



# **P&H<sup>®</sup> Century 150**

## ***Rough Terrain Crane***

## ***50 Ton (45.3 tonnes) Capacity***

## ***170 Feet (51.8 m) Max. Boom and Extension***

- ☆ **Transportable** in one piece on a trailer.
- ☆ **110 foot hydraulic telescopic boom**, 4-plate type, welded inside and out.
- ☆ **Lattice extensions** - 35 foot and 35-60 foot telescopic. Swingaround type - mounts on side of main boom for travel. Extensions can be offset 17° or 30° from main boom for up-and-over reaches.
- ☆ **Duty cycle** - no deration of capacities for bucket work on main boom or 35 foot extension.
- ☆ **Operators' cab** - cushion mounted, environmentally designed. Joy stick controls for crane functions with telescoping and tilt steering wheel.
- ☆ **4 steering modes** - front wheel, rear wheel, crab or 4-wheel - all selected by electric switches - controlled by the steering wheel.
- ☆ **Fully sequential power shift** transmission with torque converter. Gear selection electrically controlled and operated. . . located on the steering column.
- ☆ **P&H model 1580 winches** - planetary gearing, two equal speeds, power raising and lowering. Infinitely variable speed control. High line speeds and line pull.
- ☆ **Extra rugged** hydraulic, electrical and mechanical systems for long, hard duty.
- ☆ **"Easy Ride" Stabilizer** takes the bounce out of travelling for safer and easier movement around the jobsite.



## **Specifications**



## Specifications

ITEM NO. This P&H crane meets the requirements of ANSI B30.5 (1987). Boom structure (boom, lattice extension and jib) has been tested per SAE J1063, machine stability tested per SAE J765. LOAD RATINGS shown apply only to machine as manufactured and marketed by P&H.

### 1 BASIC MACHINE

#### Attachment



Boom: 34 ft. (10.4 m) retracted to 110 ft. (33.5 m) extended length, four section boom consisting of a boom base, two hydraulically extended and retracted sections and a fourth pinned section which can be hydraulically extended and retracted. Boom point has five 17.362" (441mm) dia. main metallic sheaves with roller bearings and two idler sheaves with bronze bearings. Boom elevation from -2° to 78°.

Each section of this rectangular boom consists of four plates welded both inside and out for superior strength. Large, non-metallic slider pads are adjustable.

For performance characteristics, see Chart no. 1, Crane Range Diagram, and Charts nos. 2 & 3, Lifting Capacities on Main Boom.

See Optional Equipment for lattice extensions, auxiliary sheave, and hook blocks.

**Counterweight:** 9,000 lbs (4,080 kg) standard, non-removable type. 1080 lbs. (490 kg) auxiliary counterweight to be used on units without an auxiliary winch.

#### Upperstructure



**Operator's Cab:** Fully enclosed, all-weather steel cab with full vision safety glass and hinged top window with tinted glass. Cab is cushion-mounted for vibration isolation.

**Operator's Cab Standard Equipment:** Contains all loading and crane function controls. Front control console includes: engine water temperature gauge, engine oil pressure gauge, hydraulic oil temperature gauge, air pressure gauges, fuel gauge, volt meter, transmission temperature gauge, speedometer, hour meter, winch high speed indicators; main winch drum turn indicator, dash light, electrical horn, windshield wiper and washer, tachometer, machine level, brake warning indicator, check gauges indicator, rear steer centering light and built in operational aids. Deluxe operator's seat with torsion suspension and fabric covering, and seat belt. Also, a fire extinguisher and defroster fan.



**Controls:** Joy-stick controls are an integral part of the seat arm rests. Left hand side operates swing and auxiliary winch. Right hand side operates main winch and boom hoist. Front floor mounted foot pedals for propel brake, swing brake, boom telescope and engine throttle. Front console instrument panel contains ignition switch, hand throttle control, swing lock control, and electrical outrigger control panel.

**Electrical system:** 24 volt negative ground. Wiring harnesses have protective covering and are independently clamped to the framework, and have environmentally sealed Deutsch connectors. Rocker switches in operator's cab are environmentally sealed.

**Throttle Control:** Variable air control for foot operation, and positive position cable control for hand use.

**Operational Aids:** Mechanical boom angle indicator.

Krueger (ATB) anti-two block warning device with audio-visual warning. For main boom only.

Krueger load moment system (Mark 3e/2). Includes load moment device w/audio-visual warning, radius, angle, length w/angle preset. Includes Control Lever Lockouts (Solenoid valve shut-off devices).

#### Winches



**Main Winch:** P&H model 1580 with two speed, bent axial piston motor, mounted to rear of revolving frame. Planetary gearing and equal speed, power raising and lowering. Infinitely variable speed control. Spring applied, hydraulically released load holding multi-disc brake is automatic. Complete with 550' (167m) of .75" (19mm) wire rope, and mechanical drum turn indicator.

Drum: 15" (381mm) pitch diameter  
18.5" (479mm) wide  
23.5" (597mm) flange diameter

Wire Rope: .75" (19mm) dia. 6 x 37 extra improved plow steel with 7x7 IWRC. Strength limit: 16,800 lbs. (7,619 kg). (3.5 safety factor.)

Drum Capacity: 554 ft. (168m) x .75" (19mm) dia., 5 layers.

Line Pull (max.): 18,282 lbs. (8,291 kg) 1st layer, low speed.  
13,223 lbs. (5,997 kg) 5th layer.

Available Line Pull (for starting loads in mid-air) (max.): 11,000 lbs. (4991 kg) 5th layer

Line Speed (max.): (At 2750 engine rpm and with .75" wire rope) 642 ft./min. (196 m/min.) 5th layer, high speed.

See Chart No. 11, Hoist Reeving, for rope capacities and parts of line required.

**Auxiliary Winch:** See Optional Equipment. Plumbing and controls for future installation of aux. winch is standard.

#### SHEAVE AND DRUM TO WIRE ROPE RATIOS

(Pitch Diameters)	Sheave to Wire Rope	Drum to Wire Rope
Main Boom Sheaves		
.75" Wire Rope	24.15:1	-
.625" Wire Rope	28.78:1	-
Main Winch		
.75" Wire Rope	-	20.0:1
.625" Wire Rope	-	23.8:1



**Boom Hoist:** Two 8.00" (203mm) I.D. cylinders, double-acting. Hydraulically powered raising and lowering with holding valve. Elevation -2° to 78°.

**Boom Telescope:** Two 6.3" (160mm) I.D. cylinders, double-acting. Hydraulically powered raising and lowering with holding valve. Supplied by a single hose loop.

#### Hydraulic System

**Filters:** Two 10-micron nominal return line filters mounted externally at the hydraulic reservoir. All return oil is filtered. Indicators external.





**Pump Drive:** Gear driven integral with transmission off rear of torque converter housing, with manual pump disconnect for highway travel. O.948 pump speed to 1.0 engine speed drive ratio.

**Pumps:** One tandem gear pump operating at full load rpm, with the first section providing 48.9 gpm (185 l/m) to the boom hoist and telescope circuits, and the second section providing 40.2 gpm (152 l/m) to the main and auxiliary winch circuit.

One tandem gear pump operating at full load rpm, with the first section providing 21.5 gpm (81.4 l/m) to the outrigger, steer and winch boost circuits, and the second section providing 28.8 gpm (109 l/m) to the swing circuit.

**Oil Reservoir:** 162 gallons (615 liters) mounted at front, right side of engine frame.

**Oil Cooler:** Oil to air, tube and fin type with internal turbulator.

**Control Valves:** One single-spool valve for swing circuit.

One two spool valve with one spool for boom hoist and one spool for telescope circuits.

One two-spool valve with one spool for main winch and one spool for optional auxiliary winch.

### Swing System



**Swing Unit:** Hydraulic motor driving through gear reducer to pinion gear. 360° continuous rotation to 2.0 rpm full load.

**Swing Gear:** Single shear ball swing bearing with integral spur gear.

**Swing Brake:** Spring applied, hydraulically released, internal disc brake, integral with swing reducer. Hand brake control switch mounted on front console in cab. A manual foot pedal applies brake for static holding.

**House Lock:** 360° gear segment type manually engaged with lever in cab.

### Carrier



**Type:** P&H 4 x 4 x 4, 10' 9-1/2" (3.29 m) wide.

**Weight:** Including ball bearing swing circle, hydraulic outriggers, and standard tires: 41,000 lbs. (18,600 kg).

**Frame:** Rectangular frame members of 100,000 psi (7000 kg/cm<sup>2</sup>) and 80,000 psi (5600 kg/cm<sup>2</sup>) yield strength alloy steel, reinforced with box constructed cross members of 80,000 psi (5600 kg/cm<sup>2</sup>) yield strength alloy steel.



**Outriggers:** Hydraulic out and down type. Eight double-acting hydraulic cylinders for independent horizontal and vertical motion of each beam operated from the operator's cab. Each vertical cylinder is equipped with a holding valve.

**Outrigger beams:** 100,000 psi yield strength alloy steel box extending to a maximum spread of 23' 7" (7.2 m) from centerline of float to centerline of float with the machine fully raised on the outriggers. Retracted width of the outriggers without floats is 10' 6" (3.2 m).

**Outrigger Floats:** Individually removable floats with storage on carrier. Float size 24" (610mm) dia. with effective nominal surface area of 452 sq. in. (2920 cm<sup>2</sup>) per float.

**Lower Standard Equipment:** Fenders with side storage compartments, sliding engine hood, tool box, tow lugs front and rear, hydraulic pump disconnect, automatic moisture ejector for air system, rear axle disconnect, oil to water transmission cooler and oil to air hydraulic oil cooler, audio back-up warning device, highway lights, rear view

mirrors, air drier, oscillating axle lockout override and fire extinguisher.

**Axes:** Planetary drive and steer, both axles. 22.38:1 total reduction.

**Brakes, Service:** Air over hydraulic brakes on all four wheels. Caliper disc type: one caliper for each front wheel; one caliper for each rear wheel. Front and rear on separate circuits.

**Brakes, Parking:** Spring-loaded air chamber on 14" dia. caliper disc brake on output yoke of transmission. Spring applied, air released.

**Suspension:** Rigid mounted front axle. Rear axle is pivot mounted with automatic hydraulic lockout cylinders. Maximum oscillation: 10.4" (265 mm).

**Steering:** Hydrostatic type pressure compensated system fully controlled by a steering wheel with two hydraulic power assist cylinders on each axle.

**Steering Modes:** Operator's choice of front steer only, independent rear steer only, crab steer and four wheel steer. Activation of different steering modes is by electrical switch on the console. All steering modes controlled by steering wheel only.

**Tires:** 26.5 x 25 - 26 PR tubeless rock tread (E-3)

For crane ratings on tires see chart no. 6.



### Power Plant:

Make:	Cummins 6CT 8.3
Max. HP:	215 HP (160 kw) @ 2500 rpm
Max Torque:	558 ft. lb. (77 kg - m) @ 1500 rpm
Cylinders:	Six: 4.49" (114 mm) bore x 5.31" (135mm) stroke.
Displacement:	505 cu. in. ((8.27 liter)
Cycle:	Four
Alternator:	Delco 24 volt, 65 amp.
Electrical:	24 volt system with negative ground
Aspiration:	Turbocharged
Air compressor:	Bendix TU-FLO501 12 CFM @ 1250 rpm (340 liters per min.)

**Radiator:** Water to air, tube and fin type core with bottom tank transmission oil cooler. Thermostatically temperature controlled.

**Air Cleaner:** Donaldson PHG two stage primary dry air cleaner with restriction indicator.

**Fuel Tank:** One steel tank, 80 gallons (300 liters) mounted on right side of carrier between the tires.

**Transmission:** Fully sequential power shift transmission with torque convertor, 6 speeds forward, 3 reverse. Gear selection electrically controlled and operated. Front axle disconnect: 2 wheel drive, 4 wheel drive, electrically controlled and operated.



**Performance:** Theoretical, based on 79,800 lbs. (36,200 kg) GVW; 26.5x25 E3 tires; 9000 lbs. (4080 kg) counterweight; 34' to 110' telescoping boom. Speed and gradeability will vary due to engine performance, vehicle weight and optional tires. Gradeability based on SAE J688.

Max. Speed: 24.7 mph (39.8 km/h)  
Max. Grade @ 1 mph: 54% (90% at stall).

**END BASIC MACHINE**



ITEM  
NO.      **Options and Accessories**

ITEM  
NO.

125 **Lattice Extension:** 35 ft. (10.7 m). Swingaway lattice structure with a detachable point section for easy conversion to telescopic type extension with a single metallic sheave. It can be put into operating condition by pivoting from its stored position on right side of boom base section. Self storing pins connect extension to boom head. In the operating position the extension is offset 2° from the main boom. Includes anti-two block material.

135 **Telescopic Lattice Extension:** 35 ft. to 60 ft. (10.7m to 18.3m) Swingaway lattice structure boom extension with a welded four plate telescope section with a single metallic sheave. It can be put into operating condition by pivoting from its stored position on the right side of the boom base section and pinned to the boom head. Telescopic section is then extended on rollers and pinned. The telescopic section can be replaced with a stub head section when extra length is not required. In the operating position the extension is offset 2° from the main boom. Includes anti-two-block material.

*For performance characteristics see Chart no 1: Crane Range Diagram, and Chart nos. 3,4 and 5: Load Ratings for Lattice Extension.*

140 **Offset Mechanism:** Pivoting links which allow items 125 and 135 to offset 17° or 30° from the main boom.

160 **Auxiliary Boom Point Sheave:** Boom point mounted with single metallic sheave, includes anti-two block material.

205 **Auxiliary Winch:** P&H model 1580, same as main winch, mounted to rear of revolving frame on the counterweight. Includes mechanical drum turn indicator.

220 **Wire Rope for auxiliary winch:** .75 x 460', 6 x 36.

225 **Wire Rope for Auxiliary Winch:** .75" x 460', 8 x 19 spin resistant

235 **Hook Block:** 50 ton, 5 sheaves

240 **Hook Block:** 45 ton, 4 sheaves

245 **Hook Block:** 20 ton, 1 sheave

255 **Weighted Jib Hook:** 8.5 ton, with swivel

260 **Cable Spooling Device:** Main or auxiliary winch drum

270 **Four(4) Pilot operated lever controls** (In lieu of joystick controls).

410 **Window Wiper:** Roof

415 **Heater:** Diesel

420 **Heater:** Propane w/out tank.

435 **Vandalism Kit:** Lexan Glass

440 **Tinted Glass**

455 **Rotating Beacon:** Amber, on roof of cab

460 **Floodlights:** three (3)

510 **Tires:** 29.5 x 29 - 28 ply rating tires.

*For crane load ratings on these tires see chart no. 7.*

550 **Spare Wheel & Tire:** 26.5 x 25-26 ply tire

560 **Spare Wheel & Tire:** 21:00 x 25-24 ply tire

570 **Spare Wheel & Tire:** 29.5 x 29 - 28 ply tire

625 **Pintle Hook:** front or rear

635 **Cold Weather Starting Aid**

645 **Tire Inflation Kit**

### END OPTIONAL EQUIPMENT

#### NOTE:

**Operation of this equipment in excess of rated loads and disregard of instructions is an unsafe practice and will result in denial of warranty claims.**



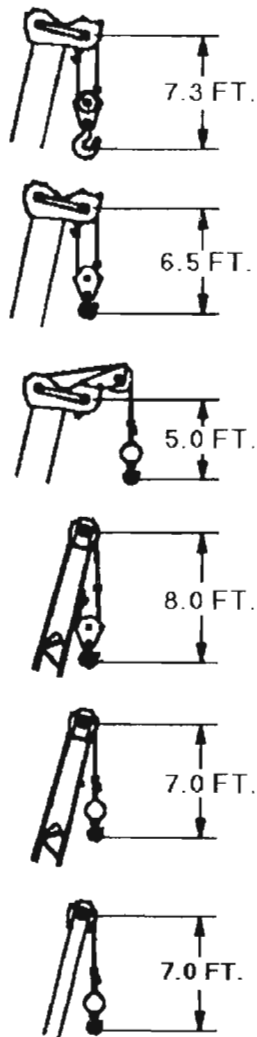
## Weight Distribution

ITEM	Pounds			Kilograms		
	Gross	Front	Rear	Gross	Front	Rear
Basic Carrier	27,355	14,065	13,290	12,406	6,379	6,027
Basic Upper	5,795	1,422	4,373	2,628	645	1,983
<b>Standard Equipment</b>						
110 ft. 4 Sect Boom inst.	17,089	21,653	-4,564	7,750	9,820	-2,070
Boom Hoist Cyl. w/Easy Ride inst.	2,496	2,245	251	1,132	1,018	114
9000 lb. Counterweight inst.	9,010	-4,317	13,327	4,086	-1,958	6,044
Main Winch (P&H 1580) inst.	1,094	-340	1,434	496	-154	650
Auxiliary Winch Plumbing	108	-13	121	49	-6	55
Drum Turn Indicator - Main Winch	18	-4	22	8	-2	10
Main Winch Wire Rope .75" x 515 '	536	-163	699	243	-74	317
Slab Counterweight or Aux. Winch	1,094	-540	1,634	496	-245	741
Cummins 6CT 8.3 Eng. w/ P-Shift Tr.	3,570	3,021	549	1,619	1,370	249
26.5x25 E-3 Tires (Qty - 4)	5,504	2,752	2,752	2,496	1,248	1,248
Rear Axle inst. (std.)	4,653	0	4,653	2,110	0	2,110
360° Position House Lock	35	13	22	16	6	10
<b>Weight - Basic Machine</b>	<b>78,357</b>	<b>39,794</b>	<b>38,563</b>	<b>35,535</b>	<b>18,047</b>	<b>17,488</b>
<b>Adjustments for Options:</b>						
<b>Attachment Options:</b>						
Auxiliary Sheave inst.	152	428	-276	69	194	-125
35 to 60 ft. Lattice Extension inst.	2,900	3,642	-743	1,315	1,652	-337
50 ton Hook Block (hooked on frt. frame)	946	1,590	-644	429	721	-292
20 ton 1 Sheave Hook Block	580	1,555	-975	263	705	-442
8.5 ton Ball Hook on Aux. Sheave	265	761	-496	120	345	-225
Offset Boom Extension Mat'l inst.	201	531	-330	91	241	-150
35 ft. Lattice Extension inst.	1,735	2,294	-549	787	1,036	-249
<b>Tire Options:</b>						
29.5 x 25 E-3 Tires	1,308	787	521	595	358	237
<b>Winch Options:</b>						
Aux. Winch Wire Rope .75" x 460'	487	-245	732	221	-111	332
Drum Turn Indicator-Aux. Winch	15	-9	24	7	-4	11
Spooling Roller - Main Winch	53	-20	73	24	-9	33
Spooling Roller - Aux. Winch	53	-31	84	24	-14	38
<b>Cab Options:</b>						
Heater - Diesel	53	4	49	24	2	22
Heater LP	55	4	51	25	2	23
LP Tank Full	49	3	46	22	1	21
Floodlights	22	24	-2	10	11	-1
Roof Window Wiper	4	2	2	2	1	1
Rotary Roof Beacon	7	2	5	3	1	2
<b>Miscellaneous Options:</b>						
Pintle Hook Front	11	15	-4	5	7	-2
Pintle Hook Rear	11	-7	18	5	-3	8
50 ton Hook Block @ Boom Point	0	946	-946	0	429	-429
Air Dryer	29	22	7	13	10	3

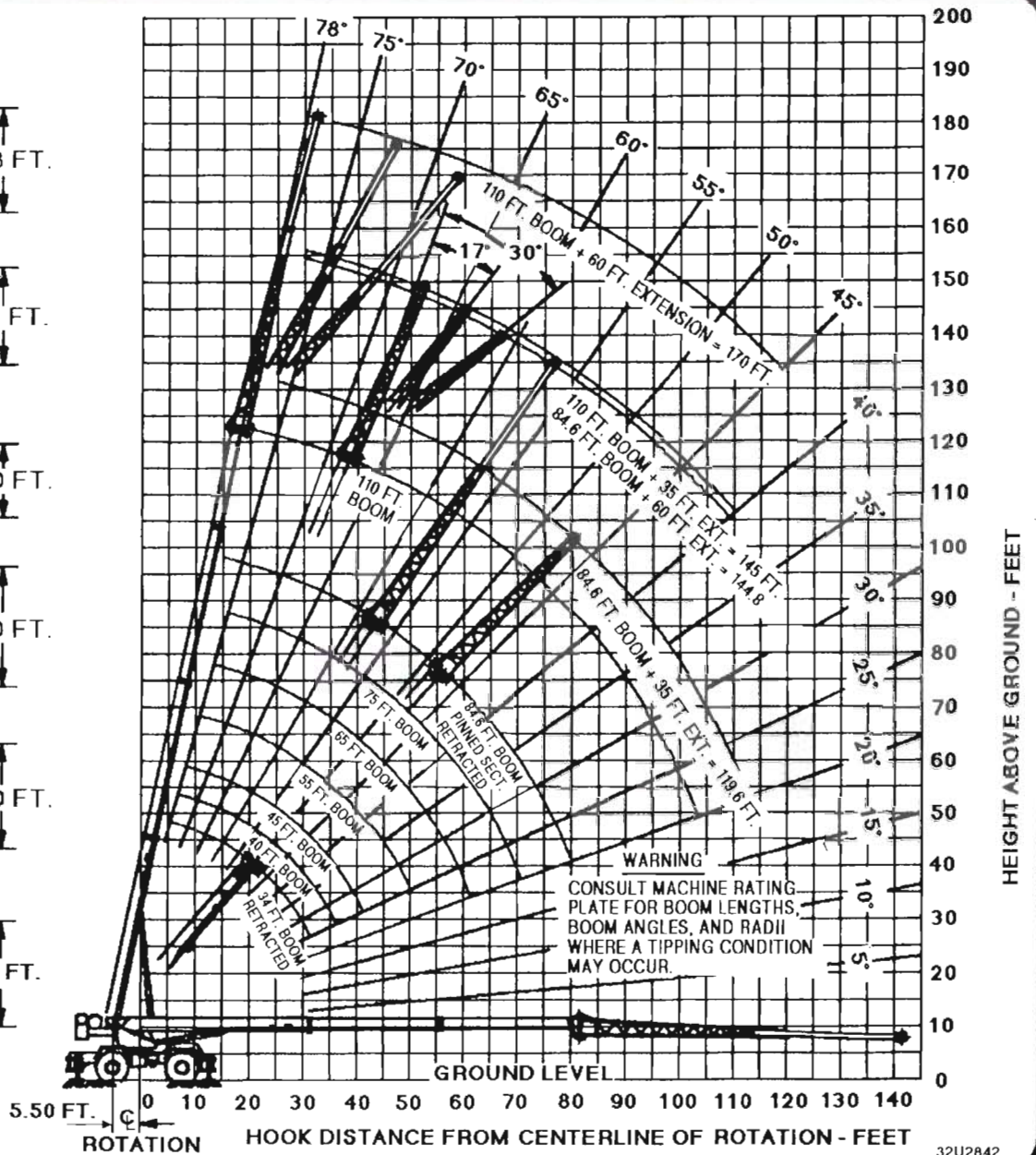


## Crane Range Diagram

CHART 1



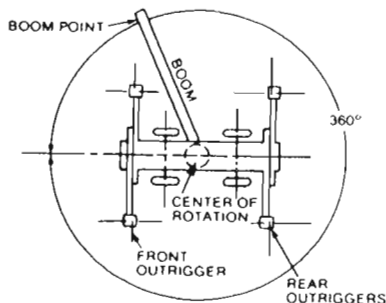
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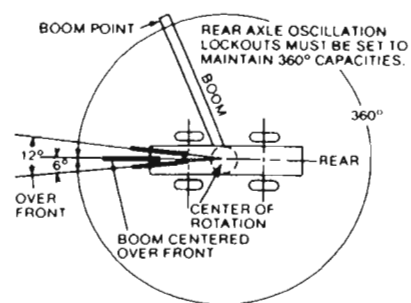
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## Areas of Operation

ON OUTRIGGERS











ON TIRES





**PCSA CLASS 10-211****Load Ratings with 9000 lbs. Counterweight**

CHART 2

OPERATING RADIUS F.T.		RATED LOADS IN POUNDS ON OUTRIGGERS																OPERATING RADIUS F.T.	
																			
			34 FT. 360°		40 FT. 360°		45 FT. 360°		55 FT. 360°		65 FT. 360°		75 FT. 360°		84.6 FT. 360°				
10	66		10000	70	82000	72	81000	76	75000								10		
12	62		86000	67	81500	70	76500	74	69000	77	60000						12		
15	56		71000	62	71000	65	70000	71	62000	74	54900	77	47200				15		
20	45		54000	53	54000	58	54000	65	53000	69	47300	73	39900	75	34700		20		
25	29		42000	43	42000	50	41900	59	41700	65	40800	69	34400	72	29900		25		
30				30	33700	40	33600	52	33500	59	33400	65	30000	68	26100		30		
35						28	27700	45	27700	54	27700	60	26400	64	22900		35		
40								37	21100	48	21100	55	21100	60	20400		40		
45								26	16500	41	16500	50	16500	56	16500		45		
50										34	13200	45	13200	52	13200		50		
55										24	10800	39	10800	47	10800		55		
60												32	8700	42	8700		60		
65												22	7100	36	7100		65		
70														29	6000		70		
75														20	4800		75		

## DEFINITIONS:

3232R25

- Operating radius is the horizontal distance from the axis of rotation before loading to the center of the vertical hoist line or tackle with load applied.
- Loaded boom angle, as shown in column headed by  $\Delta^\circ$ , is the included angle between the horizontal and longitudinal axes of the boom base after lifting rated load at rated radius.

**CHART 3****LOAD RATINGS IN POUNDS WITH OUTRIGGERS FULLY EXTENDED AND SET**

<b>PINNED SECTION EXTENDED</b>			<b>LATTICE EXTENSION WITH PINNED SECTION RETRACTED</b>						<b>LATTICE EXTENSION WITH PINNED SECTION EXTENDED</b>					
FOR ALL BOOM LENGTHS 59.3 TO 110 FT.			FOR ALL BOOM LENGTHS 59 TO 119.6 FT.		FOR ALL BOOM LENGTHS 59 TO 119.6 FT.		FOR ALL BOOM LENGTHS 94.3 TO 145 FT.		FOR ALL BOOM LENGTHS 94.3 TO 145 FT.		FOR ALL BOOM LENGTHS 94.3 TO 145 FT.		FOR ALL BOOM LENGTHS 119.3 TO 170 FT.	
OPERATING RADIUS F.T.	BOOM ANGLE $\Delta^\circ$	RATED LOAD IN POUNDS	OPERATING RADIUS F.T.	BOOM ANGLE $\Delta^\circ$	RATED LOAD IN POUNDS	OPERATING RADIUS F.T.	BOOM ANGLE $\Delta^\circ$	RATED LOAD IN POUNDS	OPERATING RADIUS F.T.	BOOM ANGLE $\Delta^\circ$	RATED LOAD IN POUNDS	OPERATING RADIUS F.T.	BOOM ANGLE $\Delta^\circ$	RATED LOAD IN POUNDS
25	77	21500	25	78	17000	25	78	16400	25			25		
30	74	19600	30	76	15600	30			30			30		
35	72	17800	35	73	14500	35	73	13900	35	76	7100	35	77	12000
40	69	16100	40	71	13500	40	71	12900	40	74	6600	40	75	10900
45	66	14700	45	68	12600	45	68	12000	45	72	6300	45	73	10100
50	63	13400	50	66	11800	50	66	11200	50	70	6100	50	71	9300
55	60	12300	55	63	11100	55	63	10400	55	69	5700	55	69	8500
60	57	10100	60	60	10400	60	60	9800	60	66	5500	60	67	7900
65	53	8500	65	57	9100	65	57	8300	65	64	5400	65	65	7300
70	50	7300	70	54	7700	70	54	7000	70	62	5200	70	63	6800
75	46	6100	75	51	6600	75	51	5800	75	60	5100	75	60	6300
80	42	5200	80	48	5600	80	48	4800	80	57	4900	80	58	5900
85	38	4400	85	44	4700	85	44	4000	85	55	4600	85	56	5300
90	33	3700	90	41	4000	90	40	3200	90	52	4400	90	53	4600
100	19	2600	100	32	2800	100	32	2000	100	47	3300	100	47	3400
									110	41	2300	110	41	2400

## NOTE:

- When boom is not fully extended, use only boom angles, not operating radius to determine load rating.
- For boom angles not shown, use rating of next lower boom angle.
- For bucket rating on 60 ft. extensions, deduct 20% from load ratings.

## WARNING:

A tipping condition will occur (with or without hook block) with 35 or 60 ft. boom extension erected, if maximum operating radius shown with load rating for respective operating configuration is exceeded.

(3232R25)

For information and warnings about crane operations, see page 10.



## Load Ratings for Offset Extension with 9000 lbs. Counterweight

## CHART 4

## 17° OFFSET EXTENSION IN POUNDS WITH OUTRIGGERS FULLY EXTENDED AND SET

LATTICE EXTENSION WITH PINNED SECTION RETRACTED									LATTICE EXTENSION WITH PINNED SECTION EXTENDED								
35 FT.			35 FT. TELESCOPIC			60 FT.			35 FT.			35 FT. TELESCOPIC			60 FT.		
FOR ALL BOOM LENGTHS 69 TO 119.6 FT.			FOR ALL BOOM LENGTHS 69 TO 119.6 FT.			FOR ALL BOOM LENGTHS 94 TO 144.6 FT.			FOR ALL BOOM LENGTHS 94.3 TO 145 FT.			FOR ALL BOOM LENGTHS 94.3 TO 145 FT.			FOR ALL BOOM LENGTHS 119.3 TO 170 FT.		
FOR 119.6 FT. BOOM ONLY			FOR 119.6 FT. BOOM ONLY			FOR 144.6 FT. BOOM ONLY			FOR 145 FT. BOOM ONLY			FOR 145 FT. BOOM ONLY			FOR 170 FT. BOOM ONLY		
RATED LOAD IN POUNDS			RATED LOAD IN POUNDS			RATED LOAD IN POUNDS			RATED LOAD IN POUNDS			RATED LOAD IN POUNDS			RATED LOAD IN POUNDS		
35	77	11100	35	77	10400	35			35			35			35		
40	74	10400	40	75	9900	40			40			40			40		
45	72	9900	45	72	9300	45	78	5400	45	77	9700	45	77	9100	45		
50	69	9500	50	69	8900	50	76	5200	50	75	9000	50	75	8300	50		
55	67	9100	55	67	8500	55	74	5100	55	73	8300	55	73	7600	55	78	5200
60	64	8700	60	64	8100	60	72	4900	60	70	7700	60	71	7000	60	76	5000
65	61	8400	65	61	7800	65	70	4700	65	68	7200	65	68	6500	65	75	4800
70	58	8100	70	58	7500	70	67	4500	70	66	6700	70	66	6000	70	73	4600
75	55	7100	75	55	6500	75	65	4300	75	64	6200	75	64	5600	75	71	4400
80	52	6100	80	52	5400	80	63	4100	80	61	5800	80	61	5200	80	69	4100
85	48	5200	85	48	4400	85	60	3900	85	59	5400	85	59	4800	85	67	3900
90	44	4400	90	44	3600	90	58	3700	90	56	5000	90	56	4200	90	65	3600
100	35	3000	100	35	2200	100	52	3500	100	51	3700	100	51	2900	100	61	3100
						110	46	2800	110	44	2600	110	44	1800	110	57	2800
															120	52	2200

## NOTES

1. See Main Load Rating Chart on outriggers for warnings, definitions, information and reeving.
2. For Bucket Ratings on 60 ft. extension, deduct 20% from load ratings.
3. Stability ratings do not exceed 85% of tipping loads
4. When boom is not fully extended, use only boom angles, not operating radius to determine load rating.
5. For boom angles not shown, use rating of next lower boom angle.
6. 9000 lb. counterweight.

(32U2843)

## CHART 5

## 30° OFFSET EXTENSION IN POUNDS WITH OUTRIGGERS FULLY EXTENDED AND SET

LATTICE EXTENSION WITH PINNED SECTION RETRACTED									LATTICE EXTENSION WITH PINNED SECTION EXTENDED								
35 FT.			35 FT. TELESCOPIC			60 FT.			35 FT.			35 FT. TELESCOPIC			60 FT.		
FOR ALL BOOM LENGTHS 69 TO 119.6 FT.			FOR ALL BOOM LENGTHS 69 TO 119.6 FT.			FOR ALL BOOM LENGTHS 94 TO 144.6 FT.			FOR ALL BOOM LENGTHS 94.3 TO 145 FT.			FOR ALL BOOM LENGTHS 94.3 TO 145 FT.			FOR ALL BOOM LENGTHS 119.3 TO 170 FT.		
FOR 119.6 FT. BOOM ONLY			FOR 119.6 FT. BOOM ONLY			FOR 144.6 FT. BOOM ONLY			FOR 145 FT. BOOM ONLY			FOR 145 FT. BOOM ONLY			FOR 170 FT. BOOM ONLY		
RATED LOAD IN POUNDS			RATED LOAD IN POUNDS			RATED LOAD IN POUNDS			RATED LOAD IN POUNDS			RATED LOAD IN POUNDS			RATED LOAD IN POUNDS		
40	78	8900	40	78	8300	40			40			40			40		
45	75	8500	45	75	7900	45			45			45			45		
50	72	8200	50	72	7600	50			50	77	8100	50	77	7400	50		
55	70	8000	55	70	7400	55			55	75	7600	55	75	6900	55		
60	67	7700	60	67	7100	60	76	4200	60	73	7100	60	73	6400	60		
65	64	7500	65	64	6900	65	74	4000	65	71	6600	65	71	5900	65	78	4100
70	61	7300	70	61	6700	70	72	3800	70	68	6200	70	68	5500	70	76	3900
75	57	7200	75	58	6600	75	69	3700	75	66	5900	75	66	5200	75	75	3800
80	54	6500	80	54	5700	80	67	3600	80	63	5600	80	63	4900	80	73	3700
85	50	5500	85	50	4800	85	64	3500	85	61	5300	85	61	4600	85	71	3500
90	46	4600	90	46	3900	90	62	3400	90	58	5000	90	58	4300	90	69	3300
100	36	3100	100	36	2300	100	56	3200	100	52	3900	100	52	3200	100	64	2900
110	19	1800				110	49	3000	110	46	2800	110	46	2000	110	60	2600
						120	41	2100	120	38	1900				120	55	2300

For information and warnings about crane operations, see page 10.

(32U2843)





## Load Ratings on Tires

**CHART 6**

LOAD RATINGS IN POUNDS				
OPERATING CAPACITY IN TONS	26.5 X 25 - 26 PLY TIRES			
	STATIONARY		PICK & CARRY BOOM CENTERED OVER FRONT	
	±6° ARC OVER FRONT	360° ARC	CREEP	2 1/2 MPH
10	66900	42200	56200	39100
12	57500	35200	48500	33300
15	47100	24800	39800	26900
20	29600	14800	29600	19700
25	19300	9500	19300	14900
30	13600	6300	13600	11500
35	9900	4200	9900	8900
40	7300	2600	7300	6900
45	5400	1500	5400	5300
50	4000		4000	4000
55	2800		2800	2800
60	1900		1900	1900

(3232U40)

**CHART 7**

LOAD RATINGS IN POUNDS				
OPERATING CAPACITY IN TONS	29.5 x 25 - 28 PLY TIRES			
	STATIONARY		PICK & CARRY BOOM CENTERED OVER FRONT	
	±6° ARC OVER FRONT	360° ARC	CREEP	2 1/2 MPH
10	74100	34100	72600	54800
12	63900	28700	62900	47200
15	52500	22700	52100	38700
20	29600	14800	29600	29200
25	19300	9500	19300	19300
30	13600	8300	13600	13600
35	9900	4200	9900	9900
40	7300	2600	7300	7300
45	5400	1500	5400	5400
50	4000		4000	4000
55	2800		2800	2800
60	1900		1900	1900

(3232U42)

**CHART 8**

DEDUCTIONS TO BE MADE FROM LOAD RATINGS IN POUNDS					
HOOK BLOCK		HOOK BLOCK ON POWERED BOOM POINT			
		8.5-20 TON	50 TON	8.5-20 TON W/AUX. SHEAVE	50 TON W/AUX. SHEAVE
HOOK BLOCK WEIGHT		580	950	740	1100
STOWED LATTICE EXT.	35 FT. BOOM EXTENSION	900	1300	1100	1400
	60 FT. TELESCOPIC BOOM EXTENSION	1100	1400	1200	1600
NOTE: LOAD DEDUCTIONS APPLY ONLY TO P&H SUPPLIED EQUIPMENT					
(3232U40)					

### INFORMATION

1. Deductions must be made from rated loads for stowed lattice extension, optional attachments, hooks and hook blocks, (See Deduction Chart no. 8). Weights of slings and all other load handling devices shall be considered part of the load.
2. Ratings above the heavy lines are based on structural competence and not on machine stability.
3. It is recommended that outriggers be extended as far as possible and clear of ground when lifting on tires.
4. Stability ratings do not exceed 75% of tipping loads.

### WARNINGS

1. Crane load ratings without outriggers depends on tire capacity and condition of tires inflated per table.
2. When transporting a load, machine must be on firm, level surface with mechanical houselock engaged.
3. Crane load ratings on tires apply only when rear axle lockouts are engaged when swinging 360°.
4. Lift loads with minimum boom length; do not exceed 75 feet boom length when lifting on tires.
5. Do not attempt lifts on tires with extension erected.
6. Maximum recommended boom angle on tires is 66° without load.

**CHART 9**

TIRE INFLATION			
TIRE SIZE	STATIC & CREEP	2 1/2 MPH	TRAVEL
26.5 X 25-26 PR	80 PSI	65 PSI	55 PSI
29.5 X 25-28 PR	75 PSI	65 PSI	55 PSI

### DEFINITION:

Creep is motion for less than 200 feet in a 30 minute period and not exceeding 1 mph.

**CHART 10**

DEDUCTIONS TO BE MADE FROM LOAD RATINGS IN POUNDS							
DESCRIPTION			WITHOUT HOOK BLOCK ON BOOM POINT	HOOK BLOCK ON POWERED BOOM POINT			
				8.5 - 20 TON	50 TON	8.5 - 20 TON WITH AUXILIARY SHEAVE	50 TON TON WITH AUXILIARY SHEAVE
HOISTING LOAD FROM POWERED BOOM	HOOK BLOCK WEIGHT			580	950	740	1100
	35 FT. LATTICE EXTENSION	Stowed		600	1000	750	1150
		Erected only		3650	4000	3800	4150
		8.5 - 15 ton Ball		4850	5200	5000	5350
		20 ton Block		6200	6600	6400	6750
	35 - 60 FT. LATTICE EXTENSION	Stowed		600	950	750	1100
		Erected only		5650	6000	5800	6200
		8.5 - 15 ton Ball		6850	7250	7000	7400
		20 ton Block		8250	8600	8400	8750
	60 FT. LATTICE EXTENSION	Erected only		5650	6000	5800	6200
		8.5 - 15 ton Ball		7300	7700	7500	7850
		20 ton Block		9250	9600	9400	9750
HOISTING LOAD FROM EXTENSION	35 FT. LATTICE EXTENSION	8.5 - 15 ton Ball	270	650	850	750	950
		20 ton Block	580	950	1150	1050	1250
	35 - 60 FT. LATTICE EXTENSION	8.5 - 15 ton Ball	270	650	900	750	950
		20 ton Block	580	950	1200	1050	1300
	60 FT. LATTICE EXTENSION	8.5 - 15 ton Ball	270	600	750	650	850
		20 ton Block	580	900	1100	1000	1150
NOTE: THESE LOAD DEDUCTIONS APPLY ONLY TO P&H SUPPLIED EQUIPMENT							

NOTE: THESE LOAD DEDUCTIONS APPLY ONLY TO P&amp;H SUPPLIED EQUIPMENT

(3232R25)

**CHART 11**

MAIN HOIST REEVING										
3/4" DIA. WIRE ROPE BREAKING STRENGTH 58,800 LBS - 6 X 37 FW IWRC										
PART OF LINE	1	2	3	4	5	6	7	8	9	10
MAXIMUM LOAD	11000	22000	33000	44000	55000	66000	77000	88000	99000	100000
AUXILIARY HOIST REEVING										
3/4" DIA. WIRE ROPE BREAKING STRENGTH 51,800 LBS. 8 X 19 IWRC SPIN RESISTANT										
PART OF LINE	1	2	3	4	5	6	7	8	9	10
MAXIMUM LOAD	10000	20000	30000	40000	50000	60000	70000	80000	90000	100000

(3232R25)

**Information:**

- Crane load ratings on outriggers do not exceed 85% of tipping.
- Ratings above the heavy line are based on the machine's hydraulic or structural competence and not on machine stability.
- Deductions must be made from rated loads for stowed lattice extensions, optional attachments, hooks and hook blocks (see deductions chart above). Weights of slings and all other load handling devices shall be considered a part of the load.
- Crane load ratings with outriggers are based on outriggers fully extended and set to a distance of 11 feet 9 3/4 inches from the longitudinal axis of the carrier to the outrigger float pivot connection with all load removed from the carrier wheels.
- Counterweight 9000 lbs., none removable.

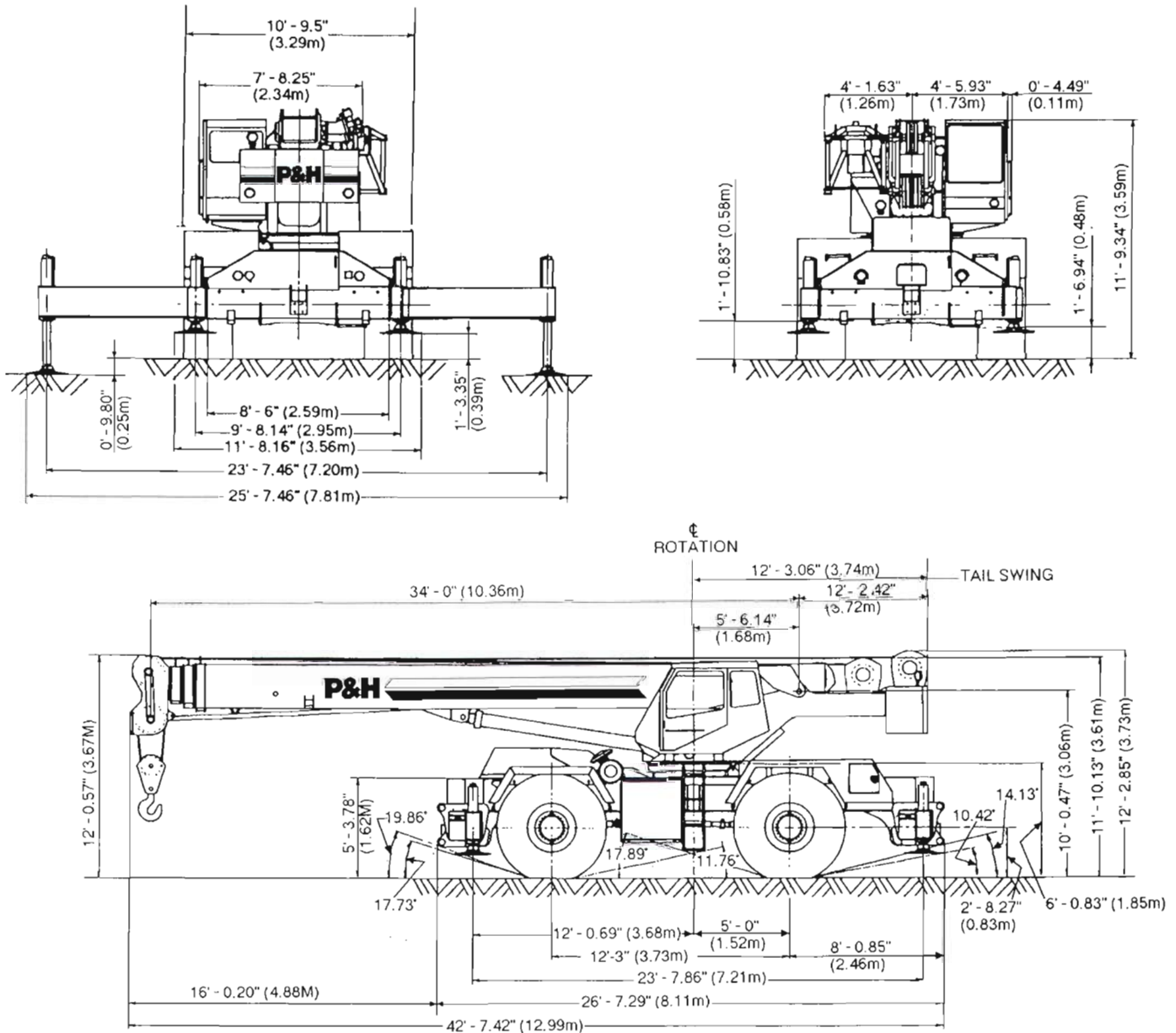
**Warnings:**

- Loaded boom angles at specified boom lengths give only an approximation of the operating radius. The boom angle before loading should be greater to account for deflections. Do not exceed the operating radius for rated loads.
- Positioning or operation of powered boom lengths at radii beyond the maximums or minimums shown, is not intended or approved.

**Warnings cont.**

- Positioning or operation of lattice extensions at boom angles beyond the maximums or minimums shown, is not intended or approved.
- For powered boom lengths not shown, use ratings of next longer powered boom. For load radii not shown, use rating of next longer radius.
- Crane load ratings on outriggers are based on freely suspended loads with the machine levelled and standing on a firm uniform supporting surface. No attempt shall be made to move a load horizontally on the ground in any direction.
- Practical working loads depend on supporting surface, wind, and other factors affecting stability, hazardous surroundings, experience of personnel, and proper handling, all of which must be taken into account by the operator.
- The maximum load which may be telescoped is limited by hydraulic pressure, boom angle, and powered boom lubrication. It is safe to attempt to telescope any load within the limits of the load rating chart.
- When lifting a load, all sections of the powered boom must be equally extended within one foot.

Dimensions are with standard tire size 26.5 x 25.



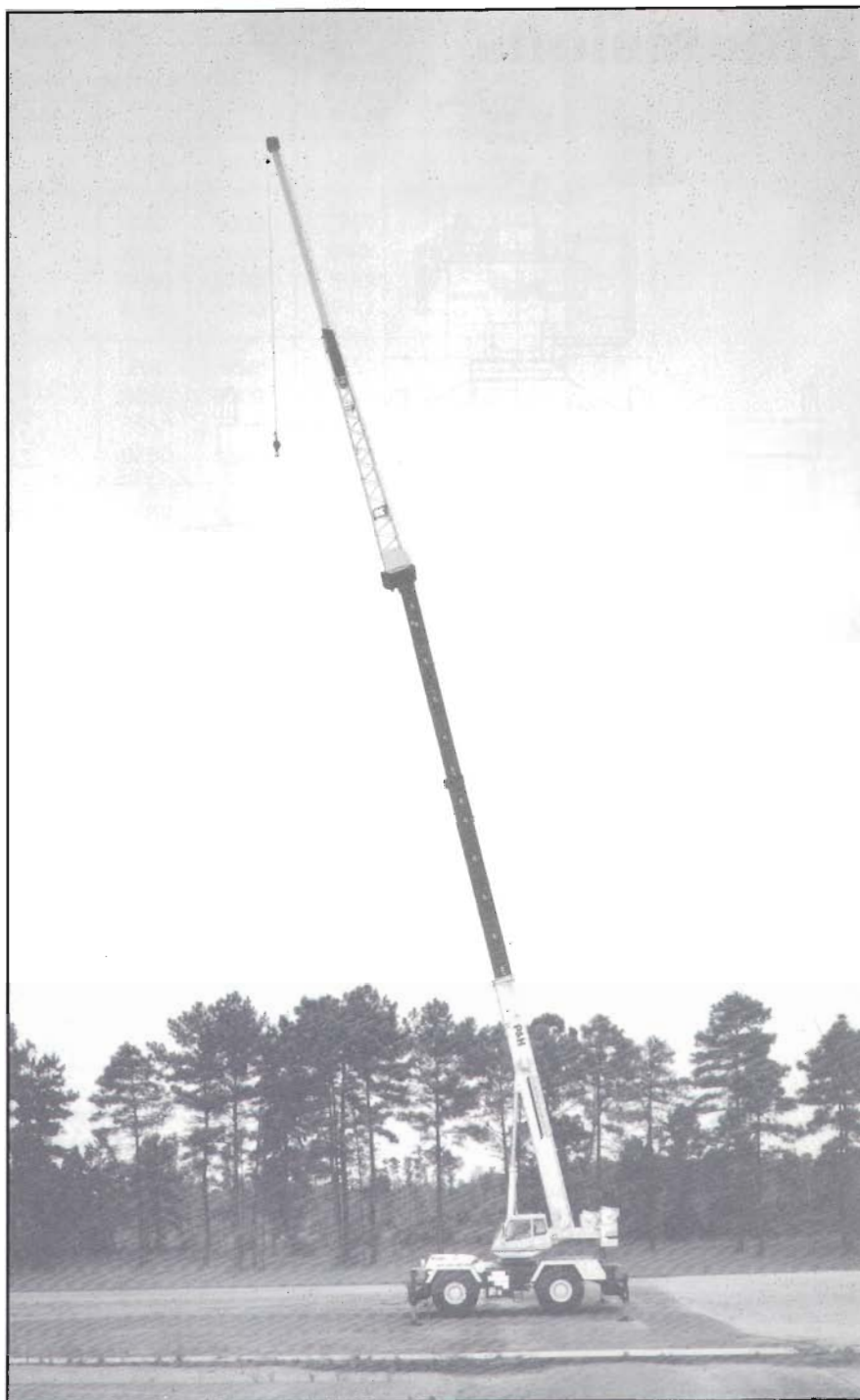
Turning Circle (Centerline of tires - 4 wheel steer)	38' 10.14" (11.84 m)
Carrier Clearance Circle (4 wheel steer)	42' 5.84" (12.95 m)
Turning Circle (Centerline of tires - front steer)	68' 6.44" (20.89 m)
Machine Clearance Circle (Over boom - 4 wheel steer)	65' 3.86" (19.91 m)
Carrier Clearance Circle (front steer)	74' 8.06" (22.76 m)
Machine Clearance Circle (Over boom - front steer)	89' 3.65" (27.22 m)





NOTE: All designs, specifications and components of the equipment described above are subject to change at the manufacturer's sole discretion at any time and 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 conditions encountered. The only warranty applicable is our standard warranty for this machine.

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