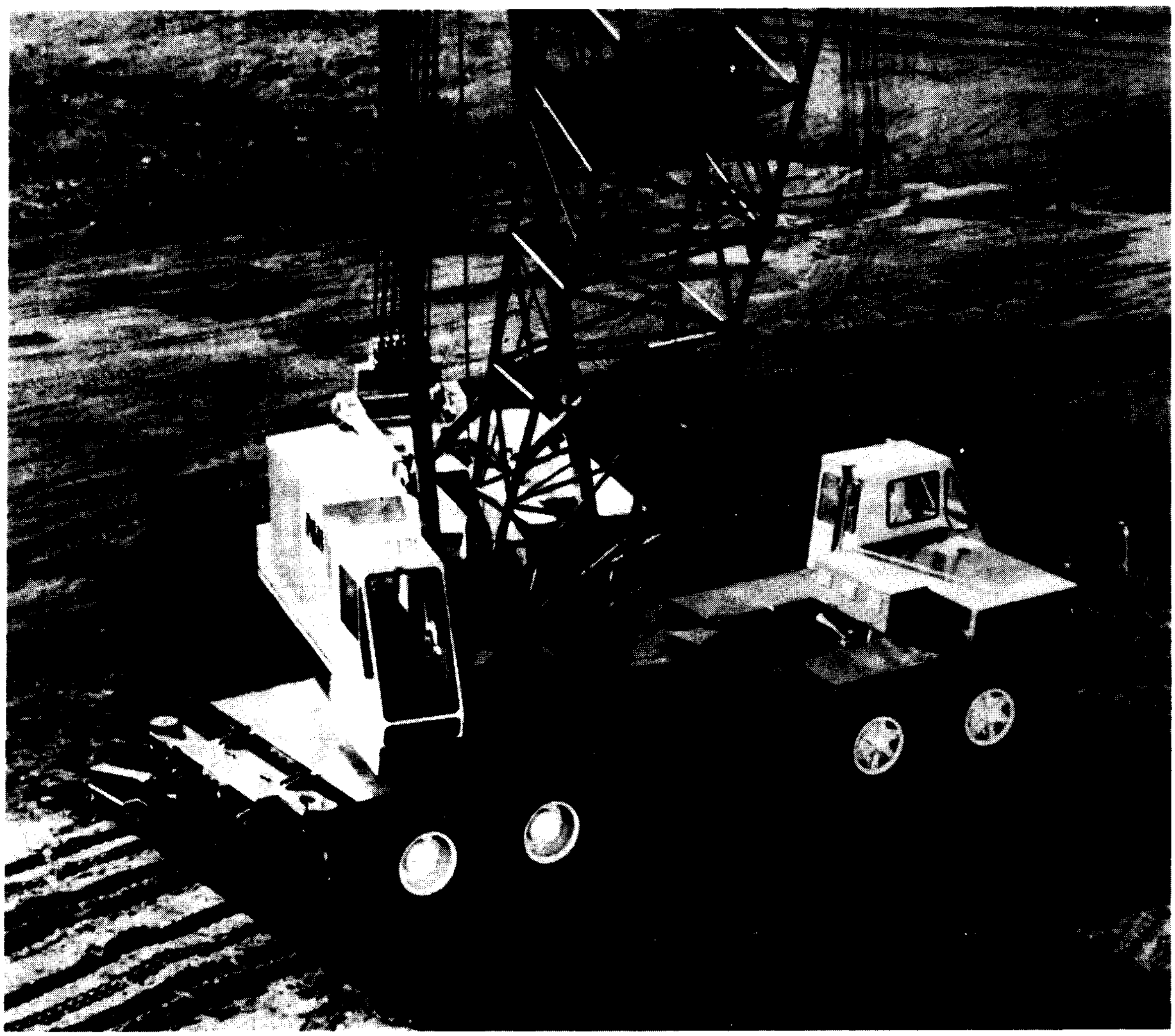
P&H® 9150

150-ton Truck Crane



- Travels under 100,000 lbs. — fast counterweight and outrigger stipdown.
- Torque Converter Transmission in upper allows precise control.
- Longest Boom in Class — 330′ max. boom and jib.
- Short Lever Controls for operator comfort — powered by full flow hydraulics.
- Planetary Power Load Lowering.
- Super-Quiet Modular Cab
- Sealed-in-steel crane gearing.

Specifications

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Specifications

BOOM

Boom is of open throat, lattice construction, fabricated from round tubular 100,000 PSI yield strength alloy steel chord members, and reinforced with contour-cut tubular lacings. Sections are pin connected and furnished with appropriate load line guide rollers and pin connected 1.375" (34.9mm) dia. boom pendants. Maximum cross-section of 3.5" (89mm) O.D. chord members is 69" x 69" (1.753m x 1.753m).

Basic boom consists of the base and tip sections.

BASE SECTION: 25' (7.6m) long tapered section with pin connected feet. Boom angle indicator (pendulum type) is mounted on leg adjacent to operator's cab.

HEAVY DUTY TIP SECTION: 25' (7.6m) has 5 offset boom point sheaves 24" (609mm) P.D., with roller bearings. Required for lifts in excess of 150,000 lbs. (68,039 kg). Boom extendible to 250' (76.2m). For 1" (25mm) hoist rope (24:1 rope ratio).

LONG RANGE TIP SECTION (OPTIONAL): 35' (10.6 m) long section has 2 offset boom point sheaves 24" (609 mm) P.D. with roller bearings. Required for long boom work from 260' to 270' (79.3 m to 82.3 m) for lifts up to 150,000 lbs. (68,039 kg). Also available with 3 boom point sheaves. Optional.

BOOM INSERT SECTIONS (OPTIONAL): Available in 10' (3m), 20' (6m), 30' (9m) and 50' (15.2m) lengths.

JIB (OPTIONAL): Jib is of open throat, lattice construction, fabricated from round tubular alloy steel chord members and reinforced with contour-cut tubular lacings. Sections are pin connected. Furnished with compression strut and appropriate front and back stay pendants of .875" (22mm) 6x25 E.I.P.S. I.W.R.C. rope. Maximum cross-section of 1.75" (44mm) O.D. chord members is 29" x 29" (736mm x 736mm).

20' (6m) basic jib consists of 10' (3m) long tapered lattice base section and a 10' (3m) long tapered tip section with an open throat and a single 18" (457mm) P.D. point sheave on roller bearings for 1" (25mm) jib hoist rope (18:1 rope ratio). Anchor provided at tip for 2 part hoist rope.

JIB INSERT SECTIONS (OPTIONAL): Available in 10' (3m), 20' (6m) and 30' (9.1m) lengths. Jib is extendible to 60' (18.2m).

LIVE MAST: 30' (9m) long, required for all boom lengths. Has 18" (457mm) P.D. sheave for handling outriggers, boom and counterweight.

BOOM POINT EXTENSION (OPTIONAL): A short jib with a single 18.625" (473mm) P.D. sheave on roller bearings for 1" (25mm) jib hoist rope (18:1 rope ratio). Anchor provided at tip for 2 part hoist rope.

BOOM POINT SHEAVE GUARD (OPTIONAL): Roller type anti-two-block.

BOOM BACKSTOPS: Dual lever type, with spring-loaded shock absorber ends.

BOOM HOIST KICKOUT: Restricts raising boom at angles greater than recommended.

BOOM ANGLE INDICATOR: Mechanical pendulum type mounted on boom base section. Electronic type is optional.

BOOM MIDPOINT SUSPENSION PENDANTS (OPTIONAL): Required for 240' (73m) through 270' (83m) long booms.

BOOM AND JIB ERECTION: Maximum boom or combinations that can be self-erected.

HEAVY DUTY TIP

BOOM POSITION	Two Counterweights	One Counterweight
Over rear end with 30,000 lbs. front bumper counterweight, outriggers set	250' (76m) boom or 250' (76m) boom plus 20' to 60' (16m) jib	—
Over rear end without front bumper counterweight, outriggers set	230' (70m) boom or 200' (61m) boom plus 20' to 60' (18m) jib	210' (64m) boom or 190' (58m) boom plus 20' to 30' (9m) jib
Over side with outriggers set	230' (70m) boom or 200' (61m) boom plus 20' to 60' (18m) jib	200' (61m) boom or 180' (55m) boom plus 20' to 50' (15m) jib
Over rear on rubber	— —	130' (40m) boom or 120' (37m) boom plus 20' (6m) jib
Over side on rubber	—	130' (40m) boom or 110' (33.5m) boom plus 20' to 30' (9m) jib

LONG RANGE TIP

BOOM POSITION	Two Counterweights	One Counterweight
Over rear end with 30,000 lbs. front bumper counterweight, outriggers set	270' (82m) boom or 270' boom plus 20' to 60' jib	—
Over rear end without front bumper counterweight, outriggers set	240' (73m) boom or 210' boom plus 20' to 60' jib	210' (64m) boom or 200' boom plus 20' to 40' jib
Over side with outriggers set	240' (73m) boom or 210' boom plus 20' to 60' jib	210' (64m) boom or 190' boom plus 20' to 60' jib
Over rear on rubber	—	130' (40m) boom or 120' boom plus 20' jib
Over side on rubber	—	130' (40m) boom or 110' boom plus 20' to 30' jib

HOOK BLOCKS (OPTIONAL):

BLOCK CAPACITY	SHEAVES	WIRE ROPE SIZE INCHES	RATIO ROPE TO SHEAVE	Miller Block Weight	Johnson Block Weight
30,000 lb. (13,608 kg)	WEIGHTED HOOK WITH SWIVEL			594 lb. (269.1 kg)	740 lb. (335.7 kg)
30,000 lb. (13,608 kg)	1	1"	16.5 to 1	555 lb. (251.4 kg)	580 lb. (263 kg)
60,000 lb. (27,216 kg)	1	1"	16.5 to 1	575 lb. (260.5 kg)	606 lb. (274.9 kg)
90,000 lb. (40,824 kg)	1	1"	18.375 to 1	790 lb. (357.9 kg)	911 lb. (413.2 kg)
140,000 lb. (63,504 kg)	2	1"	21.5 to 1	1745 lb. (790.5 kg)	1700 lb. (771 kg)
200,000 lb. (90,720 kg)	3	1"	19.22 to 1	2530 lb. (1146.1 kg)	2644 lb. (1199.3 kg)
250,000 lb. (113,400 kg)	4	1"	21.5 to 1	2938 lb. (1330.9 kg)	3050 lb. (1383.5 kg)
300,000 lb. (136,080 kg)	5	1"	24 to 1	— —	3651 lb. (1656 kg)

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UPPERSTRUCTURE

FRAME AND TRANSMISSION: All welded frame and integral sealed "powerbox" transmission case constructed of heavy, high strength steel plate is precision machined for proper alignment of all components. Transmission shaft mountings are line bored to insure precise alignment. Involute splined shafts turn in roller and ball bearings. Hardened gears and roller chains are sealed and splash lubricated in oil tight "powerbox" for long trouble-free operation. Load drums are mounted above transmission on "powerbox" side frames.

MACHINERY CAB: Low profile, steel construction with access panels on both sides and rear to machinery. No lines pass through cab. Machinery is in compact arrangement, easy to maintain and repair. Deck covered with non-skid paint. Roof top access ladder. Counterweights attach to rear of cab.

GANTRY: Two position, telescopic gantry supports boom suspension and is raised and lowered by boom hoist ropes. High position used for 240' to 270' (73 to 82m) long booms, low position for shorter booms.

BOOM HOIST SPREADERS: Lower spreader assembly is pinned to gantry and contains 6 sheaves 13" (330mm) P.D. with roller bearings for 14-part .75" (19mm) dia. wire rope boom hoist reeving to upper spreader. (17.1 rope ratio.)

Upper spreader assembly serves as connection for boom suspension pendants. Contains 6 sheaves 13" (330mm) P.D. with roller bearings for 14-part boom hoist reeving.

COUNTERWEIGHTS: One or two piece, located behind rear of machinery cab, pin connected with shear ledge support. Lower piece is 23,000 lb. (10,433 kg); upper piece is 41,000 lb. (18,598 kg) and is removable with lower counterweight. Quickly installed or removed by use of hydraulic rams in upper structure. Lower piece is standard, upper piece is optional.

OPERATORS CAB: Environmental, modular type isolated from machinery cab, detachable for transportation. Rubber mounted and foam insulated for sound suppression. Full vision cab has safety glass in all windows; sliding door, tilt-back ceiling window and self-storing front window. Seven-way adjustable seat has cushion head and armrests. Standard equipment includes insulated floor mat, electric windshield wipers, (front and top windows) dome light, signal horn, circular level, gauge dimmer switch, coat hanger, circuit breakers for electrical protection and quick disconnects for hydraulic and electrical connections. All wiring is color coded for easy servicing. Optional equipment includes heater, defroster, fire extinguisher, catwalks, air conditioner, elevated cab platform, seat belt, drum mirror and tool kit.

DBA ratings in cab —	Door Closed	Door Open
Engine at high idle —	77.2	80.5

CONTROLS: In front of operator are foot pedals for throttle, front and rear drum brakes. Drum brake pedals are short stroke and power-assisted. Console mounted short stroke, low effort hand levers are for front and rear drum controls and boom hoist control. Move lever backward to raise load (or boom) — move forward to lower load (or boom). Front drum turn indicator is located on lever (optional rear drive turn indicator is also available.) A signal horn button is mounted on the boom hoist lever.

At operators left are console mounted swing control lever and third drum control lever. A twist grip throttle control as well as a swing brake control switch are located on the swing lever. Move lever forward to swing left — move backward to swing right. Console mounted equipment includes hourmeter, optional tachometer and switches for ignition, cold weather starting aid, panel light dimmer, boom hoist override, rear drum pawl, front drum pawl, rear drum holding brake and front drum holding brake. Other switches and gauges located above and alongside left side window include windshield wipers (top and front), heater (opt.), defroster fan (opt.), overhoist safety light and buzzer (opt.), engine fault warning light and buzzer, engine oil pressure gauge, water temperature gauge, voltmeter, fuel gauge, torque converter oil temperature gauge, converter charge pressure gauge and hydraulic system pressure gauge. Gauges have both English and Metric scales and international symbols.

On the left side console wall behind the operator is the electrical system circuit breaker panel protecting the various upper circuits.

HYDRAULIC SYSTEM: Full flow hydraulic system provides power to front and rear drum clutches and boom hoist brakes and clutches. Front and rear drum brakes are power-assisted providing smooth, positive feel (similar to power brakes on automobiles). Full flow system operates at 1500 psi (105 Kg/cm) line pressure. Response is instant, positive and smooth. Pumped fluid is filtered, stored in an accumulator under pressure, cooled in 6 gal. (22.7 liter) reservoir and filtered again before returning to pump.

POWER PLANT:

ENGINE:

Make	Cummins
Model	V 903
Type	Diesel
No. of Cylinders	8
Bore x Stroke, In.	5.50 x 4.75
mm	140 x 121
Displacement, In.³	903
Liters	14.8
Cycles	4
Air Induction	Nat. Aspirated

TRANSMISSION:

Make	Twin Disc
Model	CO-10,000 MS-260 3 Stage Torque Converter

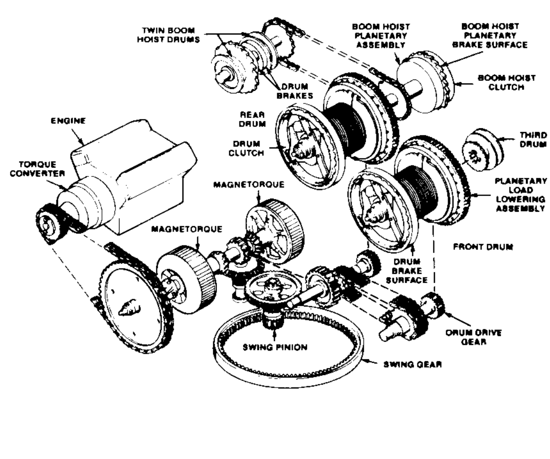
RATINGS:

Gross HP @ RPM	255 @ 2400
Net HP @ RPM	179 @ 1285
(Converter Output Shaft	(O.P.S. Gov. Full Load)
Altitude Range	0-3000' (0-914 m)
Temp. Range in F.	-20° to 110°
(C.)	(-28° to 43°)

ACCESSORIES:

Cooling	Liquid recirculating bypass
Radiator	Tube and fin type, thermostat controlled, rubber mounted
Fan	8 blade, 32 inch (813 mm) diameter suction type
Starting	24 volt motor Cold weather starting aid (measured shot) required below 30° F (-1° C)
Electrical System	24 volt 50 amp. alternator and 2-215 amp. hr. @ 20 hour rate batteries, 12 volt series connected
Fuel Tank	110 gal. (416.4 liters). Meets FHWA requrements, siphon-proof
Air Cleaner	Two stage dry
Lube Oil Filter	Replaceable. Full-flow and by-pass
Fuel Filter	Dual spin-on replaceable
Lube oil capacity	Engine - 7 gallons (26.5 liters). Filter -2.9 gallons (11 liters).
Coolant capacity	Engine - 7 gallons (26.5 liters). Radiator 3.5 gallons (13.2 liters).

Converter charging hydraulic system — Gear type pump charges converter. Oil to water heater exchanger cools fluid. Filtered with full flow pressure filters with replaceable paper elements.



LOAD HOIST SYSTEM

Independent work-motion system consisting of two drums in tandem, powered by enclosed chain transmission and gearing from engine driven torque conterter. Both drums overwind. Each drum is a one-piece fabrication consisting of brake/clutch drum (left) load drum (center) and planetary lowering (or optional brake) drum (right) mounted on a drum shaft and supported by grease lubricated roller bearings.

CRANE LOAD DRUMS (FRONT & REAR): 21" (533 mm) P.D. x 17" (432 mm) long Lebus style grooved lagging bolted to drum. For 1" (25 mm) dia. wire rope (21:1 rope ratio). Rope capacity is 1059' (321.9 m) storage, 908.9' (276.3 m) working length. Supplied with 230' (70 m) or 3 parts of wire rope for basic boom.

DRUM CLUTCHES: 35" (889 mm) dia. x 4" (102 mm) wide, internal expanding full band type, involute splined on shaft. Hydraulically actuated by clutch lever.

DRUM BRAKES: 40" (1016 mm) dia. x 5" (127 mm) wide, external contracting full-wrapped band type, automatic safety brake hydraulically set with additional spring set-hydraulically released lock actuated by foot pedal. Hydraulically controlled safety pawl for locking drum.

PLANETARY POWER LOAD LOWERING: Rapid, controlled safe lowering through reverse planetary gearing in drum using engine power. 40" (1016 mm) dia. x 5" (127 mm) wide, external contracting full-wrapped band brake engages planetary gears.

DUAL BRAKES (OPTIONAL): For duty cycle work (free-fall loads). Replaces planetary power load lowering on either drum.

DRUM ROTATION INDICATORS (FRONT STD. — REAR OPTIONAL): Clutch control lever handles pulsate per drum revolution, in either direction.

LOAD DRUM HOIST PERFORMANCE							
LINE PULL		MAXIMUM LINE SPEED					
Lbs.	Kg.	1st Layer FPM	MPM	3rd Layer FPM	MPM	6th Layer FPM	MPM
5,000	2,268	188	57.3	219	66.6	264	80.5
15,000	6,804	188	57.3	219	66.6	264	80.5
25,000	11,340	188	57.3	208	63.4	209	63.7
27,400*	12,426	188	57.3	191	58.2	190	57.9

*30,000 lb. (13,608 kg) when using P&H type 29 rope with 10 part line. Available line pull 77,850 lb. (35,312 kg).

TAGLINE WINDER (Supplied with Clamshell Attachment): McCaffrey Rud-O-Matic spring type #1248, with 70' (21.3 m) .375" (9 mm) tagline wire rope.

THIRD DRUM (OPTIONAL): 16.25" (413 mm) P.D. x 6" (152 mm) long for .75" (19 mm) dia. wire rope (21:1 rope ratio). Rope capacity is 164.5' (56.1 m) storage, 142.5' (43.3 m) working length. Rope not supplied. Drum mounts on extension of drum shaft to left of front drum. Does not interfere with any machine function or attachment. Design and control similar to load drums.

CLUTCH: 23" (584 mm) dia. x 5" (127 mm) wide internal expanding full band type, involute splined on shaft. Hydraulically actuated by clutch lever.

BRAKE: 25.5" (648 mm) dia. x 4" (102 mm) wide external contracting full-wrapped band type. Hydraulically actuated by foot pedal.

THIRD DRUM HOIST PERFORMANCE						
	1st Layer Lbs.	Kg.	3rd Layer Lbs.	Kg.	5th Layer Lbs.	Kg.
Available Hoisting Line Pull *	30,000	13,608	27,480	12,465	26,000	11,793
	FPM	MPM	FPM	MPM	FPM	MPM
Available Hoisting Line Speed	145	44.2	159	48.5	172	52.4

*Permissible Line Pull is 8,000 lbs. (3,629 kg) per part of line for .75" (19 mm) dia. wire rope.

BOOM HOIST SYSTEM

An independent work-motion system — driven by and supported by rear load drum shaft. Controlled raising and lowering of boom with engine power — raising through clutch engagement, lowering through low speed planetary gear drive, with automatic safety pawls always engaged during raising, lowering, or holding operations.

BOOM HOIST DRUMS: Each drum is a one-piece fabrication consisting of planetary hub, load drum center and brake/clutch drum. The drum as well as planetary spider have ratchet teeth which engaged the locking pawls.

Twin drums are 15.75" (400 mm) P.D. x 8.125" (209 mm) long, grooved for .75" (19 mm) dia. wire rope (21:1 rope ratio). Rope capacity is 315' (96 m) storage, 252' (77 m) working length. Supplied with 660' (201 m) or 14 parts of wire rope.

DRUM CLUTCH: 23" (584 mm) dia. x 5" (127 mm) wide, internal expanding full band type, involute splined on shaft. Hydraulically actuated by boom hoist lever being moved rearward.

DRUM BRAKE (Lowering): Two 30" (762 mm) dia. x 3" (76 mm) wide, external contracting, full wrapped band type automatic safety brake, spring-set — hydraulically released, actuated by boom hoist lever being returned to neutral position.

PLANETARY BRAKE (Lowering): 25.5" (647 mm) dia. x 4" (102 mm) wide, external contracting, full wrapped band type. Hydraulically set-spring released, actuated by forward movement of boom hoist lever. As drum brake is released hydraulically, hoist pawl is automatically released, planetary pawl is automatically engaged and planetary brake is set. As the brake is set, planetary gears reverse drum rotation, lowering the boom by engine power through the planetary.

BOOM HOIST DRUM PERFORMANCE						
MAXIMUM LINE SPEED	1st LAYER FPM	MPM	4th LAYER FPM	MPM	7th LAYER FPM	MPM
HOISTING*	73	22.3	84	25.6	94	26.7
LOWERING	48	14.6	55	16.6	62	16.9

*Based on engine full load HP at governed RPM.

SWING SYSTEM

"Magnetorque®" Swing Drive is an independent work-motion system and consists of driving and driven members coupled by magnetic force through an air gap. Driving member is chain driven from rear of engine. Driven member drives swing gear through bevel and spur gears. Lever controlled excitation.

COUPLING: 2-26" (660 mm) dia. x 6.25" (159 mm) wide, electro-magnetic "Magnetorque®". Powered by engine driven alternator.

BRAKE: 18" (457 mm) dia. x 2.5" (64 mm) wide, band type, external contracting. Hydraulic release, spring set.

SWING GEAR: 139 Internal cut teeth.

SWING PERFORMANCE	
Swing speed	Maximum rpm 3.94

FASTENING TO UNDERCARRIAGE: P&H roller bearing 66.67" (1678 mm) O.D. Swing Circle® with swing gear integral. Bolted to both upperstructure and carrier.

HOUSE LOCK: Two position (front and rear) pin-in-hole lock manually engaged is optional.

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CARRIER: 8 Wheels, 4 Wheel Drive, 12 Tires

FRAME: Front section is fabricated from 18" (457 mm) — 58 lb. channel. Rear section is a fabricated box section 22.75 inches deep, crossbraced and reinforced. High strength low alloy steel plate used extensively. Tow loops front and rear. Removable rear frame section is standard.

BODY: Cab, engine hood, front and side panels, front skirts, equipment boxes, deck and dirt shields formed from sheet steel.

CAB: 34 inch (863 mm) wide one-man cab offset to left side of engine compartment, all windows safety glass, electric windshield wiper, removable dash panel (with tachometer, speedometer, air pressure gage, voltmeter, coolant temperature gage, engine oil pressure gage, fuel level gage and switches), air horn, dome light, seat assembly with seat belt and West Coast mirrors. Crank down door window and slide-by type right side windows.

LIGHTING: Two headlights with foot operated dimmer switch. Stop, tail, directional, clearance and rear license plate lights. Two weather-proof sockets provided for upper lighting during transit. In cab — dome light, illuminated gages, indicator lights for hi-beam, directional, emergency flasher and low air pressure warning.

OUTRIGGERS: Patented hydraulic scissor type with removable floats — eight double-acting hydraulic cylinders for independent horizontal and vertical motion of each beam, solenoid valve controlled. Holding valves on vertical cylinders. Patented remote controlled air operated ratchet and pawl locks. Outrigger control stations on either side of carrier control each side.

OUTRIGGER HOUSINGS: Two independent housings front and rear, pin-connected and removable. 100,000 PSI min. yield high strength alloy steel construction.

OUTRIGGER BEAMS: 100,000 PSI min. yield high strength alloy steel box extending to a maximum of 10'10" (3.3 m) from center of carrier.

FRONT FLOAT: Hydraulically operated front float is actuated by solenoid valve controlled from left side outrigger control station. Vertical cylinder has lock check valve. Required for 360° operation.

FLOATS: Four (4) aluminum floats 30.0 inches (762 mm) in diameter.

POWER PLANT:

ENGINE:	STANDARD	OPTIONAL
Make	Cummins	Cummins
Model	NTC-300	NTCC-350
Type	Diesel	Diesel
No. of Cylinders	6	6
Bore x Stroke, Inc.	5.5 x 6.0	5.5 x 6.0
mm	(140 x 152)	(140 x 152)
Displacement, In.^{3}	855	855
liters	(14.0)	(14.0)
Cycles	Four	Four
Air Induction	Turbocharged	Turbocharged
Cooling	Liquid	Liquid
Starter	24 volt	24 volt
Charging	12 volt — 75 A	12 volt — 75 A
Compressor, Air	13.2 CFM	13.2 CFM
Governor, Air	100 to 120 PSI	100 to 120 PSI
Horsepower, Gross	300 HP @ 2100 RPM	350 HP @ 2100 RPM
Altitude Range Ft.	0-12,000	0-12,000
M	(0-3,658)	(0-3,858)
Temp. Range in F.	-20° to 120°	-20° to 120°
C.	(-28° to 50°)	(-28° to 50°)

TRANSMISSION	MAIN	AUXILIARY
Make	Fuller	Fuller
Model	RTOF-12515	AT-1202
Type	Road ranger Twin counter-shaft 15-speed Forward 3-speed Reverse	Air shifted Twin counter-shaft 2-speed
	Total of thirty (30) forward gear ratios	

Fuel tank capacity — 75 gallons (284 liters). Meets FHWA requirements. Siphon-proof.

Starting Aid — Required below 14°F (-10°C.) ether-measured shot.

Air cleaner — Donaldson — dry type.

Batteries — (2) - 12 volt H.D. rated, series connected. 215 amp hours @ 20 hour rate.

Input disconnect clutch — Lipe-Rollway 14-2 LP Pull-type with up-shift clutch brake.

PROP. SHAFTS: Front, Spicer 1710 H.D. series.
Rear, Spicer 1810 Std. series.
Interaxle, Spicer 1710 Std. series.

SUSPENSION: Rear — unsprung bogie beam with torque rods. Self-aligning bearings on both ends of bogie beams. Front — Reyco tandem sprung suspension. Dynamic capacity — 52,000 lbs. (23,587 kg).

TIRES: Twelve 1400 x 24 load range (20 PR). On-highway tread, on Goodyear 1024 MD rims.

STEERING: Ross worm and roller steering gear 32.5 to 1 ratio. 18 inch (457 mm) diameter steering wheel. Garrison power assist.

FRONT AXLE:

Shuler FTCA 5½" dia. tube, 1" wall, axles in tandem. 101.875 inches king pin centers. 107.7 inch (2736 mm) track.

REAR AXLE: Rockwell Standard SPRC-1735-P100 planetary drive bogie axle with interaxle differential. 100 inch (2540 mm) track. 9.48:1 total ratio.

BRAKES:

Service — Dual air brake circuit with front and rear brakes on separate circuits. Front linings: 17.25 in. (438 mm) diameter by 4 in. (101 mm) wide (500 sq. in. (12700 mm) total front lining area), 24 sq. in. (609 mm) air chambers. Rear linings: 20.25 in. (514 mm) diameter by 7 in. (178 mm) wide (1312 sq. in. (33320 mm) total rear lining area), 38 sq. in. (914 mm) air chambers. Total brake lining area — 1612 sq. in. (46020 mm).

Emergency/Parking — Air release, spring set brake chambers on all rear wheels controlled from cab. Separate reservoir for release of spring set brakes.

MISCELLANEOUS EQUIPMENT: Tire inflation valve and hose, one (1) manual hydraulic jack, hydraulic bypass hose, upper lighting cable and special tools.

OPTIONS: Spare rim — 1024 MD. 4' x 4' aluminum outrigger floats. Auxiliary rear outriggers (2) for use with 15,000 lb. bumper counterweight. Jacobs engine brake. Two (2) - 15,000 lb. front bumper counterweights (for raising booms longer than 220' or 200' plus 60' jib) or one 15,000 lb. front bumper counterweight (for lifting over the rear), backup alarm w/light, heater, air conditioner and defroster fan, remote control of outriggers, high water temperature/low oil pressure warning alarm and fire extinguisher.

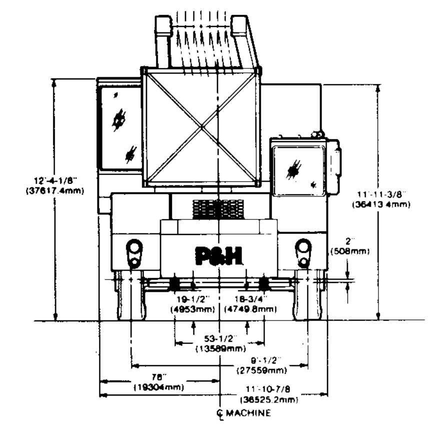
WEIGHTS:

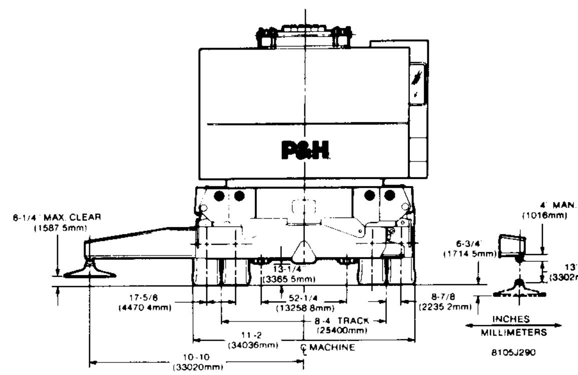
Total — Complete machine less cable and boom, but with lower counterweight 139,765 lb. (63,397 kg).
Carrier — including hydraulic outriggers, floats, "Swing Circle"® and standard tires — 67,645 lb. (30,684 kg).
Upper machine — Including counterweight and gantry. 72,120 lb. (32,714 kg).
Mast — 3110 lb. (1411 kg).
Gantry — 2070 lb. (939 kg).
Lower counterweight — 23,000 lb. (10,433 kg).
Upper counterweight — 41,000 lb. (18,598 kg).
Boom:
Base — 2937 lb. (1332 kg).
Inserts — 10 ft. — 845 lb. (368 kg)
20 ft. — 1220 lb. (553 kg)
30 ft. — 1720 lb. (780 kg)
50 ft. — 2780 lb. (1261 kg)
Tip — 4350 lbs. (1973 kg)
Jib:
Base — 365 lb. (165.3 kg)
Inserts — 10 ft. (3.0 m) — 213 lb. (96.5 kg)
20 ft. (6.1 m) — 373 lb. (189 kg)
Tip — 470 lb. (213 kg)
Strut — 420 lb. (191 kg)

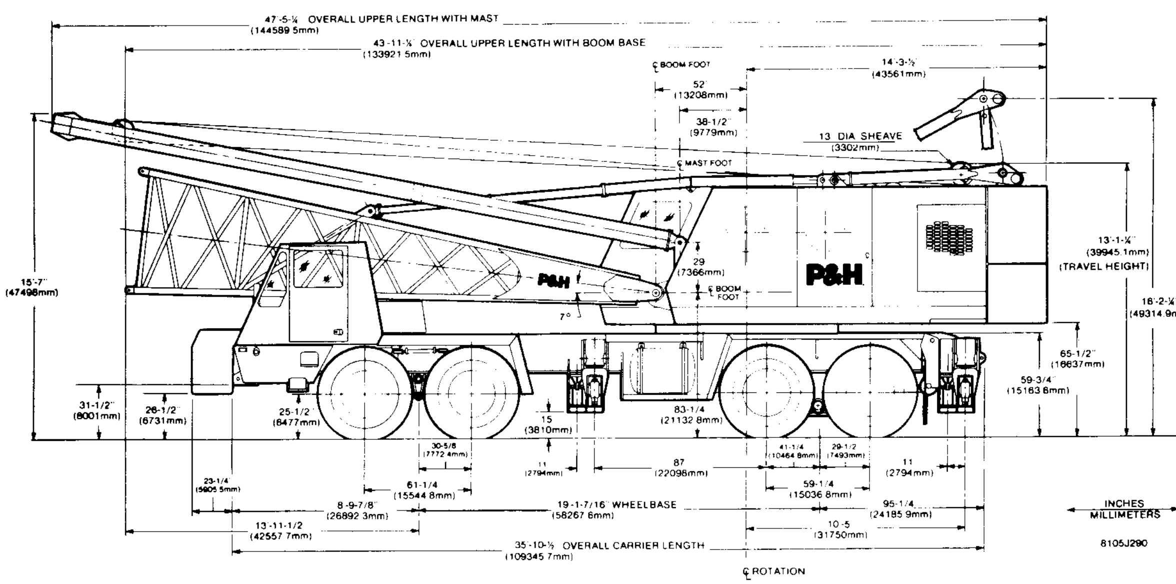
PERFORMANCE:
(Based on Cummins NTC-300 Engine)

ON HIGHWAY: 15 forward speeds, 3 reverse speeds. Performance in highest and lowest gear based on engine @ full load RPM and 117,500 lb. (53,288 kg) GVW (class I, good surface road). (Rockwell Axles). Lowest Gear: 3 MPH (4.9 km/h) to 22.4 percent grade. Highest Gear: 41.9 MPH (67.4 km/h) to 0.0 percent grade.

OFF HIGHWAY: 5 forward speeds, 1 reverse speed. Performance in lowest gear ratio based on engine @ max. torque RPM and 117,500 (53,288 kg) GVW (class II road). (Rockwell Axles). 1.3 MPH (2.1 km/h) to 30.0 percent grade.







NOTE: All designs, specifications and components of the equipment described above are subject to change at the manufacturer's sole discretion at any time without advance notice. Data published herein is informational in nature and shall not be construed to warrant suitability of the machine for any particular purpose as performance may vary with the conditions encountered. The only warranty applicable is our standard written warranty for this machine. Manufactured and sold in conformance with U. S. Department of Commerce Commercial Standard CS-90-58.

Harnischfeger
P&H
milwaukee, wisconsin. 53201

TX-786SP

D5-181 Litho in U.S.A.

P&H® 9150

150 ton truck crane
270' boom plus 80' jib

Whether your lifting requirement is heavy lifting, long reaches, tilt-up and/or walking with the load, the 9150 has a boom and counterweight arrangement to meet that requirement. These new, improved and expanded load rating tables make the 9150 the most versatile truck crane in its class.

HEAVY DUTY TIP BOOM

1. PCSA CLASS 12-847 —
   On Outriggers with front float set, Two counterweights and one bumper counterweight — ratings for 360°, Over side and Over rear.
   50 to 250 foot boom lengths
2. PCSA CLASS 12-802 —
   On Outriggers with front float set, Two counterweights — ratings for 360° and Over rear.
   50 to 230 foot boom lengths
3. PCSA CLASS 12-527 —
   On Outriggers with front float set, One counterweight — ratings for 360° and Over rear.
   50 to 200 foot boom lengths
4. On Tires with one counterweight and one bumper counterweight — Stationary and Travel ratings.
   50 to 130 foot boom lengths
5. On Tires with one counterweight — Stationary and Travel ratings.
   50 to 130 foot boom lengths
6. Jib Ratings for crane and concrete bucket service

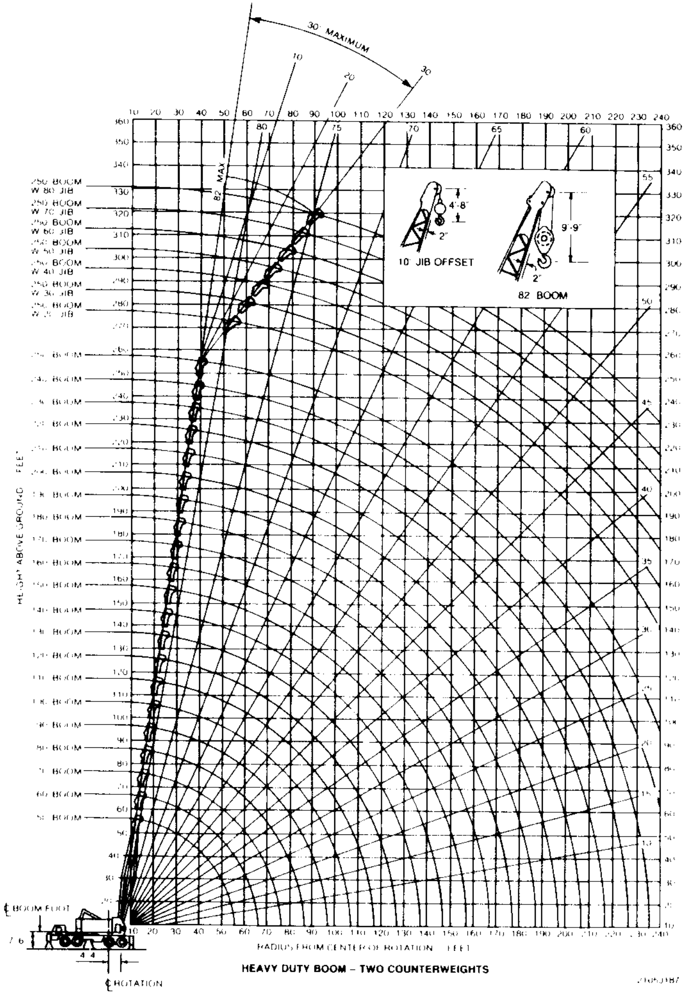
LONG RANGE TIP BOOM

1. On Outriggers with front float set, Two counterweights and one bumper counterweight — ratings for 360°, Over side and Over rear.
   60 to 270 foot boom lengths
2. On Outriggers with front float set, Two counterweights — ratings for 360° and Over rear.
   60 to 240 foot boom lengths
3. On Outriggers with front float set, One counterweight — ratings for 360° and Over rear.
   60 to 210 foot boom lengths
4. On Tires with one counterweight and one bumper counterweight — Stationary and Travel ratings.
   60 to 130 foot boom lengths
5. On Tires with one counterweight — Stationary and Travel ratings.
   60 to 130 foot boom lengths
6. Jib Ratings for crane and concrete bucket service

standard
69" wide x 69" deep
boom

crane **lifting capacities**
working ranges

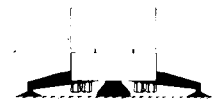
working ranges



HEAVY DUTY BOOM – TWO COUNTERWEIGHTS

two counterweights and one bumper counterweight

RATINGS
LIFT CRANE SERVICE
69" x 69" boom
heavy duty tip (25')



"on outriggers" front float set

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∠°	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
50	12	82 0	56 6	300,000	300,000	300,000
	13	80 9	56.5	278,300	278,300	278,300
	14	79 7	56.3	258,500	258,500	258,500
	15	78 5	56 1	241,300	241,200	241,200
	16	77 4	55 8	225,300	226,100	226,100
	17	76 2	55 6	210,400	212,800	212,800
	18	75 0	55 3	201,000	201,000	201,000
	19	73 8	55 0	190,400	190,400	190,400
	20	72 6	54 7	180,900	180,900	180,900
	21	71 4	54.3	172,300	172,300	172,300
	22	70 2	54 0	164,500	164,500	164,500
	23	68 9	53 6	157,300	157,300	157,300
	24	67 7	53.2	150,700	150,700	150,700
	25	66 4	52.7	144,700	144,700	144,700
	26	65 2	52.2	139,100	139,100	139,100
	27	63 9	51 7	134,000	134,000	134,000
	28	62 6	51.2	129,200	129,200	129,200
	29	61 3	50 7	124,700	124,700	124,700
	30	60 0	50 1	120,600	120,900	120,600
	32	57 3	48 8	113,000	113,000	113,000
	34	54 5	47 4	106,400	106,400	106,400
	36	51.6	45 8	98,900	98,900	100,500
	38	48 5	44 1	91,400	91,400	95,200
	40	45 4	42.2	84,700	84,700	90,400
	45	36 4	36.2	71,600	71,600	75,200
	50	24 9	27.5	57,800	57,800	57,800

Boom Length (ft)	Load Radius (ft)	Boom Angle ∠°	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
60	14	81 4	66 4	258,500	258,500	258,500
	15	80 5	66 3	241,200	241,200	241,200
	16	79 5	66.1	225,100	226,100	226,100
	17	78 5	65.9	210,200	212,800	212,800
	18	77 6	65 6	201,000	201,000	201,000
	19	76.6	65 4	190,400	190,400	190,400
	20	75 6	65 1	180,900	180,900	180,900
	21	74 6	64 8	172,300	172,300	172,300
	22	73 6	64 5	164,500	164,500	164,500
	23	72.6	64.2	157,300	157,300	157,300
	24	71 6	63 9	150,700	150,700	150,700
	25	70 6	63 5	144,700	144,700	144,700
	26	69 5	63.1	139,100	139,100	139,100
	27	68 5	62.7	134,000	134,000	134,000
	28	67 5	62.3	129,200	129,200	129,200
	29	66 4	61 9	124,700	124,700	124,700
	30	65.4	61 4	120,600	120,600	120,600
	32	63.3	60 4	113,000	113,000	113,000
	34	61.1	59 3	106,400	106,400	106,400
	36	58.9	58.1	99,100	99,100	100,500
	38	56 6	56 8	91,500	91,500	95,200
	40	54.2	55.4	84,900	84,900	90,400
	45	48 1	51.2	71,700	71,700	80,400
	50	41.2	46.0	61,900	61,900	69,900
	55	33 1	39 2	54,300	54,300	59,300
	60	22.6	29 5	47,200	47,200	47,200

32Z2291

LIFTING OVER BOOM POINT WITH JIB ATTACHED

JIB LENGTH	20 FT	30 FT	40 FT	50 FT	60 FT	70 FT	80 FT
EFFECTIVE JIB WT. – LBS.	1500	1500	2000	2500	3000	3300	3600
EFFECTIVE JIB HOOK WT	1600	1600	1600	1600	1600	1600	1600
ALSO DEDUCT TWICE THE WEIGHT OF ANY LOAD SUSPENDED FROM JIB HOOK							

WARNING

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed, as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

"on outriggers" front float set

two counterweights and one bumper counterweight

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
70	15	81.8	76.4	198,100	198,100	198,100
	16	81.0	76.2	195,700	195,700	195,700
	17	80.2	76.1	191,800	191,800	191,800
	18	79.4	75.9	188,600	188,600	188,600
	19	78.5	75.7	187,400	187,400	187,400
	20	77.7	75.4	180,900	180,900	180,900
	21	76.8	75.2	172,300	172,300	172,300
	22	76.0	74.9	164,500	164,500	164,500
	23	75.1	74.7	157,300	157,200	157,300
	24	74.3	74.4	150,700	150,700	150,700
	25	73.4	74.1	144,700	144,700	144,700
	26	72.6	73.8	139,100	139,100	139,100
	27	71.7	73.4	134,000	134,000	134,000
	28	70.9	73.1	129,200	129,200	129,200
	29	70.0	72.7	124,700	124,700	124,700
	30	69.1	72.3	120,800	120,800	120,800
	32	67.3	71.5	113,000	113,000	113,000
	34	65.5	70.6	106,400	100,400	100,400
	36	63.7	69.6	98,200	99,200	100,500
	38	61.9	68.5	91,600	91,600	95,200
	40	60.0	67.4	85,000	85,000	90,400
	45	55.1	64.1	71,900	71,500	80,400
	50	49.9	60.2	62,000	62,000	70,100
	55	44.2	55.4	54,400	54,400	61,800
	60	37.9	49.6	48,300	48,300	55,000
	65	30.5	42.0	43,300	43,300	48,800
	70	20.9	31.3	39,200	39,200	39,400
80	17	81.4	86.2	180,500	180,500	180,600
	18	80.7	86.1	178,400	178,400	178,400
	19	80.0	85.9	176,400	176,400	176,400
	20	79.2	85.7	174,500	174,500	174,500
	21	78.5	85.5	172,300	172,300	172,300
	22	77.8	85.2	164,500	164,500	164,500
	23	77.0	85.0	157,300	157,300	157,300
	24	76.3	84.8	150,700	150,700	150,700
	25	75.6	84.5	144,700	144,700	144,700
	26	74.8	84.2	139,100	139,100	139,100
	27	74.1	83.9	134,000	134,000	134,000
	28	73.3	83.6	129,200	129,300	129,200
	29	72.6	83.3	124,700	124,700	124,700
	30	71.8	83.0	120,800	120,800	120,800
	32	70.3	82.3	113,000	113,000	113,000
	34	68.8	81.5	106,400	106,400	106,400
	36	67.2	80.7	99,100	99,100	100,500
	38	65.7	79.8	91,500	91,500	95,200
	40	64.1	78.8	84,900	84,900	90,400
	45	60.0	76.1	71,700	71,700	80,400
	50	55.7	72.8	61,900	61,900	69,900
	55	51.2	69.1	54,300	54,300	61,500
	60	46.4	64.6	48,200	48,200	54,800
	65	41.2	59.3	43,200	43,200	49,300
	70	35.4	52.8	39,100	39,100	44,700
	75	28.5	44.6	35,600	35,600	40,400
	80	19.5	33.1	32,600	32,600	33,200

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
90	18	81.7	96.2	182,300	182,300	182,300
	19	81.1	96.0	180,400	180,400	180,400
	20	80.5	95.9	180,800	180,800	180,900
	21	79.8	95.7	172,300	172,300	172,300
	22	79.2	95.5	164,500	164,500	164,500
	23	78.5	95.3	157,300	157,300	157,300
	24	77.9	95.0	150,700	150,700	150,700
	25	77.2	94.8	144,700	144,700	144,700
	26	76.5	94.6	139,100	139,100	139,100
	27	75.9	94.3	134,000	134,000	134,000
	28	75.2	94.0	129,200	129,200	129,200
	29	74.6	93.8	124,700	124,700	124,700
	30	73.9	93.5	120,800	120,800	120,800
	32	72.6	92.8	113,000	113,000	113,000
	34	71.2	92.2	106,400	106,400	106,400
	36	69.9	91.4	99,000	99,000	100,500
	38	68.5	90.7	91,500	91,500	95,200
	40	67.1	89.8	84,600	84,500	90,400
	45	63.6	87.5	71,700	71,700	80,400
	50	60.0	84.7	61,500	61,800	69,500
	55	56.2	81.5	54,300	54,300	61,400
	60	52.3	77.9	48,200	48,200	54,800
	65	48.1	73.6	43,200	43,200	49,300
	70	43.6	68.7	39,000	39,000	44,800
	75	38.7	62.8	35,800	35,800	40,700
	80	33.3	55.8	32,800	32,800	37,500
	85	26.8	47.0	30,000	30,000	34,300
	90	18.3	34.7	27,700	27,700	28,500
100	19	82.0	106.1	153,700	153,700	153,700
	20	81.4	106.0	152,200	152,200	152,200
	21	80.8	105.8	150,800	150,800	150,800
	22	80.3	105.7	148,400	148,400	149,400
	23	79.7	105.5	148,100	148,100	149,100
	24	79.1	105.3	148,300	148,300	148,300
	25	78.5	105.1	144,500	144,500	144,500
	26	77.9	104.8	139,100	139,100	139,100
	27	77.3	104.6	134,000	134,000	134,000
	28	76.7	104.4	129,200	129,200	129,200
	29	76.1	104.1	124,700	124,700	124,700
	30	75.6	103.9	120,600	120,800	120,600
	32	74.4	103.3	113,000	113,000	113,000
	34	73.2	102.7	106,400	106,400	106,400
	36	72.0	102.1	98,800	98,800	100,500
	38	70.8	101.4	91,400	91,400	95,200
	40	69.5	100.6	84,700	84,700	90,400
	45	66.4	98.5	71,500	71,600	80,400
	50	63.3	96.1	61,700	61,700	69,700
	55	60.0	93.4	54,200	54,200	61,300
	60	56.6	90.2	48,000	48,000	54,700
	65	53.1	86.6	43,100	43,100	49,100
	70	49.4	82.6	38,900	38,900	44,500
	75	45.5	77.9	35,500	35,500	40,600
	80	41.3	72.5	32,500	32,500	37,400
	85	36.7	66.2	29,900	29,900	34,500
	90	31.5	58.7	27,600	27,600	31,900
	95	25.4	49.3	25,600	25,600	29,400
	100	19.2	39.3	23,800	23,800	24,700

32Z2291

WARNING ⚠

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed, as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

"on outriggers" front float set

two counterweights and one bumper counterweight

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle $\Delta°$	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
110	21	81.7	116.0	162,600	162,600	162,600
	22	81.1	115.8	161,200	161,200	161,200
	23	80.6	115.6	157,200	157,200	157,200
	24	80.1	115.5	150,700	150,700	150,700
	25	79.6	115.3	144,700	144,700	144,700
	26	79.0	115.1	136,100	136,100	136,100
	27	78.5	114.9	134,900	134,000	134,000
	28	78.0	114.6	129,200	129,200	129,200
	29	77.4	114.4	124,700	124,700	124,700
	30	76.9	114.2	120,800	120,800	120,800
	32	75.8	113.7	113,000	113,000	113,000
	34	74.7	113.1	106,400	106,400	106,400
	36	73.7	112.5	98,700	98,700	100,500
	38	72.6	111.9	91,200	91,200	95,200
	40	71.5	111.3	84,500	84,500	90,400
	45	68.7	109.4	71,400	71,400	80,200
	50	65.9	107.3	61,400	61,400	69,500
	55	63.0	104.8	53,900	53,900	61,000
	60	60.0	102.0	47,800	47,800	54,400
	65	56.9	98.9	42,800	42,800	48,900
	70	53.7	95.4	38,800	38,800	44,300
	75	50.4	91.4	35,300	35,300	40,400
	80	46.9	87.0	32,300	32,300	37,200
	85	43.2	81.9	29,700	29,700	34,200
	90	39.2	76.1	27,400	27,400	31,700
	95	34.9	69.4	25,400	25,400	29,500
	100	31.0	63.1	23,600	23,600	27,500
	110	18.3	40.9	20,500	20,500	21,400

Boom Length (ft)	Load Radius (ft)	Boom Angle $\Delta°$	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
120	22	81.9	125.9	127,800	127,800	127,800
	23	81.4	125.8	126,100	126,100	126,100
	24	80.9	125.6	124,900	124,900	124,900
	25	80.4	125.4	123,500	123,500	123,500
	26	80.0	125.3	122,200	122,200	122,200
	27	79.5	125.1	120,900	120,900	120,900
	28	79.0	124.9	119,600	119,600	119,600
	29	78.5	124.7	118,200	118,200	118,200
	30	78.0	124.4	117,100	117,100	117,100
	32	77.0	124.0	113,000	113,000	113,000
	34	76.0	123.5	106,400	106,400	106,400
	36	75.1	123.0	98,600	98,600	100,500
	38	74.1	122.4	91,000	91,000	95,200
	40	73.1	121.8	84,300	84,300	90,400
	45	70.5	120.1	71,200	71,200	80,000
	50	68.0	118.2	61,300	61,300	69,300
	55	65.4	116.0	53,800	53,800	60,800
	60	62.7	113.5	47,600	47,600	54,200
	65	60.0	110.7	42,600	42,600	48,700
	70	57.2	107.6	38,500	38,500	44,100
	75	54.3	104.1	35,100	35,100	40,200
	80	51.3	100.3	32,100	32,100	37,000
	85	48.1	96.0	29,500	29,500	34,100
	90	44.8	91.2	27,200	27,200	31,500
	95	41.3	85.7	25,200	25,200	29,300
	100	38.3	80.9	23,400	23,400	27,300
	110	29.6	65.8	20,400	20,400	23,900
	120	17.5	42.5	18,000	18,000	18,600

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle $\Delta°$	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
130	24	81.6	135.7	116,200	116,200	116,200
	25	81.2	135.6	115,100	115,100	115,100
	26	80.7	135.4	113,900	113,900	113,900
	27	80.3	135.2	112,700	112,700	112,700
	28	79.8	135.1	111,600	111,600	111,600
	29	79.4	134.9	108,800	108,800	108,800
	30	78.9	134.7	107,700	107,700	107,700
	32	78.0	134.2	105,600	105,600	105,600
	34	77.1	133.8	103,600	103,600	103,600
	36	76.2	133.3	98,400	98,400	100,500
	38	75.3	132.8	90,800	90,800	95,200
	40	74.4	132.2	84,100	84,100	90,400
	45	72.1	130.7	71,000	71,000	79,700
	50	69.8	128.9	61,000	61,000	69,000
	55	67.4	126.9	53,500	53,500	60,800
	60	65.0	124.7	47,400	47,400	54,000
	65	62.5	122.1	42,400	42,400	48,400
	70	60.0	119.4	38,200	38,200	43,800
	75	57.4	116.3	34,800	34,800	39,900
	80	54.7	112.9	31,800	31,800	36,700
	85	52.0	109.1	29,200	29,200	33,800
	90	49.1	104.9	26,900	26,900	31,300
	95	46.1	100.3	24,900	24,900	29,000
	100	43.6	96.2	23,100	23,100	27,000
	110	36.7	84.2	20,100	20,100	23,800
	120	28.4	68.3	17,700	17,700	20,600
	130	16.8	43.9	15,600	15,600	16,100

Boom Length (ft)	Load Radius (ft)	Boom Angle $\Delta°$	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
140	25	81.8	145.7	119,600	119,600	119,600
	26	81.4	145.5	118,500	118,500	118,500
	27	81.0	145.4	117,500	117,500	117,500
	28	80.6	145.2	116,400	116,400	116,400
	29	80.2	145.0	115,300	115,300	115,300
	30	79.7	144.9	114,300	114,300	114,300
	32	78.9	144.5	112,300	112,300	112,300
	34	78.1	144.0	108,400	108,400	108,400
	36	77.2	143.6	98,200	98,200	100,500
	38	76.4	143.1	90,700	90,700	95,200
	40	75.5	142.6	84,000	84,000	90,400
	45	73.4	141.2	70,900	70,900	79,600
	50	71.3	139.5	60,900	60,900	68,900
	55	69.1	137.7	53,400	53,400	60,500
	60	66.9	135.6	47,300	47,300	53,900
	65	64.6	133.4	42,300	42,300	48,300
	70	62.3	130.8	38,100	38,100	43,700
	75	60.0	128.0	34,800	34,800	39,800
	80	57.6	124.9	31,800	31,800	36,600
	85	55.1	121.6	29,200	29,200	33,700
	90	52.6	117.9	26,900	26,900	31,200
	95	49.9	113.8	24,900	24,900	28,900
	100	47.8	110.3	23,100	23,100	26,900
	110	41.9	100.1	20,000	20,000	23,500
	120	35.3	87.4	17,700	17,700	20,600
	130	27.4	70.8	15,600	15,600	18,600
	140	16.2	45.4	13,800	13,800	14,200

32Z2291

WARNING ⚠

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed, as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

"on outriggers" front float set

two counterweights and one bumper counterweight

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
150	26	82.0	155.7	98,800	98,800	98,800
	27	81.6	155.5	98,100	98,100	98,100
	28	81.2	155.3	96,200	96,800	96,800
	29	80.8	155.2	94,400	94,400	94,400
	30	80.4	155.0	93,800	93,800	93,800
	32	79.7	154.7	92,000	92,000	92,000
	34	78.9	154.3	90,400	90,400	90,400
	36	78.1	153.8	88,800	88,800	88,800
	38	77.3	153.4	87,800	87,800	87,800
	40	76.5	152.9	83,800	83,800	86,100
	45	74.6	151.6	70,700	70,700	78,000
	50	72.6	150.1	60,700	60,700	68,700
	55	70.5	148.4	53,200	53,200	60,200
	60	68.5	146.5	47,100	47,100	53,700
	65	66.4	144.4	42,100	42,100	48,100
	70	64.3	142.0	38,100	38,100	43,500
	75	62.2	139.5	34,800	34,600	39,600
	80	60.0	136.7	31,800	31,800	36,400
	85	57.8	133.6	28,800	28,800	33,500
	90	55.5	130.3	26,700	26,700	31,000
	95	53.1	126.6	24,700	24,700	28,700
	100	51.2	123.5	22,900	22,800	26,700
	110	46.0	114.6	19,800	19,800	23,300
	120	40.4	103.8	17,500	17,500	20,800
	130	34.1	90.5	15,500	15,500	18,400
	140	26.4	73.2	13,700	13,700	16,400
	150	15.6	46.7	12,200	12,200	12,400

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
160	28	81.8	165.5	97,800	97,800	97,800
	29	81.4	165.3	96,800	96,800	96,800
	30	81.0	165.2	96,100	96,100	96,100
	32	80.3	164.8	94,800	94,800	94,800
	34	79.6	164.4	93,100	93,100	93,100
	36	78.9	164.1	91,700	91,700	91,700
	38	78.1	163.6	90,100	90,100	90,100
	40	77.4	163.2	83,800	83,500	87,800
	45	75.5	162.0	70,400	70,400	77,400
	50	73.7	160.5	60,400	60,400	68,400
	55	71.8	159.0	53,000	53,000	59,800
	60	69.9	157.2	46,800	46,800	53,400
	65	68.0	155.2	41,800	41,800	47,800
	70	66.0	153.1	37,800	37,800	43,200
	75	64.1	150.7	34,300	34,300	38,300
	80	62.0	148.1	31,300	31,300	36,100
	85	60.0	145.3	28,700	28,700	33,200
	90	57.9	142.3	26,400	26,400	30,700
	95	55.8	139.0	24,400	24,400	28,400
	100	54.0	136.1	22,800	22,500	26,400
	110	49.4	128.2	19,500	19,500	23,000
	120	44.5	118.7	17,200	17,200	20,200
	130	39.1	107.4	15,200	15,200	18,100
	140	33.0	93.5	13,400	13,400	16,100
	150	25.6	75.4	11,900	11,900	14,400
	160	15.1	48.0	10,600	10,600	10,700

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
170	29	81.9	175.4	79,800	79,800	79,800
	30	81.6	175.3	79,200	79,200	79,200
	32	80.9	175.0	78,000	78,000	78,000
	34	80.2	174.6	76,800	76,800	76,800
	36	79.5	174.2	75,800	75,800	75,800
	38	78.8	173.9	74,700	74,700	74,700
	40	78.1	173.4	73,800	73,800	73,800
	45	76.4	172.3	70,200	70,200	71,000
	50	74.7	171.0	60,200	60,200	66,100
	55	72.9	169.5	52,700	52,700	59,700
	60	71.1	167.8	46,000	46,500	53,200
	65	69.3	166.0	41,500	41,500	47,800
	70	67.5	164.0	37,800	37,800	43,000
	75	65.7	161.8	34,100	34,100	39,000
	80	63.8	159.4	31,100	31,100	35,800
	85	61.9	156.8	28,400	28,400	33,000
	90	60.0	154.0	26,100	26,100	30,500
	95	58.0	151.0	24,100	24,100	28,200
	100	56.4	148.4	22,300	22,300	26,200
	110	52.3	141.1	19,300	19,300	22,800
	120	47.8	132.6	17,000	17,000	20,000
	130	43.1	122.7	15,000	15,000	17,800
	140	37.9	110.9	13,200	13,200	15,900
	150	31.9	96.4	11,700	11,700	14,200
	160	24.8	77.6	10,400	10,400	12,700
	170	14.6	49.3	9,200	9,200	9,200

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
180	30	82.0	185.4	73,500	73,500	73,500
	32	81.4	185.1	72,800	72,500	72,500
	34	80.8	184.8	71,500	71,500	71,500
	36	80.1	184.4	70,800	70,900	70,800
	38	79.5	184.0	69,700	69,700	69,700
	40	78.8	183.7	68,800	68,800	68,800
	45	77.2	182.6	66,400	66,400	66,400
	50	75.5	181.3	60,000	60,000	64,100
	55	73.9	179.9	52,500	52,500	59,500
	60	72.2	178.4	46,400	46,400	52,900
	65	70.5	176.7	41,300	41,300	47,400
	70	68.8	174.8	37,400	37,400	42,700
	75	67.1	172.7	33,900	33,900	38,800
	80	65.4	170.5	30,500	30,800	35,700
	85	63.6	168.1	28,200	28,200	32,800
	90	61.8	165.5	25,900	25,900	30,200
	95	60.0	162.7	23,900	23,900	28,000
	100	58.5	160.3	22,100	22,100	26,000
	110	54.7	153.6	19,100	19,100	22,800
	120	50.7	145.9	16,800	16,800	19,800
	130	46.4	137.0	14,800	14,800	17,700
	140	41.8	126.6	13,000	13,000	15,700
	150	36.8	114.2	11,500	11,500	14,000
	160	31.0	99.2	10,200	10,200	12,600
	170	24.1	79.8	9,000	9,000	11,100
	180	14.2	50.6	7,900	7,900	7,900

32Z2291

WARNING ⚠

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"on outriggers" front float set

two counterweights and one bumper counterweight

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle $\Delta°$	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
190	32	81.9	195.2	67,800	67,800	67,800
	34	81.2	194.9	67,800	67,800	67,800
	36	80.6	194.6	67,100	67,100	67,100
	38	80.0	194.2	66,800	66,800	66,800
	40	79.4	193.8	66,600	66,000	66,800
	45	77.9	192.8	64,800	66,000	66,800
	50	76.3	191.6	59,700	59,700	63,800
	55	74.8	190.3	52,300	52,300	59,200
	60	73.2	188.9	46,100	46,100	52,700
	65	71.6	187.3	41,000	41,000	47,100
	70	70.0	185.5	37,100	37,100	42,400
	75	68.4	183.6	33,800	33,800	36,500
	80	66.8	181.5	30,800	30,800	35,400
	85	65.1	179.2	27,800	27,800	32,500
	90	63.4	176.8	25,800	25,800	29,800
	95	62.1	174.7	23,800	23,800	27,700
	100	60.3	171.9	21,800	21,800	25,700
	110	56.8	165.7	18,800	18,900	22,300
	120	53.1	158.6	16,500	16,500	19,500
	130	49.2	150.5	14,500	14,500	17,400
	140	45.1	141.2	12,700	12,700	15,400
	150	40.6	130.3	11,200	11,200	13,700
	160	35.7	117.5	9,900	9,900	12,200
	170	30.2	101.9	8,700	8,700	11,000
	180	23.4	81.9	7,700	7,700	9,400
	190	13.8	51.8	6,500	6,500	6,500

Boom Length (ft)	Load Radius (ft)	Boom Angle $\Delta°$	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
200	33	82.0	205.2	58,800	60,600	58,800
	34	81.7	205.0	58,800	58,800	60,800
	36	81.1	204.7	58,500	58,500	58,800
	38	80.5	204.4	58,400	58,400	58,400
	40	79.9	204.0	58,100	58,100	58,100
	45	78.5	203.0	57,400	57,400	57,400
	50	77.0	201.9	56,900	56,900	55,900
	55	75.5	200.7	52,100	52,100	52,800
	60	74.1	199.3	45,900	45,900	50,800
	65	72.6	197.8	40,900	40,900	46,900
	70	71.0	196.1	37,000	37,000	42,300
	75	69.5	194.3	33,400	33,400	36,300
	80	68.0	192.3	30,400	30,400	35,200
	85	66.4	190.2	27,800	27,800	32,300
	90	64.9	187.9	25,500	25,500	29,800
	95	63.6	185.9	23,400	23,400	27,500
	100	62.0	183.3	21,700	21,700	25,500
	110	58.7	177.6	18,900	18,900	22,100
	120	55.2	171.0	16,400	16,400	19,300
	130	51.7	163.5	14,300	14,300	17,200
	140	47.9	155.0	12,600	12,600	15,300
	150	43.9	145.2	11,000	11,000	13,600
	160	39.6	133.9	9,700	9,700	12,100
	170	34.8	120.6	8,600	8,600	10,800
	180	29.4	104.5	7,600	7,600	9,700
	190	22.8	83.9	6,700	6,700	8,200
	200	13.5	53.0	5,500	5,500	5,500

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle $\Delta°$	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
210	35	81.8	215.0	51,900	51,900	51,900
	36	81.5	214.8	51,900	51,900	51,900
	38	81.0	214.5	51,600	51,600	51,600
	40	80.4	214.2	51,300	51,300	51,300
	45	79.0	213.2	50,800	50,800	50,600
	50	77.6	212.2	50,000	50,000	50,000
	55	76.2	211.0	49,400	49,400	49,400
	60	74.8	209.7	45,600	45,600	46,700
	65	73.4	208.3	40,800	40,800	46,800
	70	72.0	206.7	36,700	36,700	42,000
	75	70.5	204.9	33,100	33,100	38,000
	80	69.1	203.1	30,100	30,100	34,800
	85	67.6	201.1	27,500	27,500	32,000
	90	66.1	198.9	25,200	25,200	29,500
	95	64.9	197.1	23,100	23,100	27,200
	100	63.4	194.6	21,300	21,300	25,200
	110	60.3	189.2	18,800	18,800	21,600
	120	57.1	183.1	16,100	16,100	19,000
	130	53.8	176.1	14,000	14,000	16,900
	140	50.3	168.3	12,200	12,200	15,000
	150	46.7	159.4	10,700	10,700	13,300
	160	42.8	149.2	9,400	9,400	11,800
	170	38.6	137.4	8,300	8,300	10,500
	180	33.9	123.7	7,300	7,300	9,400
	190	28.6	107.1	6,400	6,400	6,400
	200	22.2	85.9	5,800	5,800	6,800
	210	13.1	54.1	4,300	4,300	4,300

Boom Length (ft)	Load Radius (ft)	Boom Angle $\Delta°$	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
220	36	81.9	224.9	45,800	45,800	45,800
	38	81.4	224.6	45,300	45,300	45,300
	40	80.9	224.3	45,100	45,100	45,100
	45	79.5	223.4	44,600	44,600	44,900
	50	78.2	222.4	44,100	44,100	44,100
	55	76.9	221.3	43,800	43,800	43,900
	60	75.5	220.1	43,800	43,000	43,000
	65	74.2	218.7	40,300	40,300	42,500
	70	72.8	217.2	36,500	36,500	41,300
	75	71.5	215.5	32,600	32,900	37,800
	80	70.1	213.8	29,900	29,900	34,700
	85	68.7	211.9	27,200	27,200	31,800
	90	67.3	209.8	24,900	24,900	29,200
	95	66.1	208.1	22,900	22,900	26,800
	100	64.7	205.8	21,100	21,100	24,800
	110	61.8	200.7	18,400	18,400	21,500
	120	58.8	194.9	15,900	15,900	18,600
	130	55.7	188.4	13,800	13,800	16,700
	140	52.5	181.1	12,000	12,000	14,700
	150	49.1	172.9	10,500	10,500	13,000
	160	45.5	163.6	9,200	9,200	11,800
	170	41.7	153.0	8,100	8,100	10,300
	180	37.6	140.9	7,100	7,100	9,100
	190	33.1	126.7	6,200	6,200	8,100
	200	28.0	109.6	5,400	5,400	7,200
	210	21.7	87.8	4,700	4,700	5,800
	220	12.8	55.2	3,400	3,400	3,400

32Z2291

WARNING ⚠

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"on outriggers" front float set

two counterweights and one bumper counterweight

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
230	37	82.0	234.9	40,800	40,800	40,800
	38	81.8	234.8	40,800	40,800	40,800
	40	81.3	234.4	40,800	40,800	40,800
	45	80.0	233.6	40,100	40,100	40,100
	50	78.7	232.6	39,800	38,500	39,800
	55	77.5	231.6	39,900	39,900	39,000
	60	76.2	230.4	38,800	38,800	38,500
	65	74.9	229.1	36,700	36,700	36,700
	70	73.6	227.6	34,600	34,600	34,900
	75	72.3	226.1	32,800	32,800	32,700
	80	71.0	224.4	29,800	29,800	31,000
	85	69.7	222.6	27,000	27,000	29,800
	90	68.3	220.6	24,700	24,700	28,000
	95	67.2	219.0	22,800	22,600	26,700
	100	65.9	216.8	20,800	20,800	24,700
	110	63.1	212.0	18,100	18,100	21,300
	120	60.3	206.5	15,800	15,600	18,800
	130	57.4	200.4	13,500	13,500	16,400
	140	54.3	193.6	11,800	11,800	14,500
	150	51.2	185.9	10,300	10,300	12,800
	160	47.9	177.4	9,000	9,000	11,300
	170	44.5	167.7	7,900	7,900	10,000
	180	40.8	156.8	6,600	6,800	8,900
	190	36.8	144.2	5,900	5,900	7,900
	200	32.4	129.6	5,100	5,100	7,000
	210	27.3	112.0	4,400	4,400	6,200
	220	21.2	89.7	3,800	3,800	4,500
	230	12.6	56.3	2,400	2,400	2,400

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
240	39	81.9	244.7	36,800	36,800	36,800
	40	81.6	244.6	36,700	36,700	36,700
	45	80.4	243.8	36,200	36,200	36,200
	50	79.2	242.8	35,900	35,900	35,800
	55	78.0	241.8	34,700	34,700	34,700
	60	76.8	240.7	33,900	33,900	33,800
	65	75.5	239.4	32,800	32,800	32,900
	70	74.3	238.0	32,800	32,900	32,800
	75	73.1	236.6	31,300	31,300	31,300
	80	71.8	235.0	29,300	29,300	29,700
	85	70.5	233.2	26,700	26,700	28,200
	90	69.5	231.8	24,300	24,300	27,200
	95	68.2	229.8	22,300	22,300	25,800
	100	66.9	227.7	20,500	20,500	24,300
	110	64.3	223.2	17,800	17,800	20,600
	120	61.6	218.0	15,200	15,200	18,400
	130	58.9	212.2	13,100	13,100	16,100
	140	56.0	205.8	11,400	11,400	14,100
	150	53.1	198.6	9,900	9,900	12,400
	160	50.1	190.7	8,500	8,500	10,900
	170	46.9	181.7	7,400	7,400	9,600
	180	43.5	171.7	6,400	6,400	8,500
	190	39.9	160.4	5,500	5,500	7,500
	200	36.0	147.5	4,700	4,700	6,600
	210	31.7	132.4	4,000	4,000	5,800
	220	26.7	114.4	3,300	3,300	5,000
	230	20.8	91.5	2,700	2,700	4,400
	240	12.3	57.4	—	—	3,000

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
250	40	82.0	254.7	33,200	33,200	33,200
	45	80.8	253.9	32,700	32,700	32,700
	50	79.6	253.0	32,200	32,200	32,200
	55	78.5	252.0	31,700	31,700	31,700
	60	77.3	250.9	30,900	30,900	30,900
	65	76.1	249.7	29,900	29,800	29,900
	70	74.9	248.4	28,700	28,700	28,700
	75	73.8	247.0	26,000	26,000	26,000
	80	72.8	245.8	24,900	24,900	24,900
	85	71.6	244.2	24,400	24,400	24,400
	90	70.4	242.4	24,000	24,000	24,000
	95	69.2	240.6	22,100	22,100	23,700
	100	67.9	238.6	20,300	20,300	23,700
	110	65.4	234.2	17,800	17,800	20,700
	120	62.9	229.3	15,100	15,100	18,200
	130	60.3	223.9	13,000	13,000	15,900
	140	57.6	217.8	11,200	11,200	13,900
	150	54.8	211.0	9,700	9,700	12,200
	160	52.0	203.6	8,400	8,400	10,700
	170	49.0	195.2	7,200	7,200	9,400
	180	45.9	186.0	6,200	6,200	8,300
	190	42.6	175.6	5,300	5,300	7,300
	200	39.0	164.0	4,500	4,500	6,400
	210	35.2	150.7	3,800	3,800	5,600
	220	31.0	135.2	3,100	3,100	4,800
	230	26.2	116.7	2,500	2,500	4,200
	240	20.3	93.3	—	—	3,600

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear

32Z2291

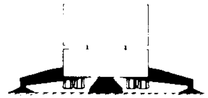
WARNING ⚠

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed, as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

RATINGS
LIFT CRANE SERVICE
69" x 69" boom
heavy duty tip (25')

two counterweights



"on outriggers"
front float set

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
50	12	82.0	56.6	300,000	300,000
	13	80.9	56.5	278,300	278,300
	14	79.7	56.3	258,500	258,500
	15	78.5	56.1	241,200	241,200
	16	77.4	55.8	226,100	226,100
	17	76.2	55.6	212,800	212,800
	18	75.0	55.3	201,000	201,000
	19	73.8	55.0	190,400	190,400
	20	72.6	54.7	180,900	180,900
	21	71.4	54.3	172,300	172,300
	22	70.2	54.0	164,500	164,500
	23	68.9	53.6	157,300	157,300
	24	67.7	53.2	150,700	150,700
	25	66.4	52.7	144,700	144,700
	26	65.2	52.2	139,100	139,100
	27	63.9	51.7	134,000	134,000
	28	62.6	51.2	129,200	129,200
	29	61.3	50.7	124,700	124,700
	30	60.0	50.1	120,800	120,600
	32	57.3	48.8	111,500	111,500
	34	54.5	47.4	101,700	101,700
	36	51.6	45.8	93,600	93,600
	38	48.5	44.1	86,500	86,500
	40	45.4	42.2	80,200	80,400
	45	36.4	36.2	67,700	68,100
	50	24.9	27.5	57,800	57,800
60	14	81.4	66.4	258,500	258,500
	15	80.5	66.3	241,200	241,200
	16	79.5	66.1	226,100	226,100
	17	78.5	65.9	212,800	212,800
	18	77.6	65.6	201,000	201,000
	19	76.6	65.4	190,400	190,400
	20	75.6	65.1	180,900	180,900
	21	74.6	64.8	172,300	172,300
	22	73.6	64.5	164,500	164,500
	23	72.6	64.2	157,300	157,300
	24	71.6	63.9	150,700	150,700
	25	70.6	63.5	144,700	144,700
	26	69.5	63.1	139,100	139,100
	27	68.5	62.7	134,000	134,000
	28	67.5	62.3	129,200	129,200
	29	66.4	61.9	124,700	124,700
	30	65.4	61.4	120,600	120,600
	32	63.3	60.4	111,600	111,600
	34	61.1	59.3	101,900	101,900
	36	58.9	58.1	93,700	93,700
	38	56.6	56.8	86,600	86,600
	40	54.2	55.4	80,300	80,400
	45	48.1	51.2	67,900	68,200
	50	41.2	46.0	58,500	59,000
	55	33.1	39.2	51,300	51,800
	60	22.6	29.5	45,500	46,000

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
70	15	81.8	76.4	198,100	198,100
	16	81.0	76.2	195,700	195,700
	17	80.2	76.1	191,800	191,800
	18	79.4	75.9	189,600	189,600
	19	78.5	75.7	187,400	187,400
	20	77.7	75.4	180,900	180,900
	21	76.8	75.2	172,300	172,300
	22	76.0	74.9	164,500	164,500
	23	75.1	74.7	157,300	157,300
	24	74.3	74.4	150,700	150,700
	25	73.4	74.1	144,700	144,700
	26	72.6	73.8	139,100	139,100
	27	71.7	73.4	134,000	134,000
	28	70.9	73.1	129,200	129,200
	29	70.0	72.7	124,700	124,700
	30	69.1	72.3	120,600	120,600
	32	67.3	71.5	111,700	111,700
	34	65.5	70.6	102,000	102,000
	36	63.7	69.6	93,800	93,800
	38	61.9	68.5	86,700	86,700
	40	60.0	67.4	80,400	80,500
	45	55.1	64.1	68,000	68,300
	50	49.9	60.2	58,600	59,100
	55	44.2	55.4	51,400	52,000
	60	37.9	49.6	45,800	46,200
	65	30.5	42.0	40,800	41,500
	70	20.9	31.3	37,000	37,500
80	17	81.4	86.2	180,500	180,500
	18	80.7	86.1	178,400	178,400
	19	80.0	85.9	176,400	176,400
	20	79.2	85.7	174,500	174,500
	21	78.5	85.5	172,300	172,300
	22	77.8	85.2	164,500	164,500
	23	77.0	85.0	157,300	157,300
	24	76.3	84.8	150,700	150,700
	25	75.6	84.5	144,700	144,700
	26	74.8	84.2	139,100	139,100
	27	74.1	83.9	134,000	134,000
	28	73.3	83.6	129,200	129,200
	29	72.6	83.3	124,700	124,700
	30	71.8	83.0	120,600	120,600
	32	70.3	82.3	111,700	111,700
	34	68.8	81.5	101,900	101,900
	36	67.2	80.7	93,700	93,700
	38	65.7	79.8	86,600	86,600
	40	64.1	78.8	80,300	80,400
	45	60.0	76.1	67,900	68,200
	50	55.7	72.8	58,500	58,900
	55	51.2	69.1	51,300	51,800
	60	46.4	64.6	45,500	46,000
	65	41.2	59.3	40,800	41,300
	70	35.4	52.8	36,900	37,500
	75	28.5	44.6	33,500	34,100
	80	19.5	33.1	30,700	31,200
90	18	81.7	96.2	192,300	192,300
	19	81.1	96.0	190,400	190,400
	20	80.5	95.9	180,900	180,900
	21	79.8	95.7	172,300	172,300
	22	79.2	95.5	164,500	164,500
	23	78.5	95.3	157,300	157,300
	24	77.9	95.0	150,700	150,700
	25	77.2	94.8	144,700	144,700
	26	76.5	94.6	139,100	139,100
	27	75.9	94.3	134,000	134,000
	28	75.2	94.0	129,200	129,200
	29	74.6	93.8	124,700	124,700
	30	73.9	93.5	120,600	120,600
	32	72.6	92.8	111,600	111,600
	34	71.2	92.2	101,800	101,800
	36	69.9	91.4	93,600	93,600
	38	68.5	90.7	86,500	86,500
	40	67.1	89.8	80,300	80,300
	45	63.6	87.5	67,600	68,100
	50	60.0	84.7	58,400	58,900
	55	56.2	81.5	51,300	51,800
	60	52.3	77.9	45,500	46,000
	65	48.1	73.6	40,700	41,300
	70	43.6	68.7	36,900	37,400
	75	38.7	62.8	33,500	34,100
	80	33.3	55.8	30,700	31,200
	85	26.8	47.0	28,200	28,700
	90	20.3	37.6	26,000	26,500
100	19	82.0	106.1	153,700	153,700
	20	81.4	106.0	152,200	152,200
	21	80.8	105.8	150,800	150,800
	22	80.3	105.7	149,400	149,400
	23	79.7	105.5	148,100	148,100
	24	79.1	105.3	146,300	146,300
	25	78.5	105.1	144,500	144,500
	26	77.9	104.8	139,100	139,100
	27	77.3	104.6	134,000	134,000
	28	76.7	104.4	129,200	129,200
	29	76.1	104.1	124,700	124,700
	30	75.6	103.9	120,600	120,600
	32	74.4	103.3	111,500	111,500
	34	73.2	102.7	101,700	101,700
	36	72.0	102.1	93,500	93,500
	38	70.8	101.4	86,400	86,400
	40	69.5	100.6	80,200	80,200
	45	66.4	98.5	67,700	68,000
	50	63.3	96.1	58,300	58,700
	55	60.0	93.4	51,200	51,700
	60	56.6	90.2	45,400	45,900
	65	53.1	86.6	40,600	41,200
	70	49.4	82.6	36,800	37,300
	75	45.5	77.9	33,500	34,000
	80	41.3	72.5	30,600	31,100
	85	36.7	66.2	28,100	28,600
	90	32.6	60.3	25,900	26,500
	95	26.7	51.4	24,000	24,500
	100	19.2	39.3	22,300	22,800

32Z2291

DEDUCT FROM RATED BOOM LOADS WHEN LIFTING OVER BOOM POINT WITH JIB ATTACHED

JIB LENGTH	20 FT	30 FT	40 FT	50 FT	60 FT	70 FT	80 FT
EFFECTIVE JIB WT — LBS	1500	1500	2000	2500	3000	3300	3600
EFFECTIVE JIB HOOK WT	1600	1600	1600	1600	1600	1600	1600
ALSO DEDUCT TWICE THE WEIGHT OF ANY LOAD SUSPENDED FROM JIB HOOK							

WARNING ⚠

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Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

"on outriggers" front float set

two counterweights

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∠°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
110	**21**	81.7	116.0	**162,500**	**162,500**
	22	81.1	115.8	**161,200**	**161,200**
	23	80.6	115.6	**157,300**	**157,300**
	24	80.1	115.5	**150,700**	**150,700**
	25	79.6	115.3	**144,700**	**144,700**
	26	79.0	115.1	**139,100**	**139,100**
	27	78.5	114.9	**134,000**	**134,000**
	28	78.0	114.6	**129,200**	**129,200**
	29	77.4	114.4	**124,700**	**124,700**
	30	76.9	114.2	**120,600**	**120,600**
	32	75.8	113.7	**111,300**	**111,300**
	34	74.7	113.1	**101,500**	**101,500**
	36	73.7	112.5	**93,300**	**93,300**
	38	72.6	111.9	**86,200**	**86,200**
	40	71.5	111.3	**80,000**	**80,000**
	45	68.7	109.4	**67,500**	**67,800**
	50	65.9	107.3	**58,100**	**58,500**
	55	63.0	104.8	**50,900**	**51,400**
	60	60.0	102.0	**45,100**	**45,600**
	65	56.9	98.9	**40,400**	**40,900**
	70	53.7	95.4	**36,900**	**37,100**
	75	50.4	91.4	**33,200**	**33,700**
	80	46.9	87.0	**30,400**	**30,900**
	85	43.2	81.9	**27,900**	**28,400**
	90	40.1	77.3	**25,700**	**26,200**
	95	35.8	70.8	**23,800**	**24,300**
	100	31.0	63.1	**22,100**	**22,800**
	110	18.3	40.9	**19,200**	**19,600**
120	**22**	81.9	125.9	**127,600**	**127,600**
	23	81.4	125.8	**126,100**	**126,100**
	24	80.9	125.6	**124,900**	**124,900**
	25	80.4	125.4	**123,500**	**123,500**
	26	80.0	125.3	**122,200**	**122,200**
	27	79.5	125.1	**120,900**	**120,900**
	28	79.0	124.9	**119,600**	**119,600**
	29	78.5	124.7	**118,200**	**118,200**
	30	78.0	124.4	**117,100**	**117,100**
	32	77.0	124.0	**111,200**	**111,200**
	34	76.0	123.5	**101,300**	**101,300**
	36	75.1	123.0	**93,200**	**93,200**
	38	74.1	122.4	**86,000**	**86,000**
	40	73.1	121.8	**79,800**	**79,800**
	45	70.5	120.1	**67,300**	**67,800**
	50	68.0	118.2	**57,900**	**58,300**
	55	65.4	116.0	**50,800**	**51,300**
	60	62.7	113.5	**44,900**	**45,500**
	65	60.0	110.7	**40,200**	**40,700**
	70	57.2	107.6	**36,400**	**36,900**
	75	54.3	104.1	**33,100**	**33,800**
	80	51.3	100.3	**30,200**	**30,700**
	85	48.1	96.0	**27,700**	**28,200**
	90	45.5	92.2	**25,600**	**26,000**
	95	42.0	86.9	**23,900**	**24,100**
	100	38.3	80.9	**21,800**	**22,400**
	110	29.6	65.8	**19,100**	**19,500**
	120	17.5	42.5	**16,600**	**17,200**
130	**24**	81.6	135.7	**116,200**	**116,200**
	25	81.2	135.6	**115,100**	**115,100**
	26	80.7	135.4	**113,900**	**113,900**
	27	80.3	135.2	**112,700**	**112,700**
	28	79.8	135.1	**111,600**	**111,600**
	29	79.4	134.9	**108,800**	**108,800**
	30	78.9	134.7	**107,700**	**107,700**
	32	78.0	134.2	**105,600**	**105,600**
	34	77.1	133.8	**101,100**	**101,100**
	36	76.2	133.3	**93,000**	**93,000**
	38	75.3	132.8	**85,600**	**85,600**
	40	74.4	132.2	**79,600**	**79,600**
	45	72.1	130.7	**67,100**	**67,400**
	50	69.8	128.9	**57,600**	**58,000**
	55	67.4	126.9	**50,500**	**51,000**
	60	65.0	124.7	**44,700**	**45,200**
	65	62.5	122.1	**39,900**	**40,400**
	70	60.0	119.4	**36,100**	**36,700**
	75	57.4	116.3	**32,600**	**33,300**
	80	54.7	112.9	**29,900**	**30,400**
	85	52.0	109.1	**27,400**	**27,900**
	90	49.7	105.8	**25,300**	**25,800**
	95	46.7	101.3	**23,400**	**23,800**
	100	43.6	96.2	**21,700**	**22,100**
	110	36.7	84.2	**18,900**	**19,200**
	120	28.4	68.3	**16,500**	**16,900**
	130	16.8	43.9	**14,500**	**14,900**
140	**25**	81.8	145.7	**119,600**	**119,600**
	26	81.4	145.5	**118,500**	**118,500**
	27	81.0	145.4	**117,500**	**117,500**
	28	80.6	145.2	**116,400**	**116,400**
	29	80.2	145.0	**115,300**	**115,300**
	30	79.7	144.9	**114,300**	**114,300**
	32	78.9	144.5	**110,500**	**110,500**
	34	78.1	144.0	**101,000**	**101,000**
	36	77.2	143.6	**92,900**	**92,900**
	38	76.4	143.1	**85,700**	**85,700**
	40	75.5	142.6	**79,500**	**79,500**
	45	73.4	141.2	**67,000**	**67,300**
	50	71.3	139.5	**57,500**	**57,900**
	55	69.1	137.7	**50,400**	**50,900**
	60	66.9	135.6	**44,600**	**45,100**
	65	64.6	133.4	**39,600**	**40,300**
	70	62.3	130.8	**36,100**	**36,600**
	75	60.0	128.0	**32,700**	**33,200**
	80	57.6	124.9	**29,800**	**30,400**
	85	55.1	121.6	**27,400**	**27,900**
	90	53.1	118.6	**25,200**	**25,700**
	95	50.5	114.7	**23,300**	**23,600**
	100	47.8	110.3	**21,600**	**22,100**
	110	41.9	100.1	**18,900**	**19,100**
	120	35.3	87.4	**16,500**	**16,900**
	130	27.4	70.8	**14,500**	**14,900**
	140	16.2	45.4	**12,800**	**13,200**
150	**26**	82.0	155.7	**96,900**	**96,900**
	27	81.6	155.5	**96,100**	**96,100**
	28	81.2	155.3	**95,200**	**95,200**
	29	80.8	155.2	**94,400**	**94,400**
	30	80.4	155.0	**93,600**	**93,600**
	32	79.7	154.7	**92,000**	**92,000**
	34	78.9	154.3	**90,400**	**90,400**
	36	78.1	153.8	**88,800**	**88,800**
	38	77.3	153.4	**85,500**	**85,500**
	40	76.5	152.9	**79,300**	**79,300**
	45	74.6	151.6	**66,900**	**67,100**
	50	72.6	150.1	**57,300**	**57,700**
	55	70.5	148.4	**50,200**	**50,700**
	60	68.5	146.5	**44,400**	**44,800**
	65	66.4	144.4	**39,600**	**40,100**
	70	64.3	142.0	**35,900**	**36,400**
	75	62.2	139.5	**32,500**	**33,000**
	80	60.0	136.7	**29,600**	**30,200**
	85	58.2	134.3	**27,200**	**27,700**
	90	55.9	131.0	**25,000**	**25,500**
	95	53.6	127.4	**23,100**	**23,600**
	100	51.2	123.5	**21,400**	**21,800**
	110	46.0	114.6	**18,700**	**18,900**
	120	40.4	103.8	**16,300**	**16,700**
	130	34.1	90.5	**14,300**	**14,700**
	140	26.4	73.2	**12,700**	**13,000**
	150	15.6	46.7	**11,200**	**11,600**
160	**28**	81.8	165.5	**97,600**	**97,600**
	29	81.4	165.3	**96,900**	**96,900**
	30	81.0	165.2	**96,100**	**96,100**
	32	80.3	164.8	**94,600**	**94,600**
	34	79.6	164.4	**93,100**	**93,100**
	36	78.9	164.1	**91,700**	**91,700**
	38	78.1	163.6	**85,300**	**85,300**
	40	77.4	163.2	**79,000**	**79,000**
	45	75.5	162.0	**66,600**	**66,800**
	50	73.7	160.5	**57,100**	**57,500**
	55	71.8	159.0	**50,000**	**50,400**
	60	69.9	157.2	**44,100**	**44,600**
	65	68.0	155.2	**39,300**	**39,800**
	70	66.0	153.1	**35,600**	**36,100**
	75	64.1	150.7	**32,200**	**32,700**
	80	62.0	148.1	**29,400**	**29,900**
	85	60.4	145.9	**26,900**	**27,400**
	90	58.3	142.9	**24,700**	**25,200**
	95	56.2	139.7	**22,600**	**23,300**
	100	54.0	136.1	**21,100**	**21,500**
	110	49.4	128.2	**18,400**	**18,600**
	120	44.5	118.7	**16,000**	**16,400**
	130	39.1	107.4	**14,000**	**14,400**
	140	33.0	93.5	**12,400**	**12,700**
	150	25.6	75.4	**10,900**	**11,300**
	160	15.1	48.0	**9,700**	**10,000**

32Z2291

WARNING ⚠

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Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

"on outriggers" front float set

two counterweights

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∆°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
170	29	81.9	175.4	79,800	79,800
	30	81.6	175.3	79,200	79,200
	32	80.9	175.0	78,000	78,000
	34	80.2	174.6	78,800	79,800
	36	79.5	174.2	75,800	75,800
	38	78.8	173.9	74,800	74,800
	40	78.1	173.4	73,800	73,800
	45	76.4	172.3	66,300	66,500
	50	74.7	171.0	57,100	57,200
	55	72.9	169.5	49,700	50,200
	60	71.1	167.8	43,900	44,400
	65	69.3	166.0	39,100	39,600
	70	67.5	164.0	35,400	35,900
	75	65.7	161.8	32,000	32,500
	80	63.8	159.4	29,100	29,600
	85	62.3	157.3	26,600	27,100
	90	60.4	154.6	24,500	25,000
	95	58.4	151.6	22,600	23,000
	100	56.4	148.4	20,900	21,300
	110	52.3	141.1	18,200	18,600
	120	47.8	132.6	15,800	16,200
	130	43.1	122.7	13,800	14,200
	140	37.9	110.9	12,200	12,500
	150	31.9	96.4	10,700	11,100
	160	24.8	77.6	9,500	9,600
	170	14.6	49.3	8,400	8,700
180	30	82.0	185.4	73,500	73,500
	32	81.4	185.1	72,500	72,500
	34	80.8	184.8	71,500	71,500
	36	80.1	184.4	70,600	70,600
	38	79.5	184.0	69,700	66,700
	40	78.8	183.7	68,700	68,700
	45	77.2	182.6	66,100	66,400
	50	75.5	181.3	56,900	57,000
	55	73.9	179.9	49,500	50,000
	60	72.2	178.4	43,700	44,200
	65	70.5	176.7	38,900	39,400
	70	68.8	174.8	35,200	35,700
	75	67.1	172.7	31,800	32,300
	80	65.4	170.5	28,900	29,400
	85	64.0	168.6	26,400	26,900
	90	62.2	166.0	24,300	24,700
	95	60.4	163.2	22,300	22,800
	100	58.5	160.3	20,600	21,100
	110	54.7	153.6	18,000	18,400
	120	50.7	145.9	15,600	16,000
	130	46.4	137.0	13,600	14,000
	140	41.8	126.6	12,000	12,300
	150	36.8	114.2	10,500	10,900
	160	31.0	99.2	9,300	9,600
	170	24.1	79.8	8,200	8,500
	180	14.2	50.6	7,300	7,500
190	32	81.9	195.2	67,900	67,900
	34	81.2	194.9	67,500	67,500
	36	80.6	194.6	67,100	67,100
	38	80.0	194.2	66,800	66,800
	40	79.4	193.8	66,500	66,600
	45	77.9	192.8	65,600	65,600
	50	76.3	191.6	56,700	57,000
	55	74.8	190.3	49,300	49,700
	60	73.2	188.9	43,400	43,900
	65	71.6	187.3	38,600	39,100
	70	70.0	185.5	34,900	35,400
	75	68.4	183.6	31,500	32,000
	80	66.8	181.5	28,600	29,100
	85	65.4	179.7	26,100	26,600
	90	63.8	177.3	24,000	24,400
	95	62.1	174.7	22,000	22,500
	100	60.3	171.9	20,300	20,800
	110	56.8	165.7	17,700	18,100
	120	53.1	158.6	15,300	15,700
	130	49.2	150.5	13,300	13,700
	140	45.1	141.2	11,700	12,000
	150	40.6	130.3	10,200	10,600
	160	35.7	117.5	9,000	9,300
	170	30.2	101.9	7,900	8,200
	180	23.4	81.9	7,000	7,200
	190	13.8	51.8	6,100	6,400
200	33	82.0	205.2	58,900	58,800
	34	81.7	205.0	58,800	58,800
	36	81.1	204.7	58,500	58,500
	38	80.5	204.4	58,400	58,400
	40	79.9	204.0	58,100	58,100
	45	78.5	203.0	57,400	57,400
	50	77.0	201.9	56,800	55,800
	55	75.5	200.7	49,100	49,500
	60	74.1	199.3	43,200	43,700
	65	72.6	197.8	38,400	38,900
	70	71.0	196.1	34,700	35,200
	75	69.5	194.3	31,400	31,900
	90	68.0	192.3	28,500	29,000
	85	66.7	190.6	26,000	26,500
	90	65.2	188.4	23,800	24,300
	95	63.6	185.9	21,900	22,300
	100	62.0	183.3	20,200	20,600
	110	58.7	177.6	17,500	18,000
	120	55.2	171.0	15,200	15,600
	130	51.7	163.5	13,200	13,600
	140	47.9	155.0	11,500	11,900
	150	43.9	145.2	10,100	10,400
	160	39.6	133.9	8,900	9,200
	170	34.8	120.6	7,600	8,100
	180	29.4	104.5	6,600	7,100
	190	22.8	83.9	6,000	6,300
	200	13.5	53.0	5,200	5,500

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∆°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
210	35	81.8	215.0	51,800	51,900
	36	81.5	214.8	51,800	51,800
	38	81.0	214.5	51,500	51,600
	40	80.4	214.2	51,300	51,300
	45	79.0	213.2	50,600	50,600
	50	77.6	212.2	50,000	50,000
	55	76.2	211.0	48,800	49,300
	60	74.8	209.7	42,900	43,400
	65	73.4	208.3	38,100	38,600
	70	72.0	206.7	34,500	35,000
	75	70.5	204.9	31,100	31,600
	80	69.1	203.1	28,200	28,700
	85	67.9	201.5	25,700	26,200
	90	66.4	199.4	23,500	24,000
	95	64.9	197.1	21,600	22,000
	100	63.4	194.6	19,900	20,300
	110	60.3	189.2	17,200	17,700
	120	57.1	183.1	14,900	15,300
	130	53.8	176.1	12,900	13,300
	140	50.3	168.3	11,200	11,600
	150	46.7	159.4	9,800	10,100
	160	42.8	149.2	8,500	8,800
	170	38.6	137.4	7,500	7,800
	180	33.9	123.7	5,500	6,800
	190	28.6	107.1	5,700	5,600
	200	22.2	85.9	4,900	5,200
	210	13.1	54.1	4,200	4,300
220	36	81.9	224.9	45,600	45,600
	38	81.4	224.6	45,300	45,300
	40	80.9	224.3	45,100	45,100
	45	79.5	223.4	44,600	44,600
	50	78.2	222.4	44,100	44,100
	55	76.9	221.3	43,600	43,600
	60	75.5	220.1	42,700	43,000
	65	74.2	218.7	37,900	38,400
	70	72.8	217.2	34,200	34,700
	75	71.5	215.5	30,800	31,300
	60	70.1	213.8	27,900	28,400
	85	69.0	212.3	25,400	25,900
	90	67.6	210.2	23,300	23,700
	95	66.1	208.1	21,300	21,600
	100	64.7	205.8	19,600	20,100
	110	61.8	200.7	17,000	17,400
	120	58.8	194.9	14,600	15,000
	130	55.7	188.4	12,700	13,000
	140	52.5	181.1	11,000	11,300
	150	49.1	172.9	9,600	9,900
	160	45.5	163.6	8,300	8,600
	170	41.7	153.0	7,200	7,500
	190	37.6	140.9	6,300	6,600
	190	33.1	126.7	5,400	5,700
	200	28.0	109.6	4,700	4,900
	210	21.7	87.8	4,000	4,200
	220	12.8	55.2	3,400	3,400
230	37	82.0	234.9	40,800	40,900
	38	81.8	234.8	40,800	40,800
	40	81.3	234.4	40,600	40,600
	45	80.0	233.6	40,100	40,100
	50	78.7	232.6	39,600	39,600
	55	77.5	231.6	39,000	39,000
	60	76.2	230.4	38,500	38,600
	65	74.9	229.1	36,700	36,700
	70	73.6	227.6	34,000	34,400
	75	72.3	226.1	30,600	31,100
	80	71.0	224.4	27,700	28,200
	85	69.9	223.0	25,200	25,700
	90	68.6	221.0	23,000	23,500
	95	67.2	219.0	21,100	21,500
	100	65.9	216.8	19,300	19,800
	110	63.1	212.0	16,800	17,200
	120	60.3	206.5	14,400	14,800
	130	57.4	200.4	12,400	12,800
	140	54.3	193.6	10,700	11,100
	150	51.2	185.9	9,300	9,600
	160	47.9	177.4	8,100	8,400
	170	44.5	167.7	7,000	7,300
	180	40.8	156.8	6,000	6,300
	190	36.8	144.2	5,200	5,500
	200	32.4	129.6	4,400	4,700
	210	27.3	112.0	3,700	4,000
	220	21.2	89.7	3,100	3,400
	230	12.6	56.3	2,400	2,400

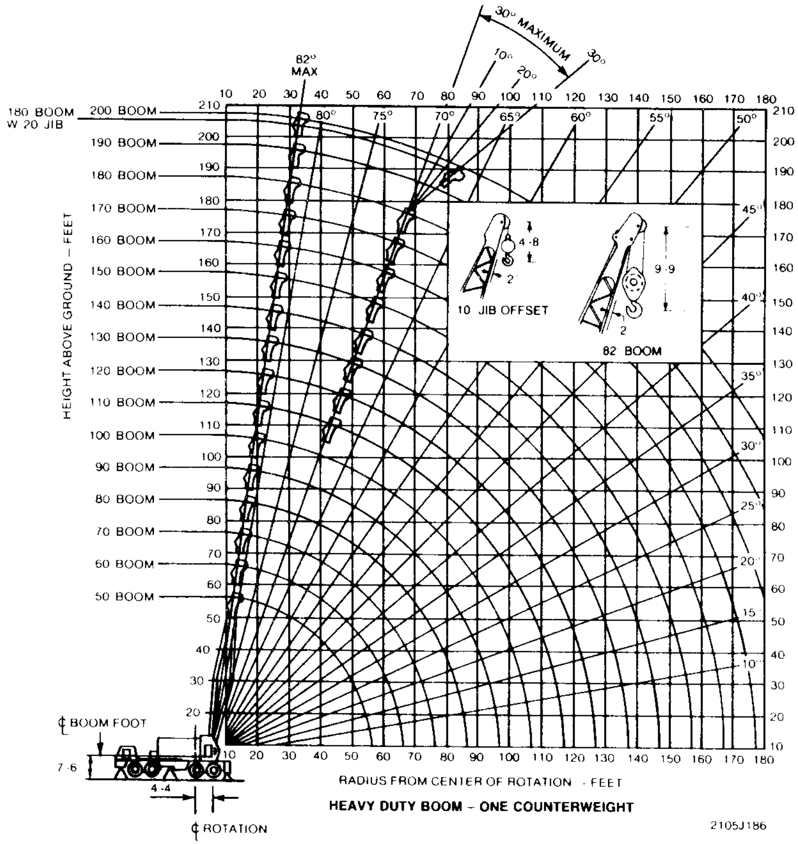
32Z2291

WARNING ⚠

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed, as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

working ranges

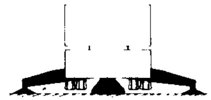


HEAVY DUTY BOOM – ONE COUNTERWEIGHT

2105J186

RATINGS
LIFT CRANE SERVICE
69" x 69" boom
heavy duty tip (25')

one counterweight



**"on outriggers"
front float set**

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∠°	Boom Point Elev (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear	Boom Length (ft)	Load Radius (ft)	Boom Angle ∆°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
50	**12**	82.0	56.6	**300,000**	**300,000**	60	**14**	81.4	66.4	**258,000**	**258,500**
	13	80.9	56.5	**272,600**	**278,300**		**15**	80.5	66.3	**241,200**	**241,200**
	14	79.7	56.3	**258,500**	**258,500**		**16**	79.5	66.1	**226,100**	**226,100**
	15	78.5	56.1	**241,200**	**241,200**		**17**	78.5	65.9	**212,800**	**212,800**
	16	77.4	55.8	**226,100**	**226,100**		**18**	77.6	65.6	**201,000**	**201,000**
	17	76.2	55.6	**212,800**	**212,800**		**19**	76.6	65.4	**190,400**	**190,400**
	18	75.0	55.3	**201,000**	**201,000**		**20**	75.6	65.1	**172,900**	**172,900**
	19	73.8	55.0	**190,400**	**190,400**		**21**	74.6	64.8	**156,800**	**156,800**
	20	72.6	54.7	**172,400**	**172,400**		**22**	73.6	64.5	**143,400**	**143,400**
	21	71.4	54.3	**156,400**	**156,400**		**23**	72.6	64.2	**132,000**	**132,000**
	22	70.2	54.0	**143,000**	**143,000**		**24**	71.6	63.9	**122,200**	**122,200**
	23	68.9	53.6	**131,700**	**131,700**		**25**	70.6	63.5	**113,800**	**113,800**
	24	67.7	53.2	**121,900**	**121,900**		**26**	69.5	63.1	**105,800**	**106,400**
	25	66.4	52.7	**113,200**	**113,500**		**27**	68.5	62.7	**99,000**	**99,800**
	26	65.2	52.2	**105,500**	**106,100**		**28**	67.5	62.3	**93,000**	**94,000**
	27	63.9	51.7	**98,700**	**99,800**		**28**	66.4	61.9	**87,600**	**88,800**
	28	62.6	51.2	**92,700**	**93,800**		**30**	65.4	61.4	**82,800**	**84,100**
	29	61.3	50.7	**87,400**	**88,600**		**32**	63.3	60.4	**74,600**	**76,000**
	30	60.0	50.1	**82,800**	**83,900**		**34**	61.1	59.3	**67,700**	**69,200**
	32	57.3	48.8	**74,400**	**75,900**		**36**	58.9	58.1	**61,900**	**63,500**
	34	54.5	47.4	**67,600**	**69,100**		**38**	56.6	56.8	**57,100**	**56,600**
	36	51.6	45.8	**61,800**	**63,400**		**40**	54.2	55.4	**52,800**	**54,400**
	38	48.5	44.1	**58,900**	**58,400**		**45**	48.1	51.2	**44,300**	**45,600**
	40	45.4	42.2	**52,700**	**54,200**		**50**	41.2	46.0	**38,000**	**39,400**
	45	36.4	36.2	**44,100**	**45,700**		**55**	33.1	39.2	**33,000**	**34,400**
	50	24.9	27.5	**37,800**	**39,200**		**60**	22.6	29.5	**29,000**	**30,300**

32Z2291

DEDUCT FROM RATED BOOM LOADS WHEN LIFTING OVER BOOM POINT WITH JIB ATTACHED

JIB LENGTH	20 FT.	30 FT.	40 FT.	50 FT.	60 FT.	70 FT.	80 FT.
EFFECTIVE JIB WT. — LBS.	1500	1500	2000	2500	3000	3300	3600
EFFECTIVE JIB HOOK WT.	1600	1600	1600	1600	1600	1600	1600
ALSO DEDUCT TWICE THE WEIGHT OF ANY LOAD SUSPENDED FROM JIB HOOK							

WARNING ⚠

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

"on outriggers" front float set

one counterweight

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∆°	Boom Point Elev (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
70	15	81.8	76.4	198,100	198,100
	16	81.0	76.2	195,700	195,700
	17	80.2	76.1	191,800	191,800
	18	79.4	75.9	189,600	189,600
	19	78.5	75.7	187,400	187,400
	20	77.7	75.4	173,200	173,200
	21	76.8	75.2	157,100	157,100
	22	76.0	74.9	143,600	143,600
	23	75.1	74.7	132,300	132,300
	24	74.3	74.4	122,400	122,400
	25	73.4	74.1	113,800	114,000
	26	72.6	73.8	106,000	106,600
	27	71.7	73.4	99,200	100,000
	28	70.9	73.1	93,200	94,200
	29	70.0	72.7	87,900	89,000
	30	69.1	72.3	83,000	84,200
	32	67.3	71.5	74,800	76,200
	34	65.5	70.6	67,800	69,400
	36	63.7	69.6	62,100	63,600
	38	61.9	68.5	57,200	58,700
	40	60.0	67.4	53,000	54,500
	45	55.1	64.1	44,400	45,900
	50	49.9	60.2	38,200	39,500
	55	44.2	55.4	33,200	34,500
	60	37.9	49.6	29,200	30,500
	65	32.1	43.7	26,000	27,200
	70	23.1	33.9	23,300	24,400
80	17	81.4	86.2	180,500	180,500
	18	80.7	86.1	178,400	178,400
	19	80.0	85.9	176,400	176,400
	20	79.2	85.7	173,300	173,300
	21	78.5	85.5	157,200	157,200
	22	77.8	85.2	143,700	143,700
	23	77.0	85.0	132,400	132,400
	24	76.3	84.8	122,500	122,500
	25	75.6	84.5	113,900	114,100
	26	74.8	84.2	106,100	106,600
	27	74.1	83.9	99,200	100,000
	28	73.3	83.6	93,300	94,200
	29	72.6	83.3	87,800	88,900
	30	71.8	83.0	83,000	84,200
	32	70.3	82.3	74,800	76,100
	34	68.8	81.5	67,900	69,300
	36	67.2	80.7	62,000	63,500
	38	65.7	79.8	57,200	58,800
	40	64.1	78.8	52,900	54,400
	45	60.0	76.1	44,300	45,800
	50	55.7	72.8	38,000	39,300
	55	51.2	69.1	33,100	34,400
	60	46.4	64.6	28,100	30,400
	65	42.3	60.4	25,900	27,100
	70	36.6	54.2	23,200	24,300
	75	30.0	46.4	20,900	22,000
	80	21.6	35.8	19,000	19,900
90	18	81.7	96.2	192,300	192,300
	19	81.1	96.0	190,400	190,400
	20	80.5	95.9	173,500	173,500
	21	79.8	95.7	157,300	157,300
	22	79.2	95.5	143,800	143,800
	23	78.5	95.3	132,400	132,400
	24	77.9	95.0	122,500	122,500
	25	77.2	94.8	114,000	114,100
	26	76.5	94.6	106,100	106,600
	27	75.9	94.3	99,200	100,000
	28	75.2	94.0	93,300	94,200
	29	74.6	93.8	87,900	88,900
	30	73.9	93.5	83,000	84,200
	32	72.6	92.8	74,800	76,100
	34	71.2	92.2	67,900	69,300
	36	69.9	91.4	62,000	63,500
	38	68.5	90.7	57,200	58,500
	40	67.1	89.8	52,900	54,400
	45	63.6	87.5	44,300	45,800
	50	60.0	84.7	38,000	39,300
	55	56.2	81.5	33,100	34,400
	60	52.3	77.9	29,100	30,400
	65	49.0	74.5	25,900	27,100
	70	44.5	69.7	23,200	24,300
	75	39.8	64.1	20,900	22,000
	80	34.4	57.4	19,000	20,000
	85	28.2	49.0	17,300	18,300
	90	20.3	37.6	15,800	16,700
100	19	82.0	106.1	153,700	153,700
	20	81.4	106.0	152,200	152,200
	21	80.8	105.8	150,900	150,900
	22	80.3	105.7	143,700	143,700
	23	79.7	105.5	132,400	132,400
	24	79.1	105.3	122,500	122,500
	25	78.5	105.1	113,800	114,000
	26	77.9	104.8	106,100	106,500
	27	77.3	104.6	99,200	99,900
	28	76.7	104.4	93,200	94,200
	29	76.1	104.1	87,900	88,900
	30	75.6	103.9	82,900	84,100
	32	74.4	103.3	74,700	76,100
	34	73.2	102.7	67,800	69,200
	36	72.0	102.1	61,900	63,400
	38	70.8	101.4	57,100	58,400
	40	69.5	100.6	52,800	54,300
	45	66.4	98.5	44,200	45,700
	50	63.3	96.1	38,000	39,200
	55	60.0	93.4	33,000	34,300
	60	56.6	90.2	29,000	30,300
	65	53.8	87.4	25,800	27,000
	70	50.1	83.4	23,100	24,200
	75	46.3	78.9	20,800	21,900
	80	42.1	73.6	19,000	19,900
	85	37.6	67.6	17,300	18,200
	90	32.6	60.3	15,800	16,700
	95	26.7	51.4	14,500	15,300
	100	19.2	39.3	13,300	14,100

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∆°	Boom Point Elev (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
110	21	81.7	116.0	157,200	157,200
	22	81.1	115.8	143,800	143,800
	23	80.6	115.6	132,400	132,400
	24	80.1	115.5	122,400	122,400
	25	79.6	115.3	113,900	114,000
	26	79.0	115.1	106,000	106,500
	27	78.5	114.9	99,100	99,800
	28	78.0	114.6	93,200	94,100
	29	77.4	114.4	87,700	88,800
	30	76.9	114.2	82,800	84,000
	32	75.8	113.7	74,800	75,900
	34	74.7	113.1	67,800	69,100
	36	73.7	112.5	61,800	63,200
	38	72.6	111.9	56,900	58,300
	40	71.5	111.3	52,800	54,100
	45	68.7	109.4	44,000	45,500
	50	65.9	107.3	37,800	39,000
	55	63.0	104.8	32,800	34,100
	60	60.0	102.0	28,800	30,000
	65	57.5	99.6	25,600	26,700
	70	54.4	96.1	22,900	24,000
	75	51.1	92.3	20,800	21,800
	80	47.6	87.9	18,800	19,800
	85	44.0	83.0	17,100	18,000
	90	40.1	77.3	15,800	16,500
	95	35.8	70.8	14,300	15,100
	100	31.0	63.1	13,100	13,900
	110	18.3	40.9	11,100	11,800
120	22	81.9	125.9	127,500	127,500
	23	81.4	125.8	126,200	126,200
	24	80.9	125.6	122,300	122,300
	25	80.4	125.4	113,900	113,900
	26	80.0	125.3	105,900	106,300
	27	79.5	125.1	99,000	99,700
	28	79.0	124.9	93,100	93,900
	29	78.5	124.7	87,600	88,600
	30	78.0	124.4	82,700	83,900
	32	77.0	124.0	74,500	75,800
	34	76.0	123.5	67,500	68,900
	36	75.1	123.0	61,600	63,100
	38	74.1	122.4	56,900	58,100
	40	73.1	121.8	52,500	54,000
	45	70.5	120.1	43,900	45,300
	50	68.0	118.2	37,600	38,800
	55	65.4	116.0	32,600	33,900
	60	62.7	113.5	28,700	29,800
	65	60.5	111.3	25,400	26,600
	70	57.8	108.2	22,700	23,800
	75	54.9	104.9	20,400	21,500
	80	51.9	101.1	18,600	19,500
	85	48.8	96.9	16,900	17,900
	90	45.5	92.2	15,500	16,300
	95	42.0	86.9	14,100	15,000
	100	38.3	80.9	13,000	13,600
	110	29.6	65.8	11,000	11,700
	120	17.5	42.5	9,300	10,000
130	24	81.6	135.7	116,300	116,300
	25	81.2	135.6	113,700	113,800
	26	80.7	135.4	105,800	106,200
	27	80.3	135.2	98,900	99,500
	28	79.8	135.1	93,000	93,800
	29	79.4	134.9	87,500	88,500
	30	78.9	134.7	82,600	83,700
	32	78.0	134.2	74,400	75,600
	34	77.1	133.8	67,400	68,700
	36	76.2	133.3	61,500	62,900
	38	75.3	132.8	56,600	57,900
	40	74.4	132.2	52,300	53,600
	45	72.1	130.7	43,600	45,100
	50	69.8	128.9	37,400	38,600
	55	67.4	126.9	32,400	33,700
	60	65.0	124.7	28,400	29,600
	65	63.0	122.7	25,200	26,300
	70	60.5	119.9	22,400	23,500
	75	57.9	116.9	20,200	21,200
	80	55.3	113.6	18,400	19,200
	85	52.5	109.9	16,700	17,600
	90	49.7	105.8	15,200	16,100
	95	46.7	101.3	13,900	14,700
	100	43.6	96.2	12,700	13,500
	110	36.7	84.2	10,700	11,500
	120	28.4	68.3	9,100	9,800
	130	16.8	43.9	7,700	8,300
140	25	81.8	145.7	113,700	113,700
	26	81.4	145.5	105,800	106,100
	27	81.0	145.4	98,800	99,400
	28	80.6	145.2	92,900	93,700
	29	80.2	145.0	87,400	88,400
	30	79.7	144.9	82,500	83,600
	32	78.9	144.5	74,300	75,500
	34	78.1	144.0	67,300	68,600
	36	77.2	143.6	61,400	62,800
	38	76.4	143.1	56,600	57,800
	40	75.5	142.6	52,200	53,700
	45	73.4	141.2	43,600	45,000
	50	71.3	139.5	37,300	38,500
	55	69.1	137.7	32,300	33,600
	60	66.9	135.6	28,300	29,800
	65	65.1	133.8	25,100	26,200
	70	62.8	131.3	22,400	23,500
	75	60.5	128.6	20,100	21,100
	80	58.1	125.6	18,300	19,100
	85	55.6	122.3	16,600	17,600
	90	53.1	118.6	15,100	16,000
	95	50.5	114.7	13,800	14,700
	100	47.8	110.3	12,700	13,500
	110	41.9	100.1	10,700	11,400
	120	35.3	87.4	9,100	9,700
	130	27.4	70.8	7,700	8,300
	140	16.2	45.4	6,500	7,100

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WARNING

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

"on outriggers" front float set

one counterweight

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle $\Delta°$	Boom Point Elev (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
150	**26**	82.0	155.7	**98,900**	**98,900**
	27	81.6	155.5	**98,000**	**98,000**
	28	81.2	155.3	**92,700**	**93,500**
	29	80.8	155.2	**87,200**	**88,200**
	30	80.4	155.0	**82,300**	**83,400**
	32	79.7	154.7	**74,100**	**75,400**
	34	78.9	154.3	**67,100**	**68,500**
	36	78.1	153.8	**61,200**	**62,600**
	38	77.3	153.4	**56,400**	**57,600**
	40	76.5	152.9	**52,000**	**53,500**
	45	74.6	151.6	**43,400**	**44,800**
	50	72.6	150.1	**37,100**	**38,300**
	55	70.5	148.4	**32,100**	**33,400**
	60	68.5	146.5	**28,100**	**29,400**
	65	66.8	144.8	**24,900**	**26,000**
	70	64.7	142.5	**22,200**	**23,300**
	75	62.6	140.0	**19,900**	**20,900**
	80	60.4	137.3	**18,100**	**18,900**
	85	58.2	134.3	**16,400**	**17,400**
	90	55.9	131.0	**15,000**	**15,800**
	95	53.6	127.4	**13,600**	**14,500**
	100	51.2	123.5	**12,500**	**13,300**
	110	46.0	114.6	**10,500**	**11,200**
	120	40.4	103.8	**8,900**	**9,600**
	130	34.1	90.5	**7,500**	**8,200**
	140	26.4	73.2	**6,400**	**7,000**
	150	15.6	46.7	**5,400**	**5,900**
160	**28**	81.8	165.5	**92,800**	**93,400**
	29	81.4	165.3	**87,100**	**58,100**
	30	81.0	165.2	**82,200**	**83,300**
	32	80.3	164.8	**74,000**	**75,200**
	34	79.6	164.4	**68,900**	**68,300**
	36	78.9	164.1	**61,000**	**62,400**
	38	78.1	163.6	**56,200**	**57,400**
	40	77.4	163.2	**51,900**	**53,300**
	45	75.5	162.0	**43,100**	**44,600**
	50	73.7	160.5	**36,900**	**38,000**
	55	71.8	159.0	**31,900**	**33,200**
	60	69.9	157.2	**27,900**	**29,100**
	65	68.4	155.6	**24,600**	**25,800**
	70	66.4	153.5	**21,900**	**23,000**
	75	64.5	151.2	**19,800**	**20,600**
	80	62.5	148.7	**17,900**	**18,800**
	85	60.4	145.9	**16,200**	**17,100**
	90	58.3	142.9	**14,700**	**15,900**
	95	56.2	139.7	**13,400**	**14,200**
	100	54.0	136.1	**12,200**	**13,000**
	110	49.4	128.2	**10,200**	**10,900**
	120	44.5	118.7	**8,600**	**9,300**
	130	39.1	107.4	**7,200**	**7,900**
	140	33.0	93.5	**6,100**	**6,700**
	150	25.6	75.4	**5,100**	**5,700**
	160	15.1	48.0	**4,200**	**4,600**
170	**29**	81.9	175.4	**79,800**	**79,800**
	30	81.6	175.3	**79,200**	**79,200**
	32	80.9	175.0	**73,900**	**75,000**
	34	80.2	174.6	**66,700**	**58,100**
	36	79.5	174.2	**60,600**	**62,200**
	38	78.8	173.9	**56,000**	**57,200**
	40	78.1	173.4	**51,600**	**53,100**
	45	76.4	172.3	**42,800**	**44,300**
	50	74.7	171.0	**38,700**	**38,100**
	55	72.9	169.5	**31,700**	**33,000**
	60	71.1	167.8	**27,700**	**28,900**
	65	69.7	166.4	**24,400**	**25,500**
	70	67.9	164.4	**21,700**	**22,800**
	75	66.1	162.3	**19,400**	**20,400**
	80	64.2	159.9	**17,700**	**18,600**
	85	62.3	157.3	**16,000**	**16,900**
	90	60.4	154.6	**14,500**	**15,300**
	95	58.4	151.6	**13,200**	**14,000**
	100	56.4	148.4	**12,000**	**12,800**
	110	52.3	141.1	**10,000**	**10,700**
	120	47.8	132.6	**8,400**	**9,100**
	130	43.1	122.7	**7,000**	**7,700**
	140	37.9	110.9	**5,900**	**6,500**
	150	31.9	96.4	**4,900**	**5,500**
	160	24.8	77.6	**4,100**	**4,800**
	170	14.6	49.3	**3,300**	**3,800**
180	**30**	82.0	185.4	**73,600**	**73,600**
	32	81.4	185.1	**72,500**	**72,500**
	34	80.8	184.8	**66,600**	**67,900**
	36	80.1	184.4	**60,600**	**62,000**
	38	79.5	184.0	**55,800**	**57,000**
	40	78.8	183.7	**51,500**	**52,900**
	45	77.2	182.6	**42,700**	**44,100**
	50	75.5	181.3	**38,500**	**37,900**
	55	73.9	179.9	**31,500**	**32,900**
	60	72.2	178.4	**27,500**	**28,700**
	65	70.9	177.0	**24,200**	**25,300**
	70	69.2	175.2	**21,500**	**22,500**
	75	67.5	173.2	**19,200**	**20,200**
	80	65.7	171.0	**17,500**	**18,400**
	85	64.0	168.6	**15,600**	**16,700**
	90	62.2	166.0	**14,300**	**15,100**
	95	60.4	163.2	**13,000**	**13,600**
	100	58.5	160.3	**11,800**	**12,600**
	110	54.7	153.6	**9,800**	**10,500**
	120	50.7	145.9	**8,200**	**8,900**
	130	46.4	137.0	**6,600**	**7,500**
	140	41.8	126.6	**5,700**	**6,300**
	150	36.8	114.2	**4,700**	**5,300**
	160	31.0	99.2	**3,900**	**4,400**
	170	24.1	79.8	**3,100**	**3,600**
	190	14.2	50.6	**2,500**	**2,900**

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle $\Delta°$	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
190	**32**	81.9	195.2	**67,600**	**67,600**
	34	81.2	194.9	**66,400**	**67,500**
	36	80.6	194.6	**60,400**	**61,900**
	38	80.0	194.2	**55,700**	**57,100**
	40	79.4	193.8	**51,300**	**52,700**
	45	77.9	192.8	**42,500**	**43,800**
	50	76.3	191.6	**36,300**	**37,800**
	55	74.8	190.3	**31,200**	**32,500**
	60	73.2	188.9	**27,200**	**28,400**
	65	71.9	187.6	**23,800**	**25,100**
	70	70.3	185.9	**21,200**	**22,300**
	75	68.7	184.0	**18,900**	**19,900**
	80	67.1	181.9	**17,200**	**18,200**
	85	65.4	179.7	**15,500**	**16,400**
	90	63.8	177.3	**14,000**	**14,900**
	95	62.1	174.7	**12,700**	**13,500**
	100	60.3	171.9	**11,500**	**12,300**
	110	56.8	165.7	**9,500**	**10,200**
	120	53.1	158.6	**7,900**	**8,600**
	130	49.2	150.5	**6,500**	**7,200**
	140	45.1	141.2	**5,400**	**6,000**
	150	40.6	130.3	**4,400**	**4,900**
	160	35.7	117.5	**3,600**	**4,100**
	170	30.2	101.9	**2,800**	**3,300**
	180	23.4	81.9	**2,200**	**2,600**
200	**33**	82.0	205.2	**58,900**	**58,900**
	34	81.7	205.0	**58,800**	**58,800**
	36	81.1	204.7	**58,500**	**58,500**
	38	80.5	204.4	**55,500**	**56,900**
	40	79.9	204.0	**51,100**	**52,500**
	45	78.5	203.0	**42,300**	**43,700**
	50	77.0	201.9	**36,100**	**37,500**
	55	75.5	200.7	**31,100**	**32,300**
	60	74.1	199.3	**27,100**	**28,200**
	65	72.9	198.1	**23,800**	**24,900**
	70	71.4	196.5	**21,000**	**22,100**
	75	69.8	194.7	**18,800**	**19,700**
	80	68.3	192.7	**17,100**	**18,000**
	85	66.7	190.6	**15,300**	**16,200**
	90	65.2	188.4	**13,800**	**14,700**
	95	63.6	185.9	**12,500**	**13,400**
	100	62.0	183.3	**11,400**	**12,100**
	110	58.7	177.6	**9,400**	**10,100**
	120	55.2	171.0	**7,700**	**8,400**
	130	51.7	163.5	**6,400**	**7,000**
	140	47.9	155.0	**5,200**	**5,800**
	150	43.9	145.2	**4,300**	**4,800**
	160	39.6	133.9	**3,400**	**3,900**
	170	34.8	120.6	**2,700**	**3,200**
	180	29.4	104.5	—	**2,500**

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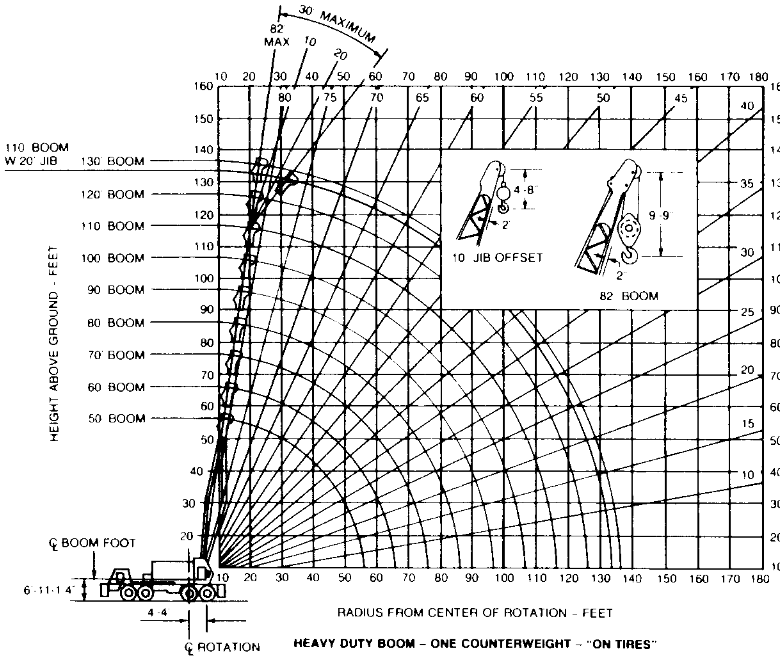
WARNING ⚠

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

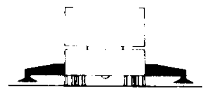
working ranges



HEAVY DUTY BOOM – ONE COUNTERWEIGHT – "ON TIRES"

RATINGS
LIFT CRANE SERVICE
69" x 69" boom
heavy duty tip (25')

one counterweight and one bumper counterweight



"on tires"

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Stationary Ratings Over Side	Stationary Ratings Over Rear	Stationary Ratings Directly Over Rear	Travel Ratings Directly Over Rear Creep	Travel Ratings Directly Over Rear 2.5 m.p.h.	Load Radius (ft)
50	12	82 0	56 4	—	91,800	114,400	87,400	—	12
	13	80 9	56 2	—	87,800	109,800	83,800	—	13
	14	79 7	56 0	—	84,400	105,400	80,500	—	14
	15	78 5	55 8	—	81,400	101,300	77,400	—	15
	16	77 4	55 6	62,100	78,800	97,500	74,500	—	16
	17	76 2	55 3	58,400	75,800	93,900	71,800	—	17
	18	75 0	55 0	55,200	73,500	89,700	69,200	—	18
	19	73 8	54 7	52,200	71,200	83,600	66,800	—	19
	20	72 6	54 4	49,400	69,100	78,200	64,500	—	20
	21	71 4	54 1	46,900	67,100	73,500	62,400	—	21
	22	70 2	53 7	44,400	65,300	69,300	60,400	—	22
	23	68 9	53 3	41,800	63,500	65,500	58,500	—	23
	24	67 7	52 9	39,500	61,900	62,000	56,700	—	24
	25	66 4	52 5	37,500	56,900	58,900	55,100	—	25
	26	65 2	52 0	35,500	56,100	56,100	53,500	—	26
	27	63 9	51 5	33,900	53,500	53,500	52,000	—	27
	28	62 6	51 0	32,300	51,100	51,100	50,500	—	28
	29	61 3	50 4	30,600	48,900	48,900	48,900	—	29
	30	60 0	49 9	29,400	46,900	46,900	46,900	—	30
	32	57 3	48 6	27,000	43,200	43,200	43,200	—	32
	34	54 5	47 2	24,600	40,000	40,000	40,000	—	34
	36	51 6	45 6	23,000	37,300	37,300	37,300	24,600	36
	38	48 5	43 9	21,300	34,800	34,800	34,800	23,400	38
	40	45 4	42 0	19,800	32,600	32,600	32,600	22,200	40
	45	36 4	36 0	16,600	28,000	28,000	28,000	19,700	45
	50	24 9	27 3	14,300	24,300	24,300	24,300	17,500	50

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LOAD RATINGS DEPEND ON TIRE CAPACITY AND CONDITION, INFLATED PER TABLE:

TIRE INFLATION			
SIZE	STATIONARY	CREEP	2.5 MPH
14.00 x 24 - 20 PR	115 PSI	115 PSI	115 PSI

DEDUCT FROM RATED BOOM LOADS WHEN LIFTING OVER BOOM POINT WITH JIB ATTACHED

JIB LENGTH	20 FT					
EFFECTIVE JIB WT LBS	1500					
EFFECTIVE JIB HOOK WT	1600					
ALSO DEDUCT TWICE THE WEIGHT OF ANY LOAD SUSPENDED FROM JIB HOOK						

WARNING

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** – a machine failure may occur.

"on tires"

one counterweight and one bumper counterweight

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∠	Boom Point Elev (ft)	Stationary Ratings Over Side	Stationary Ratings Over Rear	Stationary Ratings Directly Over Rear	Travel Ratings Directly Over Rear Creep	Travel Ratings Directly Over Rear 2.5 m.p.h.	Load Radius (ft)
60	14	81.4	66.2	—	83,900	104,800	80,000	—	14
	15	80.5	66.0	—	81,000	100,700	76,800	—	15
	16	79.5	65.8	61,800	78,100	88,800	73,800	—	16
	17	78.5	65.6	58,100	75,500	83,400	71,200	—	17
	18	77.6	65.4	54,900	73,100	89,700	68,700	—	18
	19	76.6	65.1	51,900	70,800	83,600	66,300	—	19
	20	75.6	64.9	49,200	68,700	78,200	64,000	—	20
	21	74.6	64.6	46,700	66,700	73,500	61,900	—	21
	22	73.6	64.3	44,400	64,900	69,300	59,800	—	22
	23	72.6	64.0	41,800	63,100	65,400	58,000	—	23
	24	71.6	63.6	39,500	61,500	62,000	56,300	—	24
	25	70.6	63.3	37,500	58,800	58,800	54,700	—	25
	26	69.6	62.9	35,800	56,100	56,100	53,100	—	26
	27	68.5	62.5	33,800	53,500	53,500	51,600	—	27
	28	67.5	62.1	32,200	51,100	51,100	50,100	—	28
	29	66.4	61.6	30,800	48,900	48,900	48,700	—	28
	30	65.4	61.2	29,400	46,800	46,800	46,800	—	30
	32	63.3	60.2	26,900	43,100	43,100	43,100	—	32
	34	61.1	59.1	24,800	40,000	40,000	40,000	—	34
	36	58.9	57.9	22,900	37,300	37,300	37,300	24,300	36
	38	56.6	56.6	21,300	34,800	34,800	34,800	23,100	38
	40	54.3	55.2	19,800	32,800	32,800	32,600	21,800	40
	45	48.1	51.1	16,800	28,000	28,000	28,000	19,400	45
	50	41.2	45.9	14,400	24,300	24,300	24,300	17,300	50
	55	33.1	39.1	12,400	21,400	21,400	21,400	15,500	55
	60	22.6	29.3	10,700	19,000	19,000	19,000	13,800	60
70	15	81.9	76.1	—	80,800	100,400	76,800	—	15
	16	81.0	76.0	61,800	77,800	88,800	73,700	—	16
	17	80.2	75.8	58,100	75,300	93,100	71,000	—	17
	18	79.4	75.6	54,800	72,900	89,700	68,400	—	18
	19	78.5	75.4	51,900	70,700	83,900	66,000	—	19
	20	77.7	75.2	49,200	68,600	78,200	63,800	—	20
	21	76.8	74.9	46,700	66,600	73,600	61,700	—	21
	22	76.0	74.7	44,400	64,700	69,300	59,700	—	22
	23	75.1	74.4	41,900	63,000	65,500	57,800	—	23
	24	74.3	74.1	39,800	61,300	62,000	56,100	—	24
	25	73.4	73.8	37,800	58,900	58,900	54,500	—	25
	26	72.6	73.5	35,700	56,100	56,100	52,900	—	26
	27	71.7	73.2	33,900	53,500	53,500	51,400	—	27
	28	70.9	72.8	32,300	51,100	51,100	50,000	—	28
	28	70.0	72.4	30,800	48,900	48,900	48,600	—	29
	30	69.1	72.1	29,400	46,800	46,800	46,800	—	30
	32	67.3	71.2	27,000	43,200	43,200	43,200	—	32
	34	65.5	70.3	24,900	40,000	40,000	40,000	—	34
	36	63.7	69.4	23,000	37,300	37,300	37,300	24,200	36
	38	61.9	68.3	21,300	34,800	34,800	34,800	23,000	38
	40	60.0	67.2	19,900	32,800	32,800	32,600	21,800	40
	45	55.1	63.9	16,900	28,000	28,000	28,000	19,400	45
	50	49.9	60.0	14,500	24,400	24,400	24,400	17,300	50
	55	44.3	55.2	12,500	21,500	21,500	21,500	15,500	55
	60	37.9	49.4	10,900	19,100	19,100	19,100	13,800	60
	65	30.6	41.9	9,500	17,100	17,100	17,100	12,600	65
	70	20.9	31.2	8,300	15,300	15,300	15,300	11,300	70

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∠	Boom Point Elev (ft)	Stationary Ratings Over Side	Stationary Ratings Over Rear	Stationary Ratings Directly Over Rear	Travel Ratings Directly Over Rear Creep	Travel Ratings Directly Over Rear 2.5 m.p.h.	Load Radius (ft)
80	17	81.4	85.9	57,700	74,800	92,400	70,300	—	17
	18	80.7	85.8	54,500	72,300	89,100	67,800	—	18
	19	80.0	85.6	51,500	70,100	83,400	65,400	—	19
	20	79.2	85.4	48,800	68,000	78,000	63,200	—	20
	21	78.5	85.2	46,300	66,000	73,400	61,100	—	21
	22	77.8	85.0	44,000	64,200	69,100	59,100	—	22
	23	77.0	84.7	41,700	62,400	65,300	57,200	—	23
	24	76.3	84.5	39,400	60,800	61,600	55,500	—	24
	25	75.6	84.2	37,400	58,700	58,700	53,900	—	25
	26	74.8	83.9	35,500	55,900	55,900	52,300	—	26
	27	74.1	83.7	33,700	53,300	53,300	50,800	—	27
	29	73.3	83.4	32,100	50,900	50,900	49,400	—	28
	29	72.6	83.0	30,600	48,700	48,700	48,000	—	29
	30	71.8	82.7	29,200	46,600	46,600	46,600	—	30
	32	70.3	82.0	26,800	43,000	43,000	43,000	—	32
	34	68.8	81.2	24,600	39,800	39,800	39,600	—	34
	38	67.2	80.4	22,800	37,100	37,100	37,100	23,700	36
	38	65.6	79.5	21,100	34,600	34,600	34,800	22,500	38
	40	64.1	78.6	19,600	32,400	32,400	32,400	21,300	40
	45	60.0	75.8	16,700	27,800	27,800	27,800	18,900	45
	50	55.7	72.6	14,300	24,200	24,200	24,200	16,800	50
	55	51.2	68.9	12,300	21,300	21,300	21,300	15,100	55
	60	46.4	64.4	10,700	19,000	19,000	19,000	13,500	60
	65	41.2	59.1	9,300	16,900	16,900	16,900	12,200	65
	70	35.4	52.6	8,200	15,200	15,200	15,200	11,000	70
	75	28.5	44.4	7,200	13,700	13,700	13,700	9,900	75
	80	19.5	32.9	6,200	12,400	12,400	12,400	9,000	80
90	18	81.7	95.9	54,300	72,000	88,700	67,400	—	18
	19	81.1	95.7	51,300	69,800	83,300	65,000	—	19
	20	80.4	95.6	48,800	67,700	77,900	62,800	—	20
	21	79.8	95.4	46,100	65,700	73,300	60,700	—	21
	22	79.2	95.2	43,800	63,900	69,000	58,800	—	22
	23	78.5	95.0	41,800	62,100	65,100	56,900	—	23
	24	77.9	94.8	39,300	60,500	61,700	55,300	—	24
	25	77.2	94.5	37,300	58,500	58,500	53,800	—	25
	26	76.6	94.3	35,400	55,800	55,800	52,000	—	26
	27	75.9	94.0	33,800	53,200	53,200	50,500	—	27
	28	75.2	93.8	32,000	50,800	50,800	49,100	—	28
	29	74.6	93.5	30,500	48,600	48,600	47,700	—	29
	30	73.9	93.2	29,100	46,500	46,500	48,400	—	30
	32	72.6	92.6	26,700	42,800	42,600	42,800	—	32
	34	71.2	91.9	24,600	39,700	39,700	39,700	—	34
	36	69.9	91.2	22,700	37,000	37,000	37,000	23,400	36
	38	68.5	90.4	21,000	34,500	34,500	34,500	22,200	38
	40	67.1	89.6	19,500	32,300	32,300	32,300	21,100	40
	45	63.6	87.2	16,800	27,700	27,700	27,700	18,700	45
	50	60.0	84.5	14,200	24,100	24,100	24,100	16,600	50
	55	56.2	81.3	12,200	21,200	21,200	21,200	14,900	55
	60	52.3	77.7	10,600	18,900	18,900	18,900	13,400	60
	65	48.1	73.4	9,300	16,900	16,900	16,900	12,000	65
	70	43.6	68.5	8,100	15,200	15,200	15,200	10,900	70
	75	38.7	62.7	7,100	13,700	13,700	13,700	9,600	75
	80	33.3	55.7	6,300	12,400	12,400	12,400	8,900	80
	85	26.8	46.9	5,500	11,200	11,200	11,200	8,000	85
	90	18.3	34.5	4,900	10,200	10,200	10,200	7,300	90

WARNING ⚠

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed as machine may tip or collapse

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

32Z2291

"on tires"

one counterweight and one bumper counterweight

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∠	Boom Point Elev (ft)	Stationary Ratings: Over Side	Stationary Ratings: Over Rear	Stationary Ratings: Directly Over Rear	Travel Ratings Directly Over Rear: Creep	Travel Ratings Directly Over Rear: 2.5 m.p.h.	Load Radius (ft)
100	19	82.0	105.9	51,100	69,500	83,200	64,700	—	19
	20	81.4	105.7	48,400	67,400	77,700	62,500	—	20
	21	80.8	105.5	45,900	65,400	73,100	60,400	—	21
	22	80.3	105.4	43,600	63,600	68,800	58,400	—	22
	23	79.7	105.2	41,500	61,800	65,000	56,600	—	23
	24	79.1	105.0	39,100	60,200	61,500	55,000	—	24
	25	78.5	104.8	37,200	58,400	58,400	53,300	—	25
	26	77.9	104.6	35,300	55,700	55,700	51,700	—	26
	27	77.3	104.3	33,500	53,100	53,100	50,200	—	27
	26	76.7	104.1	31,900	50,600	50,600	48,800	—	28
	29	76.1	103.9	30,400	48,400	48,400	47,500	—	29
	30	75.6	103.6	29,000	46,400	46,400	46,200	—	30
	32	74.4	103.0	26,600	42,700	42,700	42,700	—	32
	34	73.2	102.4	24,400	39,500	39,500	39,500	24,400	34
	36	72.0	101.8	22,500	38,900	36,800	36,900	23,200	36
	38	70.8	101.1	20,800	34,400	34,400	34,400	22,000	38
	40	69.5	100.4	19,400	32,200	32,200	32,200	20,900	40
	45	66.4	98.3	16,500	27,600	27,800	27,600	18,400	45
	50	63.3	95.9	14,100	24,000	24,000	24,000	16,400	50
	55	60.0	93.1	12,100	21,100	21,100	21,100	14,700	55
	60	56.6	90.0	10,500	18,800	18,800	18,800	13,100	80
	65	53.1	86.4	9,200	16,800	16,800	16,800	11,800	65
	70	49.4	82.4	8,000	15,100	15,100	15,100	10,700	70
	75	45.5	77.7	7,000	13,800	13,600	13,600	9,800	75
	80	41.3	72.3	6,200	12,300	12,300	12,300	8,700	80
	85	36.7	66.0	5,400	11,100	11,100	11,100	7,900	85
	90	31.5	58.5	4,700	10,100	10,100	10,100	7,200	90
	95	25.4	49.1	4,100	9,200	9,200	9,200	6,800	95
	100	17.4	36.1	3,500	8,400	8,400	8,400	6,000	100
110	21	81.7	115.7	45,400	64,800	72,800	59,700	—	21
	22	81.1	115.5	43,200	63,000	68,600	57,800	—	22
	23	80.6	115.3	41,100	61,200	64,700	55,900	—	23
	24	80.1	115.2	38,900	59,600	61,200	54,400	—	24
	25	79.6	115.0	36,900	58,100	58,100	52,700	—	25
	26	79.0	114.8	35,000	55,400	55,400	51,100	—	26
	27	78.5	114.6	33,200	52,800	52,800	49,600	—	27
	28	78.0	114.4	31,600	50,400	50,400	48,200	—	28
	29	77.4	114.1	30,100	48,100	48,100	46,600	—	29
	30	76.9	113.9	28,700	46,100	46,100	45,500	—	30
	32	75.8	113.4	26,300	42,400	42,400	42,400	—	32
	34	74.7	112.9	24,100	39,200	39,200	39,200	23,900	34
	36	73.7	112.3	22,300	36,600	36,600	36,600	22,800	36
	38	72.6	111.7	20,800	34,100	34,100	34,100	21,400	38
	40	71.5	111.0	19,100	31,800	31,900	31,900	20,300	40
	45	68.7	109.1	16,200	27,300	27,300	27,300	17,900	45
	50	65.9	107.0	13,800	23,700	23,700	23,700	15,900	50
	55	63.0	104.6	11,800	20,700	20,700	20,700	14,100	55
	60	60.0	101.8	10,200	18,500	18,500	18,500	12,600	60
	65	56.9	98.7	8,900	16,500	16,500	16,500	11,300	65
	70	53.7	95.2	7,700	14,600	14,800	14,800	10,200	70
	75	50.4	91.2	6,800	13,300	13,300	13,300	9,200	75
	80	46.9	86.8	5,900	12,000	12,000	12,000	8,200	80
	65	43.2	81.7	5,100	10,900	10,900	10,900	7,400	85
	90	39.2	75.9	4,500	9,900	9,900	9,900	6,600	90
	95	34.9	69.2	3,800	9,000	9,000	9,000	6,100	95
	100	30.0	61.2	3,300	8,200	8,200	8,200	5,600	100
	110	16.5	37.5	2,300	6,700	6,700	6,700	4,500	110

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∠	Boom Point Elev (ft)	Stationary Ratings: Over Side	Stationary Ratings: Over Rear	Stationary Ratings: Directly Over Rear	Travel Ratings Directly Over Rear: Creep	Travel Ratings Directly Over Rear: 2.5 m.p.h.	Load Radius (ft)
120	22	81.9	125.6	42,900	62,800	68,400	57,400	—	22
	23	81.4	125.5	40,800	60,900	64,500	55,500	—	23
	24	80.9	125.3	38,700	59,300	61,000	54,000	—	24
	25	80.4	125.1	36,600	57,700	57,900	52,400	—	25
	26	80.0	125.0	34,800	55,200	55,200	50,800	—	26
	27	79.5	124.8	33,100	52,600	52,600	49,300	—	27
	28	79.0	124.6	31,400	50,200	50,200	47,800	—	28
	29	78.5	124.4	30,000	47,900	47,900	46,500	—	29
	30	78.0	124.2	28,600	45,900	45,900	45,200	—	30
	32	77.0	123.7	26,100	42,200	42,200	42,200	25,000	32
	34	76.1	123.2	24,000	39,000	39,000	39,000	23,600	34
	36	75.1	122.7	22,100	36,400	36,400	36,400	22,300	36
	38	74.1	122.1	20,400	33,900	33,900	33,900	21,100	38
	40	73.1	121.5	18,900	31,700	31,700	31,700	20,000	40
	45	70.6	119.8	16,000	27,100	27,100	27,100	17,600	45
	50	68.0	117.9	13,600	23,500	23,500	23,500	15,600	50
	55	65.4	115.7	11,700	20,600	20,600	20,600	13,900	55
	60	62.7	113.2	10,100	18,300	18,300	18,300	12,400	60
	65	60.0	110.5	8,700	16,300	16,300	16,300	11,100	65
	70	57.2	107.4	7,600	14,600	14,600	14,600	9,900	70
	75	54.3	103.9	6,600	13,100	13,100	13,100	8,900	75
	80	51.3	100.1	5,700	11,800	11,800	11,800	8,000	80
	85	48.1	95.8	5,000	10,700	10,700	10,700	7,200	85
	90	44.8	91.0	4,300	9,700	9,700	9,700	6,500	90
	95	41.3	85.6	3,700	8,800	8,600	8,800	5,900	95
	100	37.5	79.4	3,200	8,000	8,000	8,000	5,300	100
	110	28.6	63.8	2,200	6,600	6,600	6,600	4,300	110
	120	15.8	38.9	—	5,400	5,400	5,400	3,400	120
130	24	81.6	135.4	38,400	58,700	80,700	53,400	—	24
	25	81.2	135.3	36,500	57,100	57,600	51,700	—	25
	26	80.7	135.1	34,600	54,900	54,900	50,100	—	26
	27	80.3	134.9	32,800	52,300	52,300	48,700	—	27
	28	79.8	134.8	31,200	49,900	49,900	47,200	—	28
	29	79.4	134.6	29,700	47,600	47,600	45,900	—	29
	30	78.9	134.4	28,300	45,600	45,600	44,600	—	30
	32	78.0	134.0	25,800	41,900	41,900	41,900	24,400	32
	34	77.1	133.5	23,700	38,700	38,700	38,700	23,000	34
	36	76.2	133.0	21,800	36,100	36,100	36,100	21,700	36
	38	75.3	132.5	20,100	33,600	33,600	33,600	20,500	38
	40	74.4	131.9	18,600	31,400	31,400	31,400	19,400	40
	45	72.1	130.4	15,700	26,800	26,600	26,600	17,100	45
	50	69.8	128.6	13,300	23,100	23,100	23,100	15,000	50
	55	67.4	126.7	11,400	20,200	20,200	20,200	13,300	55
	60	65.0	124.4	9,800	18,000	18,000	18,000	11,600	60
	65	62.5	121.9	8,400	16,000	16,000	16,000	10,600	65
	70	60.0	119.1	7,300	14,300	14,300	14,300	9,400	70
	75	57.4	116.1	6,300	12,800	12,600	12,800	8,400	75
	80	54.7	112.6	5,400	11,500	11,500	11,500	7,500	80
	85	52.0	108.9	4,700	10,400	10,400	10,400	6,700	85
	90	49.1	104.7	4,000	9,400	9,400	9,400	6,000	90
	95	46.1	100.1	3,400	8,500	8,500	8,500	5,400	95
	100	42.9	95.0	2,900	7,700	7,700	7,700	4,900	100
	110	36.0	82.7	1,900	6,300	6,300	6,300	3,900	110
	120	27.5	66.3	—	5,200	5,200	5,200	3,000	120
	130	15.2	40.2	—	4,200	4,200	4,200	2,200	130

32Z2291

WARNING ⚠

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** a machine failure may occur.

RATINGS
LIFT CRANE SERVICE
69″ x 69″ boom
heavy duty tip (25′)

one counterweight

"on tires"

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Stationary Ratings: Over Side	Stationary Ratings: Over Rear	Stationary Ratings: Directly Over Rear	Travel Ratings Directly Over Rear: Creep	Travel Ratings Directly Over Rear: 2.5 m.p.h.	Load Radius (ft)
50	12	82.0	56.4	—	86,800	109,200	82,400	49,200	12
	13	80.9	56.2	—	83,100	101,700	78,900	47,100	13
	14	79.7	56.0	—	79,800	91,700	75,700	45,100	14
	15	78.5	55.8	—	76,800	83,300	72,700	43,300	15
	16	77.4	55.6	—	74,100	76,300	70,000	41,800	16
	17	76.2	55.3	—	70,300	70,300	67,400	40,000	17
	18	75.0	55.0	52,000	65,100	65,100	64,500	38,500	18
	19	73.8	54.7	49,800	60,600	60,600	60,600	37,100	19
	20	72.6	54.4	47,100	56,700	56,700	56,700	35,800	20
	21	71.4	54.1	44,700	53,200	53,200	53,200	34,500	21
	22	70.2	53.7	42,000	50,000	50,000	50,000	33,400	22
	23	68.9	53.3	39,500	47,200	47,200	47,200	32,300	23
	24	67.7	52.9	37,400	44,700	44,700	44,700	31,200	24
	25	66.4	52.5	35,400	42,300	42,300	42,300	30,200	25
	26	65.2	52.0	33,600	40,200	40,200	40,200	29,300	26
	27	63.9	51.5	32,000	38,300	38,300	36,300	28,400	27
	28	62.6	51.0	30,400	36,600	36,600	36,600	27,800	28
	29	61.3	50.4	29,000	35,000	35,000	35,000	26,800	29
	30	60.0	49.9	27,700	33,400	33,400	33,400	29,000	30
	32	57.3	48.6	25,400	30,700	30,700	30,700	24,800	32
	34	54.5	47.2	23,400	28,400	28,400	28,400	23,200	34
	36	51.6	45.6	21,600	26,300	26,300	28,300	22,000	36
	38	48.5	43.9	20,000	24,400	24,400	24,400	20,800	38
	40	45.4	42.0	18,700	22,800	22,800	22,600	19,800	40
	45	36.4	36.0	15,700	19,300	19,300	19,300	17,500	45
	50	24.9	27.3	13,400	16,700	16,700	16,700	15,400	50
60	14	81.4	66.2	—	79,300	91,600	75,100	44,500	14
	15	80.5	66.0	—	76,400	83,400	72,200	42,700	15
	16	79.5	65.8	—	73,800	76,400	69,400	41,000	16
	17	78.5	65.6	—	70,400	70,400	66,800	39,500	17
	18	77.6	65.4	51,700	65,100	65,100	64,400	38,000	18
	19	76.6	65.1	49,200	60,600	60,600	60,600	36,800	19
	20	75.6	64.9	46,800	56,700	56,700	56,700	35,300	20
	21	74.6	64.6	44,700	53,200	53,200	53,200	34,000	21
	22	73.6	64.3	42,000	50,000	50,000	50,000	32,900	22
	23	72.6	64.0	39,500	47,200	47,200	47,200	31,800	23
	24	71.6	63.6	37,400	44,600	44,600	44,600	30,700	24
	25	70.6	63.3	35,400	42,300	42,300	42,300	29,600	25
	26	69.6	62.9	33,600	40,200	40,200	40,200	28,800	26
	27	68.5	62.5	31,900	38,300	38,300	38,300	27,900	27
	28	67.5	62.1	30,400	36,600	36,600	36,600	27,200	28
	29	66.4	61.6	29,000	34,900	34,900	34,900	26,400	29
	30	65.4	61.2	27,700	33,400	33,400	33,400	25,600	30
	32	63.3	60.2	25,400	30,700	30,700	30,700	24,200	32
	34	61.1	59.1	23,300	28,300	28,300	28,300	22,800	34
	36	58.9	57.9	21,600	26,200	26,200	26,200	21,800	36
	38	56.6	56.6	20,000	24,400	24,400	24,400	20,500	38
	40	54.3	55.2	18,700	22,600	22,800	22,800	19,500	40
	45	48.1	51.1	15,700	19,300	19,300	19,300	17,200	45
	50	41.2	45.9	13,400	16,700	16,700	16,700	15,200	50
	55	33.1	39.1	11,500	14,500	14,500	14,500	13,600	55
	60	22.6	29.3	9,900	12,600	12,600	12,600	12,100	60

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Stationary Ratings: Over Side	Stationary Ratings: Over Rear	Stationary Ratings: Directly Over Rear	Travel Ratings Directly Over Rear: Creep	Travel Ratings Directly Over Rear: 2.5 m.p.h.	Load Radius (ft)
70	15	81.9	76.1	—	78,200	83,400	71,900	42,500	15
	16	81.0	76.0	—	73,500	76,500	69,200	40,800	16
	17	80.2	75.8	54,400	70,400	70,400	66,800	39,200	17
	18	79.4	75.6	51,800	65,200	65,200	64,200	37,800	18
	19	78.5	75.4	49,100	60,700	60,700	60,700	36,400	19
	20	77.7	75.2	46,700	56,800	56,800	56,800	35,100	20
	21	76.8	74.9	44,800	53,200	53,200	53,200	33,800	21
	22	76.0	74.7	42,000	50,100	50,100	50,100	32,700	22
	23	75.1	74.4	39,600	47,200	47,200	47,200	31,800	23
	24	74.3	74.1	37,500	44,700	44,700	44,700	30,800	24
	25	73.4	73.8	35,500	42,400	42,400	42,400	29,600	25
	26	72.6	73.5	33,700	40,200	40,200	40,200	28,800	26
	27	71.7	73.2	32,000	38,300	38,300	38,300	27,800	27
	28	70.9	72.8	30,500	36,600	36,600	36,800	27,100	28
	29	70.0	72.4	29,100	35,000	35,000	35,000	26,200	29
	30	69.1	72.1	27,800	33,500	33,500	33,500	25,500	30
	32	67.3	71.2	25,400	30,700	30,700	30,700	24,000	32
	34	65.5	70.3	23,400	28,400	28,400	28,400	22,700	34
	36	63.7	69.4	21,500	26,300	26,300	26,300	21,500	36
	38	61.9	68.3	20,000	24,400	24,400	24,400	20,400	38
	40	60.0	67.2	18,700	22,600	22,800	22,800	19,400	40
	45	55.1	63.9	15,800	19,400	19,400	19,400	17,100	45
	50	49.9	60.0	13,500	16,800	16,800	16,800	15,200	50
	55	44.3	55.2	11,600	14,600	14,800	14,500	13,800	55
	60	37.9	49.4	10,100	12,800	12,800	12,800	12,100	60
	65	30.6	41.9	8,800	11,300	11,300	11,300	10,900	65
	70	20.9	31.2	7,600	9,900	9,900	9,900	9,700	70

32Z2291

LOAD RATINGS DEPEND ON TIRE CAPACITY AND CONDITION, INFLATED PER TABLE

TIRE INFLATION			
SIZE	STATIONARY	CREEP	2.5 MPH
14.00 x 24 - 20 PR	115 PSI	115 PSI	115 PSI

DEDUCT FROM RATED BOOM LOADS WHEN LIFTING OVER BOOM POINT WITH JIB ATTACHED

JIB LENGTH	20 FT					
EFFECTIVE JIB WT LBS	1500					
EFFECTIVE JIB HOOK WT	1600					
ALSO DEDUCT TWICE THE WEIGHT OF ANY LOAD SUSPENDED FROM JIB HOOK						

WARNING ⚠

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

"on tires"
one counterweight

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Stationary Ratings: Over Side	Stationary Ratings: Over Rear	Stationary Ratings: Directly Over Rear	Travel Ratings Directly Over Rear: Creep	Travel Ratings Directly Over Rear: 2.5 m.p.h.	Load Radius (ft)
80	17	81.4	85.9	53,600	70,300	70,300	65,800	38,600	17
	18	80.7	85.8	51,100	85,000	65,000	63,500	37,100	18
	19	80.0	85.6	48,600	60,500	60,500	60,500	35,700	19
	20	79.2	85.4	45,300	56,600	56,600	56,600	34,400	20
	21	78.5	85.2	44,100	53,100	53,100	53,100	33,200	21
	22	77.8	85.0	41,800	49,900	49,900	49,900	32,100	22
	23	77.0	84.7	39,400	47,000	47,000	47,000	31,000	23
	24	76.3	84.5	37,300	44,500	44,500	44,500	30,000	24
	25	75.6	84.2	35,300	42,100	42,100	42,100	29,000	25
	26	74.8	83.9	33,500	40,000	40,000	40,000	28,100	26
	27	74.1	83.7	31,800	36,200	38,200	38,200	27,300	27
	28	73.3	83.4	30,300	36,400	36,400	36,400	26,500	28
	29	72.6	83.0	28,900	34,600	34,600	34,800	25,700	29
	30	71.8	82.7	27,500	33,200	33,200	33,200	24,800	30
	32	70.3	82.0	25,200	30,500	30,500	30,500	23,500	32
	34	68.8	81.2	23,200	28,100	28,100	28,100	22,200	34
	36	67.2	80.4	21,400	26,100	26,100	26,100	21,000	36
	38	65.6	79.5	19,800	24,200	24,200	24,200	19,800	38
	40	64.1	78.6	18,500	22,600	22,600	22,600	18,900	40
	45	60.0	75.8	15,600	19,200	19,200	19,200	16,700	45
	50	55.7	72.6	13,300	16,600	16,600	16,600	14,800	50
	55	51.2	68.9	11,400	14,400	14,400	14,400	13,100	55
	60	46.4	64.4	9,900	12,600	12,600	12,600	11,700	60
	65	41.2	59.1	8,600	11,100	11,100	11,100	10,500	65
	70	35.4	52.6	7,500	9,800	9,800	9,800	9,400	70
	75	28.5	44.4	6,500	8,700	8,700	8,700	8,400	75
	80	19.5	32.9	5,700	7,700	7,700	7,700	7,500	80
90	18	81.7	95.9	50,800	65,000	65,000	63,200	38,800	18
	19	81.1	95.7	48,400	60,400	60,400	60,400	35,400	19
	20	80.4	95.6	46,000	56,500	56,500	56,500	34,100	20
	21	79.8	95.4	43,900	53,000	53,000	53,000	32,900	21
	22	79.2	95.2	41,700	49,600	49,800	49,800	31,800	22
	23	78.5	95.0	39,300	46,900	46,900	46,900	30,700	23
	24	77.9	94.8	37,200	44,400	44,400	44,400	29,800	24
	25	77.2	94.5	35,200	42,000	42,000	42,000	28,700	25
	26	76.6	94.3	33,400	39,900	39,900	39,900	27,800	26
	27	75.9	94.0	31,700	36,100	38,100	38,100	27,100	27
	28	75.2	93.8	30,200	36,300	36,300	36,300	26,200	28
	29	74.6	93.5	28,600	34,700	34,700	34,700	25,400	29
	30	73.9	93.2	27,500	33,200	33,200	33,200	24,700	30
	32	72.6	92.6	25,100	30,400	30,400	30,400	23,300	32
	34	71.2	91.9	23,100	28,100	28,100	28,100	22,000	34
	36	69.9	91.2	21,300	26,000	26,000	26,000	20,600	36
	36	68.5	90.4	19,700	24,100	24,100	24,100	19,700	38
	40	67.1	89.6	18,500	22,500	22,500	22,500	18,700	40
	45	63.6	87.2	15,500	19,100	19,100	19,100	16,400	45
	50	60.0	84.5	13,200	16,500	16,500	16,500	14,800	50
	55	56.2	81.3	11,400	14,400	14,400	14,400	13,000	55
	60	52.3	77.7	9,800	12,600	12,600	12,600	11,800	60
	65	48.1	73.4	8,600	11,100	11,100	11,100	10,300	65
	70	43.6	68.5	7,500	9,800	9,800	9,800	9,300	70
	75	38.7	62.7	6,500	8,700	8,700	8,700	8,300	75
	80	33.3	55.7	5,700	7,700	7,700	7,700	7,500	80
	85	26.8	46.9	4,900	6,800	6,800	6,800	6,700	85
	90	18.3	34.5	4,300	6,000	6,000	6,000	6,000	90

WARNING

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Stationary Ratings: Over Side	Stationary Ratings: Over Rear	Stationary Ratings: Directly Over Rear	Travel Ratings Directly Over Rear: Creep	Travel Ratings Directly Over Rear: 2.5 m.p.h.	Load Radius (ft)
100	19	82.0	105.9	48,100	60,300	60,300	60,300	35,100	19
	20	81.4	105.7	45,800	56,400	56,400	56,400	33,800	20
	21	80.8	105.5	43,700	52,800	52,800	52,800	32,600	21
	22	80.3	105.4	41,800	49,700	49,700	49,700	31,400	22
	23	79.7	105.2	39,200	46,800	46,800	46,800	30,400	23
	24	79.1	105.0	37,100	44,200	44,200	44,200	29,300	24
	25	78.5	104.8	35,100	41,900	41,900	41,900	28,400	25
	26	77.9	104.6	33,300	39,800	39,800	39,800	27,800	26
	27	77.3	104.3	31,600	38,000	38,000	38,000	26,800	27
	28	76.7	104.1	30,100	36,200	36,200	36,200	25,900	28
	29	76.1	103.9	28,600	34,600	34,600	34,600	25,200	29
	30	75.6	103.6	27,300	33,000	33,000	33,000	24,400	30
	32	74.4	103.0	25,000	30,300	30,300	30,300	23,000	32
	34	73.2	102.4	23,000	27,900	27,900	27,900	21,700	34
	38	72.0	101.8	21,200	25,800	25,800	25,800	20,500	36
	38	70.8	101.1	19,600	24,000	24,000	24,000	19,400	38
	40	69.5	100.4	18,300	22,400	22,400	22,400	18,400	40
	45	66.4	98.3	15,400	18,900	18,900	18,900	16,200	45
	50	63.3	95.9	13,100	16,400	16,400	16,400	14,300	50
	55	60.0	93.1	11,300	14,200	14,200	14,200	12,700	55
	60	56.6	90.0	9,700	12,500	12,500	12,500	11,300	60
	65	53.1	86.4	8,400	10,900	10,900	10,900	10,100	65
	70	49.4	82.4	7,400	9,700	9,700	9,700	9,100	70
	75	45.5	77.7	6,400	8,600	8,600	8,600	8,100	75
	80	41.3	72.3	5,600	7,600	7,600	7,600	7,300	80
	85	36.7	66.0	4,900	6,700	6,700	6,700	6,500	85
	90	31.5	58.5	4,200	6,000	6,000	6,000	5,900	90
	95	25.4	49.1	3,600	5,300	5,300	5,300	5,300	95
	100	17.4	36.1	3,100	4,700	4,700	4,700	4,700	100
110	21	81.7	115.7	43,100	52,600	52,600	52,600	31,900	21
	22	81.1	115.5	41,200	49,400	49,400	49,400	30,800	22
	23	80.6	115.3	38,900	46,600	46,600	46,600	29,700	23
	24	80.1	115.2	36,900	44,000	44,000	44,000	28,700	24
	25	79.6	115.0	34,800	41,800	41,600	41,800	27,700	25
	26	79.0	114.8	33,000	39,500	39,500	39,500	27,000	26
	27	78.5	114.6	31,300	37,700	37,700	37,700	26,200	27
	28	78.0	114.4	29,800	35,900	35,900	35,900	25,300	28
	29	77.4	114.1	28,400	34,300	34,300	34,300	24,600	29
	30	76.9	113.9	27,100	32,600	32,800	32,800	23,800	30
	32	75.8	113.4	24,700	30,000	30,000	30,000	22,400	32
	34	74.7	112.9	22,700	27,800	27,800	27,600	21,100	34
	36	73.7	112.3	20,900	25,600	25,600	25,600	20,000	36
	38	72.6	111.7	19,300	23,700	23,700	23,700	18,900	38
	40	71.5	111.0	18,100	22,100	22,100	22,100	17,900	40
	45	68.7	109.1	15,100	18,800	18,800	18,800	15,700	45
	50	65.9	107.0	12,800	16,100	16,100	16,100	13,800	50
	55	63.0	104.6	11,000	13,900	13,900	13,900	12,200	55
	60	60.0	101.8	9,400	12,200	12,200	12,200	10,800	60
	65	56.9	98.7	8,200	10,700	10,700	10,700	9,700	65
	70	53.7	95.2	7,100	9,400	9,400	9,400	8,600	70
	75	50.4	91.2	6,100	8,300	8,300	8,300	7,700	75
	80	46.9	86.8	5,300	7,300	7,300	7,300	6,800	80
	85	43.2	81.7	4,600	6,500	6,500	6,500	6,100	85
	90	39.2	75.9	3,900	5,700	5,700	5,700	5,500	90
	95	34.9	69.2	3,400	5,000	5,000	5,000	4,900	95
	100	30.0	61.2	2,800	4,400	4,400	4,400	4,400	100
	110	16.5	37.5	1,900	3,400	3,400	3,400	3,400	110

32Z2291

"on tires"

one counterweight

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∠°	Boom Point Elev (ft)	Stationary Ratings: Over Side	Stationary Ratings: Over Rear	Stationary Ratings: Directly Over Rear	Travel Ratings Directly Over Rear: Creep	Travel Ratings Directly Over Rear: 2.5 m.p.h.	Load Radius (ft)
120	**22**	81.9	125.6	**40,900**	**49,200**	**49,200**	**49,200**	**30,400**	**22**
	23	81.4	125.5	**38,700**	**46,400**	**46,400**	**46,400**	**29,400**	**23**
	24	80.9	125.3	**36,700**	**43,800**	**43,800**	**43,800**	**28,400**	**24**
	25	80.4	125.1	**34,700**	**41,500**	**41,500**	**41,500**	**27,800**	**25**
	26	80.0	125.0	**32,800**	**39,300**	**39,300**	**39,300**	**26,700**	**26**
	27	79.5	124.8	**31,200**	**37,600**	**37,600**	**37,600**	**25,900**	**27**
	28	79.0	124.6	**29,600**	**35,800**	**35,800**	**35,800**	**25,000**	**28**
	29	78.5	124.4	**28,200**	**34,100**	**34,100**	**34,100**	**24,200**	**29**
	30	78.0	124.2	**26,900**	**32,800**	**32,800**	**32,800**	**23,500**	**30**
	32	77.0	123.7	**24,500**	**29,800**	**29,800**	**29,800**	**22,100**	**32**
	34	76.1	123.2	**22,500**	**27,500**	**27,500**	**27,500**	**20,800**	**34**
	36	75.1	122.7	**20,700**	**25,400**	**25,400**	**25,400**	**19,700**	**36**
	38	74.1	122.1	**19,100**	**23,500**	**23,500**	**23,500**	**18,600**	**38**
	40	73.1	121.5	**17,900**	**21,900**	**21,900**	**21,900**	**17,800**	**40**
	45	70.6	119.8	**15,000**	**18,600**	**18,600**	**18,600**	**15,400**	**45**
	50	68.0	117.9	**12,700**	**15,900**	**15,900**	**15,900**	**13,500**	**50**
	55	65.4	115.7	**10,800**	**13,800**	**13,800**	**13,800**	**11,900**	**55**
	60	62.7	113.2	**9,300**	**12,000**	**12,000**	**12,000**	**10,800**	**60**
	65	60.0	110.5	**8,000**	**10,500**	**10,500**	**10,500**	**9,400**	**65**
	70	57.2	107.4	**6,900**	**9,200**	**9,200**	**9,200**	**8,300**	**70**
	75	54.3	103.9	**6,000**	**8,100**	**8,100**	**8,100**	**7,400**	**75**
	80	51.3	100.1	**5,100**	**7,200**	**7,200**	**7,200**	**6,800**	**80**
	85	48.1	95.8	**4,400**	**6,300**	**6,300**	**6,300**	**5,900**	**85**
	90	44.8	91.0	**3,800**	**5,600**	**5,600**	**5,600**	**5,200**	**90**
	95	41.3	85.6	**3,200**	**4,900**	**4,900**	**4,900**	**4,700**	**95**
	100	37.5	79.4	**2,700**	**4,300**	**4,300**	**4,300**	**4,200**	**100**
	110	28.6	63.8	**1,800**	**3,300**	**3,300**	**3,300**	**3,200**	**110**
	120	15.8	38.9	—	**2,400**	**2,400**	**2,400**	**2,400**	**120**

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∠°	Boom Point Elev (ft)	Stationary Ratings: Over Side	Stationary Ratings: Over Rear	Stationary Ratings: Directly Over Rear	Travel Ratings Directly Over Rear: Creep	Travel Ratings Directly Over Rear: 2.5 m.p.h.	Load Radius (ft)
130	**24**	81.6	135.4	**36,400**	**43,500**	**43,500**	**43,500**	**27,700**	**24**
	25	81.2	135.3	**34,400**	**41,200**	**41,200**	**41,200**	**27,000**	**25**
	26	80.7	135.1	**32,600**	**39,000**	**39,000**	**39,000**	**26,100**	**26**
	27	80.3	134.9	**30,900**	**37,300**	**37,300**	**37,300**	**25,200**	**27**
	29	79.8	134.8	**29,300**	**35,500**	**35,500**	**35,500**	**24,400**	**28**
	29	79.4	134.6	**27,900**	**33,800**	**33,800**	**33,800**	**23,800**	**29**
	30	78.9	134.4	**26,600**	**32,300**	**32,300**	**32,300**	**22,900**	**30**
	32	78.0	134.0	**24,200**	**29,500**	**29,500**	**29,500**	**21,500**	**32**
	34	77.1	133.5	**22,200**	**27,200**	**27,200**	**27,200**	**20,200**	**34**
	36	76.2	133.0	**20,400**	**25,100**	**25,100**	**25,100**	**19,100**	**36**
	38	75.3	132.5	**19,000**	**23,200**	**23,200**	**23,200**	**18,000**	**38**
	40	74.4	131.9	**17,600**	**21,800**	**21,800**	**21,800**	**17,000**	**40**
	45	72.1	130.4	**14,700**	**18,300**	**18,300**	**18,300**	**14,800**	**45**
	50	69.8	128.6	**12,400**	**15,600**	**15,600**	**15,800**	**13,000**	**50**
	55	67.4	126.7	**10,500**	**13,500**	**13,500**	**13,500**	**11,400**	**55**
	60	65.0	124.4	**9,000**	**11,700**	**11,700**	**11,700**	**10,100**	**60**
	65	62.5	121.9	**7,700**	**10,200**	**10,200**	**10,200**	**8,900**	**65**
	70	60.0	119.1	**6,600**	**8,900**	**8,900**	**8,900**	**7,800**	**70**
	75	57.4	116.1	**5,600**	**7,800**	**7,800**	**7,800**	**6,900**	**75**
	80	54.7	112.6	**4,800**	**6,800**	**6,800**	**6,600**	**6,100**	**80**
	85	52.0	108.9	**4,100**	**6,000**	**6,000**	**6,000**	**5,400**	**85**
	90	49.1	104.7	**3,500**	**5,300**	**5,300**	**5,300**	**4,900**	**90**
	95	46.1	100.1	**2,900**	**4,600**	**4,600**	**4,600**	**4,200**	**95**
	100	42.9	95.0	**2,400**	**4,000**	**4,000**	**4,000**	**3,700**	**100**
	110	36.0	82.7	—	**3,000**	**3,000**	**3,000**	**2,800**	**110**
	120	27.5	66.3	—	**2,100**	**2,100**	**2,100**	**2,000**	**120**

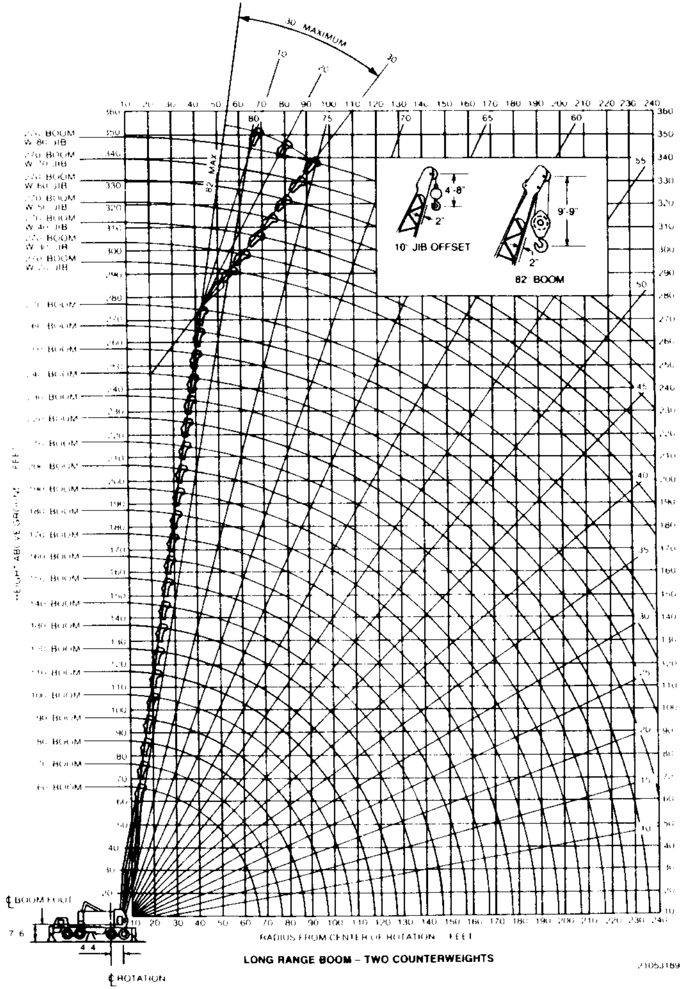
32Z2291

WARNING ⚠

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** - a machine failure may occur.

working ranges

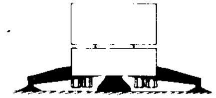


LONG RANGE BOOM - TWO COUNTERWEIGHTS

2105J189

two counterweights and one bumper counterweight

RATINGS
LIFT CRANE SERVICE
69" x 69" boom
long range tip (35')



"on outriggers" front float set

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
60	14	81.4	66.5	166,800	166,800	166,800
	15	80.5	66.3	166,800	166,800	166,800
	16	79.5	66.1	166,800	166,800	166,800
	17	78.5	65.9	166,800	166,800	166,800
	18	77.6	65.7	166,800	166,800	166,800
	19	76.6	65.4	166,800	166,800	166,800
	20	75.6	65.1	166,800	166,800	166,800
	21	74.6	64.9	166,800	166,800	166,800
	22	73.6	64.6	164,500	164,500	164,500
	23	72.6	64.2	157,300	157,300	157,300
	24	71.6	63.9	150,700	150,700	150,700
	25	70.6	63.5	144,700	144,700	144,700
	26	69.5	63.2	139,100	139,100	139,100
	27	68.5	62.8	134,000	134,000	134,000
	28	67.5	62.3	129,200	129,200	129,200
	29	66.4	61.9	124,700	124,700	124,700
	30	65.4	61.4	120,800	120,800	120,800
	32	63.3	60.4	113,000	113,000	113,000
	34	61.1	59.4	106,400	106,400	106,400
	36	58.9	58.2	99,900	99,900	100,500
	38	56.6	56.9	92,300	92,300	95,200
	40	54.2	55.4	85,700	85,700	90,400
	45	48.1	51.3	72,600	72,600	80,400
	50	41.2	46.1	62,700	62,700	70,900
	55	33.1	39.3	55,100	55,100	60,400
	60	22.6	29.5	48,200	48,200	48,200

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
70	15	81.8	76.4	166,800	166,800	166,800
	16	81.0	76.3	166,800	166,800	166,800
	17	80.2	76.1	166,800	166,800	166,800
	18	79.4	75.9	166,800	166,800	166,800
	19	78.5	75.7	166,800	166,800	166,800
	20	77.7	75.5	166,800	166,800	166,800
	21	76.8	75.2	166,800	166,800	166,800
	22	76.0	75.0	164,500	164,500	164,500
	23	75.1	74.7	157,300	157,300	157,300
	24	74.3	74.4	150,700	150,700	150,700
	25	73.4	74.1	144,700	144,700	144,700
	26	72.6	73.8	139,100	139,100	139,100
	27	71.7	73.4	134,000	134,000	134,000
	28	70.9	73.1	129,200	129,200	129,200
	29	70.0	72.7	124,700	124,700	124,700
	30	69.1	72.3	120,800	120,800	120,800
	32	67.3	71.5	113,000	113,000	113,000
	34	65.5	70.6	106,400	106,400	106,400
	36	63.7	69.6	99,900	99,900	100,500
	38	61.9	68.6	92,300	92,300	95,200
	40	60.0	67.4	85,600	85,600	90,400
	45	55.1	64.2	72,500	72,500	90,400
	50	49.9	60.2	62,700	62,700	70,700
	55	44.2	55.5	55,100	55,100	62,300
	60	37.9	49.6	49,000	49,000	55,600
	65	30.5	42.1	44,000	44,000	49,400
	70	20.9	31.4	39,800	39,800	40,200

32Z2291

DEDUCT FROM RATED BOOM LOADS WHEN LIFTING OVER BOOM POINT WITH JIB ATTACHED

JIB LENGTH	20 FT	30 FT	40 FT	50 FT	60 FT	70 FT	80 FT
EFFECTIVE JIB WT. — LBS	1500	1500	2000	2500	3000	3300	3600
EFFECTIVE JIB HOOK WT.	1600	1600	1600	1600	1600	1600	1600
ALSO DEDUCT TWICE THE WEIGHT OF ANY LOAD SUSPENDED FROM JIB HOOK.							

WARNING ⚠

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed, as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

"on outriggers" front float set

two counterweights and one bumper counterweight

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∆°	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
80	17	81.4	86.2	168,800	168,000	168,000
	18	80.7	86.1	168,800	168,800	168,800
	19	80.0	85.9	168,800	168,800	168,800
	20	79.2	85.7	168,800	195,300	168,800
	21	78.5	85.5	168,800	168,800	168,800
	22	77.8	85.3	164,500	164,500	164,500
	23	77.0	85.0	157,300	157,300	157,300
	24	76.3	84.8	150,700	150,700	150,700
	25	75.6	84.5	144,700	144,700	144,700
	26	74.8	84.2	139,100	139,100	139,100
	27	74.1	83.9	134,000	134,000	134,000
	28	73.3	83.6	129,200	129,300	139,200
	29	72.6	83.3	124,700	124,700	124,700
	30	71.8	83.0	120,800	120,800	120,800
	32	70.3	82.3	113,000	113,000	113,000
	34	68.8	81.5	106,400	100,400	106,400
	36	67.2	80.7	99,600	99,900	100,500
	38	65.7	79.8	92,300	92,300	95,200
	40	64.1	78.8	85,700	85,700	90,400
	45	60.0	76.1	72,900	72,900	80,400
	50	55.7	72.9	62,700	62,700	70,700
	55	51.2	69.1	55,100	55,100	62,300
	60	46.4	64.6	49,000	49,000	55,700
	65	41.2	59.3	44,100	44,100	50,200
	70	35.4	52.9	30,900	39,900	45,500
	75	28.5	44.7	36,500	36,500	41,400
	80	19.5	33.1	33,400	33,400	34,300

Boom Length (ft)	Load Radius (ft)	Boom Angle ∆°	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
90	18	81.7	96.2	164,800	164,800	164,800
	19	81.1	96.0	162,500	162,800	162,800
	20	80.5	95.9	161,200	161,200	161,200
	21	79.8	95.7	159,600	159,600	159,500
	22	79.2	95.5	158,200	158,200	158,200
	23	78.5	95.3	156,500	156,500	156,800
	24	77.9	95.1	150,700	150,790	150,700
	25	77.2	94.8	144,700	144,700	144,700
	26	76.5	94.6	139,100	139,100	139,100
	27	75.9	94.3	134,000	134,000	134,000
	28	75.2	94.1	129,200	129,200	129,200
	29	74.6	93.8	124,700	124,700	124,700
	30	73.9	93.5	120,500	120,800	120,800
	32	72.6	92.9	113,000	113,000	113,000
	34	71.2	92.2	106,400	106,400	106,400
	36	69.9	91.5	99,700	99,700	100,800
	38	68.5	90.7	92,200	92,200	95,200
	40	67.1	89.8	85,500	85,500	90,400
	45	63.6	87.5	72,400	72,400	80,400
	50	60.0	84.7	62,500	62,500	70,500
	55	56.2	81.6	55,000	55,000	62,100
	60	52.3	77.9	48,900	48,900	55,500
	65	48.1	73.7	43,900	43,900	50,000
	70	43.6	68.7	39,700	39,700	45,300
	75	38.7	62.9	36,300	36,300	41,400
	80	33.3	55.9	33,300	33,300	38,200
	85	26.8	47.1	30,700	30,700	35,100
	90	18.3	34.7	28,400	28,400	29,400

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∆°	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
100	19	82.0	106.2	168,800	168,800	168,800
	20	81.4	106.0	168,000	168,800	168,800
	21	80.8	105.8	168,800	160,000	168,800
	22	80.3	105.7	164,500	164,000	164,500
	23	79.7	105.5	157,300	157,300	157,300
	24	79.1	105.3	150,700	150,700	150,700
	25	78.5	105.1	144,700	144,700	144,700
	26	77.9	104.9	139,100	139,100	139,100
	27	77.3	104.6	134,000	134,000	134,000
	28	76.7	104.4	129,200	129,200	129,300
	29	76.1	104.1	124,700	124,700	124,700
	30	75.6	103.9	120,800	120,800	120,800
	32	74.4	103.3	113,000	113,000	113,000
	34	73.2	102.7	106,400	106,400	106,400
	36	72.0	102.1	99,700	99,700	100,500
	38	70.8	101.4	92,100	92,100	95,200
	40	69.5	100.6	85,400	85,400	90,400
	45	66.4	98.6	72,300	72,300	80,400
	50	63.3	96.2	62,400	62,400	70,400
	55	60.0	93.4	54,900	54,900	62,000
	60	56.6	90.3	48,800	48,800	55,400
	65	53.1	86.7	43,800	43,800	40,900
	70	49.4	82.6	39,800	39,800	45,300
	75	45.5	77.9	36,200	36,200	41,400
	80	41.3	72.5	33,200	33,200	38,100
	85	36.7	66.3	30,900	30,600	35,200
	90	31.5	58.7	28,300	28,300	32,700
	95	25.4	49.3	28,300	28,300	30,300
	100	19.2	39.4	24,500	24,500	25,600

Boom Length (ft)	Load Radius (ft)	Boom Angle ∆°	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
110	21	81.7	116.0	140,100	140,100	140,100
	22	81.1	115.8	138,800	138,900	138,900
	23	80.6	115.6	135,400	135,400	135,400
	24	80.1	115.5	133,800	133,800	133,800
	25	79.6	115.3	132,300	132,300	132,300
	26	79.0	115.1	130,900	130,900	130,900
	27	78.5	114.9	129,400	129,400	129,400
	28	78.0	114.7	128,100	128,100	128,100
	29	77.4	114.4	124,700	124,700	124,700
	30	76.9	114.2	120,600	120,600	120,600
	32	75.8	113.7	113,900	113,000	113,000
	34	74.7	113.1	106,400	106,400	106,400
	36	73.7	112.6	99,500	99,500	100,500
	38	72.6	111.9	92,000	92,000	95,200
	40	71.5	111.3	85,300	85,300	90,400
	45	68.7	109.4	72,200	72,200	80,400
	50	65.9	107.3	62,300	62,300	70,300
	55	63.0	104.8	54,900	54,800	61,900
	60	60.0	102.1	48,600	49,600	55,300
	65	56.9	98.9	43,600	43,600	49,700
	70	53.7	95.4	38,500	39,500	45,100
	75	50.4	91.5	36,100	36,100	41,200
	80	46.9	87.0	33,100	33,100	38,000
	85	43.2	82.0	30,500	30,500	35,100
	90	39.2	76.2	28,200	28,200	32,600
	85	34.9	69.4	26,200	26,200	30,300
	100	30.0	61.4	24,400	24,400	28,300
	110	18.3	41.0	21,400	21,400	22,400

32Z2291

WARNING ⚠

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Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

"on outriggers" front float set

two counterweights and one bumper counterweight

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
160	28	81.8	165.5	88,400	88,400	88,400
	29	81.4	165.3	87,800	87,500	87,800
	30	81.0	165.2	86,800	86,800	86,800
	32	80.3	164.8	85,800	85,800	85,800
	34	79.6	164.5	84,300	84,300	84,300
	36	78.9	164.1	81,400	81,400	81,400
	38	78.1	163.6	80,100	80,100	80,100
	40	77.4	163.2	78,900	78,800	78,800
	45	75.5	162.0	71,200	71,300	76,800
	50	73.7	160.6	61,200	61,200	69,200
	55	71.8	159.0	53,800	53,800	60,000
	60	69.9	157.2	47,800	47,800	54,200
	65	68.0	155.3	42,800	42,800	48,700
	70	66.0	153.1	38,400	38,400	44,000
	75	64.1	150.8	35,100	35,190	40,100
	80	62.0	148.2	32,100	32,100	37,000
	85	60.0	145.4	29,500	29,500	34,100
	90	57.9	142.3	27,200	27,200	31,500
	95	55.8	139.0	25,200	25,200	29,300
	100	54.0	136.2	23,400	23,400	27,300
	110	49.4	128.2	20,400	20,400	23,800
	120	44.5	118.8	18,100	18,100	21,100
	130	39.1	107.5	16,000	16,000	18,900
	140	33.0	93.6	14,200	14,200	17,000
	150	25.6	75.5	12,700	12,700	15,300
	160	15.1	48.1	11,400	11,400	11,700

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
170	29	81.9	175.4	88,100	88,100	88,100
	30	81.6	175.3	87,800	87,800	87,500
	32	80.9	175.0	87,000	87,000	87,000
	34	80.2	174.6	85,800	85,800	85,800
	36	79.5	174.3	84,400	84,400	84,400
	38	78.8	173.9	81,700	81,700	81,700
	40	78.1	173.4	80,500	80,500	80,500
	45	76.4	172.3	71,000	71,000	79,800
	50	74.7	171.0	61,000	61,900	69,000
	55	72.9	169.5	53,500	53,500	60,500
	60	71.1	167.8	47,300	47,300	53,800
	65	69.3	166.0	42,300	42,300	48,400
	70	67.5	164.0	38,100	38,100	43,700
	75	65.7	161.8	34,800	34,800	39,800
	80	63.8	159.4	31,800	31,800	36,700
	85	61.9	156.8	29,200	29,200	33,800
	90	60.0	154.0	26,900	26,900	31,200
	95	58.0	151.0	24,800	24,800	29,000
	100	56.4	148.4	23,100	23,100	27,000
	110	52.3	141.1	20,100	20,100	23,800
	120	47.8	132.7	17,800	17,800	20,800
	130	43.1	122.8	15,700	15,700	18,800
	140	37.9	110.9	14,000	14,000	16,700
	150	31.9	96.4	12,400	12,400	15,000
	160	24.8	77.7	11,100	11,100	13,500
	170	14.7	49.4	10,000	10,000	10,100

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
180	31	81.7	185.3	73,000	73,800	73,000
	32	81.4	185.1	72,500	72,500	72,500
	34	80.8	184.8	71,800	71,600	71,800
	36	80.1	184.4	70,800	70,800	70,800
	38	79.5	184.1	69,700	69,700	69,700
	40	78.8	183.7	68,800	68,800	68,800
	45	77.2	182.6	66,800	66,500	66,800
	50	75.5	181.3	60,800	60,800	64,200
	55	73.9	179.9	53,300	53,300	60,200
	60	72.2	178.4	47,100	47,100	53,700
	65	70.5	176.7	42,100	42,100	48,100
	70	68.8	174.8	38,000	38,000	43,500
	75	67.1	172.8	34,800	34,800	38,800
	80	65.4	170.5	31,800	31,800	36,500
	85	63.6	168.1	29,000	29,000	33,500
	90	61.8	165.5	26,700	26,700	31,000
	95	60.0	162.7	24,700	24,700	29,700
	100	58.5	160.3	22,000	22,000	26,700
	110	54.7	153.6	19,800	19,800	23,300
	120	50.7	145.9	17,800	17,800	20,800
	130	46.4	137.0	15,800	15,500	18,400
	140	41.8	126.6	13,700	13,790	16,500
	150	36.8	114.3	12,200	12,200	14,800
	160	31.0	99.2	10,800	10,800	13,300
	170	24.1	79.9	9,800	9,800	11,800
	180	14.2	50.7	8,800	8,800	8,800

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
190	32	81.9	195.2	66,100	66,100	66,100
	34	81.2	194.9	65,700	65,700	65,700
	36	80.6	194.6	65,500	65,500	65,500
	38	80.0	194.2	64,800	64,800	64,900
	40	79.4	193.9	64,100	64,100	64,100
	45	77.9	192.8	62,100	62,100	62,100
	50	76.3	191.7	60,000	60,000	60,000
	55	74.8	190.3	53,100	53,100	58,100
	60	73.2	188.9	46,900	46,900	53,500
	65	71.6	187.3	41,800	41,800	47,800
	70	70.0	185.5	38,000	38,000	43,300
	75	68.4	183.6	34,400	34,400	39,300
	80	66.8	181.5	31,400	31,400	36,200
	85	65.1	179.2	28,800	29,800	33,300
	90	63.4	176.8	26,500	26,500	30,800
	95	61.7	174.2	24,400	24,400	28,500
	100	60.3	171.9	22,700	22,700	26,500
	110	56.8	165.8	19,600	19,600	23,100
	120	53.1	158.7	17,400	17,400	20,300
	130	49.2	150.6	15,300	15,300	18,200
	140	45.1	141.2	13,500	13,500	16,300
	150	40.6	130.3	12,000	12,000	14,600
	160	35.7	117.5	10,700	10,700	13,100
	170	30.2	101.9	9,800	9,800	11,800
	180	23.4	81.9	8,500	8,800	10,400
	190	13.8	51.9	7,600	7,600	7,600

32Z2291

WARNING ⚠

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed, as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

"on outriggers" front float set

two counterweights and one bumper counterweight

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Side	Rated Load (lbs) Over Rear
200	33	82.0	205.2	59,200	59,200	59,200
	34	81.7	205.0	59,100	59,100	59,100
	36	81.1	204.7	59,000	59,000	59,000
	38	80.5	204.4	58,800	58,800	58,900
	40	79.9	204.0	58,700	58,700	58,700
	45	78.5	203.1	57,900	57,900	57,900
	50	77.0	201.9	57,300	57,200	57,200
	55	75.5	200.7	52,800	52,800	56,500
	60	74.1	199.3	45,800	46,600	52,800
	65	72.6	197.8	41,800	41,800	47,800
	70	71.0	196.1	37,700	37,700	43,000
	75	69.5	194.3	34,100	34,100	39,000
	80	68.0	192.3	31,100	31,100	35,900
	85	66.4	190.2	28,500	28,500	33,000
	90	64.9	187.9	26,200	26,200	30,500
	95	63.3	185.5	24,100	24,100	28,200
	100	62.0	183.4	22,300	22,300	26,200
	110	58.7	177.6	19,300	19,300	22,800
	120	55.2	171.1	17,100	17,100	20,000
	130	51.7	163.6	15,000	15,000	17,900
	140	47.9	155.0	13,200	13,200	15,900
	150	43.9	145.3	11,700	11,700	14,300
	160	39.6	134.0	10,400	10,400	12,800
	170	34.8	120.7	9,300	9,300	11,500
	180	29.4	104.6	8,300	8,300	10,400
	190	22.8	84.0	7,400	7,400	8,900
	200	13.5	53.0	6,300	6,300	6,300

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Side	Rated Load (lbs) Over Rear
210	35	81.8	215.0	51,100	51,100	51,100
	36	81.5	214.8	51,000	51,000	51,000
	38	81.0	214.5	50,700	50,700	50,700
	40	80.4	214.2	50,400	50,400	50,400
	45	79.0	213.3	49,800	49,800	49,800
	50	77.6	212.2	49,300	49,300	49,300
	55	76.2	211.0	48,700	46,700	48,700
	60	74.8	209.7	46,400	46,400	47,800
	65	73.4	208.3	41,400	41,400	46,500
	70	72.0	206.7	37,500	37,500	42,800
	75	70.5	205.0	34,000	34,000	38,800
	80	69.1	203.1	30,900	30,900	35,800
	85	67.6	201.1	28,300	28,300	32,800
	90	66.1	198.9	26,000	26,000	30,300
	95	64.6	196.6	24,000	24,000	28,000
	100	63.4	194.7	22,200	22,200	26,000
	110	60.3	189.3	19,100	19,100	22,600
	120	57.1	183.1	16,900	16,900	19,800
	130	53.8	176.2	14,800	14,800	17,800
	140	50.3	168.3	13,100	13,100	15,800
	150	46.7	159.4	11,600	11,600	14,100
	160	42.8	149.2	10,300	10,300	12,600
	170	38.6	137.5	9,100	9,100	11,400
	180	33.9	123.7	8,100	8,100	10,200
	190	28.6	107.2	7,200	7,200	9,200
	200	22.2	85.9	6,400	6,400	7,800
	210	13.2	54.2	5,400	5,400	5,400

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Side	Rated Load (lbs) Over Rear
220	36	81.9	224.9	48,300	48,300	48,300
	38	81.4	224.6	48,100	48,100	48,100
	40	80.9	224.3	46,800	46,800	46,800
	45	79.5	223.4	46,300	46,300	46,200
	50	78.2	222.4	44,800	44,800	44,800
	55	76.9	221.3	44,000	44,000	44,000
	60	75.5	220.1	43,400	43,400	43,400
	65	74.2	218.7	41,100	41,100	42,600
	70	72.8	217.2	37,200	37,200	41,400
	75	71.5	215.6	33,700	33,700	38,500
	80	70.1	213.8	30,800	30,600	35,500
	85	68.7	211.9	28,000	28,000	32,500
	90	67.3	209.8	25,700	25,700	30,000
	95	66.1	208.1	23,700	23,700	27,700
	100	64.7	205.8	21,900	21,900	25,700
	110	61.8	200.7	18,800	18,800	22,300
	120	58.8	195.0	16,600	16,800	19,500
	130	55.7	188.5	14,500	14,500	17,500
	140	52.5	181.2	12,800	12,800	15,500
	150	49.1	172.9	11,300	11,300	13,800
	160	45.5	163.6	10,000	10,000	12,300
	170	41.7	153.1	8,800	8,800	11,000
	180	37.6	140.9	7,800	7,800	9,900
	190	33.1	126.7	6,800	6,900	8,900
	200	28.0	109.7	6,100	6,100	8,000
	210	21.7	87.9	5,400	5,400	6,500
	220	12.8	55.3	4,300	4,300	4,300

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Side	Rated Load (lbs) Over Rear
230	38	81.8	234.8	40,900	40,900	40,900
	40	81.3	234.5	40,700	40,700	40,700
	45	80.0	233.6	40,200	40,200	40,200
	50	78.7	232.7	39,600	39,600	39,600
	55	77.5	231.6	39,100	39,100	39,100
	60	76.2	230.4	38,600	38,600	38,600
	65	74.9	229.1	38,100	38,100	38,100
	70	73.6	227.6	37,000	37,000	37,800
	75	72.3	226.1	33,400	33,400	38,500
	80	71.0	224.4	30,400	30,400	35,000
	85	69.7	222.6	27,800	27,800	32,300
	90	68.3	220.7	25,500	25,500	29,700
	95	67.2	219.0	23,400	23,400	27,500
	100	65.9	216.8	21,600	21,800	25,500
	110	63.1	212.0	18,900	18,900	22,000
	120	60.3	206.6	16,400	16,400	19,200
	130	57.4	200.5	14,300	14,300	17,200
	140	54.3	193.6	12,500	12,500	15,200
	150	51.2	186.0	11,000	11,000	13,600
	160	47.9	177.4	9,700	9,700	12,100
	170	44.5	167.8	8,600	8,600	10,800
	180	40.8	156.8	7,600	7,600	9,700
	190	36.8	144.3	6,700	6,700	8,700
	200	32.4	129.7	5,900	5,900	7,600
	210	27.3	112.1	5,200	5,200	7,000
	220	21.2	89.7	4,500	4,500	5,400
	230	12.6	56.4	3,300	3,300	3,300

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WARNING ⚠

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed, as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

"on outriggers" front float set

two counterweights and one bumper counterweight

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle $\measuredangle°$	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
240	39	81.9	244.7	37,000	37,000	37,000
	40	81.6	244.6	36,900	36,800	36,800
	45	80.4	243.8	36,500	36,800	36,500
	50	79.2	242.8	36,100	36,100	36,100
	55	78.0	241.8	35,700	35,700	35,700
	60	76.8	240.7	35,500	35,500	35,800
	65	75.5	239.4	35,200	35,300	35,200
	70	74.3	238.1	34,200	34,200	34,200
	75	73.1	236.6	32,400	32,400	32,400
	80	71.8	235.0	30,100	30,100	30,700
	85	70.5	233.3	27,500	27,500	29,200
	90	69.5	231.8	25,200	25,200	27,800
	95	68.2	229.8	23,100	23,100	27,800
	100	66.9	227.8	21,300	21,300	25,200
	110	64.3	223.2	18,800	18,800	21,800
	120	61.6	218.0	16,100	16,100	19,000
	130	58.9	212.3	14,000	14,000	17,000
	140	56.0	205.8	12,300	12,300	15,000
	150	53.1	198.7	10,800	10,800	13,300
	160	50.1	190.7	9,400	9,400	11,800
	170	46.9	181.8	8,300	8,300	10,500
	180	43.5	171.8	7,300	7,300	9,400
	190	39.9	160.5	6,400	6,400	8,400
	200	36.0	147.5	5,800	5,800	7,500
	210	31.7	132.5	4,900	4,900	6,700
	220	26.7	114.5	4,200	4,200	5,900
	230	20.8	91.6	3,700	3,700	5,300
	240	12.3	57.5	3,100	3,100	4,200

Boom Length (ft)	Load Radius (ft)	Boom Angle $\measuredangle°$	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
250	40	82.0	254.7	33,300	33,300	33,300
	45	80.8	253.9	32,800	32,800	32,800
	50	79.6	253.0	32,300	32,300	32,300
	55	78.5	252.0	31,800	31,800	31,800
	60	77.3	251.0	30,800	30,800	30,900
	65	76.1	249.8	30,000	30,000	30,900
	70	74.9	248.4	29,500	29,500	29,500
	75	73.8	247.0	29,500	29,800	29,500
	80	72.6	245.5	29,300	29,300	29,300
	85	71.3	243.8	27,200	27,200	28,000
	90	70.4	242.4	24,900	24,900	25,800
	95	69.2	240.6	22,800	22,800	25,500
	100	67.9	238.6	21,000	21,000	24,700
	110	65.4	234.2	18,300	18,300	21,400
	120	62.9	229.4	15,800	15,800	18,700
	130	60.3	223.9	13,700	13,700	16,800
	140	57.6	217.8	11,900	11,900	14,700
	150	54.8	211.1	10,400	10,400	13,000
	160	52.0	203.6	9,100	9,100	11,500
	170	49.0	195.3	8,000	8,000	10,200
	180	45.9	186.0	7,000	7,000	9,100
	190	42.6	175.7	6,100	6,100	8,000
	200	39.0	164.0	5,300	5,300	7,100
	210	35.2	150.7	4,600	4,600	6,300
	220	31.0	135.3	3,900	3,900	5,800
	230	26.2	116.8	3,300	3,300	4,900
	240	20.3	93.4	2,800	2,800	4,300
	250	12.0	58.5	2,300	2,300	3,100

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle $\measuredangle°$	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
260	42	81.8	264.5	30,100	30,100	30,100
	45	81.2	264.0	29,800	29,800	29,800
	50	80.0	263.2	29,300	29,300	29,300
	55	78.9	262.2	28,900	28,800	28,800
	60	78.0	261.4	25,100	25,100	25,100
	65	76.9	260.3	24,200	24,200	24,200
	70	75.8	259.1	23,500	23,500	23,500
	75	74.6	257.7	22,900	22,900	23,500
	80	73.5	256.3	22,300	22,300	22,300
	85	72.3	254.7	21,800	21,800	21,800
	90	71.2	253.0	21,500	21,500	21,500
	95	70.0	251.3	21,400	21,400	21,400
	100	68.8	249.4	20,500	20,800	21,400
	110	66.4	245.2	18,100	18,100	20,900
	120	64.0	240.6	15,800	15,800	18,800
	130	61.5	235.4	13,500	13,500	16,500
	140	59.0	229.6	11,800	11,800	14,500
	150	56.4	223.2	10,300	10,300	12,800
	160	53.7	216.2	8,800	8,800	11,300
	170	50.9	208.4	7,800	7,800	10,000
	180	48.0	199.8	6,800	6,800	8,800
	190	44.9	190.2	5,900	5,800	7,900
	200	41.7	179.5	5,100	5,100	7,000
	210	38.2	167.5	4,400	4,400	6,200
	220	34.5	153.9	3,700	3,700	5,400
	230	30.4	138.0	3,100	3,100	4,800
	240	25.7	119.1	2,800	2,800	4,200
	250	19.9	95.1	—	—	3,600
	260	11.8	59.6	—	—	2,400

Boom Length (ft)	Load Radius (ft)	Boom Angle $\measuredangle°$	Boom Point Elev (ft)	Rated Load (lbs) 360°	Over Side	Over Rear
270	43	82.1	274.6	25,000	25,000	25,000
	45	81.7	274.3	24,500	24,500	24,500
	50	80.6	273.5	23,900	23,800	23,800
	55	79.6	272.6	23,300	23,300	23,300
	60	78.5	271.6	22,500	22,500	22,500
	65	77.4	270.6	21,700	21,700	21,700
	70	76.3	269.4	21,000	21,000	21,000
	75	75.2	268.1	20,300	20,300	20,300
	80	74.1	266.7	19,500	19,500	19,500
	85	73.0	265.2	19,100	19,100	19,100
	90	71.9	263.6	18,700	18,700	18,700
	95	70.8	261.9	18,000	18,000	18,000
	100	69.6	260.1	17,800	17,800	17,800
	110	67.4	256.1	17,100	17,100	17,100
	120	65.0	251.6	15,300	15,300	16,900
	130	62.7	246.7	13,200	13,200	16,100
	140	60.2	241.2	11,400	11,400	14,100
	150	57.8	235.2	9,900	9,900	12,400
	160	55.2	228.5	8,600	8,600	11,000
	170	52.6	221.2	7,500	7,500	9,700
	180	49.9	213.1	6,500	6,500	8,500
	190	47.0	204.2	5,600	5,600	7,500
	200	44.0	194.3	4,800	4,800	6,600
	210	40.9	183.3	4,000	4,000	5,800
	220	37.5	170.9	3,400	3,400	5,100
	230	33.8	156.9	2,800	2,800	4,400
	240	29.8	140.7	—	—	3,800
	250	25.2	121.3	—	—	3,300
	260	19.6	96.9	—	—	2,800

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WARNING

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed, as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

RATINGS
LIFT CRANE SERVICE
69" x 69" boom
long range tip (35')

two counterweights

"on outriggers"
front float set

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∠°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
60	14	81.4	66.5	166,800	166,800
	15	80.5	66.3	166,800	166,800
	16	79.5	66.1	166,800	166,800
	17	78.5	65.9	166,800	166,800
	18	77.6	65.7	166,800	166,800
	19	76.6	65.4	166,800	166,800
	20	75.6	65.1	166,800	166,800
	21	74.6	64.9	166,800	166,800
	22	73.6	64.6	164,500	164,500
	23	72.6	64.2	157,300	157,300
	24	71.6	63.9	150,700	150,700
	25	70.6	63.5	144,700	144,700
	26	69.5	63.2	139,100	139,100
	27	68.5	62.8	134,000	134,000
	28	67.5	62.3	129,200	129,200
	29	66.4	61.9	124,700	124,700
	30	65.4	61.4	120,600	120,600
	32	63.3	60.4	112,400	112,400
	34	61.1	59.4	102,700	102,700
	36	58.9	58.2	94,500	94,500
	38	56.6	56.9	87,400	87,400
	40	54.2	55.4	81,100	81,300
	45	48.1	51.3	68,700	69,000
	50	41.2	46.1	59,300	59,800
	55	33.1	39.3	52,100	52,700
	60	22.6	29.5	46,300	46,900

Boom Length (ft)	Load Radius (ft)	Boom Angle ∠°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
70	15	81.8	76.4	166,800	166,800
	16	81.0	76.3	166,800	166,800
	17	80.2	76.1	166,800	166,800
	18	79.4	75.9	166,800	166,800
	19	78.5	75.7	166,800	166,800
	20	77.7	75.5	166,800	166,800
	21	76.8	75.2	166,800	166,800
	22	76.0	75.0	164,500	164,500
	23	75.1	74.7	157,300	157,300
	24	74.3	74.4	150,700	150,700
	25	73.4	74.1	144,700	144,700
	26	72.6	73.8	139,100	139,100
	27	71.7	73.4	134,000	134,000
	28	70.9	73.1	129,200	129,200
	29	70.0	72.7	124,700	124,700
	30	69.1	72.3	120,600	120,600
	32	67.3	71.5	112,400	112,400
	34	65.5	70.6	102,600	102,600
	36	63.7	69.6	94,500	94,500
	38	61.9	68.6	87,400	87,400
	40	60.0	67.4	81,100	81,200
	45	55.1	64.2	68,700	69,000
	50	49.9	60.2	59,300	59,600
	55	44.2	55.5	52,100	52,600
	60	37.9	49.6	46,300	46,900
	65	30.5	42.1	41,600	42,100
	70	20.9	31.4	37,600	38,200

DEDUCT FROM RATED BOOM LOADS WHEN LIFTING OVER BOOM POINT WITH JIB ATTACHED

JIB LENGTH	20 FT	30 FT	40 FT	50 FT	60 FT	70 FT	80 FT
EFFECTIVE JIB WT. — LBS	1500	1500	2000	2500	3000	3300	3600
EFFECTIVE JIB HOOK WT.	1600	1600	1600	1600	1600	1600	1600
ALSO DEDUCT TWICE THE WEIGHT OF ANY LOAD SUSPENDED FROM JIB HOOK							

WARNING ⚠

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Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∠°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
80	17	81.4	86.2	166,800	166,800
	18	80.7	86.1	166,800	166,800
	19	80.0	85.9	166,800	166,800
	20	79.2	85.7	166,800	166,800
	21	78.5	85.5	166,800	166,800
	22	77.8	85.3	164,500	164,500
	23	77.0	85.0	157,300	157,300
	24	76.3	84.8	150,700	150,700
	25	75.6	84.5	144,700	144,700
	26	74.8	84.2	139,100	139,100
	27	74.1	83.9	134,000	134,000
	28	73.3	83.6	129,200	129,200
	29	72.6	83.3	124,700	124,700
	30	71.8	83.0	120,600	120,600
	32	70.3	82.3	112,500	112,500
	34	68.8	81.5	102,700	102,700
	36	67.2	80.7	94,500	94,500
	38	65.7	79.8	87,400	87,400
	40	64.1	78.8	81,100	81,200
	45	60.0	76.1	68,700	69,000
	50	55.7	72.9	59,300	59,600
	55	51.2	69.1	52,100	52,700
	60	46.4	64.6	46,300	46,900
	65	41.2	59.3	41,600	42,200
	70	35.4	52.9	37,700	38,200
	75	28.5	44.7	34,400	34,900
	80	19.5	33.1	31,500	32,100
90	18	81.7	96.2	164,600	164,600
	19	81.1	96.0	162,800	162,800
	20	80.5	95.9	161,200	161,200
	21	79.8	95.7	159,600	159,600
	22	79.2	95.5	158,200	158,200
	23	78.5	95.3	156,500	156,500
	24	77.9	95.1	150,700	150,700
	25	77.2	94.8	144,700	144,700
	26	76.5	94.6	139,100	139,100
	27	75.9	94.3	134,000	134,000
	28	75.2	94.1	129,200	129,200
	29	74.6	93.8	124,700	124,700
	30	73.9	93.5	120,600	120,600
	32	72.6	92.9	112,300	112,300
	34	71.2	92.2	102,500	102,500
	36	69.9	91.5	94,400	94,400
	38	68.5	90.7	87,200	87,200
	40	67.1	89.8	81,000	81,100
	45	63.6	87.5	68,500	68,800
	50	60.0	84.7	59,100	59,600
	55	56.2	81.6	52,000	52,500
	60	52.3	77.9	46,200	46,700
	65	48.1	73.7	41,400	42,000
	70	43.6	68.7	37,600	38,100
	75	38.7	62.9	34,200	34,600
	80	33.3	55.9	31,400	31,900
	85	26.8	47.1	28,900	29,400
	90	20.3	37.7	26,700	27,200

Boom Length (ft)	Load Radius (ft)	Boom Angle ∠°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
100	19	82.0	106.2	166,800	166,800
	20	81.4	106.0	166,800	166,800
	21	80.8	105.8	166,800	166,800
	22	80.3	105.7	164,500	164,500
	23	79.7	105.5	157,300	157,300
	24	79.1	105.3	150,700	150,700
	25	78.5	105.1	144,700	144,700
	26	77.9	104.9	139,100	139,100
	27	77.3	104.6	134,000	134,000
	28	76.7	104.4	129,200	129,200
	29	76.1	104.1	124,700	124,700
	30	75.6	103.9	120,600	120,600
	32	74.4	103.3	112,300	112,300
	34	73.2	102.7	102,400	102,400
	36	72.0	102.1	94,300	94,300
	38	70.8	101.4	87,100	87,100
	40	69.5	100.6	80,900	81,000
	45	66.4	98.6	68,400	68,700
	50	63.3	96.2	59,000	59,500
	55	60.0	93.4	51,900	52,400
	60	56.6	90.3	46,100	46,600
	65	53.1	86.7	41,300	41,900
	70	49.4	82.6	37,500	38,100
	75	45.5	77.9	34,200	34,700
	80	41.3	72.5	31,300	31,600
	85	36.7	66.3	28,800	29,400
	90	32.6	60.4	26,700	27,200
	95	26.7	51.4	24,700	25,200
	100	19.2	39.4	23,000	23,500
110	21	81.7	116.0	140,100	140,100
	22	81.1	115.8	136,900	136,900
	23	80.6	115.6	135,400	135,400
	24	80.1	115.5	133,800	133,800
	25	79.6	115.3	132,300	132,300
	26	79.0	115.1	130,900	130,900
	27	78.5	114.9	129,400	129,400
	28	78.0	114.7	128,100	128,100
	29	77.4	114.4	124,700	124,700
	30	76.9	114.2	120,600	120,600
	32	75.8	113.7	112,100	112,100
	34	74.7	113.1	102,300	102,300
	36	73.7	112.6	94,100	94,100
	38	72.6	111.9	87,000	87,000
	40	71.5	111.3	80,800	80,800
	45	68.7	109.4	68,300	68,600
	50	65.9	107.3	58,900	59,300
	55	63.0	104.8	51,600	52,300
	60	60.0	102.1	45,900	46,500
	65	56.9	98.9	41,200	41,700
	70	53.7	95.4	37,400	37,900
	75	50.4	91.5	34,100	34,600
	80	46.9	87.0	31,200	31,700
	85	43.2	82.0	28,700	29,200
	90	40.1	77.4	26,600	27,100
	95	35.8	70.9	24,600	25,100
	100	31.0	63.2	22,900	23,400
	110	18.3	41.0	20,100	20,500

"on outriggers" front float set

two counterweights

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∠°	Boom Point Elev (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
120	**22**	81.9	125.9	**147,500**	**147,500**
	23	81.4	125.8	**145,900**	**145,900**
	24	80.9	125.6	**144,300**	**144,300**
	25	80.4	125.4	**142,700**	**142,700**
	26	80.0	125.3	**139,100**	**139,100**
	27	79.5	125.1	**134,000**	**134,000**
	28	79.0	124.9	**129,200**	**129,200**
	29	78.5	124.7	**124,700**	**124,700**
	30	78.0	124.5	**120,600**	**120,600**
	32	77.0	124.0	**112,000**	**112,000**
	34	76.0	123.5	**102,100**	**102,100**
	36	75.1	123.0	**93,900**	**93,900**
	38	74.1	122.4	**96,800**	**85,800**
	40	73.1	121.8	**80,600**	**80,900**
	45	70.5	120.1	**68,100**	**68,400**
	50	68.0	118.2	**58,700**	**59,100**
	55	65.4	116.0	**51,500**	**52,000**
	60	62.7	113.5	**45,700**	**46,200**
	65	60.0	110.7	**40,900**	**41,500**
	70	57.2	107.6	**37,100**	**37,700**
	75	54.3	104.2	**33,800**	**34,300**
	80	51.3	100.3	**30,900**	**31,500**
	85	48.1	96.0	**28,500**	**29,000**
	90	45.5	92.2	**26,300**	**26,800**
	95	42.0	86.9	**24,400**	**24,900**
	100	38.3	80.9	**22,700**	**23,200**
	110	29.6	65.9	**19,800**	**20,200**
	120	17.5	42.5	**17,500**	**17,900**
130	**24**	81.6	135.7	**115,700**	**115,700**
	25	81.2	135.6	**114,500**	**114,500**
	26	80.7	135.4	**113,400**	**113,400**
	27	80.3	135.2	**112,400**	**112,400**
	28	79.8	135.1	**111,300**	**111,300**
	29	79.4	134.9	**108,400**	**108,400**
	30	78.9	134.7	**107,400**	**107,400**
	32	78.0	134.3	**105,200**	**105,200**
	34	77.1	133.8	**101,900**	**101,900**
	36	76.2	133.3	**93,800**	**93,800**
	38	75.3	132.8	**86,600**	**86,600**
	40	74.4	132.2	**80,400**	**80,400**
	45	72.1	130.7	**67,900**	**68,200**
	50	69.8	128.9	**58,500**	**58,900**
	55	67.4	126.9	**51,300**	**51,800**
	60	65.0	124.7	**45,500**	**46,000**
	65	62.5	122.2	**40,700**	**41,300**
	70	60.0	119.4	**37,000**	**37,500**
	75	57.4	116.3	**33,800**	**34,200**
	80	54.7	112.9	**30,800**	**31,300**
	85	52.0	109.1	**28,300**	**28,800**
	90	49.7	105.8	**26,100**	**26,600**
	95	46.7	101.3	**24,200**	**24,700**
	100	43.6	96.3	**22,500**	**23,000**
	110	36.7	84.3	**19,600**	**20,100**
	120	28.4	68.4	**17,400**	**17,800**
	130	16.8	44.0	**15,400**	**15,600**
140	**25**	81.8	145.7	**105,000**	**105,000**
	26	81.4	145.6	**104,000**	**104,000**
	27	81.0	145.4	**103,200**	**103,200**
	28	80.6	145.2	**102,300**	**102,300**
	29	80.2	145.0	**101,400**	**101,400**
	30	79.7	144.9	**100,500**	**100,500**
	32	78.9	144.5	**98,600**	**98,600**
	34	78.1	144.1	**96,800**	**96,900**
	36	77.2	143.6	**93,600**	**93,600**
	38	76.4	143.1	**86,400**	**86,400**
	40	75.5	142.6	**80,200**	**80,200**
	45	73.4	141.2	**67,700**	**67,900**
	50	71.3	139.6	**58,200**	**58,600**
	55	69.1	137.7	**51,100**	**51,600**
	60	66.9	135.7	**45,200**	**45,700**
	65	64.6	133.4	**40,500**	**41,000**
	70	62.3	130.8	**36,700**	**37,200**
	75	60.0	128.1	**33,400**	**33,900**
	80	57.6	125.0	**30,500**	**31,000**
	85	55.1	121.6	**28,000**	**28,500**
	90	53.1	118.7	**25,800**	**26,300**
	95	50.5	114.7	**23,900**	**24,400**
	100	47.8	110.3	**22,200**	**22,700**
	110	41.9	100.2	**19,300**	**19,800**
	120	35.3	87.5	**17,100**	**17,500**
	130	27.4	70.9	**15,100**	**15,500**
	140	16.2	45.4	**13,400**	**13,800**
150	**26**	82.0	155.7	**107,100**	**107,100**
	27	81.6	155.5	**106,300**	**106,300**
	28	81.2	155.4	**106,400**	**105,400**
	29	80.8	155.2	**104,500**	**104,500**
	30	80.4	155.0	**103,700**	**103,700**
	32	79.7	154.7	**101,900**	**101,900**
	34	78.9	154.3	**100,400**	**100,400**
	36	78.1	153.9	**93,400**	**93,400**
	38	77.3	153.4	**86,300**	**86,300**
	40	76.5	152.9	**80,000**	**80,000**
	45	74.6	151.6	**67,600**	**67,800**
	50	72.6	150.1	**58,100**	**58,500**
	55	70.5	148.4	**51,000**	**51,500**
	60	68.5	146.5	**45,100**	**45,600**
	65	66.4	144.4	**40,400**	**40,900**
	70	64.3	142.1	**36,900**	**37,100**
	75	62.2	139.5	**33,300**	**33,800**
	80	60.0	136.7	**30,400**	**30,900**
	85	57.8	133.7	**27,900**	**28,400**
	90	55.9	131.0	**25,700**	**26,200**
	95	53.6	127.4	**23,800**	**24,300**
	100	51.2	123.5	**22,100**	**22,600**
	110	46.0	114.6	**19,200**	**19,700**
	120	40.4	103.9	**17,100**	**17,500**
	130	34.1	90.6	**15,100**	**15,500**
	140	26.4	73.2	**13,400**	**13,800**
	150	15.6	46.8	**12,000**	**12,300**

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∠°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
160	**28**	81.8	165.5	**88,400**	**88,400**
	29	81.4	165.3	**87,800**	**87,800**
	30	81.0	165.2	**86,900**	**86,900**
	32	80.3	164.8	**85,900**	**85,900**
	34	79.6	164.5	**84,300**	**84,300**
	36	78.9	164.1	**81,400**	**81,400**
	38	78.1	163.6	**80,100**	**80,100**
	40	77.4	163.2	**78,800**	**78,800**
	45	75.5	162.0	**67,400**	**67,800**
	50	73.7	160.6	**57,900**	**58,300**
	55	71.8	159.0	**50,800**	**51,200**
	60	69.9	157.2	**44,800**	**45,400**
	65	68.0	155.3	**40,100**	**40,700**
	70	66.0	153.1	**36,400**	**36,800**
	75	64.1	150.8	**33,100**	**33,600**
	80	62.0	148.2	**30,200**	**30,700**
	85	60.0	145.4	**27,700**	**28,200**
	90	58.3	143.0	**25,500**	**26,000**
	95	56.2	139.7	**23,800**	**24,100**
	100	54.0	136.2	**21,800**	**22,400**
	110	49.4	128.2	**19,000**	**19,500**
	120	44.5	118.8	**16,900**	**17,300**
	130	39.1	107.5	**14,900**	**15,300**
	140	33.0	93.6	**13,200**	**13,800**
	150	25.6	75.5	**11,600**	**12,100**
	160	15.1	48.1	**10,500**	**10,900**
170	**29**	81.9	175.4	**88,100**	**88,100**
	30	81.6	175.3	**87,800**	**87,900**
	32	80.9	175.0	**87,000**	**87,000**
	34	80.2	174.6	**85,800**	**85,800**
	36	79.5	174.3	**84,500**	**84,500**
	38	78.8	173.9	**81,800**	**81,800**
	40	78.1	173.4	**79,600**	**79,800**
	45	76.4	172.3	**67,100**	**67,400**
	50	74.7	171.0	**57,600**	**58,000**
	55	72.9	169.5	**50,500**	**51,000**
	60	71.1	167.8	**44,700**	**45,100**
	65	69.3	166.0	**39,900**	**40,400**
	70	67.5	164.0	**36,100**	**36,700**
	75	65.7	161.8	**32,800**	**33,300**
	80	63.8	159.4	**29,900**	**30,400**
	85	61.9	156.8	**27,400**	**27,800**
	90	60.4	154.6	**25,200**	**25,700**
	95	58.4	151.6	**23,300**	**23,800**
	100	56.4	148.4	**21,900**	**22,100**
	110	52.3	141.1	**18,900**	**19,200**
	120	47.8	132.7	**16,600**	**17,000**
	130	43.1	122.8	**14,900**	**15,000**
	140	37.9	110.9	**12,900**	**13,300**
	150	31.9	96.4	**11,500**	**11,900**
	160	24.8	77.7	**10,300**	**10,600**
	170	14.7	49.4	**9,200**	**9,500**

32Z2291

WARNING ⚠

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed, as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

"on outriggers" front float set

two counterweights

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
180	31	81.7	185.3	73,000	73,000
	32	81.4	185.1	72,500	72,500
	34	80.8	184.8	71,800	71,800
	36	80.1	184.4	70,800	70,800
	38	79.5	184.1	69,700	69,700
	40	78.8	183.7	68,700	69,700
	45	77.2	182.6	66,500	66,500
	50	75.5	181.3	57,400	57,800
	55	73.9	179.9	50,300	50,700
	60	72.2	178.4	44,400	44,900
	65	70.5	176.7	39,800	40,100
	70	68.8	174.8	35,900	36,400
	75	67.1	172.8	32,600	33,100
	80	65.4	170.5	29,700	30,200
	85	64.0	168.6	27,200	27,700
	90	62.2	166.0	25,000	25,500
	95	60.4	163.3	23,100	23,600
	100	58.5	160.3	21,400	21,800
	110	54.7	153.6	18,700	18,900
	120	50.7	145.9	16,400	16,800
	130	46.4	137.0	14,400	14,800
	140	41.8	126.6	12,700	13,100
	150	36.8	114.3	11,300	11,600
	160	31.0	99.2	10,000	10,400
	170	24.1	79.9	9,000	9,300
	180	14.2	50.7	8,000	8,300
190	32	81.9	195.2	66,100	66,100
	34	81.2	194.9	65,700	65,700
	36	80.6	194.6	65,500	65,500
	38	80.0	194.2	64,600	64,800
	40	79.4	193.9	64,100	64,100
	45	77.9	192.8	62,000	62,000
	50	76.3	191.7	57,200	57,500
	55	74.8	190.3	50,100	50,500
	60	73.2	188.9	44,200	44,700
	65	71.6	187.3	38,400	38,900
	70	70.0	185.5	35,700	36,200
	75	68.4	183.6	32,300	32,800
	80	66.8	181.5	29,500	30,000
	85	65.4	179.7	27,000	27,500
	90	63.8	177.3	24,800	25,300
	95	62.1	174.7	22,900	23,300
	100	60.3	171.9	21,200	21,600
	110	56.8	165.8	18,500	19,000
	120	53.1	158.7	16,200	16,600
	130	49.2	150.6	14,200	14,600
	140	45.1	141.2	12,500	12,900
	150	40.6	130.3	11,100	11,400
	160	35.7	117.5	9,800	10,200
	170	30.2	101.9	8,900	9,100
	180	23.4	81.9	7,800	8,100
	190	13.8	51.9	6,900	7,200
200	33	82.0	205.2	59,200	59,200
	34	81.7	205.0	59,100	59,100
	36	81.1	204.7	59,000	59,000
	38	80.5	204.4	58,900	58,900
	40	79.9	204.0	58,700	58,700
	45	78.5	203.1	57,900	57,900
	50	77.0	201.9	56,900	57,300
	55	75.5	200.7	49,800	50,300
	60	74.1	199.3	43,900	44,400
	65	72.6	197.8	38,100	38,800
	70	71.0	196.1	35,400	35,900
	75	69.5	194.3	32,100	32,600
	80	68.0	192.3	29,200	29,700
	85	66.7	190.7	26,700	27,200
	90	65.2	188.4	24,500	25,000
	95	63.6	186.0	22,600	23,000
	100	62.0	183.4	20,900	21,300
	110	58.7	177.6	18,200	18,700
	120	55.2	171.1	15,900	16,300
	130	51.7	163.6	13,900	14,300
	140	47.9	155.0	12,200	12,900
	150	43.9	145.3	10,800	11,100
	160	39.6	134.0	9,500	9,900
	170	34.8	120.7	8,400	8,800
	180	29.4	104.6	7,500	7,800
	190	22.8	84.0	6,800	6,900
	200	13.5	53.0	5,900	6,100
210	35	81.8	215.0	51,100	51,100
	36	81.5	214.8	51,000	51,000
	38	81.0	214.5	50,700	50,700
	40	80.4	214.2	50,400	50,400
	45	79.0	213.3	49,600	49,800
	50	77.6	212.2	48,300	48,300
	55	76.2	211.0	46,700	46,700
	60	74.8	209.7	43,700	44,200
	65	73.4	208.3	38,900	39,400
	70	72.0	206.7	35,300	35,800
	75	70.5	205.0	31,900	32,400
	80	69.1	203.1	29,000	29,500
	85	67.9	201.5	26,500	27,000
	90	66.4	199.4	24,300	24,800
	95	64.9	197.1	22,400	22,900
	100	63.4	194.7	20,700	21,100
	110	60.3	189.3	18,100	18,500
	120	57.1	183.1	15,700	16,100
	130	53.8	176.2	13,700	14,100
	140	50.3	168.3	12,100	12,400
	150	46.7	159.4	10,600	11,000
	160	42.8	149.2	9,400	9,700
	170	38.6	137.5	8,300	8,600
	180	33.9	123.7	7,300	7,600
	190	28.6	107.2	6,500	6,800
	200	22.2	85.9	5,700	6,000
	210	13.2	54.2	5,100	5,300

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
220	36	81.9	224.9	46,300	46,300
	38	81.4	224.6	46,100	46,100
	40	80.9	224.3	45,800	45,800
	45	79.5	223.4	45,200	45,200
	50	78.2	222.4	44,900	44,600
	55	76.9	221.3	44,000	44,000
	60	75.5	220.1	43,400	43,400
	65	74.2	218.7	38,700	39,100
	70	72.8	217.2	35,000	35,500
	75	71.5	215.6	31,800	32,100
	80	70.1	213.8	28,700	29,200
	85	69.0	212.3	26,200	26,700
	90	67.6	210.3	24,000	24,500
	95	66.1	208.1	22,100	22,600
	100	64.7	205.8	20,400	20,800
	110	61.8	200.7	17,800	18,200
	120	58.8	195.0	15,400	15,800
	130	55.7	188.5	13,400	13,800
	140	52.5	181.2	11,800	12,100
	150	49.1	172.9	10,300	10,700
	160	45.5	163.6	9,100	9,400
	170	41.7	153.1	8,000	8,300
	180	37.6	140.9	7,000	7,300
	190	33.1	126.7	6,200	6,500
	200	28.0	109.7	5,400	5,700
	210	21.7	87.9	4,700	5,000
	220	12.8	55.3	4,100	4,300
230	38	81.8	234.8	40,900	40,900
	40	81.3	234.5	40,700	40,700
	45	80.0	233.6	40,200	40,200
	50	78.7	232.7	39,500	39,800
	55	77.5	231.6	39,100	39,100
	60	76.2	230.4	36,600	39,500
	65	74.9	229.1	36,100	38,100
	70	73.6	227.6	34,800	35,200
	75	72.3	226.1	31,400	31,900
	80	71.0	224.4	28,500	29,000
	85	69.9	223.0	26,000	26,400
	90	68.6	221.1	23,800	24,200
	95	67.2	219.0	21,800	22,300
	100	65.9	216.8	20,100	20,600
	110	63.1	212.0	17,800	18,000
	120	60.3	206.6	15,200	15,600
	130	57.4	200.5	13,200	13,600
	140	54.3	193.6	11,500	11,900
	150	51.2	186.0	10,100	10,400
	160	47.9	177.4	8,800	9,200
	170	44.5	167.8	7,800	8,100
	180	40.8	156.8	6,800	7,100
	190	36.8	144.3	5,900	6,200
	200	32.4	129.7	5,200	5,500
	210	27.3	112.1	4,500	4,800
	220	21.2	89.7	3,900	4,100
	230	12.6	56.4	3,300	3,300
240	39	81.9	244.7	37,000	37,000
	40	81.6	244.6	36,900	36,900
	45	80.4	243.8	36,500	36,500
	50	79.2	242.8	36,100	36,100
	55	78.0	241.8	35,700	35,700
	60	76.8	240.7	35,500	35,500
	65	75.5	239.4	35,200	35,200
	70	74.3	238.1	34,200	34,200
	75	73.1	236.6	31,100	31,800
	80	71.8	235.0	28,200	28,700
	85	70.8	233.6	25,700	26,200
	90	69.5	231.8	23,500	24,000
	95	68.2	229.8	21,600	22,000
	100	66.9	227.8	19,900	20,300
	110	64.3	223.2	17,300	17,700
	120	61.6	218.0	14,900	15,300
	130	58.9	212.3	12,900	13,300
	140	56.0	205.8	11,200	11,600
	150	53.1	198.7	9,800	10,100
	160	50.1	190.7	8,600	8,900
	170	46.9	181.8	7,500	7,800
	180	43.5	171.8	6,500	6,800
	190	39.9	160.5	5,700	5,900
	200	36.0	147.5	4,800	5,200
	210	31.7	132.5	4,200	4,500
	220	26.7	114.5	3,600	3,900
	230	20.8	91.6	3,100	3,300
	240	12.3	57.5	2,500	2,800

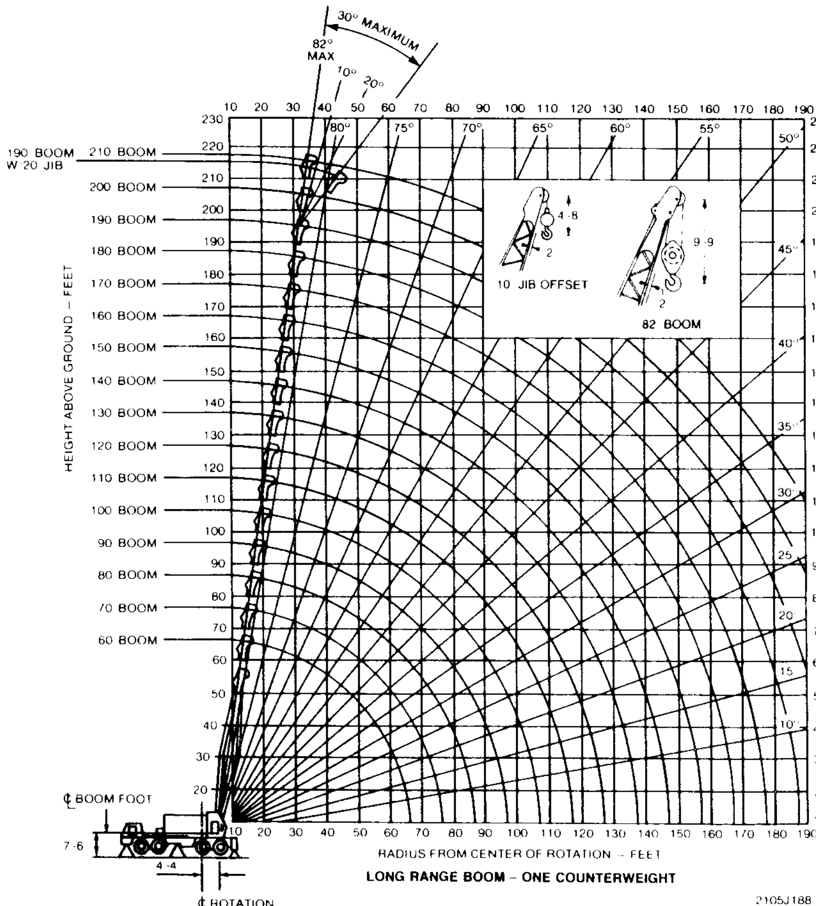
32Z2291

WARNING ⚠

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed, as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

working ranges

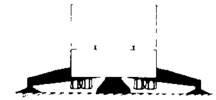


LONG RANGE BOOM – ONE COUNTERWEIGHT

2105J188

one counterweight

RATINGS
LIFT CRANE SERVICE
69" x 69" boom
long range tip (35')



"on outriggers"
front float set

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∠°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
60	14	81.4	66.5	166,800	166,800
	15	80.5	66.3	166,800	166,800
	16	79.5	66.1	166,800	166,800
	17	78.5	65.9	166,800	166,800
	18	77.6	65.7	166,800	166,800
	19	76.6	65.4	166,800	166,800
	20	75.6	65.1	166,800	166,800
	21	74.6	64.9	157,500	157,500
	22	73.6	64.6	144,100	144,100
	23	72.6	64.2	132,800	132,800
	24	71.6	63.9	123,000	123,000
	25	70.6	63.5	114,300	114,600
	26	69.5	63.2	106,500	107,100
	27	68.5	62.8	99,700	100,600
	28	67.5	62.3	93,600	94,800
	29	66.4	61.9	88,400	89,800
	30	65.4	61.4	83,600	84,900
	32	63.3	60.4	75,400	76,700
	34	61.1	59.4	68,500	70,000
	36	58.9	58.2	62,700	64,300
	38	56.6	56.9	57,800	59,400
	40	54.2	55.4	53,600	55,200
	45	48.1	51.3	45,100	46,600
	50	41.2	46.1	38,700	40,200
	55	33.1	39.3	33,900	35,200
	60	22.6	29.5	29,900	31,200

Boom Length (ft)	Load Radius (ft)	Boom Angle ∠°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
70	15	81.8	76.4	166,800	166,800
	16	81.0	76.3	166,800	166,800
	17	80.2	76.1	166,800	166,800
	18	79.4	75.9	166,800	166,800
	19	78.5	75.7	166,800	166,800
	20	77.7	75.5	166,800	166,800
	21	76.8	75.2	157,800	157,800
	22	76.0	75.0	144,300	144,300
	23	75.1	74.7	133,000	133,000
	24	74.3	74.4	123,100	123,100
	25	73.4	74.1	114,500	114,700
	26	72.6	73.8	106,700	107,200
	27	71.7	73.4	99,900	100,700
	28	70.9	73.1	93,900	94,900
	29	70.0	72.7	88,500	89,700
	30	69.1	72.3	83,700	84,900
	32	67.3	71.5	75,500	76,900
	34	65.5	70.6	68,800	70,100
	36	63.7	69.6	62,800	64,300
	38	61.9	68.6	57,800	59,400
	40	60.0	67.4	53,800	55,200
	45	55.1	64.2	45,100	46,600
	50	49.9	60.2	38,700	40,200
	55	44.2	55.5	33,900	35,200
	60	37.9	49.6	29,900	31,200
	65	30.5	42.1	26,700	27,900
	70	23.1	34.0	24,000	25,100

32Z2291

DEDUCT FROM RATED BOOM LOADS WHEN LIFTING OVER BOOM POINT WITH JIB ATTACHED

JIB LENGTH	20 FT	30 FT	40 FT	50 FT	60 FT	70 FT.	80 FT
EFFECTIVE JIB WT — LBS	1500	1500	2000	2500	3000	3300	3600
EFFECTIVE JIB HOOK WT	1600	1600	1600	1600	1600	1600	1600
ALSO DEDUCT TWICE THE WEIGHT OF ANY LOAD SUSPENDED FROM JIB HOOK							

WARNING ⚠

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur

"on outriggers" front float set

one counterweight

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∠°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
80	17	81.4	86.2	166,800	166,800
	18	80.7	86.1	166,800	166,800
	19	80.0	85.9	166,800	166,800
	20	79.2	85.7	166,800	166,800
	21	78.5	85.5	157,900	157,900
	22	77.8	85.3	144,500	144,500
	23	77.0	85.0	133,100	133,100
	24	76.3	84.8	123,200	123,200
	25	75.6	84.5	114,800	114,700
	26	74.8	84.2	106,800	107,300
	27	74.1	83.9	100,000	100,700
	28	73.3	83.6	94,000	95,000
	29	72.6	83.3	88,600	89,700
	30	71.8	83.0	83,800	85,000
	32	70.3	82.3	75,500	76,600
	34	68.8	81.5	68,800	70,100
	36	67.2	80.7	62,800	64,300
	38	65.7	79.8	57,900	59,400
	40	64.1	78.8	53,700	55,200
	45	60.0	76.1	45,100	46,600
	50	55.7	72.9	38,800	40,200
	55	51.2	69.1	33,900	35,300
	60	46.4	64.6	30,000	31,200
	65	41.2	59.3	26,700	27,900
	70	36.6	54.3	24,100	25,200
	75	30.0	46.5	21,800	22,800
	80	21.6	35.9	19,800	20,800
90	18	81.7	96.2	164,600	164,600
	19	81.1	96.0	162,800	162,800
	20	80.5	95.9	161,200	161,200
	21	79.8	95.7	157,900	157,900
	22	79.2	95.5	144,500	144,500
	23	78.5	95.3	133,100	133,100
	24	77.9	95.1	123,200	123,200
	25	77.2	94.8	114,700	114,700
	26	76.5	94.6	106,800	107,300
	27	75.9	94.3	100,000	100,700
	28	75.2	94.1	94,000	84,900
	29	74.6	93.8	88,800	89,700
	30	73.9	93.5	83,700	64,900
	32	72.6	92.9	75,500	76,700
	34	71.2	92.2	68,600	70,000
	36	69.9	91.5	62,700	64,200
	38	68.5	90.7	57,700	59,300
	40	67.1	89.8	53,600	55,100
	45	63.6	87.5	45,000	46,500
	50	60.0	84.7	38,800	40,000
	55	56.2	81.6	33,900	35,100
	60	52.3	77.9	29,800	31,100
	65	49.0	74.6	26,600	27,600
	70	44.6	69.8	23,900	25,000
	75	39.8	64.1	21,600	22,700
	80	34.4	57.4	19,700	20,700
	85	28.2	49.0	18,000	19,000
	90	20.3	37.7	16,500	17,400

Boom Length (ft)	Load Radius (ft)	Boom Angle ∠°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
100	19	82.0	106.2	166,800	166,800
	20	81.4	106.0	166,800	166,800
	21	80.8	105.8	158,000	158,000
	22	80.3	105.7	144,500	144,500
	23	79.7	105.5	133,100	133,100
	24	79.1	105.3	123,200	123,200
	25	78.5	105.1	114,500	114,600
	26	77.9	104.9	106,800	107,300
	27	77.3	104.6	99,900	100,600
	28	76.7	104.4	94,000	94,900
	29	76.1	104.1	88,600	89,600
	30	75.6	103.9	83,700	84,900
	32	74.4	103.3	75,500	76,800
	34	73.2	102.7	68,500	70,000
	36	72.0	102.1	62,700	64,200
	38	70.8	101.4	57,700	59,200
	40	69.5	100.6	53,500	55,000
	45	66.4	98.6	44,900	46,400
	50	63.3	96.2	38,500	39,900
	55	60.0	93.4	33,700	35,000
	60	56.6	90.3	29,700	31,000
	65	53.8	87.4	26,500	27,700
	70	50.1	83.5	23,800	24,900
	75	46.3	78.9	21,500	22,600
	80	42.1	73.7	19,600	20,600
	85	37.6	67.6	18,000	19,000
	90	32.6	60.4	16,500	17,400
	95	26.7	51.4	15,200	16,000
	100	19.2	39.4	14,000	14,800
110	21	81.7	116.0	140,100	140,100
	22	81.1	115.8	136,900	136,900
	23	80.6	115.6	133,000	133,000
	24	80.1	115.5	123,100	123,100
	25	79.6	115.3	114,500	114,500
	26	79.0	115.1	106,700	107,200
	27	78.5	114.9	99,800	100,500
	28	78.0	114.7	93,900	94,800
	29	77.4	114.4	88,500	89,500
	30	76.9	114.2	83,600	84,800
	32	75.8	113.7	75,400	76,500
	34	74.7	113.1	68,400	69,600
	36	73.7	112.6	62,600	64,000
	38	72.6	111.9	57,600	59,100
	40	71.5	111.3	53,400	54,900
	45	68.7	109.4	44,600	46,300
	50	65.9	107.3	38,400	39,600
	55	63.0	104.8	33,600	34,900
	60	60.0	102.1	29,600	30,900
	65	57.5	99.6	26,400	27,600
	70	54.4	96.2	23,700	24,600
	75	51.1	92.3	21,400	22,500
	80	47.6	88.0	19,500	20,500
	85	44.0	83.0	17,900	18,900
	90	40.1	77.4	16,400	17,300
	95	35.8	70.9	15,100	16,000
	100	31.0	63.2	13,900	14,900
	110	18.3	41.0	11,900	12,700

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∠°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
120	22	81.9	125.9	144,400	144,400
	23	81.4	125.8	133,000	133,000
	24	80.9	125.6	123,100	123,100
	25	80.4	125.4	114,500	114,500
	26	80.0	125.3	106,700	107,100
	27	79.5	125.1	99,800	100,400
	28	79.0	124.9	93,900	94,700
	29	78.5	124.7	88,400	89,400
	30	78.0	124.5	83,500	84,800
	32	77.0	124.0	75,300	76,400
	34	76.0	123.5	68,300	69,700
	36	75.1	123.0	62,400	63,600
	38	74.1	122.4	57,400	58,900
	40	73.1	121.8	53,200	54,700
	45	70.5	120.1	44,600	46,100
	50	68.0	118.2	36,200	39,800
	55	65.4	116.0	33,400	34,700
	60	62.7	113.5	29,400	30,600
	65	60.5	111.3	28,200	27,300
	70	57.8	108.3	23,500	24,600
	75	54.9	104.9	21,200	22,200
	80	51.9	101.1	19,200	20,200
	85	48.8	96.9	17,700	18,600
	90	45.5	92.2	16,200	17,100
	95	42.0	86.9	14,900	15,700
	100	38.3	80.9	13,700	14,500
	110	29.6	65.9	11,700	12,800
	120	17.5	42.5	10,100	10,800
130	24	81.6	135.7	115,700	115,700
	25	81.2	135.6	114,500	114,500
	26	80.7	135.4	106,600	107,000
	27	80.3	135.2	99,700	100,300
	28	79.8	135.1	93,700	94,600
	29	79.4	134.9	88,300	89,300
	30	78.9	134.7	83,300	84,500
	32	78.0	134.3	75,100	76,200
	34	77.1	133.8	68,100	69,500
	36	76.2	133.3	62,200	63,700
	38	75.3	132.8	57,200	58,700
	40	74.4	132.2	53,100	54,600
	45	72.1	130.7	44,500	45,900
	50	69.8	128.9	38,000	39,400
	55	67.4	126.9	33,200	34,500
	60	65.0	124.7	29,200	30,500
	65	63.0	122.7	26,000	27,100
	70	60.5	120.0	23,300	24,400
	75	57.9	117.0	21,000	22,000
	80	55.3	113.6	19,000	20,000
	85	52.5	109.9	17,500	18,500
	90	49.7	105.8	16,000	16,900
	95	46.7	101.3	14,700	15,600
	100	43.6	96.3	13,600	14,400
	110	36.7	84.3	11,600	12,300
	120	28.4	68.4	10,000	10,800
	130	16.8	44.0	8,600	9,200

Boom Length (ft)	Load Radius (ft)	Boom Angle ∠°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
140	25	81.8	145.7	105,000	105,000
	26	81.4	145.6	104,000	104,000
	27	81.0	145.4	99,500	100,200
	28	80.6	145.2	93,600	94,500
	29	80.2	145.0	88,100	89,100
	30	79.7	144.9	83,200	84,300
	32	78.9	144.5	75,000	76,300
	34	78.1	144.1	68,000	69,300
	36	77.2	143.6	62,100	63,500
	38	76.4	143.1	57,100	58,500
	40	75.5	142.6	52,900	54,400
	45	73.4	141.2	44,200	45,700
	50	71.3	139.6	38,000	39,100
	55	69.1	137.7	33,000	34,300
	60	66.9	135.7	29,000	30,200
	65	65.1	133.9	25,700	26,900
	70	62.8	131.4	23,000	24,100
	75	60.5	128.6	20,700	21,600
	80	58.1	125.6	19,000	19,700
	85	55.6	122.3	17,300	18,200
	90	53.1	118.7	15,600	16,700
	95	50.5	114.7	14,500	15,300
	100	47.8	110.3	13,300	14,100
	110	41.9	100.2	11,300	12,000
	120	35.3	87.5	9,700	10,400
	130	27.4	70.9	8,300	9,000
	140	16.2	45.4	7,200	7,700
150	26	82.0	155.7	106,400	106,800
	27	81.6	155.5	99,500	100,100
	28	81.2	155.4	93,500	94,300
	29	80.8	155.2	88,000	89,000
	30	80.4	155.0	83,100	84,200
	32	79.7	154.7	74,900	76,200
	34	78.9	154.3	67,900	69,200
	36	78.1	153.9	62,000	63,400
	38	77.3	153.4	57,200	58,400
	40	76.5	152.9	52,800	54,300
	45	74.6	151.6	44,100	45,800
	50	72.6	150.1	37,900	39,000
	55	70.5	148.4	32,900	34,200
	60	68.5	146.5	28,900	30,100
	65	66.8	144.8	25,800	26,800
	70	64.8	142.6	22,900	24,000
	75	62.6	140.0	20,800	21,700
	80	60.4	137.3	18,900	19,700
	85	58.2	134.3	17,200	18,100
	90	55.9	131.0	15,700	16,800
	95	53.6	127.4	14,400	15,200
	100	51.2	123.5	13,200	14,000
	110	46.0	114.6	11,200	12,000
	120	40.4	103.9	9,600	10,300
	130	34.1	90.6	8,300	8,900
	140	26.4	73.2	7,100	7,700
	150	15.6	46.8	6,100	6,700

32Z2291

WARNING

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** -- a machine failure may occur.

"on outriggers" front float set

one counterweight

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∆°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear	Boom Length (ft)	Load Radius (ft)	Boom Angle ∆°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
160	28	81.8	165.5	88,400	88,400	180	31	81.7	185.3	73,000	73,000
	29	81.4	165.3	87,600	87,600		32	81.4	185.1	72,800	72,800
	30	81.0	165.2	82,900	84,000		34	80.8	184.8	67,300	68,700
	32	80.3	164.8	74,700	76,000		36	80.1	184.4	61,400	62,800
	34	79.6	164.5	67,700	69,100		38	79.5	184.1	55,900	57,700
	36	78.9	164.1	61,800	63,200		40	78.8	183.7	52,200	53,700
	38	78.1	163.6	57,000	58,200		45	77.2	182.6	43,500	44,800
	40	77.4	163.2	52,800	54,100		50	75.5	181.3	37,300	38,300
	45	75.5	162.0	43,900	45,400		55	73.9	179.9	32,300	33,500
	50	73.7	160.6	37,700	38,800		60	72.2	178.4	28,200	29,400
	55	71.8	159.0	32,700	34,000		65	70.9	177.0	25,000	26,100
	60	69.9	157.2	28,700	29,800		70	69.2	175.2	22,200	23,300
	65	68.4	155.7	25,400	26,800		75	67.5	173.2	19,900	20,800
	70	66.4	153.6	22,700	23,800		80	65.7	171.0	18,200	18,900
	75	64.5	151.2	20,400	21,500		85	64.0	168.6	16,500	17,400
	80	62.5	148.7	18,700	19,400		90	62.2	166.0	15,000	15,800
	85	60.4	146.0	17,000	17,800		95	60.4	163.3	13,700	14,500
	90	58.3	143.0	15,500	16,400		100	58.5	160.3	12,500	13,300
	95	56.2	139.7	14,200	15,000		110	54.7	153.6	10,800	11,300
	100	54.0	136.2	13,000	13,800		120	50.7	145.9	8,900	9,800
	110	49.4	128.2	11,100	11,800		130	46.4	137.0	7,800	8,200
	120	44.5	118.8	9,400	10,100		140	41.8	126.6	6,400	7,000
	130	39.1	107.5	8,100	8,700		150	36.8	114.3	5,500	6,000
	140	33.0	93.6	6,800	7,500		160	31.0	99.2	4,800	5,100
	150	25.6	75.5	6,000	6,500		170	24.1	79.9	3,900	4,300
	160	15.1	48.1	5,100	5,600		180	14.2	50.7	3,200	3,700
170	29	81.9	175.4	87,700	88,100	190	32	81.9	195.2	66,100	66,100
	30	81.6	175.3	82,800	83,900		34	81.2	194.9	65,700	65,700
	32	80.9	175.0	74,800	75,800		36	80.6	194.6	61,200	62,800
	34	80.2	174.6	67,500	69,900		38	80.0	194.2	56,400	57,500
	36	79.5	174.3	61,500	63,000		40	79.4	193.9	52,000	53,500
	38	78.8	173.9	56,800	58,000		45	77.9	192.8	43,300	44,700
	40	78.1	173.4	52,400	53,800		50	76.3	191.7	37,100	38,100
	45	76.4	172.3	43,700	45,100		55	74.8	190.3	32,100	33,300
	50	74.7	171.0	37,500	38,800		60	73.2	188.9	28,000	29,200
	55	72.9	169.5	32,500	33,700		65	71.9	187.6	24,800	25,900
	60	71.1	167.8	28,400	29,700		70	70.3	185.9	22,000	23,100
	65	69.7	166.4	25,200	25,300		75	68.7	184.0	19,700	20,700
	70	67.9	164.4	22,500	23,500		80	67.1	181.9	18,000	19,000
	75	66.1	162.3	20,200	21,200		85	65.4	179.7	16,300	17,200
	80	64.2	159.9	18,400	19,200		90	63.8	177.3	14,800	15,700
	85	62.3	157.4	16,700	17,800		95	62.1	174.7	13,500	14,300
	90	60.4	154.6	15,200	16,100		100	60.3	171.9	12,300	13,100
	95	58.4	151.6	13,900	14,900		110	56.8	165.8	10,300	11,100
	100	56.4	148.4	12,800	13,500		120	53.1	158.7	8,700	9,400
	110	52.3	141.1	10,800	11,500		130	49.2	150.6	7,400	8,000
	120	47.8	132.7	9,100	9,800		140	45.1	141.2	6,200	6,800
	130	43.1	122.8	7,800	8,400		150	40.6	130.3	5,200	5,900
	140	37.9	110.9	6,500	7,200		160	35.7	117.5	4,400	4,900
	150	31.9	96.4	5,700	6,200		170	30.2	101.9	3,700	4,100
	160	24.8	77.7	4,800	5,300		180	23.4	81.9	3,000	3,500
	170	14.7	49.4	4,100	4,500		190	13.8	51.9	2,400	2,800

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∆°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear	Boom Length (ft)	Load Radius (ft)	Boom Angle ∆°	Boom Point Elev. (ft)	Rated Load (lbs) 360°	Rated Load (lbs) Over Rear
200	33	82.0	205.2	59,200	59,200	210	35	81.8	215.0	51,100	51,100
	34	81.7	205.0	59,100	59,100		36	81.5	214.8	51,000	51,000
	36	81.1	204.7	59,100	59,100		38	81.0	214.5	50,700	50,700
	38	80.5	204.4	56,300	57,300		40	80.4	214.2	50,500	50,500
	40	79.9	204.0	51,900	53,300		45	79.0	213.3	42,900	44,300
	45	78.5	203.1	43,100	44,500		50	77.6	212.2	36,700	38,000
	50	77.0	201.9	36,900	37,800		55	76.2	211.0	31,800	32,800
	55	75.5	200.7	31,800	33,100		60	74.8	209.7	27,800	28,800
	60	74.1	199.3	27,800	29,000		65	73.7	208.6	24,300	25,400
	65	72.9	198.1	24,500	25,800		70	72.3	207.0	21,600	22,600
	70	71.4	196.5	21,700	22,800		75	70.8	205.3	19,300	20,300
	75	69.8	194.7	19,400	20,400		80	69.4	203.5	17,600	18,600
	80	68.3	192.8	17,800	18,700		85	67.9	201.5	15,900	16,800
	85	66.7	190.7	16,000	16,900		90	66.4	199.4	14,400	15,300
	90	65.2	188.4	14,500	15,400		95	64.9	197.1	13,100	13,800
	95	63.6	186.0	13,200	14,000		100	63.4	194.7	11,800	12,700
	100	62.0	183.4	12,000	12,800		110	60.3	189.3	9,900	10,800
	110	58.7	177.6	10,100	10,800		120	57.1	183.1	8,300	8,900
	120	55.2	171.1	8,400	9,100		130	53.8	176.2	6,900	7,500
	130	51.7	163.6	7,100	7,700		140	50.3	168.3	5,800	6,400
	140	47.9	155.0	5,900	6,500		150	46.7	159.4	4,800	5,300
	150	43.9	145.3	4,900	5,500		160	42.8	149.2	3,900	4,500
	160	39.6	134.0	4,100	4,600		170	38.6	137.5	3,200	3,700
	170	34.8	120.7	3,300	3,800		180	33.9	123.7	2,900	3,000
	180	29.4	104.6	2,700	3,100		190	28.6	107.2	2,000	2,400
	190	22.8	84.0	2,100	2,500		200	22.2	85.9	—	1,900
	200	13.5	53.0	—	2,000						

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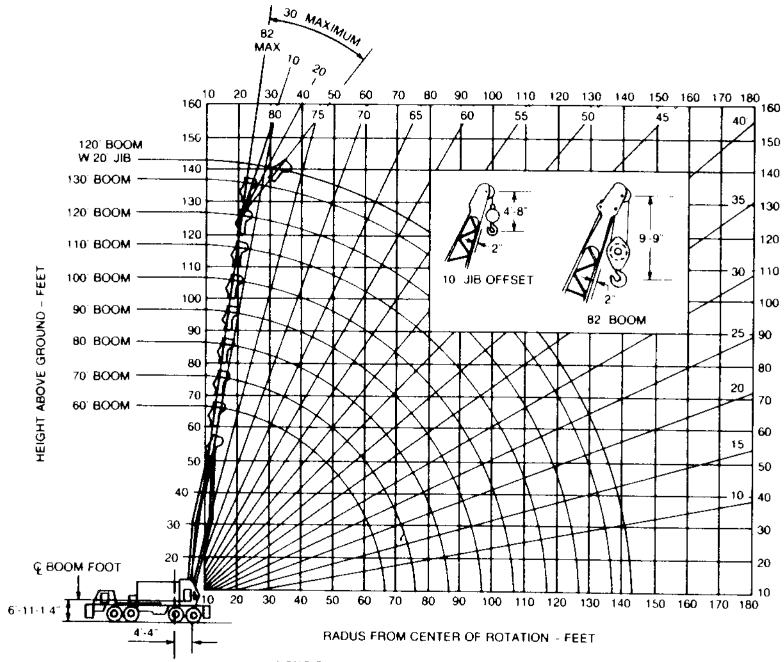
WARNING ⚠

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

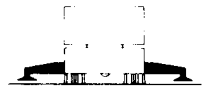
working ranges



LONG RANGE BOOM – ONE COUNTERWEIGHT – "ON TIRES"

RATINGS
LIFT CRANE SERVICE
69" x 69" boom
long range tip (35')

one counterweight and one bumper counterweight



"on tires"

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Stationary Ratings: Over Side	Stationary Ratings: Over Rear	Stationary Ratings: Directly Over Rear	Travel Ratings Directly Over Rear: Creep	Travel Ratings Directly Over Rear: 2.5 m.p.h.	Load Radius (ft)
60	14	81.4	66.2	—	85,100	108,000	81,100	—	14
	15	80.5	66.0	—	82,100	101,900	78,000	—	15
	16	79.5	65.8	—	79,300	98,100	75,100	—	16
	17	78.5	65.6	—	76,900	94,500	72,400	—	17
	18	77.6	65.4	—	74,200	90,500	69,800	—	18
	19	76.6	65.1	53,000	72,000	84,400	67,400	—	19
	20	75.6	64.9	50,300	69,800	79,000	65,200	—	20
	21	74.6	64.6	47,600	67,900	74,300	63,100	—	21
	22	73.6	64.3	45,200	66,000	70,100	61,100	—	22
	23	72.6	64.0	42,700	64,300	66,300	59,200	—	23
	24	71.6	63.6	40,400	62,600	62,800	57,400	—	24
	25	70.6	63.3	38,300	59,700	59,700	55,700	—	25
	26	69.6	62.9	36,400	56,900	56,800	54,200	—	26
	27	68.5	62.5	34,700	54,300	54,300	52,700	—	27
	28	67.5	62.1	33,100	51,900	51,900	51,300	—	28
	29	66.4	61.6	31,800	49,700	49,700	49,700	—	29
	30	65.4	61.2	30,200	47,700	47,700	47,700	—	30
	32	63.3	60.2	27,800	44,000	44,000	44,000	—	32
	34	61.1	59.1	25,700	40,600	40,800	40,800	—	34
	36	58.9	57.9	23,800	38,100	38,100	38,100	—	36
	38	56.6	56.6	22,100	35,600	35,600	35,600	—	38
	40	54.3	55.2	20,700	33,400	33,400	33,400	—	40
	45	48.1	51.1	17,700	28,600	28,800	28,800	20,600	45
	50	41.2	45.9	15,200	25,200	25,200	25,200	18,400	50
	55	33.1	39.1	13,300	22,300	22,300	22,300	16,600	55
	60	22.6	29.3	11,600	19,800	19,800	19,800	15,000	60

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LOAD RATINGS DEPEND ON TIRE CAPACITY AND CONDITION, INFLATED PER TABLE:

TIRE INFLATION			
SIZE	STATIONARY	CREEP	2.5 MPH
14.00 x 24 20 PR	115 PSI	115 PSI	115 PSI

DEDUCT FROM RATED BOOM LOADS WHEN LIFTING OVER BOOM POINT WITH JIB ATTACHED

JIB LENGTH	20 FT					
EFFECTIVE JIB WT LBS	1500					
EFFECTIVE JIB HOOK WT	1600					
ALSO DEDUCT TWICE THE WEIGHT OF ANY LOAD SUSPENDED FROM JIB HOOK						

WARNING ⚠

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

"on tires"

one counterweight and one bumper counterweight

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Stationary Ratings Over Side	Stationary Ratings Over Rear	Stationary Ratings Directly Over Rear	Travel Ratings Directly Over Rear Creep	Travel Ratings Directly Over Rear 2.5 m.p.h.	Load Radius (ft)
70	15	81.9	76.1	—	81,600	101,200	77,400	—	15
	16	81.0	76.0	—	78,700	97,400	74,500	—	16
	17	80.2	75.8	—	76,100	93,900	71,800	—	17
	18	79.4	75.6	55,800	73,700	90,400	69,200	—	18
	19	78.5	75.4	52,700	71,600	84,300	66,600	—	19
	20	77.7	75.2	50,000	69,300	78,900	64,600	—	20
	21	76.8	74.9	47,600	67,400	74,200	62,500	—	21
	22	76.0	74.7	45,100	65,500	70,000	60,600	—	22
	23	75.1	74.4	42,600	63,600	66,100	58,800	—	23
	24	74.3	74.1	40,200	62,100	62,700	56,900	—	24
	25	73.4	73.8	38,100	59,800	59,800	55,300	—	25
	26	72.6	73.5	36,300	56,800	56,800	53,700	—	26
	27	71.7	73.2	34,600	54,200	54,200	52,200	—	27
	28	70.9	72.8	33,000	51,800	51,800	50,800	—	28
	29	70.0	72.4	31,500	49,600	49,600	49,400	—	29
	30	69.1	72.1	30,100	47,500	47,500	47,500	—	30
	32	67.3	71.2	27,700	43,900	43,900	43,900	—	32
	34	65.5	70.3	25,500	40,700	40,700	40,700	—	34
	36	63.7	69.4	23,700	38,000	38,000	38,000	—	36
	38	61.9	68.3	22,000	35,500	35,500	35,500	—	38
	40	60.0	67.2	20,500	33,300	33,300	33,300	—	40
	45	55.1	63.9	17,800	28,700	28,700	28,700	20,200	45
	50	49.9	60.0	15,100	25,100	25,100	25,100	18,100	50
	55	44.3	55.2	13,200	22,200	22,200	22,200	16,300	55
	60	37.9	49.4	11,500	19,700	19,700	19,700	14,700	60
	65	30.6	41.9	10,200	17,800	17,800	17,800	13,400	65
	70	20.9	31.2	9,000	16,000	16,000	16,000	12,100	70
80	17	81.4	85.9	—	75,900	93,600	71,500	—	17
	18	80.7	85.8	55,400	73,500	90,300	68,900	—	18
	19	80.0	85.6	52,600	71,200	84,200	66,600	—	19
	20	79.2	85.4	49,900	69,100	78,600	64,300	—	20
	21	78.5	85.2	47,400	67,200	74,200	62,200	—	21
	22	77.8	85.0	45,100	65,300	69,900	60,200	—	22
	23	77.0	84.7	42,500	63,900	66,100	58,400	—	23
	24	76.3	84.5	40,200	61,900	62,600	56,600	—	24
	25	75.6	84.2	38,100	59,500	59,500	55,100	—	25
	26	74.8	83.9	36,300	56,600	56,600	53,500	—	26
	27	74.1	83.7	34,800	54,200	54,200	52,000	—	27
	28	73.3	83.4	32,900	51,700	51,700	50,500	—	28
	29	72.6	83.0	31,500	49,500	49,500	49,200	—	29
	30	71.8	82.7	30,100	47,500	47,500	47,500	—	30
	32	70.3	82.0	27,800	43,800	43,800	43,800	—	32
	34	68.8	81.2	25,500	40,600	40,600	40,600	—	34
	36	67.2	80.4	23,600	37,900	37,900	37,900	—	36
	38	65.6	79.5	22,000	35,500	35,500	35,500	—	38
	40	64.1	78.6	20,500	33,300	33,300	33,300	—	40
	45	60.0	75.8	17,800	28,700	28,700	28,700	20,000	45
	50	55.7	72.6	15,100	25,100	25,100	25,100	17,900	50
	55	51.2	68.9	13,200	22,100	22,100	22,100	16,200	55
	60	46.4	64.4	11,800	19,700	19,700	19,700	14,800	60
	65	41.2	59.1	10,200	17,800	17,800	17,800	13,300	65
	70	35.4	52.6	9,000	16,100	16,100	16,100	12,100	70
	75	28.5	44.4	8,000	14,800	14,800	14,600	11,000	75
	80	19.5	32.9	7,100	13,200	13,200	13,200	10,100	80

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Stationary Ratings Over Side	Stationary Ratings Over Rear	Stationary Ratings Directly Over Rear	Travel Ratings Directly Over Rear Creep	Travel Ratings Directly Over Rear 2.5 m.p.h.	Load Radius (ft)
90	18	81.7	95.9	55,200	72,600	89,600	68,300	—	18
	19	81.1	95.7	52,200	70,600	84,000	65,800	—	19
	20	80.4	95.6	48,400	68,500	78,800	63,700	—	20
	21	79.8	95.4	47,000	66,600	74,000	61,600	—	21
	22	79.2	95.2	44,700	64,700	69,700	59,800	—	22
	23	78.5	95.0	42,300	63,000	65,900	57,700	—	23
	24	77.9	94.8	40,000	61,300	62,400	56,000	—	24
	25	77.2	94.5	38,000	59,200	59,200	54,500	—	25
	26	76.6	94.3	36,100	56,500	56,500	52,900	—	26
	27	75.9	94.0	34,300	53,900	53,900	51,400	—	27
	28	75.2	93.8	32,700	51,500	51,500	50,000	—	28
	29	74.6	93.5	31,200	49,300	49,300	48,600	—	29
	30	73.9	93.2	29,900	47,200	47,200	47,200	—	30
	32	72.6	92.6	27,400	43,600	43,600	43,600	—	32
	34	71.2	91.9	25,300	40,400	40,400	40,400	—	34
	36	69.9	91.2	23,400	37,700	37,700	37,700	—	36
	38	68.5	90.4	21,700	35,200	35,200	35,200	—	38
	40	67.1	89.6	20,300	33,000	33,000	33,000	22,000	40
	45	63.6	87.2	17,300	28,400	28,400	28,400	19,500	45
	50	60.0	84.5	14,900	24,800	24,800	24,800	17,500	50
	55	56.2	81.3	12,900	21,900	21,900	21,900	15,700	55
	60	52.3	77.7	11,300	19,500	19,500	19,500	14,200	60
	65	48.1	73.4	10,000	17,800	17,800	17,800	12,900	65
	70	43.6	68.5	8,800	15,900	15,900	15,800	11,700	70
	75	38.7	62.7	7,800	14,400	14,400	14,400	10,700	75
	80	33.3	55.7	7,000	13,100	13,100	13,100	9,700	80
	85	26.8	46.9	6,200	11,900	11,800	11,800	8,800	85
	90	18.3	34.5	5,500	10,900	10,900	10,900	8,200	90
100	19	82.0	105.9	51,900	70,300	83,900	65,500	—	19
	20	81.4	105.7	49,200	68,200	78,500	63,300	—	20
	21	80.8	105.5	46,700	66,300	73,600	61,200	—	21
	22	80.3	105.4	44,500	64,400	69,600	59,200	—	22
	23	79.7	105.2	42,200	62,700	65,700	57,400	—	23
	24	79.1	105.0	39,900	61,000	62,200	55,600	—	24
	25	78.5	104.8	37,900	59,100	59,100	54,100	—	25
	26	77.9	104.6	36,000	56,400	56,400	52,600	—	26
	27	77.3	104.3	34,200	53,800	53,800	51,100	—	27
	28	76.7	104.1	32,600	51,400	51,400	49,600	—	28
	29	76.1	103.9	31,100	49,100	49,100	48,300	—	29
	30	75.6	103.6	29,700	47,100	47,100	47,000	—	30
	32	74.4	103.0	27,300	43,400	43,400	43,400	—	32
	34	73.2	102.4	25,100	40,200	40,200	40,200	—	34
	36	72.0	101.8	23,300	37,600	37,600	37,600	—	36
	38	70.8	101.1	21,800	35,100	35,100	35,100	22,800	36
	40	69.5	100.4	20,100	32,900	32,900	32,900	21,700	40
	45	66.4	98.3	17,200	28,300	28,300	28,300	19,300	45
	50	63.3	95.9	14,600	24,700	24,700	24,700	17,200	50
	55	60.0	93.1	12,600	21,800	21,800	21,800	15,500	55
	60	56.6	90.0	11,200	19,400	19,400	19,400	14,000	60
	65	53.1	86.4	9,900	17,500	17,500	17,500	12,700	65
	70	49.4	82.4	8,700	15,600	15,800	15,800	11,500	70
	75	45.5	77.7	7,700	14,300	14,300	14,300	10,500	75
	80	41.3	72.3	6,900	13,000	13,000	13,000	9,500	80
	85	36.7	66.0	6,100	11,900	11,900	11,900	8,700	85
	90	31.5	58.5	5,400	10,600	10,600	10,800	8,000	90
	95	25.4	49.1	4,800	9,900	9,900	9,900	7,400	95
	100	17.4	36.1	4,200	9,100	9,100	9,100	6,800	100

32Z2291

WARNING ⚠

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

"on tires"

one counterweight and one bumper counterweight

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∆°	Boom Point Elev (ft)	Stationary Ratings Over Side	Over Rear	Directly Over Rear	Travel Ratings Directly Over Rear Creep	2.5 m.p.h.	Load Radius (ft)
110	21	81.7	115.7	46,500	65,900	73,700	60,900	—	21
	22	81.1	115.5	44,200	64,100	69,400	58,900	—	22
	23	80.6	115.3	42,000	62,400	65,500	57,000	—	23
	24	80.1	115.2	39,700	60,700	62,100	55,400	—	24
	25	79.6	115.0	37,800	58,900	58,900	53,600	—	25
	26	79.0	114.8	35,800	56,200	56,200	52,300	—	26
	27	78.5	114.6	34,100	53,600	53,600	50,800	—	27
	28	78.0	114.4	32,500	51,200	51,200	49,300	—	28
	29	77.4	114.1	31,000	49,000	49,000	48,000	—	29
	30	76.9	113.9	29,600	46,900	46,900	46,700	—	30
	32	75.8	113.4	27,100	43,200	43,200	43,200	—	32
	34	74.7	112.9	25,000	40,100	40,100	40,100	—	34
	36	73.7	112.3	23,100	37,400	37,400	37,400	—	36
	38	72.6	111.7	21,400	34,900	34,900	34,900	22,500	38
	40	71.5	111.0	20,000	32,700	32,700	32,700	21,400	40
	45	68.7	109.1	17,100	28,100	28,100	28,100	19,000	45
	50	65.9	107.0	14,700	24,500	24,500	24,500	17,000	50
	55	63.0	104.6	12,700	21,600	21,600	21,600	15,200	55
	60	60.0	101.8	11,100	19,200	19,200	19,200	13,700	60
	65	56.9	98.7	9,800	17,300	17,300	17,300	12,400	65
	70	53.7	95.2	8,600	15,600	15,600	15,600	11,300	70
	75	50.4	91.2	7,600	14,200	14,200	14,200	10,200	75
	80	46.9	86.8	6,800	12,900	12,900	12,900	9,300	80
	85	43.2	81.7	6,000	11,700	11,700	11,700	8,500	85
	90	39.2	75.9	5,300	10,700	10,700	10,700	7,900	90
	95	34.9	69.2	4,700	9,800	9,800	9,800	7,200	95
	100	30.0	61.2	4,200	9,000	9,000	9,000	6,600	100
	110	16.5	37.5	3,200	7,600	7,600	7,600	5,600	110
120	22	81.9	125.6	43,800	63,500	69,100	58,200	—	22
	23	81.4	125.5	41,700	61,800	65,300	56,400	—	23
	24	80.9	125.3	39,400	60,100	61,800	54,900	—	24
	25	80.4	125.1	37,500	58,800	58,600	53,200	—	25
	26	80.0	125.0	35,600	56,000	56,000	51,600	—	26
	27	79.5	124.8	33,600	53,300	53,300	50,100	—	27
	28	79.0	124.6	32,200	50,900	50,900	48,700	—	28
	29	78.5	124.4	30,700	48,700	48,700	47,400	—	29
	30	78.0	124.2	29,300	46,600	46,600	46,100	—	30
	32	77.0	123.7	26,800	42,900	42,900	42,900	—	32
	34	76.1	123.2	24,700	39,700	39,700	39,700	—	34
	36	75.1	122.7	22,600	37,100	37,100	37,100	23,100	36
	38	74.1	122.1	21,200	34,600	34,600	34,600	22,000	38
	40	73.1	121.5	19,700	32,400	32,400	32,400	20,900	40
	45	70.6	119.8	16,600	27,800	27,800	27,800	18,500	45
	50	68.0	117.9	14,400	24,200	24,200	24,200	16,400	50
	55	65.4	115.7	12,400	21,300	21,300	21,300	14,700	55
	60	62.7	113.2	10,800	19,000	19,000	19,000	13,200	60
	65	60.0	110.5	9,500	17,000	17,000	17,000	11,900	65
	70	57.2	107.4	8,300	15,300	15,300	15,300	10,600	70
	75	54.3	103.9	7,300	13,900	13,900	13,900	9,800	75
	80	51.3	100.1	6,500	12,600	12,600	12,600	8,900	80
	85	48.1	95.8	5,700	11,400	11,400	11,400	8,100	85
	90	44.8	91.0	5,000	10,400	10,400	10,400	7,400	90
	95	41.3	85.6	4,400	9,500	9,500	9,500	6,800	95
	100	37.5	79.4	3,900	8,700	8,700	8,700	6,200	100
	110	28.6	63.8	3,000	7,400	7,400	7,400	5,200	110
	120	15.8	38.9	2,200	6,200	6,200	6,200	4,300	120

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle ∆°	Boom Point Elev (ft)	Stationary Ratings Over Side	Over Rear	Directly Over Rear	Travel Ratings Directly Over Rear Creep	2.5 m.p.h.	Load Radius (ft)
130	24	81.6	135.4	39,200	59,800	61,600	54,500	—	24
	25	81.2	135.3	37,300	58,200	58,400	52,900	—	25
	26	80.7	135.1	35,400	55,800	55,800	51,300	—	26
	27	80.3	134.9	33,600	53,100	53,100	49,800	—	27
	28	79.8	134.8	32,000	50,700	50,700	48,400	—	28
	29	79.4	134.6	30,500	48,500	48,500	47,000	—	29
	30	78.9	134.4	29,100	46,400	46,400	49,700	—	30
	32	78.0	134.0	26,700	42,700	42,700	42,700	—	32
	34	77.1	133.5	24,500	39,500	39,500	39,500	—	34
	36	76.2	133.0	22,600	36,900	36,900	36,900	22,800	36
	38	75.3	132.5	21,000	34,400	34,400	34,400	21,600	38
	40	74.4	131.9	19,500	32,200	32,200	32,200	20,800	40
	45	72.1	130.4	16,600	27,600	27,900	27,600	18,200	45
	50	69.8	128.6	14,200	24,000	24,000	24,000	16,100	50
	55	67.4	126.7	12,200	21,100	21,100	21,100	14,400	55
	60	65.0	124.4	10,600	18,900	18,900	18,600	12,900	60
	65	62.5	121.9	9,300	16,900	16,900	16,900	11,800	65
	70	60.0	119.1	8,100	15,200	15,200	15,200	10,500	70
	75	57.4	116.1	7,100	13,700	13,700	13,700	9,500	75
	80	54.7	112.6	6,300	12,400	12,400	12,400	8,600	80
	85	52.0	108.9	5,500	11,300	11,300	11,300	7,800	85
	90	49.1	104.7	4,900	10,300	10,300	10,300	7,100	90
	95	46.1	100.1	4,300	9,400	9,400	9,400	6,500	95
	100	42.9	95.0	3,700	8,600	8,600	8,600	6,000	100
	110	36.0	82.7	2,800	7,200	7,200	7,200	5,000	110
	120	27.5	66.3	2,000	6,000	6,000	6,000	4,100	120
	130	15.2	40.2	1,300	5,000	5,000	5,000	3,300	130

32Z2291

WARNING ⚠

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

RATINGS
LIFT CRANE SERVICE
69" x 69" boom
long range tip (35')

one counterweight

"on tires"

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Stationary Ratings: Over Side	Stationary Ratings: Over Rear	Stationary Ratings: Directly Over Rear	Travel Ratings Directly Over Rear: Creep	Travel Ratings Directly Over Rear: 2.5 m.p.h.	Load Radius (ft)
60	14	81.4	66.2	—	80,500	92,600	76,300	45,700	14
	15	80.5	66.0	—	77,500	84,200	73,400	43,800	15
	16	79.5	65.8	—	74,800	77,100	70,600	42,200	16
	17	78.5	65.6	—	71,200	71,200	68,000	40,600	17
	18	77.6	65.4	—	66,000	66,000	65,600	39,100	18
	19	76.6	65.1	—	61,400	61,400	61,400	37,700	19
	20	75.6	64.9	—	57,500	57,500	57,500	36,400	20
	21	74.6	64.6	—	54,000	54,000	54,000	35,200	21
	22	73.6	64.3	42,600	50,900	50,900	50,900	34,000	22
	23	72.6	64.0	40,400	48,000	48,000	48,000	32,900	23
	24	71.6	63.6	38,200	45,500	45,500	45,500	31,800	24
	25	70.6	63.3	36,300	43,200	43,200	43,200	30,900	25
	26	69.6	62.9	34,500	41,000	41,000	41,000	30,000	26
	27	68.5	62.5	32,800	39,100	39,100	39,100	29,100	27
	28	67.5	62.1	31,300	37,400	37,400	37,400	28,200	29
	29	66.4	61.6	29,900	35,600	35,900	35,800	27,500	29
	30	65.4	61.2	28,600	34,300	34,300	34,300	26,700	30
	32	63.3	60.2	26,200	31,500	31,500	31,500	25,300	32
	34	61.1	59.1	24,200	29,200	29,200	29,200	24,000	34
	36	58.9	57.9	22,400	27,100	27,100	27,100	22,800	36
	38	56.6	56.6	20,800	25,300	25,300	25,300	21,600	38
	40	54.3	55.2	19,400	23,600	23,600	23,600	20,800	40
	45	48.1	51.1	16,600	20,200	20,200	20,200	18,300	45
	50	41.2	45.9	14,300	17,600	17,600	17,600	16,400	50
	55	33.1	39.1	12,400	15,400	15,400	15,400	14,700	55
	60	22.6	29.3	10,800	13,500	13,500	13,500	13,200	60
70	15	81.9	76.1	—	77,000	84,100	72,700	43,300	15
	16	81.0	76.0	—	74,300	77,000	70,000	41,600	16
	17	80.2	75.8	—	71,100	71,100	67,400	40,000	17
	18	79.4	75.6	—	65,900	65,900	65,000	38,500	18
	19	78.5	75.4	—	61,300	61,300	61,300	37,200	19
	20	77.7	75.2	47,800	57,300	57,300	57,300	35,900	20
	21	76.8	74.9	45,400	53,900	53,900	53,900	34,600	21
	22	76.0	74.7	42,700	50,800	50,800	50,800	33,500	22
	23	75.1	74.4	40,300	47,900	47,900	47,900	32,400	23
	24	74.3	74.1	38,200	45,400	45,400	45,400	31,300	24
	25	73.4	73.8	36,200	43,000	43,000	43,000	30,400	25
	26	72.6	73.5	34,300	40,900	40,900	40,900	29,400	26
	27	71.7	73.2	32,700	39,000	39,000	39,000	28,500	27
	28	70.9	72.8	31,100	37,300	37,300	37,300	27,700	28
	29	70.0	72.4	29,700	35,700	35,700	35,700	27,000	29
	30	69.1	72.1	28,400	34,100	34,100	34,100	26,300	30
	32	67.3	71.2	26,100	31,400	31,400	31,400	24,800	32
	34	65.5	70.3	24,100	29,000	29,000	29,000	23,500	34
	36	63.7	69.4	22,300	27,000	27,000	27,000	22,300	36
	38	61.9	68.3	20,700	25,100	25,100	25,100	21,200	38
	40	60.0	67.2	19,300	23,500	23,500	23,500	20,200	40
	45	55.1	63.9	16,500	20,100	20,100	20,100	17,900	45
	50	49.9	60.0	14,200	17,500	17,500	17,500	16,000	50
	55	44.3	55.2	12,300	15,300	15,300	15,300	14,400	55
	60	37.9	49.4	10,800	13,500	13,500	13,500	12,900	60
	65	30.6	41.9	9,400	11,900	11,900	11,900	11,700	65
	70	20.9	31.2	8,300	10,600	10,600	10,600	10,500	70

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Stationary Ratings: Over Side	Stationary Ratings: Over Rear	Stationary Ratings: Directly Over Rear	Travel Ratings Directly Over Rear: Creep	Travel Ratings Directly Over Rear: 2.5 m.p.h.	Load Radius (ft)
80	17	81.4	85.9	—	71,100	71,100	67,100	39,700	17
	18	80.7	85.8	—	65,900	65,900	64,700	38,300	18
	19	80.0	85.6	—	61,300	61,300	61,300	36,900	19
	20	79.2	85.4	47,500	57,300	57,300	57,300	35,600	20
	21	78.5	85.2	45,300	53,900	53,900	53,900	34,400	21
	22	77.8	85.0	42,700	50,700	50,700	50,700	33,200	22
	23	77.0	84.7	40,200	47,900	47,900	47,900	32,100	23
	24	76.3	84.5	38,100	45,300	45,300	45,300	31,100	24
	25	75.6	84.2	36,100	43,000	43,000	43,000	30,100	25
	26	74.8	83.9	34,300	40,900	40,900	40,900	29,200	26
	27	74.1	83.7	32,700	38,900	38,900	38,900	28,300	27
	28	73.3	83.4	31,100	37,300	37,300	37,300	27,600	28
	29	72.6	83.0	29,700	35,600	35,800	35,600	26,800	29
	30	71.8	82.7	28,400	34,100	34,100	34,100	26,100	30
	32	70.3	82.0	26,100	31,400	31,400	31,400	24,700	32
	34	68.8	81.2	24,000	29,000	29,000	29,000	23,400	34
	36	67.2	80.4	22,300	26,900	26,900	26,900	22,200	36
	38	65.6	79.5	20,700	25,100	25,100	25,100	21,000	38
	40	64.1	78.6	19,300	23,500	23,500	23,500	20,000	40
	45	60.0	75.8	16,500	20,000	20,000	20,000	17,800	45
	50	55.7	72.6	14,200	17,500	17,500	17,500	15,800	50
	55	51.2	68.9	12,300	15,300	15,300	15,300	14,300	55
	60	46.4	64.4	10,900	13,500	13,500	13,500	12,800	60
	65	41.2	59.1	9,500	12,000	12,000	12,000	11,600	65
	70	35.4	52.6	8,400	10,700	10,700	10,700	10,500	70
	75	28.5	44.4	7,400	9,600	9,600	9,600	9,500	75
	80	19.5	32.9	6,500	8,600	8,600	8,600	8,600	80

32Z2291

LOAD RATINGS DEPEND ON TIRE CAPACITY AND CONDITION, INFLATED PER TABLE

TIRE INFLATION			
SIZE	STATIONARY	CREEP	2.5 MPH
14.00 x 24 - 20 PR	115 PSI	115 PSI	115 PSI

DEDUCT FROM RATED BOOM LOADS WHEN LIFTING OVER BOOM POINT WITH JIB ATTACHED

JIB LENGTH	20 FT					
EFFECTIVE JIB WT LBS	1500					
EFFECTIVE JIB HOOK WT	1600					
ALSO DEDUCT TWICE THE WEIGHT OF ANY LOAD SUSPENDED FROM JIB HOOK						

WARNING ⚠

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

"on tires"

one counterweight

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Stationary Ratings: Over Side	Stationary Ratings: Over Rear	Stationary Ratings: Directly Over Rear	Travel Ratings Directly Over Rear: Creep	Travel Ratings Directly Over Rear: 2.5 m.p.h.	Load Radius (ft)
90	18	81.7	95.9	—	85,700	65,700	64,000	37,800	18
	19	81.1	95.7	49,300	61,100	61,100	61,100	36,200	19
	20	80.4	95.6	47,000	57,200	57,200	57,200	35,000	20
	21	79.8	95.4	44,800	53,700	53,700	53,700	33,700	21
	22	79.2	95.2	42,500	50,500	50,500	50,500	32,800	22
	23	78.5	95.0	40,000	47,700	47,700	47,700	31,500	23
	24	77.9	94.8	37,900	45,100	45,100	45,100	30,500	24
	25	77.2	94.5	35,900	42,800	42,800	42,800	29,500	25
	26	76.6	94.3	34,100	40,600	40,600	40,600	28,800	26
	27	75.9	94.0	32,400	36,700	36,700	38,700	27,700	27
	28	75.2	93.8	30,900	37,000	37,000	37,000	27,100	28
	29	74.6	93.5	29,500	35,400	35,400	35,400	26,300	29
	30	73.9	93.2	28,200	33,900	33,900	33,900	25,500	30
	32	72.6	92.6	25,800	31,100	31,100	31,100	24,100	32
	34	71.2	91.9	23,800	28,800	28,800	28,800	22,800	34
	36	69.9	91.2	22,000	26,700	26,700	26,700	21,800	36
	38	68.5	90.4	20,400	24,800	24,800	24,800	20,500	38
	40	67.1	89.6	19,000	23,200	23,200	23,200	19,500	40
	45	63.6	87.2	16,200	19,800	19,800	19,800	17,300	45
	50	60.0	84.5	13,900	17,200	17,200	17,200	15,400	50
	55	56.2	81.3	12,100	15,100	15,100	15,100	13,800	55
	60	52.3	77.7	10,500	13,300	13,300	13,300	12,400	60
	65	48.1	73.4	9,300	11,800	11,800	11,800	11,200	65
	70	43.6	68.5	8,200	10,500	10,500	10,500	10,100	70
	75	38.7	62.7	7,200	9,400	9,400	9,400	8,200	75
	80	33.3	55.7	6,400	8,400	8,400	8,400	8,300	80
	85	26.8	46.9	5,600	7,500	7,500	7,500	7,500	85
	90	18.3	34.5	4,900	6,700	6,700	6,700	6,700	90
100	19	82.0	105.9	49,000	61,000	61,000	61,000	35,800	19
	20	81.4	105.7	46,700	57,100	57,100	57,100	34,800	20
	21	80.8	105.5	44,600	53,600	53,600	53,600	33,400	21
	22	80.3	105.4	42,300	50,400	50,400	50,400	32,300	22
	23	79.7	105.2	39,900	47,500	47,500	47,500	31,200	23
	24	79.1	105.0	37,800	45,000	45,000	45,000	30,200	24
	25	78.5	104.8	35,800	42,600	42,600	42,600	29,200	25
	26	77.9	104.6	34,000	40,500	40,500	40,500	28,300	26
	27	77.3	104.3	32,300	38,600	38,600	38,600	27,600	27
	28	76.7	104.1	30,800	36,900	36,900	36,900	26,800	28
	29	76.1	103.9	29,400	35,300	35,300	35,300	26,000	29
	30	75.6	103.6	28,100	33,700	33,700	33,700	25,200	30
	32	74.4	103.0	25,700	31,000	31,000	31,000	23,800	32
	34	73.2	102.4	23,700	28,600	28,600	28,600	22,500	34
	36	72.0	101.8	21,900	26,600	26,600	26,600	21,300	36
	38	70.8	101.1	20,300	24,700	24,700	24,700	20,300	38
	40	69.5	100.4	19,100	23,100	23,100	23,100	19,200	40
	45	66.4	98.3	16,100	19,700	19,700	19,700	17,000	45
	50	63.3	95.9	13,800	17,100	17,100	17,100	15,200	50
	55	60.0	93.1	12,000	15,000	15,000	15,000	13,600	55
	60	56.6	90.0	10,400	13,200	13,200	13,200	12,200	60
	65	53.1	86.4	9,200	11,700	11,700	11,700	11,000	65
	70	49.4	82.4	8,100	10,400	10,400	10,400	9,900	70
	75	45.5	77.7	7,100	9,300	9,300	9,300	9,000	75
	80	41.3	72.3	6,300	8,300	8,300	8,300	8,100	80
	85	36.7	66.0	5,600	7,500	7,500	7,500	7,400	85
	90	31.5	58.5	4,900	6,700	6,700	6,700	6,700	90
	95	25.4	49.1	4,300	6,000	6,000	6,000	6,000	95
	100	17.4	36.1	3,800	5,400	5,400	5,400	5,400	100

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Stationary Ratings: Over Side	Stationary Ratings: Over Rear	Stationary Ratings: Directly Over Rear	Travel Ratings Directly Over Rear: Creep	Travel Ratings Directly Over Rear: 2.5 m.p.h.	Load Radius (ft)
110	21	81.7	115.7	44,300	53,400	53,400	53,400	33,100	21
	22	81.1	115.5	42,200	50,200	50,200	50,200	31,900	22
	23	80.6	115.3	39,700	47,400	47,400	47,400	30,900	23
	24	80.1	115.2	37,700	44,800	44,800	44,800	29,800	24
	25	79.6	115.0	35,700	42,500	42,500	42,500	28,900	25
	26	79.0	114.8	33,900	40,300	40,300	40,300	28,000	26
	27	78.5	114.6	32,200	38,400	38,400	38,400	27,300	27
	28	78.0	114.4	30,600	36,800	36,800	36,800	26,500	28
	29	77.4	114.1	29,200	35,100	35,100	35,100	25,700	29
	30	76.9	113.9	27,900	33,600	33,600	33,600	24,900	30
	32	75.8	113.4	25,600	30,900	30,900	30,900	23,500	32
	34	74.7	112.9	23,500	28,500	28,500	28,500	22,300	34
	36	73.7	112.3	21,700	28,400	26,400	26,400	21,100	36
	38	72.6	111.7	20,200	24,600	24,600	24,600	20,000	38
	40	71.5	111.0	18,900	22,900	22,900	22,900	19,000	40
	45	68.7	109.1	16,000	19,500	19,500	19,500	16,800	45
	50	65.9	107.0	13,700	17,000	17,000	17,000	14,900	50
	55	63.0	104.6	11,800	14,800	14,600	14,800	13,300	55
	60	60.0	101.8	10,300	13,000	13,000	13,000	11,900	60
	65	56.9	98.7	9,000	11,500	11,500	11,500	10,700	65
	70	53.7	95.2	7,900	10,200	10,200	10,200	9,700	70
	75	50.4	91.2	7,000	9,100	9,100	9,100	8,800	75
	80	46.9	86.8	6,200	8,200	8,200	8,200	7,900	80
	85	43.2	81.7	5,400	7,300	7,300	7,300	7,200	85
	90	39.2	75.9	4,800	6,600	6,600	6,600	6,800	90
	95	34.9	69.2	4,200	5,900	5,900	5,900	5,900	95
	100	30.0	61.2	3,700	5,300	5,300	5,300	5,300	100
	110	16.5	37.5	2,600	4,200	4,200	4,200	4,200	110

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WARNING ⚠

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

"on tires"

one counterweight

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle $\angle°$	Boom Point Elev (ft)	Stationary Ratings: Over Side	Stationary Ratings: Over Rear	Stationary Ratings: Directly Over Rear	Travel Ratings Directly Over Rear: Creep	Travel Ratings Directly Over Rear: 2.5 m.p.h.	Load Radius (ft)
120	22	81.9	125.6	41,800	50,000	50,000	50,000	31,300	22
	23	81.4	125.5	39,500	47,100	47,100	47,100	30,200	23
	24	80.9	125.3	37,400	44,500	44,500	44,500	29,200	24
	25	80.4	125.1	35,400	42,200	42,200	42,200	28,200	25
	26	80.0	125.0	33,800	40,100	40,100	40,100	27,800	26
	27	79.5	124.8	31,900	38,100	38,100	38,100	28,700	27
	28	79.0	124.6	30,400	36,500	36,500	36,500	25,900	28
	29	78.5	124.4	28,900	34,800	34,800	34,800	25,100	29
	30	78.0	124.2	27,600	33,300	33,300	33,300	24,300	30
	32	77.0	123.7	25,300	30,800	30,600	30,600	22,900	32
	34	76.1	123.2	23,200	28,200	28,200	28,200	21,700	34
	36	75.1	122.7	21,400	26,100	26,100	26,100	20,500	36
	38	74.1	122.1	19,900	24,300	24,300	24,300	19,400	38
	40	73.1	121.5	18,600	22,600	22,600	22,600	18,400	40
	45	70.6	119.8	15,700	19,200	19,200	19,200	16,200	45
	50	68.0	117.9	13,400	16,700	16,700	16,700	14,400	50
	55	65.4	115.7	11,500	14,500	14,500	14,500	12,800	55
	60	62.7	113.2	10,000	12,700	12,700	12,700	11,400	60
	65	60.0	110.5	8,700	11,200	11,200	11,200	10,200	65
	70	57.2	107.4	7,800	9,900	9,900	9,900	9,200	70
	75	54.3	103.9	6,700	8,800	8,800	8,800	8,300	75
	80	51.3	100.1	5,900	7,900	7,900	7,900	7,400	80
	85	48.1	95.8	5,200	7,000	7,000	7,000	6,700	85
	90	44.8	91.0	4,500	6,300	6,300	6,300	6,100	90
	95	41.3	85.6	3,900	5,600	5,600	5,600	5,500	95
	100	37.5	79.4	3,400	5,000	5,000	5,000	5,000	100
	110	28.6	63.8	2,500	4,000	4,000	4,000	4,000	110
	120	15.8	38.9	1,800	3,100	3,100	3,100	3,100	120

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle $\angle°$	Boom Point Elev (ft)	Stationary Ratings: Over Side	Stationary Ratings: Over Rear	Stationary Ratings: Directly Over Rear	Travel Ratings Directly Over Rear: Creep	Travel Ratings Directly Over Rear: 2.5 m.p.h.	Load Radius (ft)
130	24	81.6	135.4	37,300	44,300	44,300	44,300	28,800	24
	25	81.2	135.3	35,200	42,000	42,000	42,000	27,900	25
	26	80.7	135.1	33,400	39,900	39,900	39,900	27,200	26
	27	80.3	134.9	31,700	38,000	38,000	38,000	26,400	27
	28	79.8	134.8	30,200	36,300	36,300	36,300	25,500	28
	29	79.4	134.6	28,800	34,700	34,700	34,700	24,800	29
	30	78.9	134.4	27,400	33,100	33,100	33,100	24,000	30
	32	78.0	134.0	25,100	30,400	30,400	30,400	22,600	32
	34	77.1	133.5	23,000	28,000	28,000	28,000	21,400	34
	36	76.2	133.0	21,200	25,900	25,900	25,900	20,200	36
	38	75.3	132.5	19,700	24,100	24,100	24,100	19,100	38
	40	74.4	131.9	18,500	22,400	22,400	22,400	18,100	40
	45	72.1	130.4	15,500	19,000	19,000	19,000	15,900	45
	50	69.8	128.6	13,200	16,500	16,500	16,500	14,100	50
	55	67.4	126.7	11,400	14,300	14,300	14,300	12,500	55
	60	65.0	124.4	9,800	12,500	12,500	12,500	11,200	60
	65	62.5	121.9	8,500	11,000	11,000	11,000	10,000	65
	70	60.0	119.1	7,500	9,800	9,800	9,800	8,900	70
	75	57.4	116.1	6,500	8,700	8,700	8,700	8,000	75
	80	54.7	112.6	5,700	7,700	7,700	7,700	7,200	80
	85	52.0	108.9	5,000	6,900	6,900	6,900	6,500	85
	90	49.1	104.7	4,300	6,100	6,100	6,100	5,800	90
	95	46.1	100.1	3,800	5,500	5,500	5,500	5,300	95
	100	42.9	95.0	3,300	4,900	4,900	4,900	4,600	100
	110	36.0	82.7	2,400	3,800	3,600	3,800	3,800	110
	120	27.5	66.3	1,800	3,000	3,000	3,000	3,000	120
	130	15.2	40.2	—	2,200	2,200	2,200	2,200	130

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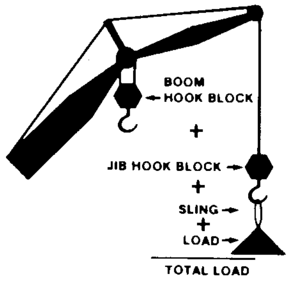
WARNING

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** -- a machine failure may occur

Jib ratings

The **total load** that can be lifted over a jib is limited by either the **rated jib loads** or by the **rated boom loads** on which the jib is mounted



Follow these steps to determine the **total load** that can be lifted over the jib

Step 1 **Measure the jib load radius.** The load radius must not be longer than the longest radius in the rated boom load chart for the length of boom on which the jib is mounted.

Step 2 **Determine the load rating of the boom** at the jib load radius by using the rated boom load chart for the counterweight, outrigger position, work area and length of boom (without jib) being used.

Step 3 **Determine jib rating** for the length and offset of the jib from the rated jib load chart.

Step 4 **The total load** that can be lifted is the **lower** of the two ratings determined in Steps 2 and 3

WARNINGS ⚠

- Do not attempt to lift more with the jib (at any radius) than the rated load for the boom at that radius, as machine may tip or collapse.
- Do not attempt to lift more than rated jib loads shown in **shaded areas — jib may collapse** before machine tips.
- When lifting over jib point with hook block suspended from boom point, **include** the weight of the boom hook block as a part of the total load.

Jib Ratings For LIFT CRANE SERVICE

rated jib loads in pounds

Offset Angle of Jib to Boom Under Full Load	20 Foot Jib	30 Foot Jib	40 Foot Jib	50 Foot Jib	60 Foot Jib	70 Foot Jib	80 Foot Jib
10°	**30,000***	**20,000**	**16,000**	**13,000**	**10,700**	**9,000**	**7,800**
20°	**25,000**	**18,000**	**14,500**	**11,600**	**9,800**	**8,400**	**7,000**
30°	**23,000**	**17,000**	**13,500**	**11,000**	**9,300**	**7,700**	**6,100**

Standard Wire Rope — 1 inch dia. Type 25
* Use 2 part of line for loads above 27,800 lbs.

Optional Wire Rope — 1 inch dia. Type 11 (Non-Rotating)
⚠ Use only 1 part of line. Loads not to exceed 15,300 lbs.
Use of Swivel is not approved with this rope.

Jib Ratings For CONCRETE BUCKET SERVICE

rated jib loads in pounds

Offset of Jib to Boom Under Full Load	20 Foot Jib	30 Foot Jib	40 Foot Jib	50 Foot Jib	60 Foot Jib	70 Foot Jib	80 Foot Jib
10°	**24,000**	**16,000**	**12,800**	**10,400**	**8,550**	**7,200**	**6,250**
20°	**20,000**	**14,400**	**11,600**	**9,250**	**7,850**	**6,700**	**5,600**
30°	**18,400**	**13,600**	**10,800**	**6,800**	**7,450**	**6,150**	**4,900**

Standard Wire Rope — 1 inch dia. Type 25
Use 1 part of line.

Optional Wire Rope — 1 inch dia. Type 11 (Non-Rotating)
⚠ Use only 1 part of line. Loads not to exceed 15,300 lbs.
Use of Swivel is not approved with this rope.

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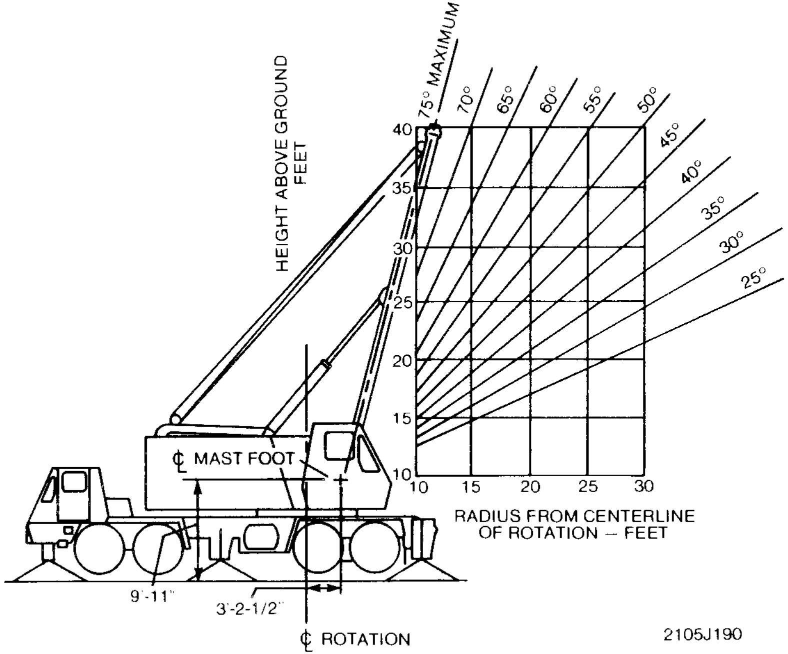
WARNING ⚠
Do not attempt to lift more than rated loads in **shaded areas** — a machine failure may occur.

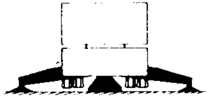
working ranges



2105J190

no counterweights

RATINGS
30' LIVE MAST



"on outriggers"
front float set

rated mast load in pounds			
Load Radius (ft.)	Mast Angle ∠°	Mast Point Elev. (ft.)	**360° Rated Load (lbs.)**
11	74.9	38.8	**42,000**
12	72.9	38.5	**42,000**
15	66.8	37.4	**42,000**
20	55.9	34.7	**32,300**
25	43.3	30.4	**22,700**
30	26.6	23.2	**13,000**

WARNING ⚠

Do not attempt to lift more than **rated load at load radius** shown, or lift where no radius or load is listed, as machine may tip or collapse.

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur.

general

1. Rated loads shown are for this machine as manufactured by Harnischfeger Corp. Rated loads only apply when all the instructions in this book are rigidly followed. Modifications to this machine or use of equipment other than that specified can reduce operating capacity.
2. If improperly operated or maintained, this machine can be dangerous. Always operate and maintain this machine in compliance with the information in the Operators, Shop, Parts, and Safety Manuals furnished. If these manuals are missing, obtain replacements through your P&H distributor.
3. Rated loads have been determined for ideal operating conditions. The user must limit or de-rate lifted loads to allow for adverse conditions (such as soft or uneven ground, out-of-level conditions, winds, side loads, pendulum action, jerking or sudden stopping of loads, inexperience of personnel, multiple machine lifts and traveling with a load.)
4. This machine meets the requirements of A.N.S.I. B30.5-1968. Upper, lower, boom and jib structures have been tested per SAE J-987. Machine stability has been tested per SAE J-765a.

definitions

Rated Load: The total suspended load (including the weight of material and load handling equipment) that the machine can safely lift under ideal conditions at a given boom length, boom angle and load radius.

Load Radius: The horizontal distance measured between the center of rotation and the hoist load line or tackle with load applied.

Boom Angle: The angle between the longitudinal centerline of the boom and the horizontal.

Boom Point Elevation: The vertical distance measured between the ground and the center of the boom point sheave.

Freely Suspended Load: Lifted load hanging free with no direct external force applied except by the hoist line.

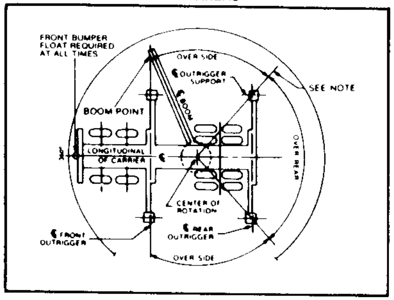
Side Load: Horizontal force applied to the load or boom.

Creep: Motion less than 200 feet in a 30 minute period and not exceeding 1 mph.

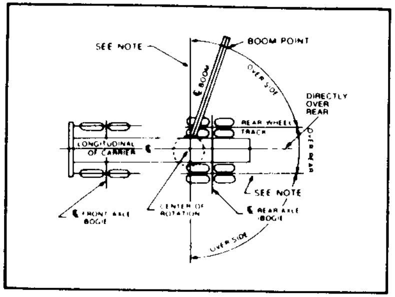
Work Areas: Areas designated are 360°, "over side", "over rear" or "directly over rear" of carrier.

NOTE: THESE LINES DETERMINE THE LIMITING POSITION OF ANY LOAD FOR OPERATION WITHIN WORKING AREAS INDICATED.

"WITH OUTRIGGERS EXTENDED AND SET" WORK AREAS



"ON TIRES" WORK AREAS



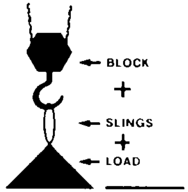
warnings ⚠

SET-UP

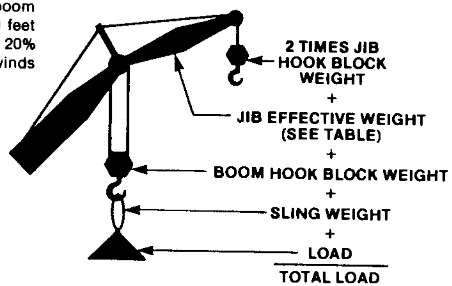
1. Boom backstops are required for all boom lengths.
2. 30 ft. live mast required for all boom lengths.
3. The gantry position and boom hoist rope strength are determined by the maximum boom or boom plus jib combination as shown in the information section.
4. The machine must be leveled to within 1% (one foot rise or fall in 100 foot distance) on firm supporting surface.
5. This machine must be reeved and set-up as stated in information section.
6. Front bumper float must be set for all operations on outriggers.
7. When using 30 ft. live mast as a boom, boom backstops must be attached to mast.
8. All "On Outrigger" ratings must have outriggers fully extended and set with tires clear of ground.
9. Machine will tip when swung over side unless outriggers are fully extended and set — and —
   - 2 counterweights and boom are installed.
   - 1 counterweight without boom is installed.
10. Two 15,000 lb. front bumper counterweights **OR** two auxiliary rear outriggers are used only to erect long booms or boom and jib combinations.
    - Do not use two front bumper counterweights **AND** two auxiliary rear outriggers at the same time.
    - Do not use for lifting loads in excess of the rating chart. Structural damage may result.

LIFTING OPERATIONS

1. Rated loads are for stationary and level machines lifting freely suspended loads.
   - Rated loads do not exceed 85% of tipping as determined by SAE Crane Stability Test Code J-765a.
   - Ratings in shaded areas are based on factors other than machine stability (such as structural strength.)
2. Attempting to lift more than rated loads may cause machine to tip or collapse. Do not tip machine to determine capacity.
3. Weights 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 load that can be lifted.
4. When lifting over the boom point with jib installed, deductions for the effective weights of the jib hook block, jib (see table), boom hook block and slings must be subtracted from the rated load to obtain the load that can be lifted.



5. Wind can cause sufficient side load on the boom and load to tip the machine (or collapse the boom structures.)
   - Rated loads allow for the effect on the boom of up to a 10 MPH wind measured 30 feet above the ground. Reduce rated loads 20% for the effect of the wind on boom for winds between 10 mph and 20 mph.
   - Rated loads make no allowance for the effect of the wind on the load. Do not lift load when side load due to wind exceeds 2% of the rated or reduced load.
   - Do not operate when wind speeds exceed 20 MPH. Contact manufacturer for special rating chart if crane work must be performed in wind speeds above 20 MPH.
   - Booms should be lowered (or tied off) when wind speed exceeds 50 MPH.



warnings ⚠

6. Rated loads are for machines leveled to within 1% (one foot rise or fall in 100 foot distance.)
   - Reduce rated loads by 20% when machine is between 1% and 2% out-of-level.
   - Do not operate if machine is more than 2% out-of-level.

7. Using two or more machines to lift a single load can be dangerous unless carefully engineered and coordinated.
   - Machine must be level.
   - Rigging must be equalized so that each machine lifts a share of the load which is well within its load rating.
   - Swing brakes must be released so that boom points are free to remain directly over the load attachment points at all times.
   - Care must be used to avoid side-loading.

8. **Do not attempt to operate** at load radii or boom lengths **where no load ratings are listed.** At these positions, machine could tip without any load on the hook.

9. **Do not guess at load ratings** in-between those listed on chart. When operating at a load radius or boom angle in-between listed numbers, proceed as follows:
   - For a load radius not shown, use rated load of next longer listed radius.
   - For a boom angle not shown, use rated load of next smaller boom angle.

10. Swing acceleration and deceleration must be smooth. Horizontal forces (side loads) at the boom point due to acceleration or deceleration must not exceed 2% of the lifted load.

11. When lifting loads "on tires", loads lifted over-rear and swung over-side will increase in radius due to tire deflection. This increase must be compensated for by raising boom, or machine may tip over. All tires must be inflated to 115 psi.

12. To help prevent tipping conditions when lifting loads "on tires", it is recommended that —
    - Minimum boom lengths be used.
    - Outriggers be extended as far as possible and be cleared of ground.

TRAVELING OPERATIONS

1. TRAVEL WITH LOAD
   - All tires must be evenly inflated to 115 psi.
   - Speeds not to exceed "creep' or 2.5 mph as shown on "on tires" load chart.
   - Only one bumper counterweight allowed. Two bumper counterweights may overload front carrier suspension.
   - Maximum approved boom length is 130 feet.
   - Maximum approved heavy duty boom and jib length is 110 ft. and 20 ft. of jib.
   - Maximum approved long range boom and jib length is 120 ft. and 20 ft. of jib.
   - Machine must be on firm, level surface with load centered directly over rear of machine and restrained from swinging.
   - Carrier acceleration and deceleration must be smooth.
2. TRAVEL WITH BOOM WITHOUT LOAD
   - All tires must be evenly inflated to 100 psi.
   - Speed not to exceed 2.5 mph with one bumper counterweight.
   - Two bumper counterweights are not allowed because front carrier suspension may be overloaded.
   - Maximum approved boom length is 130 ft.
   - Maximum approved heavy duty boom and jib length is 110 ft. and 20 ft. of jib.
   - Maximum approved long range boom and jib length is 120 ft. and 20 ft. of jib.
   - Machine must be on firm, level surface with boom centered directly over rear of machine.
   - Consult factory for approval of configurations other than those shown.
3. TRAVEL WITHOUT BOOM
   - All tires must be evenly inflated to 100 psi.
   - One bumper counterweight is allowed. Two bumper counterweights will overload front carrier suspension.
   - Upper of machine must be in line with long carrier axis

information

See Operators Manual For Boom Erection Procedure

HEAVY DUTY TIP BOOM ERECTION
(MAXIMUM LENGTHS THAT CAN BE RAISED)

	BOOM ONLY		BOOM AND JIB	
BOOM POSITION	Two Counterweights	One Counterweight	Two Counterweights	One Counterweight
Over rear end with two bumper counterweights, outriggers set	250' boom maximum	—	250' boom maximum plus 20' to 80' jib maximum	—
Over rear end with one bumper counterweight, outriggers set	250' boom maximum	—	230' boom maximum plus 40' jib maximum 220' boom maximum plus 50' jib maximum 210' boom maximum plus 60' jib maximum 200' boom maximum plus 70' jib maximum 190' boom maximum plus 80' jib maximum	
Over rear end with one bumper counterweight, aux. rear outriggers and standard outriggers set	250' boom maximum	—	250' boom maximum plus 20' to 80' jib maximum	—
Over rear end without bumper counterweight, outriggers set	230' boom maximum	200' boom maximum	200' boom maximum plus 20' to 80' jib maximum	180' boom maximum plus 20' jib maximum
Over side, outriggers set	230' boom maximum	200' boom maximum	200' boom maximum plus 20' to 80' jib maximum	180' boom maximum plus 20' jib maximum
Over rear end on tires	—	130' boom maximum	—	110' boom maximum plus 20' jib maximum
Over side, on tires	—	130' boom maximum	—	—

GANTRY POSITION AND BOOM HOIST ROPE
FOR MAXIMUM BOOM OR BOOM PLUS JIB LENGTH COMBINATIONS

Gantry Position	Boom Length Feet	Boom Plus Jib Length — Ft.	Boom Hoist Rope
Lowered or Raised	230' maximum	230' maximum plus 60' maximum 220' maximum plus 70' maximum 210' maximum plus 80' maximum	Standard rope
Raised	250' maximum	250' maximum plus 80' maximum 250' maximum plus 70' maximum 240' maximum plus 80' maximum 230' maximum plus 80' maximum 230' maximum plus 70' maximum	(See wire rope data)

WARNINGS ⚠

Do not attempt to erect more than the maximum boom (or maximum boom with jib combination) because tipping or structural damage may occur

information

See Operators Manual For Boom Erection Procedure

LONG RANGE TIP BOOM ERECTION
(MAXIMUM LENGTHS THAT CAN BE RAISED)

	BOOM ONLY		BOOM AND JIB	
BOOM POSITION	Two Counterweights	One Counterweight	Two Counterweights	One Counterweight
Over rear end with two bumper counterweights, outriggers set	270' boom maximum	—	270' boom maximum plus 20' to 80' jib maximum	—
Over rear end with one bumper counterweight, outriggers set	270' boom maximum	—	250' boom maximum plus 50' jib maximum 240' boom maximum plus 60' jib maximum 230' boom maximum plus 70' jib maximum 220' boom maximum plus 80' jib maximum	—
Over rear end with one bumper counterweight aux. rear outriggers and standard outriggers set	270' boom maximum	—	270' boom maximum plus 20' to 80' jib maximum	—
Over rear end without bumper counterweight, outriggers set	240' boom maximum	210' boom maximum	210' boom maximum plus 20' to 80' jib maximum	190' boom maximum plus 20' jib maximum
Over side, outriggers set	240' boom maximum	210' boom maximum	210' boom maximum plus 20' to 80' jib maximum	190' boom maximum plus 20' jib maximum
Over rear end on tires	—	130' boom maximum	—	120' boom maximum plus 20' jib maximum
Over side, on tires	—	130' boom maximum	—	—

GANTRY POSITION AND BOOM HOIST ROPE
(FOR MAXIMUM BOOM OR BOOM PLUS JIB LENGTH COMBINATIONS)

Gantry Position	Boom Length Feet	Boom Plus Jib Length — Ft.	Boom Hoist Rope
Lowered or Raised	230' maximum	230' maximum plus 60' maximum 220' maximum plus 70' maximum 210' maximum plus 80' maximum	Standard rope
Raised	270' maximum	270' maximum plus 60' maximum 260' maximum plus 70' maximum 250' maximum plus 80' maximum	(See wire rope data)
Raised	—	270' maximum plus 80' maximum 270' maximum plus 70' maximum 260' maximum plus 80' maximum	Special rope (See wire rope data)

WARNINGS ⚠

Do not attempt to erect more than the maximum boom (or maximum boom with jib combination) because tipping or structural damage may occur.

information

BOOM MAKE-UP ARRANGEMENT

HEAVY DUTY TIP BOOM

BOOM LENGTH (FEET)	BOOM INSERT ARRANGEMENT Base (25') = B Tip (25') = T		BOOM ROLLERS		MID POINT	JIB BACKSTAY
	RECOMMENDED	ALTERNATE	No. Required	Distance From Boom Point (Feet)	Distance From Boom Point (Feet)	Distance From Boom Point (Feet)
50	B + T	—	0	—	—	—
60	B + 10' + T	—	0	—	—	—
70	B + 20' + T	—	0	—	—	—
80	B + 30' + T	B + 10' + 20' + T	0	—	—	—
90	B + 10' + 30' + T	—	0	—	—	—
100	B + 50' + T	B + 20' + 30' + T	0	—	—	—
110	B + 10' + 50' + T	B + 10' + 20' + 30' + T	0	—	—	76
120	B + 20' + 50' + T	B + 20' + 20' + 30' + T	0	—	—	76
130	B + 30' + 50' + T	B + 10' + 20' + 20' + 30' + T	0	—	—	76
140	B + 10' + 30' + 50' + T	—	0	—	—	76
150	B + 50' + 50' + T	B + 20' + 30' + 50' + T	0	—	—	76
160	B + 10' + 50' + 50' + T	B + 10' + 20' + 30' + 50' + T	1	75	—	76
170	B + 20' + 50' + 50' + T	B + 20' + 20' + 30' + 50' + T	1	75	—	76
180	B + 30' + 50' + 50' + T	B + 20' + 20' + 30' + 50' + T	1	75	—	76
190	B + 10' + 30' + 50' + 50' + T	B + 10' + 20' + 30' + 30' + 50' + T	1	75	—	76
200	B + 50' + 50' + 50' + T	B + 20' + 30' + 50' + 50' + T	1	75	—	76
210	B + 10' + 50' + 50' + 50' + T	B + 10' + 20' + 30' + 50' + 50' + T	2	75	—	76
220	B + 20' + 50' + 50' + 50' + T	B + 20' + 20' + 30' + 50' + 50' + T	2	75 & 125	—	76
230	B + 30' + 50' + 50' + 50' + T	B + 20' + 30' + 30' + 50' + 50' + T	2	75 & 125	—	76
240	B + 10' + 30' + 50' + 50' + 50' + T	B + 10' + 20' + 30' + 30' + 50' + 50' + T	2	75 & 125	125	76
250	B + 50' + 50' + 50' + 50' + T	B + 20' + 30' + 50' + 50' + 50' + T	2	75 & 125	125	76

WARNINGS ⚠

- Boom inserts must be arranged as indicated above or machine may tip or collapse.
- Arrange boom insert pendant lengths to match insert lengths. Tip pendants are 28'-6" long. For pendant information, refer to Parts Book.
- Mid point suspension pendant is required for 240 foot and 250 foot booms. Refer to Parts Book.

information

BOOM MAKE-UP ARRANGEMENT

LONG RANGE TIP BOOM

BOOM LENGTH (FEET)	BOOM INSERT ARRANGEMENT Base (25') = B Tip (35') = T		BOOM ROLLERS		MID POINT	JIB BACKSTAY
	RECOMMENDED	ALTERNATE	No. Required	Distance From Boom Point (Feet)	Distance From Boom Point (Feet)	Distance From Boom Point (Feet)
60	B + T	—	0	—	—	—
70	B + 10' + T	—	0	—	—	—
80	B + 20' + T	—	0	—	—	—
90	B + 30' + T	B + 10' + 20' + T	0	—	—	—
100	B + 10' + 30' + T	—	0	—	—	—
110	B + 50' + T	B + 20' + 30' + T	0	—	—	—
120	B + 10' + 50' + T	B + 10' + 20' + 30' + T	0	—	—	86
130	B + 20' + 50' + T	B + 20' + 20' + 30' + T	0	—	—	86
140	B + 30' + 50' + T	B + 10' + 20' + 20' + 30' + T	0	—	—	86
150	B + 10' + 30' + 50' + T	—	0	—	—	86
160	B + 50' + 50' + T	B + 20' + 30' + 50' + T	0	—	—	86
170	B + 10' + 50' + 50' + T	B + 10' + 20' + 30' + 50' + T	1	85	—	86
180	B + 20' + 50' + 50' + T	B + 20' + 20' + 30' + 50' + T	1	85	—	86
190	B + 30' + 50' + 50' + T	B + 20' + 30' + 30' + 50' + T	1	85	—	86
200	B + 10' + 30' + 50' + 50' + T	B + 10' + 20' + 30' + 30' + 50' + T	1	85	—	86
210	B + 50' + 50' + 50' + T	B + 20' + 30' + 50' + 50' + T	1	85	—	86
220	B + 10' + 50' + 50' + 50' + T	B + 10' + 20' + 30' + 50' + 50' + T	2	85 & 135	—	86
230	B + 20' + 50' + 50' + 50' + T	B + 20' + 20' + 30' + 50' + 50' + T	2	85 & 135	—	86
240	B + 30' + 50' + 50' + 50' + T	B + 20' + 30' + 30' + 50' + 50' + T	2	85 & 135	135	86
250	B + 10' + 30' + 50' + 50' + 50' + T	B + 10' + 20' + 30' + 30' + 50' + 50' + T	2	85 & 135	135	86
260	B + 50' + 50' + 50' + 50' + T	B + 20' + 30' + 50' + 50' + 50' + T	2	85 & 135	135	86
270	B + 10' + 50' + 50' + 50' + 50' + T	B + 10' + 20' + 30' + 50' + 50' + 50' + T	2	85 & 135	135	86

WARNINGS ⚠

- Boom inserts must be arranged as indicated above or machine may tip or collapse.
- Arrange boom insert pendant lengths to match insert lengths. Tip pendants are 38'-6" long. For pendant information, refer to Parts Book.
- Mid point suspension pendant is required for 240 foot through 270 foot booms. Refer to Parts Book.

information

JIB MAKE-UP ARRANGEMENT CHART

JIB LENGTH (FEET)	JIB INSERT ARRANGEMENT
20	Jib Base (10') + Jib Tip (10')
30	Jib Base + 10' + Jib Tip
40	Jib Base + 20' + Jib Tip
50	Jib Base + 10' + 20' + Jib Tip
60	Jib Base + 20' + 20' + Jib Tip
70	Jib Base + 10 + 20 + 20 + Jib Tip
80	Jib Base + 10 + 10 + 20 + 20 + Jib Tip

WARNINGS ⚠

- Jib inserts must be arranged as indicated above or machine may tip or collapse.
- Jibs cannot be attached to heavy duty booms less than 110 ft. long.
- Jibs cannot be attached to long range booms less than 120 ft. long.

WIRE ROPE DATA

MAIN HOIST ROPE — STANDARD

1 inch diameter P&H type 25 (6 x 25 filler wire preformed extra improved plow steel with independent wire rope core)
- 103,400 pound minimum breaking strength

PARTS OF LINE	1	2	3	4	5
Total Maximum Lifted Load (Lbs.)	27,800	55,600	83,400	111,200	139,000

PARTS OF LINE	6	7	8	9	10
Total Maximum Lifted Load (Lbs.)	166,800	194,600	222,400	250,200	278,000

MAIN HOIST ROPE — SPECIAL

1 inch diameter P&H type 29 (6 x 25 filler wire preformed extra extra improved plow steel with independent wire rope core.
- 115,000 pound minimum breaking strength

PARTS OF LINE	10	
Total Maximum Lifted Load (Lbs.)	300,000	30,000# line pull permissible only when lifting loads exceeding 278,000#

JIB HOIST ROPE — STANDARD

1 inch diameter P&H type 25 (6 x 25 filler wire preformed extra improved plow steel with independent wire rope core)
- 103,400 pound minimum breaking strength

PARTS OF LINE	1	2	
Total Maximum Lifted Load (Lbs.)	27,800	30,000	

WARNING ⚠

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur

information

JIB HOIST ROPE OPTIONAL (NON-ROTATING)

1 inch diameter P&H type 11 (18 x 7 Non-rotating preformed improved plow steel with fibre core)
- 76,600 pound minimum breaking strength
- use of swivel is not approved with this rope
- not approved for more than single part of line

PARTS OF LINE	1
Total Maximum Lifted Load (Lbs.)	**15,300**

BOOM HOIST ROPE — STANDARD

3/4 inch diameter P&H type 27D (6 x 26 Warrington Seale, preformed extra improved plow steel, right alternate lay with independent wire rope core)
- 58,800 pound minimum breaking strength
- Boom hoist reeving is 14 parts reeved as shown in the Operator's Manual

BOOM HOIST ROPE — SPECIAL

Required for:
260' Ft. of Long Range Boom plus 80' Jib or 270 Ft. of Boom plus 70' or 80' of Jib.
3/4 inch diameter P&H type 30D (6 x 26 Warrington Seale, preformed extra extra improved plow steel right alternate lay with independent wire rope core)
- 64,600 pound minimum breaking strength
- Boom hoist reeving is 14 parts reeved as shown in the Operator's Manual

BOOM PENDANTS

4 - 1 inch diameter P&H type 25 (6 x 25 filler wire preformed extra improved plow steel with independent wire rope core)
- 103,400 pound minimum breaking strength per pendant
- Must be replaced in matched pairs. Refer to Parts Book

JIB PENDANTS

3/4 inch diameter P&H type 29 (6 x 25 filler wire preformed extra extra improved plow steel with independent wire rope core)
- 64,600 pound minimum breaking strength per pendant
- Must be replaced in matched pairs. Refer to Parts Book

JIB BACKSTAY

7/8 inch diameter P&H type 25 (6 x 25 filler wire preformed extra improved plow steel with independent wire rope core)
- 79,600 pound minimum breaking strength
- Refer to parts book

MIDPOINT SUSPENSION PENDANTS

7/8 inch diameter P&H type 25 (6 x 25 filler wire preformed extra improved plow steel with independent wire rope core)
- 79,600 pound minimum breaking strength
- Matched sets. Refer to Parts Book.

WARNING ⚠

Do not attempt to lift more than rated loads shown in **shaded areas** — a machine failure may occur

information

WIRE ROPE LENGTH CHART (For Lift Crane Service)

USE	BOOM LENGTH	ROPE P&H TYPE	ROPE DIA. IN.	ROPE LENGTH (FEET) PARTS OF LINE 1	2	3	4	5	6	7	8	9	10
BOOM HOIST	ALL	27D **30D	3/4	660 ft. (14 Part Reeving)									
HOIST LINE (FRONT OR REAR DRUM)	50	*25	1	120	175	230	285	340	395	450	505	560	615
	60	25	1	140	205	270	335	400	465	530	595	660	725
	70	25	1	160	235	310	385	460	535	610	685		
	80	25	1	180	265	350	435	520	605	690			
	90	25	1	200	295	390	485	580	675	770			
	100	25	1	220	325	430	535	640	745				
	110	25	1	240	355	470	585	700	815				
	120	25	1	260	385	510	635	760					
	130	25	1	280	415	550	685	820					
	140	25	1	300	445	590	735	880					
	150	25	1	320	475	630	785						
	160	25	1	340	505	670	835						
	170	25	1	360	535	710		Extra Rope Length is Required for Operating Below Ground Level					
	180	25	1	380	565	750							
	190	25	1	400	595	790							
	200	25	1	420	625	830							
	210	25	1	440	655								
	220	25	1	460	685	*Type 29 for loads exceeding 278,000 pounds							
	230	25	1	480	715	**Special Boom Hoist Rope required for: 260' of Long Range Boom Plus 80' Jib or 270' of Boom Plus 70' or 80' of Jib							
	240	25	1	500	745								
	250	25	1	520	775								
	260	25	1	540	805								
	270	25	1	560									

USE	BOOM LENGTH	ROPE P&H TYPE	ROPE DIA. IN.	JIB LENGTHS / PARTS OF LINE 20' JIB 1	20' JIB 2	30' JIB 1	30' JIB 2	40' JIB 1	50' JIB 1	60' JIB 1	70' JIB 1	80' JIB 1
JIB HOIST LINE (REAR DRUM)	110	25	1	280	415	300	445	320	340	360	380	400
	120	25	1	300	445	320	475	340	360	380	400	420
	130	25	1	320	475	340	505	360	380	400	420	440
	140	25	1	340	505	360	535	380	400	420	440	460
	150	25	1	380	535	380	565	400	420	440	460	480
	160	25	1	380	565	400	595	420	440	460	480	500
	170	25	1	400	595	420	625	440	460	480	500	520
	180	25	1	420	625	440	655	460	480	500	520	540
	190	25	1	440	655	460	685	480	500	520	540	560
	200	25	1	460	685	480	715	500	520	540	560	580
	210	25	1	480	715	500	745	520	540	560	580	600
	220	25	1	500	745	520	775	540	560	580	600	620
	230	25	1	520	775	540	805	560	580	600	620	640
	240	24	1	540	805	580	835	580	600	620	640	660
	250	25	1	560	835	580		600	620	640	660	680
	260	25	1	580		600		620	640	660	680	700
	270	25	1	600		620		640	660	680	700	720

information

HOOK BLOCKS

Capacities Tons	Capacities Pounds	Number of Sheaves	Weight (Pounds)
150	300,000	5	3651
100	200,000	3	2645
45	90,000	1	911
15	30,000	Ball Hook	800

This chart shows the capacities and weights of Johnson Blocks supplied with this crane.

- One counterweight is 23,000 pounds.

- Two counterweights are 64,000 pounds.

- One bumper counterweight is 15,000 pounds.

- Two bumper counterweights are 30,000 pounds (consisting of two 15,000 pound bumper counterweights).

- Do not put additional counterweight on machine to increase stability in order to lift more than rated loads — machine may tip backwards. Lifting more than rated loads may cause boom or jib structures to collapse.