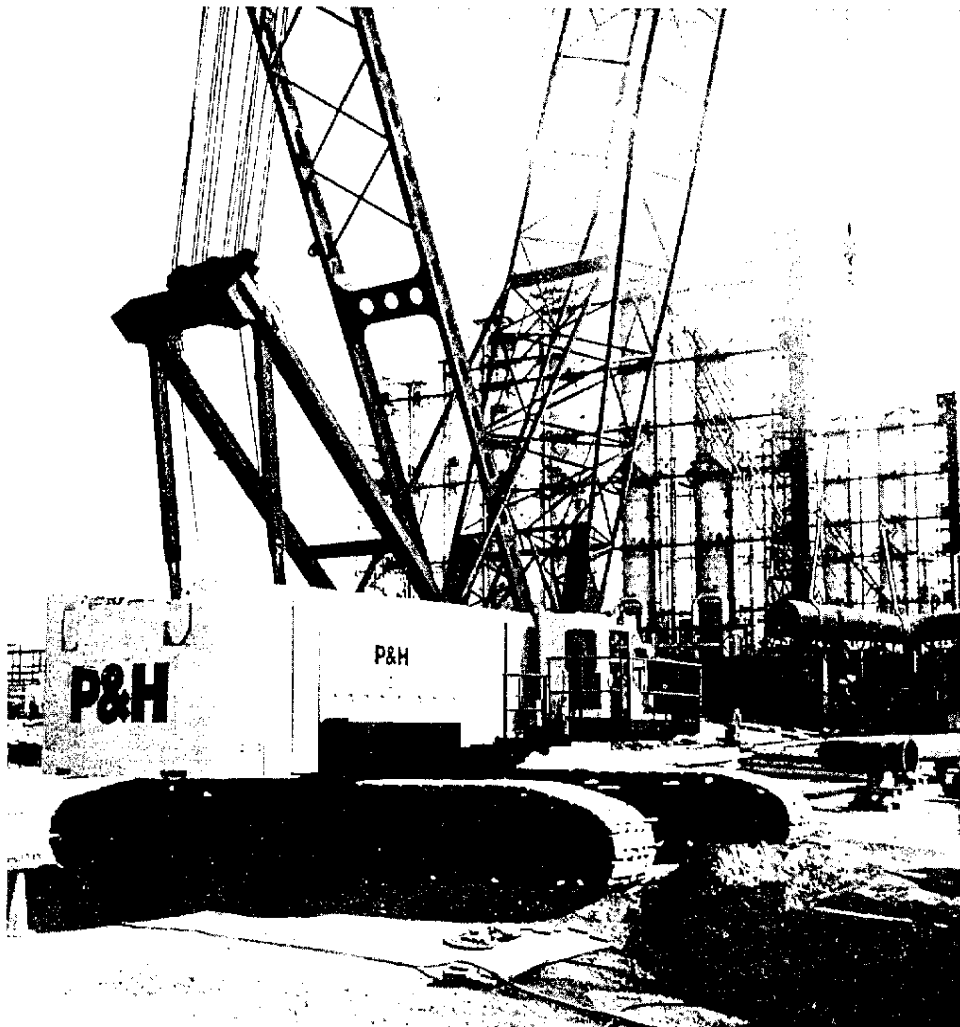


P&H[®] 5300A

**300 ton crawler crane
320' boom plus 80' jib
370' boom**



The versatile Model 5300A adapts readily to your special operating needs through a choice of counterweights and boom tips. This brochure contains these crane rating charts:

Heavy Duty Tapered Tip Boom:

1. 70 to 240 foot boom lengths

Light Duty Tapered Tip Boom:

2. 70 to 370 foot boom lengths

Jib Ratings:

3. All boom combinations up to 320 feet.

standard
94" wide x 94" deep
boom

**crane lifting capacities
working ranges**

P&H® 5300A

300-ton crawler crane



STANDARD BOOM:

Two-piece 70' (21.3 m) long, open throat lattice type tubular boom consisting of a 40' (12.2 m) long tapered base section and a 30' (9.1 m) long heavy duty tapered tip section. All boom sections are pin connected, have a 94" (239 cm) square cross section and complete with suspension cable assemblies. Sections are fabricated from seamless tubular T-1 steel and reinforced with contour-cut tubular lacings for strongest welded joints. Other tip sections are optional.

HEAVY DUTY TIP: 30' (9.1 m) has 6 offset boom point sheaves 30" (76.2 cm) P.D., with roller bearings. Required for lifts up to 600,000 lbs. (272,160 kg). Boom extendible to 240' (73.2 m).

LIGHT DUTY TIP: 30' (9.1 m) long section has 3 offset boom point sheaves 30" (76.2 cm) P.D. with roller bearings. Required for long boom work from 250' to 370' (76.2 m to 112.8 m) for lifts up to 250,000 lbs. (113,400 kg). Optional.

HAMMERHEAD TIP: 20' (6.1 m) long section has 6 offset boom point sheaves 30" (76.2 cm) P.D. with roller bearings. Extra heavy duty tip of short length for minimum headroom clearance and lifts up to 500,000 lbs. (226,800 kg). Boom extendible to 250' (76.2 m). Optional.

CONTAINER TIP: 30' (9.1 m) long section has 4 boom point sheaves (2 each side) 27" (68.6 cm) P.D. with roller bearings for single or double drum operation. Double hoist lines keep container level and straight for precise placement. Boom extendible from 130' minimum to 220' (39.6 to 67 m) for lifts up to 160,000 lbs. (72,576 kg). Optional.

BOOM INSERT SECTION: 10' (3.1 m) Boom insert with suspension cable assemblies, pin connections optional
20' (6.1 m) insert optional
30' (9.1 m) insert optional
50' (15.2 m) insert optional

JIB: 30' (9.1 m) long jib, open throat lattice type, two equal tapered sections, pin connected, having a 42 (106.7 cm) square cross section and with single 18.75" (47.6 cm) P.D. jib point sheave, compression strut and guy cables assemblies. Extendible to 80' (24.4 m). Extends reach to 405' (123.4 m). For lifts not exceeding 50,000 lb. (22,680 kg). Optional.

JIB INSERT SECTIONS:

10' (3.1 m) jib insert with cable assemblies optional
20' (6.1 m) jib insert optional
30' (9.1 m) jib insert optional

MAST: Required for all booms. Mast is 45' (13.7 m) long and is attached to boom foot during operation.

MID-POINT SUSPENSION: Required when boom length is 320 ft. (97.5 m) or longer. (Optional).

BOOM BACKSTOPS: Spring loaded, shock absorber type. (Optional).

WIRE ROPE GUIDE ROLLERS: Use as required to eliminate wire rope interference. (Optional).

UPPER MACHINERY

FRAME: All welded frame and power box constructed of heavy steel plate. Shaft mountings are line bored to insure precise alignment of all parts. Gearing (except swing) is sealed and splash lubricated. Involute splined shafts are used, turn in roller and ball bearings. Gears and roller chains are hardened, sealed in oil bath for long, trouble free operation.

GANTRY: Three position telescopic gantry. Power raise and lowering — 8 sheaves — 16" (40.6 cm) P.D.

MACHINERY CAB: All steel construction, access panels on both sides and roof. Removable panels for main drum brake access. No lines pass through cab. Low profile, recessed center roof. Deck covered with non-skid floor plate. Deck machinery is in compact arrangement, easy to maintain and repair.

OPERATORS CAB: Totally enclosed from weather. Full vision cab has tinted safety glass throughout, sliding front window and door. Operators four-way adjustable seat, boom hoist kick-out limit switch and boom angle indicator are standard. Cab heater, signal horn, windshield wiper, drum turn indicator and flood lights available. Detachable for transporting with quick disconnects for hydraulic and electrical systems.



CONTROLS:

In front of operator are foot pedals for front and rear drum brakes, hand levers for swing control, front and rear drum controls, boom hoist control, swing brake and engine speed control. At operators left are console mounted switches for front and rear drum pawls and brake locks, master switch, engine start, starting aid and lights, included are gauges for upper hydraulic oil pressure, fuel level, engine water temperature, oil pressure, ammeter, hourmeter, drum brake pressure, converter oil charging pressure and temperature, modulated clutch control lever, trouble light receptacle and drum turn indicators. A Lode-Safe-T® computer is standard.



POWER PLANT

ENGINE: STANDARD
Make Cummins
Model KT 1150 C-450
Type Diesel, direct injection
No. of Cylinders 6
Bore x Stroke, in. 6.25 x 6.25
mm 158.8 x 158.8
Displacement, in. 1150
liters 18.86
Cycles 4
Air Induction Turbo charged
Cooling Liquid, recirculating bypass
Starting 24 volt motor. Cold weather starting aid.
Alternator 12/24 volt - 74 amp.

TORQUE CONVERTER:

Make Twin Disc
Model 4-MOP-2014-1
Type Modulated clutch, electronically controlled.
70 gal. (265 L) reservoir
2 double power take-offs

RATINGS:

Net Hp @ RPM 378 @ 2100 rpm SAE
(Flywheel)
Net HP @ RPM 264 @ 2022 rpm
(Converter Output Shaft)
Altitude Range 0-9000
In. Ft. (m) (0-2743)
Temp. Range in F. -20° to 110°
(C.) (-28° to 43°)

Specifications

Input disconnect clutch — Torque converter — Five plate wet type electro-hydraulically actuated.

Converter charging hydraulic system — Gear type pump charges converter. Oil to water heat exchanger cools fluid. Filtered with full flow pressure filters with replaceable paper elements. Combined system for control, drive and lubrication. 70 gal. (265 liters) reservoir with level indicator.

Governor control — Twist grip (standard) — Twist grip and foot pedal (optional).

RIGHT TRANSMISSION: Two speed, electro-hydraulic powershift transmission, chain drive. Pressure lubricated bearings, gear and chain (driven by torque converter).

LEFT TRANSMISSION: Two speed transmission; hydraulic disc clutches non-power shift; input and output through universal drive shafts; pressure lubricated anti-friction bearings, roller chain and spur gears, (driven by engine front crankshaft). Electrical interlock to prevent shifting transmission above 650 rpm idle.

Fuel tank capacity — Two 79 gal. (299 liters) tanks - 158 gal. (598 liters) total.

Lube oil capacity — Engine - 40 quarts (37.9 liters). Filter - 22 quarts (20.8 liters).

Coolant capacity — Engine - 7 gallons (26.5 liters). Radiator 5.83 gallons (22.1 liters) sheet metal, tube & plate fin type.

Air cleaner — Farr - dry type, 2 stage.

Lube oil filter — Remote mounted - replaceable. Full flow and by-pass.

Fuel filter — Dual spin-on - replaceable.

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

Batteries — (4) - 12 volt H.D. rated, series and parallel connected. Disconnect switch prevents start-up while servicing. 215 amp. hours @ 20 hour rate.

Hydraulic pump — Flange mounted, constant displacement in-line piston pump 3000 psi (210 kg/cm²), 5 GPM, (19 liters per minute).

HYDRAULIC SYSTEM: Full flow hydraulic system for infinitely variable pressure to front and rear drums, boom hoist brakes and clutches. System at 1550 psi (108.5 kg/cm²) line pressure. Response is instant, positive and smooth to operators light touch. Pumped fluid is filtered, stored in accumulator under pressure, cooled in 9 gallon (34 liter) reservoir and filtered again before returning to pump.



LOAD DRUMS:

DRUM ASSEMBLY: Tandem, driven from flywheel end of engine through modulated clutch torque converter and two speed (right) transmission, both drums overwinding.

FRONT AND REAR:

1.25" ROPE: 28.25" (71.8 cm) P.D. x 40.5" long (102.9 cm) grooved drum. Total wire rope length of 1.25" (32 mm) dia. rope is 1628 ft. (496.2 m) storage or 1312 ft. (399.9 m) working length. Lifts in excess of 500,000 lb. require 12 part reeving with special 1.25" rope with minimum breaking strength of 87.5 tons.

1.0" ROPE: 28" (71.1 cm) P.D. x 40.5" long (102.9 cm) grooved drum. Total wire rope length of 1" (25 mm) dia. rope is 1979 ft. (603.2 m) storage or 1603 ft. (488.6 m) working length.



CLUTCH: (Front and rear) — 46" (116.8 cm) dia. x 6" (15.2 cm) wide, band type, internal expanding.



BRAKE: (Front and rear) — 52" (132 cm) dia. x 8" (20.3 cm) wide, band type, external contracting. Hydraulic set, with additional spring set hydraulically released brake lock and external ratchet for locking drum.

TORQUE CONVERTER RANGE (Based on 70% Efficiency Pts.)			REAR DRUM RANGE Low — High	FRONT DRUM RANGE Low — High
HOIST- ING:	Low Gear	Line f/min	56.6—198.5	56.6—198.5
		Speed m/min	17.3—60.5	17.3—60.5
	1.25" Rope	Line lb.	127100—35670	118800—33350
		Pull kg.	57653—16180	53888—15128
	High Gear	Line f/min	125.9—441.7	125.9—441.7
		Speed m/min	38.4—134.6	38.4—134.6
1.0" Rope	Line lb.	57100—16000	53400—15000	
	Pull kg.	25901—7258	24222—6804	

HOIST- ING:	Low Gear	Line f/min	56.4—196.8	56.4—196.8
		Speed m/min	17.2—59.9	17.2—59.9
	1.0" Rope	Line lb.	128413—36080	120750—33928
		Pull kg.	58248—16366	54772—15390
LOWER- ING:	Low Gear	Line f/min	30.9—107.9	30.9—107.9
		Speed m/min	9.4—32.9	9.4—32.9
	1.25" Rope	Line f/min	68.8—240.4	68.8—240.4
		Speed m/min	20.9—73.2	20.9—73.2
LOWER- ING:	Low Gear	Line f/min	30.6—106.9	30.6—106.9
		Speed m/min	9.3—32.6	9.3—32.6
	1.0" Rope	Line f/min	68.2—238.1	68.2—238.1
		Speed m/min	20.7—72.6	20.7—72.6



POWER CONTROLLED LOAD LOWERING: Rapid, safe lowering through reverse planetary gearing in drum, transmission and engine. External spider brake on drum engages planetary gears. (Optional for either drum).



THIRD DRUM: (OPTIONAL)

Mounted forward of front drum on revolving frame on center line of boom. Does not interfere with crane or machine functions. Hydrostatic drive, fixed displacement pump mounted on converter power take-off; 50 gal. reservoir, manual controls; quickly detachable.

DRUM: 12.75" (32.4 cm) P.D. x 16" (40.6 cm) long. Total wire rope length of 3/4" (19 mm) rope is 667 ft. (203.3 m) storage or 547 ft. (166.7 m) working length.

LINE SPEED: 87 ft./min. (26.5 m/min.).

LINE PULL: 15100 lb. (6849 kg).



BOOM HOIST:

Independent planetary gear type with external ratchets and automatic brakes provides for raising and lowering boom under power and locking boom. Driven from left transmission.

TWIN DRUMS: 20" (50.8 cm) P.D. x 12.375" (31.4 cm) long. Total wire rope length per drum for 1" (25 mm) rope is 536 ft. (163.4 m) storage or 442 ft. (134.7 m) working length.



CLUTCH: 52" (132 cm) dia. x 4" (10.2 cm) wide, band type, external contracting.



BRAKE: (2) - 30" (76.2 cm) dia. x 4" (10.2 cm) wide, band type, external contracting "full wrap" design.

	Gear Range	Low	High
		HOISTING:	Line Speed
		Line Pull	13,330 lb. (6,046 kg)
		LOWER-ING:	Line Speed

BOOM HOIST REEVEING: 14 parts line, 1" (25 mm) wire rope.

SHEAVE AND DRUM TO WIRE ROPE RATIOS: Pitch Diameter

	Boom Hoist	Front 1.25" Rope	Rear 1.25" Rope	Third
Sheave to Wire Rope	16 to 1	24 to 1	15 to 1	---
Drum to Wire Rope	20 to 1	22.6 to 1	22.6 to 1	17 to 1
		Front 1.0" Rope	Rear 1.0" Rope	Rear Container 1.0" Rope
Sheave to Wire Rope		27 to 1	18.75 to 1	27 to 1
Drum to Wire Rope		28 to 1	28 to 1	28 to 1



SWING: "Magnatorque®" Swing Drive coupling 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: 2-27" (68 cm) dia. x 6" (15.2 cm) wide, electro-magnetic "Magnatorque®". Powered by engine driven alternator.



BRAKE: 18" (45.7 cm) dia. x 2.5" (6.4 cm) wide, band type, external contracting. Hydraulic release, spring set.

Gear Range	Low	High
Swing Speed	1.13 rpm	2.83 rpm

SWING GEAR: 132 internal cut teeth, 88" (223.5 cm) P.D.

FASTENING TO LOWER: Roller bearing "Swing Circle"® 105.315" (267.5 cm) dia., detachable, with integral swing gear.

COUNTERWEIGHTS: Bustle - 127,200 lb. (57,698 kg) — Cast, 3 piece, located behind rear of upper machinery cab. Removable with gantry—pin connected. Counterweights #1 and #2 — 41,600 lb. (18,869.8 kg) each, counterweight #3 — 44,000 lb. (19,961 kg). Optional counterweight #4 — 45,700 lb. (20,732 kg) is required for light-duty booms over 240 ft. (73.2 m) (total counterweight is 172,900 lbs. — 78,427 kg) and located behind #2 counterweight. Counterweight #3 has to be raised to position by another crane (a fourth counterweight cannot be handled by gantry.)

INDEPENDENT PROPEL MECHANISM: Driven from rear of engine through Modulated Clutch Torque Converter, Two Speed Transmission and Propel Clutch. Anti-Friction Bearings, Spur Gears and Roller Chain to Bevel Gear Reversing mechanism.



PROPEL CLUTCH: Internal expanding segmented shoe type hydraulically actuated by an internal circular expander tube, 17.25" (43.8 cm) dia. x 4" (10.2 cm) wide.

LOWER MACHINERY

CAR BODY: Car body of alloy steel welded construction with axle housing integral. Crawler frames shear mounted and bolted to end of extendible axles.



CRAWLER

Crawler side frames are extendible and retractable by means of hydraulic cylinders to convert from wide tract operating condition to a narrower overall width for travel and transportation. Two banks of valves, one on each end of the car body, control the extension cylinders of each side frame. A valve in the upper divert fluid from the upper control system to the extension cylinders. Crawlers designed with quick disconnect feature for individual removal as a unit from axles. Crawler belt and propel chain tension maintained by hydraulic jack force on track adjusting bearing block and insertion of proper shimming. 15 lower rollers in each frame, with double rolling surfaces, 18" (45.7 cm) dia.

CRAWLER DRIVE: Power from propel mechanism in carbody is transmitted by heavy forged driveshafts. When crawlers are retracted, extended driveshafts swing away for retracting. Independent drive in each side frame consists of sliding jaw clutches engaging each end of horizontal propel shaft center section, controlling application of propelling power through sprocket and chain drive to driving tumbler. The tumbler exerts force against lugs cast into crawler shoes to propel crawler.

STEERING MECHANISM: The sliding jaw clutches are spring engaged together for propel drive, or they may be hydraulically locked to spring-set propel brakes independently.

CRAWLER BRAKES: Two — 40" (101.6 cm) dia. spring-set, hydraulically released V-type propel brakes remain set during engagement of jaw clutches.

CRAWLER SHOES: Total number — both sides 126
 cast flat shoes — standard width 48" (122 cm)
 — optional width 60" (152.4 cm)

OPTIONS:

Upper: Rapid refueling system, lighting (and container steering) system with 6 KW generator or 12 KW generator, 4th counterweight, modulated clutch rotation indicator, audio-visual drum turn indicators, elevated cab (30 or 40 foot), wind velocity indicator, positive swing lock, hoist limit switch, signal horn, rotary warning light for boom point, windshield wiper and heater. Container accessories include hydraulic and radio-controlled spreaders.

GENERATOR SET: (Optional) 6 kw rated, AC, electric, independent, diesel powered, Onan Special Heavy-Duty Contractors Model 6DJB, air-cooled. 5 kw continuous 120/240 volt, 60 Hz, 3 wire, single phase, 1.0 PF. with receptacle box containing two 240 v and two duplex 120 v outlets. Completely self-contained with battery and charge circuit, muffler, heavy-duty air filter, lube filter and dual fuel filter. Starting either remote at operator's cab or at generator. Optional mounting locations. Quick disconnects provide easy removal for transporting and use elsewhere. Totally housed with service access doors. Fuel supplied from upper tanks. Estimated weight, 1,050 lbs.

(Optional) 12 kw rated, AC, electric, independent, diesel powered, Onan Model 12DJC-5 DR. Ratings: Continuous, 10 kw-12.5 KVA @.8 PF — 30 Amp; Standby 12 kw-15 KVA .8 PF — 36 Amp. Generator 120240 v, 60 Hz, 3 phase, 4 wire, Delta wound. Engine: 4 cyl., 4 cycle, air-cooled, 1800 RPM rated speed, electric start and heat switches in operator's cab, fuel and lube filters, air filter, engine high air temperature and low lube oil warning system, weatherproof housing and thermo controlled shutters, vibration isolator mounted. Mounting: Front of upper at boom foot. Fuel supplied from upper tanks. Quick disconnects provide for easy removal for transporting or use elsewhere. Estimated weight, 1,200 lbs.

CONTAINER HANDLING ASSEMBLY (OPTIONAL): Consists of a load frame having two pickup points located at each end of the frame. The load frame is supplied with its own electric motor, pump and hydraulic reservoir to supply power to container spreaders which are suspended from load frame. An electrical cable with quick disconnects near boom point connects load frame to operator's module push button and indicator controls for control of spreader latching mechanism. The optional 12 kw AC generator set is required to power load frame motor, controls and flood lights. Hydraulically operated, electrically controlled, spreaders with necessary wire rope slings to connect to load frame are available for handling nominal 20 or 40 foot ASA/ISO containers.

HOOK BLOCKS:

Block Capacity	Number Sheaves	Wire Rope Size	Weight		Rope to Sheave Ratio
			Miller	Johnson	
60,000 lb. (27,216 kg)	1	1 1/4"	2300 lb. (1043 kg)	1530 lb. (694 kg)	21.4 to 1
130,000 lb. (58,968 kg)	1	1 1/4"	2500 lb. (1134 kg)	1744 lb. (791 kg)	21.4 to 1
220,000 lb. (99,792 kg)	2	1 1/4"	3040 lb. (1379 kg)	3070 lb. (1393 kg)	21.4 to 1
250,000 lb. (113,400 kg)	3	1 1/4"	3190 lb. (1447 kg)	4519 lb. (2050 kg)	21.4 to 1
380,000 lb. (172,368 kg)	4	1 1/4"	4190 lb. (1900.6 kg)	4970 lb. (2254 kg)	21.4 to 1
460,000 lb. (208,656 kg)	5	1 1/4"	6400 lb. (2903 kg)	7027 lb. (3187 kg)	21.4 to 1
500,000 lb. (226,800 kg)	6	1 1/4"	5600 lb. (2540 kg)	6490 lb. (2944 kg)	21.4 to 1
600,000 lb. (272,160 kg)	6	1 1/2"	6675 lb. (3028 kg)	7259 lb. (3293 kg)	21.4 to 1
30,000 lb. (13,608 kg)	Weighted Hook		1100 lb. (499 kg)	1000 lb. (454 kg)	---
90,000 lb. (40,824 kg)	1	1"	790 lb. (358 kg)	911 lb. (413 kg)	18.375 to 1
60,000 lb. (27,216 kg)	1	1"	1435 lb. (651 kg)	1180 lb. (535 kg)	21.5 to 1
140,000 lb. (63,504 kg)	2	1"	1745 lb. (792 kg)	1700 lb. (771 kg)	21.5 to 1
180,000 lb. (81,648 kg)	3	1"	2280 lb. (1034 kg)	2200 lb. (998 kg)	21.5 to 1

WEIGHTS:

Upper machine — 114,261 lb. (51,828.8 kg).
 Mast — 5080 lb. (2304 kg)
 Gantry — 5416 lb. (2457 kg)
 Counterweights — #1 - 41,600 lb. (18,869.8 kg)
 — #2 - 41,600 lb. (18,869.8 kg)
 — #3 - 44,000 lb. (19,961 kg)
 — #4 - 45,700 lb. (20,732 kg)

Boom:

Base — 7020 lb. (3184 kg)
 Inserts — 10 ft. — 1551 lb. (703.5 kg)
 20 ft. — 2652 lb. (1203 kg)
 30 ft. — 3272 lb. (1484.2 kg)
 50 ft. — 5183 lb. (2351 kg)
 Tip — Heavy Duty — 8833 lb. (4007 kg)
 Light Duty — 7420 lb. (3366 kg)
 Hammerhead — 8870 lb. (4023 kg)
 Container — 8396 lb. (3808 kg)

Jib:

Base — 650 lb. (294.8 kg)
 Inserts — 10 ft. — 460 lb. (208.7 kg)
 20 ft. — 700 lb. (317.5 kg)
 30 ft. — 890 lb. (403.7 kg)
 Tip — 830 lb. (376.5 kg)

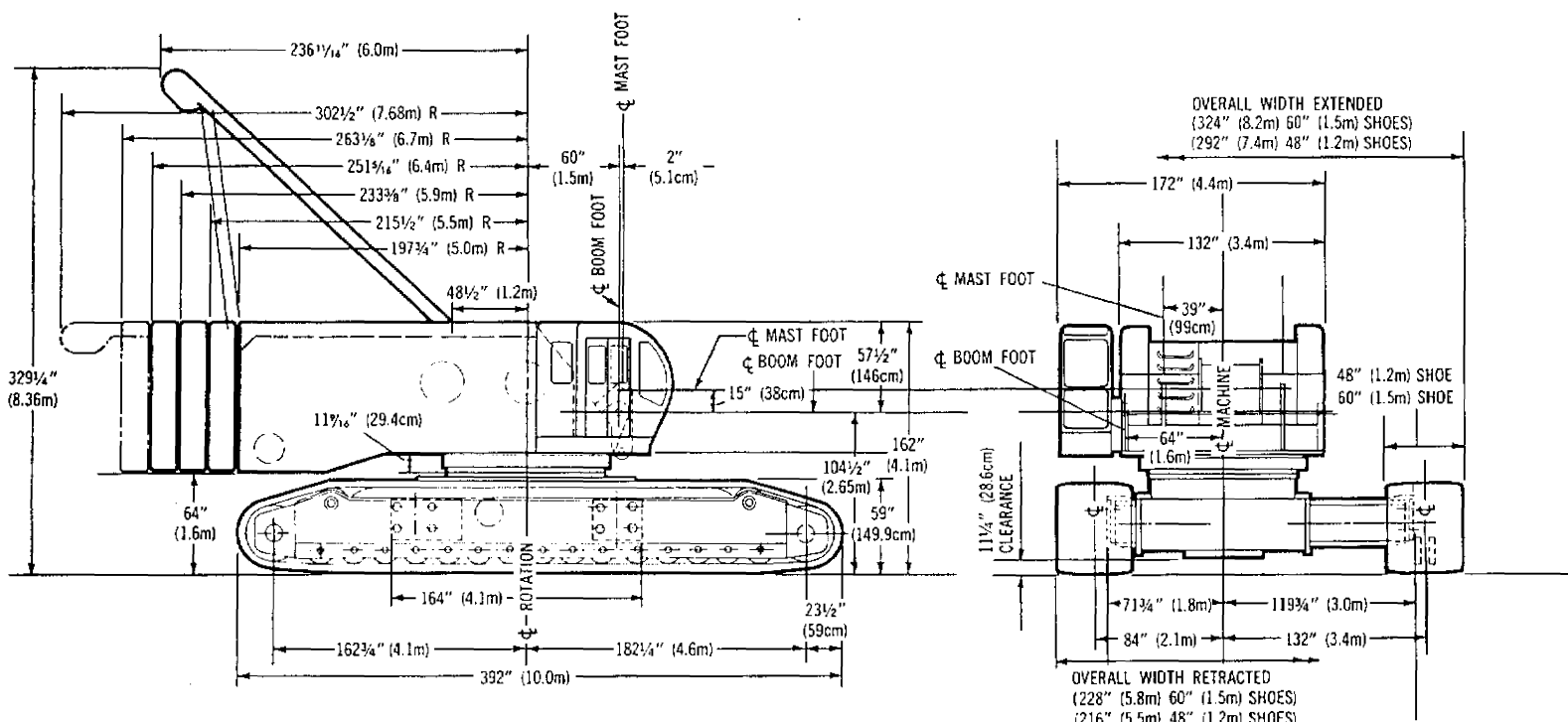
Lower machine w/std. 48" shoes — 241,380 lb. (109,490 kg)
 w/opt. 60" shoes — 247,352 lb. (112,199 kg)
 Carbody with axles — 77,600 lb. (35,199.4 kg)
 Crawler side frame (each) —
 w/48" cast flat shoes — 81,890 lb. (37,145.3 kg)
 w/60" cast flat shoes — 84,876 lb. (38,500 kg)

AVERAGE GROUND BEARING PRESSURES:

Machine w/48" cast flat shoes — 14 psi (0.98 kgm)
 w/60" cast flat shoes — 12 psi (0.84 kg/cm)

PERFORMANCE

Lo-Speed	.64 mph 1.02 Kph	(Full load converter output speed)
Hi-speed	1.43 mph 2.29 Kph	(Maximum 20% grade recommended)



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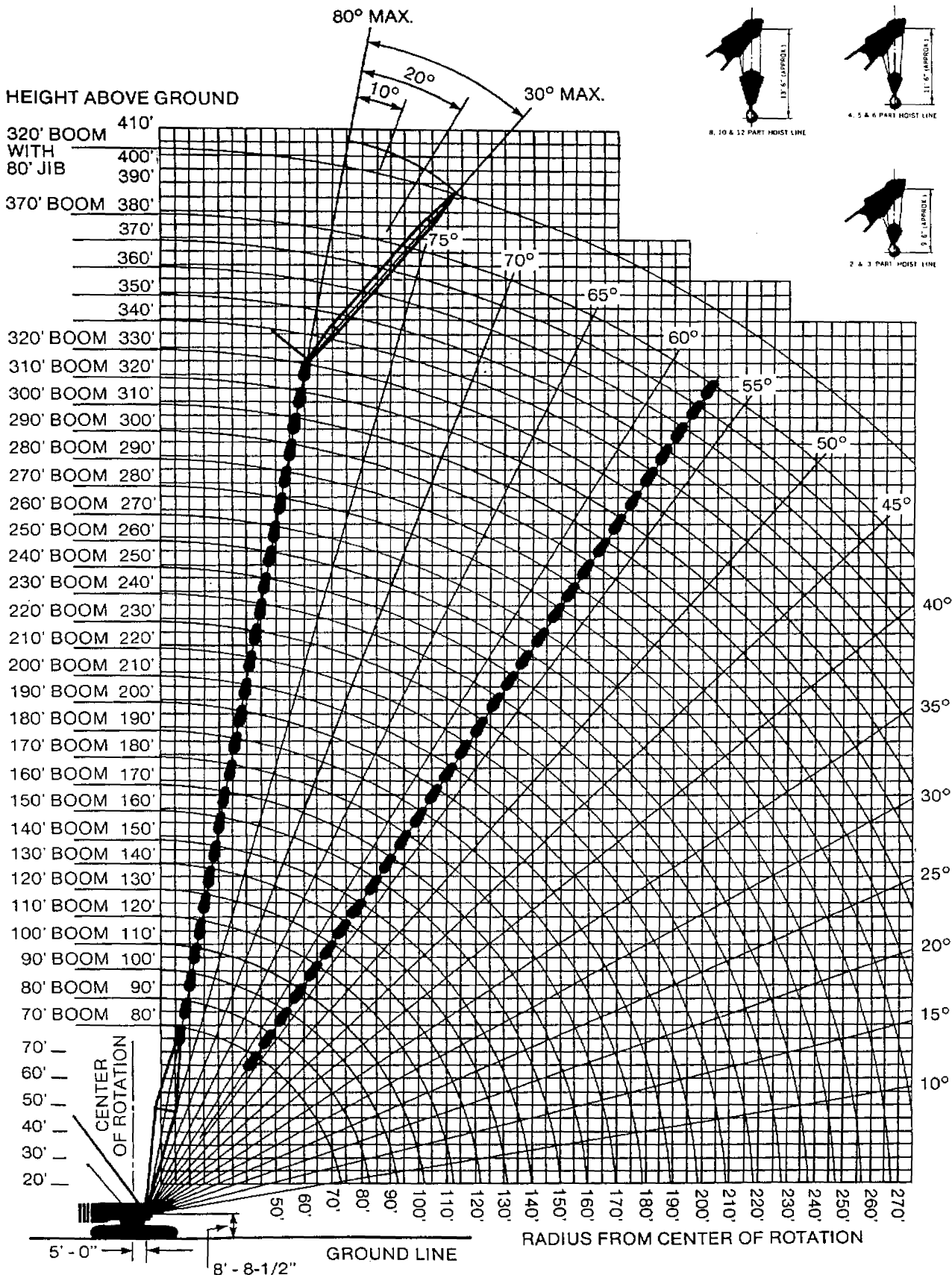


NOTE: All designs, specifications and components of the equipment described above are subject to change at the manufacturer's sole discretion at any time without advance notice. Data published herein is informational in nature and shall not be construed to warrant suitability of the machine for any particular 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.



Address inquiries to:

working ranges



operating instructions

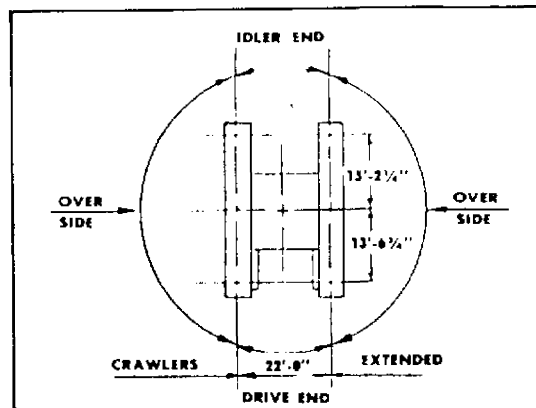
GENERAL

- 1) This machine meets the requirements of A.N.S.I. B30.5-1968. Boom structure has been tested per SAE J-987. Machine stability has been tested per SAEJ-765a.
- 2) Rated loads as shown on load rating charts pertain to this machine and are only for combination of P&H manufactured upper, crawlers, boom, jib, and counterweights. Modifications to this machine or use of equipment other than that specified can result in a reduction of capacity.
- 3) Construction equipment can be hazardous if improperly operated or maintained. Operation and maintenance of this machine shall be in compliance with the information in the operators, shop, parts, and safety manuals supplied with this machine. If these manuals are missing, order replacements from the manufacturer through the distributor.
- 4) The operator and other personnel associated with this machine shall fully acquaint themselves with the latest applicable American Standards Institute (ANSI) safety standards for cranes.

DEFINITIONS

- 1) **Load Radius:** Horizontal distance from a projection of the axis of rotation to the supporting surface before loading to the center of the vertical hoist line or tackle with load applied.
- 2) **Working Area:** Areas measured in a circular arc about the centerline of rotation as shown on the work area diagram.

PER S.A.E.—J1028
STANDARD WORK AREAS



- 3) **Freely Suspended Load:** Load hanging free with no direct external force applied except by the hoist line.
- 4) **Side Load:** Horizontal side force applied to the lifted load either on the ground or in the air.

INSTRUCTIONS

Failure to observe any of the following instructions may result in serious structural or mechanical failures, or in accidents.

1) Set-Up

- a) Boom backstops are required for all boom lengths.
- b) Boom hoist reeving is 14 parts, and is reeved in accordance with instruction plate located in crane cab.
- c) The mast is required for all crane operations, with the gantry in the intermediate position.
- d) Boom inserts and guy cables must be arranged as shown in the operators manual.
- e) A center hitch is not required with less than 320 ft. of boom. Center hitch is required for 320 ft. thru 370 ft. boom lengths, connected 160 ft. from the boom foot pin.
- f) Load ratings are based on crawlers extended and locked to a distance of 11'-0" from the centerline of the car body to the center line of the sideframe.
- g) The machine shall be leveled on a firm supporting surface.
- h) Boom lengths 70' to 320' without jib may be erected over side with crawlers extended, or over end of crawlers. Boom lengths 330' to 370' without jib or all boom lengths with jib must be erected over idler (long) end of crawlers and crawler must be blocked.

1) Set-Up (Continued)

- i) Erection and lowering to be done into the wind. Warning: Strong back wind may cause crane to tip.

2) Operation

a) Rated loads for stationary operation.

- (1) Rated loads do not exceed 75% of tipping as determined by SAE J-765a.
- (2) Rated loads at rated radius shall not be exceeded. Do not tip machine to determine allowable loads.
- (3) Rated loads include the weight of the hook block, slings, and auxiliary lifting devices. Their weights shall be subtracted from the listed ratings to obtain the net load to be lifted. In addition, any hook blocks at a point other than where the load is to be lifted must be accounted for in the same manner.
- (4) Rated loads shown are based on freely suspended loads, boom length and radius of operation.
- (5) The wind effect on the lifted load can cause sufficient side load to over-stress boom or jib structures. When suspended load will not remain in line with the boom, derate chart 25%. Operation is not permitted when wind velocity 20 m.p.h. Boom should be tied off, or lowered when wind velocity exceeds 50 m.p.h.
- (6) Rating limitations for cranes standing on inclines within the allowable limits are as follows: a) No deration for inclines less than 1%, b) 20% deration for inclines between 1% and 2%.
- (7) When two cranes are making a lift together, both cranes must be level. The rigging must be equalized so that each crane is lifting a share of the load which is well within its rating. The swing brakes of both machines must be released so that the boom points are free to remain directly over the load attachment points at all times.

b) Rating restrictions when traveling with load.

- (1) 90% of rated capacity when traveling with load over front or rear of crawler.
- (2) 75% of rated capacity when traveling with load over side of crawler or when traveling and swinging is done simultaneously.
- (3) Propel and swing acceleration and deceleration must be smooth and sideloads at the boom point due to these acceleration and deceleration forces shall not exceed 2% of the derated load.
- (4) Loads must be restrained from swinging.
- (5) All other requirements in regard to levelness and firmness of grounds as shown in this book, must be met.

c) Crawlers may be retracted to 7'-0" from centerline of car body for travel purposes only. When crawlers are retracted, centerline of machine upper must be parallel with crawlers. For machines equipped with 172,900 lbs. counterweight, the fourth piece of counterweight must be removed before the crawlers can be retracted to 7'-0".

32 R 513

INFORMATIONAL DATA

Load Hoist Reeving

Main Hoist Drum Rated Loads for One and One-Quarter Inch Dia. P & H Type 25 Wire Rope						
Number of Parts of Main Hoist Reeving	1	2	3	4	5	6
Maximum Load -- Lbs.	41700	83400	125000	166700	208400	250000
Number of Parts of Main Hoist Reeving	7	8	9	10	11	12
Maximum Load -- Lbs.	291700	333400	375000	416700	458400	500000

Lifted loads in excess of 500,000 pounds requires 12 part reeving with special 1-1/4 dia. hoist rope with minimum breaking strength of 87.5 tons.

WIRE ROPES:

P & H type 25 wire rope: 6 x 25 I.W.R.C., preformed extra improved plow steel wire rope (filler wire).
 P & H type 11 wire rope: 18 x 7 non-rotating preformed plow steel wire rope (fiber core).
 When used for jib line on rear drum maximum lifted load including hook must not exceed 15,320 lbs. Do not use dead-end swivels with non-rotating wire rope.

4

INFORMATIONAL DATA

Boom Rigging:

BASE SECTION IS 40 FEET. INSERT LENGTHS AS SHOWN, TIP SECTION IS 30 FEET.

Boom Tip	30 Ft. Heavy Duty Tip		30 Ft. Light Duty Tip	
Boom Length	No. of Boom Rollers Required	Boom Make-Up	No. of Boom Rollers Required	Boom Make-Up
70'		Base-Tip		Base-Tip
80'	1	Base-10'-Tip	1	Base-10'-Tip
90'	2	Base-20'-Tip	2	Base-20'-Tip
100'	3	Base-10'-20'-Tip	3	Base-10'-20'-Tip
110'	3	Base-10'-30'-Tip	3	Base-10'-30'-Tip
120'	4	Base-20'-30'-Tip	4	Base-20'-30'-Tip
130'	4	Base-30'-30'-Tip	4	Base-30'-30'-Tip
140'	5	Base-20'-50'-Tip	5	Base-20'-50'-Tip
150'	5	Base-30'-50'-Tip	5	Base-30'-50'-Tip
160'	6	Base-10'-30'-50'-Tip	6	Base-10'-30'-50'-Tip
170'	6	Base-50'-50'-Tip	6	Base-50'-50'-Tip
180'	7	Base-30'-30'-50'-Tip	7	Base-30'-30'-50'-Tip
190'	8	Base-20'-50'-50'-Tip	8	Base-20'-50'-50'-Tip
200'	8	Base-30'-50'-50'-Tip	8	Base-30'-50'-50'-Tip
210'	9	Base-10'-30'-50'-50'-Tip	9	Base-10'-30'-50'-50'-Tip
220'	9	Base-50'-50'-50'-Tip	9	Base-50'-50'-50'-Tip
230'	10	Base-30'-30'-50'-50'-Tip	10	Base-30'-30'-50'-50'-Tip
240'	11	Base-20'-50'-50'-50'-Tip	11	Base-20'-50'-50'-50'-Tip
250'	BOOMS BELOW THIS LINE REQUIRE 172,900 LBS. OF COUNTERWEIGHT.		11	Base-30'-50'-50'-50'-Tip
260'			12	Base-10'-30'-50'-50'-50'-Tip
270'			12	Base-50'-50'-50'-50'-Tip
280'			13	Base-50'-50'-30'-30'-50'-Tip
290'			14	Base-50'-50'-20'-50'-50'-Tip
300'			15	Base-30'-30'-50'-20'-50'-50'-Tip
310'			15	Base-10'-50'-50'-30'-50'-50'-Tip
320'			16	Base-20'-50'-50'-30'-50'-50'-Tip
330'			16	Base-50'-50'-50'-10'-50'-50'-Tip
340'			17	Base-50'-50'-50'-20'-50'-50'-Tip
350'			17	Base-50'-50'-50'-30'-50'-50'-Tip
360'			18	Base-50'-50'-50'-10'-30'-50'-50'-Tip
370'	19	Base-20'-30'-50'-50'-50'-50'-50'-Tip		

Jib Rigging:

Jib Length	30'			40'			50'		
Insert Arrangement	Base-Tip			Base-A-Tip			Base-B-Tip		
Offset Angle*	10°	20°	30°	10°	20°	30°	10°	20°	30°
Guy Line Arrangement	D	D-A	D-A	D-B	D-B-A	D-B-A	D-C	D-C	D-C-A
Jib Length	60'			70'			80'		
Insert Arrangement	Base-C-Tip			Base-A-C-Tip			Base-B-C-Tip		
Offset Angle*	10°	20°	30°	10°	20°	30°	10°	20°	30°
Guy Line Arrangement	D-D	D-D	D-D-A	D-D-B	D-D-B	D-D-B-A	D-D-C	D-D-C	D-D-C-A

JIB BASE SECTION IS 15'
 JIB TIP SECTION IS 15'
 INSERT LENGTHS ARE:

- A = 10 Feet
- B = 20 Feet
- C = 30 Feet

GUY LINE LENGTHS ARE:

- A = 5'-0"
- B = 10'-0"
- C = 20'-0"
- D = 30'-0"

NOTE: GUY LINES ARE USED IN GROUPS OF TWO.
 BACKSTAY GUY LINE IS 34'-8" LONG.

* SOME OFFSET ANGLES ARE ATTAINED BY VARYING GUY LINE LENGTH CHANGES, ADJUSTING THE BACKSTAY CONNECTION OR BOTH.

PCSA CLASS 18-2056 equipped with heavy duty rated crane loads in pounds — main boom in 360° work areas

Boom Length (ft)	Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	Rated Load (lbs.)
70	18	79	79.7	600,000
	20	78	79.3	542,500
	25	73	78.0	440,800
	30	69	76.3	320,600
	35	65	74.2	251,000
	40	60	71.2	205,600
	45	55	68.0	173,600
	50	50	64.2	149,900
	60	38	53.7	117,100
	70	22	36.1	95,500
80	25	76	88.4	440,800
	30	72	87.0	320,500
	35	68	85.1	250,800
	40	64	82.6	205,400
	45	60	79.9	173,400
	50	56	76.7	149,700
	60	47	68.6	116,800
	70	36	57.0	95,200
	80	20	37.9	79,900
	90	25	77	98.7
30		74	97.4	320,300
35		71	95.8	250,600
40		67	93.5	205,200
45		64	91.2	173,100
50		60	88.6	149,400
60		52	81.8	116,500
70		44	72.7	94,800
80		34	60.1	79,500
90		19	39.6	68,100
100	25	78	108.9	400,000
	30	76	107.8	320,200
	35	73	106.4	250,400
	40	70	104.3	204,800
	45	66	102.3	172,700
	50	63	99.9	149,000
	60	57	94.1	116,000
	70	49	86.5	94,300
	80	41	76.6	79,000
	90	32	63.0	67,600
100	18	41.2	58,800	
110	30	77	118.1	319,500
	35	74	116.8	249,700
	40	71	114.9	203,900
	45	69	113.1	171,900
	50	66	111.0	148,100
	60	60	105.9	115,200
	70	54	99.3	93,500
	80	47	91.0	78,200
	90	39	80.3	66,700
	100	30	65.7	57,900
110	17	42.8	51,000	

Boom Length (ft)	Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	Rated Load (lbs.)
120	30	78	128.3	319,300
	35	76	127.1	249,500
	40	73	125.4	203,500
	45	71	123.8	171,400
	50	68	121.9	147,600
	60	63	117.3	114,700
	70	57	111.5	93,000
	80	51	104.2	77,600
	90	45	95.2	66,200
	100	38	83.7	57,400
	110	29	68.3	50,400
	120	17	44.2	44,800
130	30	79	138.5	300,000
	35	77	137.4	249,000
	40	74	135.8	203,000
	45	72	134.3	170,900
	50	70	132.6	147,100
	60	65	128.4	114,200
	70	60	123.2	92,400
	80	55	116.8	77,000
	90	49	108.9	65,600
	100	43	99.2	56,700
	110	36	87.0	49,700
	120	28	70.8	44,100
130	16	45.7	39,500	
140	35	78	147.7	248,900
	40	76	146.2	202,800
	45	73	144.8	170,800
	50	71	143.2	147,000
	60	67	139.4	114,000
	70	62	134.6	92,300
	80	58	128.8	76,900
	90	53	121.8	65,400
	100	47	113.4	56,600
	110	41	103.1	49,500
	120	35	90.2	43,800
	130	27	73.2	39,200
140	15	47.0	35,400	
150	35	78	157.9	248,700
	40	77	156.5	202,400
	45	75	155.2	170,300
	50	73	153.7	146,500
	60	68	150.2	113,500
	70	64	145.8	91,800
	80	60	140.5	76,400
	90	55	134.2	64,900
	100	51	126.6	56,000
	110	46	117.6	49,000
	120	40	106.7	43,300
	130	34	93.2	38,600
140	26	75.6	34,700	
150	15	48.3	31,500	

Boom Length (ft)	Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	Rated Load (lbs.)
160	35	79	167.7	249,600
	40	77	166.7	201,900
	45	76	165.5	169,800
	50	74	164.1	146,000
	60	70	160.9	113,000
	70	66	156.8	91,200
	80	62	152.0	75,800
	90	58	146.2	64,300
	100	54	139.3	55,500
	110	49	131.3	48,400
	120	44	121.7	42,700
	130	39	110.3	38,000
	140	32	96.2	34,000
	150	25	77.8	30,700
160	14	49.6	28,000	
WARNING: SHADED AREA DEPICTS RATINGS BASED ON FACTORS OTHER THAN STABILITY				
170	40	78	176.9	201,500
	45	76	175.8	169,300
	50	75	174.5	145,500
	60	71	171.5	112,500
	70	68	167.7	97,000
	80	64	163.2	75,300
	90	60	157.8	63,800
	100	56	151.6	54,900
	110	52	144.3	47,900
	120	47	135.7	42,100
	130	43	125.7	37,400
	140	37	113.7	33,400
	150	31	99.0	30,100
	160	24	80.0	27,200
170	14	50.8	24,900	
180	40	79	187.1	201,000
	45	77	186.1	168,800
	50	76	184.9	145,000
	60	72	182.0	111,900
	70	69	178.5	90,200
	80	65	174.3	74,800
	90	62	169.3	63,300
	100	58	163.5	54,400
	110	54	156.8	47,300
	120	50	149.0	41,600
	130	46	140.0	36,800
	140	41	129.5	32,800
	150	36	117.0	29,400
	160	31	101.8	26,600
170	24	82.1	24,100	
180	14	52.0	22,100	
WARNING: SHADED AREA DEPICTS RATINGS BASED ON FACTORS OTHER THAN STABILITY				

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tip section and 127,200 lbs. counterweight with crawlers fully extended and with mast

Boom Length (ft)	Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	Rated Load (lbs.)
190	40	79	197.3	200,500
	45	78	196.3	168,300
	50	76	195.2	144,500
	60	73	192.5	111,400
	70	70	189.5	89,600
	80	67	185.2	74,200
	90	63	180.6	62,700
	100	60	175.2	53,800
	110	56	169.0	46,700
	120	53	161.8	41,000
	130	49	153.6	36,200
	140	45	144.2	32,200
	150	40	133.2	28,800
	160	35	120.3	25,900
	170	30	104.5	23,500
	180	23	84.1	21,300
	190	13	53.2	19,600
	200	45	78	206.5
50		77	205.5	144,400
60		74	202.9	111,300
70		71	199.8	89,500
80		68	196.0	74,100
90		65	191.7	62,600
100		62	186.6	53,600
110		58	180.8	46,600
120		55	174.2	40,800
130		51	166.7	36,000
140		48	158.1	32,000
150		44	148.2	28,500
160	39	136.8	25,600	
170	34	123.4	23,100	
180	29	107.1	20,900	
190	22	86.1	19,000	
200	13	54.3	17,400	
210	45	79	216.7	167,700
	50	78	215.7	143,800
	60	75	213.3	110,700
	70	72	210.3	88,900
	80	69	206.8	73,400
	90	66	202.7	61,900
	100	63	197.9	53,000
	110	60	192.5	45,900
	120	57	186.3	40,100
	130	53	179.3	35,300
	140	50	171.4	31,300
	150	46	162.4	29,800
	160	42	152.2	24,900
	170	38	140.3	22,300
180	34	126.4	20,100	
190	28	109.6	18,200	
200	22	88.0	16,500	
210	13	55.4	15,200	

Boom Length (ft)	Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	Rated Load (lbs.)	
220	45	80	226.9	167,200	
	50	78	225.9	143,300	
	60	76	223.6	110,200	
	70	73	220.8	86,300	
	80	70	217.4	72,900	
	90	67	213.5	61,300	
	100	64	209.1	52,400	
	110	61	203.9	45,300	
		120	58	198.2	39,500
		130	55	191.6	34,700
		140	52	184.3	30,700
150		49	176.0	27,300	
160		45	166.6	24,300	
170		41	156.0	21,700	
180		37	143.7	19,500	
190		33	129.4	17,600	
200		28	112.1	15,900	
210		21	89.9	14,400	
220		12	56.5	13,200	
230	50	79	236.1	142,800	
	60	76	233.9	109,600	
	70	74	231.2	87,800	
	80	71	228.0	72,300	
	90	68	224.3	60,800	
	100	66	220.1	51,800	
	110	63	215.3	44,700	
	120	60	209.8	38,900	
	130	57	203.7	34,100	
	140	54	196.8	30,100	
	150	51	189.1	26,700	
	160	48	180.5	23,700	
	170	44	170.7	21,100	
180	40	159.7	18,900		
190	36	147.0	16,900		
200	32	132.3	15,200		
210	27	114.5	13,700		
220	21	91.8	12,400		
230	12	57.5	11,300		

Boom Length (ft)	Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	Rated Load (lbs.)
240	50	79	246.3	141,930
	60	77	244.2	109,100
	70	74	241.6	87,200
	80	72	238.6	71,800
	90	69	235.1	61,200
	100	67	231.0	51,300
	110	64	226.4	44,200
	120	61	221.3	38,400
	130	59	215.5	33,600
	140	56	209.0	29,500
	150	53	201.8	26,100
160	50	193.8	23,100	
170	47	184.8	20,500	
180	43	174.7	18,300	
190	40	163.3	16,300	
200	36	150.3	14,500	
210	31	135.1	13,000	
220	26	116.8	11,700	
230	20	93.8	10,500	
240	12	58.6	9,600	

WARNING: SHADED AREA DEPICTS RATINGS BASED ON FACTORS OTHER THAN STABILITY

32 R 513

WARNING
Deduct the weight of all suspended load handling devices (hooks, hookblocks, slings, buckets etc.) from rated loads.

WARNING:						
When boom is equipped with jib, main hook ratings must be reduced to compensate for jib attachment weight.						
Jib Length	30 Ft.	40 Ft.	50 Ft.	60 Ft.	70 Ft.	80 Ft.
Deduct — Lbs.	3500	4200	4600	5000	5700	6200

Using this equipment in excess of rated loads, in areas of chart not rated, or with disregard of instructions will result in unsafe operating conditions and is a violation of the U.S. Department of Labor Safety and Health Regulations for Construction.

PCSA CLASS 18-2076 equipped with light duty rated crane loads in pounds — main boom in 360° work areas

Boom Length (ft)	Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	Rated Load (lbs.)
70	18	79	79.7	250,000
	20	78	79.3	250,000
	25	73	78.0	250,000
	30	69	76.3	250,000
	35	65	74.2	250,000
	40	60	71.2	207,600
	45	55	68.0	175,600
	50	50	64.2	151,900
80	60	38	53.7	119,100
	70	22	36.1	97,500
	25	76	88.4	250,000
	30	72	87.0	250,000
	35	68	85.1	250,000
	40	64	82.6	207,400
	45	60	79.9	175,400
	50	56	76.7	151,700
90	60	47	68.6	118,800
	70	36	57.0	97,200
	80	20	37.9	81,900
	25	77	98.7	250,000
	30	74	97.4	250,000
	35	71	95.8	250,000
	40	67	93.5	207,200
	45	64	91.2	175,100
100	50	60	88.6	151,400
	60	52	81.8	118,500
	70	44	72.7	96,800
	80	34	60.1	81,500
	90	19	39.6	70,100
	25	78	108.9	250,000
	30	76	107.8	250,000
	35	73	106.4	250,000
110	40	70	104.3	206,800
	45	66	102.3	174,700
	50	63	99.9	151,000
	60	57	94.1	118,000
	70	49	86.5	96,300
	80	41	76.6	81,000
	90	32	63.0	69,600
	100	18	41.2	60,800
120	30	77	118.1	250,000
	35	74	116.8	249,700
	40	71	114.9	205,900
	45	69	113.1	173,900
	50	66	111.0	150,100
	60	60	105.9	117,200
	70	54	99.3	95,500
	80	47	91	80,200
	90	39	80.3	68,700
	100	30	65.7	59,900
	110	17	42.8	53,000

Boom Length (ft)	Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	Rated Load (lbs.)
120	30	78	128.3	250,000
	35	76	127.1	249,500
	40	73	125.4	205,500
	45	71	123.8	173,400
	50	68	121.9	149,600
	60	63	117.3	116,700
	70	57	111.5	95,000
	80	51	104.2	79,600
	90	45	95.2	68,200
	100	38	83.7	59,400
	110	29	68.3	52,400
	120	17	44.2	46,800
130	30	79	138.5	250,000
	35	77	137.4	249,000
	40	74	135.8	205,000
	45	72	134.3	172,900
	50	70	132.6	149,100
	60	65	128.4	116,200
	70	60	123.2	94,400
	80	55	116.8	79,000
	90	49	108.9	67,600
	100	43	99.2	58,700
	110	36	87.0	51,700
	120	28	70.8	46,100
140	130	16	45.7	41,500
	35	78	147.7	248,900
	40	76	146.2	204,800
	45	73	144.8	172,800
	50	71	143.2	149,000
	60	67	139.4	116,000
	70	62	134.6	94,300
	80	58	128.8	78,900
	90	53	121.8	67,400
	100	47	113.4	58,600
	110	41	103.1	51,500
	120	35	90.2	45,800
150	130	27	73.2	41,200
	140	15	7.0	37,400
	35	78	157.9	248,700
	40	77	156.5	204,400
	45	75	155.2	172,300
	50	73	153.7	148,500
	60	68	150.2	115,500
	70	64	145.8	93,800
	80	60	140.5	78,400
	90	55	134.2	66,900
	100	51	126.6	58,000
	110	46	117.6	51,000
160	120	40	106.7	45,300
	130	34	93.2	40,600
	140	26	75.6	36,700
	150	15	48.3	33,500

Boom Length (ft)	Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	Rated Load (lbs.)
160	35	79	167.7	249,600
	40	77	166.7	203,900
	45	76	165.5	171,800
	50	74	164.1	148,000
	60	70	160.9	115,000
	70	66	156.8	93,200
	80	62	152.0	77,800
	90	58	146.2	66,300
	100	54	139.3	57,500
	110	49	131.3	50,400
	120	44	121.7	44,700
	130	39	110.3	40,000
	140	32	96.2	36,000
	150	25	77.8	32,700
	160	14	49.6	30,000
	170	40	78	176.9
45		76	175.8	171,300
50		75	174.5	147,500
60		71	171.5	114,500
70		68	167.7	92,700
80		64	163.2	77,300
90		60	157.8	65,800
100		56	151.6	56,900
110		52	144.3	49,900
120		47	135.7	44,100
130		43	125.7	39,400
140		37	113.7	35,400
150		31	99.0	32,100
160		24	80.0	29,200
180	170	14	50.8	26,900
	40	79	187.1	203,000
	45	77	186.1	170,800
	50	76	184.9	147,000
	60	72	182.0	113,900
	70	69	178.5	92,200
	80	65	174.3	76,800
	90	62	169.3	65,300
	100	58	163.5	56,400
	110	54	156.8	49,300
	120	50	149.0	43,600
	130	46	140.0	38,800
	140	41	129.5	34,800
	150	36	117.0	31,400
160	31	101.8	28,600	
170	24	82.1	26,100	
180	14	52.0	24,100	

WARNING: SHADED AREA DEPICTS RATINGS BASED ON FACTORS OTHER THAN STABILITY

8

tip section and 127,200 lbs. counterweight with crawlers fully extended and with mast

Boom Length (ft)	Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	Rated Load (lbs.)
190	40	79	197.3	202,500
	45	78	196.3	170,300
	50	76	195.2	146,500
	60	73	192.5	113,400
	70	70	189.5	91,600
	80	67	185.2	76,200
	90	63	180.6	64,700
	100	60	175.2	55,800
	110	56	169.0	48,700
	120	53	161.8	43,000
	130	49	153.6	38,200
	140	45	144.2	34,200
	150	40	133.2	30,800
	160	35	120.3	27,900
	170	30	104.5	25,500
	180	23	84.1	23,300
	190	13	53.2	21,600
200	45	78	206.5	170,200
	50	77	205.5	146,400
	60	74	202.9	113,300
	70	71	199.8	91,500
	80	68	196.0	76,100
	90	65	191.7	64,600
	100	62	186.6	55,600
	110	58	180.8	48,600
	120	55	174.2	42,800
	130	51	166.7	38,000
	140	48	158.1	34,000
	150	44	148.2	30,500
	160	39	136.8	27,600
	170	34	123.4	25,100
	180	29	107.1	22,900
	190	22	86.1	21,000
	200	13	54.3	19,400

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Boom Length (ft)	Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	Rated Load (lbs.)
210	45	79	216.7	169,700
	50	78	215.7	145,800
	60	75	213.3	112,700
	70	72	210.3	90,900
	80	69	206.8	75,400
	90	66	202.7	63,900
	100	63	197.9	55,000
	110	60	192.5	47,900
	120	57	186.3	42,100
	130	53	179.3	37,300
	140	50	171.4	33,300
	150	46	162.4	29,800
	160	42	152.2	26,900
	170	38	140.3	24,300
	180	34	126.4	22,100
	190	28	109.6	20,200
	200	22	88.0	18,500
	210	13	55.4	17,200
220	45	80	226.9	169,200
	50	78	225.9	145,300
	60	76	223.6	112,200
	70	73	220.8	90,300
	80	70	217.4	74,900
	90	67	213.5	63,300
	100	64	209.1	54,400
	110	61	203.9	47,300
	120	58	198.2	41,500
	130	55	191.6	36,700
	140	52	184.3	32,700
	150	49	176.0	29,300
	160	45	166.6	26,300
	170	41	156.0	23,700
	180	37	143.7	21,500
	190	33	129.4	19,600
	200	28	112.1	17,900
	210	21	89.9	16,400
	220	12	56.5	15,200

WARNING: SHADED AREA DEPICTS RATINGS BASED ON FACTORS OTHER THAN STABILITY

Boom Length (ft)	Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	Rated Load (lbs.)
230	50	79	236.1	144,800
	60	76	233.9	111,600
	70	74	231.2	89,800
	80	71	228.0	74,300
	90	68	224.3	62,800
	100	66	220.1	53,800
	110	63	215.3	46,700
	120	60	209.8	40,900
	130	57	203.7	36,100
	140	54	196.8	32,100
	150	51	189.1	28,700
	160	48	180.5	25,700
	170	44	170.7	23,100
	180	40	159.7	20,900
	190	36	147.0	18,900
	200	32	132.3	17,200
	210	27	114.5	15,700
	220	21	91.8	14,400
	230	12	57.5	13,300
240	50	79	246.3	143,930
	60	77	244.2	111,100
	70	74	241.6	89,200
	80	72	238.6	73,800
	90	69	235.1	62,200
	100	67	231.0	53,300
	110	64	226.4	46,200
	120	61	221.3	40,400
	130	59	215.5	35,600
	140	56	209.0	31,500
	150	53	201.8	28,100
	160	50	193.8	25,100
	170	47	184.8	22,500
	180	43	174.7	20,300
	190	40	163.3	18,300
	200	36	150.3	16,500
	210	31	135.1	15,000
	220	26	116.8	13,700
	230	20	93.8	12,500
	240	12	58.6	11,600

continued

WARNING

Deduct the weight of all suspended load handling devices (hooks, hookblocks, slings, buckets etc.) from rated loads.

WARNING:

When boom is equipped with jib, main hook ratings must be reduced to compensate for jib attachment weight.

Jib Length	30 Ft.	40 Ft.	50 Ft.	60 Ft.	70 Ft.	80 Ft.
Deduct — Lbs.	3500	4200	4600	5000	5700	6200

Using this equipment in excess of rated loads, in areas of chart not rated, or with disregard of instructions will result in unsafe operating conditions and is a violation of the U.S. Department of Labor Safety and Health Regulations for Construction.

PCSA CLASS 18-2076 equipped with light duty

rated crane loads in pounds — main boom in 360° work areas

Boom Length (ft)	Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	Rated Load (lbs.)	Boom Length (ft)	Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	Rated Load (lbs.)	Boom Length (ft)	Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	Rated Load (lbs.)
250	50	80	256.6	155,600	270	60	78	275.1	128,500	290	60	79	295.5	108,200
	60	77	254.6	137,700		70	76	272.9	110,000		70	77	293.4	104,200
	70	75	252.2	110,900		80	74	270.2	91,800		80	75	290.9	90,800
	80	73	249.3	92,700		90	72	267.1	77,600		90	73	288.1	76,700
	90	70	246.0	78,600		100	69	263.6	66,700		100	71	284.9	65,700
	100	68	242.2	67,700		110	67	259.7	58,000		110	69	281.2	57,000
	110	65	237.8	58,900		120	65	255.2	50,900		120	67	277.7	48,900
	120	63	233.0	51,800		130	63	251.0	46,400		130	65	273.2	45,400
	130	60	228.2	47,300		140	60	245.5	41,300		140	63	268.3	40,300
	140	58	222.2	42,200		150	58	239.6	36,900		150	60	262.9	35,900
	150	55	215.6	37,900		160	55	233.0	33,200		160	58	256.9	32,200
	160	52	208.2	34,100		170	53	225.7	29,900		170	56	250.4	28,900
	170	49	199.9	30,800		180	50	217.7	27,000		180	53	243.2	26,000
	180	46	190.8	27,900		190	47	208.9	24,400		190	51	235.4	23,400
	190	43	180.5	25,400		200	44	199.1	22,200		200	48	226.8	21,100
	200	39	169.0	23,100		210	41	188.2	20,100		210	45	217.4	19,100
	210	35	155.8	21,000		220	38	175.9	18,300		220	43	207.0	17,200
	220	31	140.6	19,200		230	34	162.1	16,600		230	40	195.5	15,500
	230	27	122.4	17,500		240	30	146.0	15,100		240	36	182.6	14,000
	240	21	99.4	16,000		250	26	127.0	13,700		250	33	168.1	12,600
	250	13	66.1	14,600		260	20	103.0	12,400		260	29	151.3	11,300
						270	12	68.3	11,200		270	25	131.4	10,100
											280	19	106.4	9,000
											290	12	70.4	8,000
WARNING: SHADED AREA DEPICTS RATINGS BASED ON FACTORS OTHER THAN STABILITY					280	60	79	285.3	117,300					
260	50	80	266.8	143,500		70	77	283.1	109,500	300	60	79	305.6	94,900
	60	78	264.9	135,200		80	75	280.6	91,300		70	78	303.6	91,500
	70	76	262.6	110,500		90	72	277.6	77,200		80	76	301.3	88,500
	80	73	259.8	92,200		100	70	274.3	66,200		90	74	298.5	76,200
	90	71	256.6	78,100		110	68	270.5	57,500		100	72	295.4	65,200
	100	69	252.9	67,100		120	66	266.2	50,400		110	70	291.9	56,500
	110	66	248.8	58,400		130	64	262.1	45,900		120	68	288.5	48,900
	120	64	244.2	51,300		140	62	257.0	40,800		130	66	284.2	45,000
	130	62	239.7	46,800		150	59	251.3	36,400		140	64	279.5	39,900
	140	59	234.0	41,700		160	57	245.0	32,700		150	61	274.3	35,500
	150	56	227.7	37,300		170	54	238.2	29,400		160	59	268.6	31,700
	160	54	220.7	33,600		180	52	230.6	26,500		170	57	262.4	28,400
	170	51	213.0	30,300		190	49	222.3	23,900		180	55	255.6	25,500
	180	48	204.5	27,400		200	46	213.2	21,600		190	52	248.2	23,000
	190	45	195.0	24,800		210	43	203.1	19,600		200	50	240.1	20,700
	200	42	184.4	22,500		210	43	203.1	19,600		210	47	231.2	18,600
	210	38	172.5	20,500		220	40	191.9	17,700		220	45	221.5	16,800
	220	35	159.0	18,600		230	37	179.3	16,000		230	42	210.9	15,100
	230	31	143.3	17,000		240	33	165.1	14,500		240	39	199.0	13,500
	240	26	124.7	15,400		250	30	148.7	13,100		250	36	185.9	12,100
	250	20	101.2	14,000		260	25	129.2	11,800		260	32	171.0	10,900
	260	13	67.2	12,800		270	20	104.7	10,700		270	29	153.8	9,700
						280	12	69.4	9,600		280	24	133.5	8,600
											290	19	108.1	7,600
											300	12	71.5	6,700

Using this equipment in excess of rated loads, in areas of chart not rated, or with disregard of instructions will result in unsafe operating conditions and is a violation of the U.S. Department of Labor Safety and Health Regulations for Construction.

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10.

tip section and 172,900 lbs. counterweight with crawlers fully extended and with mast

Boom Length (ft)	Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	Rated Load (lbs.)
310	60	80	315.8	84,200
	70	78	313.9	81,200
	80	76	311.6	79,000
	90	74	309.0	75,700
	100	72	305.9	64,700
	110	70	302.6	56,000
	120	69	299.3	48,800
	130	67	295.2	44,500
	140	64	290.6	39,300
	150	62	285.6	35,000
	160	60	280.2	31,200
	170	58	274.2	27,900
	180	56	267.8	25,000
	190	54	260.7	22,400
	200	51	253.0	20,100
	210	49	244.7	18,100
	220	46	235.6	16,200
	230	44	225.6	14,500
	240	41	214.6	13,000
	250	38	202.5	11,600
	260	35	189.0	10,300
	270	32	173.8	9,100
	280	28	156.3	8,000
	290	24	135.7	7,000
	300	19	109.8	6,100
	310	12	72.5	5,200

WARNING: SHADED AREA DEPICTS RATINGS BASED ON FACTORS OTHER THAN STABILITY

320	70	78	324.1	76,700
①	80	76	321.9	73,700
	90	75	319.3	71,000
	100	73	316.4	64,300
	110	71	313.2	55,500
	120	69	310.0	48,800
	130	67	306.0	44,000
	140	65	301.7	38,900
	150	63	296.9	34,500
	160	61	291.6	30,800
	170	59	285.9	27,500
	180	57	279.7	24,600
	190	55	273.0	22,000
	200	53	265.7	19,700
	210	51	257.8	17,600
	220	48	249.2	15,800
	230	46	239.8	14,100
	240	43	229.6	12,600
	250	40	218.3	11,200
	260	38	206.0	9,900
	270	35	192.2	8,700
	280	31	176.6	7,600
	290	28	158.8	6,600
	300	23	137.7	5,700

Boom Length (ft)	Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	Rated Load (lbs.)
330	70	79	334.3	68,700
①	80	77	332.1	65,200
	90	75	329.7	61,900
	100	73	326.9	58,400
②	110	71	323.7	54,700
	120	70	320.7	48,800
	130	68	316.8	43,200
	140	66	312.6	38,100
	150	64	308.0	33,700
	160	62	303.0	30,000
	170	60	297.5	26,700
	180	58	291.6	23,800
	190	56	285.1	21,200
	200	54	278.2	18,900
	210	52	270.6	16,800
	220	50	262.5	15,000
	230	47	253.6	13,300
	240	45	244.0	11,700
	250	42	233.5	10,300
	260	40	222.0	9,000
	270	37	209.3	7,800
	280	34	195.2	6,800
	290	31	179.4	5,700

340	70	79	344.5	62,500
①	80	77	342.4	59,000
	90	76	340.0	55,700
②	100	74	337.3	52,500
	110	72	334.6	45,900
	120	71	331.3	43,900
	130	69	327.6	41,900
	140	67	323.5	37,600
	150	65	319.1	33,200
	160	63	314.2	29,500
	170	61	309.0	26,200
	180	59	303.3	23,300
	190	57	297.1	20,700
	200	55	290.4	18,400
	210	53	283.2	16,300
	220	51	275.4	14,500
	230	49	267.0	12,800
	240	47	257.9	11,200
	250	44	248.1	9,800
	260	42	237.3	8,500
	270	39	225.6	7,300
	280	36	212.6	6,200

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① Center hitch is required for 320 to 370 ft. boom lengths, connected 160 ft. from boom foot pin. ② Jibs cannot be used on 330-370 ft. boom lengths.

Boom Length (ft)	Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	Rated Load (lbs.)
350	70	79	354.6	56,900
①	80	78	352.6	53,600
	90	76	350.3	50,300
	100	75	348.0	43,700
②	110	73	345.1	41,900
	120	71	341.9	40,000
	130	69	338.3	38,200
	140	68	334.4	36,700
	150	66	330.1	33,000
	160	64	325.4	29,200
	170	62	320.3	25,900
	180	60	314.8	23,000
	190	58	308.9	20,400
	200	56	302.5	18,100
	210	54	295.6	16,000
	220	52	288.2	14,200
	230	50	280.2	12,500
	240	48	271.5	10,900
	250	46	262.2	9,500
	260	44	252.1	8,200
	270	41	241.1	7,000
	280	39	229.1	5,900

360	70	80	364.8	50,800
①	80	78	363.1	44,200
	90	77	360.9	41,500
②	100	75	358.4	39,200
	110	73	355.6	37,100
	120	72	352.4	35,200
	130	70	349.0	33,800
	140	68	345.2	32,900
	150	67	341.0	31,400
	160	65	336.5	28,400
	170	63	331.6	25,100
	180	61	326.3	22,200
	190	59	320.6	19,600
	200	57	314.4	17,300
	210	56	307.8	15,200
	220	54	300.7	13,400
	230	52	293.1	11,700
	240	50	284.8	10,100
	250	47	276.0	8,700
	260	45	266.4	7,400
	270	43	256.0	6,200

continued

WARNING:						
When boom is equipped with jib, main hook ratings must be reduced to compensate for jib attachment weight.						
Jib Length	30 Ft.	40 Ft.	50 Ft.	60 Ft.	70 Ft.	80 Ft.
Deduct — Lbs.	3500	4200	4600	5000	5700	6200

light duty tip section and 172,900 lbs. counterweight rated crane loads in pounds — main boom

Boom Length (ft)	Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	Rated Load (lbs.)
370	70	80	375.2	42,900
①	80	79	373.3	40,500
②	90	77	371.2	37,900
	100	75	368.7	35,700
	110	74	366.0	33,700
	120	72	362.9	32,200
	130	71	359.6	31,100
	140	69	355.9	29,700
	150	67	351.9	29,000
	160	65	347.5	28,300
	170	64	342.8	25,000
	180	62	337.7	22,100
	190	60	332.1	19,500
	200	58	326.2	17,200
	210	57	319.9	15,100
	220	55	313.0	13,300
	230	53	305.7	11,600
	240	51	297.9	10,000
	250	49	289.4	8,600
	260	47	280.3	7,300
	270	45	270.5	6,100

WARNING: SHADED AREA DEPICTS RATINGS BASED ON FACTORS OTHER THAN STABILITY

Using this equipment in excess of rated loads, in areas of chart not rated, or with disregard of instructions will result in unsafe operating conditions and is a violation of the U.S. Department of Labor Safety and Health Regulations for Construction.

Maximum Jib (42" D x 42" W) Ratings for Lifting Crane Service — Lbs.						
One Inch Diameter P & H Type 25 Wire Rope						
*Use Two Parts of Line for Loads Above 25,000 Lbs.						
Offset Angle Jib to Boom Under Full Load	30 Ft. Jib	40 Ft. Jib	50 Ft. Jib	60 Ft. Jib	70 Ft. Jib	80 Ft. Jib
10°	50000*	37000*	29000*	22800	18400	15000
20°	41700*	31750*	25250*	19800	15650	12600
30° Max.	37500*	28800*	23200	18500	14600	11750

Jib crane ratings are based on strength of materials. When main boom load rating at operating radius is less than maximum, jib ratings stability governs and the lower value of main boom load rating must be used. Jibs are intended to increase lifting height — not operating radius — therefore maximum jib operating radius is limited to maximum rated radius of boom length on which jib is mounted.



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.



Address inquiries to: