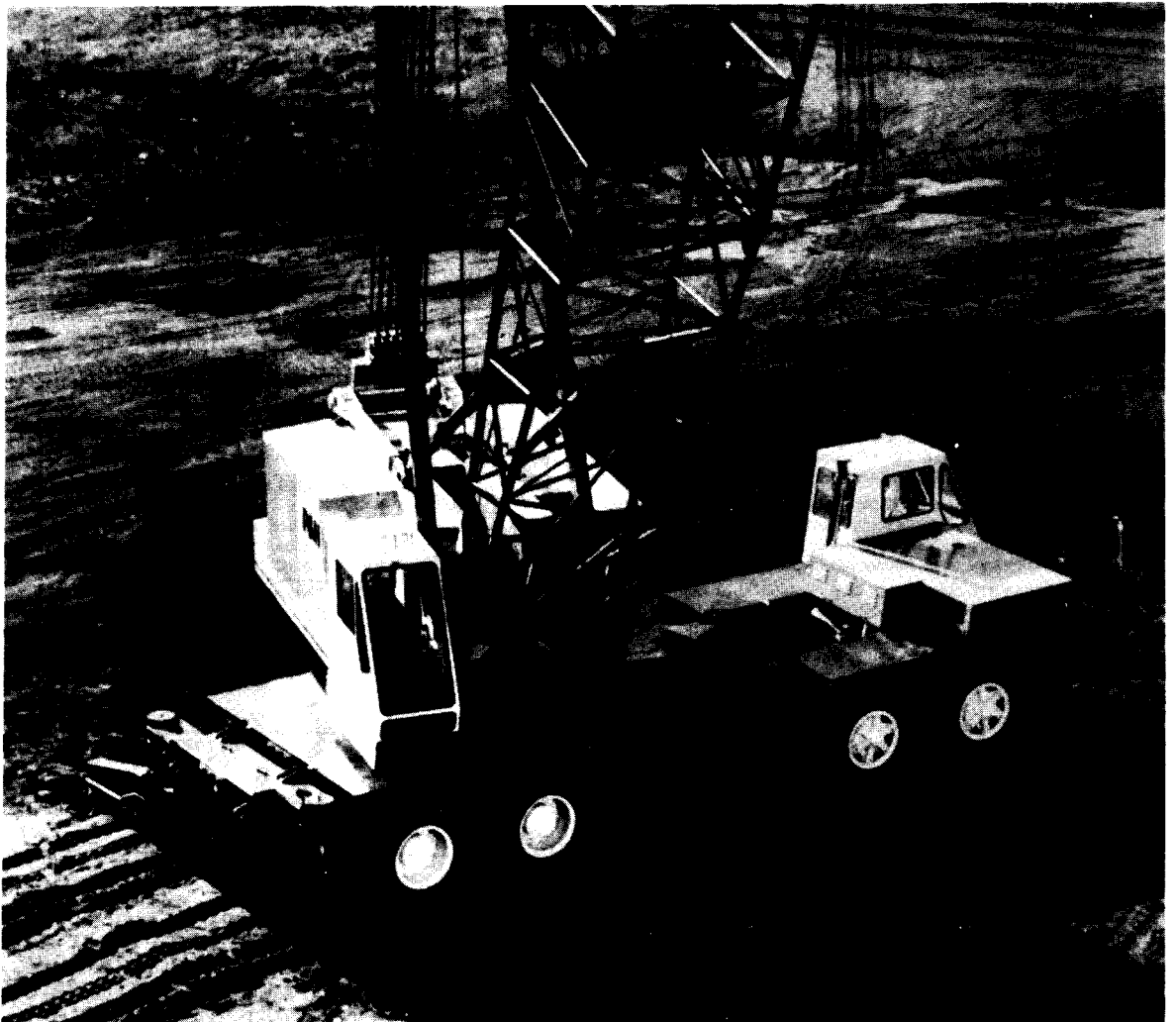


# P&H<sup>®</sup> 9150

## 150-ton Truck Crane



- Travels under 100,000 lbs. — fast counterweight and outrigger stltdown.
- 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

# 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' (18m) 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)

## 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.<sup>3</sup> 903  
 Liters 14.8  
 Cycles 4  
 Air Induction Nat. Aspirated

### TRANSMISSION:

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

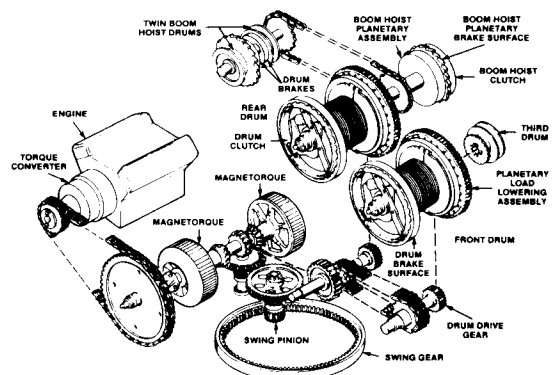
### RATINGS:

Gross HP @ RPM 255 @ 2400  
 Net HP @ RPM 179 @ 1285  
 (Converter Output Shaft 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 requirements, 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 converter. 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	8th Layer FPM MPM
5,000	2,268	188 57.3	219 66.8	264 80.5
15,000	6,804	188 57.3	219 66.8	264 80.5
25,000	11,340	188 57.3	208 63.4	209 63.7
27,400*	12,428	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 184.5' (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						
Available Hoisting Line Pull *	1st Layer		3rd Layer		5th Layer	
	Lbs.	Kg.	Lbs.	Kg.	Lbs.	Kg.
	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	28.7
LOWERING	48 14.6	55 16.8	62	18.9

\*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:** 2-28" (660 mm) dia. x 6.25" (159 mm) wide, electromagnetic "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" (1676 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.

## 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. <sup>3</sup>	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)	(0-3,658)
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	Air shifted
	Twin counter-shaft	Twin counter-shaft
	15-speed Forward	2-speed
	3-speed Reverse	
	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 14-2LP 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), 36 sq. in. (914 mm) air chambers. Total brake lining area — 1812 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. (169 kg)

Tip — 470 lb. (213 kg)

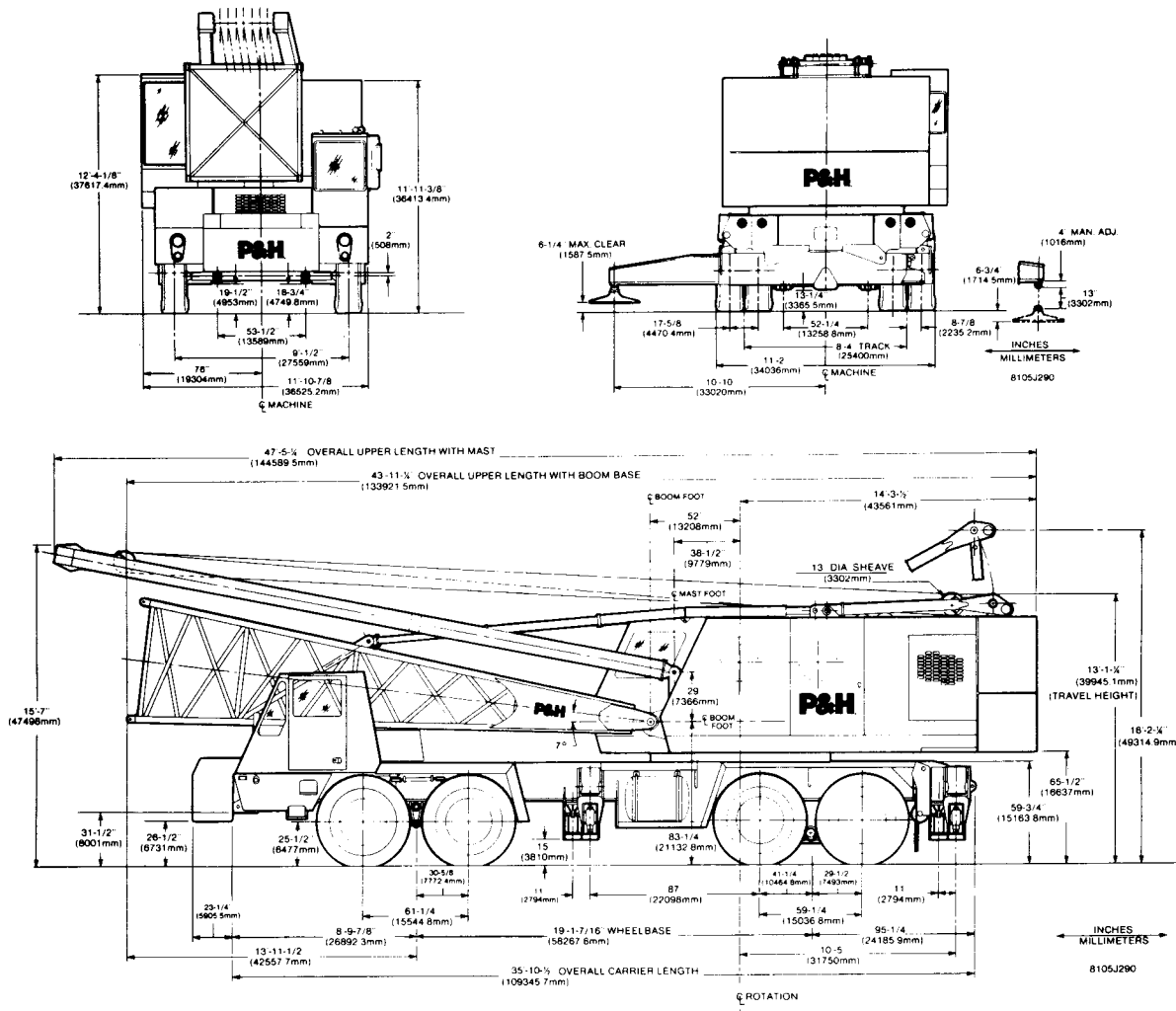
Strut — 420 lb. (191 kg)

**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.



# 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**

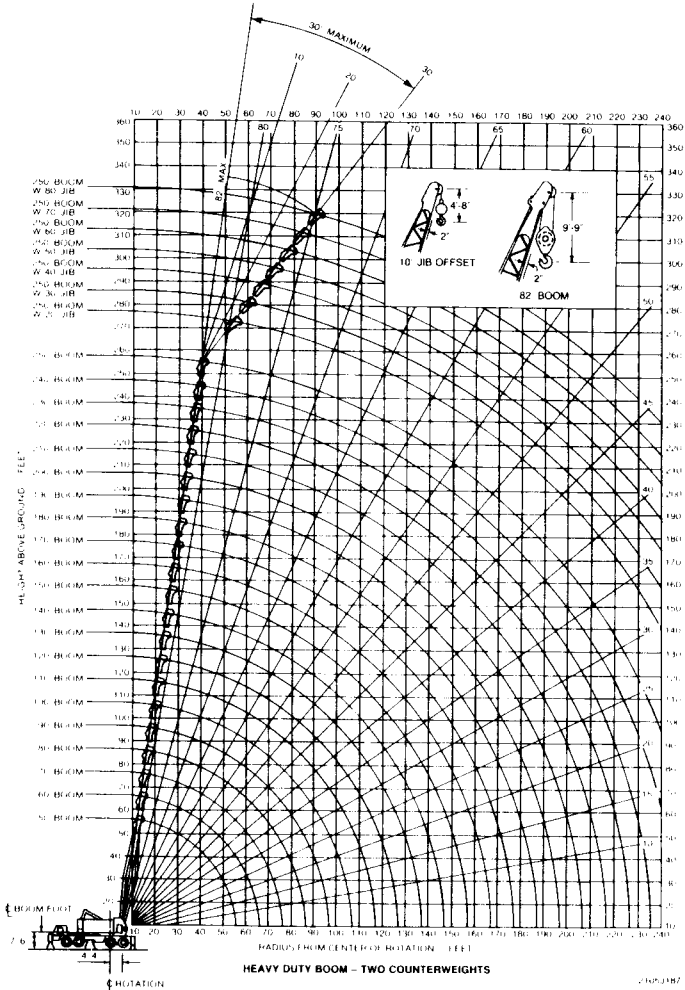
# working ranges

TRUCK CRANES

Dataquest Incorporated

P&H

P. 180.33

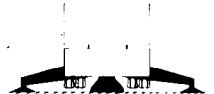


## RATINGS LIFT CRANE SERVICE



two counterweights and  
one bumper counterweight

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 Δ°	Boom Point Elev (ft)	Rated Load (lbs)			Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs)		
				360°	Over Side	Over Rear					360°	Over Side	Over Rear
50	12	82.0	56.6	300,000	300,000	300,000	60	14	81.4	66.4	258,500	258,500	258,500
	13	80.9	56.5	278,300	278,300	278,300		15	80.5	66.3	241,200	241,200	241,200
	14	79.7	56.3	258,500	258,500	258,500		16	79.5	66.1	225,100	225,100	225,100
	15	78.5	56.1	241,200	241,200	241,200		17	78.5	65.9	210,200	210,200	210,200
	16	77.4	55.8	225,300	225,100	225,100		18	77.6	65.6	201,000	201,000	201,000
	17	76.2	55.6	210,400	212,800	212,800		19	76.6	65.4	190,400	190,400	190,400
	18	75.0	55.3	201,000	201,000	201,000		20	75.6	65.1	180,900	180,900	180,900
	19	73.8	55.0	190,400	190,400	190,400		21	74.6	64.8	172,300	172,300	172,300
	20	72.6	54.7	180,900	180,900	180,900		22	73.6	64.5	164,500	164,500	164,500
	21	71.4	54.3	172,300	172,300	172,300		23	72.6	64.2	157,300	157,300	157,300
	22	70.2	54.0	164,500	164,500	164,500		24	71.6	63.9	150,700	150,700	150,700
	23	68.9	53.6	157,300	157,300	157,300		25	70.6	63.5	144,700	144,700	144,700
	24	67.7	53.2	150,700	150,700	150,700		26	69.5	63.1	139,100	139,100	139,100
	25	66.4	52.7	144,700	144,700	144,700		27	68.5	62.7	134,000	134,000	134,000
	26	65.2	52.2	139,100	139,100	139,100		28	67.5	62.3	129,200	129,200	129,200
	27	63.9	51.7	134,000	134,000	134,000		29	66.4	61.9	124,700	124,700	124,700
	28	62.6	51.2	129,200	129,200	129,200		30	65.4	61.4	120,600	120,600	120,600
	29	61.3	50.7	124,700	124,700	124,700		32	63.3	60.4	113,000	113,000	113,000
	30	60.0	50.1	120,600	120,600	120,600		34	61.1	59.3	106,400	106,400	106,400
	32	57.3	48.8	113,000	113,000	113,000		36	58.9	58.1	99,100	99,100	100,500
	34	54.5	47.4	106,400	106,400	106,400		38	56.6	56.8	91,500	91,500	95,200
	36	51.6	45.8	98,900	98,900	100,500		40	54.2	55.4	84,900	84,900	90,400
	38	48.5	44.1	91,400	91,400	95,200		45	48.1	51.2	71,700	71,700	80,400
	40	45.4	42.2	84,700	84,700	90,400		50	41.2	46.0	61,900	61,900	69,900
	45	36.4	36.2	71,600	71,600	75,200		55	33.1	39.2	54,300	54,300	59,300
	50	24.9	27.5	57,800	57,800	57,800		60	22.6	29.5	47,200	47,200	47,200

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### 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)			Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs)		
				360°	Over Side	Over Rear					360°	Over Side	Over Rear
70	15	81.8	76.4	198,100	198,100	198,100	80	17	81.4	86.2	180,500	180,500	180,500
	16	81.0	76.2	186,700	186,700	186,700		18	80.7	86.1	178,400	178,400	178,400
	17	80.2	76.1	181,800	181,800	181,800		19	80.0	85.9	178,400	178,400	178,400
	18	79.4	75.9	188,800	188,800	188,800		20	79.2	85.7	174,500	174,500	174,500
	19	78.5	75.7	187,400	187,400	187,400		21	78.5	85.5	172,300	172,300	172,300
	20	77.7	75.4	180,800	180,800	180,800		22	77.8	85.2	164,500	164,500	164,500
	21	76.8	75.2	172,300	172,300	172,300		23	77.0	85.0	157,300	157,300	157,300
	22	76.0	74.9	164,500	164,500	164,500		24	76.3	84.8	150,700	150,700	150,700
	23	75.1	74.7	157,300	157,300	157,300		25	75.6	84.5	144,700	144,700	144,700
	24	74.3	74.4	150,700	150,700	150,700		26	74.8	84.2	138,100	138,100	138,100
	25	73.4	74.1	144,700	144,700	144,700		27	74.1	83.9	134,000	134,000	134,000
	26	72.6	73.8	138,100	138,100	138,100		28	73.3	83.6	129,200	129,200	129,200
	27	71.7	73.4	134,000	134,000	134,000		29	72.6	83.3	124,700	124,700	124,700
	28	70.9	73.1	129,200	129,200	129,200		30	71.8	83.0	120,800	120,800	120,800
	29	70.0	72.7	124,700	124,700	124,700		32	70.3	82.3	113,000	113,000	113,000
	30	69.1	72.3	120,800	120,800	120,800		34	68.8	81.5	108,400	108,400	108,400
	32	67.3	71.5	113,000	113,000	113,000		36	67.2	80.7	99,100	99,100	99,100
	34	65.5	70.6	108,400	108,400	108,400		38	65.7	79.8	91,500	91,500	95,200
	36	63.7	69.6	99,200	99,200	100,800		40	64.1	78.8	84,900	84,900	90,400
	38	61.9	68.5	91,800	91,800	95,200		45	60.0	76.1	71,700	71,700	80,400
40	60.0	67.4	85,000	85,000	90,400	50	55.7	72.8	61,900	61,900	69,900		
45	55.1	64.1	71,900	71,900	80,400	55	51.2	69.1	54,300	54,300	61,500		
50	49.9	60.2	62,000	62,000	70,100	60	46.4	64.6	48,200	48,200	54,800		
55	44.2	55.4	54,400	54,400	61,800	65	41.2	59.3	43,200	43,200	49,300		
60	37.9	49.6	48,300	48,300	55,000	70	35.4	52.8	38,100	38,100	44,700		
65	30.5	42.0	43,300	43,300	48,900	75	28.5	44.6	35,600	35,600	40,400		
70	20.9	31.3	39,200	39,200	36,400	80	19.5	33.1	32,800	32,800	33,200		

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs)			Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs)		
				360°	Over Side	Over Rear					360°	Over Side	Over Rear
90	18	81.7	96.2	182,300	182,300	182,300	100	18	82.0	106.1	153,700	153,700	153,700
	19	81.1	96.0	180,400	180,400	180,400		20	81.4	106.0	152,200	152,200	152,200
	20	80.5	95.9	180,800	180,800	180,800		21	80.8	105.8	150,800	150,800	150,800
	21	79.8	95.7	172,300	172,300	172,300		22	80.3	105.7	148,400	148,400	148,400
	22	79.2	95.5	164,500	164,500	164,500		23	79.7	105.5	148,100	148,100	148,100
	23	78.5	95.3	157,300	157,300	157,300		24	79.1	105.3	146,300	146,300	146,300
	24	77.9	95.0	150,700	150,700	150,700		25	78.5	105.1	144,500	144,500	144,500
	25	77.2	94.8	144,700	144,700	144,700		26	77.9	104.8	138,100	138,100	138,100
	26	76.5	94.6	138,100	138,100	138,100		27	77.3	104.6	134,000	134,000	134,000
	27	75.9	94.3	134,000	134,000	134,000		28	76.7	104.4	129,200	129,200	129,200
	28	75.2	94.0	129,200	129,200	129,200		29	76.1	104.1	124,700	124,700	124,700
	29	74.6	93.8	124,700	124,700	124,700		30	75.6	103.9	120,800	120,800	120,800
	30	73.9	93.5	120,800	120,800	120,800		32	74.4	103.3	113,000	113,000	113,000
	32	72.6	92.8	113,000	113,000	113,000		34	73.2	102.7	108,400	108,400	108,400
	34	71.2	92.2	108,400	108,400	108,400		36	72.0	102.1	99,900	99,900	100,500
	36	69.9	91.4	99,000	99,000	100,500		38	70.8	101.4	91,400	91,400	95,200
	38	68.5	90.7	91,500	91,500	95,200		40	69.5	100.6	84,700	84,700	90,400
	40	67.1	89.8	84,800	84,800	90,400		45	66.4	98.5	71,800	71,800	80,400
	45	63.6	87.5	71,700	71,700	80,400		50	63.3	96.1	61,700	61,700	69,700
	50	60.0	84.7	61,800	61,800	69,800		55	60.0	93.4	54,200	54,200	61,300
55	56.2	81.5	54,300	54,300	61,400	60	56.6	90.2	48,000	48,000	54,700		
60	52.3	77.9	48,200	48,200	54,800	65	53.1	86.6	43,100	43,100	48,100		
65	48.1	73.6	43,200	43,200	49,300	70	49.4	82.6	38,900	38,900	44,500		
70	43.6	68.7	38,000	38,000	44,800	75	45.5	77.9	35,500	35,500	40,800		
75	39.7	62.8	35,800	35,800	40,700	80	41.3	72.5	32,500	32,500	37,400		
80	33.3	55.8	32,600	32,600	37,500	85	36.7	66.2	29,900	29,900	34,500		
85	26.8	47.0	30,000	30,000	34,300	90	31.5	58.7	27,600	27,600	31,900		
90	18.3	34.7	27,700	27,700	29,500	95	25.4	49.3	25,600	25,600	29,400		
						100	19.2	39.3	23,800	23,800	24,700		



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)			Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs)		
				360°	Over Side	Over Rear					360°	Over Side	Over Rear
110	21	81.7	116.0	<b>162,800</b>	<b>162,800</b>	<b>162,800</b>	120	22	81.9	125.9	<b>127,800</b>	<b>127,800</b>	<b>127,800</b>
	22	81.1	115.8	<b>161,200</b>	<b>161,200</b>	<b>161,200</b>		23	81.4	125.8	<b>126,100</b>	<b>126,100</b>	<b>126,100</b>
	23	80.6	115.6	<b>167,300</b>	<b>167,300</b>	<b>167,300</b>		24	80.9	125.6	<b>124,900</b>	<b>124,900</b>	<b>124,900</b>
	24	80.1	115.5	<b>158,700</b>	<b>158,700</b>	<b>158,700</b>		25	80.4	125.4	<b>123,500</b>	<b>123,500</b>	<b>123,500</b>
	25	79.6	115.3	<b>144,700</b>	<b>144,700</b>	<b>144,700</b>		26	80.0	125.3	<b>122,200</b>	<b>122,200</b>	<b>122,200</b>
	26	79.0	115.1	<b>136,100</b>	<b>136,100</b>	<b>136,100</b>		27	79.5	125.1	<b>120,900</b>	<b>120,900</b>	<b>120,900</b>
	27	78.5	114.9	<b>134,000</b>	<b>134,000</b>	<b>134,000</b>		28	79.0	124.9	<b>119,800</b>	<b>119,800</b>	<b>119,800</b>
	28	78.0	114.6	<b>129,200</b>	<b>129,200</b>	<b>129,200</b>		29	78.5	124.7	<b>118,200</b>	<b>118,200</b>	<b>118,200</b>
	29	77.4	114.4	<b>124,700</b>	<b>124,700</b>	<b>124,700</b>		30	78.0	124.4	<b>117,100</b>	<b>117,100</b>	<b>117,100</b>
	30	76.9	114.2	<b>120,800</b>	<b>120,800</b>	<b>120,800</b>		32	77.0	124.0	<b>113,000</b>	<b>113,000</b>	<b>113,000</b>
	32	75.8	113.7	<b>113,000</b>	<b>113,000</b>	<b>113,000</b>		34	76.0	123.5	<b>108,400</b>	<b>108,400</b>	<b>108,400</b>
	34	74.7	113.1	<b>108,400</b>	<b>108,400</b>	<b>108,400</b>		36	75.1	123.0	<b>98,800</b>	<b>98,800</b>	<b>100,500</b>
	36	73.7	112.5	<b>98,700</b>	<b>98,700</b>	<b>100,500</b>		38	74.1	122.4	<b>91,000</b>	<b>91,000</b>	<b>95,200</b>
	38	72.6	111.9	<b>91,200</b>	<b>91,200</b>	<b>95,200</b>		40	73.1	121.8	<b>84,300</b>	<b>84,300</b>	<b>90,400</b>
	40	71.5	111.3	<b>84,500</b>	<b>84,500</b>	<b>90,400</b>		45	70.5	120.1	<b>71,200</b>	<b>71,200</b>	<b>80,000</b>
	45	68.7	109.4	<b>71,400</b>	<b>71,400</b>	<b>80,200</b>		50	68.0	118.2	<b>61,300</b>	<b>61,300</b>	<b>69,300</b>
	50	65.9	107.3	<b>61,400</b>	<b>61,400</b>	<b>66,500</b>		55	65.4	116.0	<b>53,800</b>	<b>53,800</b>	<b>60,800</b>
	55	63.0	104.8	<b>53,900</b>	<b>53,900</b>	<b>61,000</b>		60	62.7	113.5	<b>47,800</b>	<b>47,800</b>	<b>54,200</b>
	60	60.0	102.0	<b>47,800</b>	<b>47,800</b>	<b>54,400</b>		65	60.0	110.7	<b>42,800</b>	<b>42,800</b>	<b>48,700</b>
	65	56.9	98.9	<b>42,800</b>	<b>42,800</b>	<b>48,900</b>		70	57.2	107.6	<b>38,500</b>	<b>38,500</b>	<b>44,100</b>
	70	53.7	95.4	<b>38,800</b>	<b>38,800</b>	<b>44,300</b>		75	54.3	104.1	<b>35,100</b>	<b>35,100</b>	<b>40,200</b>
	75	50.4	91.4	<b>35,300</b>	<b>35,300</b>	<b>40,400</b>		80	51.3	100.3	<b>32,100</b>	<b>32,100</b>	<b>37,000</b>
80	46.9	87.0	<b>32,300</b>	<b>32,300</b>	<b>37,200</b>	85	48.1	96.0	<b>29,500</b>	<b>29,500</b>	<b>34,100</b>		
85	43.2	81.9	<b>29,700</b>	<b>29,700</b>	<b>34,200</b>	90	44.8	91.2	<b>27,200</b>	<b>27,200</b>	<b>31,500</b>		
90	39.2	76.1	<b>27,400</b>	<b>27,400</b>	<b>31,700</b>	95	41.3	85.7	<b>25,200</b>	<b>25,200</b>	<b>29,300</b>		
95	34.9	69.4	<b>25,400</b>	<b>25,400</b>	<b>29,500</b>	100	38.3	80.9	<b>23,400</b>	<b>23,400</b>	<b>27,300</b>		
100	31.0	63.1	<b>23,800</b>	<b>23,800</b>	<b>27,500</b>	110	29.6	65.8	<b>20,400</b>	<b>20,400</b>	<b>23,900</b>		
110	18.3	40.9	<b>20,500</b>	<b>20,500</b>	<b>21,400</b>	120	17.5	42.5	<b>18,000</b>	<b>18,000</b>	<b>18,800</b>		

rated boom loads in pounds													
Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs)			Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs)		
				360°	Over Side	Over Rear					360°	Over Side	Over Rear
130	24	81.6	135.7	<b>118,200</b>	<b>118,200</b>	<b>118,200</b>	140	25	81.8	145.7	<b>118,600</b>	<b>118,600</b>	<b>118,600</b>
	25	81.2	135.6	<b>118,100</b>	<b>115,100</b>	<b>118,100</b>		26	81.4	145.5	<b>118,500</b>	<b>118,500</b>	<b>118,500</b>
	26	80.7	135.4	<b>113,900</b>	<b>113,900</b>	<b>124,900</b>		27	81.0	145.4	<b>117,500</b>	<b>117,500</b>	<b>117,500</b>
	27	80.3	135.2	<b>112,700</b>	<b>112,700</b>	<b>112,700</b>		28	80.6	145.2	<b>116,400</b>	<b>116,400</b>	<b>116,400</b>
	28	79.8	135.1	<b>111,800</b>	<b>111,800</b>	<b>111,800</b>		29	80.2	145.0	<b>115,300</b>	<b>115,300</b>	<b>115,300</b>
	29	79.4	134.9	<b>108,800</b>	<b>108,800</b>	<b>108,800</b>		30	79.7	144.9	<b>114,300</b>	<b>114,300</b>	<b>114,300</b>
	30	78.9	134.7	<b>107,700</b>	<b>107,700</b>	<b>107,700</b>		32	78.9	144.5	<b>112,300</b>	<b>112,300</b>	<b>112,300</b>
	32	78.0	134.2	<b>105,800</b>	<b>105,800</b>	<b>105,800</b>		34	78.1	144.0	<b>108,400</b>	<b>108,400</b>	<b>108,400</b>
	34	77.1	133.8	<b>103,800</b>	<b>103,800</b>	<b>103,800</b>		36	77.2	143.6	<b>98,200</b>	<b>98,200</b>	<b>100,500</b>
	36	76.2	133.3	<b>98,400</b>	<b>98,400</b>	<b>100,500</b>		38	76.4	143.1	<b>90,700</b>	<b>90,700</b>	<b>95,200</b>
	38	75.3	132.8	<b>90,800</b>	<b>90,800</b>	<b>95,200</b>		40	75.5	142.6	<b>84,000</b>	<b>84,000</b>	<b>90,400</b>
	40	74.4	132.2	<b>84,100</b>	<b>84,100</b>	<b>90,400</b>		45	73.4	141.2	<b>70,900</b>	<b>70,900</b>	<b>79,600</b>
	45	72.1	130.7	<b>71,000</b>	<b>71,000</b>	<b>79,700</b>		50	71.3	139.5	<b>60,900</b>	<b>60,900</b>	<b>68,900</b>
	50	69.8	128.9	<b>61,000</b>	<b>61,000</b>	<b>66,000</b>		55	69.1	137.7	<b>53,400</b>	<b>53,400</b>	<b>60,500</b>
	55	67.4	126.9	<b>53,500</b>	<b>53,500</b>	<b>60,800</b>		60	66.9	135.6	<b>47,300</b>	<b>47,300</b>	<b>53,900</b>
	60	65.0	124.7	<b>47,400</b>	<b>47,400</b>	<b>54,000</b>		65	64.6	133.4	<b>42,300</b>	<b>42,300</b>	<b>48,300</b>
	65	62.5	122.1	<b>42,400</b>	<b>42,400</b>	<b>48,400</b>		70	62.3	130.8	<b>38,100</b>	<b>38,100</b>	<b>43,700</b>
	70	60.0	119.4	<b>38,200</b>	<b>38,200</b>	<b>43,800</b>		75	60.0	128.0	<b>34,800</b>	<b>34,800</b>	<b>39,800</b>
	75	57.4	116.3	<b>34,800</b>	<b>34,800</b>	<b>39,900</b>		80	57.6	124.9	<b>31,800</b>	<b>31,800</b>	<b>36,600</b>
	80	54.7	112.9	<b>31,800</b>	<b>31,800</b>	<b>36,700</b>		85	55.1	121.6	<b>29,200</b>	<b>29,200</b>	<b>33,700</b>
	85	52.0	109.1	<b>29,200</b>	<b>29,200</b>	<b>33,800</b>		90	52.6	117.9	<b>26,900</b>	<b>26,900</b>	<b>31,200</b>
	90	49.1	104.9	<b>26,900</b>	<b>26,900</b>	<b>31,300</b>		95	49.9	113.8	<b>24,900</b>	<b>24,900</b>	<b>28,900</b>
95	46.1	100.3	<b>24,800</b>	<b>24,800</b>	<b>29,000</b>	100	47.8	110.3	<b>23,100</b>	<b>23,100</b>	<b>26,900</b>		
100	43.6	96.2	<b>23,100</b>	<b>23,100</b>	<b>27,000</b>	110	41.9	100.1	<b>20,000</b>	<b>20,000</b>	<b>23,500</b>		
110	36.7	84.2	<b>20,100</b>	<b>20,100</b>	<b>23,600</b>	120	35.3	87.4	<b>17,700</b>	<b>17,700</b>	<b>20,800</b>		
120	28.4	68.3	<b>17,700</b>	<b>17,700</b>	<b>20,800</b>	130	27.4	70.8	<b>15,800</b>	<b>15,800</b>	<b>18,600</b>		
130	16.8	43.9	<b>15,800</b>	<b>15,800</b>	<b>18,100</b>	140	16.2	45.4	<b>13,800</b>	<b>13,800</b>	<b>14,200</b>		

3222291

**WARNING**

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TRUCK CRANES

Dataquest Incorporated

PSH

P.180.35

"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 Port Elev (ft)	Rated Load (lbs)			Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Port Elev (ft)	Rated Load (lbs)		
				360°	Over Side	Over Rear					360°	Over Side	Over Rear
150	26	82.0	155.7	98,000	98,000	98,000	160	28	81.8	165.5	97,800	97,800	97,800
	27	81.6	155.5	96,100	96,100	96,100		29	81.4	165.3	96,900	96,900	96,900
	28	81.2	155.3	96,200	96,200	96,200		30	81.0	165.2	96,100	96,100	96,100
	29	80.8	155.2	94,600	94,600	94,600		32	80.3	164.8	94,800	94,800	94,800
	30	80.4	155.0	93,800	93,800	93,800		34	79.6	164.4	93,100	93,100	93,100
	32	79.7	154.7	92,000	92,000	92,000		36	78.9	164.1	91,700	91,700	91,700
	34	78.9	154.3	90,400	90,400	90,400		38	78.1	163.6	90,100	90,100	90,100
	36	78.1	153.8	88,900	88,900	88,900		40	77.4	163.2	88,600	88,600	87,800
	38	77.3	153.4	87,800	87,800	87,800		45	75.5	162.0	70,400	70,400	77,400
	40	76.5	152.9	83,800	83,800	86,100		50	73.7	160.5	60,400	60,400	66,400
	45	74.6	151.6	70,700	70,700	79,000		55	71.8	159.0	53,000	53,000	56,900
	50	72.6	150.1	60,700	60,700	68,700		60	69.9	157.2	46,900	46,900	53,400
	55	70.5	148.4	53,200	53,200	60,200		65	68.0	155.2	41,800	41,800	47,900
	60	68.5	146.5	47,100	47,100	53,700		70	66.0	153.1	37,900	37,900	43,200
	65	66.4	144.4	42,100	42,100	48,100		75	64.1	150.7	34,300	34,300	38,300
	70	64.3	142.0	38,100	38,100	43,500		80	62.0	148.1	31,300	31,300	36,100
	75	62.2	139.5	34,800	34,800	39,600		85	60.0	145.3	28,700	28,700	33,200
	80	60.0	136.7	31,800	31,800	36,400		90	57.9	142.3	26,400	26,400	30,700
	85	57.8	133.6	28,900	28,900	33,500		95	55.8	139.0	24,400	24,400	28,400
	90	55.5	130.3	26,700	26,700	31,000		100	54.0	136.1	22,800	22,800	26,400
	95	53.1	126.6	24,700	24,700	28,700		110	49.4	128.2	18,500	18,500	23,000
	100	51.2	123.5	22,900	22,900	26,700		120	44.5	118.7	17,200	17,200	20,200
	110	46.0	114.6	19,900	19,900	23,300		130	39.1	107.4	15,200	15,200	18,100
	120	40.4	103.8	17,500	17,500	20,800		140	33.0	93.5	13,400	13,400	16,100
	130	34.1	90.5	15,500	15,500	18,400		150	25.6	75.4	11,900	11,900	14,400
	140	26.4	73.2	13,700	13,700	16,400		160	15.1	48.0	10,600	10,600	12,700
	150	15.6	46.7	12,200	12,200	12,400							

rated boom loads in pounds													
Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Port Elev (ft)	Rated Load (lbs)			Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Port Elev (ft)	Rated Load (lbs)		
				360°	Over Side	Over Rear					360°	Over Side	Over Rear
170	29	81.9	175.4	79,800	79,800	79,800	180	30	82.0	185.4	73,500	73,500	73,500
	30	81.6	175.3	79,200	79,200	79,200		32	81.4	185.1	72,500	72,500	72,500
	32	80.9	175.0	78,000	78,000	78,000		34	80.8	184.8	71,500	71,500	71,500
	34	80.2	174.6	76,900	76,900	76,900		36	80.1	184.4	70,800	70,800	70,800
	36	79.5	174.2	75,800	75,800	75,800		38	79.5	184.0	69,700	69,700	69,700
	38	78.8	173.9	74,700	74,700	74,700		40	78.8	183.7	68,800	68,800	68,800
	40	78.1	173.4	73,600	73,600	73,600		45	77.2	182.6	64,400	64,400	64,400
	45	76.4	172.3	70,200	70,200	71,000		50	75.5	181.3	60,000	60,000	64,100
	50	74.7	171.0	66,200	66,200	66,100		55	73.9	179.9	52,500	52,500	56,500
	55	72.9	169.5	62,700	62,700	59,700		60	72.2	178.4	48,400	48,400	52,900
	60	71.1	167.8	48,800	48,800	53,200		65	70.5	176.7	41,300	41,300	47,400
	65	69.3	166.0	41,500	41,500	47,800		70	68.8	174.8	37,400	37,400	42,700
	70	67.5	164.0	37,800	37,800	43,000		75	67.1	172.7	33,900	33,900	38,800
	75	65.7	161.8	34,100	34,100	39,000		80	65.4	170.5	30,800	30,800	35,700
	80	63.8	159.4	31,100	31,100	35,900		85	63.6	168.1	28,200	28,200	32,800
	85	61.9	156.8	28,400	28,400	33,000		90	61.8	165.5	25,900	25,900	30,200
	90	60.0	154.0	26,100	26,100	30,500		95	60.0	162.7	23,900	23,900	28,000
	95	58.0	151.0	24,100	24,100	28,200		100	58.5	160.3	22,100	22,100	26,000
	100	56.4	148.4	22,300	22,300	26,200		110	54.7	153.6	19,100	19,100	22,800
	110	52.3	141.1	19,300	19,300	22,800		120	50.7	145.9	16,800	16,800	19,800
	120	47.8	132.6	17,000	17,000	20,000		130	46.4	137.0	14,800	14,800	17,700
	130	43.1	122.7	15,000	15,000	17,900		140	41.8	126.6	13,000	13,000	15,700
	140	37.9	110.9	13,200	13,200	15,900		150	36.8	114.2	11,500	11,500	14,000
	150	31.9	96.4	11,700	11,700	14,200		160	31.0	99.2	10,200	10,200	12,600
	160	24.8	77.6	10,400	10,400	12,700		170	24.1	79.8	9,000	9,000	11,100
	170	14.6	49.3	9,200	9,200	9,200		180	14.2	50.6	7,900	7,900	7,900



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"on outriggers" front float set  
two counterweights and one bumper counterweight

TRUCK CRANES

Dataquest Incorporated

P&H

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs)			Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs)		
				360°	Over Side	Over Rear					360°	Over Side	Over Rear
				190	32	81.9					195.2	67,800	67,800
	34	81.2	194.9	67,800	67,500	67,500		34	81.7	205.0	58,900	58,900	58,900
	36	80.6	194.6	67,100	67,100	67,100		36	81.1	204.7	58,500	58,500	58,500
	38	80.0	194.2	66,500	66,500	66,500		38	80.5	204.4	58,400	58,400	58,400
	40	79.4	193.8	66,500	66,500	66,500		40	79.9	204.0	58,100	58,100	58,100
	45	77.9	192.8	66,000	66,000	66,000		45	78.5	203.0	57,400	57,400	57,400
	50	76.3	191.6	59,700	59,700	63,900		50	77.0	201.9	56,900	56,900	56,900
	55	74.8	190.3	52,300	52,300	59,200		55	75.5	200.7	52,100	52,100	52,800
	60	73.2	188.9	46,100	46,100	52,700		60	74.1	199.3	45,900	45,900	50,900
	65	71.6	187.3	41,000	41,000	47,100		65	72.6	197.8	40,900	40,900	46,900
	70	70.0	185.5	37,100	37,100	42,400		70	71.0	196.1	37,000	37,000	42,300
	75	68.4	183.6	33,900	33,900	38,500		75	69.5	194.3	33,400	33,400	38,300
	80	66.8	181.5	30,800	30,800	35,400		80	68.0	192.3	30,400	30,400	35,200
	85	65.1	179.2	27,900	27,900	32,500		85	66.4	190.2	27,800	27,800	32,300
	90	63.4	176.8	25,800	25,800	29,900		90	64.9	187.9	25,500	25,500	29,800
	95	62.1	174.7	23,800	23,800	27,700		95	63.6	185.9	23,400	23,400	27,500
	100	60.3	171.9	21,800	21,800	25,700		100	62.0	183.3	21,700	21,700	25,500
	110	56.8	165.7	18,800	18,800	22,300		110	58.7	177.6	18,900	18,900	22,100
	120	53.1	158.6	16,500	16,500	19,500		120	55.2	171.0	16,400	16,400	19,300
	130	49.2	150.5	14,500	14,500	17,400		130	51.7	163.5	14,300	14,300	17,200
	140	45.1	141.2	12,700	12,700	15,400		140	47.9	155.0	12,800	12,800	15,300
	150	40.6	130.3	11,200	11,200	13,700		150	43.9	145.2	11,000	11,000	13,600
	160	35.7	117.5	9,900	9,900	12,200		160	39.6	133.9	9,700	9,700	12,100
	170	30.2	101.9	8,700	8,700	11,000		170	34.8	120.6	8,500	8,500	10,800
	180	23.4	81.9	7,700	7,700	9,400		180	29.4	104.5	7,800	7,800	9,700
	190	13.8	51.8	6,500	6,500	8,500		190	22.8	83.9	6,700	6,700	8,200
								200	13.5	53.0	5,500	5,500	5,500

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs)			Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs)		
				360°	Over Side	Over Rear					360°	Over Side	Over Rear
				210	35	81.8					215.0	61,800	61,800
	36	81.5	214.8	61,800	61,800	61,800		36	81.4	224.6	46,300	46,300	46,300
	38	81.0	214.5	61,800	61,800	61,800		40	80.9	224.3	46,100	46,100	46,100
	40	80.4	214.2	61,800	61,800	61,800		45	79.5	223.4	44,600	44,600	44,600
	45	79.0	213.2	60,800	60,800	60,800		50	78.2	222.4	44,100	44,100	44,100
	50	77.6	212.2	60,800	60,800	60,800		55	76.9	221.3	43,800	43,800	43,800
	55	76.2	211.0	48,400	48,400	48,400		60	75.5	220.1	43,000	43,000	43,000
	60	74.8	209.7	45,800	45,800	48,700		65	74.2	218.7	40,300	40,300	42,500
	65	73.4	208.3	40,800	40,800	46,800		70	72.8	217.2	36,500	36,500	41,300
	70	72.0	206.7	36,700	36,700	42,000		75	71.5	215.5	32,900	32,900	37,800
	75	70.5	204.9	33,100	33,100	38,000		80	70.1	213.8	29,900	29,900	34,700
	80	69.1	203.1	30,100	30,100	34,900		85	68.7	211.9	27,200	27,200	31,800
	85	67.6	201.1	27,500	27,500	32,000		90	67.3	209.8	24,900	24,900	29,200
	90	66.1	198.9	25,200	25,200	29,500		95	66.1	208.1	22,900	22,900	26,900
	95	64.9	197.1	23,100	23,100	27,200		100	64.7	205.8	21,100	21,100	24,900
	100	63.4	194.6	21,300	21,300	25,200		110	61.8	200.7	18,400	18,400	21,500
	110	60.3	189.2	18,800	18,800	21,800		120	58.8	194.9	15,900	15,900	18,800
	120	57.1	183.1	16,100	16,100	19,000		130	55.7	188.4	13,800	13,800	16,700
	130	53.8	176.1	14,000	14,000	16,900		140	52.5	181.1	12,000	12,000	14,700
	140	50.3	168.3	12,200	12,200	15,000		150	49.1	172.9	10,500	10,500	13,000
	150	46.7	159.4	10,700	10,700	13,300		160	45.5	163.6	9,200	9,200	11,600
	160	42.8	149.2	9,400	9,400	11,800		170	41.7	153.0	8,100	8,100	10,300
	170	38.6	137.4	8,300	8,300	10,500		180	37.6	140.9	7,100	7,100	9,100
	180	33.9	123.7	7,300	7,300	9,400		190	33.1	126.7	6,200	6,200	8,100
	190	28.6	107.1	6,400	6,400	8,400		200	28.0	109.6	5,400	5,400	7,200
	200	22.2	85.9	5,800	5,800	8,800		210	21.7	87.8	4,700	4,700	5,800
	210	13.1	54.1	4,300	4,300	4,300		220	12.8	55.2	3,400	3,400	3,400

3222291

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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)			Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs)		
				360°	Over Side	Over Rear					360°	Over Side	Over Rear
230	37	82.0	234.9	40,800	40,800	40,800	240	39	81.9	244.7	36,800	36,800	36,800
	38	81.8	234.8	40,800	40,800	40,800		40	81.6	244.6	36,700	36,700	36,700
	40	81.3	234.4	40,800	40,800	40,800		45	80.4	243.8	36,200	36,200	36,200
	45	80.0	233.6	40,100	40,100	40,100		50	79.2	242.8	35,800	35,800	35,800
	50	78.7	232.6	39,600	39,600	39,600		55	78.0	241.8	34,700	34,700	34,700
	55	77.5	231.6	39,000	39,000	39,000		60	76.8	240.7	33,800	33,800	33,800
	60	76.2	230.4	38,500	38,500	38,500		65	75.5	239.4	32,900	32,900	32,900
	65	74.9	229.1	38,700	38,700	38,700		70	74.3	238.0	32,800	32,800	32,800
	70	73.6	227.6	34,800	34,800	34,800		75	73.1	236.6	31,300	31,300	31,300
	75	72.3	226.1	32,600	32,600	32,700		80	71.8	235.0	29,300	29,300	29,700
	80	71.0	224.4	29,800	29,800	31,800		85	70.5	233.2	26,700	26,700	28,200
	85	69.7	222.6	27,000	27,000	29,500		90	69.5	231.8	24,300	24,300	27,200
	90	68.3	220.6	24,700	24,700	28,000		95	68.2	229.8	22,300	22,300	25,900
	95	67.2	219.0	22,800	22,800	26,700		100	66.9	227.7	20,500	20,500	24,300
	100	65.9	216.8	20,800	20,800	24,700		110	64.3	223.2	17,800	17,800	20,900
	110	63.1	212.0	18,100	18,100	21,300		120	61.6	218.0	15,200	15,200	18,400
	120	60.3	206.5	15,800	15,800	18,800		130	58.9	212.2	13,100	13,100	16,100
	130	57.4	200.4	13,500	13,500	16,400		140	56.0	205.8	11,400	11,400	14,100
	140	54.3	193.6	11,800	11,800	14,500		150	53.1	198.6	9,900	9,900	12,400
	150	51.2	185.9	10,300	10,300	12,800		160	50.1	190.7	8,500	8,500	10,900
	160	47.9	177.4	9,000	9,000	11,300		170	46.9	181.7	7,400	7,400	9,600
	170	44.5	167.7	7,800	7,800	10,000		180	43.5	171.7	6,400	6,400	8,500
	180	40.8	156.8	6,800	6,800	8,900		190	39.9	160.4	5,500	5,500	7,500
	190	36.8	144.2	5,900	5,900	7,900		200	36.0	147.5	4,700	4,700	6,600
	200	32.4	129.6	5,100	5,100	7,000		210	31.7	132.4	4,000	4,000	5,800
	210	27.3	112.0	4,400	4,400	6,200		220	26.7	114.4	3,300	3,300	5,000
	220	21.2	89.7	3,800	3,800	4,500		230	20.8	91.5	2,700	2,700	4,400
	230	12.6	56.3	2,400	2,400	2,400		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)			Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs)		
				360°	Over Side	Over Rear					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	29,900	29,900							
	70	74.9	248.4	28,700	28,700	28,700							
	75	73.8	247.0	28,000	28,000	28,000							
	80	72.8	245.8	24,800	24,800	24,800							
	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							

3222291



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

Table with columns: Boom Length, Load Radius, Boom Angle, Boom Point Elev, Rated Load (lbs) 360°/Over Rear. Rows include boom lengths 110, 120, 130, and 140.

rated boom loads in pounds

Table with columns: Boom Length, Load Radius, Boom Angle, Boom Point Elev, Rated Load (lbs) 360°/Over Rear. Rows include boom lengths 150 and 160.

3222291



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.



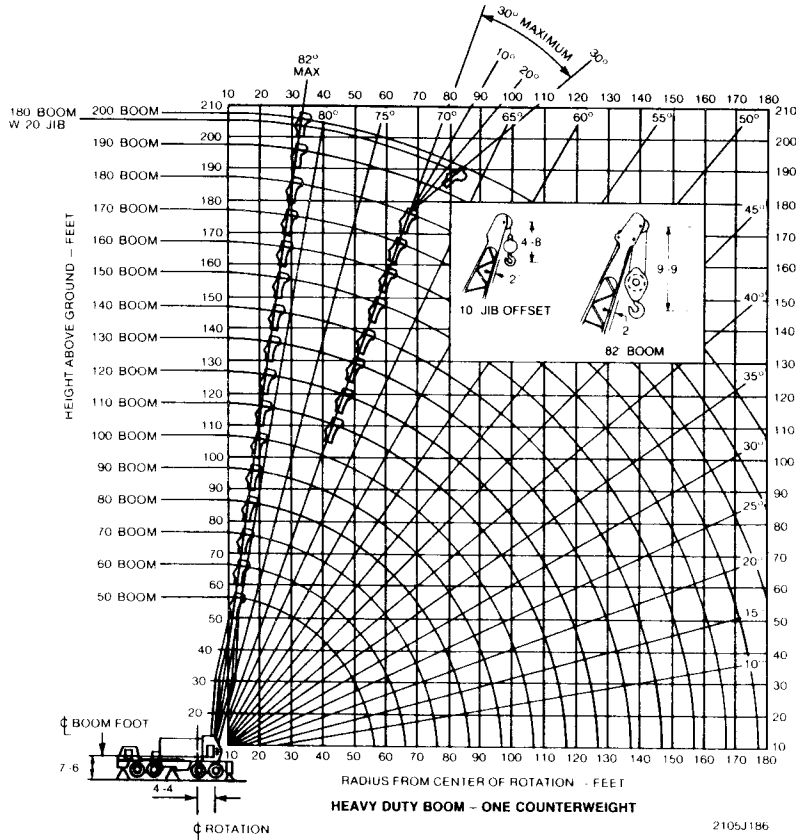


# working ranges

TRUCK CRANES

Dataquest Incorporated

P&H



## 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)		Boom Length (ft)	Load Radius (ft)	Boom Angle (°)	Boom Point Elev (ft)	Rated Load (lbs)	
				360°	Over Rear					360°	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	272,800	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	29	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	82,600	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	58,600		
36	51.6	45.8	61,800	63,400	40	54.2	55.4	52,800	54,400		
38	48.5	44.1	56,900	58,400	45	48.1	51.2	44,300	45,800		
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		

3222291

### 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	1800	1800	1800	1800	1800

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

Table with columns: Boom Length, Load Radius, Boom Angle, Boom Port Elev, Rated Load (lbs) [360°, Over Rear]. Rows for lengths 70, 80, 90, 100.

Table with columns: Boom Length, Load Radius, Boom Angle, Boom Port Elev, Rated Load (lbs) [360°, Over Rear]. Rows for lengths 110, 120, 140.

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

# RATINGS LIFT CRANE SERVICE



one counterweight and  
one bumper counterweight

69" x 69" boom  
heavy duty tip (25')



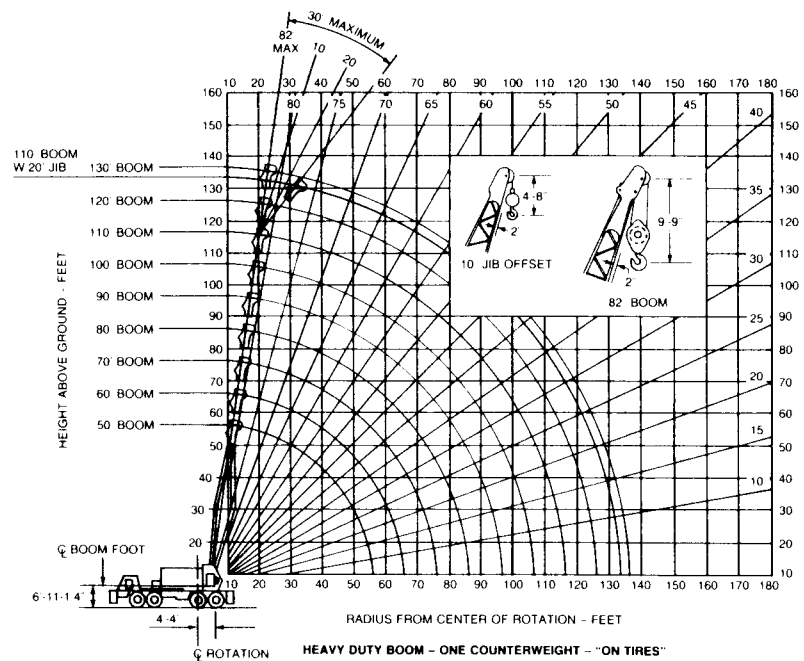
"on tires"

TRUCK CRANES

Datquest Incorporated

P&H

## rated boom loads in pounds



Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Stationary Ratings			Travel Ratings		Load Radius (ft)
				Over Side	Over Rear	Directly Over Rear	Creep	2.5 m.p.h.	
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	82,100	78,900	97,500	74,500	—	16
	17	76.2	55.3	58,400	75,900	93,900	71,900	—	17
	18	75.0	55.0	55,200	73,500	89,200	69,200	—	18
	19	73.8	54.7	52,200	71,200	83,600	66,800	—	19
	20	72.6	54.4	48,400	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	59,900	58,900	55,100	—	25
	26	65.2	52.0	35,800	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	30,800	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	24,800	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	16,800	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

322291

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

Table with columns: Boom Length (ft), Load Radius (ft), Boom Angle (°), Boom Pivot Elev (ft), Stationary Ratings (Over Side, Over Rear, Directly Over Rear), Travel Ratings (Creep, 2.5 m.p.h., Over Rear), and Load Radius (ft). Rows are grouped by boom length: 190, 110, and 110.

rated boom loads in pounds

Table with columns: Boom Length (ft), Load Radius (ft), Boom Angle (°), Boom Pivot Elev (ft), Stationary Ratings (Over Side, Over Rear, Directly Over Rear), Travel Ratings (Creep, 2.5 m.p.h., Over Rear), and Load Radius (ft). Rows are grouped by boom length: 120 and 130.



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.

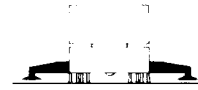
Do not attempt to lift more than rated loads shown in shaded areas a machine failure may occur.

## 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			Travel Ratings Directly Over Rear		Load Radius (ft)
				Over Side	Over Rear	Directly Over Rear	Creep	2.5 m.p.h.	
50	12	82.0	56.4	—	86,800	109,200	82,400	49,200	12
	13	80.9	56.2	—	83,100	101,700	78,800	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	41,600	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	64,800	38,500	18
	19	73.8	54.7	49,500	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	38,300	28,400	27
	28	62.6	51.0	30,400	36,600	36,600	36,600	27,600	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	26,000	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	26,300	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	22,800	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	91,800	75,100	44,500	14
	15	80.5	66.0	—	76,400	83,400	72,200	42,700	15
	16	79.5	65.8	—	73,600	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	29,800	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	21,600	36
	38	56.6	56.6	20,000	24,400	24,400	24,400	20,500	38
40	54.3	55.2	18,700	22,800	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			Travel Ratings Directly Over Rear		Load Radius (ft)
				Over Side	Over Rear	Directly Over Rear	Creep	2.5 m.p.h.	
70	15	81.9	76.1	—	76,200	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	31,600	23
	24	74.3	74.1	37,500	44,700	44,700	44,700	30,600	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	28,600	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	36,600	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	21,600	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	22,800	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	14,800	14,800	14,800	13,600	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	

322291

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



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			Travel Ratings Directly Over Rear		Load Radius (ft)
				Over Side	Over Rear	Directly Over Rear	Creep	2.5 m.p.h.	
				120	22	81.9	125.6	40,800	
	23	81.4	125.5	38,700	46,400	46,400	46,400	28,400	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	29,800	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	32,600	32,600	32,600	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	18,700	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	17,600	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	10,600	60
	65	60.0	110.5	8,000	10,500	10,500	10,500	8,400	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 Δ°	Boom Point Elev. (ft)	Stationary Ratings			Travel Ratings Directly Over Rear		Load Radius (ft)
				Over Side	Over Rear	Directly Over Rear	Creep	2.5 m.p.h.	
				130	24	81.6	135.4	36,400	
	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
	28	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	23,600	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	18,800	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	15,800	15,800	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	6,800	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	4,800	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

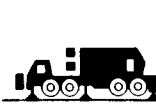
32Z2291

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.

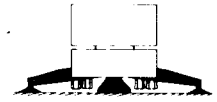
Do not attempt to lift more than **rated loads shown in shaded areas** - a machine failure may occur.

working ranges



**RATINGS  
LIFT CRANE SERVICE**

69" x 69" boom  
long range tip (35')



"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)			Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs)		
				360°	Over Side	Over Rear					360°	Over Side	Over Rear
60	14	81.4	66.5	106,800	106,800	106,800	70	15	81.8	76.4	106,800	106,800	106,800
	15	80.5	66.3	106,800	106,800	106,800		16	81.0	76.3	106,800	106,800	106,800
	16	79.5	66.1	106,800	106,800	106,800		17	80.2	76.1	106,800	106,800	106,800
	17	78.5	65.9	106,800	106,800	106,800		18	79.4	75.9	106,800	106,800	106,800
	18	77.6	65.7	106,800	106,800	106,800		19	78.5	75.7	106,800	106,800	106,800
	19	76.6	65.4	106,800	106,800	106,800		20	77.7	75.5	106,800	106,800	106,800
	20	75.6	65.1	106,800	106,800	106,800		21	76.8	75.2	106,800	106,800	106,800
	21	74.6	64.9	106,800	106,800	106,800		22	76.0	75.0	104,500	104,500	104,500
	22	73.6	64.6	104,500	104,500	104,500		23	75.1	74.7	107,300	107,300	107,300
	23	72.6	64.2	107,300	107,300	107,300		24	74.3	74.4	150,700	150,700	150,700
	24	71.6	63.9	150,700	150,700	150,700		25	73.4	74.1	144,700	144,700	144,700
	25	70.6	63.5	144,700	144,700	144,700		26	72.6	73.8	136,100	136,100	136,100
	26	69.5	63.2	136,100	136,100	136,100		27	71.7	73.4	134,000	134,000	134,000
	27	68.5	62.8	134,000	134,000	134,000		28	70.9	73.1	129,200	129,200	129,200
	28	67.5	62.3	129,200	129,200	129,200		29	70.0	72.7	124,700	124,700	124,700
	29	66.4	61.9	124,700	124,700	124,700		30	69.1	72.3	120,600	120,600	120,600
30	65.4	61.4	120,600	120,600	120,600	32	67.3	71.5	113,000	113,000	113,000		
32	63.3	60.4	113,000	113,000	113,000	34	65.5	70.6	106,400	106,400	106,400		
34	61.1	59.4	106,400	106,400	106,400	36	63.7	69.6	99,900	99,900	100,500		
36	58.9	58.2	99,900	99,900	100,500	38	61.9	68.6	92,300	92,300	95,200		
38	56.6	56.9	92,300	92,300	95,200	40	60.0	67.4	85,600	85,600	90,400		
40	54.2	55.4	85,700	85,700	90,400	45	55.1	64.2	72,500	72,500	80,400		
45	48.1	51.3	72,900	72,900	80,400	50	49.9	60.2	62,700	62,700	70,700		
50	41.2	46.1	62,700	62,700	70,800	55	44.2	55.5	55,100	55,100	62,300		
55	33.1	39.3	55,100	55,100	60,400	60	37.9	49.6	48,000	48,000	55,600		
60	22.6	29.5	48,200	48,200	48,200	65	30.5	42.1	44,000	44,000	48,400		
						70	20.9	31.4	39,800	39,800	40,200		

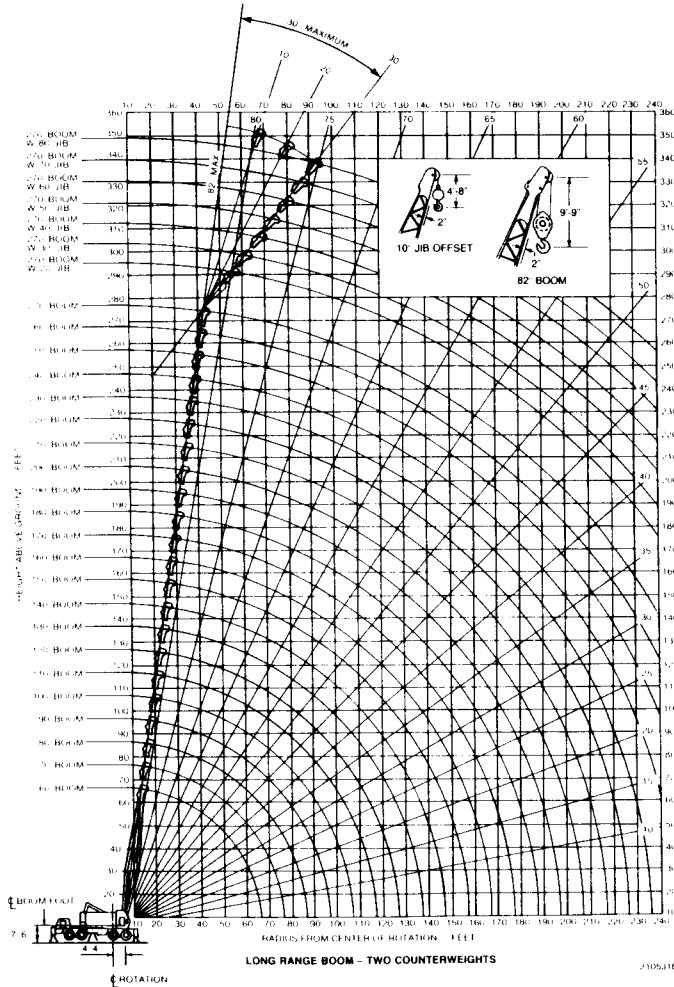
**DEDUCT FROM RATED BOOM LOADS WHEN  
LIFTING OVER BOOM POINT WITH JIB ATTACHED**

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**

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.



TRUCK CRANES

Datquest Incorporated

P&H

P. 180.51

32Z2291

"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)			Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs)		
				360°	Over Side	Over Rear					360°	Over Side	Over Rear
	18	80.7	86.1	166,800	166,800	166,800		19	81.1	96.0	162,800	162,800	162,800
	19	80.0	85.9	166,800	166,800	166,800		20	80.5	95.9	161,200	161,200	161,200
	20	79.2	85.7	166,800	166,800	166,800		21	79.8	95.7	159,600	159,600	159,600
	21	78.5	85.5	166,800	166,800	166,800		22	79.2	95.5	158,200	158,200	158,200
	22	77.8	85.3	164,500	164,500	164,500		23	78.5	95.3	156,500	156,500	156,500
	23	77.0	85.0	157,300	157,300	157,300		24	77.9	95.1	150,700	150,700	150,700
	24	76.3	84.8	150,700	150,700	150,700		25	77.2	94.8	144,700	144,700	144,700
	25	75.6	84.5	144,700	144,700	144,700		26	76.5	94.6	138,100	138,100	138,100
	26	74.8	84.2	138,100	138,100	138,100		27	75.9	94.3	134,000	134,000	134,000
	27	74.1	83.9	134,000	134,000	134,000		28	75.2	94.1	129,200	129,200	129,200
	28	73.3	83.6	129,200	129,200	129,200		29	74.6	93.8	124,700	124,700	124,700
	29	72.6	83.3	124,700	124,700	124,700		30	73.9	93.5	120,600	120,600	120,600
	30	71.8	83.0	120,600	120,600	120,600		32	72.6	92.9	113,000	113,000	113,000
	32	70.3	82.3	113,000	113,000	113,000		34	71.2	92.2	106,400	106,400	106,400
	34	68.8	81.5	106,400	106,400	106,400		36	69.9	91.5	99,700	99,700	100,500
	36	67.2	80.7	99,900	99,900	100,500		38	68.5	90.7	92,200	92,200	95,200
	38	65.7	79.8	92,300	92,300	95,200		40	67.1	89.8	85,500	85,500	90,400
	40	64.1	78.8	85,700	85,700	90,400		45	63.6	87.5	72,400	72,400	80,400
	45	60.0	76.1	72,600	72,600	80,400		50	60.0	84.7	62,500	62,500	70,500
	50	55.7	72.9	62,700	62,700	70,700		55	56.2	81.6	55,000	55,000	62,100
	55	51.2	69.1	55,100	55,100	62,300		60	52.3	77.9	48,900	48,900	55,500
	60	46.4	64.6	48,000	48,000	55,700		65	48.1	73.7	43,900	43,900	50,000
	65	41.2	59.3	44,100	44,100	50,200		70	43.6	68.7	39,700	39,700	45,300
	70	35.4	52.9	39,900	39,900	45,500		75	38.7	62.9	36,300	36,300	41,400
	75	28.5	44.7	36,500	36,500	41,400		80	33.3	55.9	33,300	33,300	38,200
	80	19.5	33.1	33,400	33,400	34,300		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 Δ°	Boom Point Elev (ft)	Rated Load (lbs)			Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs)		
				360°	Over Side	Over Rear					360°	Over Side	Over Rear
	20	81.4	106.0	166,800	166,800	166,800		22	81.1	115.8	136,900	136,900	136,900
	21	80.8	105.8	166,800	166,800	166,800		23	80.6	115.6	135,400	135,400	135,400
	22	80.3	105.7	164,500	164,500	164,500		24	80.1	115.5	133,900	133,900	133,900
	23	79.7	105.5	157,300	157,300	157,300		25	79.6	115.3	132,300	132,300	132,300
	24	79.1	105.3	150,700	150,700	150,700		26	79.0	115.1	130,900	130,900	130,900
	25	78.5	105.1	144,700	144,700	144,700		27	78.5	114.9	129,400	129,400	129,400
	26	77.9	104.9	138,100	138,100	138,100		28	78.0	114.7	128,100	128,100	128,100
	27	77.3	104.6	134,000	134,000	134,000		29	77.4	114.4	124,700	124,700	124,700
	28	76.7	104.4	129,200	129,200	129,200		30	76.9	114.2	120,600	120,600	120,600
	29	76.1	104.1	124,700	124,700	124,700		32	75.8	113.7	113,000	113,000	113,000
	30	75.6	103.9	120,600	120,600	120,600		34	74.7	113.1	106,400	106,400	106,400
	32	74.4	103.3	113,000	113,000	113,000		36	73.7	112.6	99,500	99,500	100,500
	34	73.2	102.7	106,400	106,400	106,400		38	72.6	111.9	92,000	92,000	96,200
	36	72.0	102.1	99,700	99,700	100,500		40	71.5	111.3	85,300	85,300	90,400
	38	70.8	101.4	92,100	92,100	95,200		45	68.7	109.4	72,200	72,200	80,400
	40	69.5	100.6	85,400	85,400	90,400		50	65.9	107.3	62,300	62,300	70,300
	45	66.4	98.6	72,300	72,300	80,400		55	63.0	104.8	54,800	54,800	61,900
	50	63.3	96.2	62,400	62,400	70,400		60	60.0	102.1	48,600	48,600	55,300
	55	60.0	93.4	54,900	54,900	62,000		65	56.9	98.9	43,600	43,600	48,700
	60	56.6	90.3	48,800	48,800	55,400		70	53.7	95.4	39,500	39,500	45,100
	65	53.1	86.7	43,800	43,800	49,900		75	50.4	91.5	36,100	36,100	41,200
	70	49.4	82.6	39,800	39,800	45,300		80	46.9	87.0	33,100	33,100	38,000
	75	45.5	77.9	36,200	36,200	41,400		85	43.2	82.0	30,500	30,500	35,100
	80	41.3	72.5	33,200	33,200	38,100		90	39.2	76.2	28,200	28,200	32,600
	85	36.7	66.3	30,600	30,600	35,200		95	34.9	69.4	26,200	26,200	30,300
	90	31.5	58.7	28,300	28,300	32,700		100	30.0	61.4	24,400	24,400	28,300
	95	25.4	49.3	26,300	26,300	30,300		110	18.3	41.0	21,400	21,400	22,400
	100	19.2	39.4	24,500	24,500	25,600							



**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)			Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs)		
				360°	Over Side	Over Rear					360°	Over Side	Over Rear
160	28	81.8	165.5	86,400	86,400	86,400	170	29	81.9	175.4	86,100	86,100	86,100
	29	81.4	165.3	87,800	87,800	87,800		30	81.6	175.3	87,900	87,900	87,900
	30	81.0	165.2	86,900	86,900	86,900		32	80.9	175.0	87,000	87,000	87,000
	32	80.3	164.8	86,800	86,800	86,800		34	80.2	174.6	85,800	85,800	85,800
	34	79.6	164.5	84,300	84,300	84,300		36	79.5	174.3	84,400	84,400	84,400
	36	78.9	164.1	81,400	81,400	81,400		38	78.8	173.9	81,700	81,700	81,700
	38	78.1	163.6	80,100	80,100	80,100		40	78.1	173.4	80,500	80,500	80,500
	40	77.4	163.2	78,900	78,900	78,900		45	76.4	172.3	71,000	71,000	78,900
	45	75.5	162.0	71,200	71,200	78,800		50	74.7	171.0	61,000	61,000	80,800
	50	73.7	160.6	61,200	61,200	80,200		55	72.9	169.5	53,500	53,500	80,500
	55	71.8	159.0	53,800	53,800	80,800		60	71.1	167.8	47,300	47,300	53,900
	60	69.9	157.2	47,800	47,800	54,200		65	69.3	166.0	42,300	42,300	48,400
	65	68.0	155.3	42,800	42,800	48,700		70	67.5	164.0	38,100	38,100	43,700
	70	66.0	153.1	38,400	38,400	44,000		75	65.7	161.8	34,800	34,800	38,900
	75	64.1	150.8	35,100	35,100	40,100		80	63.8	159.4	31,800	31,800	36,700
	80	62.0	148.2	32,100	32,100	37,000		85	61.9	156.8	29,200	29,200	33,800
	85	60.0	145.4	29,500	29,500	34,100		90	60.0	154.0	26,900	26,900	31,200
	90	57.9	142.3	27,200	27,200	31,500		95	58.0	151.0	24,900	24,900	29,000
	95	55.8	139.0	25,200	25,200	28,300		100	56.4	148.4	23,100	23,100	27,000
	100	54.0	136.2	23,400	23,400	27,300		110	52.3	141.1	20,100	20,100	23,800
	110	49.4	128.2	20,400	20,400	23,900		120	47.8	132.7	17,800	17,800	20,800
	120	44.5	118.8	18,100	18,100	21,100		130	43.1	122.8	15,700	15,700	18,800
	130	39.1	107.5	16,000	16,000	18,900		140	37.9	110.9	14,000	14,000	16,700
	140	33.0	93.6	14,200	14,200	17,000		150	31.9	96.4	12,400	12,400	15,000
	150	25.6	75.5	12,700	12,700	15,300		160	24.8	77.7	11,100	11,100	13,500
	160	15.1	48.1	11,400	11,400	11,700		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)			Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs)		
				360°	Over Side	Over Rear					360°	Over Side	Over Rear
180	31	81.7	185.3	73,000	73,000	73,000	190	32	81.9	195.2	86,100	86,100	86,100
	32	81.4	185.1	72,500	72,500	72,500		34	81.2	194.9	85,700	85,700	85,700
	34	80.8	184.8	71,800	71,800	71,800		36	80.6	194.6	85,500	85,500	85,500
	36	80.1	184.4	70,800	70,800	70,800		38	80.0	194.2	84,900	84,900	84,900
	38	79.5	184.1	69,700	69,700	69,700		40	79.4	193.9	84,100	84,100	84,100
	40	78.8	183.7	68,800	68,800	68,800		45	77.9	192.8	82,100	82,100	82,100
	45	77.2	182.6	68,800	68,500	68,500		50	76.3	191.7	80,000	80,000	80,000
	50	75.5	181.3	60,800	60,800	64,200		55	74.8	190.3	53,100	53,100	58,100
	55	73.9	179.9	53,300	53,300	60,200		60	73.2	188.9	46,900	46,900	53,500
	60	72.2	178.4	47,100	47,100	53,700		65	71.6	187.3	41,900	41,900	47,900
	65	70.5	176.7	42,100	42,100	48,100		70	70.0	185.5	38,000	38,000	43,300
	70	68.8	174.8	38,000	38,000	43,500		75	68.4	183.6	34,400	34,400	39,300
	75	67.1	172.8	34,800	34,800	39,800		80	66.8	181.5	31,400	31,400	36,200
	80	65.4	170.5	31,800	31,800	36,500		85	65.1	179.2	28,800	28,800	33,300
	85	63.6	168.1	28,000	28,000	33,500		90	63.4	176.8	26,500	26,500	30,800
	90	61.8	165.5	26,700	26,700	31,000		95	61.7	174.2	24,400	24,400	28,500
	95	60.0	162.7	24,700	24,700	28,700		100	60.3	171.9	22,700	22,700	26,500
	100	58.5	160.3	22,900	22,900	26,700		110	56.8	165.8	19,800	19,800	23,100
	110	54.7	153.6	19,800	19,800	23,300		120	53.1	158.7	17,400	17,400	20,300
	120	50.7	145.9	17,800	17,800	20,500		130	49.2	150.6	15,300	15,300	18,200
	130	46.4	137.0	15,500	15,500	18,400		140	45.1	141.2	13,500	13,500	16,300
	140	41.8	126.6	13,700	13,700	16,500		150	40.6	130.3	12,000	12,000	14,800
	150	36.8	114.3	12,200	12,200	14,800		160	35.7	117.5	10,700	10,700	13,100
	160	31.0	99.2	10,900	10,900	13,300		170	30.2	101.9	9,800	9,800	11,800
	170	24.1	79.9	9,800	9,800	11,800		180	23.4	81.9	8,800	8,800	10,400
	180	14.2	50.7	8,800	8,800	8,800		190	13.8	51.9	7,800	7,800	7,800

**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)			Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs)		
				360°	Over Side	Over Rear					360°	Over Side	Over Rear
200	33	82.0	205.2	56,200	56,200	56,200	210	35	81.8	215.0	51,100	51,100	51,100
	34	81.7	205.0	56,100	56,100	56,100		36	81.5	214.8	51,000	51,000	51,000
	36	81.1	204.7	56,000	56,000	56,000		38	81.0	214.5	50,700	50,700	50,700
	38	80.5	204.4	56,000	56,000	56,000		40	80.4	214.2	50,400	50,400	50,400
	40	79.9	204.0	56,700	56,700	56,700		45	79.0	213.3	48,900	48,900	48,900
	45	78.5	203.1	57,800	57,800	57,800		50	77.6	212.2	48,300	48,300	48,300
	50	77.0	201.9	57,300	57,300	57,300		55	76.2	211.0	48,700	48,700	48,700
	55	75.5	200.7	52,800	52,800	52,800		60	74.8	209.7	46,400	46,400	47,900
	60	74.1	199.3	46,600	46,600	52,800		65	73.4	208.3	41,400	41,400	46,500
	65	72.6	197.8	41,600	41,600	47,600		70	72.0	206.7	37,500	37,500	42,800
	70	71.0	196.1	37,700	37,700	43,000		75	70.5	205.0	34,000	34,000	38,800
	75	69.5	194.3	34,100	34,100	39,000		80	69.1	203.1	30,900	30,900	35,800
	80	68.0	192.3	31,100	31,100	35,900		85	67.6	201.1	28,300	28,300	32,800
	85	66.4	190.2	28,500	28,500	33,000		90	66.1	198.9	26,000	26,000	30,300
	90	64.9	187.9	26,200	26,200	30,500		95	64.6	196.6	24,000	24,000	28,000
	95	63.3	185.5	24,100	24,100	28,200		100	63.4	194.7	22,200	22,200	26,000
	100	62.0	183.4	22,300	22,300	26,200		110	60.3	189.3	19,100	19,100	22,600
	110	58.7	177.6	19,300	19,300	22,800		120	57.1	183.1	16,900	16,900	19,800
	120	55.2	171.1	17,100	17,100	20,600		130	53.8	176.2	14,800	14,800	17,800
	130	51.7	163.6	15,000	15,000	17,900		140	50.3	168.3	13,100	13,100	15,800
	140	47.9	155.0	13,200	13,200	15,900		150	46.7	159.4	11,600	11,600	14,100
	150	43.9	145.3	11,700	11,700	14,300		160	42.8	149.2	10,300	10,300	12,600
	160	39.6	134.0	10,400	10,400	12,800		170	38.6	137.5	9,100	9,100	11,400
	170	34.8	120.7	9,300	9,300	11,500		180	33.9	123.7	8,100	8,100	10,200
	180	29.4	104.6	8,300	8,300	10,400		190	28.6	107.2	7,200	7,200	9,200
	190	22.8	84.0	7,400	7,400	8,900		200	22.2	85.9	6,400	6,400	7,800
	200	13.5	53.0	6,300	6,300	8,300		210	13.2	54.2	5,400	5,400	6,400

rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs)			Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs)		
				360°	Over Side	Over Rear					360°	Over Side	Over Rear
220	36	81.9	224.9	46,300	46,300	46,300	230	38	81.8	234.8	40,900	40,900	40,900
	38	81.4	224.6	46,100	46,100	46,100		40	81.3	234.5	40,700	40,700	40,700
	40	80.9	224.3	45,800	45,800	45,800		45	80.0	233.6	40,200	40,200	40,200
	45	79.5	223.4	45,200	45,200	45,200		50	78.7	232.7	39,800	39,800	39,800
	50	78.2	222.4	44,800	44,800	44,800		55	77.5	231.6	39,100	39,100	39,100
	55	76.9	221.3	44,000	44,000	44,000		60	76.2	230.4	38,600	38,600	38,600
	60	75.5	220.1	43,400	43,400	43,400		65	74.9	229.1	38,100	38,100	38,100
	65	74.2	218.7	41,100	41,100	42,900		70	73.6	227.6	37,000	37,000	37,000
	70	72.8	217.2	37,200	37,200	41,400		75	72.3	226.1	33,400	33,400	36,500
	75	71.5	215.6	33,700	33,700	38,500		80	71.0	224.4	30,400	30,400	35,000
	80	70.1	213.8	30,800	30,800	35,500		85	69.7	222.6	27,800	27,800	32,300
	85	68.7	211.9	28,000	28,000	32,500		90	68.3	220.7	25,500	25,500	29,700
	90	67.3	209.8	25,700	25,700	30,000		95	67.2	219.0	23,400	23,400	27,500
	95	66.1	208.1	23,700	23,700	27,700		100	65.9	216.8	21,600	21,600	25,500
	100	64.7	205.8	21,900	21,900	25,700		110	63.1	212.0	18,900	18,900	22,000
	110	61.8	200.7	18,800	18,800	22,300		120	60.3	206.6	16,400	16,400	19,200
	120	58.8	195.0	16,800	16,800	19,500		130	57.4	200.5	14,300	14,300	17,200
	130	55.7	188.5	14,500	14,500	17,500		140	54.3	193.6	12,500	12,500	15,200
	140	52.5	181.2	12,800	12,800	15,500		150	51.2	186.0	11,000	11,000	13,600
	150	49.1	172.9	11,300	11,300	13,800		160	47.9	177.4	9,700	9,700	12,100
	160	45.5	163.6	10,000	10,000	12,300		170	44.5	167.8	8,800	8,800	10,800
	170	41.7	153.1	8,900	8,900	11,000		180	40.8	156.8	7,800	7,800	9,700
	180	37.6	140.9	7,800	7,800	9,900		190	36.8	144.3	6,700	6,700	8,700
	190	33.1	126.7	6,900	6,900	8,900		200	32.4	129.7	5,900	5,900	7,800
	200	28.0	109.7	6,100	6,100	8,000		210	27.3	112.1	5,200	5,200	7,000
	210	21.7	87.9	5,400	5,400	6,500		220	21.2	89.7	4,500	4,500	5,400
	220	12.8	55.3	4,300	4,300	4,300		230	12.6	56.4	3,300	3,300	3,300

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**

TRUCK CRANES

Dataquest Incorporated

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rated boom loads in pounds													
Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs)			Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs)		
				360°	Over Side	Over Rear					360°	Over Side	Over Rear
240	39	81.9	244.7	37,000	37,000	37,000	250	40	82.0	254.7	33,300	33,300	33,300
	40	81.6	244.6	36,900	36,900	36,900		45	80.8	253.9	32,900	32,900	32,900
	45	80.4	243.8	36,500	36,500	36,500		50	79.6	253.0	32,300	32,300	32,300
	50	79.2	242.8	36,100	36,100	36,100		55	78.5	252.0	31,900	31,900	31,900
	55	78.0	241.8	35,700	35,700	35,700		60	77.3	251.0	30,900	30,900	30,900
	60	76.8	240.7	35,300	35,300	35,300		65	76.1	249.8	30,000	30,000	30,000
	65	75.5	239.4	34,900	34,900	34,900		70	74.9	248.4	29,500	29,500	29,500
	70	74.3	238.1	34,200	34,200	34,200		75	73.8	247.0	29,500	29,500	29,500
	75	73.1	236.6	32,400	32,400	32,400		80	72.6	245.5	29,300	29,300	29,300
	80	71.8	235.0	30,100	30,100	30,700		85	71.3	243.8	27,200	27,200	28,000
	85	70.5	233.3	27,500	27,500	28,200		90	70.4	242.4	24,900	24,900	25,800
	90	69.5	231.8	25,200	25,200	27,800		95	69.2	240.6	22,800	22,800	25,500
	95	68.2	229.8	23,100	23,100	27,800		100	67.9	238.6	21,000	21,000	24,700
	100	66.9	227.8	21,300	21,300	25,200		110	65.4	234.2	18,300	18,300	21,400
	110	64.3	223.2	18,800	18,800	21,800		120	62.9	229.4	15,800	15,800	18,700
	120	61.6	218.0	16,100	16,100	19,000		130	60.3	223.9	13,700	13,700	16,800
	130	58.9	212.3	14,000	14,000	17,000		140	57.6	217.8	11,900	11,900	14,700
	140	56.0	205.8	12,300	12,300	15,000		150	54.8	211.1	10,400	10,400	13,000
	150	53.1	198.7	10,800	10,800	13,300		160	52.0	203.6	9,100	9,100	11,500
	160	50.1	190.7	9,400	9,400	11,800		170	49.0	195.3	8,000	8,000	10,200
	170	46.9	181.8	8,300	8,300	10,500		180	45.9	186.0	7,000	7,000	9,100
	180	43.5	171.8	7,300	7,300	9,400		190	42.6	175.7	6,100	6,100	8,000
	190	39.9	160.5	6,400	6,400	8,400		200	39.0	164.0	5,300	5,300	7,100
	200	36.0	147.5	5,600	5,600	7,500		210	35.2	150.7	4,600	4,600	6,300
	210	31.7	132.5	4,900	4,900	6,700		220	31.0	135.3	3,900	3,900	5,600
	220	26.7	114.5	4,200	4,200	5,900		230	26.2	116.8	3,300	3,300	4,900
	230	20.8	91.6	3,700	3,700	5,300		240	20.3	93.4	2,800	2,800	4,300
	240	12.3	57.5	3,100	3,100	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 Δ°	Boom Point Elev (ft)	Rated Load (lbs)			Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev (ft)	Rated Load (lbs)		
				360°	Over Side	Over Rear					360°	Over Side	Over Rear
260	42	81.8	264.5	30,100	30,100	30,100	270	43	82.1	274.6	25,000	25,000	25,000
	45	81.2	264.0	29,800	29,800	29,800		45	81.7	274.3	24,500	24,500	24,500
	50	80.0	263.2	29,300	29,300	29,300		50	80.6	273.5	23,900	23,900	23,900
	55	78.9	262.2	28,800	28,800	28,800		55	79.6	272.6	23,300	23,300	23,300
	60	78.0	261.4	28,100	28,100	28,100		60	78.5	271.6	22,500	22,500	22,500
	65	76.9	260.3	24,200	24,200	24,200		65	77.4	270.6	21,700	21,700	21,700
	70	75.8	259.1	23,500	23,500	23,500		70	76.3	269.4	21,000	21,000	21,000
	75	74.6	257.7	22,900	22,900	22,900		75	75.2	268.1	20,300	20,300	20,300
	80	73.5	256.3	22,300	22,300	22,300		80	74.1	266.7	19,500	19,500	19,500
	85	72.3	254.7	21,800	21,800	21,800		85	73.0	265.2	18,100	18,100	18,100
	90	71.2	253.0	21,500	21,500	21,500		90	71.9	263.6	18,700	18,700	18,700
	95	70.0	251.3	21,400	21,400	21,400		95	70.8	261.9	18,000	18,000	18,000
	100	68.8	249.4	20,800	20,800	21,400		100	69.6	260.1	17,800	17,800	17,800
	110	66.4	245.2	18,100	18,100	20,900		110	67.4	256.1	17,100	17,100	17,100
	120	64.0	240.6	15,800	15,800	18,800		120	65.0	251.6	15,300	15,300	18,800
	130	61.5	235.4	13,500	13,500	16,500		130	62.7	246.7	13,200	13,200	16,100
	140	59.0	229.6	11,800	11,800	14,500		140	60.2	241.2	11,400	11,400	14,100
	150	56.4	223.2	10,300	10,300	12,800		150	57.8	235.2	9,900	9,900	12,400
	160	53.7	216.2	8,900	8,900	11,300		160	55.2	228.5	8,800	8,800	11,000
	170	50.9	208.4	7,800	7,800	10,000		170	52.6	221.2	7,500	7,500	9,700
	180	48.0	199.8	6,800	6,800	8,900		180	49.9	213.1	6,500	6,500	8,500
	190	44.9	190.2	5,900	5,900	7,900		190	47.0	204.2	5,800	5,800	7,500
	200	41.7	179.5	5,100	5,100	7,000		200	44.0	194.3	4,800	4,800	6,800
	210	38.2	167.5	4,400	4,400	6,200		210	40.9	183.3	4,000	4,000	5,800
	220	34.5	153.9	3,700	3,700	5,400		220	37.5	170.9	3,400	3,400	5,100
	230	30.4	138.0	3,100	3,100	4,800		230	33.8	156.9	2,800	2,800	4,400
	240	25.7	119.1	2,600	2,600	4,200		240	29.8	140.7	—	—	3,800
	250	19.9	95.1	—	—	3,800		250	25.2	121.3	—	—	3,300
	260	11.8	59.6	—	—	2,400		260	19.6	96.9	—	—	2,800

**WARNING** 

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









# working ranges

TRUCK CRANES

Dataquest Incorporated

P&H

## RATINGS LIFT CRANE SERVICE

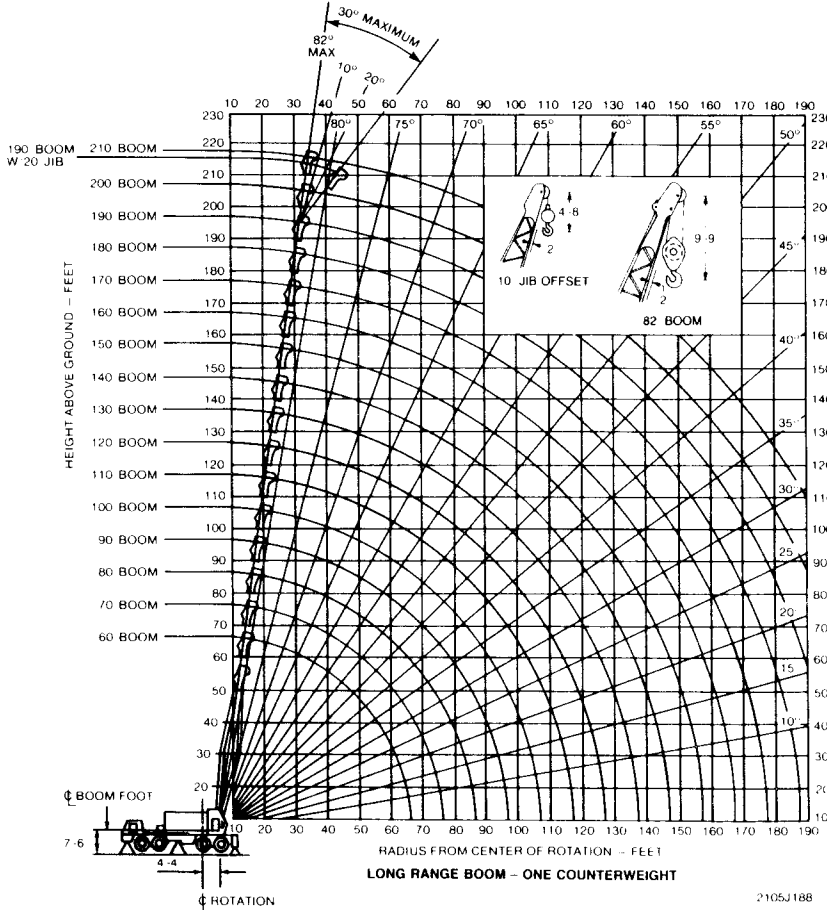
69" x 69" boom  
long range tip (35')



### rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev. (ft)	Rated Load (lbs)		Boom Length (ft)	Load Radius (ft)	Boom Angle Δ°	Boom Point Elev. (ft)	Rated Load (lbs)	
				360°	Over Rear					360°	Over Rear
60	14	81.4	66.5	198,000	198,000	70	15	81.8	76.4	168,000	168,000
	15	80.5	66.3	198,000	198,000		18	81.0	76.3	168,000	168,000
	16	79.5	66.1	198,000	198,000		17	80.2	76.1	168,000	168,000
	17	78.5	65.9	198,000	198,000		18	79.4	75.9	168,000	168,000
	18	77.6	65.7	198,000	198,000		19	78.5	75.7	168,000	168,000
	19	76.6	65.4	198,000	198,000		20	77.7	75.5	168,000	168,000
	20	75.6	65.1	198,000	198,000		21	76.8	75.2	157,800	157,800
	21	74.6	64.9	157,500	157,500		22	76.0	75.0	144,300	144,300
	22	73.6	64.6	144,100	144,100		23	75.1	74.7	133,000	133,000
	23	72.6	64.2	132,800	132,800		24	74.3	74.4	123,100	123,100
	24	71.6	63.9	123,000	123,000		25	73.4	74.1	114,500	114,700
	25	70.6	63.5	114,300	114,600		26	72.6	73.8	108,700	107,200
	26	69.5	63.2	108,500	107,100		27	71.7	73.4	99,900	100,700
	27	68.5	62.8	99,700	100,800		28	70.9	73.1	93,900	94,900
	28	67.5	62.3	93,800	94,800		29	70.0	72.7	88,500	89,700
	29	66.4	61.9	88,400	89,800		30	69.1	72.3	83,700	84,900
	30	65.4	61.4	83,800	84,900		32	67.3	71.5	75,500	78,800
	32	63.3	60.4	75,400	76,700		34	65.5	70.6	68,800	70,100
	34	61.1	59.4	68,500	70,000		36	63.7	69.6	62,800	64,300
	36	58.9	58.2	62,700	64,300		38	61.9	68.6	57,800	59,400
38	56.6	56.9	57,800	59,400	40	60.0	67.4	53,800	55,200		
40	54.2	55.4	53,800	55,200	45	55.1	64.2	45,100	46,800		
45	48.1	51.3	45,100	46,800	50	49.9	60.2	38,700	40,200		
50	41.2	46.1	38,700	40,200	55	44.2	55.5	33,900	35,200		
55	33.1	39.3	33,900	35,200	60	37.9	49.6	29,900	31,200		
60	22.6	29.5	29,900	31,200	65	30.5	42.1	26,700	27,900		
					70	23.1	34.0	24,000	25,100		

3222291



2105J188

### 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





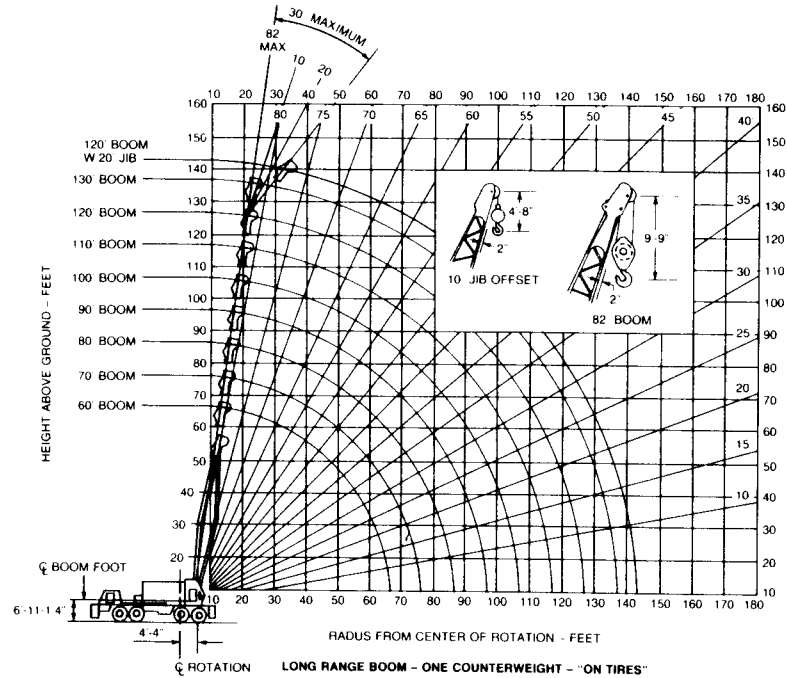
# working ranges

TRUCK CRANES

Dataguest Incorporated

P&H

P. 180.63



LONG RANGE BOOM - ONE COUNTERWEIGHT - "ON TIRES"

## RATINGS LIFT CRANE SERVICE



one counterweight and  
one bumper counterweight

69" x 69" boom  
long range tip (35')



"on tires"

### rated boom loads in pounds

Boom Length (ft)	Load Radius (ft)	Boom Angle Δ	Boom Point Elev (ft)	Stationary Ratings			Travel Ratings		Load Radius (ft)
				Over Side	Over Rear	Directly Over Rear	Creep	2.5 m.p.h.	
60	14	81.4	66.2	—	85,100	108,000	81,100	—	14
	15	80.5	66.0	—	82,100	101,800	78,000	—	15
	16	79.5	65.8	—	79,300	98,100	75,100	—	16
	17	78.5	65.6	—	76,600	94,500	72,400	—	17
	18	77.6	65.4	—	74,200	90,500	69,800	—	18
	19	76.6	65.1	83,000	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	47,800	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	62,800	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	56,900	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	31,600	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	40,800	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	28,800	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

322291

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

SIZE	TIRE INFLATION		
	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.





# 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				Load Radius (ft)	
				Over Side	Over Rear	Directly Over Rear	Travel Ratings Directly Over Rear Creep 2.5 m.p.h.		
60	14	81.4	66.2	—	80,500	92,600	78,300	45,700	14
	15	80.5	66.0	—	77,500	84,200	73,400	43,900	15
	16	79.5	65.8	—	74,800	77,100	70,800	42,200	16
	17	78.5	65.6	—	71,200	71,200	68,000	40,800	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	42,800	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	31,900	24
	25	70.6	63.3	36,300	43,200	43,200	43,200	30,800	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	28
	29	66.4	61.6	29,900	35,800	35,800	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	20,600	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	41,800	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	47,600	57,300	57,300	57,300	35,900	20
	21	76.8	74.9	45,400	53,900	53,900	53,900	34,900	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				Travel Ratings		Load Radius (ft)
				Over Side	Over Rear	Directly Over Rear	Creep	2.5 m.p.h.		
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	35,800	35,800	35,800	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	15,900	50	
	55	51.2	68.9	12,300	15,300	15,300	15,300	14,300	55	
	60	46.4	64.4	10,800	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	

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			Travel Ratings		Load Radius (ft)
				Over Side	Over Rear	Directly Over Rear	Directly	Over Rear	
							Creep	2.5 m.p.h.	
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	28,600	26
	27	75.9	94.0	32,400	38,700	38,700	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	21,600	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	9,200	75
	80	33.3	55.7	6,400	8,400	8,400	8,400	8,300	80
	85	26.8	46.9	5,800	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	38,900	19
	20	81.4	105.7	48,700	57,100	57,100	57,100	34,800	20
	21	80.8	105.5	44,800	53,800	53,800	53,800	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			Travel Ratings		Load Radius (ft)
				Over Side	Over Rear	Directly Over Rear	Directly	Over Rear	
							Creep	2.5 m.p.h.	
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	25,800	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	26,400	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	14,800	50
	55	63.0	104.6	11,800	14,800	14,800	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	8,700	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	6,600	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	2,800	4,200	4,200	4,200	4,200	110

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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 $\Delta^\circ$	Boom Point Elev (ft)	Stationary Ratings			Travel Ratings		Load Radius (ft)
				Over Side	Over Rear	Directly Over Rear	Creep	2.5 m.p.h.	
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	33,600	40,100	40,100	40,100	27,600	26
	27	79.5	124.8	31,900	38,100	38,100	38,100	26,700	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	30,600	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	7,600	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	15.6	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 $\Delta^\circ$	Boom Point Elev (ft)	Stationary Ratings			Travel Ratings		Load Radius (ft)
				Over Side	Over Rear	Directly Over Rear	Creep	2.5 m.p.h.	
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	4,800	100
	110	36.0	82.7	2,400	3,800	3,800	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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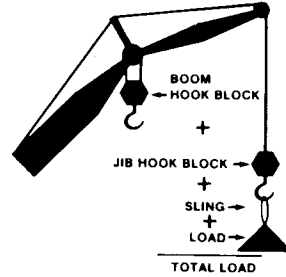
WARNING 

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	8,800	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



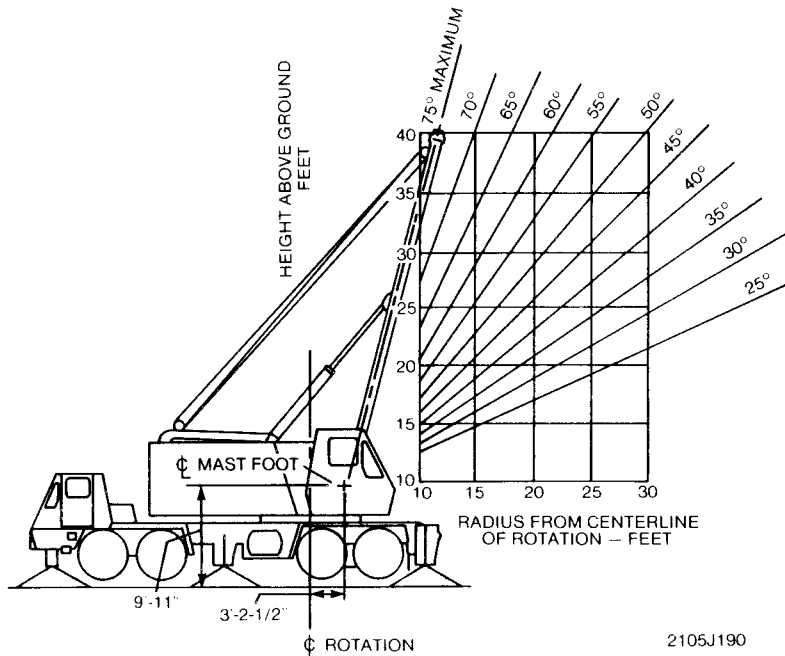
## RATINGS 30' LIVE MAST



TRUCK CRANES

Dataquest Incorporated

P&H



2105J190

rated mast load in pounds			
Load Radius (ft.)	Mast Angle $\Delta$	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.

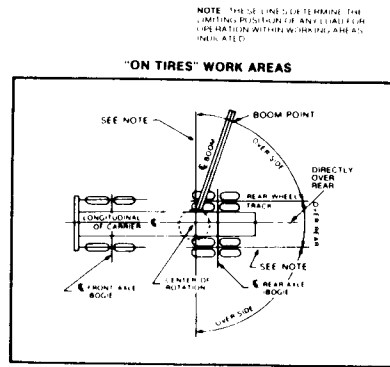
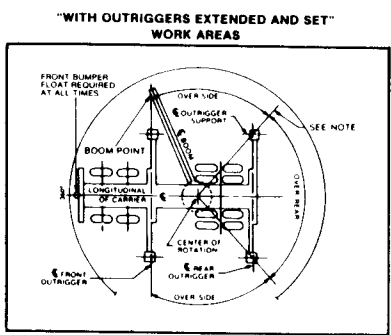
**Boom Point Elevation:** The vertical distance measured between the ground and the center of the boom point sheave.

**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: THE USER SHOULD DETERMINE THE LIMITING POSITION FOR ALL LIFTING OPERATIONS AND THE WORKING AREA AS INDICATED.

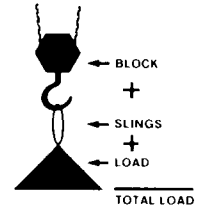
# warnings

## SET-UP

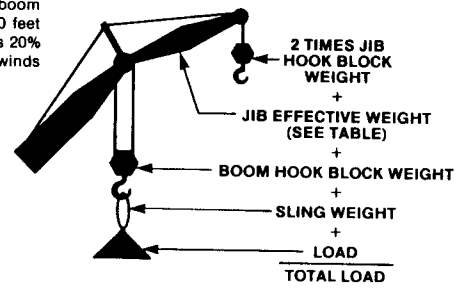
1. Boom backstops are required for all boom lengths.
2. 30 ft. live mast required for all boom lengths.
3. The gantry position and boom hoist rope strength are determined by the maximum boom or boom plus jib combination as shown in the information section.
4. The machine must be leveled to within 1% (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 POSITION	BOOM ONLY		BOOM AND JIB	
	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 240' maximum plus 70' 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 POSITION	BOOM ONLY		BOOM AND JIB	
	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	
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		BOOM ROLLERS		MID POINT	JIB BACKSTAY
	Base (25') = B Tip (25') = T		No. Required	Distance From Boom Point (Feet)	Distance From Boom Point (Feet)	Distance From Boom Point (Feet)
	RECOMMENDED	ALTERNATE				
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		BOOM ROLLERS		MID POINT	JIB BACKSTAY
	Base (25') = B Tip (35') = T		No. Required	Distance From Boom Point (Feet)	Distance From Boom Point (Feet)	Distance From Boom Point (Feet)
	RECOMMENDED	ALTERNATE				
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)	
<ul style="list-style-type: none"> <li>● 76,600 pound minimum breaking strength</li> <li>● use of swivel is not approved with this rope</li> <li>● not approved for more than single part of line</li> </ul>	
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)	
<ul style="list-style-type: none"> <li>● 58,800 pound minimum breaking strength</li> <li>● Boom hoist reeving is 14 parts reeved as shown in the Operator's Manual</li> </ul>	

## 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)	
<ul style="list-style-type: none"> <li>● 64,600 pound minimum breaking strength</li> <li>● Boom hoist reeving is 14 parts reeved as shown in the Operator's Manual</li> </ul>	

## 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)	
<ul style="list-style-type: none"> <li>● 103,400 pound minimum breaking strength per pendant</li> <li>● Must be replaced in matched pairs. Refer to Parts Book</li> </ul>	

## 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)	
<ul style="list-style-type: none"> <li>● 64,600 pound minimum breaking strength per pendant</li> <li>● Must be replaced in matched pairs. Refer to Parts Book</li> </ul>	

## 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)	
<ul style="list-style-type: none"> <li>● 79,600 pound minimum breaking strength</li> <li>● Refer to parts book</li> </ul>	

## 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)	
<ul style="list-style-type: none"> <li>● 79,600 pound minimum breaking strength</li> <li>● Matched sets. Refer to Parts Book.</li> </ul>	



**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		ROPE LENGTH (FEET)										
		P&H TYPE	DIA. IN.	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		Extra Rope Length is Required for Operating Below Ground Level					
	170	25	1	360	535	710								
	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 **Special Boom Hoist Rope required for: 260' of Long Range Boom Plus 80' Jib or 270' of Boom Plus 70' or 80' of Jib							
230	25	1	480	715										
240	25	1	500	745										
250	25	1	520	775										
260	25	1	540	805										
270	25	1	560											

USE	BOOM LENGTH	ROPE		JIB LENGTHS									
		P&H TYPE	DIA. IN.	PARTS OF LINE									
				20' JIB		30' JIB		40' JIB		50' JIB		60' 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	360	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	560	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		Number of Sheaves	Weight (Pounds)	This chart shows the capacities and weights of Johnson Blocks supplied with this crane.
Tons	Pounds			
150	300,000	5	3651	
100	200,000	3	2645	
45	90,000	1	911	
15	30,000	Ball Hook	800	

- 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.