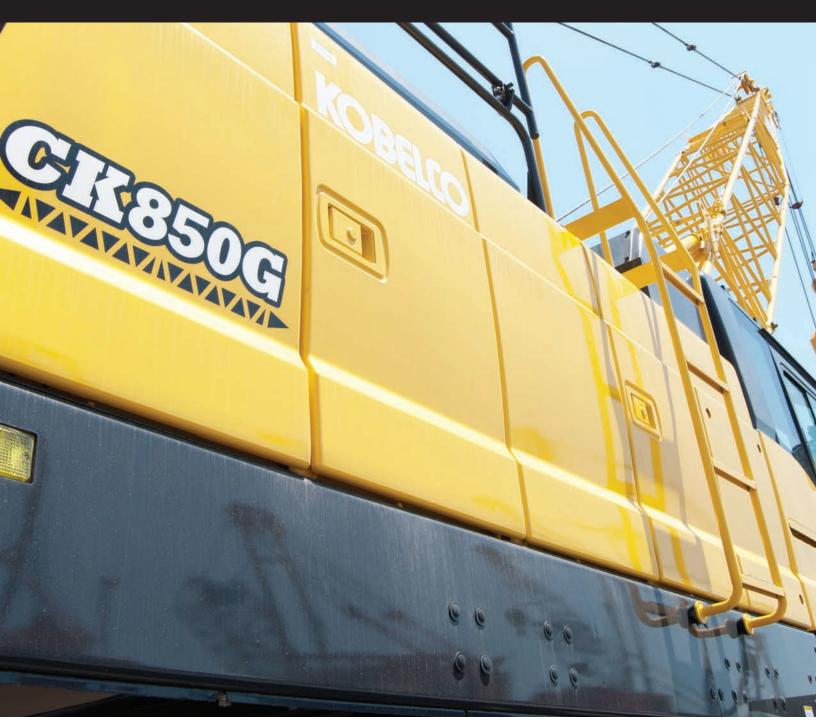
KOBELCO

Hydraulic Crawler Crane



Max. Lifting Capacity : 85 US Tons Max. Crane Boom Length : 200 ft Max. Fixed Jib Combination : <u>180 ft + 60 ft</u>





2 SPECIFICATIONS
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General Description



Type Maximum lift capacity Basic boom length Maximum boom length Basic boom & jib length Maximum boom & jib length Working weight Ground bearing pressure Gradeability

Crawler mounted, Lattice boom, Hydraulic controlled 170,000 lbs (77,110 kg) @ 10' operating radius (40' boom) 40' (12.2 m) 200' (61.0 m) 80' + 30' (24.4 m + 9.1 m) 180' + 60' (54.9 m + 18.3 m) Approx. 165,700 lbs (75,140 kg) Approx. 10.8 psi (84.7 kPa) 40%

Calculations to determine working weight, ground bearing pressure, and gradeability include the weight of the upper and lower works of the crane, counterweights, and carbody weights, 40' boom and hook block.

General Dimensions

Height to top of gantry (lowered)	10'10" (3.31 m)
Width of upper machine w/operator's cab	9'10" (2.99 m)*
Radius of rear end (counterweights)	14'9" (4.50 m)
Counterweight ground clearance	3'7" (1.10 m)
Center of rotation to boom foot pin	3'7" (1.10 m)
Height from ground to boom foot pin	5'9" (1.75 m)
Height over gantry (raised)	20'3" (6.17 m)
Overall length of crawlers	20'7" (6.28 m)
Overall width of crawlers	17'2" (5.24 m)
Center to center, idler to sprocket	17'10" (5.44 m)
Shoe width	36" (0.91 m)
Ground clearance of body	15" (0.39 m)

Upper Machinery

Power Plant:		
Diesel engine - mak	e and model	
	Hino J08E-UV	16 16 10 10 10 10 10 10 10 10 10 10 10 10 10
	(complies with Interim "Tier 4")	
No. of cylinders	6	
Bore X stroke	4-13/32" x 5-1/8"	
	(112 mm x 130 mm)	
Cycles	4	3 VI a
Total displacement	469 cu.in. (7.684 <i>l</i>)	
Rated output SAE G		
1	285 HP / 2,100 rpm (213 kW / 2,100 min ⁻¹)	
Maximum torque		
1	750 lbs-ft / 1,600 rpm (1,017 Nm / 1,600 min ⁻¹)	
Starter	24 Volts / 5.0 kW	
Alternator	24 Volts / 90 Amp	
Batteries	Two 12 volt, 136 AH/5 HR capacity series connected.	
Radiator	Corrugated type core, thermostatically controlled, with	cleanout screen.
Throttle	Twist grip type hand throttle, electrically controlled, in	
Air cleaner	Dry type with replaceable paper element.	5
Fuel tank capacity	106 US gal. (400 liters)	
Lube oil filters	Full flow and by-pass type with element type.	
Fuel filter	Replaceable paper element.	
3		* - 10'5" wide with Catwalks o

Working Speed

Hoist line speed (front and rear drums) 390 ~ 10 ft/min (120 ~ 3 m/min) *Lowering line speed (front and rear drums)* 390 ~ 10 ft/min (120 ~ 3 m/min) Boom hoist line speed (front and rear drums) 230 ~ 6.6 ft/min (70 ~ 2 m/min) *Boom lowering line speed (front and rear drums)* 230 ~ 6.6 ft/min (70 ~ 2 m/min) Swing speed (max.) 4.0 rpm *Travel speed (high/low)* 1.1/0.72 mph (1.7/1.1 km/h)

Line speed based on single line, no load, and first layer of rope on the drum.



10'5" wide with Catwalks on cab side only. 11' wide with Catwalks on both sides.



Hydraulic pumps: Load hoist, boom hoist, and propel

2 piston pumps, max flow rate 67.3 US gal/min x 2 (255 *l*/min x 2)

Swing

1 piston pump, max flow rate 46.7 US gal/min (177 ℓ/min)

Control system and auxiliary

2 Gear pumps, max flow rate 16.3 US gal/min + 10.6 US gal (61.6 l/min + 40.5 l/min)

Self Lifting Device - Standard Equipment

Counterweight and Carbody weight

Counterweight Base $1 \ge 20,600 \ (9,320 \ \text{kg})$ Counterweight (R) $2 \ge 9,250 \ (4,200 \ \text{kg})$ Counterweight (L) $2 \ge 9,250 \ (4,200 \ \text{kg})$ Total Counterweight $57,600 \ (26,120 \ \text{kg})$

Carbody weight 2 x 7,200 (3,250 kg) Total Carbody weight 14,400 (6,500 kg)



Hydraulic system Maximum pressure rating 4,626 psi (31.9MPa) Cooling Oil to air heat exchanger Filtration Full flow filters with replaceable paper elements Reservoir capacity 116.2 US gal. (440 liters)

2 gear pumps, max flow rate

Brake cooling system

19.4 US gal/min x 2 (73.5 *l*/min x 2)

Gantry

This high folding type gantry is fitted with a sheave frame for boom reeving. Hydraulic lift is standard. It provides full up, full down positions with linkage.

Operators cab

Totally enclosed from weather, this full-vision cab has safety glass all around. The adjustable, high-backed seat with armrest is capable of adjustment with or without the control console. Auxiliary controls and instruments are on a side mounted console. A signal horn, windshield wipers, air conditioner/heater, and swing limiter are all standard features.

Controls

At the operator's right are console-mounted adjustable short levers for the front and rear drum and the boom hoist control. Fine inching control and free fall activation switches are built in to the levers. Beside the seat on the right are two short levers for propel control, plus individual speed dial controls for front, rear, and boom drums. At the left is the console mounted swing lever, an optional 3rd drum control, switches for the front, rear, and boom drum pawls, and the engine start/stop key. A swing brake control switch and signal horn button are on the swing lever.

Swing:

Swing unit

Hydraulic motor driving spur gears through planetary reducers to output swing pinion for 360 degree rotation.

Swing brake

Spring set hydraulically released multiple disk brake mounted on swing motor.

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

Swing lock Manual, 4 position lock for transportation.



Line pull:

Max. line pull (single line) - 34,400 lbf (153 kN) *Rated line pull* - 17,000 lbf (78.5 kN)

Lower Machinery

Crawlers:

Crawler assemblies can be hydraulically extended or retracted for wide track operation or retracted for transportation. Crawler belt tension adjusted with hydraulic jack and maintained by shims between the idler block and frame.

Crawler drive:

The independent two speed hydraulic propel drive is built into each crawler side frame. Each drive consists of a hydraulic motor driving a propel sprocket through a planetary gear box. The hydraulic motor and gear box are built into the crawler side frame within the shoe width.

Crawler brakes:

Spring set, hydraulically released, multiple disk-type parking brakes are built into each propel drive.

Steering mechanism:

A hydraulic propel system provides both skid steering and counter rotating steering.

Crawler shoe: 66 shoes - 36" wide, each crawler.

Track rollers:

The track rollers are sealed for maintenance free operation.

Front drum:

Front and rear drums for load hoist powered by hydraulic variable plunger motors, driven through planetary reducers.

Negative brake

A spring-set, hydraulically released multiple disk brake is mounted on the hoist motor and operated through a counter-balance valve.

Drum lock External ratchet for locking drum

Drums:

Front drum -

550 mm P.C.D. x 545 mm Lg., grooved for 22 mm wire rope. Rope capacity is 869' (265 m) working length and 1,099' (335 m) storage length.

Rear drum -

550 mm P.C.D. x 545 mm Lg., grooved for 22 mm wire rope. Rope capacity is 673' (205 m) working length and 1,099' (335 m) storage length.

3rd drum (optional) -

550 mm P.C.D. x 545 mm Lg., grooved for 22 mm wire rope. Rope capacity is 476' (145 m) working length and 1,099' (335 m) storage length.



Crane Attachments

Boom:

The welded lattice construction uses tubular, high-tension steel chords with pin connections between sections.

Maximum boom length Basic boom length Boom base section Boom tip section 200' (61.0 m) 40' (12.2 m) 19'7" (5.97 m) 22'8" (6.91 m)

Boom insert (optional):

Optional boom inserts are available to provide extension capabilities. They are robotic welded, laser aligned, lattice constructed with tubular, high-tension steel chords and pin connections.

Boom insert 10' (3.1 m), 20' (6.1 m), 40' (12.2 m)

Jib (optional):

Jib inserts are available to provide extension capabilites. The optional jib employs welded lattice construction with tubular, high-tension steel chords with pin connections between sections.

Maximum jib length	60' (18.3 m)
Basic jib length	30' (9.1 m)
Jib base section	15'9" (4.8 m)
Jib tip section	16'1" (4.9 m)
Jib insert	10' (3.1 m), 20' (6.1 m)

Jib is useable on booms of 80' (24.4 m) through 180' (54.9 m)

Standard Equipment

Lights:

Two (2) front flood lights One (1) cab inside light

Gauges and warning display Gauges One (1) tachometer One (1) hour meter One (1) fuel gauge One (1) water temperature Warning display Battery charge Engine oil pressure Air cleaner Engine oil filter Control main pressure Hydraulic oil temperature DPF condition indicator

Others

Air conditioner/heater Drum turn indicator (front/rear) Foot pedal / throttle Electric transfer pump Counterweight self-removal device KCross Telematics Free fall winches

Safety Service

Function lock lever Swing Limiter Boom over hoist limit switch Signal horn Front/rear hoist drum lock Swing Limiter (Buzzer, lamps, or stops) Overload prevention device (LMI) Hook over hoist shut off (Anti-two-block) Boom angle indicator Travel alarm



Auxiliary sheave (optional): Auxiliary sheave is extendible on booms of 40' (12.2 m) through 190' (57.9 m)

Boom hoist reeving:

Twelve (12) parts of 5/8" (16.0 mm) diameter high strength wire rope.

Boom backstops: Telescopic type with spring bumper

> Safety Service (cont) Level indicator Boom hoist drum lock Swing locks, anti drift, and mechanical Boom backstops Boom base catwalk Upper machinery catwalk, handrails and ladder

Tools and Accessories

A set of tools and accessories are furnished.

Optional Equipment

Third drum Hook block Hook ball Auxiliary sheave Fixed jib Boom inserts

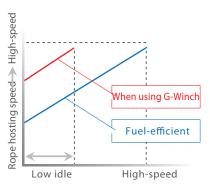
G-Mode

The G-modes are a standard exclusive energy and fuel saving system, with up to 30% in fuel savings. The G-Mode eliminates needless operations and engine functions allowing for reduced fuel consumption by using three basic modes that are all operator selectable.

Auto Idling Stop Mode (AIS): An Industry First The AIS mode can conserve fuel by stopping the engine, with an operator prompt, after 10 seconds of idling time. Restarting the engine is simple by just twisting the throttle.

G-Winch Mode:

ch Mode: An Industry First The G-winch mode can produce maximum winch line speed at a low engine RPM.



The high speed mode allows the line to be raised or lowered at maximum line speed without raising engine speed when lifting without a load.

G-Engine Mode:

ne Mode: An Industry First The G-engine mode limits maximum engine speed to 1,750 RPM and controls the pumps to make engine operation in the most efficient condition.







Exhaust cleaning DPR:

The DPR (diesel particulate active reduction system) burns PM (particulate matter) collected by the DPF (diesel particulate filter) from the diesel exhaust gas, increasing the PM collection efficiency of the DPF, and recovering to purify the exhaust. This means that the exhaust gas from the diesel engine is cleaner, conforming with current EPA Interim Tier 4 regulations.

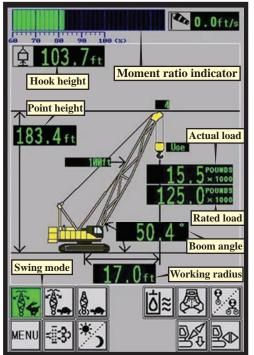
A new clean diesel system - although diesel engines consume less fuel and emit less CO2 than gasoline engines, they also emit more harmful particulate matter and nitrogen oxide (NOx). The "new clean energy system" engine utilizes a DPF to reduce particulate matter, which is also kept to a minimum using negative ions. This system requires the use of low sulfer diesel.

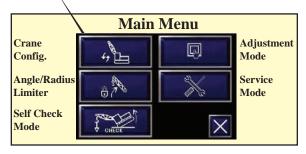
* Warning: High sulfer diesel will damage the engine.

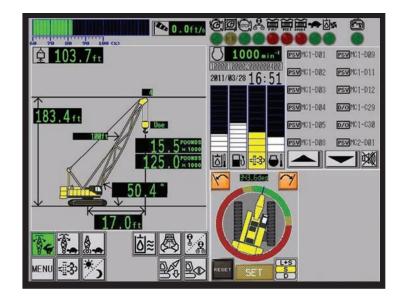
Load Moment Indicator (LMI)

The Kobelco newly designed 12" touch panel screen with sunshade and screen protector is an industry first. This intuitive and easy to understand new touch screen monitor gives the operator a full display of essential data. Universal pictograms are used providing easy visual recognition, making this new technology easy to read and understand the information. This new monitor includes: Hook Height, Engine Speed, Display Lamp of standard functions, Gauges, Over-Swing Prevention Device, Switches, and Error Messages.

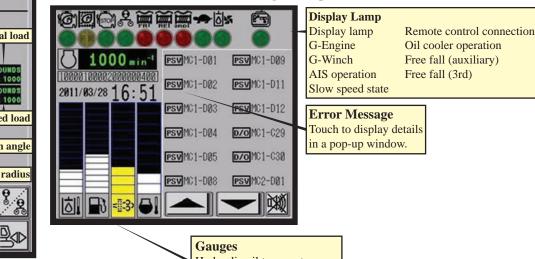
Moment Limiter (Left Side)







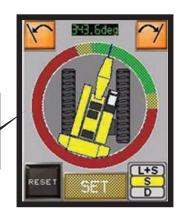
Gauges (Right Side)



- Hydraulic oil temperature Fuel gauge Diesel particulate filter gauge Coolant temperature
 - * Figures for the above gauges are only shown when the bar is touched.

Over-Swing Prevention

An over-swing preventative device is standard. It limits the swing of the crane. Configuration is simple and can be done from the touch panel.



Winch Performance Data

Note:

Line speed and line pull based on Hino J08E-UV at 2,100 rpm.

Line speed and line pull based on single line.

Max. line pull is based on referential performance, not wire rope strength.

Front & Rear Drum

Wire Rope Diameter = 22 mm Rated Line Pull = 17,000 lbf (78.5 kN) Maximum Line Pull = 34,400 lbf (153 kN) Total Storage Capacity = 1,099 ft (334.9 m)

Line speed (ft/min)							
	Layer	1	2	3	4	5	6
	0	394	420	446	472	499	
	5,000	394	420	446	472	499	
	10,000	394	420	438	434	437	
Line Pull	15,000	296	292	287	279	269	storage
(lbs)	17,000	265	246	235	221	216	only
	20,000	195	183	184	183	181	
	25,000	145	142	137	131	123	
	32,000	95					
Storage Cap	pacity (ft)	130	139	148	157	166	175

Third Drum (for Load hoist)

Wire Rope Diameter = 22 mm Rated Line Pull = 17,000 lbf (78.5 kN) Maximum Line Pull = 32,400 lbf (144 kN) Total Storage Capacity = 1,099 ft (334.9 m)

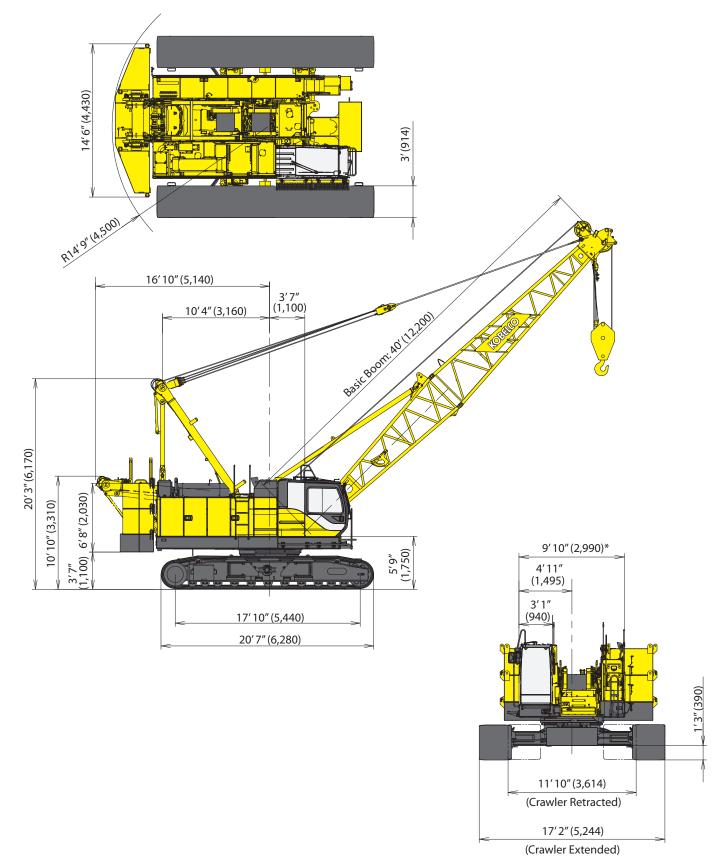
	Line speed (ft/min)						
	Layer	1	2	3	4	5	6
	0	394	394	394	394	394	
	5,000	394	394	394	394	394	
Line Pull	10,000	227	227	227	227	227	
(lbs)	15,000	147	152	161	170	179	storage
	17,000	142	151	160	169	178	only
	20,000	140	149	158	167	176	
	25,000	138	147	155	163	164	
	30,000	136	135				
Storage Ca	pacity (ft)	130	139	148	157	166	175

Wire Rope Specifications

Use	Construction	No load diameter	Length	Safety Factor	Required minimum breaking strength
Front drum	6 x 29 Filler IWRC Right hand lay, Regular lay	0.888" to 0.905" (22.55 mm to 22.99 mm)	869' (265 m)	3.5: 1	81,606 lbf (363 kN)
Rear drum	6 x 29 Filler IWRC Right hand lay, Regular lay	0.888" to 0.905" (22.55 mm to 22.99 mm)	672' (205 m)	3.5: 1	81,606 lbf (363 kN)
Boom drum	6 x 31 P-Warrington seal Right hand lay, Regular lay	0.646" to 0.658" (16.40 mm to 16.72 mm)	492' (150 m)	3.5: 1	47,210 lbf (210 kN)
Third drum (Optional)	6 x 29 Filler IWRC Right hand lay, Regular lay	0.888" to 0.905" (22.55 mm to 22.99 mm)	476' (145 m)	3.5: 1	81,606 lbf (363 kN)



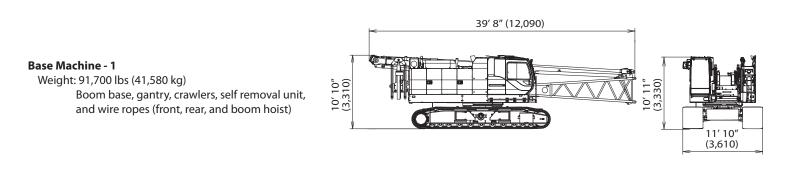
General Dimensions



* - 10'5" wide with Catwalks on cab side only. 11' wide with Catwalks on both sides.

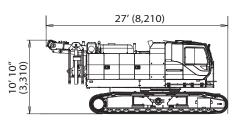
Dimensions and Weight

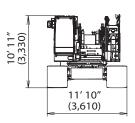
Dimensions: ft-in (mm) Weight: lbs (kg)



Base Machine - 2

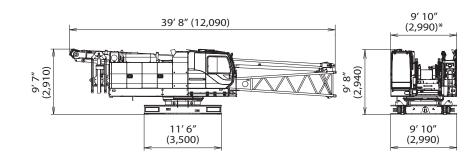
Weight: 87,500 lbs (39,660 kg) Gantry, crawlers, self removal unit, and wire ropes (front, rear, and boom hoist)





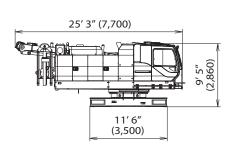
Base Machine - 3

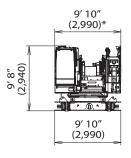
Weight: 58,000 lbs (26,330 kg) Gantry, crawlers, and wire ropes (front, rear, and boom hoist)



Base Machine - 4

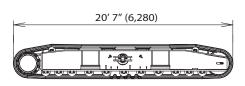
Weight: 53,800 lbs (24,380 kg) Boom base, gantry, self removal unit, and wire ropes (front, rear, and boom hoist)

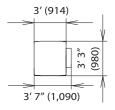




Crawler

Weight: 16,850 lbs (7,640 kg)





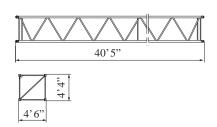
* - 10'5" wide with Catwalks on cab side only. 11' wide with Catwalks on both sides.

Dimensions and Weight Dimensions: ft-in (mm) Weight: lbs (kg) 5'3" Self Removal Unit **Counterweight Base** Weight: 20,600 lbs (9,320 kg) Weight: 1,900 lbs (860 kg) 14'6" ı Fla 2'9' Counterweight (R) Counterweight (L) Weight: 9,250 lbs (4,200 kg) Weight: 9,250 lbs (4,200 kg) **Carbody Weight Auxiliary Sheave** ŝ Weight: 7,200 lbs (3,250 kg) Weight: 320 lbs (145 kg) 5,7, 2'9' **Boom Base Boom Tip** Weight: 2,500 lbs (1,126 kg) Weight: 3,000 lbs (1,379 kg) Includes cable roller and guy lines 10, in 19'7' 22'8" 4'6" 4'8" 10 ft (3.0 m) Insert Boom 20 ft (6.1 m) Insert Boom Weight: 760 lbs (345 kg) Weight: 1,300 lbs (566 kg) Includes cable roller and guy lines Includes cable roller and guy lines 4,4, 4,4'



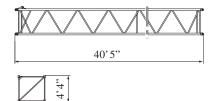
40 ft (12.2 m) Insert Boom

Weight: 2,200 lbs (1,009 kg) Includes cable roller and guy lines



40 ft (12.2 m) Insert Boom (with lug) Weight: 2,300 lbs (1,024 kg) Includes cable roller and guy lines

4'6"



4'6"

20'5"

11



Dimensions and Weight

Dimensions: ft-in (mm) Weight: lbs (kg)

Jib Tip Weight: 500 lbs (228 kg) Includes cable roller. Jib Base and Strut Weight: 1,100 lbs (485 kg) Includes guy line.

10 ft (3.0 m) Insert Jib Weight: 270 lbs (121 kg) Includes cable roller and guy line.



20 ft (6.1 m) Jib Insert

Weight: 460 lbs (209 kg) Includes cable roller and guy line.



Transportation Plan

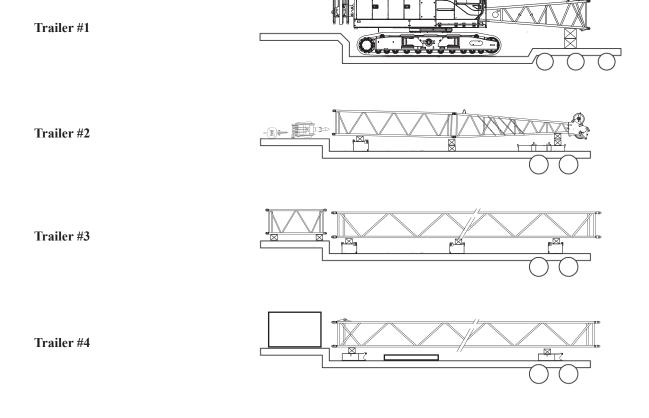
Refer to pages 10-12

Shipping plan for 150 ft Boom

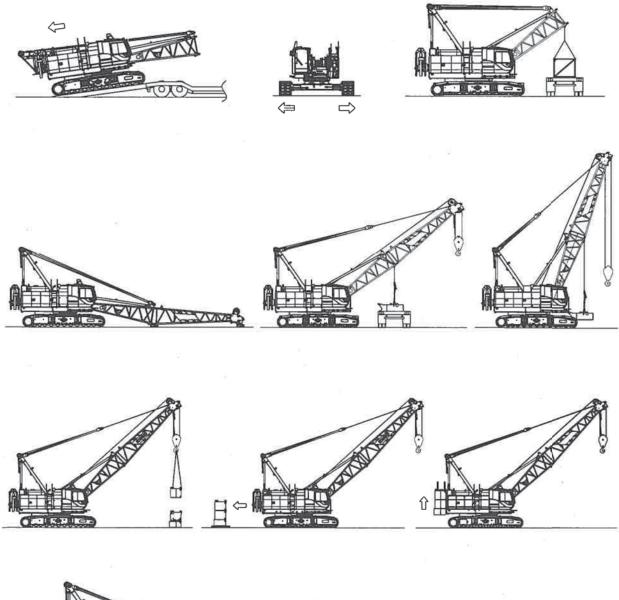
Description of them	We	Weight		Trailer Loads		
Description of Item	lbs	(kg)	#1	#2	#3	#4
Base Machine with Boom Base and Crawlers*	91,700	(41,580)	1			
Counterweight Base	20,600	(9,320)		1		
Counterweight (L)	9,250	(4,200)			2	
Counterweight ('R)	9,250	(4,200)		1	1	
Carbody Weight	7,200	(3,250)				2
10 ft Insert Boom and Guy Line	760	(345)			1	
20 ft Insert Boom and Guy Line	1,300	(566)		1		
40 ft Insert Boom and Guy Line	2,200	(1,009)			1	
40 ft Insert Boom (w/ Lug) and Guy Line (A)	2,300	(1,024)				1
Boom Tip and Guy Line	2,500	(1,126)		1		
Jib Base and Guy Line	1,100	(485)				
10 ft Insert Jib and Guy Line	270	(121)				
20 ft Insert Jib and Guy Line	460	(209)				
Jib Tip	500	(228)				
75 Ton Block	3,000	(1,361)		1		
13 Ton Ball	800	(365)		1		
Ladder Assembly	90	(41)				1
Support Box	5,000	(2,268)				1
	in a Mainlei	lbs	91,700	37,450	30,710	21,790
Approx. Total Shipp	ing weight	(kg)	(41,580)	(16,938)	(13,954)	(9,833

* Third drum is not included. Add 4,200 lbs if third drum is installed.

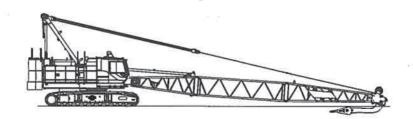
Loads for transportation were targeted at 45,000 lbs, 8' 6" wide, 48' long and 13' 6" high from ground, 48' step deck. This may vary depending on truck/trailer weight, style of trailer and state law.



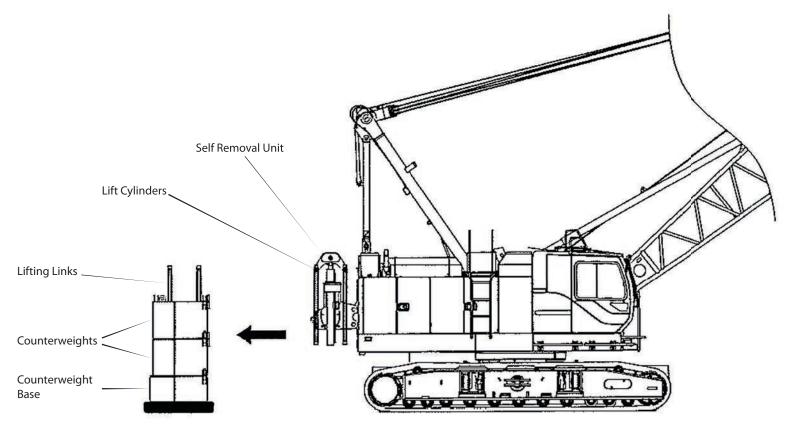
Self-Assembly Procedure

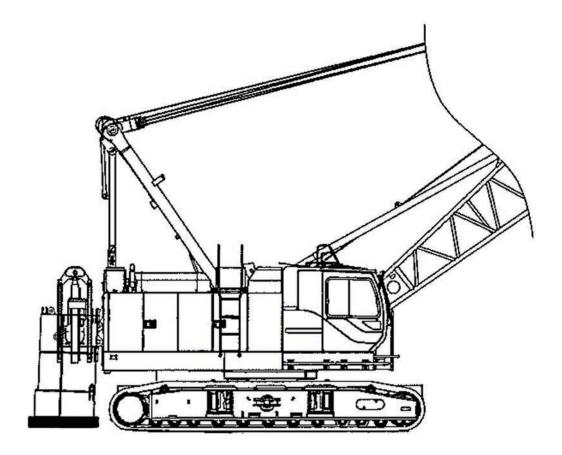






Counterweight Self-Removal Device





Boom and Fixed Jib Arrangement

Boom length ft (m)	Boom arrangement
40 (12.2)	
50 (15.2)	
60 (18.3)	
70 (21.3)	₩ <u>B 10 20 T</u>
80 (24.4)	
90 (27.4)	
100 (30.5)	
110 (33.5)	₩ <u>10 20 40A</u>
120 (36.6)	
130 (39.6)	Image: Weight of the second
140 (42.7)	Image: Weight of the second

Fixed Jib	Arrangement
	A

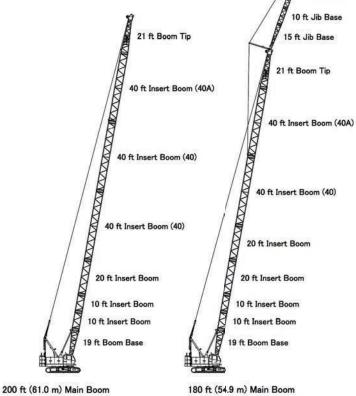
Fixed Jb	Crane boom length	Jib length ft (m)	Jib arrangement
		30 (9.1)	
	80 ft (24.4 m)	40 (12.2)	B 1017
	(180 ft (54.9 m)	50 (15.2)	<u>B</u> 20 T
	(60 (18.3)	B 20 10

Symbol	Jib Length	Remarks
В	15 ft (4.6 m)	Jib Base
	15 ft (4.6 m)	Jib Top
10	10 ft (3.0 m)	Insert Jib
20	20 ft (6.1 m)	Insert Jib

Boom length ft (m)	Boom arrangement
150 (45.7)	* <u>E110 20 40</u> 40A T
160 (48.8)	Image: Weight of the second
170 (51.8)	X B 10 20 20 40 40A T Image: Constraint of the second s
180 (54.9)	Image: Weight of the second
190 (57.9)	₩ <b 10 _20 40="" <sup="" ="">↑ 40A T</b 10 _20>
200 (61.0)	₩ <b 10 10 _20 40 4040a></b 10 10 _20 40 4040a>

Symbol	Boom Length	Remarks
	20.0 ft (6.1 m)	Boom Base
	20.0 ft (6.1 m)	Boom Top
10	10.0 ft (3.1 m)	Insert Boom
20	20.0 ft (6.1 m)	Insert Boom
40	40.0 ft (12.2 m)	Insert Boom
40A	40.0 ft (12.2 m)	Insert Boom with lug

- mark shows the guy line installing position when the xed jib is used. 15 ft Jib Tip % indicates the most exible combination of insert lu ng booms, which can be modi ed to form all shorter lu ng boom 20 ft Jib Base arrangements.



180 ft (54.9 m) Main Boom and 60 ft (18.3 m) Fixed Jib



Unit : ft (m)

Working Ranges

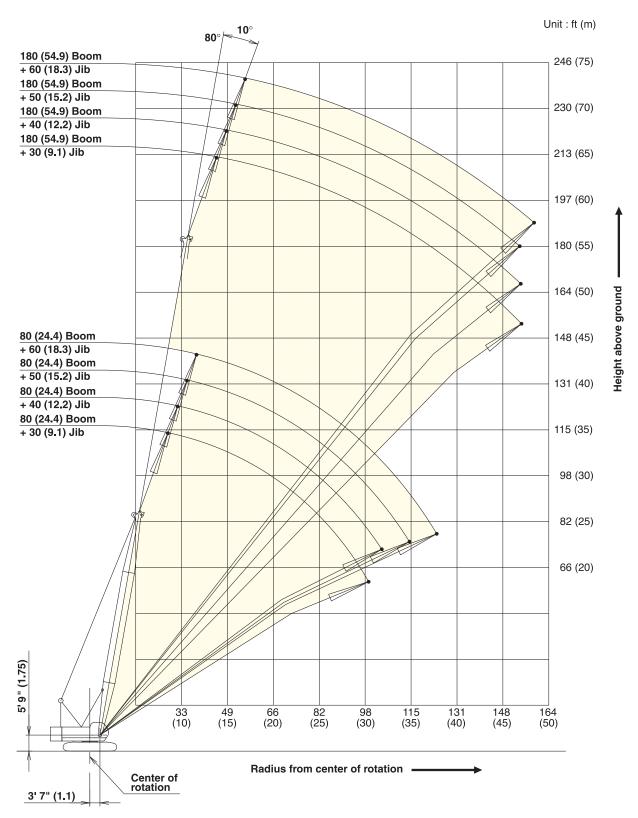
Main Boom

82° **75**° **70**° 65° **60**° 55° 213 (65) **50**° 200 (61.0) Boom 190 (57.9) Boom 197 (60) 1 180 (54.9) Boom **M** 180 (55) 170 (51.8) Boom 1 **́45**° 160 (48.8) Boom 164 (50) \mathbb{N} 150 (45.7) Boom 140 (42.7) Boom 148 (45) ST **40**° 130 (39.6) Boom 1 Height above ground 131 (40) 120 (36.6) Boom 1 **35°** 110 (33.5) Boom 115 (35) 100 (30.5) Boom **30**°⁄ 98 (30) 90 (27.4) Boom 80 (24.4) Boom **25**° 82 (25) 70 (21.3) Boom 1 7 <u>60 (18.3) Boo</u>m 66 (20) 1 20° 50 (15.2) Boom]|| 40 (12.2) Boom 5 9" (1 75) 131 (40) 164 (50) 33 (10) 49 (15) 66 (20) 82 (25) 98 148 115 (30) (35) (45) Radius from center of rotation Center of rotation 3'7" (1.1)

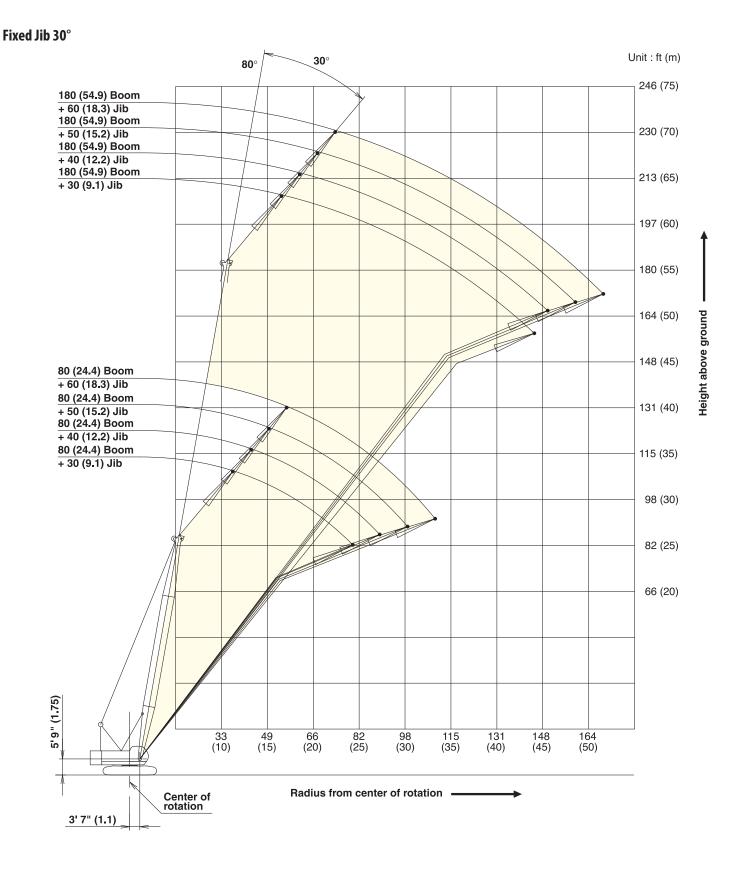
Working Ranges

Fixed Jib 10°

Unit : ft (m)



Working Ranges



Supplemental Data

- 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 level on 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 ground, 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. Rated loads do not exceed 75% of minimum tipping loads. Rated loads 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 operation manual and all the instruction manuals if these manuals are missing, obtain replacements.
 - The crane must be leveled to within 1% on a firm supporting surface.
 - Boom backstops are required for all boom length.
 - Gantry must be fully raised position for all operations.
- 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 rated loads.
- 6. Weight of hooks, hook blocks, slings and other lifting devices are a 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)	320	2,400	3,200	4,200	5,200

- 8. The total load that can be lifted by jib is limited by rated jib loads.
- 9. Boom lengths for jib mounting are 80 ft (24.4 m) to 180 ft (54.9 m)
- 10. The total load that can be lifted by the auxiliary sheave is the value for 320 lbs deducted from rated load for the boom (without auxiliary sheave installed); however, the auxiliary sheave rated load should not exceed 17,000 lbs.

- 11. Boom lengths that can attach auxiliary sheave are from 40 ft (12.2 m) to 190 ft (57.9 m).
- 12. The boom should be erected over the front of the crawlers, not laterally. When lifting from or lowering to the ground the boom at length of 180 ft (54.9 m) with jib, the blocks for erections must be placed at the end of the crawlers.
- 13. Least stable position is over the side.
- 14. Maximum hoist load for number of reeving parts of line for hoist rope.

Maximum Load for Main Boom

No. of Parts of line	1	2	3	4	5
Maximum Loads (lbs)	17,000	34,000	51,000	68,000	85,000

No. of Parts of line	6	7	8	9	10
Maximum Loads (lbs)	102,000	119,000	136,000	153,000	170,000

Maximum Load for Fixed Jib

No. of Parts of line	1	2
Maximum Loads (lbs)	17,000	24,000

Maximum Load Auxiliary Sheave

No. of Parts of line	1
Maximum Loads (lbs)	17,000

- 15. Rated loads listed apply only to the machine as originally manufactured and designed by KOBELCO CRANES CO., LTD. Modifications to this machine or use of equipment of than that specified can reduce operating capacity.
- 16. Designed and rated to comply with ANSI Code B30.5.

Main Boom Lift Capacity

Full Counterweight: 57,600 lbs Carbody

Carbody Weight: 14,400

40	D' Boo	m _	50)' Boo	m _	60)' Boo	m _	7()' Boo	m _	80)' Boo	m
Load	Boom	360 [°]	Load	Boom	360 [°]	Load	Boom	360°	Load	Boom	360°	Load	Boom	360°
Radius	Angle	Rated Load	Radius	Angle	Rated Load	Radius	Angle	Rated Load	Radius	Angle	Rated Load	Radius	Angle	Rated Load
(ft)	(deg.)	(lbs)	(ft)	(deg.)	(lbs)	(ft)	(deg.)	(lbs)	(ft)	(deg.)	(lbs)	(ft)	(deg.)	(lbs)
10.0	81.7	170,000 *	12.0	81.1	166,400 *	13.0	81.6	154,200 *	14.0	82.0	143,600 *	16.0	81.6	126,300 *
11.0	80.3	170,000 *	13.0	79.9	154,400 *	14.0	80.7	143,800 *	15.0	81.2	134,500 *	17.0	80.8	119,100 *
12.0	78.8	166,600 *	14.0	78.8	144,000 *	15.0	79.7	134,700 *	16.0	80.3	126,500 *	18.0	80.1	112,600 *
13.0	77.4	154,600 *	15.0	77.6	134,900 *	16.0	78.7	126,700 *	17.0	79.5	119,300 *	19.0	79.4	105,290
14.0	75.9	144,200 *	16.0	76.4	126,900 *	17.0	77.7	119,500 *	18.0	78.7	112,800 *	20.0	78.6	96,930
15.0	74.4	135,100 *	17.0	75.2	119,700 *	18.0	76.8	113,000 *	19.0	77.8	105,400	22.0	77.2	83,550
16.0	72.9	127,100 *	18.0	74.0	113,200 *	19.0	75.8	105,460	20.0	77.0	97,060	24.0	75.7	73,320
17.0	71.4	119,900 *	19.0	72.8	105,660	20.0	74.8	97,130	22.0	75.3	83,700	26.0	74.2	65,230
18.0	69.9	113,400 *	20.0	71.6	97,350	22.0	72.8	83,790	24.0	73.6	73,470	28.0	72.7	58,680
19.0	68.3	105,820	22.0	69.2	84,010	24.0	70.8	73,560	26.0	71.9	65,380	30.0	71.2	53,260
20.0	66.7	97,500	24.0	66.7	73,810	26.0	68.7	65,490	28.0	70.1	58,840	32.0	69.7	48,690
22.0	63.6	84,190	26.0	64.2	65,760	28.0	66.6	58,970	30.0	68.4	53,430	34.0	68.1	44,840
24.0	60.3	74,000	28.0	61.6	59,230	30.0	64.5	53,570	32.0	66.6	48,890	36.0	66.6	41,490
26.0	56.9	65,980	30.0	58.9	53,850	32.0	62.4	49,030	34.0	64.8	45,030	38.0	65.0	38,580
28.0 30.0	53.4 49.7	59,480	32.0 34.0	56.2 53.3	49,310	34.0 36.0	60.2 58.0	45,170 41,840	36.0 38.0	63.0 61.1	41,680 38,800	40.0 45.0	63.4 59.3	36,020 30,820
30.0	49.7	54,100 49,580	36.0	55.5 50.4	45,480 42,150	38.0	56.0	38,950	40.0	59.2	36,240	45.0 50.0	59.5 55.0	26,820
34.0	41.5	49,380	38.0	47.3	39,280	40.0	53.3	36,410	40.0	59.2	30,240	55.0	50.5	20,820
36.0	36.9	43,740 42,460	40.0	47.5	39,280	40.0	47.0	31,230	50.0	49.0	27,070	60.0	45.6	23,070
38.0	31.6	39,590	45.0	34.9	31,590	50.0	40.0	27,290	55.0	43.3	23,960	65.0	40.3	19,060
40.0	25.5	34,830 *	50.0	22.7	26,890 *	55.0	31.7	24,200	60.0	36.9	21,450	70.0	34.4	17,350
40.0	25.5	54,050	50.0	22.7	20,090	60.0	20.6	21,600 *	65.0	29.3	19,420	75.0	27.3	15,890
						00.0	20.0	21,000		29.5	19,120	/ 5.0	27.5	13,050
Ree		10	Ree		10	Roc	ves	10	Roc	eves	9	Ree		8
	D' Boo	-		0' Boo	-		0' Boo			0' Boo			0' Boo	
Load				0 000			0 000							
Loud	I BOOM I	360°	Load	Boom	360°	Load	Boom	360°		Boom	360°		Boom	360°
Radius	Boom Angle	360 [°] Rated Load	Load Radius	Boom Angle	360° Rated Load	Load Radius	Boom Angle	360 [°] Rated Load	Load	Boom Angle	360° Rated Load	Load	Boom Angle	360° Rated Load
Radius (ft)	Angle (deg.)	360 [°] Rated Load (lbs)	Load Radius (ft)	Boom Angle (deg.)	360° Rated Load (lbs)	Load Radius (ft)	Boom Angle (deg.)	360 [°] Rated Load (lbs)			360 [°] Rated Load (lbs)		Boom Angle (deg.)	360° Rated Load (lbs)
(ft)	Angle (deg.)	Rated Load (lbs)	Radius (ft)	Angle (deg.)	Rated Load (lbs)	Radius (ft)	Angle (deg.)	Rated Load (lbs)	Load Radius (ft)	Angle (deg.)	Rated Load (lbs)	Load Radius (ft)	Angle (deg.)	Rated Load (lbs)
	Angle	Rated Load	Radius	Angle	Rated Load	Radius	Angle	Rated Load	Load Radius	Angle	Rated Load	Load Radius	Angle	Rated Load
(ft) 17.0	Angle (deg.) 81.9 81.2 80.6	Rated Load (lbs) 118,820 * 112,400 * 105,220	Radius (ft) 19.0	Angle (deg.) 81.5 80.9 79.8	Rated Load (lbs) 101,850 * 96,800 83,400	Radius (ft) 20.0	Angle (deg.) 81.8 80.7 79.7	Rated Load (lbs) 92,590 * 83,260 73,010	Load Radius (ft) 22.0	Angle (deg.) 81.5 80.5 79.6	Rated Load (lbs) 80,680 *	Load Radius (ft) 24.0 26.0 28.0	Angle (deg.) 81.3 80.4 79.5	Rated Load (lbs) 71,200 * 64,610 58,020
(ft) 17.0 18.0 19.0 20.0	Angle (deg.) 81.9 81.2 80.6 79.9	Rated Load (lbs) 118,820 * 112,400 * 105,220 96,870	Radius (ft) 19.0 20.0 22.0 24.0	Angle (deg.) 81.5 80.9 79.8 78.6	Rated Load (lbs) 101,850 * 96,800 83,400 73,120	Radius (ft) 20.0 22.0 24.0 26.0	Angle (deg.) 81.8 80.7 79.7 78.6	Rated Load (lbs) 92,590 * 83,260 73,010 64,900	Load Radius (ft) 22.0 24.0 26.0 28.0	Angle (deg.) 81.5 80.5 79.6 78.6	Rated Load (lbs) 80,680 * 72,950 64,810 58,240	Load Radius (ft) 24.0 26.0 28.0 30.0	Angle (deg.) 81.3 80.4 79.5 78.6	Rated Load (lbs) 71,200 * 64,610 58,020 52,570
(ft) 17.0 18.0 19.0 20.0 22.0	Angle (deg.) 81.9 81.2 80.6 79.9 78.6	Rated Load (lbs) 118,820 * 112,400 * 105,220 96,870 83,480	Radius (ft) 19.0 20.0 22.0 24.0 26.0	Angle (deg.) 81.5 80.9 79.8 78.6 77.4	Rated Load (lbs) 101,850 * 96,800 83,400 73,120 65,010	Radius (ft) 20.0 22.0 24.0 26.0 28.0	Angle (deg.) 81.8 80.7 79.7 78.6 77.5	Rated Load (lbs) 92,590 * 83,260 73,010 64,900 58,330	Load Radius (ft) 22.0 24.0 26.0 28.0 30.0	Angle (deg.) 81.5 80.5 79.6 78.6 77.6	Rated Load (lbs) 80,680 * 72,950 64,810 58,240 52,800	Load Radius (ft) 24.0 26.0 28.0 30.0 32.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7	Rated Load (lbs) 71,200 * 64,610 58,020 52,570 48,010
(ft) 17.0 18.0 19.0 20.0 22.0 24.0	Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3	Rated Load (lbs) 118,820 * 112,400 * 105,220 96,870 83,480 73,230	Radius (ft) 19.0 20.0 22.0 24.0 26.0 28.0	Angle (deg.) 81.5 80.9 79.8 78.6 77.4 76.3	Rated Load (lbs) 101,850 * 96,800 83,400 73,120 65,010 58,440	Radius (ft) 20.0 22.0 24.0 26.0 28.0 30.0	Angle (deg.) 81.8 80.7 79.7 78.6 77.5 76.5	Rated Load (lbs) 92,590 * 83,260 73,010 64,900 58,330 52,880	Load Radius (ft) 22.0 24.0 26.0 28.0 30.0 32.0	Angle (deg.) 81.5 80.5 79.6 78.6 77.6 76.6	Rated Load (lbs) 80,680 * 72,950 64,810 58,240 52,800 48,230	Load Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8	Rated Load (lbs) 71,200 * 64,610 58,020 52,570 48,010 44,110
(ft) 17.0 18.0 19.0 20.0 22.0 24.0 26.0	Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0	Rated Load (lbs) 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140	Radius (ft) 19.0 20.0 22.0 24.0 26.0 28.0 30.0	Angle (deg.) 81.5 80.9 79.8 78.6 77.4 76.3 75.1	Rated Load (lbs) 101,850 * 96,800 83,400 73,120 65,010 58,440 53,020	Radius (ft) 20.0 22.0 24.0 26.0 28.0 30.0 32.0	Angle (deg.) 81.8 80.7 79.7 78.6 77.5 76.5 75.4	Rated Load (lbs) 92,590 * 83,260 73,010 64,900 58,330 52,880 48,320	Load Radius (ft) 22.0 24.0 26.0 28.0 30.0 32.0 34.0	Angle (deg.) 81.5 80.5 79.6 78.6 77.6 76.6 75.6	Rated Load (lbs) 80,680 * 72,950 64,810 58,240 52,800 48,230 44,330	Load Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9	Rated Load (lbs) 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760
(ft) 17.0 18.0 19.0 20.0 22.0 24.0 26.0 28.0	Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7	Rated Load (lbs) 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570	Radius (ft) 19.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0	Angle (deg.) 81.5 80.9 79.8 78.6 77.4 76.3 75.1 73.9	Rated Load (lbs) 101,850 * 96,800 83,400 73,120 65,010 58,440 53,020 48,450	Radius (ft) 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0	Angle (deg.) 81.8 80.7 79.7 78.6 77.5 76.5 75.4 74.3	Rated Load (lbs) 92,590 * 83,260 73,010 64,900 58,330 52,880 48,320 44,440	Load Radius (ft) 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0	Angle (deg.) 81.5 80.5 79.6 78.6 77.6 76.6 75.6 74.7	Rated Load (lbs) 80,680 * 72,950 64,810 58,240 52,800 48,230 44,330 40,980	Load Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.9	Rated Load (lbs) 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830
(ft) 17.0 18.0 19.0 20.0 22.0 24.0 26.0	Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0	Rated Load (lbs) 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150	Radius (ft) 19.0 20.0 22.0 24.0 26.0 28.0 30.0	Angle (deg.) 81.5 80.9 79.8 78.6 77.4 76.3 75.1	Rated Load (lbs) 101,850 * 96,800 83,400 73,120 65,010 58,440 53,020 48,450 44,550	Radius (ft) 20.0 22.0 24.0 26.0 28.0 30.0 32.0	Angle (deg.) 81.8 80.7 79.7 78.6 77.5 76.5 75.4	Rated Load (lbs) 92,590 * 83,260 73,010 64,900 58,330 52,880 48,320 44,440 41,090	Load Radius (ft) 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0	Angle (deg.) 81.5 80.5 79.6 78.6 77.6 76.6 75.6	Rated Load (lbs) 80,680 * 72,950 64,810 58,240 52,800 48,230 44,330 40,980 38,050	Load Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9	Rated Load (lbs) 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250
(ft) 17.0 18.0 19.0 20.0 22.0 24.0 26.0 28.0 30.0	Angle (deg.) 81.9 80.6 79.9 78.6 77.3 76.0 74.7 73.4	Rated Load (lbs) 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570	Radius (ft) 19.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0	Angle (deg.) 81.5 80.9 79.8 78.6 77.4 76.3 75.1 73.9 72.7	Rated Load (lbs) 101,850 * 96,800 83,400 73,120 65,010 55,010 53,020 48,450 44,550 41,200 38,290	Radius (ft) 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0	Angle (deg.) 81.8 80.7 79.7 78.6 77.5 76.5 75.4 74.3 73.2	Rated Load (lbs) 92,590 * 83,260 73,010 64,900 58,330 52,880 48,320 44,440 41,090 38,160 35,600	Load Radius (ft) 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0	Angle (deg.) 81.5 80.5 79.6 78.6 77.6 76.6 75.6 74.7 73.7	Rated Load (lbs) 80,680 * 72,950 64,810 58,240 52,800 48,230 44,330 44,330 40,980 38,050 35,470 30,220	Load Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.9 74.0	Rated Load (lbs) 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830
(ft) 17.0 18.0 19.0 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0	Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 69.3	Rated Load (lbs) 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 41,380	Radius (ft) 19.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0	Angle (deg.) 81.5 80.9 79.8 78.6 77.4 76.3 75.1 73.9 72.7 71.5 70.3 69.0	Rated Load (lbs) 101,850 * 96,800 83,400 73,120 65,010 58,440 53,020 48,450 44,550 41,200 38,290 35,730	Radius (ft) 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0	Angle (deg.) 81.8 80.7 79.7 78.6 77.5 76.5 75.4 74.3 73.2 72.1 71.0 68.2	Rated Load (lbs) 92,590 * 83,260 73,010 64,900 58,330 52,880 48,320 44,440 41,090 38,160 35,600 30,350	Load Radius (ft) 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0	Angle (deg.) 81.5 80.5 79.6 77.6 77.6 76.6 75.6 74.7 73.7 72.7 70.1 67.6	Rated Load (lbs) 80,680 * 72,950 64,810 58,240 52,800 48,230 44,330 44,330 40,980 38,050 35,470 30,220 26,210	Load Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.9 74.0 71.7 69.4 67.0	Rated Load (lbs) 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970 22,790
(ft) 17.0 18.0 19.0 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0	Angle (deg.) 81.9 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 69.3 68.0	Rated Load (lbs) 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 41,380 38,440	Radius (ft) 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0	Angle (deg.) 81.5 80.9 79.8 78.6 77.4 76.3 75.1 73.9 72.7 71.5 70.3 69.0 65.9	Rated Load (lbs) 101,850 * 96,800 83,400 73,120 65,010 58,440 53,020 48,450 44,550 44,550 41,200 38,290 35,730 30,480	Radius (ft) 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 38.0 40.0 45.0 50.0	Angle (deg.) 81.8 80.7 79.7 78.6 77.5 76.5 75.4 74.3 73.2 72.1 71.0 68.2 65.4	Rated Load (lbs) 92,590 * 83,260 73,010 64,900 58,330 52,880 48,320 44,440 41,090 38,160 35,600 30,350 26,340	Load Radius (ft) 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0	Angle (deg.) 81.5 80.5 79.6 78.6 76.6 75.6 74.7 73.7 72.7 70.1 67.6 65.0	Rated Load (lbs) 80,680 * 72,950 64,810 58,240 52,800 48,230 44,330 40,980 38,050 35,470 30,220 26,210 23,010	Load Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0 60.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.9 74.9 74.9 74.0 69.4 67.0 64.6	Rated Load (lbs) 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970 22,790 20,210
(ft) 17.0 18.0 19.0 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0	Angle (deg.) 81.9 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 69.3 68.0 66.6	Rated Load (lbs) 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 41,380 38,440 35,890	Radius (ft) 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0	Angle (deg.) 81.5 80.9 79.8 78.6 77.4 76.3 75.1 73.9 72.7 71.5 70.3 69.0 65.9 62.7	Rated Load (lbs) 101,850 * 96,800 83,400 73,120 65,010 58,440 53,020 48,450 44,550 44,550 44,550 41,200 38,290 35,730 30,480 26,470	Radius (ft) 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0	Angle (deg.) 81.8 80.7 79.7 78.6 77.5 76.5 75.4 74.3 73.2 72.1 71.0 68.2 65.4 62.5	Rated Load (lbs) 92,590 * 83,260 73,010 64,900 58,330 52,880 48,320 44,440 41,090 38,160 35,600 30,350 26,340 23,170	Load Radius (ft) 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0 60.0	Angle (deg.) 81.5 80.5 79.6 78.6 76.6 75.6 74.7 73.7 70.1 67.6 65.0 62.3	Rated Load (lbs) 80,680 * 72,950 64,810 58,240 52,800 48,230 44,330 40,980 38,050 35,470 30,220 26,210 23,010 20,450	Load Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 34.0 36.0 40.0 45.0 55.0 60.0 65.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.9 74.0 71.7 69.4 67.0 64.6 62.1	Rated Load (lbs) 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970 22,790 20,210 18,070
(ft) 17.0 18.0 19.0 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0	Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 69.3 68.0 66.6 63.0	Rated Load (lbs) 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 41,380 38,440 35,890 30,660	Radius (ft) 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0	Angle (deg.) 81.5 80.9 79.8 78.6 77.4 76.3 75.1 73.9 72.7 71.5 70.3 69.0 65.9 62.7 59.5	Rated Load (lbs) 101,850 * 96,800 83,400 73,120 65,010 58,440 53,020 48,450 44,550 44,550 41,200 38,290 35,730 30,480 26,470 23,320	Radius (ft) 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 55.0 60.0	Angle (deg.) 81.8 80.7 79.7 78.6 77.5 76.5 75.4 74.3 73.2 72.1 71.0 68.2 65.4 62.5 59.5	Rated Load (lbs) 92,590 * 83,260 73,010 64,900 58,330 52,880 48,320 44,440 41,090 38,160 35,600 30,350 26,340 23,170 20,610	Load Radius (ft) 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0	Angle (deg.) 81.5 80.5 79.6 78.6 76.6 75.6 74.7 73.7 72.7 70.1 67.6 65.0 62.3 59.5	Rated Load (lbs) 80,680 * 72,950 64,810 58,240 52,800 48,230 44,330 40,980 38,050 38,050 35,470 30,220 26,210 23,010 20,450 18,320	Load Radius (ft) 24.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 55.0 60.0 65.0 70.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.9 74.0 71.7 69.4 67.0 64.6 62.1 59.6	Rated Load (lbs) 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970 22,790 20,210 18,070 16,290
(ft) 17.0 18.0 19.0 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0	Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 69.3 68.0 66.6 63.0 59.4	Rated Load (lbs) 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 41,380 38,440 35,890 30,660 26,670	Radius (ft) 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0	Angle (deg.) 81.5 80.9 79.8 78.6 77.4 76.3 75.1 73.9 72.7 71.5 70.3 69.0 65.9 62.7 59.5 56.1	Rated Load (lbs) 101,850 * 96,800 83,400 73,120 65,010 58,440 53,020 48,450 44,550 41,200 38,290 35,730 30,480 26,470 23,320 20,740	Radius (ft) 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0	Angle (deg.) 81.8 80.7 79.7 78.6 77.5 76.5 75.4 74.3 73.2 72.1 71.0 68.2 65.4 62.5 59.5 56.4	Rated Load (lbs) 92,590 * 83,260 73,010 64,900 58,330 52,880 48,320 44,440 41,090 38,160 35,600 30,350 26,340 23,170 20,610 18,490	Load Radius (ft) 22.0 24.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 70.0	Angle (deg.) 81.5 80.5 79.6 78.6 77.6 75.6 74.7 73.7 72.7 70.1 67.6 65.0 62.3 59.5 56.7	Rated Load (lbs) 80,680 * 72,950 64,810 58,240 52,800 48,230 44,330 40,980 38,050 35,470 30,220 26,210 23,010 20,450 18,320 16,530	Load Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0 60.0 65.0 70.0 75.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.9 74.0 71.7 69.4 67.0 64.6 62.1 59.6 57.0	Rated Load (lbs) 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970 22,790 20,210 18,070 16,290 14,770
(ft) 17.0 18.0 19.0 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0	Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 69.3 68.0 66.6 63.0 59.4 55.6	Rated Load (lbs) 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 41,380 38,440 35,890 30,660 26,670 23,520	Radius (ft) 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0	Angle (deg.) 81.5 80.9 79.8 78.6 77.4 76.3 75.1 73.9 72.7 71.5 70.3 69.0 65.9 62.7 59.5 56.1 52.5	Rated Load (lbs) 101,850 * 96,800 83,400 73,120 65,010 58,440 53,020 48,450 44,550 41,200 38,290 35,730 30,480 26,470 23,320 20,740 18,620	Radius (ft) 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 70.0	Angle (deg.) 81.8 80.7 79.7 78.6 77.5 76.5 75.4 74.3 73.2 72.1 71.0 68.2 65.4 62.5 59.5 56.4 53.2	Rated Load (lbs) 92,590 * 83,260 73,010 64,900 58,330 52,880 48,320 44,440 41,090 38,160 35,600 30,350 26,340 23,170 20,610 18,490 16,710	Load Radius (ft) 22.0 24.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 70.0 75.0	Angle (deg.) 81.5 80.5 79.6 78.6 77.6 76.6 75.6 74.7 73.7 72.7 70.1 67.6 65.0 62.3 59.5 56.7 53.8	Rated Load (lbs) 80,680 * 72,950 64,810 58,240 52,800 48,230 44,330 40,980 38,050 35,470 30,220 26,210 23,010 20,450 18,320 16,530 15,010	Load Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 55.0 60.0 55.0 60.0 77.0 80.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.9 74.0 71.7 69.4 67.0 64.6 62.1 59.6 57.0 54.3	Rated Load (lbs) 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970 22,790 20,210 18,070 16,290 14,770 13,470
(ft) 17.0 18.0 19.0 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0	Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 69.3 68.0 66.6 63.0 59.4	Rated Load (lbs) 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 41,380 38,440 38,440 35,890 30,660 26,670 23,520 20,960	Radius (ft) 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0	Angle (deg.) 81.5 80.9 79.8 78.6 77.4 76.3 75.1 73.9 72.7 71.5 70.3 69.0 65.9 62.7 59.5 56.1	Rated Load (lbs) 101,850 * 96,800 83,400 73,120 65,010 58,440 53,020 48,450 44,550 41,200 38,290 35,730 30,480 26,470 23,320 20,740	Radius (ft) 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0	Angle (deg.) 81.8 80.7 79.7 78.6 77.5 76.5 75.4 74.3 73.2 72.1 71.0 68.2 65.4 62.5 59.5 56.4	Rated Load (lbs) 92,590 * 83,260 73,010 64,900 58,330 52,880 48,320 44,440 41,090 38,160 35,600 30,350 26,340 23,170 20,610 18,490 16,710 15,210	Load Radius (ft) 22.0 24.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 55.0 60.0 77.0 80.0	Angle (deg.) 81.5 80.5 79.6 78.6 77.6 75.6 74.7 73.7 72.7 70.1 67.6 65.0 62.3 59.5 56.7	Rated Load (lbs) 80,680 * 72,950 64,810 58,240 52,800 48,230 44,330 40,980 38,050 35,470 30,220 26,210 23,010 20,450 18,320 16,530 15,010 13,710	Load Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0 60.0 65.0 70.0 75.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.9 74.0 71.7 69.4 67.0 64.6 62.1 59.6 57.0	Rated Load (lbs) 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970 22,790 20,210 18,070 16,290 14,770 13,470 12,320
(ft) 17.0 18.0 19.0 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 36.0 36.0 36.0 36.0 55.0 60.0	Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 69.3 68.0 66.6 63.0 59.4 55.6 51.6	Rated Load (lbs) 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 41,380 38,440 35,890 30,660 26,670 23,520	Radius (ft) 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0 60.0 65.0 70.0	Angle (deg.) 81.5 80.9 79.8 78.6 77.4 76.3 75.1 73.9 72.7 71.5 70.3 69.0 65.9 62.7 59.5 56.1 52.5 48.8	Rated Load (lbs) 101,850 * 96,800 83,400 73,120 65,010 58,440 53,020 48,450 44,550 41,200 38,290 35,730 30,480 26,470 23,320 20,740 18,620 16,860	Radius (ft) 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 70.0 75.0	Angle (deg.) 81.8 80.7 79.7 78.6 77.5 76.5 75.4 74.3 73.2 72.1 71.0 68.2 65.4 62.5 59.5 56.4 53.2 49.9	Rated Load (lbs) 92,590 * 83,260 73,010 64,900 58,330 52,880 48,320 44,440 41,090 38,160 35,600 30,350 26,340 23,170 20,610 18,490 16,710	Load Radius (ft) 22.0 24.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 70.0 75.0	Angle (deg.) 81.5 79.6 78.6 77.6 76.6 75.6 74.7 73.7 72.7 70.1 67.6 65.0 62.3 59.5 56.7 53.8 50.8	Rated Load (lbs) 80,680 * 72,950 64,810 58,240 52,800 48,230 44,330 40,980 38,050 35,470 30,220 26,210 23,010 20,450 18,320 16,530 15,010	Load Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 55.0 60.0 77.0 80.0 85.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.9 74.0 71.7 69.4 67.0 64.6 62.1 59.6 57.0 54.3 51.5	Rated Load (lbs) 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970 22,790 20,210 18,070 16,290 14,770 13,470
(ft) 17.0 18.0 19.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 70.0 75.0	Angle (deg.) 81.9 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 69.3 68.0 66.6 63.0 59.4 55.6 51.6 51.6 51.6 51.6	Rated Load (lbs) 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 41,380 38,440 35,890 30,660 26,670 23,520 20,960 18,870 17,100 15,630	Radius (ft) 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0 60.0 65.0 70.0 75.0	Angle (deg.) 81.5 80.9 79.8 78.6 77.4 76.3 75.1 73.9 72.7 71.5 70.3 69.0 65.9 62.7 59.5 56.1 52.5 48.8 44.8 40.6 35.9	Rated Load (lbs) 101,850 * 96,800 83,400 73,120 65,010 58,440 53,020 48,450 44,550 44,500 44,500 38,290 35,730 30,480 26,470 23,320 20,740 18,620 18,620 18,620 15,360 14,080 12,980	Radius (ft) 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 75.0 60.0 65.0 70.0 75.0 80.0 85.0 90.0	Angle (deg.) 81.8 80.7 79.7 78.6 77.5 76.5 75.4 74.3 73.2 72.1 71.0 68.2 65.4 62.5 59.5 56.4 62.5 59.5 56.4 53.2 49.9 46.4 42.6 38.6	Rated Load (lbs) 92,590 * 83,260 73,010 64,900 58,330 52,880 48,320 44,440 41,090 38,160 35,600 30,350 26,340 23,170 20,610 18,490 16,710 15,210 13,910 12,800 11,830	Load Radius (ft) 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 75.0 60.0 65.0 75.0 80.0 85.0 90.0 95.0	Angle (deg.) 81.5 80.5 79.6 78.6 77.6 76.6 75.6 74.7 73.7 72.7 70.1 67.6 65.0 62.3 59.5 56.7 53.8 50.8 47.6 44.3 40.7	Rated Load (lbs) 80,680 * 72,950 64,810 58,240 52,800 48,230 44,330 40,980 38,050 35,470 30,220 26,210 23,010 20,450 18,320 16,530 15,010 13,710 12,580 11,590 10,730	Load Radius (ft) 24.0 26.0 28.0 30.0 34.0 34.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 70.0 75.0 80.0 85.0 90.0 95.0 100.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.9 74.9 74.0 71.7 69.4 67.0 64.6 62.1 59.6 57.0 54.3 51.5 48.6 45.6 42.4	Rated Load (lbs) 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970 22,790 20,210 18,070 16,290 14,770 13,470 12,320 11,330 10,440 9,670
(ft) 17.0 18.0 19.0 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 65.0 60.0 65.0 70.0 75.0 80.0	Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 69.3 68.0 66.6 63.0 59.4 55.6 51.6 47.4 42.9 37.9 32.3	Rated Load (lbs) 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 41,380 38,440 35,890 30,660 26,670 23,520 20,960 18,870 17,100 15,630 14,370	Radius (ft) 19.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 75.0 60.0 65.0 75.0 80.0 85.0 90.0	Angle (deg.) 81.5 80.9 79.8 78.6 77.4 76.3 75.1 73.9 72.7 71.5 70.3 69.0 65.9 62.7 59.5 56.1 52.5 56.1 52.5 48.8 44.8 44.8 40.6 35.9 30.6	Rated Load (lbs) 101,850 * 96,800 83,400 73,120 65,010 58,440 53,020 48,450 44,550 41,200 38,290 35,730 30,480 26,470 23,320 20,740 18,620 18,620 18,620 16,860 15,360 14,080 12,980 12,010	Radius (ft) 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 34.0 36.0 40.0 45.0 55.0 60.0 65.0 70.0 75.0 80.0 85.0 90.0 95.0	Angle (deg.) 81.8 80.7 79.7 78.6 77.5 76.5 75.4 74.3 73.2 72.1 71.0 68.2 65.4 62.5 59.5 56.4 53.2 49.9 46.4 42.6 38.6 34.2	Rated Load (lbs) 92,590 * 83,260 73,010 64,900 58,330 52,880 48,320 44,440 41,090 38,160 35,600 30,350 26,340 23,170 20,610 18,490 16,710 15,210 13,910 12,800 11,830 10,970	Load Radius (ft) 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 70.0 75.0 80.0 85.0 90.0 95.0 100.0	Angle (deg.) 81.5 80.5 79.6 78.6 76.6 75.6 74.7 73.7 72.7 70.1 67.6 65.0 62.3 59.5 56.7 53.8 47.6 44.3 40.7 36.9	Rated Load (lbs) 80,680 * 72,950 64,810 58,240 52,800 48,230 44,330 40,980 38,050 35,470 30,220 26,210 23,010 20,450 18,320 16,530 15,010 13,710 12,580 11,590 10,730 9,960	Load Radius (ft) 24.0 26.0 28.0 30.0 34.0 34.0 34.0 38.0 40.0 45.0 50.0 55.0 60.0 65.0 70.0 75.0 80.0 80.0 90.0 95.0 100.0 105.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.9 74.9 74.9 74.0 71.7 69.4 67.0 64.6 62.1 59.6 57.0 54.3 51.5 48.6 45.6 42.4 39.0	Rated Load (lbs) 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970 22,790 20,210 18,070 16,290 14,770 13,470 12,320 11,330 10,440 9,670 8,990
(ft) 17.0 18.0 19.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 70.0 75.0	Angle (deg.) 81.9 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 69.3 68.0 66.6 63.0 59.4 55.6 51.6 51.6 51.6 51.6	Rated Load (lbs) 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 41,380 38,440 35,890 30,660 26,670 23,520 20,960 18,870 17,100 15,630	Radius (ft) 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 70.0 75.0 80.0 85.0	Angle (deg.) 81.5 80.9 79.8 78.6 77.4 76.3 75.1 73.9 72.7 71.5 70.3 69.0 65.9 62.7 59.5 56.1 52.5 48.8 44.8 40.6 35.9	Rated Load (lbs) 101,850 * 96,800 83,400 73,120 65,010 58,440 53,020 48,450 44,550 44,500 44,500 38,290 35,730 30,480 26,470 23,320 20,740 18,620 18,620 18,620 15,360 14,080 12,980	Radius (ft) 20.0 22.0 24.0 28.0 30.0 32.0 34.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 70.0 75.0 80.0 85.0 90.0 95.0 100.0	Angle (deg.) 81.8 80.7 79.7 78.6 77.5 76.5 75.4 74.3 73.2 72.1 71.0 68.2 65.4 62.5 59.5 56.4 53.2 49.9 46.4 53.2 49.9 46.4 53.2 49.9 46.4 53.2 49.9 46.4 53.2 49.9 46.4 53.2 29.2	Rated Load (lbs) 92,590 * 83,260 73,010 64,900 58,330 52,880 48,320 44,440 41,090 38,160 35,600 30,350 26,340 23,170 20,610 18,490 16,710 15,210 13,910 12,800 11,830 10,970 10,250	Load Radius (ft) 22.0 24.0 26.0 28.0 30.0 32.0 34.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 70.0 75.0 80.0 85.0 90.0 95.0 100.0 105.0	Angle (deg.) 81.5 80.5 79.6 78.6 76.6 75.6 74.7 73.7 70.1 67.6 65.0 62.3 59.5 56.7 53.8 50.8 47.6 44.3 40.7 36.9 32.7	Rated Load (lbs) 80,680 * 72,950 64,810 58,240 52,800 48,230 44,330 40,980 38,050 35,470 30,220 26,210 23,010 20,450 18,320 16,530 15,010 13,710 12,580 11,590 10,730 9,960 9,280	Load Radius (ft) 24.0 26.0 28.0 30.0 34.0 34.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0 60.0 65.0 70.0 75.0 80.0 80.0 90.0 90.0 95.0 100.0 105.0 110.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.9 74.0 71.7 69.4 67.0 64.6 62.1 59.6 57.0 54.3 51.5 48.6 45.6 42.4 39.0 35.4	Rated Load (lbs) 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970 22,790 20,210 18,070 16,290 14,770 13,470 12,320 11,330 10,440 9,670 8,990 8,390
(ft) 17.0 18.0 19.0 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 65.0 60.0 65.0 70.0 75.0 80.0	Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 69.3 68.0 66.6 63.0 59.4 55.6 51.6 47.4 42.9 37.9 32.3	Rated Load (lbs) 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 41,380 38,440 35,890 30,660 26,670 23,520 20,960 18,870 17,100 15,630 14,370	Radius (ft) 19.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 75.0 60.0 65.0 75.0 80.0 85.0 90.0	Angle (deg.) 81.5 80.9 79.8 78.6 77.4 76.3 75.1 73.9 72.7 71.5 70.3 69.0 65.9 62.7 59.5 56.1 52.5 56.1 52.5 48.8 44.8 44.8 40.6 35.9 30.6	Rated Load (lbs) 101,850 * 96,800 83,400 73,120 65,010 58,440 53,020 48,450 44,550 41,200 38,290 35,730 30,480 26,470 23,320 20,740 18,620 18,620 18,620 16,860 15,360 14,080 12,980 12,010	Radius (ft) 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 34.0 36.0 40.0 45.0 55.0 60.0 65.0 70.0 75.0 80.0 85.0 90.0 95.0	Angle (deg.) 81.8 80.7 79.7 78.6 77.5 76.5 75.4 74.3 73.2 72.1 71.0 68.2 65.4 62.5 59.5 56.4 53.2 49.9 46.4 42.6 38.6 34.2	Rated Load (lbs) 92,590 * 83,260 73,010 64,900 58,330 52,880 48,320 44,440 41,090 38,160 35,600 30,350 26,340 23,170 20,610 18,490 16,710 15,210 13,910 12,800 11,830 10,970	Load Radius (ft) 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 70.0 75.0 80.0 85.0 90.0 95.0 100.0 105.0 110.0	Angle (deg.) 81.5 80.5 79.6 78.6 77.6 76.6 75.6 74.7 73.7 70.1 67.6 65.0 62.3 59.5 56.7 53.8 50.8 47.6 44.3 40.7 36.9 32.7 27.9	Rated Load (lbs) 80,680 * 72,950 64,810 58,240 52,800 48,230 44,330 40,980 38,050 35,470 30,220 26,210 23,010 20,450 18,320 16,530 15,010 13,710 12,580 11,590 10,730 9,960 9,280 8,680	Load Radius (ft) 24.0 28.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 55.0 60.0 65.0 70.0 75.0 80.0 85.0 90.0 95.0 105.0 105.0 105.0 110.0 115.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.9 74.0 71.7 69.4 67.0 64.6 62.1 59.6 57.0 64.6 62.1 59.6 57.0 54.3 51.5 48.6 45.6 42.4 39.0 35.4 31.3	Rated Load (lbs) 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970 22,790 20,210 18,070 16,290 14,770 12,320 11,330 10,440 9,670 8,990 8,390 7,840
(ft) 17.0 18.0 19.0 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 65.0 60.0 65.0 70.0 75.0 80.0	Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 69.3 68.0 66.6 63.0 59.4 55.6 51.6 47.4 42.9 37.9 32.3	Rated Load (lbs) 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 41,380 38,440 35,890 30,660 26,670 23,520 20,960 18,870 17,100 15,630 14,370	Radius (ft) 19.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 75.0 60.0 65.0 75.0 80.0 85.0 90.0	Angle (deg.) 81.5 80.9 79.8 78.6 77.4 76.3 75.1 73.9 72.7 71.5 70.3 69.0 65.9 62.7 59.5 56.1 52.5 56.1 52.5 48.8 44.8 44.8 40.6 35.9 30.6	Rated Load (lbs) 101,850 * 96,800 83,400 73,120 65,010 58,440 53,020 48,450 44,550 41,200 38,290 35,730 30,480 26,470 23,320 20,740 18,620 18,620 18,620 16,860 15,360 14,080 12,980 12,010	Radius (ft) 20.0 22.0 24.0 28.0 30.0 32.0 34.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 70.0 75.0 80.0 85.0 90.0 95.0 100.0	Angle (deg.) 81.8 80.7 79.7 78.6 77.5 76.5 75.4 74.3 73.2 72.1 71.0 68.2 65.4 62.5 59.5 56.4 53.2 49.9 46.4 53.2 49.9 46.4 53.2 49.9 46.4 53.2 49.9 46.4 53.2 49.9 46.4 53.2 29.2	Rated Load (lbs) 92,590 * 83,260 73,010 64,900 58,330 52,880 48,320 44,440 41,090 38,160 35,600 30,350 26,340 23,170 20,610 18,490 16,710 15,210 13,910 12,800 11,830 10,970 10,250	Load Radius (ft) 22.0 24.0 26.0 28.0 30.0 32.0 34.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 70.0 75.0 80.0 85.0 90.0 95.0 100.0 105.0	Angle (deg.) 81.5 80.5 79.6 78.6 76.6 75.6 74.7 73.7 70.1 67.6 65.0 62.3 59.5 56.7 53.8 50.8 47.6 44.3 40.7 36.9 32.7	Rated Load (lbs) 80,680 * 72,950 64,810 58,240 52,800 48,230 44,330 40,980 38,050 35,470 30,220 26,210 23,010 20,450 18,320 16,530 15,010 13,710 12,580 11,590 10,730 9,960 9,280	Load Radius (ft) 24.0 26.0 28.0 30.0 34.0 34.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0 60.0 65.0 70.0 75.0 80.0 80.0 90.0 90.0 95.0 100.0 105.0 110.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.9 74.0 71.7 69.4 67.0 64.6 62.1 59.6 57.0 54.3 51.5 48.6 45.6 42.4 39.0 35.4	Rated Load (lbs) 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970 22,790 20,210 18,070 16,290 14,770 13,470 12,320 11,330 10,440 9,670 8,990 8,390

Note: Designed and rated to comply with ANSI Code B30.5

Main Boom Lift Capacity

Full Counterweight: 57,600 lbs Carbody Weight: 14,400

14	0' Boc	om	15	0' Boo	om	16	0' Boo	om	17	0' Boo	om	18	0' Boo	om
Load Radius	Boom Angle	360 [°] Rated Load	Load Radius	Boom Angle	360 [°] Rated Load	Load Radius	Boom Angle	360 [°] Rated Load	Load Radius	Boom Angle	360 [°] Rated Load	Load Radius	Boom Angle	360 [°] Rated Load
(ft)	(deg.)	(lbs)	(ft)	(deg.)	(lbs)	(ft)	(deg.)	(lbs)	(ft)	(deg.)	(lbs)	(ft)	(deg.)	(lbs)
24.0 26.0 28.0 30.0 32.0 34.0 36.0 55.0 60.0 65.0 75.0 60.0 65.0 75.0 80.0 85.0 90.0 95.0 100.0 115.0 115.0 125.0 130.0 135.0	$\begin{array}{c} 81.9\\ 81.1\\ 80.2\\ 79.4\\ 78.6\\ 77.7\\ 76.0\\ 75.2\\ 73.1\\ 70.9\\ 66.5\\ 64.3\\ 59.6\\ 57.2\\ 49.5\\ 46.8\\ 43.9\\ 37.5\\ 34.0\\ 30.1\\ 25.7\\ 20.5\\ \end{array}$	61,720 * 60,840 * 57,980 52,530 47,950 44,040 40,670 37,740 35,160 29,910 25,880 20,100 16,150 14,630 13,310 12,160 11,170 10,290 9,500 8,790 8,790 8,790 8,790 8,790 8,790 5,900	26.0 28.0 30.0 32.0 34.0 38.0 40.0 45.0 55.0 60.0 65.0 75.0 80.0 85.0 90.0 85.0 95.0 100.0 115.0 120.0 115.0 120.0 135.0 135.0	81.7 80.9 80.1 79.3 78.6 77.8 77.0 76.2 74.2 70.2 66.1 64.0 61.8 59.6 57.4 55.7 45.1 52.7 50.3 47.7 45.1 52.7 50.3 47.7 45.1 39.4 36.2 32.8 29.1 24.8	52,680 * 51,800 * 51,140 * 47,810 43,890 40,540 37,610 35,030 29,760 25,720 22,530 19,950 17,810 16,000 14,480 13,160 12,010 11,000 10,110 9,320 8,640 8,000 7,420 6,920 6,450 6,040 5,660 5,330	28.0 30.0 32.0 34.0 36.0 38.0 40.0 50.0 55.0 60.0 55.0 60.0 75.0 80.0 90.0 95.0 100.0 105.0 100.0 105.0 115.0 125.0 135.0 140.0 145.0	81.5 80.7 80.0 79.3 78.6 77.8 77.1 75.2 73.4 71.5 69.6 67.7 65.7 65.7 61.7 59.7 57.6 45.2 50.9 48.6 46.1 43.6 40.9 38.1 35.0 31.8 28.1 24.0	44,090 * 43,430 * 42,760 * 40,520 37,560 34,980 29,710 25,680 22,480 19,880 17,720 15,930 14,390 13,070 11,920 10,910 10,910 10,910 10,910 10,910 10,910 10,910 5,860 5,860 5,860 5,860 5,860 5,860 5,860	28.0 30.0 32.0 34.0 36.0 38.0 40.0 50.0 55.0 60.0 75.0 60.0 75.0 80.0 85.0 90.0 95.0 100.0 105.0 100.0 105.0 115.0 125.0 135.0 140.0 145.0 155.0 160.0	$\begin{array}{c} 82.0\\ 81.3\\ 80.6\\ 79.9\\ 79.9\\ 79.2\\ 78.6\\ 77.9\\ 76.1\\ 74.4\\ 72.6\\ 69.1\\ 67.2\\ 65.5\\ 61.6\\ 59.7\\ 55.7\\ 55.7\\ 55.7\\ 53.6\\ 51.5\\ 49.3\\ 47.0\\ 44.7\\ 42.2\\ 39.6\\ 36.9\\ 34.0\\ 30.8\\ 27.3\\ 23.3\\ \end{array}$	38,800 * 38,130 * 37,470 * 37,030 * 36,370 * 34,780 29,510 25,460 22,260 19,660 17,520 15,710 14,170 12,850 11,680 10,670 9,780 8,990 8,260 7,620 7,620 7,620 6,520 6,040 5,570 5,150 4,760 4,380 4,050 3,760 3,500	30.0 32.0 34.0 36.0 38.0 45.0 55.0 65.0 65.0 70.0 75.0 80.0 90.0 90.0 90.0 90.0 90.0 105.0 110.0 115.0 135.0 145.0 145.0 155.0 165.0	$\begin{array}{c} 81.8\\ 81.1\\ 80.5\\ 79.8\\ 79.2\\ 78.5\\ 76.9\\ 75.3\\ 73.6\\ 72.0\\ 70.3\\ 68.6\\ 66.8\\ 65.1\\ 63.3\\ 61.5\\ 59.7\\ 57.8\\ 55.9\\ 54.0\\ 52.0\\ 9\\ 47.8\\ 45.6\\ 43.3\\ 40.9\\ 38.4\\ 35.8\\ 33.0\\ 29.9\\ 26.5\\ \end{array}$	33,730 * 33,060 * 32,620 * 31,960 * 31,960 * 31,920 * 29,250 25,220 22,000 19,400 17,260 15,450 13,910 12,560 11,410 10,400 9,500 8,700 8,700 6,760 6,230 5,720 5,220 4,780 4,380 4,030 3,680 3,370 2,840 2,
Ree	ves	4	Ree	ves	4	Ree		4	Ree		4	170.0 Ree	22.6	2,620 2
							1003	4		ves	-	nee	eves	2
19	0' Boc	om		0' Boo	om	nee		4	nee	ves	T	nee	ves	
19 Load Radius (ft)	0' Boom Boom Angle (deg.)	2000 360° Rated Load (lbs)												
Load Radius	Boom Angle (deg.) 81.6 80.4 79.8 77.6 76.1 74.5 72.9 71.3 69.7 68.1 64.8 63.2 61.4 59.7 57.9 56.1 54.3 52.4 50.5 48.5 48.5 48.5 48.5 48.5 48.5 48.5 48	360 [°] Rated Load	20 Load Radius	0' Boom Angle (deg.) 81.4 80.9 80.3 79.7 78.2 76.8 75.3 70.8 67.7 66.2 64.6 63.0 61.4 59.7 58.1 56.3 54.6 63.4 59.7 58.1 54.6 63.4 59.7 58.1 54.6 52.8 51.0 49.1 47.2 45.2 45.2 45.2 45.2	OM 360 [°] Rated Load									

Note: Designed and rated to comply with ANSI Code B30.5

Fixed Jib Lift Capacity

Full Counterweight: 57,600 lbs Carbody Weight: 14,400

	80' Be	oom															
		30 f					t Jib				t Jib				t Jib		-
Load Radius		Offset An					igle (deg.)			Offset An				Offset An			Load Radius
(ft)	1 Boom Angle		-	0 Pated Load	Boom Angle	0 Pated Load	Boom Angle	Dated Load		0 Pated Load	-	0 Pated Load	Boom Angle	0 Pated Load	Boom Angle	Dated Load	(ft)
	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	
30	79.3	24,000*															30
32	78.0	24,000*															32
34 36	77.0 75.9	24,000* 24,000*			79.3 78.3	24,000* 24,000*											34 36
38	73.9	24,000*	79.6	20,230*	77.4	24,000*			79.3	20,000*							38
40	73.8	24,000*	78.5	19,730*	76.4	24,000*			78.4	20,000*			79.8	18,000*			40
45	71.1	24,000*	75.7	18,600*	73.9	24,000*	79.7	15,360*	76.1	20,000*			77.7	17,940*			45
50	68.3	24,000*	72.8	17,610*	71.4	22,150*	77.1	14,480*	73.8	18,540*			75.6	16,330*			50
55	65.3 62.3	23,890	69.7 66.7	16,710*	68.7 66.1	20,280* 18,800*	74.3 71.6	13,640* 12,980*	71.3 68.9	16,950* 15,690*	78.0 75.5	11,080* 10,490*	73.3 71.2	14,900* 13,750*	78.7	8,950*	55
60 65	62.5 59.3	21,340 19,200	63.6	15,960* 15,290*	63.4	17,520*	68.8	12,980	66.5	14,610*	73.0	9,980*	69.0	12,780*	76.4	8,480*	60 65
70	56.2	17,410	60.3	14,700*	60.6	16,400*	65.9	11,830*	64.0	13,660*	70.4	9,540*	66.7	11,900*	74.1	8,060*	70
75	52.8	15,780	56.7	14,150*	57.6	15,360*	62.7	11,350*	61.3	12,760*	67.6	9,100*	64.2	11,110*	71.5	7,670*	75
80	49.3	14,460	53.1	13,710*	54.6	14,520*	59.6	10,930*	58.7	12,030*	64.8	8,730*	61.9	10,440*	69.0	7,340*	80
85 90	45.7	13,330			51.5 48.3	13,470 12,450	56.3 52.9	10,560* 10,250*	56.0 53.2	11,390* 10,800*	62.0 59.0	8,420* 8,130*	59.5 57.0	9,850* 9,320*	66.5 63.9	7,030* 6,760*	85
90 95	41.8 37.2	12,320 11,370			48.3 44.6	12,450	52.9	10,250"	53.2	10,800*	59.0 55.6	7,840*	54.2	8,810*	60.9	6,500*	90 95
100	32.4	10,600			40.8	10,710			46.9	9,780*	52.3	7,620*	51.5	8,390*	58.1	6,280*	100
105		,			36.7	10,000			43.6	9,360*			48.7	8,020*	55.0	6,100*	105
110									40.0	8,990*			45.7	7,670*	51.8	5,930*	110
115									35.8	8,640*			42.3	7,340*			115
120 125													38.8 35.1	7,050* 6,810*			120 125
Reeves	2	>		2		2		1		2				2		1	Reeves
	90' Be	oom															
	J O D	30 fi	t lib			40 f	t Jib			50 f	t Jib			60 f	t Jib		<u> </u>
Load		Offset An		1			igle (deg.))		Offset An				Offset An)	Load
Radius	1	0	3	0	1	0	3	0	1	0	3	0	1	0	3	0	Radius
(ft)	Boom Angle		Boom Angle		-		Boom Angle				-		-	Rated Load	-		(ft)
	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	
32 34	79.1 78.1	24,000*															32
36		24 000*															
38	77.1	24,000* 24,000*			79.3	24,000*											34 36
1 50	77.1 76.2	24,000* 24,000*			78.4	24,000*			80.0	20,000*							34 36 38
40	77.1 76.2 75.2	24,000* 24,000* 24,000*	79.5	20,170*	78.4 77.5	24,000* 24,000*			79.2	20,000*			70.6	10.000*			34 36 38 40
40 45	77.1 76.2 75.2 72.7	24,000* 24,000* 24,000* 24,000*	77.0	19,060*	78.4 77.5 75.2	24,000* 24,000* 24,000*	78.2	14 810*	79.2 77.1	20,000* 20,000*			78.6	18,000*			34 36 38 40 45
40	77.1 76.2 75.2	24,000* 24,000* 24,000*		19,060* 18,120*	78.4 77.5	24,000* 24,000*	78.2 75.6	14,810* 14,020*	79.2	20,000*	78.9	11,300*	78.6 76.6 74.5	18,000* 17,040* 15,580*			34 36 38 40 45 50
40 45 50 55 60	77.1 76.2 75.2 72.7 70.2 67.5 64.9	24,000* 24,000* 24,000* 24,000* 24,000*	77.0 74.4	19,060* 18,120* 17,210* 16,460*	78.4 77.5 75.2 72.9 70.4 68.1	24,000* 24,000* 23,320* 21,400* 19,880*	1	14,020* 13,330*	79.2 77.1 75.0 72.7 70.5	20,000* 20,000* 19,400* 17,790* 16,510*	78.9 76.7	10,730*	76.6 74.5 72.5	17,040* 15,580* 14,410*	79.5	9,100*	34 36 38 40 45 50 55 60
40 45 50 55 60 65	77.1 76.2 75.2 72.7 70.2 67.5 64.9 62.2	24,000* 24,000* 24,000* 24,000* 24,000* 23,690 21,120 19,000	77.0 74.4 71.6 68.9 66.1	19,060* 18,120* 17,210* 16,460* 15,800*	78.4 77.5 75.2 72.9 70.4 68.1 65.6	24,000* 24,000* 23,320* 21,400* 19,880* 18,560*	75.6 73.2 70.7	14,020* 13,330* 12,760*	79.2 77.1 75.0 72.7 70.5 68.3	20,000* 20,000* 19,400* 17,790* 16,510* 15,380*	76.7 74.4	10,730* 10,250*	76.6 74.5 72.5 70.5	17,040* 15,580* 14,410* 13,400*	77.4	8,660*	34 36 38 40 45 50 55 60 65
40 45 50 55 60 65 70	77.1 76.2 75.2 72.7 70.2 67.5 64.9 62.2 59.4	24,000* 24,000* 24,000* 24,000* 24,000* 23,690 21,120 19,000 17,190	77.0 74.4 71.6 68.9 66.1 63.3	19,060* 18,120* 17,210* 16,460* 15,800* 15,210*	78.4 77.5 75.2 72.9 70.4 68.1 65.6 63.2	24,000* 24,000* 23,320* 21,400* 19,880* 18,560* 17,370	75.6 73.2 70.7 68.1	14,020* 13,330* 12,760* 12,230*	79.2 77.1 75.0 72.7 70.5 68.3 66.1	20,000* 20,000* 19,400* 17,790* 16,510* 15,380* 14,390*	76.7 74.4 72.0	10,730* 10,250* 9,780*	76.6 74.5 72.5 70.5 68.4	17,040* 15,580* 14,410* 13,400* 12,520*	77.4 75.3	8,660* 8,240*	34 36 38 40 45 50 55 60 65 70
40 45 50 55 60 65	77.1 76.2 75.2 72.7 70.2 67.5 64.9 62.2	24,000* 24,000* 24,000* 24,000* 23,690 21,120 19,000 17,190 15,560	77.0 74.4 71.6 68.9 66.1	19,060* 18,120* 17,210* 16,460* 15,800*	78.4 77.5 75.2 72.9 70.4 68.1 65.6	24,000* 24,000* 23,320* 21,400* 19,880* 18,560* 17,370 15,740	75.6 73.2 70.7	14,020* 13,330* 12,760*	79.2 77.1 75.0 72.7 70.5 68.3	20,000* 20,000* 19,400* 17,790* 16,510* 15,380*	76.7 74.4	10,730* 10,250*	76.6 74.5 72.5 70.5	17,040* 15,580* 14,410* 13,400*	77.4	8,660*	34 36 38 40 45 50 55 60 65
40 45 50 55 60 65 70 75	77.1 76.2 75.2 72.7 70.2 67.5 64.9 62.2 59.4 56.4	24,000* 24,000* 24,000* 24,000* 24,000* 23,690 21,120 19,000 17,190	77.0 74.4 71.6 68.9 66.1 63.3 60.2	19,060* 18,120* 17,210* 16,460* 15,800* 15,210* 14,660*	78.4 77.5 75.2 72.9 70.4 68.1 65.6 63.2 60.4	24,000* 24,000* 23,320* 21,400* 19,880* 18,560* 17,370	75.6 73.2 70.7 68.1 65.3	14,020* 13,330* 12,760* 12,230* 11,720*	79.2 77.1 75.0 72.7 70.5 68.3 66.1 63.6	20,000* 20,000* 19,400* 17,790* 16,510* 15,380* 14,390* 13,490*	76.7 74.4 72.0 69.5	10,730* 10,250* 9,780* 9,360*	76.6 74.5 72.5 70.5 68.4 66.1	17,040* 15,580* 14,410* 13,400* 12,520* 11,680*	77.4 75.3 72.9	8,660* 8,240* 7,870*	34 36 38 40 45 50 55 60 65 70 75
40 45 50 55 60 65 70 75 80 85 90	77.1 76.2 75.2 72.7 70.2 67.5 64.9 62.2 59.4 56.4 53.5 50.4 47.1	24,000* 24,000* 24,000* 24,000* 23,690 21,120 19,000 17,190 15,560 14,240 13,090 12,100	77.0 74.4 71.6 68.9 66.1 63.3 60.2 57.1	19,060* 18,120* 17,210* 16,460* 15,800* 15,210* 14,660* 14,190*	78.4 77.5 75.2 72.9 70.4 68.1 65.6 63.2 60.4 57.8 55.1 52.3	24,000* 24,000* 23,320* 21,400* 19,880* 18,560* 17,370 15,740 14,410 13,240 12,230	75.6 73.2 70.7 68.1 65.3 62.5 59.7 56.7	14,020* 13,330* 12,760* 12,230* 11,720* 11,300* 10,930* 10,580*	79.2 77.1 75.0 72.7 70.5 68.3 66.1 63.6 61.3 58.8 56.3	20,000* 20,000* 19,400* 17,790* 16,510* 15,380* 14,390* 13,490* 12,720* 12,050* 11,440*	76.7 74.4 72.0 69.5 67.0 64.5 61.8	10,730* 10,250* 9,780* 9,360* 8,990* 8,680* 8,370*	76.6 74.5 72.5 70.5 68.4 66.1 64.0 61.8 59.5	17,040* 15,580* 14,410* 13,400* 12,520* 11,680* 11,000* 10,400* 9,850*	77.4 75.3 72.9 70.7 68.4 66.0	8,660* 8,240* 7,870* 7,530* 7,230* 6,960*	34 36 38 40 45 50 55 60 65 70 75 80 85 90
40 45 50 55 60 65 70 75 80 85 90 95	77.1 76.2 75.2 72.7 70.2 67.5 64.9 62.2 59.4 56.4 53.5 50.4 47.1 43.4	24,000* 24,000* 24,000* 24,000* 23,690 21,120 19,000 17,190 15,560 14,240 13,090 12,100 11,150	77.0 74.4 71.6 68.9 66.1 63.3 60.2 57.1	19,060* 18,120* 17,210* 16,460* 15,800* 15,210* 14,660* 14,190*	78.4 77.5 75.2 72.9 70.4 68.1 65.6 63.2 60.4 57.8 55.1 52.3 49.1	24,000* 24,000* 23,320* 21,400* 19,880* 18,560* 17,370 15,740 14,410 13,240 12,230 11,280	75.6 73.2 70.7 68.1 65.3 62.5 59.7	14,020* 13,330* 12,760* 12,230* 11,720* 11,300* 10,930*	79.2 77.1 75.0 72.7 70.5 68.3 66.1 63.6 61.3 58.8 56.3 53.6	20,000* 20,000* 19,400* 17,790* 16,510* 15,380* 14,390* 13,490* 12,720* 12,050* 11,440* 10,860*	76.7 74.4 72.0 69.5 67.0 64.5 61.8 58.9	10,730* 10,250* 9,780* 9,360* 8,990* 8,680* 8,370* 8,110*	76.6 74.5 72.5 70.5 68.4 66.1 64.0 61.8 59.5 57.1	17,040* 15,580* 14,410* 13,400* 12,520* 11,680* 11,000* 10,400* 9,850* 9,320*	77.4 75.3 72.9 70.7 68.4 66.0 63.4	8,660* 8,240* 7,870* 7,530* 7,230* 6,960* 6,700*	34 36 38 40 45 50 55 60 65 70 75 80 85 90 95
40 45 50 55 60 65 70 75 80 85 90	77.1 76.2 75.2 72.7 70.2 67.5 64.9 62.2 59.4 56.4 53.5 50.4 47.1	24,000* 24,000* 24,000* 24,000* 23,690 21,120 19,000 17,190 15,560 14,240 13,090 12,100	77.0 74.4 71.6 68.9 66.1 63.3 60.2 57.1	19,060* 18,120* 17,210* 16,460* 15,800* 15,210* 14,660* 14,190*	78.4 77.5 75.2 72.9 70.4 68.1 65.6 63.2 60.4 57.8 55.1 52.3	24,000* 24,000* 23,320* 21,400* 19,880* 18,560* 17,370 15,740 14,410 13,240 12,230	75.6 73.2 70.7 68.1 65.3 62.5 59.7 56.7	14,020* 13,330* 12,760* 12,230* 11,720* 11,300* 10,930* 10,580*	79.2 77.1 75.0 72.7 70.5 68.3 66.1 63.6 61.3 58.8 56.3	20,000* 20,000* 19,400* 17,790* 16,510* 15,380* 14,390* 13,490* 12,720* 12,050* 11,440*	76.7 74.4 72.0 69.5 67.0 64.5 61.8	10,730* 10,250* 9,780* 9,360* 8,990* 8,680* 8,370*	76.6 74.5 72.5 70.5 68.4 66.1 64.0 61.8 59.5	17,040* 15,580* 14,410* 13,400* 12,520* 11,680* 11,000* 10,400* 9,850*	77.4 75.3 72.9 70.7 68.4 66.0	8,660* 8,240* 7,870* 7,530* 7,230* 6,960*	34 36 38 40 45 50 55 60 65 70 75 80 85 90
40 45 50 55 60 65 70 75 80 85 90 95 100	77.1 76.2 75.2 72.7 70.2 67.5 64.9 62.2 59.4 56.4 53.5 50.4 47.1 43.4 39.7	24,000* 24,000* 24,000* 24,000* 23,690 21,120 19,000 17,190 15,560 14,240 13,090 12,100 11,150 10,360	77.0 74.4 71.6 68.9 66.1 63.3 60.2 57.1	19,060* 18,120* 17,210* 16,460* 15,800* 15,210* 14,660* 14,190*	78.4 77.5 75.2 72.9 70.4 68.1 65.6 63.2 60.4 57.8 55.1 52.3 49.1 46.0 42.7 39.1	24,000* 24,000* 23,320* 21,400* 19,880* 18,560* 17,370 15,740 14,410 13,240 12,230 11,280 10,490 9,760 9,120	75.6 73.2 70.7 68.1 65.3 62.5 59.7 56.7	14,020* 13,330* 12,760* 12,230* 11,720* 11,300* 10,930* 10,580*	79.2 77.1 75.0 72.7 70.5 68.3 66.1 63.6 61.3 58.8 56.3 53.6 50.9	20,000* 20,000* 19,400* 17,790* 16,510* 15,380* 14,390* 13,490* 12,720* 12,050* 11,440* 10,860* 10,380* 9,850 9,210	76.7 74.4 72.0 69.5 67.0 64.5 61.8 58.9 56.1	10,730* 10,250* 9,780* 9,360* 8,990* 8,680* 8,370* 8,110* 7,870*	76.6 74.5 72.5 70.5 68.4 66.1 64.0 61.8 59.5 57.1 54.7 52.2 49.6	17,040* 15,580* 14,410* 13,400* 12,520* 11,680* 11,000* 10,400* 9,850* 9,320* 8,880*	77.4 75.3 72.9 70.7 68.4 66.0 63.4 60.9	8,660* 8,240* 7,870* 7,530* 7,230* 6,960* 6,700* 6,480*	34 36 38 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110
40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115	77.1 76.2 75.2 72.7 70.2 67.5 64.9 62.2 59.4 56.4 53.5 50.4 47.1 43.4 39.7	24,000* 24,000* 24,000* 24,000* 23,690 21,120 19,000 17,190 15,560 14,240 13,090 12,100 11,150 10,360	77.0 74.4 71.6 68.9 66.1 63.3 60.2 57.1	19,060* 18,120* 17,210* 16,460* 15,800* 15,210* 14,660* 14,190*	78.4 77.5 75.2 72.9 70.4 68.1 65.6 63.2 60.4 57.8 55.1 52.3 49.1 46.0 42.7	24,000* 24,000* 23,320* 21,400* 19,880* 18,560* 17,370 15,740 14,410 13,240 12,230 11,280 10,490 9,760	75.6 73.2 70.7 68.1 65.3 62.5 59.7 56.7	14,020* 13,330* 12,760* 12,230* 11,720* 11,300* 10,930* 10,580*	79.2 77.1 75.0 72.7 70.5 68.3 66.1 63.6 61.3 58.8 56.3 53.6 50.9 48.0 45.0 41.7	20,000* 20,000* 19,400* 17,790* 16,510* 15,380* 14,390* 13,490* 12,720* 12,050* 11,440* 10,860* 10,880* 9,850 9,210 8,570	76.7 74.4 72.0 69.5 67.0 64.5 61.8 58.9 56.1	10,730* 10,250* 9,780* 9,360* 8,990* 8,680* 8,370* 8,110* 7,870*	76.6 74.5 72.5 70.5 68.4 66.1 64.0 61.8 59.5 57.1 54.7 52.2 49.6 46.7	17,040* 15,580* 14,410* 13,400* 12,520* 11,680* 11,000* 10,400* 9,850* 9,320* 8,880* 8,880* 8,480* 8,110* 7,760*	77.4 75.3 72.9 70.7 68.4 66.0 63.4 60.9 58.3	8,660* 8,240* 7,870* 7,530* 7,230* 6,960* 6,700* 6,480* 6,280*	34 36 38 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115
40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120	77.1 76.2 75.2 72.7 70.2 67.5 64.9 62.2 59.4 56.4 53.5 50.4 47.1 43.4 39.7	24,000* 24,000* 24,000* 24,000* 23,690 21,120 19,000 17,190 15,560 14,240 13,090 12,100 11,150 10,360	77.0 74.4 71.6 68.9 66.1 63.3 60.2 57.1	19,060* 18,120* 17,210* 16,460* 15,800* 15,210* 14,660* 14,190*	78.4 77.5 75.2 72.9 70.4 68.1 65.6 63.2 60.4 57.8 55.1 52.3 49.1 46.0 42.7 39.1	24,000* 24,000* 23,320* 21,400* 19,880* 18,560* 17,370 15,740 14,410 13,240 12,230 11,280 10,490 9,760 9,120	75.6 73.2 70.7 68.1 65.3 62.5 59.7 56.7	14,020* 13,330* 12,760* 12,230* 11,720* 11,300* 10,930* 10,580*	79.2 77.1 75.0 72.7 70.5 68.3 66.1 63.6 61.3 58.8 56.3 53.6 50.9 48.0 45.0 41.7 38.2	20,000* 20,000* 19,400* 17,790* 16,510* 15,380* 14,390* 13,490* 12,720* 12,050* 11,440* 10,860* 10,380* 9,850 9,210 8,570 8,040	76.7 74.4 72.0 69.5 67.0 64.5 61.8 58.9 56.1	10,730* 10,250* 9,780* 9,360* 8,990* 8,680* 8,370* 8,110* 7,870*	76.6 74.5 72.5 70.5 68.4 66.1 64.0 61.8 59.5 57.1 54.7 52.2 49.6 46.7 43.8	17,040* 15,580* 14,410* 13,400* 12,520* 11,680* 11,000* 10,400* 9,850* 9,320* 8,880* 8,480* 8,480* 8,110* 7,760* 7,450*	77.4 75.3 72.9 70.7 68.4 66.0 63.4 60.9 58.3 55.5	8,660* 8,240* 7,870* 7,530* 7,230* 6,960* 6,700* 6,480* 6,280* 6,100*	34 36 38 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120
40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115	77.1 76.2 75.2 72.7 70.2 67.5 64.9 62.2 59.4 56.4 53.5 50.4 47.1 43.4 39.7	24,000* 24,000* 24,000* 24,000* 23,690 21,120 19,000 17,190 15,560 14,240 13,090 12,100 11,150 10,360	77.0 74.4 71.6 68.9 66.1 63.3 60.2 57.1	19,060* 18,120* 17,210* 16,460* 15,800* 15,210* 14,660* 14,190*	78.4 77.5 75.2 72.9 70.4 68.1 65.6 63.2 60.4 57.8 55.1 52.3 49.1 46.0 42.7 39.1	24,000* 24,000* 23,320* 21,400* 19,880* 18,560* 17,370 15,740 14,410 13,240 12,230 11,280 10,490 9,760 9,120	75.6 73.2 70.7 68.1 65.3 62.5 59.7 56.7	14,020* 13,330* 12,760* 12,230* 11,720* 11,300* 10,930* 10,580*	79.2 77.1 75.0 72.7 70.5 68.3 66.1 63.6 61.3 58.8 56.3 53.6 50.9 48.0 45.0 41.7	20,000* 20,000* 19,400* 17,790* 16,510* 15,380* 14,390* 13,490* 12,720* 12,050* 11,440* 10,860* 10,880* 9,850 9,210 8,570	76.7 74.4 72.0 69.5 67.0 64.5 61.8 58.9 56.1	10,730* 10,250* 9,780* 9,360* 8,990* 8,680* 8,370* 8,110* 7,870*	76.6 74.5 72.5 70.5 68.4 66.1 64.0 61.8 59.5 57.1 54.7 52.2 49.6 46.7	17,040* 15,580* 14,410* 13,400* 12,520* 11,680* 11,000* 10,400* 9,850* 9,320* 8,880* 8,880* 8,480* 8,110* 7,760*	77.4 75.3 72.9 70.7 68.4 66.0 63.4 60.9 58.3 55.5	8,660* 8,240* 7,870* 7,530* 7,230* 6,960* 6,700* 6,480* 6,280* 6,100*	34 36 38 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125
40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125	77.1 76.2 75.2 72.7 70.2 67.5 64.9 62.2 59.4 56.4 53.5 50.4 47.1 43.4 39.7	24,000* 24,000* 24,000* 24,000* 23,690 21,120 19,000 17,190 15,560 14,240 13,090 12,100 11,150 10,360	77.0 74.4 71.6 68.9 66.1 63.3 60.2 57.1	19,060* 18,120* 17,210* 16,460* 15,800* 15,210* 14,660* 14,190*	78.4 77.5 75.2 72.9 70.4 68.1 65.6 63.2 60.4 57.8 55.1 52.3 49.1 46.0 42.7 39.1	24,000* 24,000* 23,320* 21,400* 19,880* 18,560* 17,370 15,740 14,410 13,240 12,230 11,280 10,490 9,760 9,120	75.6 73.2 70.7 68.1 65.3 62.5 59.7 56.7	14,020* 13,330* 12,760* 12,230* 11,720* 11,300* 10,930* 10,580*	79.2 77.1 75.0 72.7 70.5 68.3 66.1 63.6 61.3 58.8 56.3 53.6 50.9 48.0 45.0 41.7 38.2	20,000* 20,000* 19,400* 17,790* 16,510* 15,380* 14,390* 13,490* 12,720* 12,050* 11,440* 10,860* 10,380* 9,850 9,210 8,570 8,040	76.7 74.4 72.0 69.5 67.0 64.5 61.8 58.9 56.1	10,730* 10,250* 9,780* 9,360* 8,990* 8,680* 8,370* 8,110* 7,870*	76.6 74.5 72.5 70.5 68.4 66.1 64.0 61.8 59.5 57.1 54.7 52.2 49.6 46.7 43.8 40.7	17,040* 15,580* 14,410* 13,400* 12,520* 11,680* 11,000* 10,400* 9,850* 9,320* 8,880* 8,480* 8,480* 8,110* 7,760* 7,450* 7,180*	77.4 75.3 72.9 70.7 68.4 66.0 63.4 60.9 58.3 55.5	8,660* 8,240* 7,870* 7,530* 7,230* 6,960* 6,700* 6,480* 6,280* 6,100*	34 36 38 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120

Note: Designed and rated to comply with ANSI Code B30.5

Fixed Jib Lift Capacity

Full Counterweight: 57,600 lbs Carbody Weight: 14,400

	100' E	Boom															
			t Jib				t Jib				t Jib				t Jib		
Load Radius			igle (deg.)	0			gle (deg.)	0			igle (deg.)	0			igle (deg.)	0	Load Radius
(ft)	Boom Angle	0 Rated Load	Boom Angle	-	Boom Angle	0 Rated Load	-			0 Rated Load	Boom Angle	-	Boom Angle	0 Rated Load	Boom Angle	-	(ft)
	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	
32 34 36 38 40 45 50 55 60 65 70 75 80 85 80 85 100 105 110 115 120 125 130 135 140	79.9 79.0 78.1 77.2 76.4 74.1 71.8 69.3 67.0 64.5 62.1 59.4 56.7 54.0 51.2 48.1 45.0 41.7 38.1 34.0	24,000* 24,000* 24,000* 24,000* 24,000* 24,000* 24,000* 24,000* 23,450 16,930 15,290 13,970 12,830 11,810 10,860 10,070 9,360 8,730 8,130	78.0 75.7 73.2 70.7 68.2 65.7 62.9 60.2 57.4 54.5 51.2	19,480* 18,560* 16,930* 16,260* 15,670* 15,670* 14,300 13,110 12,050 11,060	80.0 79.2 78.4 76.3 74.2 71.9 69.7 67.5 65.3 62.8 60.4 55.5 52.8 50.1 47.2 44.3 40.9 37.4 33.7	24,000* 24,000* 24,000* 24,000* 22,480* 20,920* 18,950 17,150 15,490 14,150 13,000 11,970 11,020 10,200 9,500 8,860 8,220 7,690 7,230	79.1 76.7 74.5 72.2 69.9 67.3 64.9 62.4 59.8 56.9 54.0	15,100* 14,320* 13,660* 12,560* 12,050* 11,640* 11,260* 10,910* 10,580* 10,310*	 79.9 78.0 76.0 73.9 71.9 69.9 67.8 65.6 63.4 61.2 59.0 56.5 54.1 51.6 49.0 46.1 43.2 40.2 36.8 33.2 	20,000* 20,000* 18,580* 17,260* 16,110* 15,120* 14,170* 13,380* 12,650* 11,130 10,310 9,590 8,950 8,310 7,780 7,290 6,830 6,430	79.7 77.7 75.5 73.4 71.1 68.8 66.5 64.2 61.6 59.1 56.4 53.7	11,500* 10,950* 10,470* 10,030* 9,230* 8,920* 8,610* 8,330* 8,090* 7,870* 7,690*	79.3 77.5 75.5 73.7 71.8 69.9 67.8 63.8 63.8 61.7 59.5 57.3 55.1 52.7 50.2 47.7 45.1 42.3 39.4 35.9	18,000* 17,680* 16,200* 13,090* 13,090* 12,250* 11,550* 10,360* 9,810* 9,810* 9,840* 8,920* 8,920* 8,550* 8,170* 7,340 6,870 6,480 6,060	78.3 76.3 74.2 72.1 70.0 67.9 65.5 63.2 60.9 58.4 55.7 53.1	8,810* 8,420* 8,040* 7,710* 7,420* 7,160* 6,900* 6,670* 6,450* 6,450* 6,280* 6,100* 5,950*	32 34 36 38 40 45 50 55 50 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140
145													32.4	5,730			145
Reeves		2		2		2		1	Ĩ	2		1		2		1	Reeves
	110' E	Boom															
			t Jib				t Jib			50 f	t Jib			60 f	t Jib		
Load Radius		Offset Ar					1 (1)			0.00	1 (1)				1 (1)		1
(ft)	1 1	0					gle (deg.)				igle (deg.)			Offset An	igle (deg.)		Load Radius
		O Rated Load	3	0	1	0	3	0	1	0	3	0	1	Offset An 0	3	0	
	1 Boom Angle (deg.)	1		0		0	3	0	1	0	<u> </u>	0		Offset An 0		0	Radius
34 36 38 40 45 50 55 50 60 65 70 65 70 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150	Boom Angle	Rated Load	3 Boom Angle	O Rated Load	1 Boom Angle	O Rated Load	3 Boom Angle	O Rated Load	1 Boom Angle	O Rated Load	3 Boom Angle	O Rated Load	1 Boom Angle	Offset An O Rated Load	3 Boom Angle	O Rated Load	Radius

Note: Designed and rated to comply with ANSI Code B30.5

Capacities based on factors other than machine stability such as structural competence are shown by asterisk * in the charts.

Refer to notes on page 20.

Fixed Jib Lift Capacity

Full Counterweight: 57,600 lbs Carbody Weight: 14,400

	120' E	Boom															
			t Jib				t Jib			50 f				60 f			
Load Radius		Offset An	igle (deg.)	0		Offset An	gle (deg.)	0		Offset An 0		0		Offset An	gle (deg.)	0	Load Radius
(ft)	Boom Angle	-	-	-			-	-	Boom Angle	-	-	-			Boom Angle	-	(ft)
	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	
36 38 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 125 130 135 140 145 150	79.7 79.0 78.2 76.3 74.3 72.2 68.2 66.1 63.9 61.7 59.5 57.3 54.8 52.4 49.9 47.3 44.5 41.6 38.5 35.3 31.7	24,000* 24,000* 24,000* 24,000* 24,000* 23,100 20,520 18,360 16,550 14,920 13,600 12,430 11,410 10,470 9,650 8,950 8,950 8,950 8,310 7,690 7,160 6,670 6,230 5,840	79.7 77.7 75.6 73.5 71.4 69.3 67.0 64.8 62.6 60.2 57.7 55.2 52.6	20,190* 19,290* 18,450* 17,720* 16,490* 15,340 13,970 12,780 11,720 10,730 9,890 9,140	79.9 78.1 76.2 74.3 72.4 70.5 68.6 66.5 64.5 62.5 60.5 58.2 56.0 53.8 51.5 49.0 46.5 43.8 41.1 38.1 34.7	24,000* 24,000* 23,360 20,760 18,580 16,770 15,100 13,770 12,610 11,570 10,620 9,810 9,080 8,440 7,800 7,270 6,320 5,530	78.5 76.6 74.7 70.6 68.5 66.4 64.3 62.0 59.7 57.4 55.0 52.3	14,880* 14,240* 13,690* 12,670* 12,250* 11,860* 11,130 10,290 9,520 8,840 8,150	79.5 77.7 75.9 74.2 72.4 70.6 68.7 66.8 65.0 63.1 61.0 59.0 57.0 54.9 52.6 50.4 48.1 45.7 43.1 40.3 37.4 34.3	20,000* 20,000* 18,690* 17,500* 16,440* 15,250 13,910 12,740 11,700 10,730 9,920 9,190 8,530 7,890 7,360 6,850 6,410 5,990 5,590 5,5240 4,910	79.2 77.4 75.6 73.6 71.7 69.7 67.8 65.6 63.6 61.4 59.3 56.8 54.5 52.1	11,330* 10,860* 10,420* 10,030* 9,670* 9,340* 8,700* 8,700* 8,280* 8,060* 7,870* 7,690* 7,250	78.9 77.2 75.6 73.9 72.2 70.4 68.7 67.0 65.2 63.3 61.5 59.6 57.7 55.6 53.6 51.5 59.6 51.5 49.3 47.1 44.6 42.2 39.6 36.8	18,000* 17,390* 16,180* 15,120* 14,170* 13,290* 12,560* 11,300* 10,730* 9,980 9,250 8,590 7,950 7,400 6,920 6,450 6,040 5,640 5,640 5,640 5,640	79.7 78.0 76.1 74.4 72.6 70.7 66.8 64.9 62.9 60.7 58.6 56.4 54.1 51.7	9,080* 8,700* 8,350* 8,040* 7,470* 7,230* 7,230* 6,790* 6,610* 6,410* 6,260* 6,100* 5,970* 5,860*	36 38 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 50 60 75 70 75 80 85 90 105 100 105 100 105 100 105 100 105 100 105 100 105 100 105 100 105 100 105 100 105 100 105 100 105 100 100
160		2		2		2		1	-	2		1	33.6	4,340 2	-	1	160 Reeves
Reeves	130' E			2		2		I		<u></u>		1		2		1	neeves
	150 E		t Jib			40 f	t Jib			50 f	t lib			60.6	t Jib		. – –
Load			igle (deg.)				gle (deg.)			Offset An					gle (deg.)		Load
Radius		0	<u> </u>	0		0	<u> </u>	0		0	<u> </u>	0		0	<u> </u>	0	Radius
(ft)	Boom Angle		-		-		-		Boom Angle				-		-		(ft)
20	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	20
38 40 45 50 55 60 65 70 75	79.7 79.0 77.1 75.3 73.4 71.5	24,000* 24,000* 24,000* 24,000* 22,880	78.5 76.5	19,620*	78.8 77.1	24,000* 24,000*			80.0	20.000*							38 40 45 50
 75 80 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 	69.6 67.7 65.6 63.6 61.6 59.6 57.3 55.2 52.9 50.6 48.1 45.6 43.0 40.2 37.3 33.9	20,300 18,140 16,330 14,680 13,350 12,210 11,170 10,220 9,430 8,700 8,700 6,430 5,990 5,570 5,200	76.5 74.6 72.7 70.7 68.6 66.6 64.5 62.4 60.1 57.9 55.6 53.2	18,780* 18,070* 17,430* 16,860 15,140 13,770 12,580 11,530 10,510 9,700 8,950 8,260	75.2 73.5 71.7 69.9 68.0 66.2 64.3 62.4 60.3 58.3 56.3 54.2 51.9 49.7 47.4 45.0 42.5 39.6 36.8 33.7	24,000 23,170 20,540 18,380 16,550 14,880 13,550 12,380 11,350 10,380 9,560 8,260 7,560 7,030 6,540 6,540 6,540 6,540 6,540 6,540 4,930 4,600	79.3 77.5 75.7 73.8 71.8 69.9 68.0 66.1 63.9 61.9 59.8 57.6 55.2 52.9	15,100* 14,500* 13,420* 12,940* 12,520* 12,140* 11,770* 10,090 9,340 8,640 7,980 7,400	78.4 76.7 75.1 73.4 71.7 69.9 68.2 66.5 64.7 62.8 61.0 59.1 57.2 55.1 53.1 51.0 48.8 46.6 44.1 41.7 39.1 36.3 33.1	20,000* 20,000* 19,330* 18,140* 16,710 15,030 13,690 11,480 10,510 9,700 8,950 11,480 10,510 9,700 8,950 8,310 7,670 7,120 6,630 6,170 5,750 5,350 5,350 5,350 5,350 4,670 4,360 4,030	79.9 78.2 76.5 74.6 72.8 71.0 69.2 67.2 65.3 63.4 61.4 59.2 57.1 54.9 52.6	11,480* 11,020* 10,200* 9,540* 9,540* 9,540* 8,950* 8,700* 8,480* 8,260* 7,600 7,070 6,590	79.5 77.9 76.3 74.8 73.2 71.5 69.9 68.3 66.6 64.8 63.1 61.4 59.6 57.7 55.9 54.0 52.0 50.0 50.0 50.0 52.0 50.0 47.8 45.6 43.3 41.0 38.3 35.6 32.7	18,000* 17,920* 16,710* 15,630* 13,800* 13,800* 13,3050* 11,570 10,580 9,760 9,030 8,370 9,030 8,370 7,730 7,780 7,780 7,780 7,780 6,670 6,670 6,620 5,820 5,840 5,640 4,710 4,400 4,070 3,760 3,480	78.7 76.9 75.3 73.6 71.9 70.0 68.3 64.6 62.6 60.7 58.7 56.6 54.5 52.2	8,840* 8,480* 8,170* 7,890* 7,620* 7,140* 6,740* 6,740* 6,740* 6,560* 6,390* 6,230* 6,100* 5,970* 5,840	555 600 655 700 755 800 855 900 955 900 955 1000 1055 1200 1355 1300 1455 1400 1455 1600 1655 1700

Note: Designed and rated to comply with ANSI Code B30.5

Fixed Jib Lift Capacity

Full Counterweight: 57,600 lbs Carbody Weight: 14,400

		140' E	Boom																
Bath I <td></td> <td></td> <td>30 f</td> <td>t Jib</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>50 f</td> <td>t Jib</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>			30 f	t Jib							50 f	t Jib							
10 box dep Decisital box Sourtical box																-			
Integr				-			-	-				-			-	-			
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $																			
Revel 2 2 2 1 2 1 2 1 2 1 kers 150' Boom 150' Boom 150' Boom 10 30 <td cols<="" td=""><td>45 50 55 60 70 75 80 85 90 95 100 105 110 115 120 125 130 145 155 160 165 170</td><td>77.9 76.2 74.4 72.6 70.9 69.1 67.2 65.3 63.5 61.6 59.5 55.5 55.5 55.5 53.4 51.1 48.9 46.6 44.2 41.7 38.8 36.0</td><td>24,000* 24,000* 22,680 20,080 17,940 16,110 14,460 13,130 11,970 10,950 9,980 9,190 8,460 7,820 7,180 6,650 6,170 5,730 4,910 4,560</td><td>77.4 75.6 73.8 72.0 70.0 68.1 66.2 64.3 62.2 60.1 58.1 55.9 53.5</td><td>19,090* 18,400* 17,760* 16,680 14,960 13,600 12,380 11,330 10,310 9,500 8,750 8,060 7,400</td><td>$\begin{array}{c} 77.8\\ 76.1\\ 74.4\\ 72.8\\ 71.1\\ 69.3\\ 67.6\\ 65.9\\ 64.1\\ 62.2\\ 60.3\\ 58.5\\ 56.6\\ 54.5\\ 52.5\\ 50.4\\ 48.2\\ 46.0\\ 43.5\\ 41.1\\ 38.5\\ 35.7\\ \end{array}$</td><td>24,000* 22,970 20,340 18,180 16,330 14,680 13,330 12,160 11,130 10,160 9,340 8,610 7,950 7,340 6,790 6,300 5,840 5,420 5,820 4,670 4,320 3,940</td><td>78.2 76.5 74.8 72.9 71.2 69.4 67.6 65.6 63.7 61.8 59.8 57.6 55.5</td><td>14,720* 14,170* 13,690* 13,180* 12,760* 12,380* 11,810 10,780 9,920 9,140 8,460 7,780 7,200</td><td>77.4 75.9 74.3 72.8 71.1 69.4 67.8 66.2 64.4 62.7 60.9 59.2 57.2 55.4 53.5 51.6 49.5 47.3 45.1 42.9 40.5 37.8 35.1</td><td>20,000* 19,970* 18,360 16,510 14,830 12,300 11,260 10,290 9,470 8,730 8,060 7,420 6,900 6,900 6,900 5,9510 5,510 5,510 5,510 5,510 5,510 5,510 5,510 3,680 3,370</td><td>77.2 75.5 73.8 72.1 70.4 68.6 66.8 65.0 63.2 61.2 59.3 57.3 55.3</td><td>10,780* 10,380* 10,030* 9,720* 9,430* 9,120* 8,880* 8,660* 8,440* 8,000 7,420 6,900 6,390</td><td>$\begin{array}{c} 77.0\\ 75.6\\ 74.1\\ 72.5\\ 71.0\\ 69.4\\ 67.9\\ 66.2\\ 64.6\\ 63.0\\ 61.4\\ 59.6\\ 57.9\\ 56.1\\ 54.3\\ 52.5\\ 50.5\\ 48.5\\ 46.5\\ 44.4\\ 42.0\\ 39.7\\ 37.3\\ \end{array}$</td><td>17,210* 16,130* 15,160* 14,260* 12,410 11,350 10,380 9,540 8,810 8,810 8,810 8,810 6,960 6,450 5,970 5,570 4,800 4,470 4,100 3,720 3,410 3,130</td><td>77.7 76.1 74.5 72.9 71.2 69.5 67.8 66.1 64.3 62.5 60.7 58.8 56.9 54.7</td><td>8,590* 8,310* 8,020* 7,760* 7,510* 7,270* 6,870* 6,700* 6,520* 6,520* 6,370* 6,230* 6,100* 5,640</td><td>45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 135 140 155 150 165 170</td></td>	<td>45 50 55 60 70 75 80 85 90 95 100 105 110 115 120 125 130 145 155 160 165 170</td> <td>77.9 76.2 74.4 72.6 70.9 69.1 67.2 65.3 63.5 61.6 59.5 55.5 55.5 55.5 53.4 51.1 48.9 46.6 44.2 41.7 38.8 36.0</td> <td>24,000* 24,000* 22,680 20,080 17,940 16,110 14,460 13,130 11,970 10,950 9,980 9,190 8,460 7,820 7,180 6,650 6,170 5,730 4,910 4,560</td> <td>77.4 75.6 73.8 72.0 70.0 68.1 66.2 64.3 62.2 60.1 58.1 55.9 53.5</td> <td>19,090* 18,400* 17,760* 16,680 14,960 13,600 12,380 11,330 10,310 9,500 8,750 8,060 7,400</td> <td>$\begin{array}{c} 77.8\\ 76.1\\ 74.4\\ 72.8\\ 71.1\\ 69.3\\ 67.6\\ 65.9\\ 64.1\\ 62.2\\ 60.3\\ 58.5\\ 56.6\\ 54.5\\ 52.5\\ 50.4\\ 48.2\\ 46.0\\ 43.5\\ 41.1\\ 38.5\\ 35.7\\ \end{array}$</td> <td>24,000* 22,970 20,340 18,180 16,330 14,680 13,330 12,160 11,130 10,160 9,340 8,610 7,950 7,340 6,790 6,300 5,840 5,420 5,820 4,670 4,320 3,940</td> <td>78.2 76.5 74.8 72.9 71.2 69.4 67.6 65.6 63.7 61.8 59.8 57.6 55.5</td> <td>14,720* 14,170* 13,690* 13,180* 12,760* 12,380* 11,810 10,780 9,920 9,140 8,460 7,780 7,200</td> <td>77.4 75.9 74.3 72.8 71.1 69.4 67.8 66.2 64.4 62.7 60.9 59.2 57.2 55.4 53.5 51.6 49.5 47.3 45.1 42.9 40.5 37.8 35.1</td> <td>20,000* 19,970* 18,360 16,510 14,830 12,300 11,260 10,290 9,470 8,730 8,060 7,420 6,900 6,900 6,900 5,9510 5,510 5,510 5,510 5,510 5,510 5,510 5,510 3,680 3,370</td> <td>77.2 75.5 73.8 72.1 70.4 68.6 66.8 65.0 63.2 61.2 59.3 57.3 55.3</td> <td>10,780* 10,380* 10,030* 9,720* 9,430* 9,120* 8,880* 8,660* 8,440* 8,000 7,420 6,900 6,390</td> <td>$\begin{array}{c} 77.0\\ 75.6\\ 74.1\\ 72.5\\ 71.0\\ 69.4\\ 67.9\\ 66.2\\ 64.6\\ 63.0\\ 61.4\\ 59.6\\ 57.9\\ 56.1\\ 54.3\\ 52.5\\ 50.5\\ 48.5\\ 46.5\\ 44.4\\ 42.0\\ 39.7\\ 37.3\\ \end{array}$</td> <td>17,210* 16,130* 15,160* 14,260* 12,410 11,350 10,380 9,540 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43.5\\ 41.1\\ 38.5\\ 35.7\\ \end{array}$	24,000* 22,970 20,340 18,180 16,330 14,680 13,330 12,160 11,130 10,160 9,340 8,610 7,950 7,340 6,790 6,300 5,840 5,420 5,820 4,670 4,320 3,940	78.2 76.5 74.8 72.9 71.2 69.4 67.6 65.6 63.7 61.8 59.8 57.6 55.5	14,720* 14,170* 13,690* 13,180* 12,760* 12,380* 11,810 10,780 9,920 9,140 8,460 7,780 7,200	77.4 75.9 74.3 72.8 71.1 69.4 67.8 66.2 64.4 62.7 60.9 59.2 57.2 55.4 53.5 51.6 49.5 47.3 45.1 42.9 40.5 37.8 35.1	20,000* 19,970* 18,360 16,510 14,830 12,300 11,260 10,290 9,470 8,730 8,060 7,420 6,900 6,900 6,900 5,9510 5,510 5,510 5,510 5,510 5,510 5,510 5,510 3,680 3,370	77.2 75.5 73.8 72.1 70.4 68.6 66.8 65.0 63.2 61.2 59.3 57.3 55.3	10,780* 10,380* 10,030* 9,720* 9,430* 9,120* 8,880* 8,660* 8,440* 8,000 7,420 6,900 6,390	$\begin{array}{c} 77.0\\ 75.6\\ 74.1\\ 72.5\\ 71.0\\ 69.4\\ 67.9\\ 66.2\\ 64.6\\ 63.0\\ 61.4\\ 59.6\\ 57.9\\ 56.1\\ 54.3\\ 52.5\\ 50.5\\ 48.5\\ 46.5\\ 44.4\\ 42.0\\ 39.7\\ 37.3\\ \end{array}$	17,210* 16,130* 15,160* 14,260* 12,410 11,350 10,380 9,540 8,810 8,810 8,810 8,810 6,960 6,450 5,970 5,570 4,800 4,470 4,100 3,720 3,410 3,130	77.7 76.1 74.5 72.9 71.2 69.5 67.8 66.1 64.3 62.5 60.7 58.8 56.9 54.7	8,590* 8,310* 8,020* 7,760* 7,510* 7,270* 6,870* 6,700* 6,520* 6,520* 6,370* 6,230* 6,100* 5,640	45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 135 140 155 150 165 170
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Note: Designed and rated to comply with ANSI Code B30.5

Fixed Jib Lift Capacity

Full Counterweight: 57,600 lbs Carbody Weight: 14,400

Jost 30 ft.Jb 40 ft.Jb 90 ft.Jb 90 ft.Jb 90 ft.Jb 00 ff.Set Angle (deg.) Offset Angle (deg.) Offset Angle (deg.) 00 ff.Set Angle (deg.)				
(f) (kg) Root Auge (kg) Retel Lad (kg) Root Auge (kg) Root Auge (k				
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170' Boom 30 ft Jib 40 ft Jib 50 ft Jib 60 ft J Load 30 ft Jib Coffset Angle (deg.) Offset Angle (deg.) (deg.) (deg				
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155 42.7 2,930 46.3 3,060 49.3 3,150 52.4 3,760 51.9 3,240 160 40.4 2,570 44.2 2,680 47.4 2,790 50.2 2,860				
165 48.5 2,530				

Note: Designed and rated to comply with ANSI Code B30.5



Fixed Jib Lift Capacity

Full Counterweight: 57,600 lbs Carbody Weight: 14,400

	180' E	Boom															
		30 f	t Jib			40 f	t Jib			50 f	t Jib			60 f	t Jib		
Load		Offset An	gle (deg.)			Offset An	igle (deg.)			Offset An	gle (deg.)			Offset Ar	igle (deg.)		Load
Radius	1	0	3	0	1	0	3	0	1	0	3	0	1	0	3	0	Radius
(ft)	Boom Angle	Rated Load	Boom Anale	Rated Load	Boom Angle	Rated Load	Boom Angle	Rated Load	Boom Angle	Rated Load	Boom Angle	Rated Load	Boom Angle	Rated Load	Boom Angle	Rated Load	(ft)
	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	(deg.)	(lbs)	
50	78.9	19,770*															50
55	77.4	19,240*	79.9	19,060*	78.7	18,500*			79.7	17,000*							55
60	76.0	18,760*	78.5	18,580*	77.3	17,800*			78.4	16,400*			79.3	15,000*			60
65	74.6	17,190	77.1	17,960	76.0	17,100*	79.1	14,740*	77.1	15,800*			78.0	14,500*			65
70	73.2	15,360	75.6	16,070	74.7	15,630	77.7	14,460*	75.9	15,200*	79.6	11,300*	76.8	14,000*			70
75	71.7	13,710	74.1	14,350	73.2	13,950	76.3	14,020*	74.5	13,980*	78.2	10,930*	75.5	13,500*	79.9	8,990*	75
80	70.3	12,360	72.6	12,940	71.9	12,580	74.9	13,580	73.2	12,760	76.9	10,600*	74.3	12,870	78.6	8,700*	80
85	68.8	11,190	71.2	11,720	70.5	11,410	73.5	12,320	71.9	11,570	75.5	10,310*	73.0	11,680	77.3	8,460*	85
90	67.4	10,180	69.7	10,640	69.1	10,360	72.1	11,220	70.6	10,510	74.2	10,030*	71.8	10,620	76.0	8,200*	90
95	65.8	9,190	68.1	9,630	67.6	9,390	70.5	10,180	69.2	9,520	72.7	9,740*	70.4	9,630	74.6	7,950*	95
100	64.3	8,390	66.5	8,790	66.2	8,570	69.1	9,320	67.8	8,700	71.4	9,500*	69.2	8,790	73.3	7,760*	100
105	62.8	7,670	65.0	8,040	64.8	7,820	67.6	8,550	66.5	7,950	70.0	8,810	67.9	8,040	72.0	7,530*	105
110	61.3	7,010	63.4	7,360	63.3	7,160	66.1	7,840	65.1	7,290	68.5	8,110	66.6	7,360	70.7	7,360*	110
115	59.6	6,370	61.7	6,670	61.8	6,520	64.5	7,160	63.6	6,630	67.0	, ,	40065.2	6,720	69.2	7,160*	115
120	58.0	5,840	60.1	6,120	60.3	5,970	63.0	6,560	62.2	6,080	65.6	6,810	63.8	6,170	67.8	7,010*	120
125	56.4	5,310	58.4	5,590	58.8	5,460	61.4	6,040	60.8	5,570	64.1	6,260	62.5	5,660	66.4	6,480	125
130	54.7	4,780	56.7	5,110	57.2	4,960	59.8	5,550	59.3	5,090	62.6	5,770	61.1	5,180	65.0	5,970	130
135	53.0	4,270	55.0	4,580	55.6	4,450	58.2	5,090	57.8	4,580	61.1	5,310	59.7	4,670	63.6	5,480	135
140	51.2	3,790	53.1	4,070	53.9	3,940	56.4	4,580	56.2	4,070	59.4	4,850	58.2	4,160	62.0	5,020	140
145 150	49.4 47.6	3,370	51.3	3,610	52.3 50.6	3,520 3,130	54.7 53.0	4,120	54.7	3,630	57.8	4,380	56.8	3,720	60.5	4,620	145 150
	47.6	2,970				-,	53.0	3,680	53.1 51.5	3,240	56.2	3,940	55.3	3,320	59.0	4,160	150
155 160	45./	2,600			48.8	2,750			51.5	2,860	54.5 52.7	3,520 3,100	53.8 52.2	2,930 2,550	57.5 55.8	3,740 3,320	155
160											52.7	5,100	52.2	2,550	55.8 54.1	2,950	160
170															52.4	2,930	170
Reeves	-	2	-	<u></u>	-	2	-	l	-	l		1		1	, 52.4	2,000	Reeves
neeves	4	<u>-</u>		-	4	-		1		1		1			L	1	1100003

Supplemental Data - Clamshell

 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 level on 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 ground, 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).

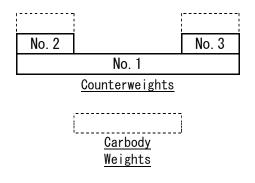
2. Rated loads do not exceed 66% of minimum tipping loads. Rated loads based on factors other than machine stability such as structural competence are shown by asterisk * in the charts.

- 3. The machine must be reeved and set-up as stated in the operation manual and all the instruction manuals if these manuals are missing, obtain replacements.
 - Machine shall be positively secured to prevent shifting.
 - Boom backstops are required for all boom length.
 - Gantry must be fully raised position for all operations.
 - Crawlers must be fully extended and be locked in position.
 - Must have 39,000 lbs (2) Counterweights installed, and without carbody weights.
- 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 rated loads.
- 6. Weight of hooks, hook blocks, slings and other lifting devices are a part of the total load. Their total weight must be subtracted from the rated load to obtain the weight that can be lifted.
- 7. The boom should be erected over the front of the crawlers, not laterally.
- 8. Least stable position is over the side.
- 9. Maximum hoist load for number of reeving parts of line for hoist rope.

Maximum Load for Main Boom

No. of Parts of line	1
Maximum Loads (lbs)	16,000

- Rated loads listed apply only to the machine as originally manufactured and designed by KOBELCO CRANES CO., LTD. Modifications to this machine or use of equipment oth than that specified can reduce operating capacity.
- 11. Assembling the Counterweight 39,000 lbs counterweight (No. 1 ~ No. 3) Without Carbody weights



Operation of this equipment in excess of rated loads or disregard of instruction voids the warranty.

Clamshell

Boom:

Welded lattice construction using tubular, high-tensile steel chords with pin connections between each section. Basic boom length: 40 ft (12.2 m) Max. boom length: 70 ft (21.3 m) Limit on clamshell bucket weight: 4,600 lbs (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

Base = Boom Base

Insert: A = 10 ft (3.05 m)B = 20 ft (6.10 m)C = 40 ft (12.2 m)

Tip = Boom Tip

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 sort of uneven supporting surface, rapid cycle operations, or bucket.

4. The combined weight of the bucket and load must not exceed these capacities.

4	0' Boo	m	50)' Boo	m	60)' Boo	m	7()' Boo	m
Load Radius (ft)	Boom Angle (deg.)	360 [°] Rated Load (lbs)	Load Radius (ft)	Boom Angle (deg.)	360 [°] Rated Load (lbs)	Load Radius (ft)	Boom Angle (deg.)	360 [°] Rated Load (lbs)	Load Radius (ft)	Boom Angle (deg.)	360 [°] Rated Load (Ibs)
22.0 24.0 26.0 30.0 32.0 34.0 36.0 38.0 40.0	63.6 60.3 56.9 53.4 49.7 45.7 41.5 36.9 31.6 25.5	16,000 * 16,000 * 16,000 * 16,000 * 16,000 * 16,000 * 16,000 * 16,000 *	26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 42.0 44.0 46.0 48.0	64.2 61.6 58.9 56.2 53.3 50.4 47.3 44.1 40.6 36.9 32.8 28.2	16,000 * 16,000 * 16,000 * 16,000 * 16,000 * 16,000 * 16,000 * 16,000 * 16,000 * 16,000 *	30.0 32.0 34.0 36.0 38.0 40.0 42.0 44.0 46.0 48.0 50.0 52.0 54.0 56.0 58.0	64.5 62.4 60.2 58.0 55.7 53.3 50.9 48.3 45.7 42.9 40.0 36.9 33.5 29.8 25.6	16,000 * 16,000 * 16,000 * 16,000 * 16,000 * 16,000 * 16,000 * 16,000 * 15,200 * 14,500 13,600 13,000 12,300 11,900	34.0 36.0 38.0 40.0 42.0 44.0 46.0 48.0 50.0 52.0 54.0 56.0 58.0 60.0 62.0 64.0 66.0	64.8 63.0 61.1 59.2 57.3 55.3 51.2 49.0 46.8 44.5 42.1 39.6 36.9 34.0 30.9 27.5	16,000 * 16,000 * 16,000 * 16,000 * 15,800 * 15,200 * 15,200 * 14,300 * 13,600 * 13,000 * 13,000 * 11,200 * 11,200 * 10,800 * 10,100 * 9,700 *

Supplemental Data - Barge

- 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 level on 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 ground, 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).
- Rated loads do not exceed 75% of minimum tipping loads. Rated loads 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 operation manual and all the instruction manuals if these manuals are missing, obtain replacements.
 - Machine shall be positively secured to prevent shifting.
 - Boom backstops are required for all boom length.
 - Gantry must be fully raised position for all operations.
 - Crawlers must be fully extended and be locked in position.
 - Must have 57,600 lbs (5) Counterweights fully installed.
 - Must have 14,400 lbs (2) Carbody weights fully installed.
- 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 rated loads.
- Weight of hooks, hook blocks, slings and other lifting devices are a 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)	320		Not Ap	plicable	

When auxiliary sheave is used for 10 or 9 reeving parts of line, it is not required to deduct 320 lbs from rated loads.

- 8. To install the jib is prohibited when the machine is on a barge.
- The total load that can be lifted over an auxiliary sheave is the value for 320 lbs deducted from rated load for the boom without auxiliary sheave, but it should not exceed 17,000 lbs.

- 10. Boom lengths that can attach auxiliary sheave are from 40 ft (12.2 m) to 190 ft (57.9 m).
- 11. The boom should be erected over the front of the crawlers, not laterally.
- 12. Least stable position is over the side.
- 13. Maximum hoist load for number of reeving parts of line for hoist rope.

Maximum Load for Main Boom

No. of Parts of line	1	2	3	4	5
Maximum Loads (lbs)	17,000	34,000	51,000	68,000	85,000
-					

No. of Parts of line	6	7	8	9	10
Maximum Loads (lbs)	102,000	119,000	136,000	153,000	170,000

Maximum Load for Auxiliary Sheave

No. of Parts of line 1 Maximum Loads (lbs) 17.000

Maximum Loads (lbs) 17,000

14. Weight of recommended hook block.

Hook Block	85 t	55 t	35 t	21 t	7 t ball hook
Weight (lbs)	1,765	1,545	1,105	885	355

Warning: If the weight of the hook block to be used is light than the recommended weight, the jib may turn over backw or will be difficult to lower the empty hook block.

- 15. Rated loads listed apply only to the machine as originally manufactured and designed by KOBELCO CRANES CO., LTD. Modifications to this machine or use of equipment of than that specified can reduce operating capacity.
- 16. Designed and rated to comply with ANSI Code B30.5.

Operation of this equipment in excess of rated loads or disregard of instruction voids the warranty.

Barge

5 Counterweights (57,600 lbs) - 2 Carbody weights (14,400 lbs) - Crawlers in extended position.

	40'	Boon	n				50	' Boor	n				60	' Boon	n		
				l Load (lk	os)			30	50° Ratec	Load (lk	os)			30	60° Rated	l Load (lk	os)
Load	Boom	0 Degree	1 Degree	2 Degree	2 Degree	Load	Boom	0 Degree	1 Degree	2 Degree	2 Degree	Load	Boom	0 Degree	1 Degree	2 Degree	2 Degree
Radius (ft)	Angle (deg.)	Machine List	Machine List	Machine List	Machine List	Radius (ft)	Angle (deg.)	Machine List	Machine List	Machine List	Machine List	Radius (ft)	Angle (deg.)	Machine List	Machine List	Machine List	Machine List
10.0	81.7	170,000 *				12.0	81.1	166,400 *				13.0	81.6	154,200 *			
11.0	80.3	170,000 *				13.0	79.9	154,400 *				14.0	80.7	143,800 *			
12.0 13.0	78.8	266,600 * 154,600 *				14.0 15.0	78.8 77.6	144,000 * 134,900 *				15.0 16.0	79.7 78.7	134,700 * 126,700 *			
13.0 14.0	77.4 75.9	154,000 *				15.0	76.4	126,900 *				17.0	77.7	119,500 *			
15.0	74.4	135,100 *	135,100 *			17.0	75.2	119,700 *				18.0	76.8	113,000 *			
16.0	72.9	127,100 *	127,100 *			18.0	74.0	113,200 *	105,400			19.0	75.8	105,460			
17.0	71.4	119,900 *	119,900 *	105,100		19.0	72.8	105,660	97,100			20.0	74.8	97,130	89,000		
18.0 19.0	69.9 68.3	113,400 * 105,820	113,400 * 98,900 *	100,200 93,300		20.0	71.6 69.2	97,350 84,010	90,500 78,800	73,500		22.0 24.0	72.8 70.8	83,790 73,560	77,500 68,500	63,600	
20.0	66.7	97,500	98,900 92,100	86,400		22.0	66.7	73,810	69,700	65,500		24.0	68.7	65,490	61,400	57,900	51,000
22.0	63.6	84,190	80,100	75,700	71,700	26.0	64.2	65,760	62,400	59,000	56,100	28.0	66.6	58,970	55,600	52,700	49,100
24.0	60.3	74,000	70,800	67,300	64,700	28.0	61.6	59,230	56,400	53,700	51,400	30.0	64.5	53,570	50,700	48,200	45,800
26.0	56.9	65,980	63,300	60,500	58,100	30.0	58.9	53,850	51,500	49,200	47,300	32.0	62.4	49,030	46,600	44,500	42,500
28.0 30.0	53.4 49.7	59,400 54,100	57,200 52,300	55,000 50,400	53,000 48,700	32.0 34.0	56.2 53.3	49,310 45,480	47,300 43,700	45,500 42,200	43,700 40,700	34.0 36.0	60.2 58.0	45,170 41,840	43,100 40,000	41,000 38,400	39,400 36,900
30.0 32.0	49.7 45.7	54,100 49,580	52,500 48,100	46,500	46,700	36.0	55.5 50.4	42,150	40,600	42,200 39,300	38,100	38.0	55.7	38,950	40,000 37,300	35,800	34,700
34.0	41.5	45,740	44,500	43,200	42,100	38.0	47.3	39,280	37,900	36,800	35,500	40.0	53.3	36,410	35,000	33,900	32,700
36.0	36.9	42,460	41,400	40,300	39,400	40.0	44.1	36,750	35,700	34,800	33,800	45.0	47.0	31,230	30,200	29,300	28,500
												50.0	40.0	27,290	26,400	25,900	25,300
Ree	ves	10	8	7	5	Ree	eves	10	7	5	4	Ree	eves	10	6	4	4
																	-
	70'	Boon	n				80	' Boon	n				90	' Boor	n		
	70'			l Load (lb	os)		80		n 60° Ratec	Load (lb	os)		90			Load (lb	os)
Load	Boom	30 0 Degree	50° Ratec 1 Degree	2 Degree	2 Degree	Load	Boom	30 0 Degree	60° Ratec 1 Degree	2 Degree	2 Degree	Load	Boom	30 0 Degree	50° Rateo	2 Degree	2 Degree
Load Radius (ft)		30	50° Rateo			Load Radius (ft)		30	60° Ratec			Load Radius (ft)		30	60° Rateo		
Radius (ft) 14.0	Boom Angle (deg.) 82.0	0 Degree Machine List 143,600 *	50° Ratec 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 16.0	Boom Angle (deg.) 81.6	30 0 Degree Machine List 126,300 *	50° Ratec 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 17.0	Boom Angle (deg.) 81.9	30 0 Degree Machine List 118,820 *	50° Rateo 1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 14.0 15.0	Boom Angle (deg.) 82.0 81.2	30 0 Degree Machine List 143,600 * 134,500 *	50° Ratec 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 16.0 17.0	Boom Angle (deg.) 81.6 80.8	30 0 Degree Machine List 126,300 * 119,100 *	50° Ratec 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 17.0 18.0	Boom Angle (deg.) 81.9 81.2	30 0 Degree Machine List 118,820 * 112,400 *	50° Rateo 1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 14.0 15.0 16.0	Boom Angle (deg.) 82.0 81.2 80.3	30 0 Degree Machine List 143,600 * 134,500 * 126,500 *	50° Ratec 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 16.0 17.0 18.0	Boom Angle (deg.) 81.6 80.8 80.1	30 0 Degree Machine List 126,300 * 119,100 * 112,600 *	50° Ratec 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 17.0 18.0 19.0	Boom Angle (deg.) 81.9 81.2 80.6	30 0 Degree Machine List 118,820 * 112,400 * 105,220	50° Rateo 1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 14.0 15.0	Boom Angle (deg.) 82.0 81.2	30 0 Degree Machine List 143,600 * 134,500 *	50° Ratec 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 16.0 17.0	Boom Angle (deg.) 81.6 80.8	30 0 Degree Machine List 126,300 * 119,100 *	50° Ratec 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 17.0 18.0	Boom Angle (deg.) 81.9 81.2	30 0 Degree Machine List 118,820 * 112,400 *	50° Rateo 1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 14.0 15.0 16.0 17.0 18.0 19.0	Boom Angle (deg.) 82.0 81.2 80.3 79.5 78.7 78.7	O Degree Machine List 143,600 * 134,500 * 126,500 * 119,300 * 112,800 * 105,400	50° Ratec 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 16.0 17.0 18.0 19.0	Boom Angle (deg.) 81.6 80.8 80.1 79.4 78.6 77.2	30 0 Degree Machine List 126,300 * 119,100 * 112,600 * 105,290 96,930 83,550	50° Ratec 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 17.0 18.0 19.0 20.0	Boom Angle (deg.) 81.9 81.2 80.6 79.9	34 0 Degree Machine List 118,820 * 112,400 * 105,220 96,870	50° Rateo 1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 14.0 15.0 16.0 17.0 18.0 19.0 20.0	Boom Angle (deg.) 82.0 81.2 80.3 79.5 78.7 77.8 77.8	O Degree Machine List 143,600 * 134,500 * 126,500 * 119,300 * 105,400 97,060	50° Ratec 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 16.0 17.0 18.0 19.0 20.0 22.0 24.0	Boom Angle (deg.) 81.6 80.8 80.1 79.4 78.6 77.2 75.7	30 0 Degree Machine List 126,300 * 119,100 * 112,600 * 105,290 96,930 83,550 73,320	50° Ratec 1 Degree Machine List	2 Degree Machine	2 Degree Machine	Radius (ft) 17.0 18.0 19.0 20.0 22.0 24.0 26.0	Boom Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0	O Degree Machine List 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140	60° Ratec 1 Degree Machine List	2 Degree Machine	2 Degree Machine
Radius (ft) 14.0 15.0 16.0 17.0 18.0 19.0 20.0 22.0	Boom Angle (deg.) 82.0 81.2 80.3 79.5 78.7 77.8 77.8 77.0 75.3	O Degree Machine List 143,600 * 134,500 * 126,500 * 119,300 * 112,800 * 105,400 97,060 83,700	50° Ratec 1 Degree Machine List	2 Degree Machine	2 Degree Machine	Radius (ft) 16.0 17.0 18.0 19.0 20.0 22.0 24.0 26.0	Boom Angle (deg.) 81.6 80.8 80.1 79.4 78.6 77.2 75.7 74.2	31 0 Degree Machine 119,100 * 119,100 * 112,600 * 105,290 96,930 83,550 73,320 65,230	60° Ratecc 1 Degree Machine List 60,000	2 Degree Machine	2 Degree Machine	Radius (ft) 17.0 18.0 19.0 20.0 22.0 24.0 26.0 28.0	Boom Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7	O Degree Machine List 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570	50° Ratec 1 Degree Machine List 53,700	2 Degree Machine	2 Degree Machine
Radius (ft) 14.0 15.0 16.0 17.0 18.0 19.0 20.0 22.0 24.0	Boom Angle (deg.) 82.0 81.2 80.3 79.5 78.7 77.8 77.8 77.0 75.3 73.6	O Degree Machine List 143,600 * 134,500 * 126,500 * 119,300 * 105,400 97,060 83,700 73,470	50° Ratec 1 Degree Machine List 67,700	2 Degree Machine	2 Degree Machine	Radius (ft) 16.0 17.0 18.0 19.0 20.0 22.0 24.0 26.0 28.0	Boom Angle (deg.) 81.6 80.8 80.1 79.4 78.6 77.2 75.7 74.2 72.7	0 Degree Machine 126,300 * 119,100 * 112,600 * 105,290 96,930 83,550 73,320 65,230 58,680	60° Ratect 1 Degree Machine List 60,000 54,200	2 Degree Machine	2 Degree Machine	Radius (ft) 17.0 18.0 19.0 20.0 22.0 24.0 26.0 28.0 30.0	Boom Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7 73.4	O Degree Machine List 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150	50° Ratec I Degree Machine List 53,700 49,000	2 Degree Machine List	2 Degree Machine
Radius (ft) 14.0 15.0 16.0 17.0 18.0 19.0 20.0 22.0	Boom Angle (deg.) 82.0 81.2 80.3 79.5 78.7 77.8 77.8 77.0 75.3	O Degree Machine List 143,600 * 134,500 * 126,500 * 119,300 * 112,800 * 105,400 97,060 83,700	50° Ratec 1 Degree Machine List	2 Degree Machine	2 Degree Machine	Radius (ft) 16.0 17.0 18.0 19.0 20.0 22.0 24.0 26.0	Boom Angle (deg.) 81.6 80.8 80.1 79.4 78.6 77.2 75.7 74.2	31 0 Degree Machine 119,100 * 119,100 * 112,600 * 105,290 96,930 83,550 73,320 65,230	60° Ratecc 1 Degree Machine List 60,000	2 Degree Machine	2 Degree Machine	Radius (ft) 17.0 18.0 19.0 20.0 22.0 24.0 26.0 28.0	Boom Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7	O Degree Machine List 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570	50° Ratec 1 Degree Machine List 53,700	2 Degree Machine	2 Degree Machine
Radius (ft) 14.0 15.0 16.0 17.0 18.0 19.0 20.0 22.0 24.0 24.0 26.0 28.0 30.0	Boom Angle (deg.) 82.0 81.2 80.3 79.5 78.7 77.8 77.8 77.8 77.0 75.3 73.6 71.9 70.1 68.4	Obegree Machine List 143,600 * 134,500 * 126,500 * 119,300 * 112,800 * 105,400 97,060 83,700 73,470 65,380 58,840 53,430	50° Ratect 1 Degree Machine List 67,700 60,600 54,900 50,200	2 Degree Machine List 51,600 47,300	2 Degree Machine List 42,400	Radius (ft) 16.0 17.0 18.0 19.0 20.0 24.0 26.0 28.0 30.0 32.0 34.0	Boom Angle (deg.) 81.6 80.8 80.1 79.4 78.6 77.2 75.7 74.2 75.7 74.2 72.7 71.2 69.7 68.1	31 0 Degree Machine List 126,300 * 119,100 * 112,600 * 105,290 96,930 83,550 73,320 65,230 58,680 53,260 48,690 44,840	60° Ratect 1 Degree Machine List 60,000 54,200 49,500 45,500 42,000	2 Degree <u>Machine List</u> 42,800 39,700	2 Degree Machine List 35,800	Radius (ft) 17.0 18.0 19.0 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0	Boom Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 69.3	O Degree Machine 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 41,380	53,700 49,000 41,700 38,700	2 Degree Machine List 41,700 38,900 36,300	2 Degree Machine
Radius (ft) 14.0 15.0 16.0 17.0 18.0 19.0 20.0 22.0 24.0 24.0 26.0 28.0 30.0 32.0	Boom Angle (deg.) 82.0 81.2 80.3 79.5 78.7 77.8 77.0 75.3 71.9 70.1 68.4 66.6	Obegree Machine List 143,600 * 134,500 * 126,500 * 119,300 * 112,800 * 105,400 97,060 83,700 73,470 65,380 58,840 53,430 48,890	50° Ratect 1 Degree Machine List 67,700 60,600 54,900 50,200 46,100	2 Degree Machine List 51,600 47,300 43,700	2 Degree Machine List 42,400 40,900	Radius (ft) 16.0 17.0 18.0 19.0 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0	Boom Angle (deg.) 81.6 80.8 80.1 79.4 78.6 77.2 75.7 74.2 70.7 69.7 68.1 66.6	31 0 Degree Machine List 126,300 * 119,100 * 112,600 * 105,290 96,930 83,550 73,320 65,230 58,680 53,260 48,690 44,840 41,490	60° Ratect 1 Degree Machine List 60,000 54,200 49,500 45,500 42,000 39,000	2 Degree <u>Machine List</u> 42,800 39,700 36,900	2 Degree Machine List 35,800 34,500	Radius (ft) 17.0 18.0 19.0 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0	Boom Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 69.3 68.0	O Degree Machine 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 41,380 38,440	53,700 49,000 45,000 41,700 38,700 36,100	2 Degree Machine List 41,700 38,900 36,300 34,200	2 Degree Machine List
Radius (ft) 14.0 15.0 16.0 17.0 18.0 19.0 20.0 22.0 24.0 24.0 26.0 28.0 30.0 32.0 34.0	Boom Angle (deg.) 82.0 80.3 79.5 78.7 77.8 77.8 77.0 75.3 73.6 71.9 70.1 68.4 66.6 64.8	Obegree Machine List 143,600 * 134,500 * 126,500 * 119,300 * 112,800 * 105,400 97,060 83,700 73,470 65,380 58,840 53,430 48,890 45,030	50° Ratect 1 Degree Machine List 67,700 60,600 54,900 50,200 46,100 42,500	2 Degree Machine List 51,600 47,300 43,700 40,500	2 Degree Machine List 42,400 40,900 38,400	Radius (ft) 16.0 17.0 18.0 19.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0	Boom Angle (deg.) 81.6 80.8 80.1 79.4 78.6 77.2 75.7 74.2 72.7 71.2 69.7 68.1 66.6 65.0	31 0 Degree Machine List 126,300 * 119,100 * 112,600 * 105,290 96,930 83,550 73,320 65,230 58,680 53,260 48,690 44,840 41,490 38,580	60° Ratect 1 Degree Machine List 60,000 54,200 49,500 42,000 39,000 36,500	2 Degree Machine List 42,800 39,700 36,900 34,600	2 Degree Machine List 35,800 34,500 32,700	Radius (ft) 17.0 18.0 19.0 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0	Boom Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 69.3 68.0 66.6	O Degree Machine 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 41,380 38,440 35,890	53,700 49,000 45,000 41,700 38,700 36,100 34,000	2 Degree Machine List 41,700 38,900 36,300 34,200 32,100	2 Degree Machine List 29,900
Radius (ft) 14.0 15.0 16.0 17.0 18.0 19.0 20.0 22.0 24.0 28.0 30.0 30.0 32.0 34.0 36.0	Boom Angle (deg.) 82.0 80.3 79.5 78.7 77.8 77.8 77.8 77.0 75.3 73.6 71.9 70.1 68.4 66.6 64.8 63.0	3(0 Degree Machine List 143,600 * 134,500 * 126,500 * 119,300 * 112,800 * 105,400 97,060 83,700 73,470 65,380 58,840 53,430 48,890 45,030 41,680	50° Ratect 1 Degree Machine List 67,700 60,600 54,900 50,200 46,100 42,500 39,500	2 Degree Machine List 51,600 47,300 43,700 40,500 37,700	2 Degree Machine List 42,400 40,900 38,400 35,900	Radius (ft) 16.0 17.0 18.0 19.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 38.0 40.0	Boom Angle (deg.) 81.6 80.8 80.1 79.4 78.6 77.2 75.7 74.2 72.7 71.2 69.7 68.1 66.6 65.0 63.4	31 0 Degree Machine List 126,300 * 119,100 * 112,600 * 105,290 96,930 83,550 73,320 65,230 58,680 53,260 48,690 44,840 41,490 38,580 36,020	60° Ratect 1 Degree Machine List 60,000 54,200 49,500 42,000 39,000 36,500 34,300	2 Degree Machine List 42,800 39,700 36,900 34,600 32,600	2 Degree Machine List 35,800 34,500 32,700 30,900	Radius (ft) 17.0 18.0 19.0 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0	Boom Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 73.4 72.0 70.7 69.3 68.0 66.6 63.0	O Degree Machine 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 41,380 38,440 35,890 30,660	53,700 49,000 45,000 41,700 38,700 36,100 34,000 29,300	2 Degree Machine List 41,700 38,900 36,300 34,200 32,100 27,700	2 Degree Machine List 29,900 26,400
Radius (ft) 14.0 15.0 16.0 17.0 18.0 19.0 20.0 22.0 24.0 24.0 26.0 28.0 30.0 32.0 34.0	Boom Angle (deg.) 82.0 80.3 79.5 78.7 77.8 77.8 77.0 75.3 73.6 71.9 70.1 68.4 66.6 64.8	Obegree Machine List 143,600 * 134,500 * 126,500 * 119,300 * 112,800 * 105,400 97,060 83,700 73,470 65,380 58,840 53,430 48,890 45,030	50° Ratect 1 Degree Machine List 67,700 60,600 54,900 50,200 46,100 42,500	2 Degree Machine List 51,600 47,300 43,700 40,500	2 Degree Machine List 42,400 40,900 38,400	Radius (ft) 16.0 17.0 18.0 19.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0	Boom Angle (deg.) 81.6 80.8 80.1 79.4 78.6 77.2 75.7 74.2 72.7 71.2 69.7 68.1 66.6 65.0	31 0 Degree Machine List 126,300 * 119,100 * 112,600 * 105,290 96,930 83,550 73,320 65,230 58,680 53,260 48,690 44,840 41,490 38,580	60° Ratect 1 Degree Machine List 60,000 54,200 49,500 42,000 39,000 36,500	2 Degree Machine List 42,800 39,700 36,900 34,600	2 Degree Machine List 35,800 34,500 32,700	Radius (ft) 17.0 18.0 19.0 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0	Boom Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 69.3 68.0 66.6	O Degree Machine 118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 41,380 38,440 35,890	53,700 49,000 45,000 41,700 38,700 36,100 34,000	2 Degree Machine List 41,700 38,900 36,300 34,200 32,100	2 Degree Machine List 29,900
Radius 14.0 15.0 16.0 17.0 18.0 19.0 20.0 24.0 26.0 30.0 34.0 36.0 38.0 40.0 45.0	Boom Angle (deg.) 82.0 81.2 80.3 79.5 78.7 77.8 77.8 77.8 77.0 75.3 77.6 71.9 70.1 68.4 66.6 64.8 63.0 61.1 59.2 54.3	O Degree Machine List 143,600 * 134,500 * 126,500 * 112,800 * 105,400 97,060 83,700 73,470 65,380 53,430 45,030 41,680 38,800 36,240 31,040	67,700 67,700 60,600 54,900 50,200 46,100 42,500 39,500 36,900 34,800 29,900	2 Degree Machine List 51,600 47,300 43,700 40,500 37,700 35,000 33,300 28,800	2 Degree Machine List 42,400 40,900 38,400 35,900 33,900 31,900 27,700	Radius (ft) Radius (ft) 16.0 17.0 17.0 18.0 19.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 36.0 38.0 36.0 35.0 55.0	Boom Angle (deg.) 81.6 80.8 80.1 79.4 78.6 77.2 75.7 74.2 75.7 74.2 69.7 76.8 61 66.6 65.0 63.4 59.3 55.0 50.5	31 0 Degree Machine 126,300 * 119,100 * 112,600 * 05,290 96,930 83,550 73,320 65,230 58,680 53,260 44,840 41,490 38,580 36,020 30,820 26,820 23,670	60° Ratect 1 Degree Machine List 60,000 54,200 49,500 42,000 39,000 36,500 34,300 29,500 25,700 22,800	2 Degree Machine List 42,800 39,700 36,900 34,600 32,600 28,200 24,700 22,000	2 Degree Machine List 35,800 34,500 32,700 30,900 27,000 23,800 21,300	Radius 17.0 17.0 18.0 19.0 20.0 22.0 24.0 22.0 26.0 30.0 32.0 34.0 36.0 38.0 36.0 38.0 55.0 60.0	Boom Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 69.3 68.0 66.6 63.0 59.4 55.6 51.6	O Degree Machine 0 Degree Machine 1118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 41,380 38,440 35,890 30,660 26,670 23,520 20,960	50° Ratect 1 Degree Machine 53,700 49,000 45,000 41,700 38,700 36,100 34,000 29,300 25,500 22,500 20,100	2 Degree Machine List 41,700 38,900 36,300 34,200 32,100 27,700 24,300 21,600 19,400	29,900 26,400 23,400 20,800 18,700
Radius Constraint 14.0 14.0 15.0 15.0 16.0 17.0 18.0 19.0 20.0 20.0 24.0 26.0 30.0 32.0 34.0 36.0 38.0 34.0 40.0 45.0 50.0 50.0	Boom Angle (deg.) 82.0 81.2 80.3 79.5 78.7 77.8 77.0 77.8 77.0 75.3 77.0 75.3 71.9 70.1 68.4 66.6 66.4 63.0 61.1 59.2 54.3 49.0	O Degree Machine List 143,600 * 134,500 * 126,500 * 112,800 * 105,400 97,060 83,700 73,470 65,8840 53,430 44,6303 41,680 38,800 36,240 31,040 27,070	67,700 67,700 60,600 54,900 50,200 46,100 42,500 39,500 36,900 34,800 29,900 26,100	2 Degree Machine List 51,600 47,300 43,700 40,500 37,700 35,000 33,300 28,800 25,300	2 Degree Machine List 42,400 40,900 38,400 35,900 33,900 31,900 27,700 24,600	Radius (ft) Radius (ft) 16.0 17.0 18.0 17.0 19.0 20.0 20.0 24.0 24.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 55.0 60.0	Boom Angle (deg.) 81.6 80.8 80.1 79.4 78.6 77.2 75.7 74.2 75.7 74.2 75.7 74.2 75.7 74.2 75.7 71.2 68.1 66.6 63.4 55.0 50.5 50.5 50.5	31 0 Degree Machine 126,300 * 119,100 * 112,600 * 105,290 96,930 83,550 73,320 65,230 58,680 53,260 44,840 34,580 36,020 30,820 26,820 23,670 21,140	60° Ratect 1 Degree Machine List 60,000 54,200 49,500 42,000 39,000 36,500 34,300 29,500 25,700 22,800 20,400	2 Degree Machine List 42,800 39,700 36,900 34,600 32,600 28,200 24,700 22,000 19,900	2 Degree Machine List 35,800 34,500 32,700 30,900 27,000 23,800 21,300 19,200	Radius 17.0 18.0 19.0 19.0 20.0 22.0 24.0 22.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 38.0 35.0 50.0 55.0 60.0 65.0 65.0	Boom Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 70.7 69.3 68.0 66.6 63.0 59.4 55.6 51.6 47.4	O Degree Machine 0 Degree Machine 1118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 38,440 35,890 30,660 26,670 23,520 20,960 18,870	53,700 49,000 45,000 41,700 36,100 34,000 29,300 25,500 22,500 20,100 18,100	2 Degree Machine List 41,700 38,900 36,300 34,200 32,100 27,700 24,300 21,600 19,400 17,600	29,900 26,400 23,400 20,800 18,700 17,000
Radius Constraint 14.0 14.0 15.0 15.0 16.0 16.0 17.0 18.0 18.0 20.0 20.0 24.0 20.0 26.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0 55.0	Boom Angle (deg.) 82.0 81.2 80.3 79.5 78.7 77.8 77.8 77.0 77.8 77.0 75.3 77.0 75.3 71.9 70.1 68.4 66.6 66.4 63.0 61.1 59.2 54.3 49.0 43.3	O Degree Machine 0 Degree Machine 143,600 * 134,500 * 126,500 * 112,800 * 105,400 97,060 83,700 73,470 65,8840 53,430 48,890 34,600 38,800 36,240 31,040 27,070 23,960	67,700 67,700 60,600 54,900 50,200 46,100 42,500 39,500 36,900 34,800 29,900 26,100 23,100	2 Degree Machine List 51,600 47,300 43,700 40,500 37,700 35,000 33,300 28,800 25,300 22,500	2 Degree Machine List 42,400 40,900 38,400 35,900 33,900 31,900 27,700 24,600 21,900	Radius (ft) Radius (ft) 16.0 17.0 17.0 18.0 19.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 36.0 38.0 36.0 35.0 55.0	Boom Angle (deg.) 81.6 80.8 80.1 79.4 78.6 77.2 75.7 74.2 75.7 74.2 75.7 74.2 75.7 74.2 75.7 71.2 68.1 66.6 63.4 55.0 50.5 50.5 50.5	31 0 Degree Machine 126,300 * 119,100 * 112,600 * 05,290 96,930 83,550 73,320 65,230 58,680 53,260 44,840 41,490 38,580 36,020 30,820 26,820 23,670	60° Ratect 1 Degree Machine List 60,000 54,200 49,500 42,000 39,000 36,500 34,300 29,500 25,700 22,800	2 Degree Machine List 42,800 39,700 36,900 34,600 32,600 28,200 24,700 22,000	2 Degree Machine List 35,800 34,500 32,700 30,900 27,000 23,800 21,300	Radius 17.0 14.0 18.0 19.0 19.0 20.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 36.0 55.0 60.0 65.0 70.0	Boom Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 70.7 70.7 69.3 68.0 66.6 63.0 59.4 55.6 51.6 47.4 42.9	O Degree Machine 0 Degree Machine 1118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 38,440 35,890 30,660 26,670 23,520 20,960 18,870 17,100	53,700 49,000 45,000 41,700 36,100 34,000 29,300 25,500 22,500 20,100 18,100 16,400	2 Degree Machine List 41,700 38,900 36,300 34,200 32,100 27,700 24,300 21,600 19,400 17,600 16,000	29,900 26,400 23,400 20,800 18,700 17,000 15,600
Radius Constraint 14.0 14.0 15.0 15.0 16.0 17.0 18.0 19.0 20.0 20.0 24.0 20.0 30.0 30.0 32.0 34.0 34.0 36.0 38.0 40.0 45.0 50.0	Boom Angle (deg.) 82.0 81.2 80.3 79.5 78.7 77.8 77.0 77.8 77.0 75.3 77.0 75.3 71.9 70.1 68.4 66.6 66.4 63.0 61.1 59.2 54.3 49.0	O Degree Machine List 143,600 * 134,500 * 126,500 * 112,800 * 105,400 97,060 83,700 73,470 65,8840 53,430 44,6303 41,680 38,800 36,240 31,040 27,070	67,700 67,700 60,600 54,900 50,200 46,100 42,500 39,500 36,900 34,800 29,900 26,100	2 Degree Machine List 51,600 47,300 43,700 40,500 37,700 35,000 33,300 28,800 25,300	2 Degree Machine List 42,400 40,900 38,400 35,900 33,900 31,900 27,700 24,600	Radius (ft) Radius (ft) 16.0 17.0 18.0 17.0 19.0 20.0 20.0 24.0 24.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 55.0 60.0	Boom Angle (deg.) 81.6 80.8 80.1 79.4 78.6 77.2 75.7 74.2 75.7 74.2 75.7 74.2 75.7 74.2 75.7 71.2 68.1 66.6 63.4 55.0 50.5 50.5 50.5	31 0 Degree Machine 126,300 * 119,100 * 112,600 * 105,290 96,930 83,550 73,320 65,230 58,680 53,260 44,840 34,580 36,020 30,820 26,820 23,670 21,140	60° Ratect 1 Degree Machine List 60,000 54,200 49,500 42,000 39,000 36,500 34,300 29,500 25,700 22,800 20,400	2 Degree Machine List 42,800 39,700 36,900 34,600 32,600 28,200 24,700 22,000 19,900	2 Degree Machine List 35,800 34,500 32,700 30,900 27,000 23,800 21,300 19,200	Radius 17.0 18.0 19.0 19.0 20.0 22.0 24.0 22.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 38.0 35.0 50.0 55.0 60.0 65.0 65.0	Boom Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 70.7 69.3 68.0 66.6 63.0 59.4 55.6 51.6 47.4	O Degree Machine 0 Degree Machine 1118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 38,440 35,890 30,660 26,670 23,520 20,960 18,870	53,700 49,000 45,000 41,700 36,100 34,000 29,300 25,500 22,500 20,100 18,100	2 Degree Machine List 41,700 38,900 36,300 34,200 32,100 27,700 24,300 21,600 19,400 17,600	29,900 26,400 23,400 20,800 18,700 17,000
Radius Constraint 14.0 14.0 15.0 15.0 16.0 16.0 17.0 18.0 18.0 20.0 20.0 24.0 20.0 26.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0 55.0	Boom Angle (deg.) 82.0 81.2 80.3 79.5 78.7 77.8 77.8 77.0 77.8 77.0 75.3 77.0 75.3 71.9 70.1 68.4 66.6 66.4 63.0 61.1 59.2 54.3 49.0 43.3	O Degree Machine 0 Degree Machine 143,600 * 134,500 * 126,500 * 112,800 * 105,400 97,060 83,700 73,470 65,8840 53,430 48,890 34,600 38,800 36,240 31,040 27,070 23,960	67,700 67,700 60,600 54,900 50,200 46,100 42,500 39,500 36,900 34,800 29,900 26,100 23,100	2 Degree Machine List 51,600 47,300 43,700 40,500 37,700 35,000 33,300 28,800 25,300 22,500	2 Degree Machine List 42,400 40,900 38,400 35,900 33,900 31,900 27,700 24,600 21,900	Radius (ft) Radius (ft) 16.0 17.0 18.0 17.0 19.0 20.0 20.0 24.0 24.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 55.0 60.0	Boom Angle (deg.) 81.6 80.8 80.1 79.4 78.6 77.2 75.7 74.2 75.7 74.2 75.7 74.2 75.7 74.2 75.7 71.2 68.1 66.6 63.4 55.0 50.5 50.5 50.5	31 0 Degree Machine 126,300 * 119,100 * 112,600 * 105,290 96,930 83,550 73,320 65,230 58,680 53,260 44,840 34,580 36,020 30,820 26,820 23,670 21,140	60° Ratect 1 Degree Machine List 60,000 54,200 49,500 42,000 39,000 36,500 34,300 29,500 25,700 22,800 20,400	2 Degree Machine List 42,800 39,700 36,900 34,600 32,600 28,200 24,700 22,000 19,900	2 Degree Machine List 35,800 34,500 32,700 30,900 27,000 23,800 21,300 19,200	Radius 17.0 14.0 18.0 19.0 19.0 20.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 36.0 55.0 60.0 65.0 70.0	Boom Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 70.7 70.7 69.3 68.0 66.6 63.0 59.4 55.6 51.6 47.4 42.9	O Degree Machine 0 Degree Machine 1118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 38,440 35,890 30,660 26,670 23,520 20,960 18,870 17,100	53,700 49,000 45,000 41,700 36,100 34,000 29,300 25,500 22,500 20,100 18,100 16,400	2 Degree Machine List 41,700 38,900 36,300 34,200 32,100 27,700 24,300 21,600 19,400 17,600 16,000	29,900 26,400 23,400 20,800 18,700 17,000 15,600
Radius Constraint 14.0 14.0 15.0 15.0 16.0 16.0 17.0 18.0 18.0 20.0 20.0 24.0 20.0 26.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0 55.0	Boom Angle (deg.) 82.0 81.2 80.3 79.5 78.7 77.8 77.8 77.0 77.8 77.0 75.3 77.0 75.3 71.9 70.1 68.4 66.6 66.4 63.0 61.1 59.2 54.3 49.0 43.3	O Degree Machine 0 Degree Machine 143,600 * 134,500 * 126,500 * 112,800 * 105,400 97,060 83,700 73,470 65,8840 53,430 48,890 34,600 38,800 36,240 31,040 27,070 23,960	67,700 67,700 60,600 54,900 50,200 46,100 42,500 39,500 36,900 34,800 29,900 26,100 23,100	2 Degree Machine List 51,600 47,300 43,700 40,500 37,700 35,000 33,300 28,800 25,300 22,500	2 Degree Machine List 42,400 40,900 38,400 35,900 33,900 31,900 27,700 24,600 21,900	Radius (ft) Radius (ft) 16.0 17.0 18.0 17.0 19.0 20.0 20.0 24.0 24.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 55.0 60.0	Boom Angle (deg.) 81.6 80.8 80.1 79.4 78.6 77.2 75.7 74.2 75.7 74.2 75.7 74.2 75.7 74.2 75.7 71.2 68.1 66.6 63.4 55.0 50.5 50.5 50.5	31 0 Degree Machine 126,300 * 119,100 * 112,600 * 105,290 96,930 83,550 73,320 65,230 58,680 53,260 44,840 34,580 36,020 30,820 26,820 23,670 21,140	60° Ratect 1 Degree Machine List 60,000 54,200 49,500 42,000 39,000 36,500 34,300 29,500 25,700 22,800 20,400	2 Degree Machine List 42,800 39,700 36,900 34,600 32,600 28,200 24,700 22,000 19,900	2 Degree Machine List 35,800 34,500 32,700 30,900 27,000 23,800 21,300 19,200	Radius 17.0 18.0 19.0 19.0 20.0 20.0 24.0 22.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 67.0 70.0	Boom Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 70.7 70.7 69.3 68.0 66.6 63.0 59.4 55.6 51.6 47.4 42.9	O Degree Machine 0 Degree Machine 1118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 38,440 35,890 30,660 26,670 23,520 20,960 18,870 17,100	53,700 49,000 45,000 41,700 36,100 34,000 29,300 25,500 22,500 20,100 18,100 16,400	2 Degree Machine List 41,700 38,900 36,300 34,200 32,100 27,700 24,300 21,600 19,400 17,600 16,000	29,900 26,400 23,400 20,800 18,700 17,000 15,600
Radius (ft) 14.0 15.0 16.0 17.0 18.0 19.0 20.0 24.0 26.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0	Boom Angle (deg.) 82.0 81.2 80.3 79.5 78.7 77.8 77.8 77.0 77.8 77.0 75.3 77.0 75.3 71.9 70.1 68.4 66.6 66.4 63.0 61.1 59.2 54.3 49.0 43.3	O Degree Machine 0 Degree Machine 143,600 * 134,500 * 126,500 * 112,800 * 105,400 97,060 83,700 73,470 65,8840 53,430 48,890 34,600 38,800 36,240 31,040 27,070 23,960	67,700 67,700 60,600 54,900 50,200 46,100 42,500 39,500 36,900 34,800 29,900 26,100 23,100	2 Degree Machine List 51,600 47,300 43,700 40,500 37,700 35,000 33,300 28,800 25,300 22,500	2 Degree Machine List 42,400 40,900 38,400 35,900 33,900 31,900 27,700 24,600 21,900	Radius (ft) Radius (ft) 16.0 17.0 18.0 17.0 19.0 20.0 20.0 24.0 24.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 55.0 60.0	Boom Angle (deg.) 81.6 80.8 80.1 79.4 78.6 77.2 75.7 74.2 75.7 74.2 75.7 74.2 72.7 71.2 68.1 66.6 63.4 55.0 50.5 50.5 50.5	31 0 Degree Machine 126,300 * 119,100 * 112,600 * 105,290 96,930 83,550 73,320 65,230 58,680 53,260 44,840 34,580 36,020 30,820 26,820 23,670 21,140	60° Ratect 1 Degree Machine List 60,000 54,200 49,500 42,000 39,000 36,500 34,300 29,500 25,700 22,800 20,400	2 Degree Machine List 42,800 39,700 36,900 34,600 32,600 28,200 24,700 22,000 19,900	2 Degree Machine List 35,800 34,500 32,700 30,900 27,000 23,800 21,300 19,200	Radius 17.0 18.0 19.0 19.0 20.0 20.0 24.0 22.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 67.0 70.0	Boom Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 70.7 70.7 69.3 68.0 66.6 63.0 59.4 55.6 51.6 47.4 42.9	O Degree Machine 0 Degree Machine 1118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 38,440 35,890 30,660 26,670 23,520 20,960 18,870 17,100	53,700 49,000 45,000 41,700 36,100 34,000 29,300 25,500 22,500 20,100 18,100 16,400	2 Degree Machine List 41,700 38,900 36,300 34,200 32,100 27,700 24,300 21,600 19,400 17,600 16,000	29,900 26,400 23,400 20,800 18,700 17,000 15,600
Radius (ft) 14.0 15.0 16.0 17.0 18.0 19.0 20.0 24.0 26.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0	Boom Angle (deg.) 82.0 81.2 80.3 79.5 78.7 77.8 77.8 77.0 77.8 77.0 75.3 77.0 75.3 71.9 70.1 68.4 66.6 66.4 63.0 61.1 59.2 54.3 49.0 43.3	O Degree Machine 0 Degree Machine 143,600 * 134,500 * 126,500 * 112,800 * 105,400 97,060 83,700 73,470 65,8840 53,430 48,890 34,600 38,800 36,240 31,040 27,070 23,960	67,700 67,700 60,600 54,900 50,200 46,100 42,500 39,500 36,900 34,800 29,900 26,100 23,100	2 Degree Machine List 51,600 47,300 43,700 40,500 37,700 35,000 33,300 28,800 25,300 22,500	2 Degree Machine List 42,400 40,900 38,400 35,900 33,900 31,900 27,700 24,600 21,900	Radius (ft) Radius (ft) 16.0 17.0 18.0 17.0 19.0 20.0 20.0 24.0 24.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 55.0 60.0	Boom Angle (deg.) 81.6 80.8 80.1 79.4 78.6 77.2 75.7 74.2 75.7 74.2 75.7 74.2 72.7 71.2 68.1 66.6 63.4 55.0 50.5 50.5 50.5	31 0 Degree Machine 126,300 * 119,100 * 112,600 * 105,290 96,930 83,550 73,320 65,230 58,680 53,260 44,840 34,580 36,020 30,820 26,820 23,670 21,140	60° Ratect 1 Degree Machine List 60,000 54,200 49,500 42,000 39,000 36,500 34,300 29,500 25,700 22,800 20,400	2 Degree Machine List 42,800 39,700 36,900 34,600 32,600 28,200 24,700 22,000 19,900	2 Degree Machine List 35,800 34,500 32,700 30,900 27,000 23,800 21,300 19,200	Radius 17.0 18.0 19.0 19.0 20.0 20.0 24.0 22.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 67.0 70.0	Boom Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 70.7 70.7 69.3 68.0 66.6 63.0 59.4 55.6 51.6 47.4 42.9	O Degree Machine 0 Degree Machine 1118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 38,440 35,890 30,660 26,670 23,520 20,960 18,870 17,100	53,700 49,000 45,000 41,700 36,100 34,000 29,300 25,500 22,500 20,100 18,100 16,400	2 Degree Machine List 41,700 38,900 36,300 34,200 32,100 27,700 24,300 21,600 19,400 17,600 16,000	29,900 26,400 23,400 20,800 18,700 17,000 15,600
Radius Characterization 14.0 15.0 15.0 16.0 17.0 18.0 19.0 20.0 20.0 24.0 26.0 24.0 26.0 38.0 30.0 38.0 40.0 45.0 55.0 60.0	Boom Angle (deg.) 82.0 81.2 80.3 79.5 78.7 77.8 77.8 77.0 77.8 77.0 75.3 77.0 75.3 71.9 70.1 68.4 66.6 66.4 63.0 61.1 59.2 54.3 49.0 43.3	O Degree Machine List 143,600 * 134,500 * 126,500 * 112,800 * 105,400 97,060 83,700 73,470 65,8840 53,430 48,890 34,600 31,040 27,070 23,960	67,700 67,700 60,600 54,900 50,200 46,100 42,500 39,500 36,900 34,800 29,900 26,100 23,100	2 Degree Machine List 51,600 47,300 43,700 40,500 37,700 35,000 33,300 28,800 25,300 22,500	2 Degree Machine List 42,400 40,900 38,400 35,900 33,900 31,900 27,700 24,600 21,900	Radius 16.0 17.0 18.0 19.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 65.0	Boom Angle (deg.) 81.6 80.8 80.1 79.4 78.6 77.2 75.7 74.2 75.7 74.2 75.7 74.2 72.7 71.2 68.1 66.6 63.4 55.0 50.5 50.5 50.5	31 0 Degree Machine 126,300 * 119,100 * 112,600 * 105,290 96,930 83,550 73,320 65,230 58,680 53,260 44,840 34,580 36,020 30,820 26,820 23,670 21,140	60° Ratect 1 Degree Machine List 60,000 54,200 49,500 42,000 39,000 36,500 34,300 29,500 25,700 22,800 20,400	2 Degree Machine List 42,800 39,700 36,900 34,600 32,600 28,200 24,700 22,000 19,900	2 Degree Machine List 35,800 34,500 32,700 30,900 27,000 23,800 21,300 19,200	Radius 17.0 18.0 19.0 20.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 55.0 60.0 65.0 70.0 75.0	Boom Angle (deg.) 81.9 81.2 80.6 79.9 78.6 77.3 76.0 74.7 73.4 72.0 70.7 70.7 70.7 69.3 68.0 66.6 63.0 59.4 55.6 51.6 47.4 42.9	O Degree Machine 0 Degree Machine 1118,820 * 112,400 * 105,220 96,870 83,480 73,230 65,140 58,570 53,150 48,580 44,700 38,440 35,890 30,660 26,670 23,520 20,960 18,870 17,100	53,700 49,000 45,000 41,700 36,100 34,000 29,300 25,500 22,500 20,100 18,100 16,400	2 Degree Machine List 41,700 38,900 36,300 34,200 32,100 27,700 24,300 21,600 19,400 17,600 16,000	2 D Ma 29 26 23 20 18 17 15

Refer to notes on page 31.

Barge

5 Counterweights (57,600 lbs) - 2 Carbody weights (14,400 lbs) - Crawlers in extended position.

	100)' Booi	m				1 <u>10</u>)' Boo	m				120)' Boo	m		
				Load (lb	os)				60° Rateo	Load (lb	os)				60° Rateo	Load (lb	os)
Load Radius	Boom Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine	Load Radius	Boom Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine	Load Radius	Boom Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine
(ft)	(deg.)	List	List	List	List	(ft)	(deg.)	List	List	List	List	(ft)	(deg.)	List	List	List	List
19.0	81.5	101,850*				20.0	81.8	92,590				22.0	81.5	80,680 *			
20.0 22.0	80.9 79.8	96,800 83,400				22.0 24.0	80.7 79.7	83,260 73,010				24.0 26.0	80.5 79.6	72,950 64,810			
22.0	79.6	73,120				24.0	79.7	64,900				28.0	79.0	58,240			
26.0	77.4	65,010				28.0	77.5	58,330				30.0	77.6	52,800			
28.0	76.3	58,440				30.0	76.5	52,880				32.0	76.6	48,230			
30.0	75.1	53,020				32.0	75.4	48,320				34.0	75.6	44,330			
32.0 34.0	73.9 72.7	48,450 44,550	44,500 41,100			34.0 36.0	74.3 73.2	44,440	40,600 37,800			36.0 38.0	74.7 73.7	40,980	37,600 35,100		
36.0	71.5	44,330	38,200	35,700		38.0	72.1	41,090 38,160	35,300			40.0	72.7	38,050 35,470	33,000		
38.0	70.3	38,290	35,600	33,700		40.0	71.0	35,600	33,200			45.0	70.1	30,220	28,300	26,200	
40.0	69.0	35,730	33,500	31,600		45.0	68.2	30,350	28,500			50.0	67.6	26,210	24,600	23,100	
45.0	65.9	30,480	28,900	27,300	25,800	50.0	65.4	26,340	24,900	23,500	22,100	55.0	65.0	23,010	21,600	20,500	19,400
50.0	62.7	26,470	25,100	24,000	22,800	55.0	62.5	23,170	21,900	20,800	19,900	60.0	62.3	20,450	19,300	18,300	17,400
55.0 60.0	59.5 56.1	23,320 20,740	22,200 19,800	21,200 19,100	20,200 18,200	60.0 65.0	59.5 56.4	20,610 18,490	19,600 17,700	18,700 16,900	17,800 16,100	65.0 70.0	59.5 56.7	18,320 16,530	17,400 15,700	16,500 14,900	15,700 14,400
65.0	52.5	18,620	17,800	17,200	16,500	70.0	53.2	16,710	16,000	15,300	14,800	75.0	53.8	15,010	14,300	13,700	13,200
70.0	48.8	16,860	16,200	15,600	15,000	75.0	49.9	15,210	14,500	13,900	13,500	80.0	50.8	13,710	13,000	12,700	12,100
75.0	44.8	15,360	14,800	14,300	13,900	80.0	46.4	13,910	13,300	12,900	12,500	85.0	47.6	12,580	12,000	11,600	11,200
80.0	40.6	14,080	13,600	13,100	12,900	85.0	42.6	12,800	12,300	11,900	11,600	90.0	44.3	11,590	11,100	10,700	10,400
85.0	35.9	12,980	12,600	12,200	12,000	90.0 95.0	38.6 34.2	11,830 10,970	11,400 10,600	11,000 10,300	10,800 10,100	95.0 100.0	40.7 36.9	10,730 9,960	10,300 9,500	9,900 9,300	9,600 8,900
						55.0	54.2	10,570	10,000	10,500	10,100	105.0	32.7	9,280	5,500	8,700	8,500
Ree	eves	6	4	4	2	Ree	eves	6	4	2	2	Ree	eves	5	4	2	2
	130)' Booi	m				140)' Boo	m				150)' Boo	m		
		36		l Load (lk	os)				60° Rateo	Load (lb	os)				60° Rateo	l Load (lk	os)
Load	Boom	0 Degree	50° Ratec	2 Degree	2 Degree	Load	Boom	3 0 Degree	60° Ratec	2 Degree	2 Degree	Load	Boom	3 0 Degree	60° Rateo	2 Degree	2 Degree
Load Radius (ft)	Boom Angle (deg.)		50° Rateo		-	Load Radius (ft)		3	60° Rateo		,	Load Radius (ft)		3	60° Rateo		
Radius	Angle	0 Degree Machine	50° Rateo 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius	Boom Angle	3 0 Degree Machine	60° Ratec 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius	Boom Angle	0 Degree Machine	60° Rateo 1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft)	Angle (deg.) 81.3 80.4	0 Degree Machine List 71,200 * 64,610	50° Rateo 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft)	Boom Angle (deg.)	30 0 Degree Machine List 61,720 * 60,840	60° Ratec 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 26.0 28.0	Boom Angle (deg.)	30 0 Degree Machine List 52,680 * 51,800 *	60° Rateo 1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 24.0 26.0 28.0	Angle (deg.) 81.3 80.4 79.5	0 Degree Machine List 71,200 * 64,610 58,020	50° Rateo 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 24.0 26.0 28.0	Boom Angle (deg.) 81.9 81.1 80.2	30 0 Degree Machine List 61,720 * 60,840 57,980	60° Ratec 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 26.0 28.0 30.0	Boom Angle (deg.) 81.7 80.9 80.1	30 0 Degree Machine List 52,680 * 51,800 * 51,140 *	60° Rateo 1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 24.0 26.0 28.0 30.0	Angle (deg.) 81.3 80.4 79.5 78.6	0 Degree Machine List 71,200 * 64,610 58,020 52,570	50° Rateo 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 24.0 26.0 28.0 30.0	Boom Angle (deg.) 81.9 81.1 80.2 79.4	30 0 Degree Machine List 61,720 * 60,840 57,980 52,530	60° Ratec 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 26.0 28.0 30.0 32.0	Boom Angle (deg.) 81.7 80.9 80.1 79.3	30 0 Degree Machine List 52,680 * 51,800 * 51,140 * 47,810	60° Rateo 1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 24.0 26.0 28.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7	0 Degree Machine List 71,200 * 64,610 58,020 52,570 48,010	50° Rateo 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 24.0 26.0 28.0	Boom Angle (deg.) 81.9 81.1 80.2 79.4 78.6	30 0 Degree Machine List 61,720 * 60,840 57,980	60° Ratec 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 26.0 28.0 30.0 32.0 34.0	Boom Angle (deg.) 81.7 80.9 80.1 79.3 78.6	30 0 Degree Machine List 52,680 * 51,800 * 51,140 * 47,810 43,890	60° Rateo 1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 24.0 26.0 28.0 30.0 32.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7	0 Degree Machine List 71,200 * 64,610 58,020 52,570	50° Rateo 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 24.0 26.0 28.0 30.0 32.0	Boom Angle (deg.) 81.9 81.1 80.2 79.4	30 0 Degree Machine List 61,720 * 60,840 57,980 52,530 47,950	60° Ratec 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 26.0 28.0 30.0 32.0	Boom Angle (deg.) 81.7 80.9 80.1 79.3 78.6	30 0 Degree Machine List 52,680 * 51,800 * 51,140 * 47,810	60° Rateo 1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.9	0 Degree Machine List 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830	50° Ratec 1 Degree Machine List 34,600	2 Degree Machine	2 Degree Machine	Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0	Boom Angle (deg.) 81.9 81.1 80.2 79.4 78.6 77.7 76.9 76.9	30 0 Degree Machine List 61,720 * 60,840 57,980 52,530 47,950 44,040 40,670 37,740	60° Ratec 1 Degree Machine List	2 Degree Machine	2 Degree Machine	Radius (ft) 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0	Boom Angle (deg.) 81.7 80.9 80.1 79.3 78.6 77.8 77.0 76.2	30 Degree Machine List 52,680 * 51,800 * 51,140 * 47,810 43,890 40,540 37,610 35,030	60° Rateo 1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.9 74.0	0 Degree Machine List 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250	50° Ratect 1 Degree Machine List 34,600 32,500	2 Degree Machine	2 Degree Machine	Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0	Boom Angle (deg.) 81.9 81.1 80.2 79.4 78.6 77.7 76.9 76.0 75.2	30 Degree Machine List 60,840 57,980 52,530 47,950 44,040 40,670 37,740 35,160	60° Ratec 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0	Boom Angle (deg.) 81.7 80.9 80.1 79.3 78.6 77.8 77.0 76.2 74.2	30 Degree Machine List 52,680 * 51,140 * 47,810 43,890 40,540 37,610 35,030 29,760	60° Ratec 1 Degree Machine List	2 Degree Machine	2 Degree Machine
Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.9 74.0 71.7	0 Degree Machine List 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000	50° Ratect 1 Degree Machine List 34,600 32,500 27,800	2 Degree Machine List	2 Degree Machine	Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0	Boom Angle (deg.) 81.9 81.1 80.2 79.4 78.6 77.7 76.9 76.0 75.2 73.1	3/2 0 Degree Machine 61,720 * 60,840 57,980 52,530 47,950 44,040 40,670 37,740 35,160 29,910	60° Ratec 1 Degree Machine List 2	2 Degree Machine List	2 Degree Machine	Radius (ft) 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0	Boom Angle (deg.) 81.7 80.9 80.1 79.3 78.6 77.8 77.0 76.2 74.2 72.2	O Degree Machine 52,680 * 51,800 * 51,140 * 47,810 43,890 40,540 37,610 35,030 29,760 25,720	60° Ratec 1 Degree Machine List 23,700	2 Degree Machine List	2 Degree Machine
Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.9 74.0 71.7 69.4	O Degree Machine List 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970	50° Ratect 1 Degree Machine List 34,600 32,500 27,800 24,200	22,600	2 Degree Machine	Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0	Boom Angle (deg.) 81.9 81.1 80.2 79.4 78.6 77.7 76.9 76.0 75.2 73.1 70.9	3/ 0 Degree Machine 61,720 * 60,840 57,980 52,530 47,950 44,040 40,670 37,740 35,160 29,910 25,880	60° Ratec 1 Degree Machine List 2 4,100	2 Degree Machine List 22,300	2 Degree Machine	Radius (ft) 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0	Boom Angle (deg.) 81.7 80.9 80.1 79.3 78.6 77.8 77.0 76.2 74.2 74.2 72.2 70.2	31 0 Degree Machine 52,680 * 51,800 * 51,140 * 47,810 43,890 40,540 37,610 35,030 29,760 25,720 22,530	60° Ratec 1 Degree Machine List 23,700 20,900	2 Degree Machine List 19,200	2 Degree Machine
Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.9 74.0 71.7	0 Degree Machine List 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000	50° Ratect 1 Degree Machine List 34,600 32,500 27,800	2 Degree Machine List	2 Degree Machine	Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0	Boom Angle (deg.) 81.9 81.1 80.2 79.4 78.6 77.7 76.9 76.0 75.2 73.1	3/2 0 Degree Machine 61,720 * 60,840 57,980 52,530 47,950 44,040 40,670 37,740 35,160 29,910	60° Ratec 1 Degree Machine List 2	2 Degree Machine List	2 Degree Machine	Radius (ft) 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0	Boom Angle (deg.) 81.7 80.9 80.1 79.3 78.6 77.8 77.0 76.2 74.2 72.2	O Degree Machine 52,680 * 51,800 * 51,140 * 47,810 43,890 40,540 37,610 35,030 29,760 25,720	60° Ratec 1 Degree Machine List 23,700	2 Degree Machine List	2 Degree Machine
Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 34.0 36.0 38.0 40.0 45.0 55.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.9 74.0 71.7 69.4 67.0 64.6 62.1	0 Degree Machine List 71,200 * 64,610 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970 22,790	50° Ratect 1 Degree Machine 1 Joint 1 State 1 Statet	22,600 22,600 20,100 17,900 16,100	2 Degree Machine List	Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0	Boom Angle (deg.) 81.9 81.1 80.2 79.4 78.6 77.7 76.9 76.0 75.2 73.1 70.9 68.7	30 Degree Machine Eist 61,720 * 60,840 57,980 52,530 47,950 44,040 40,670 35,740 35,160 29,910 25,880 22,680 20,100 17,960	60° Ratec 1 Degree Machine List 2 4,100 21,200	2 Degree Machine List 22,300 19,700	2 Degree Machine List	Radius (ft) 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0 60.0	Boom Angle (deg.) 81.7 80.9 80.1 79.3 78.6 77.8 77.0 76.2 74.2 74.2 72.2 70.2 68.2	31 0 Degree Machine 52,680 * 51,800 * 51,140 * 47,810 43,890 40,540 37,610 35,030 29,760 25,720 22,530 19,950	60° Ratec 1 Degree Machine 23,700 20,900 18,600 16,600 15,000	2 Degree Machine List 19,200 17,400	2 Degree Machine List 13,700 13,100
Radius 24.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 70.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.9 74.9 74.0 71.7 69.4 67.0 64.6 62.1 59.6	0 Degree Machine List 71,200 * 64,610 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970 22,790 20,210 18,070 16,290	34,600 32,500 27,800 21,300 19,000 17,100 15,400	22,600 22,600 20,100 17,900 16,100 14,600	2 Degree Machine List 16,800 15,400 14,000	Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0 60.0 65.0 70.0	Boom Angle (deg.) 81.9 81.1 80.2 79.4 78.6 77.7 76.9 75.2 73.1 70.9 68.7 64.5 64.3 62.0	30 Degree Machine 1,720 * 60,840 57,980 52,530 47,950 44,040 40,670 37,740 35,160 29,910 25,880 22,680 20,100 17,960 16,150	60° Ratect 1 Degree Machine 2 4,100 21,200 18,800 16,800 15,100	2 Degree Machine List 22,300 19,700 17,700 15,800 14,400	2 Degree Machine List 15,700 14,900 13,600	Radius (ft) 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 50.0 55.0 60.0 65.0 70.0 75.0	Boom Angle (deg.) 81.7 80.9 80.1 79.3 78.6 77.8 77.0 76.2 72.2 70.2 68.2 66.1 64.0 61.8	30 0 Degree Machine 52,680 * 51,800 * 51,140 * 47,810 43,890 40,540 37,610 35,030 29,760 25,720 22,530 19,950 17,810 16,000 14,480	60° Ratec 1 Degree Machine 23,700 20,900 18,600 16,600 15,000 13,700	2 Degree Machine List 19,200 17,400 15,600 14,100 12,800	2 Degree Machine List 13,700 13,100 12,100
Radius (ft) 24.0 28.0 30.0 32.0 34.0 34.0 38.0 40.0 45.0 55.0 60.0 65.0 70.0 75.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.9 74.0 71.7 69.4 67.0 64.6 62.1 59.6 57.0	0 Degree Machine List 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970 22,790 20,210 18,070 16,290 14,770	34,600 32,500 27,800 24,200 21,300 19,000 17,100 15,400 14,000	22,600 22,600 20,100 17,900 16,100 14,600 13,200	2 Degree Machine List 16,800 15,400 14,000 12,800	Radius 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0 60.0 65.0 70.0 75.0	Boom Angle (deg.) 81.9 81.1 80.2 79.4 78.6 77.7 76.9 76.0 75.2 73.1 70.9 68.7 66.5 64.3 62.0 59.6	30 Degree Machine 1ist 61,720 * 60,840 57,980 52,530 47,950 44,040 40,670 37,740 35,160 29,910 25,880 22,680 20,100 17,960 16,150 14,630	60° Ratect 1 Degree Machine 2 4,100 21,200 18,800 16,800 15,100 13,700	2 Degree Machine List 22,300 19,700 17,700 15,800 14,400 13,100	2 Degree Machine List 15,700 14,900 13,600 12,400	Radius 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0 60.0 65.0 70.0 75.0 80.0	Boom Angle (deg.) 81.7 80.9 80.1 79.3 78.6 77.0 76.2 74.2 70.2 68.2 66.1 64.0 61.8 59.6	30 D Degree Machine 52,680 * 51,800 * 51,140 * 47,810 43,890 40,540 37,610 35,030 29,760 25,720 22,530 19,950 17,810 16,000 14,480 13,160	60° Ratect 1 Degree Machine 23,700 20,900 18,600 16,600 15,000 13,700 12,300	2 Degree Machine List 19,200 17,400 15,600 14,100 12,800 11,700	2 Degree Machine List 13,700 13,100 12,100 11,100
Radius 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 50.0 55.0 60.0 75.0 80.0 75.0 80.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.0 74.0 71.7 69.4 67.0 64.6 62.1 59.6 57.0 54.3	0 Degree Machine List 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970 22,790 20,210 18,070 16,290 14,770 13,470	50° Ratect 1 Degree Machine 34,600 32,500 27,800 24,200 21,300 19,000 17,100 15,400 14,000 12,800	22,600 22,600 20,100 17,900 16,100 14,600 13,200 12,100	2 Degree Machine List 16,800 15,400 14,000 12,800 11,700	Radius 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0 60.0 65.0 70.0 75.0 80.0	Boom Angle (deg.) 81.9 81.1 80.2 79.4 78.6 77.7 76.9 75.2 73.1 70.9 68.7 64.3 62.0 59.6 57.2	30 0 Degree Machine 60,840 57,980 52,530 47,950 44,040 40,670 37,740 35,160 29,910 25,880 22,680 22,680 22,680 22,680 17,960 16,150 14,630 13,310	60° Ratect 1 Degree Machine 2 4,100 21,200 18,800 16,800 15,100 13,700 12,500	2 Degree Machine List 22,300 19,700 17,700 15,800 14,400 13,100 12,000	2 Degree Machine List 15,700 14,900 13,600 12,400 11,400	Radius 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0 60.0 65.0 70.0 75.0 80.0 85.0	Boom Angle (deg.) 81.7 80.9 80.1 79.3 78.6 77.0 76.2 74.2 70.2 68.2 66.1 64.0 61.8 59.6 57.4	30 D Degree Machine 52,680 * 51,800 * 51,140 * 47,810 43,890 40,540 37,610 35,030 29,760 22,530 19,950 17,810 16,000 14,480 13,160 12,010	60° Ratec 1 Degree Machine 23,700 20,900 18,600 16,600 15,000 13,700 12,300 11,300	2 Degree Machine List 19,200 17,400 15,600 14,100 12,800 11,700 10,600	2 Degree Machine List 13,700 13,100 12,100 11,100 10,200
Radius 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 50.0 55.0 60.0 70.0 75.0 80.0 85.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.0 71.7 69.4 67.0 64.6 62.1 59.6 62.1 59.6 57.0 54.3 51.5	0 Degree Machine List 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970 22,790 20,210 18,070 16,290 14,770 13,470 12,320	50° Ratect 1 Degree Machine 34,600 32,500 27,800 24,200 21,300 19,000 17,100 15,400 14,000 12,800 11,700	22,600 22,600 20,100 17,900 16,100 14,600 13,200 12,100 11,200	2 Degree Machine List 16,800 15,400 14,000 12,800 11,700 10,700	Radius 24.0 24.0 26.0 28.0 30.0 30.0 34.0 36.0 36.0 40.0 45.0 50.0 55.0 60.0 65.0 70.0 75.0 80.0 85.0 85.0	Boom Angle (deg.) 81.9 81.1 80.2 79.4 78.6 77.7 76.9 76.0 75.2 73.1 70.9 68.7 66.5 64.3 62.0 59.6	30 Degree Machine 1ist 61,720 * 60,840 57,980 52,530 47,950 44,040 40,670 37,740 35,160 29,910 25,880 22,680 20,100 17,960 16,150 14,630	60° Ratect 1 Degree Machine 2 4,100 21,200 18,800 16,800 15,100 13,700	2.2,300 19,700 17,700 15,800 14,400 13,100 12,000 11,000	2 Degree Machine List 15,700 14,900 13,600 12,400 11,400 10,600	Radius 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 60.0 65.0 70.0 75.0 80.0 85.0 90.0	Boom Angle (deg.) 81.7 80.9 80.1 79.3 78.6 77.0 76.2 74.2 70.2 68.2 66.1 64.0 61.8 59.6 57.4	30 D Degree Machine 52,680 * 51,800 * 51,140 * 47,810 43,890 40,540 37,610 35,030 29,760 25,720 22,530 19,950 17,810 16,000 14,480 13,160	60° Ratect 1 Degree Machine 23,700 20,900 18,600 15,000 13,700 12,300 11,300 10,400	2 Degree Machine List 19,200 17,400 15,600 14,100 12,800 11,700	2 Degree Machine List 13,700 13,100 12,100 11,100
Radius 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 50.0 55.0 60.0 75.0 80.0 75.0 80.0	Angle (deg.) 81.3 80.4 79.5 78.6 77.7 76.8 75.9 74.0 74.0 71.7 69.4 67.0 64.6 62.1 59.6 57.0 54.3	0 Degree Machine List 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970 22,790 20,210 18,070 16,290 14,770 13,470	50° Ratect 1 Degree Machine 34,600 32,500 27,800 24,200 21,300 19,000 17,100 15,400 14,000 12,800	22,600 22,600 20,100 17,900 16,100 14,600 13,200 12,100	2 Degree Machine List 16,800 15,400 14,000 12,800 11,700	Radius 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0 60.0 65.0 70.0 75.0 80.0	Boom Angle (deg.) 81.9 81.1 80.2 79.4 78.6 77.7 76.9 76.0 75.2 73.1 70.9 66.5 64.3 62.0 65.5 64.3 62.0 59.6 57.2 54.7	30 0 Degree Machine 60,840 57,980 52,530 47,950 44,040 40,670 37,740 35,160 29,910 22,680 22,680 22,680 22,680 22,680 22,680 17,960 16,150 14,630 13,310 12,160	60° Ratect 1 Degree Machine 2 4,100 21,200 18,800 16,800 15,100 13,700 12,500 11,500	2 Degree Machine List 22,300 19,700 17,700 15,800 14,400 13,100 12,000	2 Degree Machine List 15,700 14,900 13,600 12,400 11,400	Radius 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0 60.0 65.0 70.0 75.0 80.0 85.0	Boom Angle (deg.) 81.7 80.9 80.1 79.3 78.6 77.8 77.0 76.2 74.2 74.2 70.2 68.2 66.1 64.0 64.8 59.6 57.4 55.1 52.7	30 D Degree Machine 52,680 * 51,800 * 51,140 * 47,810 43,890 40,540 37,610 35,030 29,760 22,530 19,950 17,810 16,000 14,480 13,160 12,010 11,000	60° Ratec 1 Degree Machine 23,700 20,900 18,600 16,600 15,000 13,700 12,300 11,300	2 Degree Machine List 19,200 17,400 15,600 14,100 12,800 11,700 10,600 9,800	2 Degree Machine List 13,700 13,100 12,100 11,100 10,200 9,400
Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0 45.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 60.0 60.0 60.0 60.0 60.0 60.0 90.0 95.0 100.0	Angle (deg.) 81.3 80.4 77.5 78.6 77.7 76.8 75.9 74.9 74.0 74.0 67.4 69.4 67.0 64.6 62.1 59.6 57.0 54.3 51.5 48.6 45.6 42.4	0 Degree Machine List 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970 22,790 20,210 18,070 16,290 14,770 13,470 12,320 11,330 10,440 9,670	34,600 32,500 27,800 21,300 19,000 17,100 15,400 14,000 12,800 11,700 10,700 9,900 9,200	22,600 22,600 20,100 17,900 16,100 14,600 13,200 12,100 11,200 10,400 9,700 8,900	2 Degree Machine List 16,800 15,400 14,000 12,800 11,700 10,700 10,000 9,200 8,600	Radius 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 55.0 60.0 55.0 60.0 75.0 80.0 75.0 80.0 85.0 90.0 95.0 100.0	Boom Angle (deg.) 81.9 81.1 80.2 79.4 78.6 77.7 76.9 76.0 75.2 73.1 70.9 66.5 64.3 66.5 64.3 65.6 64.3 59.6 57.2 54.7 52.2 49.5 46.8	30 0 Degree Machine 61,720 * 60,840 57,980 52,530 47,950 44,040 40,670 37,740 35,160 29,910 25,880 20,100 17,960 16,150 14,630 13,310 12,160 11,170 10,290 9,500	2 4,100 21,200 18,800 16,800 15,100 13,700 12,500 11,500 10,600 9,800 9,000	22,300 19,700 17,700 15,800 14,400 13,100 12,000 11,000 10,100 9,400 8,700	2 Degree Machine List 15,700 14,900 13,600 12,400 11,400 10,600 9,700 8,900 8,300	Radius (ft) 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 50.0 55.0 60.0 60.0 65.0 75.0 80.0 85.0 90.0 95.0 100.0 105.0	Boom Angle (deg.) 81.7 80.9 80.1 79.3 78.6 77.8 77.0 76.2 74.2 74.2 76.2 74.2 66.1 64.0 64.0 64.8 59.6 57.4 55.1 52.7 50.3 47.7	30 D Degree Machine 52,680 * 51,800 * 51,140 * 47,810 43,890 40,540 37,610 35,030 29,760 25,720 22,530 19,950 17,810 16,000 14,480 13,160 12,010 11,000 10,110 9,320 8,640	60° Ratect 1 Degree Machine List 23,700 20,900 18,600 16,600 15,000 13,700 12,300 11,300 10,400 9,500 8,700 8,100	2 Degree Machine List 19,200 17,400 15,600 14,100 12,800 11,700 10,600 9,800 9,100 8,400 7,800	2 Degree Machine List 13,700 13,100 12,100 11,100 10,200 9,400 8,600 8,000 7,600
Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0 40.0 55.0 60.0 65.0 75.0 80.0 90.0 95.0 100.0 105.0	Angle (deg.) 81.3 80.4 77.5 78.6 77.7 76.8 75.9 74.0 74.0 74.0 67.0 67.4 67.0 67.0 67.0 67.0 67.0 67.0 51.5 51.5 48.6 45.6 42.4 39.0	0 Degree Machine List 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970 22,790 20,210 18,070 16,290 14,770 13,470 12,320 11,330 10,440 9,670 8,990	34,600 32,500 27,800 24,200 17,100 15,400 14,000 12,800 11,700 10,700 9,900 9,200 8,600	22,600 20,100 17,900 16,100 13,200 12,100 11,200 10,400 9,700 8,900 8,300	2 Degree Machine List 16,800 15,400 14,000 12,800 11,700 10,700 10,000 9,200 8,600 8,000	Radius (ft) Radius 24.0 24.0 26.0 28.0 30.0 32.0 34.0 34.0 36.0 38.0 40.0 55.0 60.0 65.0 70.0 75.0 80.0 85.0 90.0 95.0 100.0 105.0 105.0	Boom Angle (deg.) 81.9 81.1 80.2 79.4 78.6 77.7 76.9 76.0 75.2 73.1 70.9 66.5 64.3 66.5 64.3 62.0 59.6 57.2 54.7 52.2 49.5 46.8 43.9	30 0 Degree Machine 61,720 * 60,840 57,980 52,530 47,950 44,040 40,670 37,740 35,160 29,910 25,880 20,100 17,960 16,150 14,630 13,310 12,160 11,170 10,290 9,500 8,790	60° Ratect I Degree Machine 2 4,100 21,200 18,800 16,800 15,100 13,700 12,500 11,500 10,600 9,800 9,000 8,300	22,300 19,700 15,800 14,400 13,100 12,000 11,000 10,100 9,400 8,700 8,100	2 Degree Machine List 15,700 14,900 13,600 12,400 11,400 10,600 9,700 8,900 8,900 8,300 7,700	Radius (ft) 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 55.0 60.0 75.0 80.0 85.0 90.0 95.0 100.0 110.0	Boom Angle (deg.) 81.7 80.9 80.1 79.3 78.6 77.8 77.0 76.2 74.2 74.2 70.2 68.2 66.1 64.0 64.0 61.8 59.6 57.4 55.1 52.7 50.3 47.7 45.1	30 O Degree Machine 52,680 * 51,800 * 51,140 * 47,810 43,890 40,540 37,610 35,030 29,760 25,720 22,530 19,950 17,810 13,160 12,010 11,000 10,110 9,320 8,640 8,000	60° Ratect 1 Degree Machine List 23,700 20,900 18,600 16,600 15,000 13,700 12,300 11,300 10,400 9,500 8,700 8,100 7,500	2 Degree Machine List 19,200 17,400 15,600 14,100 12,800 11,700 10,600 9,800 9,100 8,400 7,800 7,200	2 Degree Machine List 13,700 13,100 12,100 11,100 10,200 9,400 8,600 8,000 7,600 7,000
Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0 40.0 55.0 60.0 55.0 60.0 75.0 80.0 90.0 95.0 100.0	Angle (deg.) 81.3 80.4 77.5 78.6 77.7 76.8 75.9 74.9 74.0 74.0 67.4 69.4 67.0 64.6 62.1 59.6 57.0 54.3 51.5 48.6 45.6 42.4	0 Degree Machine List 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970 22,790 20,210 18,070 16,290 14,770 13,470 12,320 11,330 10,440 9,670	34,600 32,500 27,800 21,300 19,000 17,100 15,400 14,000 12,800 11,700 10,700 9,900 9,200	22,600 22,600 20,100 17,900 16,100 14,600 13,200 12,100 11,200 10,400 9,700 8,900	2 Degree Machine List 16,800 15,400 14,000 12,800 11,700 10,700 10,000 9,200 8,600	Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 75.0 80.0 95.0 90.0 95.0 100.0 105.0	Boom Angle (deg.) 81.9 81.1 80.2 79.4 78.6 77.7 76.9 76.0 75.2 73.1 70.9 66.5 64.3 62.0 59.6 57.2 54.7 52.2 49.5 46.8 43.9 40.8	30 0 Degree Machine 61,720 * 60,840 57,980 52,530 47,950 44,040 40,670 37,740 35,160 29,910 25,880 22,680 20,100 17,960 16,150 14,630 13,310 12,160 11,170 10,290 9,500 8,790 8,170	60° Ratect I Degree Machine 2 4,100 21,200 18,800 15,100 13,700 12,500 11,500 10,600 9,800 9,000 8,300 7,700	22,300 19,700 13,100 12,000 11,000 10,100 9,400 8,700 8,100 7,500	2 Degree Machine List 15,700 14,900 13,600 12,400 11,400 10,600 9,700 8,900 8,900 8,900 8,900 7,700 7,200	Radius (ft) 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 75.0 80.0 90.0 90.0 95.0 105.0 110.0 115.0	Boom Angle (deg.) 81.7 80.9 80.1 79.3 78.6 77.8 77.0 76.2 74.2 74.2 70.2 68.2 66.1 64.0 61.8 59.6 59.6 59.6 59.5 1 52.7 50.3 47.7 45.1 42.3	30 O Degree Machine 52,680 * 51,800 * 51,140 * 47,810 43,890 40,540 37,610 35,030 29,760 25,720 22,530 19,950 17,810 16,000 14,480 13,160 12,010 11,000 10,110 9,320 8,640 8,000 7,420	60° Ratect 1 Degree Machine List 23,700 20,900 18,600 16,600 15,000 13,700 12,300 11,300 10,400 9,500 8,700 8,700 8,100 7,500 7,100	2 Degree Machine List 19,200 17,400 15,600 14,100 12,800 11,700 10,600 9,800 9,100 8,400 7,800 7,200 6,700	2 Degree Machine List 13,700 13,100 12,100 11,100 10,200 9,400 8,600 8,000 7,600 7,000 6,500
Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0 40.0 50.0 55.0 60.0 65.0 75.0 80.0 90.0 95.0 100.0 105.0	Angle (deg.) 81.3 80.4 77.5 78.6 77.7 76.8 75.9 74.0 74.0 74.0 67.0 67.4 67.0 67.0 67.0 67.0 67.0 67.0 51.5 51.5 48.6 45.6 42.4 39.0	0 Degree Machine List 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970 22,790 20,210 18,070 16,290 14,770 13,470 12,320 11,330 10,440 9,670 8,990	34,600 32,500 27,800 24,200 17,100 15,400 14,000 12,800 11,700 10,700 9,900 9,200 8,600	22,600 20,100 17,900 16,100 13,200 12,100 11,200 10,400 9,700 8,900 8,300	2 Degree Machine List 16,800 15,400 14,000 12,800 11,700 10,700 10,000 9,200 8,600 8,000	Radius 24.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 75.0 80.0 90.0 95.0 100.0 105.0 115.0	Boom Angle (deg.) 81.9 81.1 80.2 79.4 78.6 77.7 76.9 76.0 75.2 73.1 70.9 68.7 66.5 64.3 62.0 59.6 57.2 54.7 52.2 40.5 44.8 43.9 40.8 37.6	30 0 Degree Machine 61,720 * 60,840 57,980 52,530 47,950 44,040 40,670 37,740 35,160 29,910 25,880 22,680 20,100 17,960 16,150 14,630 13,310 12,160 11,170 10,290 9,500 8,790 8,170 7,620	60° Ratect I Degree Machine 2 4,100 21,200 18,800 15,100 13,700 12,500 11,500 10,600 9,800 9,000 8,300 7,700 7,200	22,300 19,700 13,100 14,400 13,100 12,000 11,000 10,100 9,400 8,700 8,100 7,500 7,000	2 Degree Machine List 15,700 14,900 13,600 12,400 11,400 10,600 9,700 8,900 8,900 8,900 8,900 8,900 6,800	Radius (ft) 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 55.0 60.0 75.0 80.0 90.0 95.0 100.0 110.0 1120.0	Boom Angle (deg.) 81.7 80.9 80.1 79.3 78.6 77.8 77.0 76.2 74.2 74.2 70.2 68.2 66.1 64.0 61.8 59.6 59.6 59.6 59.5 59.5 59.5 59.4 59.5 1 52.7 50.3 47.7 45.1 42.3 39.4	30 D Degree Machine 52,680 * 51,800 * 51,140 * 47,810 43,890 40,540 37,610 35,030 29,760 25,720 22,530 19,950 17,810 16,000 14,480 13,160 12,010 11,000 10,110 9,320 8,640 8,000 7,420 6,920	60° Ratect 1 Degree Machine List 23,700 20,900 18,600 16,600 13,700 12,300 11,300 10,400 9,500 8,700 8,100 7,500 7,100 6,600	2 Degree Machine List 19,200 17,400 15,600 14,100 12,800 11,700 10,600 9,800 9,100 8,400 7,800 7,200 6,700 6,300	2 Degree Machine List 13,700 13,100 12,100 11,100 10,200 9,400 8,600 8,600 8,600 7,600 7,000 6,500 6,100
Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0 40.0 55.0 60.0 65.0 75.0 80.0 90.0 95.0 100.0 105.0	Angle (deg.) 81.3 80.4 77.5 78.6 77.7 76.8 75.9 74.0 74.0 74.0 67.0 67.4 67.0 67.0 67.0 67.0 67.0 67.0 51.5 51.5 48.6 45.6 42.4 39.0	0 Degree Machine List 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970 22,790 20,210 18,070 16,290 14,770 13,470 12,320 11,330 10,440 9,670 8,990	34,600 32,500 27,800 24,200 17,100 15,400 14,000 12,800 11,700 10,700 9,900 9,200 8,600	22,600 20,100 17,900 16,100 13,200 12,100 11,200 10,400 9,700 8,900 8,300	2 Degree Machine List 16,800 15,400 14,000 12,800 11,700 10,700 10,000 9,200 8,600 8,000	Radius (ft) 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 75.0 80.0 95.0 90.0 95.0 100.0 105.0	Boom Angle (deg.) 81.9 81.1 80.2 79.4 78.6 77.7 76.9 76.0 75.2 73.1 70.9 66.5 64.3 62.0 59.6 57.2 54.7 52.2 49.5 46.8 43.9 40.8	30 0 Degree Machine 61,720 * 60,840 57,980 52,530 47,950 44,040 40,670 37,740 35,160 29,910 25,880 22,680 20,100 17,960 16,150 14,630 13,310 12,160 11,170 10,290 9,500 8,790 8,170	60° Ratect I Degree Machine 2 4,100 21,200 18,800 15,100 13,700 12,500 11,500 10,600 9,800 9,000 8,300 7,700	22,300 19,700 13,100 12,000 11,000 10,100 9,400 8,700 8,100 7,500	2 Degree Machine List 15,700 14,900 13,600 12,400 11,400 10,600 9,700 8,900 8,900 8,900 8,900 7,700 7,200	Radius (ft) 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 75.0 80.0 90.0 90.0 95.0 105.0 110.0 115.0	Boom Angle (deg.) 81.7 80.9 80.1 77.8 77.0 76.2 74.2 74.2 70.2 68.2 66.1 64.0 61.8 59.6 61.8 59.6 51.4 55.1 55.7 55.1 55.1 55.1 39.4 32.2 43.2 43.2 43.2 43.2 43.2 43.2 43	30 O Degree Machine 52,680 * 51,800 * 51,140 * 47,810 43,890 40,540 37,610 35,030 29,760 25,720 22,530 19,950 17,810 16,000 14,480 13,160 12,010 11,000 10,110 9,320 8,640 8,000 7,420	60° Ratect 1 Degree Machine List 23,700 20,900 18,600 16,600 15,000 13,700 12,300 11,300 10,400 9,500 8,700 8,700 8,100 7,500 7,100	2 Degree Machine List 19,200 17,400 15,600 14,100 12,800 11,700 10,600 9,800 9,100 8,400 7,800 7,200 6,700	2 Degree Machine List 13,700 13,100 12,100 11,100 10,200 9,400 8,600 8,000 7,600 7,000 6,500
Addius 24.0 26.0 28.0 30.0 32.0 34.0 36.0 40.0 45.0 55.0 60.0 65.0 75.0 80.0 90.0 95.0 100.0 105.0	Angle (deg.) 81.3 80.4 77.5 78.6 77.7 76.8 75.9 74.0 74.0 74.0 67.0 67.4 67.0 67.0 67.0 67.0 67.0 67.0 51.5 51.5 48.6 45.6 42.4 39.0	0 Degree Machine List 71,200 * 64,610 58,020 52,570 48,010 44,110 40,760 37,830 35,250 30,000 25,970 22,790 20,210 18,070 16,290 14,770 13,470 12,320 11,330 10,440 9,670 8,990	34,600 32,500 27,800 24,200 17,100 15,400 14,000 12,800 11,700 10,700 9,900 9,200 8,600	22,600 20,100 17,900 16,100 13,200 12,100 11,200 10,400 9,700 8,900 8,300	2 Degree Machine List 16,800 15,400 14,000 12,800 11,700 10,700 10,000 9,200 8,600 8,000	Radius 24.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 75.0 80.0 90.0 95.0 100.0 105.0 115.0	Boom Angle (deg.) 81.9 81.1 80.2 79.4 78.6 77.7 76.9 76.0 75.2 73.1 70.9 68.7 66.5 64.3 62.0 59.6 57.2 54.7 52.2 40.5 44.8 43.9 40.8 37.6	30 0 Degree Machine 61,720 * 60,840 57,980 52,530 47,950 44,040 40,670 37,740 35,160 29,910 25,880 22,680 20,100 17,960 16,150 14,630 13,310 12,160 11,170 10,290 9,500 8,790 8,170 7,620	60° Ratect I Degree Machine 2 4,100 21,200 18,800 15,100 13,700 12,500 11,500 10,600 9,800 9,000 8,300 7,700 7,200	22,300 19,700 13,100 14,400 13,100 12,000 11,000 10,100 9,400 8,700 8,100 7,500 7,000	2 Degree Machine List 15,700 14,900 13,600 12,400 11,400 10,600 9,700 8,900 8,900 8,900 8,900 8,900 6,800	Radius (ft) 26.0 28.0 30.0 34.0 34.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 36.0 45.0 55.0 60.0 65.0 70.0 75.0 80.0 85.0 90.0 100.0 105.0 110.0 125.0	Boom Angle (deg.) 81.7 80.9 80.1 77.8 77.0 76.2 74.2 74.2 70.2 68.2 66.1 64.0 61.8 59.6 57.4 55.1 55.7 55.1 55.7 45.1 42.3 39.4 36.2	30 O Degree Machine 52,680 * 51,800 * 51,140 * 47,810 43,890 40,540 37,610 35,030 29,760 25,720 22,530 19,950 17,810 16,000 14,480 11,000 10,110 9,320 8,640 8,000 7,420 6,920 6,450	60° Ratect 1 Degree Machine List 23,700 20,900 18,600 16,600 13,700 12,300 11,300 10,400 9,500 8,700 8,100 7,500 7,100 6,600	2 Degree Machine List 19,200 17,400 15,600 14,100 12,800 11,700 10,600 9,800 9,100 8,400 7,800 7,200 6,700 6,300 5,800	2 Degree Machine List 13,700 13,100 12,100 11,100 10,200 9,400 8,600 8,000 7,600 7,000 6,500 6,100 5,700

Refer to notes on page 31.

Barge

5 Counterweights (57,600 lbs) - 2 Carbody weights (14,400 lbs) - Crawlers in extended position.

	160)' Boor	n				170)' Boo	m				1 <u>80</u>	Boo	m		
			50° Rated	Load (lb	os)					d Load (lb	s)				60° Rateo	d Load (ll	os)
Load Radius	Boom Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine	Load Radius	Boom Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine	Load Radius	Boom Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine
(ft)	(deg.)	List	List	List	List	(ft)	(deg.)	List	List	List	List	(ft)	(deg.)	List	List	List	List
28.0 30.0	81.5 80.7	44,090 * 43,430 *				28.0 30.0	82.0 81.3	38,800 * 38,130 *				30.0 32.0	81.8 81.1	33,730 * 33,060 *			
32.0	80.0	42,760 *				32.0	80.6	37,470*				34.0	80.5	32,620*			
34.0	79.3	42,100 *				34.0	79.9	37,030*				36.0	79.8	31,960*			
36.0 38.0	78.6 77.8	40,520 37,560				36.0 38.0	79.2 78.6	36,370* 35,710*				38.0 40.0	79.2 78.5	31,520 * 31,080 *			
40.0	77.1	37,500 34,980				40.0	77.9	34,780				40.0	76.9	29,250			
45.0	75.2	29,710				45.0	76.1	29,510				50.0	75.3	25,220			
50.0	73.4	25,680				50.0	74.4	25,460				55.0	73.6	22,000			
55.0 60.0	71.5 69.6	22,480 19,880	20,800 18,400	17,100		55.0 60.0	72.6 70.8	22,260 19,660	20,500 18,100	15,700		60.0 65.0	72.0 70.3	19,400 17,260	17,800 15,900	13,700	
65.0	67.7	17,720	16,400	15,400		65.0	69.1	17,520	16,100	15,000		70.0	68.6	15,450	14,300	13,100	
70.0	65.7	15,930	14,800	14,000	12,000	70.0	67.2	15,710	14,500	13,700		75.0	66.8	13,910	12,800	11,900	9,300
75.0	63.7	14,390	13,400	12,700	11,600	75.0	65.4	14,170	13,100	12,400	10,400	80.0	65.1	12,560	11,700	10,800	9,000
80.0 85.0	61.7 59.7	13,070 11,920	12,200 11,100	11,500 10,500	10,900 9,900	80.0 85.0	63.5 61.6	12,850 11,680	11,900 10,800	11,200 10,300	10,200 9,600	85.0 90.0	63.3 61.5	11,410 10,400	10,600 9,600	10,000 9,100	8,800 8,500
90.0	57.6	10,910	10,100	9,700	9,200	90.0	59.7	10,670	9,900	9,400	8,900	95.0	59.7	9,500	8,800	8,300	7,800
95.0	55.4	10,000	9,300	8,800	8,500	95.0	57.7	9,780	9,100	8,600	8,200	100.0	57.8	8,700	8,100	7,600	7,200
100.0	53.2	9,210	8,700	8,200	7,900	100.0	55.7	8,990	8,400	7,900	7,600	105.0	55.9	8,000	7,300	7,000	6,600
105.0 110.0	50.9 48.6	8,500 7,870	8,000 7,400	7,500 7,100	7,200 6,700	105.0 110.0	53.6 51.5	8,260 7,620	7,800 7,100	7,200 6,800	6,900 6,400	110.0 115.0	54.0 52.0	7,340 6,760	6,800 6,200	6,400 5,900	6,100 5,600
115.0	46.0 46.1	7,290	6,800	6,500	6,300	115.0	49.3	7,020	6,600	6,200	6,000	120.0	49.9	6,230	5,700	5,500	5,000
120.0	43.6	6,760	6,400	6,000	5,800	120.0	47.0	6,520	6,100	5,700	5,600	125.0	47.8	5,700	5,300	4,800	4,600
125.0	40.9	6,280	6,000	5,600	5,400	125.0	44.7	6,040	5,600	5,300	5,100	130.0	45.6	5,220	4,800	4,600	4,200
130.0 135.0	38.1 35.0	5,860 5,440	5,500 5,100	5,300 5,000	5,000 4,600	130.0 135.0	42.2 39.6	5,570 5,150	5,200 4,800	4,900 4,500	4,700 4,300	135.0 140.0	43.3 40.9	4,780 4,380	4,400 4,000	4,200 3,800	3,900 3,600
140.0	31.8	5,070	5,100	4,500	4,000	140.0	36.9	4,760	4,000	4,200	3,900	145.0	38.4	4,030	3,600	3,500	3,200
		-,		.,	.,	145.0	34.0	4,380	4,100	3,800	3,700	150.0	35.8	3,680	3,400	3,200	3,000
						150.0	30.8	4,050			3,500	155.0	33.0	3,370	3,100	2,900	2,800
Ree	eves	4	2	2	2	Ree	eves	4	2	2	2	Ree	eves	2	2	2	2
	190)' Boor	n				200)' Boo	m								
	120						200	000									
		36	50° Rated		os)			3	60° Rateo	d Load (lb	s)				60° Rateo		os)
Load Radius (ft)				Load (Ib 2 Degree Machine List	os) 2 Degree Machine List	Load Radius (ft)	Boom Angle (deg.)			d Load (Ib 2 Degree Machine List	s) 2 Degree Machine List	Load Radius (ft)	Boom Angle (deg.)	3 0 Degree Machine List	60° Rateo 1 Degree Machine List	d Load (II 2 Degree Machine List	2 Degree Machine List
Radius	Boom Angle	36 0 Degree Machine	50° Rated 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius	Boom Angle	3 0 Degree Machine	60° Rateo 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius	Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 32.0 34.0	Boom Angle (deg.) 81.6 81.0	36 0 Degree Machine List 29,540 * 28,880 *	50° Rated 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 34.0 36.0	Boom Angle (deg.) 81.4 80.9	3 0 Degree Machine List 25,790 * 25,350 *	60° Rateo 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius	Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 32.0 34.0 36.0	Boom Angle (deg.) 81.6 81.0 80.4	36 0 Degree Machine 29,540 * 28,880 * 28,430 *	50° Rated 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 34.0 36.0 38.0	Boom Angle (deg.) 81.4 80.9 80.3	3 0 Degree Machine List 25,790 * 25,350 * 24,910 *	60° Rateo 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius	Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 32.0 34.0 36.0 38.0	Boom Angle (deg.) 81.6 81.0 80.4 79.8	O Degree Machine List 29,540 * 28,880 * 28,430 * 27,990 *	50° Rated 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 34.0 36.0 38.0 40.0	Boom Angle (deg.) 81.4 80.9 80.3 79.7	3 0 Degree Machine List 25,790 * 25,350 * 24,910 * 24,470 *	60° Rateo 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius	Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 32.0 34.0 36.0	Boom Angle (deg.) 81.6 81.0 80.4 79.8 79.2	36 0 Degree Machine 29,540 * 28,880 * 28,430 *	50° Rated 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 34.0 36.0 38.0	Boom Angle (deg.) 81.4 80.9 80.3	3 0 Degree Machine List 25,790 * 25,350 * 24,910 * 24,470 * 23,360 *	60° Rateo 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius	Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 32.0 34.0 36.0 38.0 40.0 45.0 50.0	Boom Angle (deg.) 81.6 81.0 80.4 79.8 79.2 77.6 76.1	36 0 Degree Machine 29,540 * 28,880 * 28,430 * 27,990 * 27,550 * 26,450 * 25,300	50° Rated 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 34.0 36.0 38.0 40.0 45.0 50.0 55.0	Boom Angle (deg.) 81.4 80.9 80.3 79.7 78.2 76.8 75.3	3 0 Degree Machine List 25,790 * 25,350 * 24,910 * 24,470 * 23,360 * 22,480 * 21,380 *	60° Rateo 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius	Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 32.0 34.0 36.0 38.0 40.0 50.0 55.0	Boom Angle (deg.) 81.6 81.0 80.4 79.8 79.8 79.2 77.6 76.1 74.5	O Degree Machine O Degree List 29,540 * 28,880 * 28,880 * 28,430 * 27,990 * 27,550 * 26,450 * 25,300 22,110 24,100	50° Ratect	2 Degree Machine	2 Degree Machine	Radius (ft) 34.0 36.0 38.0 40.0 45.0 50.0 55.0 60.0	Boom Angle (deg.) 81.4 80.9 80.3 79.7 78.2 76.8 75.3 73.8	3 0 Degree Machine 25,790 * 25,350 * 24,910 * 24,470 * 23,360 * 22,480 * 21,380 * 19,310	60° Ratee 1 Degree Machine List	2 Degree Machine	2 Degree Machine	Radius	Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 32.0 34.0 36.0 38.0 40.0 45.0 50.0	Boom Angle (deg.) 81.6 81.0 80.4 79.8 79.2 77.6 76.1	36 0 Degree Machine 29,540 * 28,880 * 28,430 * 27,990 * 27,550 * 26,450 * 25,300	50° Rated 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius (ft) 34.0 36.0 38.0 40.0 45.0 50.0 55.0	Boom Angle (deg.) 81.4 80.9 80.3 79.7 78.2 76.8 75.3	3 0 Degree Machine List 25,790 * 25,350 * 24,910 * 24,470 * 23,360 * 22,480 * 21,380 *	60° Rateo 1 Degree Machine	2 Degree Machine	2 Degree Machine	Radius	Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 32.0 34.0 36.0 38.0 40.0 50.0 50.0 60.0 65.0 70.0	Boom Angle (deg.) 81.6 81.0 80.4 79.8 79.2 77.6 76.1 74.5 72.9 71.3 69.7	0 Degree Machine List 29,540 * 28,880 * 28,430 * 27,590 * 26,450 * 25,300 22,110 19,510 17,350	50° Ratect 1 Degree Machine List 16,800 15,600 14,200	2 Degree Machine List 11,700	2 Degree Machine List	Radius (ft) 34.0 36.0 38.0 40.0 50.0 50.0 55.0 60.0 65.0 70.0 75.0	Boom Angle (deg.) 81.4 80.9 80.3 79.7 78.2 76.8 75.3 75.3 73.8 72.3 70.8 69.3	3 0 Degree Machine 25,790 * 25,350 * 24,910 * 24,470 * 23,360 * 22,480 * 21,380 * 19,310 17,150 15,320 13,770	60° Rateo 1 Degree Machine List 14,100 13,200 12,400	2 Degree Machine List 10,200 9,600	2 Degree Machine List	Radius	Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0 60.0 65.0 70.0 75.0	Boom Angle (deg.) 81.6 81.0 80.4 79.8 79.2 77.6 76.1 74.5 72.9 71.3 69.7 68.1	36 0 Degree List 29,540 * 28,880 * 28,430 * 27,550 * 26,450 * 25,300 19,510 17,350 15,540 13,990	50° Ratect 1 Degree Machine List 16,800 15,600 14,200 12,800	2 Degree Machine List 11,700 11,100	2 Degree Machine List 8,100	Radius (ft) 34.0 36.0 38.0 40.0 55.0 50.0 55.0 60.0 65.0 70.0 75.0 80.0	Boom Angle (deg.) 81.4 80.9 80.3 79.7 78.2 76.8 75.3 73.8 75.3 73.8 72.3 70.8 69.3 69.3 67.7	3 0 Degree Machine 25,790 * 25,350 * 24,910 * 24,470 * 23,360 * 22,480 * 21,380 * 19,310 17,150 15,320 13,770 12,430	60° Rated 1 Degree Machine List 14,100 13,200 12,400 11,300	2 Degree Machine List 10,200 9,600 9,100	2 Degree Machine List 6,800	Radius	Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 32.0 34.0 36.0 38.0 40.0 50.0 50.0 60.0 65.0 70.0 75.0 80.0	Boom Angle (deg.) 81.6 81.0 80.4 79.8 77.6 76.1 74.5 72.9 71.3 69.7 68.1 66.5	36 0 Degree List 29,540 * 28,880 * 28,430 * 27,550 * 26,450 * 25,300 22,110 19,510 17,350 15,540 13,990 12,650	50° Ratect 1 Degree Machine List 16,800 15,600 14,200 12,800 11,600	2 Degree Machine List 11,700 11,100 10,600	2 Degree Machine List 8,100 7,900	Radius 34.0 36.0 38.0 40.0 50.0 55.0 60.0 65.0 70.0 75.0 80.0 85.0	Boom Angle (deg.) 81.4 80.9 80.3 79.7 78.2 76.8 72.3 70.8 69.3 67.7 66.2	3 0 Degree Jist 25,790 * 25,350 * 24,910 * 24,470 * 23,360 * 22,480 * 19,310 17,150 15,320 13,770 12,430 11,260	60° Rated 1 Degree Machine List 14,100 13,200 12,400 11,300 10,400	2 Degree Machine List 10,200 9,600 9,100 8,600	2 Degree Machine List 6,800 6,600	Radius	Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 32.0 34.0 36.0 38.0 40.0 45.0 50.0 55.0 60.0 65.0 70.0 75.0	Boom Angle (deg.) 81.6 81.0 80.4 79.8 79.2 77.6 76.1 74.5 72.9 71.3 69.7 68.1	36 0 Degree List 29,540 * 28,880 * 28,430 * 27,550 * 26,450 * 25,300 19,510 17,350 15,540 13,990	50° Ratect 1 Degree Machine List 16,800 15,600 14,200 12,800	2 Degree Machine List 11,700 11,100	2 Degree Machine List 8,100	Radius (ft) 34.0 36.0 38.0 40.0 55.0 50.0 55.0 60.0 65.0 70.0 75.0 80.0	Boom Angle (deg.) 81.4 80.9 80.3 79.7 78.2 76.8 75.3 73.8 75.3 73.8 72.3 70.8 69.3 69.3 67.7	3 0 Degree Machine 25,790 * 25,350 * 24,910 * 24,470 * 23,360 * 22,480 * 21,380 * 19,310 17,150 15,320 13,770 12,430	60° Rated 1 Degree Machine List 14,100 13,200 12,400 11,300	2 Degree Machine List 10,200 9,600 9,100	2 Degree Machine List 6,800	Radius	Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius 32.0 34.0 36.0 38.0 40.0 55.0 55.0 60.0 70.0 75.0 80.0 80.0 90.0 95.0	Boom Angle (deg.) 81.6 81.0 80.4 79.8 77.6 77.6 76.1 74.5 72.9 71.3 69.7 68.1 66.5 64.8 63.2 61.4	36 0 Degree Machine List 29,540 * 28,880 * 28,430 * 27,550 * 26,450 * 25,300 22,110 17,350 15,540 13,990 12,650 11,500 10,470 9,560	50° Ratect 1 Degree Machine List 16,800 15,600 14,200 12,800 11,600 10,700	2 Degree Machine List 11,700 11,100 10,600 9,900 9,000 8,200	2 Degree Machine List 8,100 7,900 7,700 7,300 6,900	Radius 34.0 36.0 38.0 40.0 50.0 50.0 55.0 60.0 65.0 70.0 75.0 80.0 85.0 90.0 95.0 100.0	Boom Angle (deg.) 81.4 80.3 79.7 78.2 76.8 73.8 70.8 69.3 67.7 66.2 64.6	3 0 Degree Machine 25,790 * 24,910 * 24,470 * 23,360 * 22,480 * 21,380 * 19,310 17,150 15,320 13,770 12,430 11,260 10,250 9,340 8,530	60° Rated 1 Degree Machine List 14,100 13,200 12,400 11,300 10,400 9,400 8,600 7,900	2 Degree Machine List 10,200 9,600 9,100 8,600 8,100	2 Degree Machine List 6,800 6,600 6,200 5,900 5,500	Radius	Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 32.0 34.0 36.0 38.0 40.0 45.0 50.0 50.0 60.0 60.0 70.0 70.0 70.0 90.0 95.0 100.0	Boom Angle (deg.) 81.6 81.0 80.4 79.8 77.6 77.6 76.1 74.5 72.9 71.3 69.7 68.1 66.5 64.8 63.2 61.4 59.7	36 0 Degree List 29,540 * 28,830 * 28,830 * 27,990 * 26,450 * 25,300 22,110 19,510 17,350 15,540 13,990 11,500 10,470 9,560 8,770	50° Ratect 1 Degree Machine 16,800 15,600 14,200 12,800 11,600 9,600 8,800 8,200	2 Degree Machine List 11,700 11,100 10,600 9,900 9,900 8,200 7,600	2 Degree Machine List 8,100 7,900 7,700 7,300 6,900 6,600	Radius 34.0 36.0 38.0 40.0 55.0 60.0 65.0 70.0 75.0 80.0 90.0 95.0 100.0 105.0	Boom Angle (deg.) 81.4 80.9 80.3 79.7 78.2 76.8 77.3 70.8 69.3 67.7 66.2 64.6 63.0 61.4 59.7	3 0 Degree List 25,790 * 25,570 * 24,470 * 23,360 * 23,360 * 22,480 * 21,380 * 19,310 17,150 15,320 13,770 12,430 11,260 9,340 8,530 7,820	60° Ratec 1 Degree Machine List 14,100 13,200 12,400 11,300 10,400 9,400 8,600 7,900 7,300	2 Degree Machine List 10,200 9,600 9,100 8,600 8,100 7,600 7,100 6,600	2 Degree Machine List 6,800 6,600 6,200 5,900 5,500 5,500 5,100	Radius	Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius 32.0 34.0 36.0 38.0 40.0 45.0 50.0 50.0 60.0 60.0 70.0 70.0 70.0 90.0 90.0 100.0 105.0	Boom Angle (deg.) 81.6 81.0 80.4 79.8 77.6 76.1 74.5 72.9 71.3 69.7 68.1 68.1 68.1 66.5 64.8 63.2 61.4 59.7 57.9	36 0 Degree Machine List 29,540 * 28,880 * 28,430 * 27,990 * 26,450 * 25,300 22,110 19,510 17,350 15,540 13,990 12,650 11,500 10,470 9,560 8,770 8,040	50° Ratect 1 Degree Machine 16,800 15,600 14,200 12,800 11,600 10,700 9,600 8,800 8,200 7,500	2 Degree Machine List 11,700 11,100 10,600 9,900 9,000 8,200 7,600 7,000	2 Degree Machine List 8,100 7,900 7,700 7,300 6,900 6,600 6,300	Radius (ft) 34.0 36.0 38.0 40.0 45.0 50.0 55.0 60.0 60.0 70.0 75.0 80.0 90.0 95.0 100.0 110.0	Boom Angle (deg.) 81.4 80.9 80.3 79.7 78.2 76.8 77.3 70.8 69.3 67.7 66.2 64.6 63.0 61.4 59.7 58.1	3 0 Degree List 25,790 * 25,570 * 24,470 * 23,360 * 23,360 * 22,480 * 21,380 * 19,310 17,150 15,320 13,770 12,430 11,260 9,340 8,530 7,820 7,160	60° Ratec 1 Degree Machine List 14,100 13,200 12,400 11,300 10,400 9,400 8,600 7,900 7,300 6,600	2 Degree Machine List 10,200 9,600 9,100 8,600 8,100 7,600 7,100 6,600 6,000	2 Degree Machine List 6,800 6,600 6,200 5,900 5,500 5,500 5,100 4,900	Radius	Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius 32.0 34.0 36.0 38.0 40.0 45.0 50.0 50.0 60.0 60.0 70.0 70.0 70.0 90.0 90.0 100.0	Boom Angle (deg.) 81.6 81.0 80.4 79.8 77.6 77.6 76.1 74.5 72.9 71.3 69.7 68.1 66.5 64.8 63.2 61.4 59.7	36 0 Degree List 29,540 * 28,830 * 28,830 * 27,990 * 26,450 * 25,300 22,110 19,510 17,350 15,540 13,990 11,500 10,470 9,560 8,770	50° Ratect 1 Degree Machine 16,800 15,600 14,200 12,800 11,600 9,600 8,800 8,200	2 Degree Machine List 11,700 11,100 10,600 9,900 9,900 8,200 7,600	2 Degree Machine List 8,100 7,900 7,700 7,300 6,900 6,600	Radius 34.0 36.0 38.0 40.0 55.0 60.0 65.0 70.0 75.0 80.0 90.0 95.0 100.0 105.0	Boom Angle (deg.) 81.4 80.9 80.3 79.7 78.2 76.8 77.3 70.8 69.3 67.7 66.2 64.6 63.0 61.4 59.7	3 0 Degree List 25,790 * 25,570 * 24,470 * 23,360 * 23,360 * 22,480 * 21,380 * 19,310 17,150 15,320 13,770 12,430 11,260 9,340 8,530 7,820	60° Ratec 1 Degree Machine List 14,100 13,200 12,400 11,300 10,400 9,400 8,600 7,900 7,300	2 Degree Machine List 10,200 9,600 9,100 8,600 8,100 7,600 7,100 6,600	2 Degree Machine List 6,800 6,600 6,200 5,900 5,500 5,500 5,100	Radius	Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 32.0 34.0 36.0 36.0 36.0 36.0 36.0 55.0 60.0 65.0 70.0 75.0 80.0 90.0 90.0 100.0 110.0 120.0	Boom Angle (deg.) 81.6 81.0 80.4 79.2 77.6 77.9 71.3 69.7 68.1 66.5 64.8 63.2 61.4 59.7 57.9 56.1 54.3 52.4	36 0 Degree List 29,540 * 28,880 * 28,430 * 27,590 * 26,450 * 25,300 22,110 19,510 17,350 15,540 13,990 12,650 11,500 10,470 9,560 8,770 8,040 7,400 6,810 6,280	50° Ratect 1 Degree Machine 16,800 15,600 14,200 12,800 11,600 10,700 9,600 8,800 8,200 7,500 6,900 6,300 5,800	2 Degree Machine List 11,700 11,100 10,600 9,900 9,000 8,200 7,600 7,600 7,600 7,600 7,600 5,900 5,900 5,400	2 Degree Machine List 8,100 7,900 7,700 7,700 6,900 6,600 6,600 6,600 5,800 5,800 5,400 5,000	Radius (ft) 34.0 36.0 36.0 40.0 45.0 55.0 60.0 65.0 70.0 75.0 80.0 85.0 90.0 100.0 105.0 115.0 125.0	Boom Angle (deg.) 81.4 80.9 80.3 79.7 78.2 76.8 75.3 70.8 67.3 70.8 69.3 67.7 66.2 64.6 63.0 61.4 59.7 55.8 1 56.3 54.6 52.8	3 0 Degree Jist 25,790 * 25,350 * 24,910 * 24,470 * 23,360 * 22,480 * 19,310 17,150 15,320 13,770 12,430 11,260 10,250 9,340 8,530 7,820 7,160 6,560 5,970 5,440	60° Ratec 1 Degree Machine 14,100 13,200 12,400 11,300 10,400 9,400 8,600 7,900 6,600 6,000 5,400 5,000	2 Degree Machine List 10,200 9,600 9,100 8,600 8,100 7,600 6,600 6,600 6,600 5,600 5,600 5,600 4,500	2 Degree Machine List 6,800 6,600 6,200 5,500 5,500 5,100 4,900 4,500 4,200 3,800	Radius	Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 32.0 34.0 36.0 36.0 36.0 40.0 45.0 50.0 50.0 60.0 60.0 70.0 75.0 80.0 90.0 100.0 105.0 110.0 120.0 125.0	Boom Angle (deg.) 81.6 81.0 80.4 79.2 77.6 77.9 71.3 69.7 68.1 60.5 64.8 63.2 61.4 59.7 57.9 56.1 54.3 52.4 50.5	36 0 Degree List 29,540 * 28,880 * 28,430 * 27,590 * 26,450 * 25,300 12,510 17,350 15,540 13,990 12,650 11,500 10,470 9,560 8,040 7,400 6,810 6,280 5,750	50° Ratect 1 Degree Machine 16,800 15,600 14,200 12,800 11,600 10,700 9,600 8,800 5,200 5,200	2 Degree Machine List 11,700 11,100 10,600 9,900 9,000 8,200 7,600 7,600 7,600 6,500 5,900 5,900 5,400 5,000	2 Degree Machine List 8,100 7,900 7,700 7,300 6,900 6,600 6,600 6,300 5,800 5,400 5,800 5,400 5,000 4,600	Radius (ft) 34.0 36.0 38.0 40.0 45.0 50.0 55.0 60.0 65.0 70.0 75.0 80.0 85.0 90.0 95.0 100.0 110.0 125.0 130.0	Boom Angle (deg.) 81.4 80.9 80.3 79.7 78.2 76.8 75.3 73.8 75.3 70.8 69.3 67.7 66.2 64.6 63.0 61.4 59.7 56.3 54.6 55.3 54.6 55.3	3 0 Degree Jackine 25,790 * 25,350 * 24,910 * 24,470 * 23,360 * 22,480 * 21,380 * 19,310 17,150 15,320 13,770 12,430 11,260 10,250 9,340 8,530 7,820 7,160 6,560 5,970 5,440 4,960	60° Ratec 1 Degree Machine List 14,100 13,200 12,400 11,300 10,400 9,400 8,600 7,900 6,600 6,000 5,400 5,000 4,600	2 Degree Machine List 10,200 9,600 9,100 8,600 8,100 7,100 6,600 6,000 5,600 5,600 5,600 4,500 4,100	2 Degree Machine List 6,800 6,600 6,200 5,500 5,500 5,500 5,100 4,900 4,500 4,200 3,800 3,600	Radius	Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (r) 32.0 36.0 36.0 36.0 36.0 55.0 60.0 55.0 60.0 75.0 60.0 75.0 75.0 80.0 85.0 90.0 90.0 90.0 90.0 90.0 100.0 115.0 125	Boom Angle (deg.) 81.6 81.0 80.4 79.2 77.6 77.9 71.3 69.7 68.1 66.5 64.8 63.2 61.4 59.7 57.9 55.1 55.4 55.4 50.5 48.5	36 0 Degree List 29,540 * 28,880 * 28,430 * 27,550 * 26,450 * 25,300 22,110 19,510 17,350 15,540 13,990 12,650 11,500 10,470 9,560 8,770 8,040 7,400 6,810 6,280 5,750	10° Ratect 1 Degree Machine 16,800 15,600 14,200 12,800 11,600 10,700 9,600 8,800 8,200 6,900 6,300 5,800 5,200 4,800	2 Degree Machine List 11,700 11,100 10,600 9,900 8,200 7,600 7,000 6,500 6,500 5,900 5,400 5,000 4,600	8,100 7,900 7,700 7,300 6,900 6,600 6,300 5,800 5,400 5,000 4,600 4,200	Radius 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 70.0 75.0 80.0 80.0 80.0 80.0 90.0 90.0 95.0 100.0 115.0 120.0 130.0 135.0	Boom Angle (deg.) 81.4 80.9 80.3 79.7 78.2 76.8 75.3 75.3 75.3 70.8 69.3 67.7 66.2 64.6 63.0 61.4 59.7 58.1 56.3 54.6 52.8 51.0 49.1	3 0 Degree Jackine 25,790 * 25,350 * 24,910 * 24,470 * 23,360 * 22,480 * 21,380 * 19,310 17,150 15,320 13,770 12,430 11,260 10,250 9,340 8,530 7,820 7,160 6,560 5,970 5,440 4,960 4,510	60° Ratec 1 Degree Machine List 14,100 13,200 12,400 11,300 10,400 9,400 8,600 7,900 7,900 7,900 6,000 6,000 5,400 5,000 4,600 4,100	2 Degree Machine List 10,200 9,600 9,100 8,600 8,100 7,600 7,100 6,600 6,600 6,600 6,600 6,600 6,000 5,600 4,500 4,500 4,100 3,700	2 Degree Machine List 6,800 6,600 6,200 5,900 5,500 5,500 5,500 5,500 5,500 4,900 4,500 4,200 3,800 3,600 3,200	Radius	Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 32.0 34.0 36.0 40.0 45.0 55.0 60.0 65.0 70.0 75.0 80.0 80.0 80.0 90.0 100.0 100.0 110.0 115.0 125.0	Boom Angle (deg.) 81.6 81.0 80.4 79.2 77.6 77.9 71.3 69.7 68.1 60.5 64.8 63.2 61.4 59.7 57.9 56.1 54.3 52.4 50.5	36 0 Degree List 29,540 * 28,880 * 28,430 * 27,590 * 26,450 * 25,300 12,510 17,350 15,540 13,990 12,650 11,500 10,470 9,560 8,040 7,400 6,810 6,280 5,750	50° Ratect 1 Degree Machine 16,800 15,600 14,200 12,800 11,600 10,700 9,600 8,800 5,200 5,200	2 Degree Machine List 11,700 11,100 10,600 9,900 9,000 8,200 7,600 7,600 7,600 6,500 5,900 5,900 5,400 5,000	2 Degree Machine List 8,100 7,900 7,700 7,300 6,900 6,600 6,600 6,300 5,800 5,400 5,800 5,400 5,000 4,600	Radius (ft) 34.0 36.0 38.0 40.0 45.0 50.0 55.0 60.0 65.0 70.0 75.0 80.0 85.0 90.0 95.0 100.0 110.0 125.0 130.0	Boom Angle (deg.) 81.4 80.9 80.3 79.7 78.2 76.8 75.3 73.8 75.3 70.8 69.3 67.7 66.2 64.6 63.0 61.4 59.7 56.3 54.6 55.3 54.6 55.3	3 0 Degree Jackine 25,790 * 25,350 * 24,910 * 24,470 * 23,360 * 22,480 * 21,380 * 19,310 17,150 15,320 13,770 12,430 11,260 10,250 9,340 8,530 7,820 7,160 6,560 5,970 5,440 4,960	60° Ratec 1 Degree Machine List 14,100 13,200 12,400 11,300 10,400 9,400 8,600 7,900 6,600 6,000 5,400 5,000 4,600	2 Degree Machine List 10,200 9,600 9,100 8,600 8,100 7,100 6,600 6,000 5,600 5,600 5,600 4,500 4,100	2 Degree Machine List 6,800 6,600 6,200 5,500 5,500 5,500 5,100 4,900 4,500 4,200 3,800 3,600	Radius	Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 32.0 34.0 36.0 36.0 36.0 45.0 55.0 60.0 55.0 60.0 65.0 60.0 65.0 70.0 80.0 85.0 90.0 95.0 100.0 115.0 115.0 125.0 125.0 135.0 135.0 140.0 135.0	Boom Angle (deg.) 81.6 81.0 80.4 79.8 79.2 77.6 70.2 77.6 70.2 71.3 69.7 72.9 71.3 69.7 68.1 74.5 72.9 71.3 69.7 68.1 64.5 64.8 65.5 64.8 50.7 55.4 54.3 52.4 50.5 54.4 50.5 54.8 50.5 46.4 44.3 42.1	36 0 Degree List 29,540 * 28,880 * 28,430 * 27,990 * 26,450 * 25,300 22,110 19,510 17,350 15,540 13,990 12,650 11,500 11,500 10,470 9,560 8,770 8,040 7,400 6,810 6,280 5,750 5,260 4,800 4,400 4,010	10° Ratect 1 Degree Machine 16,800 15,600 14,200 12,800 11,600 12,800 11,600 8,800 8,200 7,500 6,900 6,900 6,900 6,900 5,200 4,800 4,400 3,900 3,600	2 Degree Machine List 11,700 11,100 10,600 9,900 9,900 8,200 7,600 7,600 7,000 6,500 5,400 5,000 5,400 4,600 4,200 3,700 3,500	8,100 7,900 7,700 7,300 6,900 6,600 6,300 5,800 5,800 5,400 5,000 4,600 4,600 4,200 3,800 3,500 3,200	Radius (ft) 34.0 36.0 38.0 40.0 40.0 55.0 60.0 65.0 75.0 60.0 65.0 70.0 75.0 80.0 85.0 90.0 90.0 90.0 90.0 90.0 90.0 90.0 90.0 90.0 90.0 90.0 90.0 91.00.0 102.00 130.0 135.0 145.0 155.0	Boom Angle (deg.) 81.4 80.9 70.7 78.2 76.8 75.3 73.8 70.8 69.3 66.2 64.6 63.0 61.4 59.7 58.1 54.6 51.0 49.1 47.2 43.1	3 0 Degree List 25,790 * 25,570 * 24,470 * 22,480 * 22,480 * 22,480 * 21,380 * 19,310 17,150 15,320 13,770 12,430 11,260 9,340 8,530 7,820 7,160 6,560 5,970 5,440 4,510 4,100 3,700 3,350	60° Ratec 1 Degree Machine List 14,100 13,200 12,400 11,300 10,400 8,600 7,900 7,300 6,600 6,000 5,400 5,400 5,000 4,100 3,700 3,300 2,900	2 Degree Machine List 10,200 9,600 9,100 8,600 8,100 7,600 7,100 6,600 6,000 5,600 5,600 5,600 5,000 4,500 4,100 3,700 3,400	2 Degree Machine List 6,800 6,600 6,200 5,900 5,500 5,500 5,500 5,500 5,500 5,500 5,500 4,200 4,200 4,200 3,800 3,600 3,200 2,900	Radius	Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 32.0 34.0 36.0 36.0 36.0 45.0 55.0 60.0 55.0 60.0 65.0 60.0 65.0 70.0 80.0 80.0 80.0 90.0 90.0 100.0 110.0 115.0 120.0 115.0 135.0 140.0 135.0 140.0 155.0 140.0 155.0 140.0 155.0 1	Boom Angle (deg.) 81.6 81.0 80.4 79.8 79.2 77.6 76.1 74.5 72.9 71.3 69.7 68.1 66.5 64.8 63.2 61.4 59.7 55.9 55.1 54.3 52.4 50.5 52.4 48.5 46.4 44.3 42.1 39.8	36 0 Degree List 29,540 * 28,880 * 27,990 * 27,990 * 22,110 19,510 12,650 11,500 11,500 11,500 11,500 11,500 10,470 9,560 8,770 8,040 7,400 6,810 6,810 6,810 6,810 6,810 5,750 5,260 4,800 4,400 4,010 3,680	50° Ratect 1 Degree Machine 10 egree Machine 16,800 15,600 14,200 12,800 11,600 9,600 8,800 8,200 7,500 6,900 6,300 5,200 4,400 3,900 3,600	2 Degree Machine List 11,700 11,100 10,600 9,900 9,900 8,200 7,600 7,600 7,000 6,500 5,900 5,400 5,900 5,400 5,000 4,600 4,200 3,700 3,700 3,500 3,100	8,100 7,900 7,700 7,300 6,900 6,600 6,300 5,800 5,800 5,4000 5,400 5,4000 5,400 5,400 5,400 5,40	Radius (ft) 34.0 36.0 38.0 40.0 45.0 55.0 60.0 65.0 70.0 75.0 80.0 80.0 80.0 80.0 80.0 90.0 100.0 115.0 130.0 130.0 140.0 145.0	Boom Angle (deg.) 81.4 80.9 80.3 79.7 78.2 76.8 75.3 70.8 67.7 66.2 64.6 63.0 61.4 59.7 58.1 56.3 54.6 54.6 54.6 54.8 51.0 49.1 47.2 45.2	3 0 Degree List 25,790 * 25,570 * 24,910 * 24,470 * 23,360 * 22,480 * 21,380 * 19,310 17,150 15,320 13,770 12,430 11,260 9,340 8,530 7,820 7,160 6,560 5,970 5,440 4,960 4,510 4,100 3,700	60° Ratec 1 Degree Machine List 14,100 13,200 12,400 11,300 0,400 9,400 8,600 7,900 7,300 6,600 6,000 5,400 5,400 4,600 4,600 4,600 3,700 3,300	2 Degree Machine List 10,200 9,600 9,100 8,600 8,100 7,600 7,100 6,600 6,000 5,600 5,000 4,500 4,500 4,100 3,700 3,400 3,000	2 Degree Machine List 6,800 6,600 6,200 5,900 5,500 5,500 5,500 5,500 5,500 5,500 5,500 4,200 4,200 4,200 3,800 3,600 3,200 2,900	Radius	Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 32.0 34.0 36.0 36.0 36.0 55.0 60.0 65.0 60.0 65.0 60.0 65.0 70.0 80.0 90.0 90.0 90.0 90.0 90.0 105.0 110.0 115.0 120.0 135.0 135.0 145.0 155.0	Boom Angle (deg.) 81.6 81.0 80.4 79.2 77.6 76.1 74.5 72.9 71.3 69.7 68.1 66.5 64.8 63.2 61.4 59.7 57.9 56.1 54.3 52.4 50.5 54.4 44.3 42.1 39.8 37.4	360 0 Degree List 29,540 * 28,880 * 28,430 * 27,990 * 27,550 * 25,300 22,110 19,510 17,350 15,540 13,990 12,650 11,500 11,500 11,500 8,770 8,040 7,400 6,810 6,280 5,260 4,800 4,400 4,010 3,680 3,350	50° Ratect 1 Degree Machine 1100000000000000000000000000000000000	2 Degree Machine List 11,700 11,100 10,600 9,900 9,900 8,200 7,600 7,600 7,000 6,500 5,900 5,900 5,400 5,900 5,400 5,900 4,600 4,200 3,700 3,700 3,700 3,700 3,100 2,900	8,100 7,900 7,700 7,300 6,900 6,600 6,300 5,800 5,800 5,400 5,000 4,600 4,600 4,200 3,800 3,500 3,200	Radius (ft) 34.0 36.0 38.0 40.0 40.0 55.0 60.0 65.0 75.0 60.0 65.0 70.0 75.0 80.0 85.0 90.0 90.0 90.0 90.0 90.0 90.0 90.0 90.0 90.0 90.0 90.0 91.00.0 102.00 130.0 135.0 145.0 155.0	Boom Angle (deg.) 81.4 80.9 70.7 78.2 76.8 75.3 73.8 70.8 69.3 66.2 64.6 63.0 61.4 59.7 58.1 54.6 51.0 49.1 47.2 43.1	3 0 Degree List 25,790 * 25,570 * 24,470 * 22,480 * 22,480 * 22,480 * 21,380 * 19,310 17,150 15,320 13,770 12,430 11,260 9,340 8,530 7,820 7,160 6,560 5,970 5,440 4,510 4,100 3,700 3,350	60° Ratec 1 Degree Machine List 14,100 13,200 12,400 11,300 10,400 8,600 7,900 7,300 6,600 6,000 5,400 5,400 5,000 4,100 3,700 3,300 2,900	2 Degree Machine List 10,200 9,600 9,100 8,600 8,100 7,600 7,100 6,600 6,000 5,600 5,000 4,500 4,500 4,100 3,700 3,400 3,000	2 Degree Machine List 6,800 6,600 6,200 5,900 5,500 5,500 5,500 5,500 5,500 5,500 5,500 4,200 4,200 4,200 3,800 3,600 3,200 2,900	Radius	Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine
Radius (ft) 32.0 34.0 36.0 36.0 36.0 55.0 60.0 55.0 60.0 65.0 60.0 65.0 70.0 80.0 80.0 80.0 80.0 90.0 90.0 100.0 110.0 115.0 120.0 135.0 140.0 135.0 140.0	Boom Angle (deg.) 81.6 81.0 80.4 79.2 77.6 77.6 77.6 77.9 71.3 69.7 68.1 66.5 64.8 63.2 61.4 59.7 57.9 56.1 54.3 52.4 50.5 46.4 44.3 42.1 39.8 37.4 34.8	36 0 Degree List 29,540 * 28,880 * 27,990 * 27,990 * 22,110 19,510 12,650 11,500 11,500 11,500 11,500 11,500 10,470 9,560 8,770 8,040 7,400 6,810 6,810 6,810 6,810 6,810 5,750 5,260 4,800 4,400 4,010 3,680	50° Ratect 1 Degree Machine 10 egree Machine 16,800 15,600 14,200 12,800 11,600 9,600 8,800 8,200 7,500 6,900 6,300 5,200 4,400 3,900 3,600	2 Degree Machine List 11,700 11,100 10,600 9,900 8,200 7,600 7,600 7,000 6,500 5,900 5,400 5,900 5,400 5,000 4,600 4,200 3,700 3,700 3,500 3,100	8,100 7,900 7,700 7,300 6,900 6,600 6,300 5,800 5,800 5,4000 5,400 5,400 5,4000 5,400 5,40	Radius (ft) 34.0 36.0 38.0 40.0 40.0 55.0 60.0 65.0 75.0 60.0 65.0 70.0 75.0 80.0 85.0 90.0 90.0 90.0 90.0 90.0 90.0 90.0 90.0 90.0 90.0 90.0 91.00.0 102.00 130.0 135.0 145.0 155.0	Boom Angle (deg.) 81.4 80.9 70.7 78.2 76.8 75.3 73.8 70.8 69.3 66.2 64.6 63.0 61.4 59.7 58.1 54.6 51.0 49.1 47.2 43.1	3 0 Degree List 25,790 * 25,570 * 24,470 * 22,480 * 22,480 * 22,480 * 21,380 * 19,310 17,150 15,320 13,770 12,430 11,260 9,340 8,530 7,820 7,160 6,560 5,970 5,440 4,510 4,100 3,700 3,350	60° Ratec 1 Degree Machine List 14,100 13,200 12,400 11,300 10,400 8,600 7,900 7,300 6,600 6,000 5,400 5,400 5,000 4,100 3,700 3,300 2,900	2 Degree Machine List 10,200 9,600 9,100 8,600 8,100 7,600 7,100 6,600 6,000 5,600 5,000 4,500 4,500 4,100 3,700 3,400 3,000	2 Degree Machine List 6,800 6,600 6,200 5,900 5,500 5,500 5,500 5,500 5,500 5,500 5,500 4,200 4,200 4,200 3,800 3,600 3,200 2,900	Radius	Angle	0 Degree Machine	1 Degree Machine	2 Degree Machine	2 Degree Machine



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KOBELCO CRANES CO., LTD.

17-1, Higashigotanda 2-chome, Shinagawa-ku, Tokyo 141-8626 JAPAN Tel: +81-3-5789-2130 Fax: +81-3-5789-3372 URL: http://www.kobelco-cranes.com/

KOBELCO CRANES NORTH AMERICA, INC.

10845 Train Court, Houston, Texas 77041, USA Tel: +1-713-856-5755 Fax: +1-713-856-9072 URL: http://www.kobelcocranesnorthamerica.com/ Inquiries To: