920	9,610	*8,770			110	9,060	9,390						115	8,310	8,610								115	8,550	8,840	8,730	9,120	8,860	*8,550			115	8,310	8,610						120	7,670	7,980								120	7,930	8,200	8,090	8,460	8,220	*8,350			120	7,670	7,980						125	7,090	7,360								125	7,360	7,580	7,510	7,840	7,620	8,090			125	7,090	7,360						130	6,560	6,810								130	6,830	7,030	6,960	7,270	7,090	7,510			130	6,560	6,810						135	6,080	6,300								135	6,320		6,480	6,760	6,590	6,980			135	6,080	6,300						140	5,590	5,750								140	5,860		5,990	6,260	6,100	6,450			140	5,590	5,750						145	*5,040									145	*5,310		5,570		5,680	5,990			145	*5,040							150	*4,540									150	*4,760		*5,090		5,290	5,570			150	*4,540							155	*4,030									155	*4,230		*4,580		*4,800				155	*4,030							160	*3,520									160	*3,680		*4,050		*4,320				160	*3,520							165	*3,040									165	*3,170		*3,590		*3,880				165	*3,040							170										170			*3,100		*3,430				170								175																																																																																																																					
70	19,040	19,730	19,310	*14,100					70	18,820	19,530						75	16,880	17,520								75	17,100	17,720	17,370	*13,640	17,570	*10,670			75	16,880	17,520						80	15,320	15,890								80	15,540	16,090	17,580	*13,220	15,980	*10,330			80	15,320	15,890						85	13,950	14,480								85	14,190	14,680	14,410	*12,850	14,590	*10,030			85	13,950	14,480						90	12,740	13,240								90	12,980	13,440	13,200	*12,500	13,350	*9,740			90	12,740	13,240						95	11,610	12,050								95	11,860	12,270	12,050	*12,140	12,210	*9,450			95	11,610	12,050						100	10,670	11,080								100	10,910	11,280	11,110	11,640	11,260	*9,210			100	10,670	11,080						105	9,810	10,200								105	10,070	10,400	10,250	10,730	10,400	*8,970			105	9,810	10,200						110	9,060	9,390								110	9,300	9,610	9,470	9,920	9,610	*8,770			110	9,060	9,390						115	8,310	8,610								115	8,550	8,840	8,730	9,120	8,860	*8,550			115	8,310	8,610						120	7,670	7,980								120	7,930	8,200	8,090	8,460	8,220	*8,350			120	7,670	7,980						125	7,090	7,360								125	7,360	7,580	7,510	7,840	7,620	8,090			125	7,090	7,360						130	6,560	6,810								130	6,830	7,030	6,960	7,270	7,090	7,510			130	6,560	6,810						135	6,080	6,300								135	6,320		6,480	6,760	6,590	6,980			135	6,080	6,300						140	5,590	5,750								140	5,860		5,990	6,260	6,100	6,450			140	5,590	5,750						145	*5,040									145	*5,310		5,570		5,680	5,990			145	*5,040							150	*4,540									150	*4,760		*5,090		5,290	5,570			150	*4,540							155	*4,030									155	*4,230		*4,580		*4,800				155	*4,030							160	*3,520									160	*3,680		*4,050		*4,320				160	*3,520							165	*3,040									165	*3,170		*3,590		*3,880				165	*3,040							170										170			*3,100		*3,430				170								175																																																																																																																																																
75	17,100	17,720	17,370	*13,640	17,570	*10,670			75	16,880	17,520						80	15,320	15,890								80	15,540	16,090	17,580	*13,220	15,980	*10,330			80	15,320	15,890						85	13,950	14,480								85	14,190	14,680	14,410	*12,850	14,590	*10,030			85	13,950	14,480						90	12,740	13,240								90	12,980	13,440	13,200	*12,500	13,350	*9,740			90	12,740	13,240						95	11,610	12,050								95	11,860	12,270	12,050	*12,140	12,210	*9,450			95	11,610	12,050						100	10,670	11,080								100	10,910	11,280	11,110	11,640	11,260	*9,210			100	10,670	11,080						105	9,810	10,200								105	10,070	10,400	10,250	10,730	10,400	*8,970			105	9,810	10,200						110	9,060	9,390								110	9,300	9,610	9,470	9,920	9,610	*8,770			110	9,060	9,390						115	8,310	8,610								115	8,550	8,840	8,730	9,120	8,860	*8,550			115	8,310	8,610						120	7,670	7,980								120	7,930	8,200	8,090	8,460	8,220	*8,350			120	7,670	7,980						125	7,090	7,360								125	7,360	7,580	7,510	7,840	7,620	8,090			125	7,090	7,360						130	6,560	6,810								130	6,830	7,030	6,960	7,270	7,090	7,510			130	6,560	6,810						135	6,080	6,300								135	6,320		6,480	6,760	6,590	6,980			135	6,080	6,300						140	5,590	5,750								140	5,860		5,990	6,260	6,100	6,450			140	5,590	5,750						145	*5,040									145	*5,310		5,570		5,680	5,990			145	*5,040							150	*4,540									150	*4,760		*5,090		5,290	5,570			150	*4,540							155	*4,030									155	*4,230		*4,580		*4,800				155	*4,030							160	*3,520									160	*3,680		*4,050		*4,320				160	*3,520							165	*3,040									165	*3,170		*3,590		*3,880				165	*3,040							170										170			*3,100		*3,430				170								175																																																																																																																																																																											
80	15,540	16,090	17,580	*13,220	15,980	*10,330			80	15,320	15,890						85	13,950	14,480								85	14,190	14,680	14,410	*12,850	14,590	*10,030			85	13,950	14,480						90	12,740	13,240								90	12,980	13,440	13,200	*12,500	13,350	*9,740			90	12,740	13,240						95	11,610	12,050								95	11,860	12,270	12,050	*12,140	12,210	*9,450			95	11,610	12,050						100	10,670	11,080								100	10,910	11,280	11,110	11,640	11,260	*9,210			100	10,670	11,080						105	9,810	10,200								105	10,070	10,400	10,250	10,730	10,400	*8,970			105	9,810	10,200						110	9,060	9,390								110	9,300	9,610	9,470	9,920	9,610	*8,770			110	9,060	9,390						115	8,310	8,610								115	8,550	8,840	8,730	9,120	8,860	*8,550			115	8,310	8,610						120	7,670	7,980								120	7,930	8,200	8,090	8,460	8,220	*8,350			120	7,670	7,980						125	7,090	7,360								125	7,360	7,580	7,510	7,840	7,620	8,090			125	7,090	7,360						130	6,560	6,810								130	6,830	7,030	6,960	7,270	7,090	7,510			130	6,560	6,810						135	6,080	6,300								135	6,320		6,480	6,760	6,590	6,980			135	6,080	6,300						140	5,590	5,750								140	5,860		5,990	6,260	6,100	6,450			140	5,590	5,750						145	*5,040									145	*5,310		5,570		5,680	5,990			145	*5,040							150	*4,540									150	*4,760		*5,090		5,290	5,570			150	*4,540							155	*4,030									155	*4,230		*4,580		*4,800				155	*4,030							160	*3,520									160	*3,680		*4,050		*4,320				160	*3,520							165	*3,040									165	*3,170		*3,590		*3,880				165	*3,040							170										170			*3,100		*3,430				170								175																																																																																																																																																																																																						
85	14,190	14,680	14,410	*12,850	14,590	*10,030			85	13,950	14,480						90	12,740	13,240								90	12,980	13,440	13,200	*12,500	13,350	*9,740			90	12,740	13,240						95	11,610	12,050								95	11,860	12,270	12,050	*12,140	12,210	*9,450			95	11,610	12,050						100	10,670	11,080								100	10,910	11,280	11,110	11,640	11,260	*9,210			100	10,670	11,080						105	9,810	10,200								105	10,070	10,400	10,250	10,730	10,400	*8,970			105	9,810	10,200						110	9,060	9,390								110	9,300	9,610	9,470	9,920	9,610	*8,770			110	9,060	9,390						115	8,310	8,610								115	8,550	8,840	8,730	9,120	8,860	*8,550			115	8,310	8,610						120	7,670	7,980								120	7,930	8,200	8,090	8,460	8,220	*8,350			120	7,670	7,980						125	7,090	7,360								125	7,360	7,580	7,510	7,840	7,620	8,090			125	7,090	7,360						130	6,560	6,810								130	6,830	7,030	6,960	7,270	7,090	7,510			130	6,560	6,810						135	6,080	6,300								135	6,320		6,480	6,760	6,590	6,980			135	6,080	6,300						140	5,590	5,750								140	5,860		5,990	6,260	6,100	6,450			140	5,590	5,750						145	*5,040									145	*5,310		5,570		5,680	5,990			145	*5,040							150	*4,540									150	*4,760		*5,090		5,290	5,570			150	*4,540							155	*4,030									155	*4,230		*4,580		*4,800				155	*4,030							160	*3,520									160	*3,680		*4,050		*4,320				160	*3,520							165	*3,040									165	*3,170		*3,590		*3,880				165	*3,040							170										170			*3,100		*3,430				170								175																																																																																																																																																																																																																																	
90	12,980	13,440	13,200	*12,500	13,350	*9,740			90	12,740	13,240						95	11,610	12,050								95	11,860	12,270	12,050	*12,140	12,210	*9,450			95	11,610	12,050						100	10,670	11,080								100	10,910	11,280	11,110	11,640	11,260	*9,210			100	10,670	11,080						105	9,810	10,200								105	10,070	10,400	10,250	10,730	10,400	*8,970			105	9,810	10,200						110	9,060	9,390								110	9,300	9,610	9,470	9,920	9,610	*8,770			110	9,060	9,390						115	8,310	8,610								115	8,550	8,840	8,730	9,120	8,860	*8,550			115	8,310	8,610						120	7,670	7,980								120	7,930	8,200	8,090	8,460	8,220	*8,350			120	7,670	7,980						125	7,090	7,360								125	7,360	7,580	7,510	7,840	7,620	8,090			125	7,090	7,360						130	6,560	6,810								130	6,830	7,030	6,960	7,270	7,090	7,510			130	6,560	6,810						135	6,080	6,300								135	6,320		6,480	6,760	6,590	6,980			135	6,080	6,300						140	5,590	5,750								140	5,860		5,990	6,260	6,100	6,450			140	5,590	5,750						145	*5,040									145	*5,310		5,570		5,680	5,990			145	*5,040							150	*4,540									150	*4,760		*5,090		5,290	5,570			150	*4,540							155	*4,030									155	*4,230		*4,580		*4,800				155	*4,030							160	*3,520									160	*3,680		*4,050		*4,320				160	*3,520							165	*3,040									165	*3,170		*3,590		*3,880				165	*3,040							170										170			*3,100		*3,430				170								175																																																																																																																																																																																																																																																												
95	11,860	12,270	12,050	*12,140	12,210	*9,450			95	11,610	12,050						100	10,670	11,080								100	10,910	11,280	11,110	11,640	11,260	*9,210			100	10,670	11,080						105	9,810	10,200								105	10,070	10,400	10,250	10,730	10,400	*8,970			105	9,810	10,200						110	9,060	9,390								110	9,300	9,610	9,470	9,920	9,610	*8,770			110	9,060	9,390						115	8,310	8,610								115	8,550	8,840	8,730	9,120	8,860	*8,550			115	8,310	8,610						120	7,670	7,980								120	7,930	8,200	8,090	8,460	8,220	*8,350			120	7,670	7,980						125	7,090	7,360								125	7,360	7,580	7,510	7,840	7,620	8,090			125	7,090	7,360						130	6,560	6,810								130	6,830	7,030	6,960	7,270	7,090	7,510			130	6,560	6,810						135	6,080	6,300								135	6,320		6,480	6,760	6,590	6,980			135	6,080	6,300						140	5,590	5,750								140	5,860		5,990	6,260	6,100	6,450			140	5,590	5,750						145	*5,040									145	*5,310		5,570		5,680	5,990			145	*5,040							150	*4,540									150	*4,760		*5,090		5,290	5,570			150	*4,540							155	*4,030									155	*4,230		*4,580		*4,800				155	*4,030							160	*3,520									160	*3,680		*4,050		*4,320				160	*3,520							165	*3,040									165	*3,170		*3,590		*3,880				165	*3,040							170										170			*3,100		*3,430				170								175																																																																																																																																																																																																																																																																																							
100	10,910	11,280	11,110	11,640	11,260	*9,210			100	10,670	11,080						105	9,810	10,200								105	10,070	10,400	10,250	10,730	10,400	*8,970			105	9,810	10,200						110	9,060	9,390								110	9,300	9,610	9,470	9,920	9,610	*8,770			110	9,060	9,390						115	8,310	8,610								115	8,550	8,840	8,730	9,120	8,860	*8,550			115	8,310	8,610						120	7,670	7,980								120	7,930	8,200	8,090	8,460	8,220	*8,350			120	7,670	7,980						125	7,090	7,360								125	7,360	7,580	7,510	7,840	7,620	8,090			125	7,090	7,360						130	6,560	6,810								130	6,830	7,030	6,960	7,270	7,090	7,510			130	6,560	6,810						135	6,080	6,300								135	6,320		6,480	6,760	6,590	6,980			135	6,080	6,300						140	5,590	5,750								140	5,860		5,990	6,260	6,100	6,450			140	5,590	5,750						145	*5,040									145	*5,310		5,570		5,680	5,990			145	*5,040							150	*4,540									150	*4,760		*5,090		5,290	5,570			150	*4,540							155	*4,030									155	*4,230		*4,580		*4,800				155	*4,030							160	*3,520									160	*3,680		*4,050		*4,320				160	*3,520							165	*3,040									165	*3,170		*3,590		*3,880				165	*3,040							170										170			*3,100		*3,430				170								175																																																																																																																																																																																																																																																																																																																		
105	10,070	10,400	10,250	10,730	10,400	*8,970			105	9,810	10,200						110	9,060	9,390								110	9,300	9,610	9,470	9,920	9,610	*8,770			110	9,060	9,390						115	8,310	8,610								115	8,550	8,840	8,730	9,120	8,860	*8,550			115	8,310	8,610						120	7,670	7,980								120	7,930	8,200	8,090	8,460	8,220	*8,350			120	7,670	7,980						125	7,090	7,360								125	7,360	7,580	7,510	7,840	7,620	8,090			125	7,090	7,360						130	6,560	6,810								130	6,830	7,030	6,960	7,270	7,090	7,510			130	6,560	6,810						135	6,080	6,300								135	6,320		6,480	6,760	6,590	6,980			135	6,080	6,300						140	5,590	5,750								140	5,860		5,990	6,260	6,100	6,450			140	5,590	5,750						145	*5,040									145	*5,310		5,570		5,680	5,990			145	*5,040							150	*4,540									150	*4,760		*5,090		5,290	5,570			150	*4,540							155	*4,030									155	*4,230		*4,580		*4,800				155	*4,030							160	*3,520									160	*3,680		*4,050		*4,320				160	*3,520							165	*3,040									165	*3,170		*3,590		*3,880				165	*3,040							170										170			*3,100		*3,430				170								175																																																																																																																																																																																																																																																																																																																																													
110	9,300	9,610	9,470	9,920	9,610	*8,770			110	9,060	9,390						115	8,310	8,610								115	8,550	8,840	8,730	9,120	8,860	*8,550			115	8,310	8,610						120	7,670	7,980								120	7,930	8,200	8,090	8,460	8,220	*8,350			120	7,670	7,980						125	7,090	7,360								125	7,360	7,580	7,510	7,840	7,620	8,090			125	7,090	7,360						130	6,560	6,810								130	6,830	7,030	6,960	7,270	7,090	7,510			130	6,560	6,810						135	6,080	6,300								135	6,320		6,480	6,760	6,590	6,980			135	6,080	6,300						140	5,590	5,750								140	5,860		5,990	6,260	6,100	6,450			140	5,590	5,750						145	*5,040									145	*5,310		5,570		5,680	5,990			145	*5,040							150	*4,540									150	*4,760		*5,090		5,290	5,570			150	*4,540							155	*4,030									155	*4,230		*4,580		*4,800				155	*4,030							160	*3,520									160	*3,680		*4,050		*4,320				160	*3,520							165	*3,040									165	*3,170		*3,590		*3,880				165	*3,040							170										170			*3,100		*3,430				170								175																																																																																																																																																																																																																																																																																																																																																																								
115	8,550	8,840	8,730	9,120	8,860	*8,550			115	8,310	8,610						120	7,670	7,980								120	7,930	8,200	8,090	8,460	8,220	*8,350			120	7,670	7,980						125	7,090	7,360								125	7,360	7,580	7,510	7,840	7,620	8,090			125	7,090	7,360						130	6,560	6,810								130	6,830	7,030	6,960	7,270	7,090	7,510			130	6,560	6,810						135	6,080	6,300								135	6,320		6,480	6,760	6,590	6,980			135	6,080	6,300						140	5,590	5,750								140	5,860		5,990	6,260	6,100	6,450			140	5,590	5,750						145	*5,040									145	*5,310		5,570		5,680	5,990			145	*5,040							150	*4,540									150	*4,760		*5,090		5,290	5,570			150	*4,540							155	*4,030									155	*4,230		*4,580		*4,800				155	*4,030							160	*3,520									160	*3,680		*4,050		*4,320				160	*3,520							165	*3,040									165	*3,170		*3,590		*3,880				165	*3,040							170										170			*3,100		*3,430				170								175																																																																																																																																																																																																																																																																																																																																																																																																			
120	7,930	8,200	8,090	8,460	8,220	*8,350			120	7,670	7,980						125	7,090	7,360								125	7,360	7,580	7,510	7,840	7,620	8,090			125	7,090	7,360						130	6,560	6,810								130	6,830	7,030	6,960	7,270	7,090	7,510			130	6,560	6,810						135	6,080	6,300								135	6,320		6,480	6,760	6,590	6,980			135	6,080	6,300						140	5,590	5,750								140	5,860		5,990	6,260	6,100	6,450			140	5,590	5,750						145	*5,040									145	*5,310		5,570		5,680	5,990			145	*5,040							150	*4,540									150	*4,760		*5,090		5,290	5,570			150	*4,540							155	*4,030									155	*4,230		*4,580		*4,800				155	*4,030							160	*3,520									160	*3,680		*4,050		*4,320				160	*3,520							165	*3,040									165	*3,170		*3,590		*3,880				165	*3,040							170										170			*3,100		*3,430				170								175																																																																																																																																																																																																																																																																																																																																																																																																																														
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130	6,830	7,030	6,960	7,270	7,090	7,510			130	6,560	6,810						135	6,080	6,300								135	6,320		6,480	6,760	6,590	6,980			135	6,080	6,300						140	5,590	5,750								140	5,860		5,990	6,260	6,100	6,450			140	5,590	5,750						145	*5,040									145	*5,310		5,570		5,680	5,990			145	*5,040							150	*4,540									150	*4,760		*5,090		5,290	5,570			150	*4,540							155	*4,030									155	*4,230		*4,580		*4,800				155	*4,030							160	*3,520									160	*3,680		*4,050		*4,320				160	*3,520							165	*3,040									165	*3,170		*3,590		*3,880				165	*3,040							170										170			*3,100		*3,430				170								175																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
135	6,320		6,480	6,760	6,590	6,980			135	6,080	6,300						140	5,590	5,750								140	5,860		5,990	6,260	6,100	6,450			140	5,590	5,750						145	*5,040									145	*5,310		5,570		5,680	5,990			145	*5,040							150	*4,540									150	*4,760		*5,090		5,290	5,570			150	*4,540							155	*4,030									155	*4,230		*4,580		*4,800				155	*4,030							160	*3,520									160	*3,680		*4,050		*4,320				160	*3,520							165	*3,040									165	*3,170		*3,590		*3,880				165	*3,040							170										170			*3,100		*3,430				170								175																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
140	5,860		5,990	6,260	6,100	6,450			140	5,590	5,750						145	*5,040									145	*5,310		5,570		5,680	5,990			145	*5,040							150	*4,540									150	*4,760		*5,090		5,290	5,570			150	*4,540							155	*4,030									155	*4,230		*4,580		*4,800				155	*4,030							160	*3,520									160	*3,680		*4,050		*4,320				160	*3,520							165	*3,040									165	*3,170		*3,590		*3,880				165	*3,040							170										170			*3,100		*3,430				170								175																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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CLAMSHELL

Boom:

Welded lattice construction using tubular, high-tensile steel chords with pin connections between sections.

Basic boom length: 40 ft (12.2 m)

Max. boom length: 100 ft (30.5 m)

Limit on clamshell bucket weight: 4,600 lb (2,100 kg)

Optional tagline: hydraulic operated type and spring type

Boom Component Chart

Boom length ft (m)	Boom arrangement
40 (12.2)	Base-Tip
50 (15.2)	Base-A-Tip
60 (18.3)	Base-A-A-Tip, Base-B-Tip
70 (21.3)	Base-A-B-Tip
80 (24.4)	Base-A-A-B-Tip, Base-B-B-Tip
90 (27.4)	Base-A-C-Tip
100 (30.5)	Base-A-A-C-Tip

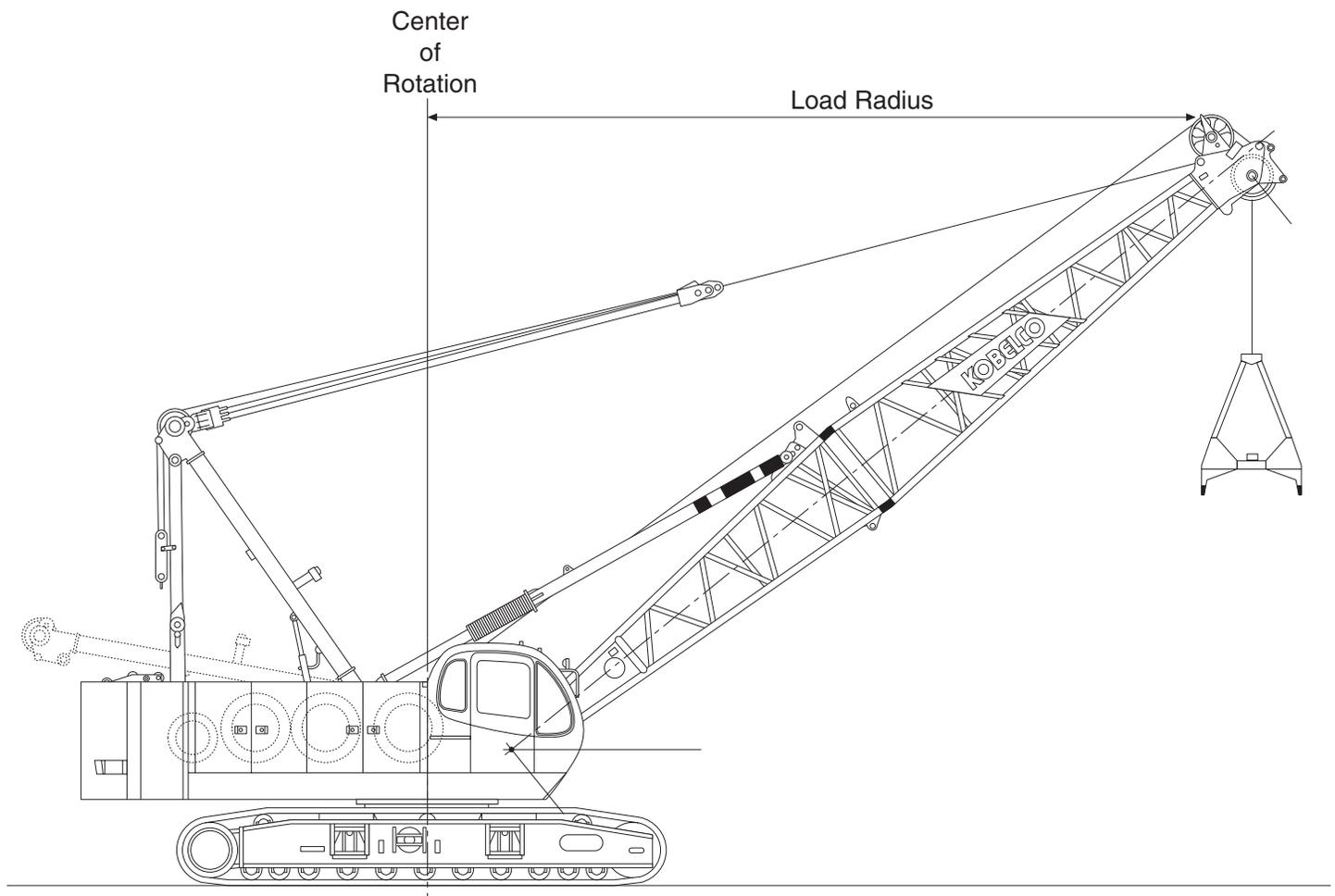
Base = 20 ft (6.10 m)

Insert: A = 10 ft (3.05 m)

B = 20 ft (6.10 m)

C = 40 ft (12.2 m)

Tip = 20 ft (6.10 m)



1. Figures represent maximum allowable capacity, and assume level, ground and ideal working conditions.
2. Capacities are calculated at 66% of the minimum tipping loads.
3. Capacities are maximum recommended by PCSA Standard #4. Allowances must be made by the user for such unfavorable conditions as a soft or uneven supporting surface, rapid cycle operations, or bucket suction.
4. The combined weight of the bucket and load must not exceed these capacities.
5. Boom length for clamshell operation should not exceed 100 ft (30.5 m).

Rated Load

No. of Counterweight: 1 Position of Crawlers: Extended

Boom Length (ft)	Load Radius (ft)	Boom Angle (degree)	Rated Load (lbs)	Boom Length (ft)	Load Radius (ft)	Boom Angle (degree)	Rated Load (lbs)
40	22	63.7	*22,000	50	26	64.3	*22,000
	24	60.5	*22,000		28	61.7	*22,000
	26	57.1	*22,000		30	59.7	*22,000
	28	53.5	*22,000		32	56.3	*22,000
	30	49.8	*22,000		34	53.5	*21,400
	32	45.9	*22,000		36	50.5	*20,200
	34	41.7	*21,400		38	47.4	*19,200
	36	37.0	*20,200		40	44.2	*18,200
	38	31.8	*19,200		42	40.7	*17,300
40	25.7	*18,200	44	37.0	*16,500		
				46	32.9	*15,800	
				48	28.3	*15,200	
60	30	64.6	*22,000	70	34	64.9	*21,400
	32	62.5	*22,000		36	63.1	*20,200
	34	60.3	*21,400		38	61.2	*19,200
	36	58.1	*20,200		40	59.3	*18,200
	38	55.8	*19,200		42	57.4	*17,300
	40	53.4	*18,200		44	55.4	*16,500
	42	51.0	*17,300		46	53.4	*15,800
	44	48.4	*16,500		48	51.3	*15,200
	46	45.8	*15,800		50	49.1	*14,600
	48	43.0	*15,200		52	46.9	*14,600
	50	40.1	*14,600		54	44.6	*13,500
	52	37.0	*14,000		56	42.2	*13,000
	54	33.6	*13,500		58	39.6	*12,500
	56	29.9	*13,000		60	37.0	*12,100
58	25.7	*12,500	62	34.1	*11,700		
			64	31.0	*11,400		
			66	27.6	*11,000		

Rated Load

No. of Counterweight: 1 Position of Crawlers: Extended

Boom Length (ft)	Load Radius (ft)	Boom Angle (degree)	Rated Load (lbs)	Boom Length (ft)	Load Radius (ft)	Boom Angle (degree)	Rated Load (lbs)
80	38	65.1	*19,200	90	42	65.2	*17,300
	40	63.5	*18,200		44	63.8	*16,500
	42	61.9	*17,300		46	62.4	*15,800
	44	60.2	*16,500		48	60.9	*15,200
	46	58.6	*15,800		50	59.5	*14,600
	48	56.9	*15,200		52	58.0	*14,000
	50	55.1	*14,600		54	56.4	*13,500
	52	53.3	*14,600		56	54.9	*13,900
	54	51.5	*13,500		58	53.3	*12,500
	56	49.6	*13,000		60	51.7	*12,100
	58	47.7	*12,500		62	50.0	*11,700
	60	45.7	*12,100		64	48.3	*11,400
	62	43.7	*11,700		66	46.6	*11,000
	64	41.5	*11,400		68	46.6	*10,700
	66	39.3	*11,000		70	43.8	*10,400
	68	37.0	*10,700		72	41.0	*10,100
70	34.5	*10,400	74	39.0	9,700		
72	31.8	*10,100	76	36.9	9,200		
74	28.9	*9,800	78	34.7	9,000		
76	25.7	*9,400	80	32.4	8,500		
			82	29.9	8,300		
			84	27.2	7,900		
100	46	65.4	*15,800				
	48	64.1	*15,200				
	50	62.8	*14,600				
	52	61.5	*14,000				
	54	60.2	*13,500				
	56	58.8	*13,000				
	58	57.5	*12,500				
	60	56.1	*12,100				
	64	53.3	*11,400				
	66	51.8	*11,000				
	68	50.4	*10,700				
	70	48.8	10,300				
	72	47.3	9,900				
	74	45.7	9,400				
	76	44.1	9,000				
	78	42.4	8,800				
80	40.6	8,300					
82	38.8	8,100					
84	36.9	7,700					
86	35.0	7,400					
88	32.9	7,200					
90	30.7	7,000					
92	28.3	6,800					
94	25.8	6,600					

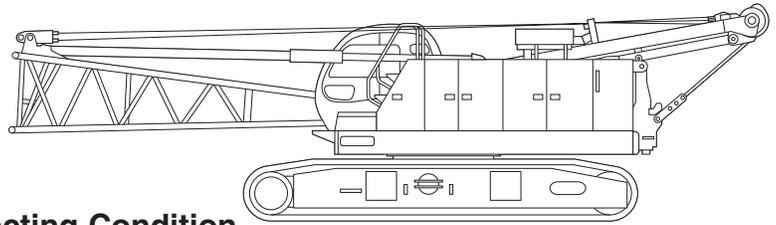
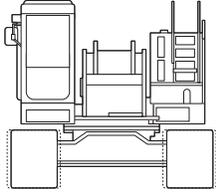
TRANSPORTATION

■CK1000 Transportation Style 1

Base Machine, Boom Base with Crawlers

Weight: 99,770 lbs (45,250 kg)

Dimensions: 11' 4" height × 11' 10" width × 39' 11" length (3,450 mm × 3,610 mm × 12,170 mm)

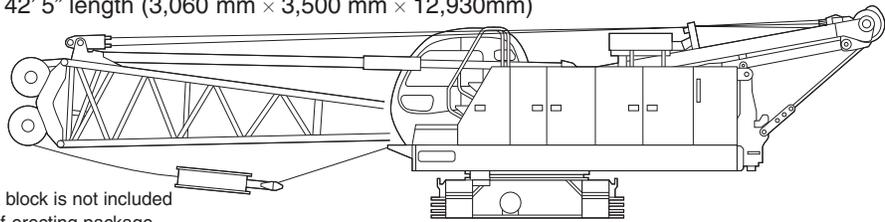
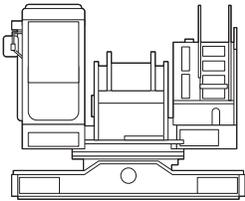


■CK1000 Transportation Style 2 Self-Erecting Condition

Base Machine, Boom Base without Crawlers

Weight: 71,100 lbs (32,250 kg)

Dimensions: 10' 0" height × 11' 6" width × 42' 5" length (3,060 mm × 3,500 mm × 12,930 mm)



Hook block is not included in self-erecting package

■CK1000 Transportation Style 3

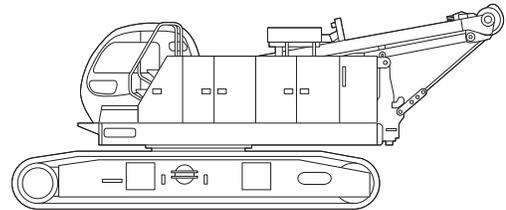
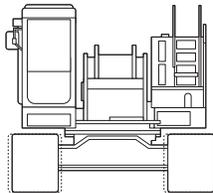
Base Machine with Crawlers

Weight:

96,780 lbs (43,900 kg)

Dimensions:

11' 4" height × 11' 10" width × 27' 7" length (3,450 mm × 3,610 mm × 8,410 mm)

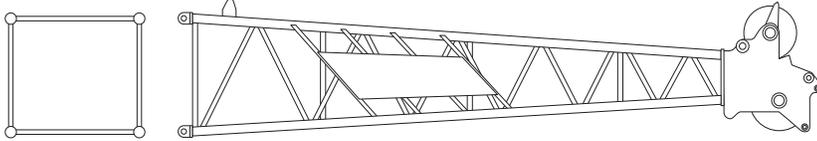


■Booms

Boom Tip:

2,580 lbs (1,170 kg)

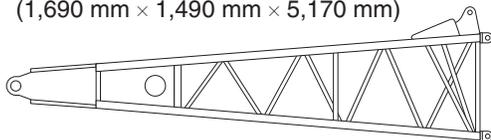
4' 10" height × 4' 11" width × 22' 8" length (1,480 mm × 1,505 mm × 6,910 mm)



Boom Base:

2,510 lbs (1,140 kg)

5' 7" height × 4' 11" width × 19' 7" length (1,690 mm × 1,490 mm × 5,170 mm)

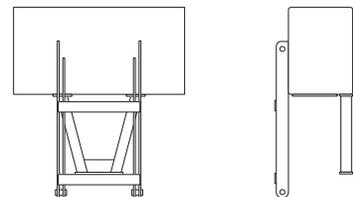


■Carbody Counterweights

Carbody Counterweights:

4,410 lbs (2,000 kg) × 2

1' 11" height × 4' 3" width × 4' 9" length (590 mm × 1,300 mm × 1,450 mm)



■Counterweights

Counterweight (A)

Weight: 27,300 lbs (12,400 kg)

5' 6" height × 1' 11" width × 11' 10" length (1,670 mm × 570 mm × 3,600 mm)

Counterweight (B)

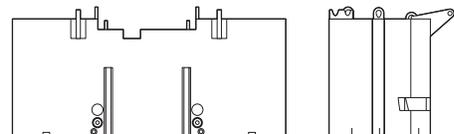
Weight: 8,160 lbs (3,700 kg)

Dimensions: 5' 6" height × 1' width × 11' 10" length (1,660 mm × 300 mm × 3,600 mm)

Counterweight (C)

Weight: 27,560 lbs (12,500 kg)

Dimensions: 5' 4" height × 3' width × 11' 10" length (1,640 mm × 910 mm × 3,600 mm)



(A) (B) (C)

■Other Attachments

Attachment	Weights	Dimensions (H × W × L)
10ft Insert Boom:	680 lbs (310 kg)	4' 3" × 4' 11" × 10' 5" (1,290 mm × 1,490 mm × 3,165 mm)
20ft Insert Boom:	1,150 lbs (520 kg)	4' 3" × 4' 11" × 20' 4" (1,290 mm × 1,490 mm × 6,210 mm)
40ft Insert Boom:	2,120 lbs (960 kg)	4' 3" × 4' 11" × 40' 4" (1,290 mm × 1,490 mm × 12,305 mm)
Jib Tip:	620 lbs (280 kg)	2' 7" × 2' 7" × 16' 3" (790 mm × 790 mm × 4,960 mm)
Jib Base:	440 lbs (200 kg)	2' 7" × 2' 7" × 15' 9" (790 mm × 790 mm × 4,810 mm)
10ft Insert Jib:	220 lbs (100 kg)	2' 7" × 2' 7" × 10' 3" (790 mm × 790 mm × 3,120 mm)
20ft Insert Jib:	400 lbs (180 kg)	2' 7" × 2' 7" × 20' 3" (790 mm × 790 mm × 6,160 mm)
Jib Strut	550 lbs (250 kg)	2' 2" × 2' 9" × 11' 11" (620 mm × 840 mm × 3,620 mm)
Upper Spreader:	600 lbs (270 kg)	2' 3" × 10.6" × 5' 2" (680 mm × 270 mm × 1,580 mm)

CK1000

Note: Due to our policy of continual product improvements all designs and specifications are subject to change without advance notice.

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