

P&H® *Century T280*

Hydraulic Truck Crane **28 Ton (25.4 tonnes) Maximum Capacity** **137 Feet (41.8 m) Maximum Tip Height**

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Built to Celebrate Over a Century of Quality and Service

4-section, 91 foot boom. Four-plate welded inside and out. Rectangular cross section, full-depth for extra performance. Automatic equal extension of powered boom sections.

25 foot lattice extension, or 25.5 foot to 42.5 foot telescoping lattice extension. 133.5 foot maximum boom length, with a tip height of 137 feet. Extensions are offsettable to 22° for reaching over structures.

A duty-cycle machine - powerful P&H winches offer high line speeds and pull. Four pump hydraulic system has optimum flow for fast crane functioning. *No derating of capacities on powered boom or 25 foot lattice extension for bucket work.*

Total operator comfort means less fatigue and greater production. Spacious cab has convenient placement of controls, lots of leg and elbow room, and full vision of work.

Rugged P&H 6 x 4 carrier, 8 feet wide, with Cummins 6CTA 8.3-250HP (EPA approved) diesel engine and Roadranger transmission (13 speeds forward, 3 reverse).

Extra-wide 17'10" outrigger spread for rock-solid stability when lifting.

Heavy-duty electrical, hydraulic and mechanical systems are built for maximum reliability. Triple-sealed electrical connectors protect against corrosion and vibration. Environmentally protected switches, relays and solenoids.

Less downtime - One of the most serviceable cranes. Engineered for maximum reliability of all systems, parts commonality, accessibility, and easy maintenance.



Specifications

Specifications

ITEM NO. This P&H crane meets the requirements of ANSI B30.5c-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 by P&H.

1 BASIC MACHINE

Boom



Boom: All boom sections are of full depth rectangular four plate construction, welded inside and out, with adjustable slider pads on top, bottom and sides. All powered sections are single lever controlled. Block type semi-fixed telescope cylinder mounts provide ample capacity to telescope loads.

Boom point contains one idler sheave with bronze bushing and four load sheaves with roller bearings. Sheaves are 11.88" (301.7mm) pitch diameter.

Standard Boom: 91' (27.74m) four (4) section boom with manual section, 29' (8.8m) retracted length, 91' (27.74m) extended length, consisting of one base section, two hydraulically powered "first" and "second" sections, and one manually pinned section that can be hydraulically extended or retracted.

For performance characteristics, see Chart No. 2: Range Diagram and Chart Nos. 4 and 7, Lifting Capacities Powered Boom.

(For enhanced performance, see Boom Options and Accessories).

Counterweight: 1426 lbs. made up of 750 lb. shell for accepting optional counterweight plus 676 lbs. of auxiliary counterweight.

Operational Aids: Mechanical boom angle indicator, anti-two block and load moment indicator with shut-off.

Upper Structure



Operator's Cab: All-weather environmental cab of steel has hinged ceiling window, slide-by right side window, locking slide-by door and large windows with a full view in all directions. Tinted safety glass used throughout. Operator's three-way adjustable seat has torsion suspension and seat belt. Cab is 34.5" x 876mm wide with a stand-up height of 56" (1422mm) and is cushion mounted for vibration dampening and noise reduction.

Cab Equipment: Cab contains all crane function controls in addition to electric windshield wiper, dash light, warning light and buzzer (monitoring hydraulic oil temperature, engine water temperature, air pressure, engine oil pressure), fuel gauge, master ignition switch, engine start button, circular level, hand throttle, fire extinguisher, electric remote control of outriggers, electronic anti-two block device, boom angle indicator and rear view mirrors. Other gauges include hydraulic oil temperature, air pressure, voltmeter and tachometer.



Controls: In front of operator are foot pedals for boom hoist, swing brake, and engine throttle. Mounted on left side of front console are double-acting levers for swing (with warning horn button), and telescope. At the right are levers for main winch (with drum turn indicator) and boom hoist. On operator's front console are switches for master ignition, engine start, windshield wiper, lights and optional accessories. At the right are console mounted switches for outrigger controls, manual boom extension, optional items and positive (air) hand throttle. On right side of seat are levers for swing holding brake and 360° house lock. Console has pre-wired, removable modules for ease of service.



Main Winch: P&H model 1080, mounted on rear of upper frame. Planetary gearing with equal speed power raising and lowering, infinitely variable controlled speed. Spring applied, hydraulically released load holding multiple disc brake is automatic. Complete with 425' (130M) wire rope and a mechanical drum turn indicator.

Drum: 10.75" (273mm) P.D. x 16.5" (419mm) wide with 16.75" (425mm) dia. flanges.

Wire Rope (Standard): 1/2" (13mm) dia. 6 x 37 extra improved plow steel, with 7 x 7 I.W.R.C.

Drum Capacity: 543 ft. (165M) 5 layers.

Cont. next column

Winch Cont.

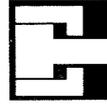
Line Pull (Max.): 10,309 lbs. (4,676kg) 1st layer.

Line Pull (Permissible - based on strength of wire rope):
7,600 lbs. (3,454 kg) 6 x 37 wire rope;
4,650 lbs. (2,109 kg) 8 x 19 spin resistant wire rope.

Line Speed Up (Max.): 358 fpm (109M/m) 5th layer.

(See Options, page 3, for spin resistant rope.)

See Chart No. 1, Hoist Reeving, for rope capacities and parts of line required.



Boom Hoist: One 11" (279mm) bore x 58.0" (1473mm) stroke cylinder, double-acting. Hydraulically powered raising and lowering with holding valve.

Boom Telescope: Two 5.25" (133mm) I.D. cylinders - double-acting for powered sections. Hydraulically powered extending and retracting with holding valve.



Swing Unit: Hydraulic motor driving through gear reducer to pinion gear, 360° continuous rotation to 2.3 rpm. Flow control valve for swing speed adjustment.

Swing Gear: External cut spur gear 39.667" (100.75cm) P.D.

Swing Brake: Spring applied, hydraulically released, dry disc brake, integral with swing reducer. Hand brake control lever mounted on side console. A manual foot pedal applies brake for static holding.

House Lock: Positive 360° position lock, manually engaged with house lock lever.

Fastening to Lower: Single row ball bearing integral with swing gear. Welded to carrier frame and bolted to rotating frame. Bearing is protected from dust by labyrinth seal.

Rotary Manifold: Sealed rotary swivel for air and hydraulic hose connections between rotating upper and carrier. Quickly removable from above or below for servicing. Electrical swivel is mounted on top of air and hydraulic swivel.

Carrier



Carrier: P&H 6 x 4

Frame: All welded unitized construction assures rigidity and permanent alignment of swing bearing and rotating upper machinery. Fabricated of rectangular structural tubing main frame beams of high strength 80,000 psi (5625 kg/sq. cm.) minimum yield steel and reinforced with rectangular box cross members of high strength 80,000 psi (5625 kg/sq. cm.) minimum yield steel.



Carrier Cab: Low profile environmental cab of steel construction is mounted forward of the front suspension on the left side of the carrier frame. Cab is cushion-mounted for vibration dampening and noise reduction. Large safety glass windows are used throughout, providing full view in all directions. Operator's four-way adjustable seat has torsion suspension and seat belt.

Cab Equipment: Contains all roading controls and instrumentation. Includes illuminated instrument panel with speedometer, tachometer, hourmeter, voltmeter, three (3) air pressure gauges with warning lights, fuel gauge, oil pressure gauge with warning lights, water temperature gauge with warning lights, master ignition switch, engine start button. Panel also includes switches for highway lights, dome light, windshield wiper, engine brake and options. Right side console includes interaxle differential lock, throttle selector, transmission shift lever and parking brake. Other cab equipment includes cigarette lighter, turn signals, engine condition warning alarm, pump disconnect lever, air horns, tinted glass and West Coast rear view mirrors.

Hydraulic System: System utilizes 4 pumps and is designed to provide ample volume and pressure for optimum performance. A heavy duty power steering pump operating at 2400 rpm (engine full load) provides 7.5 gpm (28 lpm) to steering circuit. Three main gear type pumps are piggy-back mounted (use common drive shaft) and driven off front of engine at 2400 rpm (engine full load). The pump closest to the engine provides 43 gpm (163 lpm) to boom hoist and telescope circuits. The shaft end pump of the piggy-back-mounted tandem pump provides 43 gpm (163 lpm) to main and auxiliary winch circuits. The cover end pump of the tandem provides 27 gpm (102 lpm) to swing and outrigger circuits.

Cont. page 3

Hyd. Syst. cont.

Total flow for this system at governed engine speed is 120.5 gpm (456 lpm). High pressure oil leaving the pump to the swing and outrigger circuits is filtered thru 20 microns to protect seals in cylinders, valves and motors before entering the functioning circuits. All returning oil (100%) is filtered thru dual bypass type filters to 10 microns before entering the reservoir.

The 115-gallon (435 liter) reservoir is located on the mid-right side of the carrier. Pumps, valves, cylinders and motors are readily accessible and easy to service. Control valves are four-way, three-position type with low effort spools and pilot-operated relief valves for quick, smooth response. A single spool pressure-compensated valve and adjustable flow control valve are used for swing metering control. Cable linkage connects valves to control levers. Air to oil hydraulic oil cooler is standard.



Hydraulic Outriggers: Four (4) independent assemblies that hydraulically extend out horizontally from carrier frame and down vertically to form a stable working platform. Four (4) double-acting hydraulic cylinders provide independent horizontal beam movement and four (4) cylinders provide vertical rod movement. Vertical cylinders are equipped with holding valves. Cylinders are actuated by electric solenoid directional control valves operated from operator's cab console switches or control stations on either side of the carrier.

Outrigger Beams: Beams are rectangular box members of high strength 80,000 psi (5625 kg/cm) minimum yield steel. Extended spread is 17'10" (5.4m) from C/L to C/L of vertical cylinders; retracted within carrier width of 8'0" (2.44m).

Outrigger Floats: Four (4) fabricated 20.25" (514mm) sq. floats are removable and stored on the frame.

Front Axle: Rockwell FL-931 forged balanced section I-beam.

Rear Axles: Rockwell RT44-1450 single reduction, with interaxle differential.

Suspension: Front—Reyco multi-leaf spring mounted with torque rods and shock absorbers. Rear—Hendrickson solid bogie, mounted tandem with torque rods.

Steering: Ross 32.5:1 hydraulic powered gear and integral valve with Garrison dual hydraulic power assist cylinder, 18" (457mm) dia. steering wheel.

Service Brakes: Rockwell Stopmasters on front; Maxi safety brakes on rear. Air on all six wheels—shoe type with separate front and rear reservoirs for safety.

Parking Brake: Maxi spring set, air release on rear wheels.

Tires: 425/65R 22.5 (16.5R22.5) front (2), and 10:00 x 20 12-ply rear (8) See Chart Nos. 10 and 11 for "On Rubber" lifting capacities. Alternate tires and spares available. See Options.

Miscellaneous Equipment (Standard): Front bumper, full fenders, tow hooks front and back, carrier mounted boom rack, anti-skid decking, sliding engine hood, back-up warning device and highway lighting package.



Power Plant

1992 50-State EPA Engine

Make	Cummins
Model	6CTA 8.3-250
Type	Diesel
Cylinders	6
Bore x Stroke	4.49 x 5.32 114 x 135 mm
Displacement	505.4 cu. in. 8.3 liters
Cycles	Four
Air Induction	Turbocharged & Charge Air Cooled
Ratings:	
Gross HP @ rpm	250 @ 2400
Kilowatts @ rpm	186.5 @ 2400

Accessories:

Cooling	Liquid-pressurized recirculating bypass.
Fan	6-blade, suction type 24" (610mm) diameter.
Radiator	Tube and fin type, thermostat controlled.
Electrical	System is 12 volt, negative ground with 80 amp. alternator. Wire harnesses have protective braided nylon covering and are individually clamped to framework. Environmentally-sealed toggle-type switches and harness connectors are used.
Battery	1 - 385 amp. hour
Compressor	13.2 cfm @ 1800 rpm
Governor, air	105-120 psi
Fuel Tank	60 gal. (227 liters) Meets FHWA requirements. (Left side of carrier).
Air cleaner	Two-stage dry type - replaceable element.
Lube Oil Filter	Full-flow with replaceable element.
Fuel Filter	Heavy-duty with replaceable element.

Transmission: Fuller RTO 6613 Roadranger, 13 speeds forward, 3 speeds reverse.



Performance: Speed and gradeability based on 53,000 lbs. (22,679 kg) gross vehicle weight and may vary due to engine performance, vehicle weight and tire conditions.

Low gear	1.7 mph (2.7Kph)
High gear	59 mph (95Kph)
Max. grade	60%
Axle ratio	5.86:1

End - BASIC MACHINE

OPTIONS

Boom Options and Accessories

ITEM NO.	
125	25' (7.62m) Lattice Extension: Swing-around tapered lattice structure with single 13.1" (332.7mm) P.D. metallic boom point sheave with bronze bushing. Easily installed from ground level by pivoting from stored position on right side of boom base and pin-connecting with self-storing pins to boom point. Includes Anti-Two Block material. Offset 2° from boom. For extending reach of boom. Includes Item 145 with new machine.
135	25'6" to 42'6" (7.8 - 12.95m) Lattice Extension: Swing-around tapered lattice structure with welded four-plate telescopic section and single 13.1" (332.7mm) metallic boom point sheave with bronze bushing. Easily installed from ground level by pivoting from stored position on right side of boom base and pin-connecting with self-storing pins to boom point. Includes Anti-Two Block material. Offset 2° from boom. For extending reach of boom. Includes Item 150 with new machine. <i>For performance characteristics see Chart Nos. 6 and 9.</i>
140	Extension Offset Mechanism: Pivoting link which allows lattice extensions (Items 125 and 135) to be offset 22° from main boom. For reaching up and over structures.
145	Material for storing 25' extension on right side of boom.
150	Material for storing 25'6" - 42'6" extension on right side of boom.
160	Auxiliary Boom Point Sheave: Single 13.1" (332.7mm) P.D. metallic sheave with bronze bushings, bracket-mounted on boom point. Includes Anti-Two Block material. For use with single auxiliary winch line.
185	2148 lbs. Additional Upper Counterweight: Removable insert 1930 lbs. plus 218 lbs. fixed counterweight removal device.
190	Carrier Counterweight: 871 lbs. mounted on front frame.
205	Auxiliary Winch: Same as main winch. Mounted on rear of revolving frame. (Includes item 260 w/new machine).
220	Auxiliary Winch Wire Rope: 1/2" x 360' (13mm x 110m) 6 x 37 extra improved plow steel w/7 x 7 I.W.R.C.
225	Auxiliary Winch Wire Rope: Spin resistant 1/2" x 360' (13mm x 110m), 8 x 19 extra improved plow steel w/7 x 7 I.W.R.C.)

See Chart No. 1, Hoist Reeving and Wire Rope Capacities

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- 230 **Mechanical Drum Turn Indicator:** (Aux. winch only, standard on main winch.)
- 235 **28 Ton Hook Block:** (25 metric ton) 4 sheaves with swivel and safety latch, for 1/2" (13mm) wire rope.
- 240 **15 Ton Hook Block:** (13.6 metric ton) 2 sheaves with swivel hook and safety latch, for 1/2" (13mm) wire rope.
- 245 **10 Ton Hook Block:** (9.1 metric ton) single sheave with swivel hook and safety latch, for 1/2" (13mm) wire rope.
- 255 **5 Ton Weighted Hook:** (4.5 metric ton) with swivel and safety latch, for 1/2" (13mm) wire rope.
- 260 **Plumbing and Controls for Auxiliary Winch:** (No winch) (For later installation of winch.)
- 265 **Cable Spooling Device:** Main or auxiliary winch.
- 320 **Automatic Transmission:** Allison MT653 DR.
- 330 **Remote Control:** Drive carrier from upper cab.
- 405 **Windshield Washer**
- 410 **Roof Window Wiper**
- 415 **Heater & Defroster:** Diesel
- 420 **Heater & Defroster:** Propane w/o Tank

- 435 **Vandalism Kit:** Lexan Glass
- 455 **Amber Rotating Beacon:** Top of Cab
- 460 **Floodlight:** (3), includes Standard Alternator
- 525 **Radial Tires:** 425/65R22.5 (16.5R 22.5) front (2)
10:00R20 14-ply rear (8)
- 560 **Spare Wheel** and 425/65R 22.5 tire (front)
- 570 **Spare Wheel** and 10:00 x 20 12-ply tire (rear)
- 585 **Spare Wheel** and 10:00R20 14-ply tire (rear)
- 595 **Tire Inflation Kit**
- 610 **Slewing Rim Sheet Metal Cover**
- 620 **Tool Box:** Right Side
- 630 **Hydraulic Front Bumper Stabilizer (Outtrigger):** Required for 360° operation. Includes float.
- 635 **Cold Weather Starting Aid:** Required for operation below 30°F (-1°C)
- 640 **Air Dryer**

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MAIN & AUXILIARY HOIST REEVING 6 X 37 - 3.5:1									
1/2" DIA. WIRE ROPE BREAKING STRENGTH 26,600 LBS.									
PARTS OF LINE	1	2	3	4	5	6	7	8	9
MAXIMUM LOAD	7600	15200	22800	30400	38000	45600	53200	56000	
MAIN & AUXILIARY HOIST REEVING 8 X 19 - 5:1 SPIN RESISTANT									
1/2" DIA. WIRE ROPE BREAKING STRENGTH 23,400 LBS.									
PARTS OF LINE	1	2	3	4	5	6	7	8	9
MAXIMUM LOAD	4650	9300	13950	18600	23250	27900	32550	37200	41850

CHART
1

(32R1021)

T-280 Load Ratings with 2680 Pounds of Counterweight

PCSA CLASS 10-79

OPERATING RADIUS IN FT.	Rated Loads in Pounds on Outriggers																		OPERATING RADIUS IN FT.
	Powered Boom Length in Feet — Manual Retracted																		
	29 FT.		40 FT.		48 FT.		56 FT.		64 FT.		70.3 FT.								
	LOADED BOOM ANGLE	RATED LOAD POUNDS	LOADED BOOM ANGLE	RATED LOAD POUNDS	LOADED BOOM ANGLE	RATED LOAD POUNDS	LOADED BOOM ANGLE	RATED LOAD POUNDS	LOADED BOOM ANGLE	RATED LOAD POUNDS	LOADED BOOM ANGLE	RATED LOAD POUNDS	LOADED BOOM ANGLE	RATED LOAD POUNDS	LOADED BOOM ANGLE	RATED LOAD POUNDS	LOADED BOOM ANGLE	RATED LOAD POUNDS	
10	63	56000	56000	71	47800	47800	75	44600	44600									10	
12	58	47200	43600	68	43600	43600	72	40500	40500									12	
15	50	36400	36400	63	36400	36400	68	35800	35800	72	33200	33200	75	31000	31000			15	
20	34	25900	25900	54	25900	25900	62	25900	25900	67	25900	25900	70	25900	25900	73	23500	23500	20
25				44	19700	19700	54	19700	19700	61	19700	19700	65	19700	19700	68	19700	19700	25
30				32	14000	15500	46	14000	15500	54	14000	15500	60	14000	15500	63	14000	15500	30
35							36	10300	12600	47	10300	12600	54	10300	12600	59	10300	12600	35
40							32	7900	10500	39	7900	10500	48	7900	10500	53	7900	10500	40
45										30	6000	8800	42	6000	8800	48	6000	8800	45
50										13	4700	7400	34	4700	7400	42	4700	7400	50
55													23	3600	6100	34	3600	6100	55
60																25	2700	4900	60
65																8	2000	4000	65

(32R1021)

Information:

- Crane load ratings 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 extension, optional attachments, hooks, and hookblocks (see deductions chart no. 5). 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 8 feet 11 inches from the longitudinal axis of the carrier to the outrigger float pivot connection with all load removed from the carrier wheels.
- Counterweight 2680 pounds with 1930 pounds 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 shown is not intended or approved.
- 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 rating 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 machine leveled on a firm 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 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.

8. When lifting a load all sections of the powered boom must be equally extended within one foot.

Definitions:

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

DEDUCTIONS TO BE MADE FROM LOAD RATINGS IN POUNDS						
DESCRIPTION	WITHOUT HOOK BLOCK ON BOOM POINT	HOOK BLOCK ON POWERED BOOM POINT				
		5 TON	10-28 TON	5 TON WITH AUXILIARY SHEAVE	10-28 TON WITH AUXILIARY SHEAVE	
HOOK BLOCK WEIGHT	—	150	550	250	650	
HOISTING LOADS FROM POWERED BOOM	25 FT. LATTICE EXTENSION	STOWED	—	—	—	
	ERECTED ONLY	150	550	250	650	
	5 TON BLOCK	1400	1800	1500	1900	
	10 TON BLOCK	1850	2250	1950	2350	
HOISTING LOADS FROM EXTENSION	25.5 FT. LATTICE EXTENSION	STOWED	—	—	—	
	ERECTED ONLY	150	150	250	650	
	5 TON BLOCK	2150	2550	2250	2650	
	10 TON BLOCK	2600	3000	2700	3100	
HOISTING LOADS FROM EXTENSION	42.5 FT. LATTICE EXTENSION	ERECTED ONLY	—	—	—	
	5 TON BLOCK	2150	2550	2250	2650	
	10 TON BLOCK	2750	3150	2850	3250	
	10 TON BLOCK	3500	3900	3600	4000	
HOISTING LOADS FROM EXTENSION	25 FT. LATTICE EXTENSION	5 TON BLOCK	150	250	300	550
	10 TON BLOCK	350	450	500	750	
	25.5 FT. LATTICE EXTENSION	5 TON BLOCK	150	250	300	550
	10 TON BLOCK	350	450	500	750	
HOISTING LOADS FROM EXTENSION	42.5 FT. LATTICE EXTENSION	5 TON BLOCK	150	250	300	500
	10 TON BLOCK	350	450	500	700	

Note: These deductions apply only to P&H supplied equipment. (See Information Note No. 3.)

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CHART 6

Load Ratings in Pounds with Outriggers Extended

Lattice Extension with 2° Offset									
Pinned Section Extended					Pinned Section Retracted				
OR PA ED RI AU TS I N F	G.T.	FOR ALL BOOM LENGTHS 49.7 TO 91 FT.	RATED LOAD POUNDS	SIDE REAR	OR PA ED RI AU TS I N F	G.T.	FOR ALL BOOM LENGTHS 54 TO 95.8 FT.	RATED LOAD POUNDS	SIDE REAR
20					20				
25	15700				25				
30	14100	13000			30				
35	11400	10950	12100		35	74	7800	7800	
40	8900	8450	10200		40	71	7300	7300	
45	7000	6650	8300		45	67	6900	6900	
50	5700	5300	6800		50	63	5900	6500	
55	4600	4250	5600		55	60	4800	6100	
60	3700	3400	4700		60	56	3850	5100	
65	3000	2700	4000		65	51	3100	4300	
70	2400	2100	3300		70	46	2450	3600	
75	1900	1600	2800		75	41	1850	3000	
80	1500	1150	2300		80	34	1400	2500	
85	11	23	1900		85	27	1900	1900	
			1500		90	39	1800	2300	
					95	35	1500	2000	
					100	42	1700	1300	
					105	39			

Lattice Extension With 22° Offset									
Pinned Section Extended					Pinned Section Retracted				
OR PA ED RI AU TS I N F	G.T.	FOR ALL BOOM LENGTHS 92.2 TO 133.5 FT.	RATED LOAD POUNDS	SIDE REAR	OR PA ED RI AU TS I N F	G.T.	FOR ALL BOOM LENGTHS 74.7 TO 116.5 FT.	RATED LOAD POUNDS	SIDE REAR
20					20				
25					25				
30					30				
35					35	74	7800	7800	
40					40	71	7300	7300	
45					45	67	6900	6900	
50					50	63	5900	6500	
55					55	60	4800	6100	
60					60	56	3850	5100	
65					65	51	3100	4300	
70					70	46	2450	3600	
75					75	41	1850	3000	
80					80	34	1400	2500	
85					85	27	1900	1900	
					90	39	1800	2300	
					95	35	1500	2000	
					100	42	1700	1300	
					105	39			

Lattice Extension With 22° Offset									
Pinned Section Extended					Pinned Section Retracted				
OR PA ED RI AU TS I N F	G.T.	FOR ALL BOOM LENGTHS 92.2 TO 133.5 FT.	RATED LOAD POUNDS	SIDE REAR	OR PA ED RI AU TS I N F	G.T.	FOR ALL BOOM LENGTHS 74.7 TO 116.5 FT.	RATED LOAD POUNDS	SIDE REAR
20					20				
25					25				
30					30				
35					35	74	7800	7800	
40					40	71	7300	7300	
45					45	67	6900	6900	
50					50	63	5900	6500	
55					55	60	4800	6100	
60					60	56	3850	5100	
65					65	51	3100	4300	
70					70	46	2450	3600	
75					75	41	1850	3000	
80					80	34	1400	2500	
85					85	27	1900	1900	
					90	39	1800	2300	
					95	35	1500	2000	
					100	42	1700	1300	
					105	39			

Lattice Extension With 22° Offset									
Pinned Section Extended					Pinned Section Retracted				
OR PA ED RI AU TS I N F	G.T.	FOR ALL BOOM LENGTHS 92.2 TO 133.5 FT.	RATED LOAD POUNDS	SIDE REAR	OR PA ED RI AU TS I N F	G.T.	FOR ALL BOOM LENGTHS 74.7 TO 116.5 FT.	RATED LOAD POUNDS	SIDE REAR
20					20				
25					25				
30					30				
35					35	74	7800	7800	
40					40	71	7300	7300	
45					45	67	6900	6900	
50					50	63	5900	6500	
55					55	60	4800	6100	
60					60	56	3850	5100	
65					65	51	3100	4300	
70					70	46	2450	3600	
75					75	41	1850	3000	
80					80	34	1400	2500	
85					85	27	1900	1900	
					90	39	1800	2300	
					95	35	1500	2000	
					100	42	1700	1300	
					105	39			

(32R1021)

T280 Load Ratings with 2680 lbs. Counterweight

Note:
1. When boom is not fully extended, Use only boom angles, not operating radius, to determine load rating.
2. For boom angles not shown, use rating of next lower boom angle.
3. For bucket ratings on 42.5 ft. extension, deduct 20% from load ratings.

Warning:
A tipping condition will occur (with or without a hookblock) with 25 ft., 25.5 ft., or 42.5 ft. boom extension due to the following conditions:
1. Do not exceed 100 ft. operating radius with pinned main boom section retracted.
2. Do not exceed 105 ft. operating radius with pinned main boom section extended.

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!

T-280 Load Ratings with 750 Pounds of Counterweight

PCSA CLASS 10-69

CHART 7 OPERATING INFORMATION

Rated Loads in Pounds on Outriggers

Powered Boom Length in Feet — Manual Retracted

OPERATING INFORMATION	LOADED BOOM ANGLE Δ°	29 FT.		40 FT.		48 FT.		56 FT.		64 FT.		70.3 FT.		OPERATING INFORMATION					
		RATED LOAD POUNDS		RATED LOAD POUNDS		RATED LOAD POUNDS		RATED LOAD POUNDS		RATED LOAD POUNDS		RATED LOAD POUNDS							
		SIDE	REAR	SIDE	REAR	SIDE	REAR	SIDE	REAR	SIDE	REAR	SIDE	REAR						
10	63	56000	56000	71	47800	47800	75	44600	44600					10					
12	58	47200	47200	68	43600	43600	72	40500	40500					12					
15	50	36400	36400	63	36400	36400	68	35800	35800	72	33200	33200	75	31000	31000	15			
20	34	25900	25900	54	25900	25900	62	25900	25900	67	25900	25900	70	25900	25900	73	23500	23500	20
25				44	18000	19700	54	18000	19700	61	18000	19700	65	18000	19700	68	18000	19700	25
30				32	12500	15500	46	12500	15500	54	12500	15500	60	12500	15500	64	12500	15500	30
35							36	9200	12600	47	9200	12600	54	9200	12600	59	9200	12600	35
40							23	6900	10500	39	6900	10500	48	6900	10500	53	6900	10500	40
45										30	5200	8300	42	5200	8300	48	5200	8300	45
50										13	4000	6700	34	4000	6700	42	4000	6700	50
55													23	3000	5500	34	3000	5500	55
60																25	2200	4400	60
65																8	1500	3500	65

(32R1020)

Information:

- Crane load ratings 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 extension, optional attachments, hooks, and hookblocks (see deductions chart no. 8). 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 8 feet 11 inches from the longitudinal axis of the carrier to the outrigger float pivot connection with all load removed from the carrier wheels.
- Counterweight 750 pounds. with 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 shown is not intended or approved.
- 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 rating 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 machine leveled on a firm 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 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.

Definitions:

- 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 "Δ°" is the included angle between the horizontal and longitudinal axes of the boom base after lifting rated load at rated radius.

CHART 8

DEDUCTIONS TO BE MADE FROM LOAD RATINGS IN POUNDS

DESCRIPTION	WITHOUT HOOK BLOCK ON BOOM POINT	HOOK BLOCK ON POWERED BOOM POINT				
		5 TON	10-28 TON	5 TON WITH AUXILIARY SHEAVE	10-28 TON WITH AUXILIARY SHEAVE	
HOOK BLOCK WEIGHT	—	150	550	250	650	
25 FT. LATTICE EXTENSION	STOWED	—	150	550	250	650
	ERECTED ONLY	—	1400	1800	1500	1900
	10 TON BLOCK	—	1850	2250	1950	2350
25.5 FT. LATTICE EXTENSION	STOWED	—	150	150	250	650
	ERECTED ONLY	—	2150	2550	2250	2650
	10 TON BLOCK	—	2600	3000	2700	3100
42.5 FT. LATTICE EXTENSION	STOWED	—	150	150	250	650
	ERECTED ONLY	—	2150	2550	2250	2650
	10 TON BLOCK	—	2750	3150	2850	3250
25 FT. LATTICE EXTENSION	5 TON BLOCK	150	250	500	300	550
	10 TON BLOCK	350	450	700	500	750
	5 TON BLOCK	150	250	500	300	550
25.5 FT. LATTICE EXTENSION	5 TON BLOCK	350	450	700	500	750
	10 TON BLOCK	350	450	700	500	750
	5 TON BLOCK	150	250	450	300	500
42.5 FT. LATTICE EXTENSION	5 TON BLOCK	350	450	650	500	700
	10 TON BLOCK	350	450	650	500	700
	5 TON BLOCK	150	250	450	300	500

Note: These deductions apply only to P&H supplied equipment. (See Information Note No. 3.)

Load Ratings on Tires

with 2680 lbs. Counterweight

C H A R T 10	Load Ratings in Pounds				
	O P E R A T I O N S I N F L A T I O N	10.00 x 20 (F) 10R x 20 (G) Rear Tires		Travel Ratings Over Rear	
		Stationary		Creep	
		Over Rear	Over Side	2 1/2 MPH	2 1/2 MPH
10	23000	10100	17800	17000	
12	18400	7500	16000	15000	
15	13300	4900	13300	13000	
20	8500	2300	8500	8500	
25	5800	-	5800	5800	
30	4000	-	-	-	
35	2800	-	-	-	

(32U2867)

with 750 lbs. Counterweight

C H A R T 11	Load Ratings in Pounds				
	O P E R A T I O N S I N F L A T I O N	10.00 x 20 (F) 10R x 20 (G) Rear Tires		Travel Ratings Over Rear	
		Stationary		Creep	
		Over Rear	Over Side	2 1/2 MPH	2 1/2 MPH
10	21500	9000	16500	15500	
12	16700	6600	15000	14000	
15	12000	4200	12000	12000	
20	7600	1700	7600	7600	
25	5000	-	5000	5000	
30	3400	-	-	-	
35	2200	-	-	-	

(32U2866)

Warnings:

1. Crane load ratings without outriggers depend on tire capacity and condition of tires inflated according to table.
2. When transporting a load, machine must be on a firm, level surface with mechanical house lock engaged. The load must be centered over rear of machine and be restrained from swinging. See "Areas of Operation" Chart No. 3 for working ranges.
3. Lift loads with minimum boom; do not exceed 48 foot boom length when lifting on rubber.
4. Do not attempt lifts on tires with extension erected.

Definitions:

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

Information:

1. Deductions must be made from rated loads for stowed lattice extension, optional attachments, hooks and hookblocks (see deductions chart no. 13). Weights of slings and all other load handling devices shall be considered a part of the load.
2. Ratings above the heavy line 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.

C H A R T 12	Tire Inflation (psi)			
	Size	Static	Creep	2-1/2 mph
	425/65R 22.5	115	115	105
	10.00x20(F)	95	95	85
	10Rx20(G)	120	120	120

(32U2867)

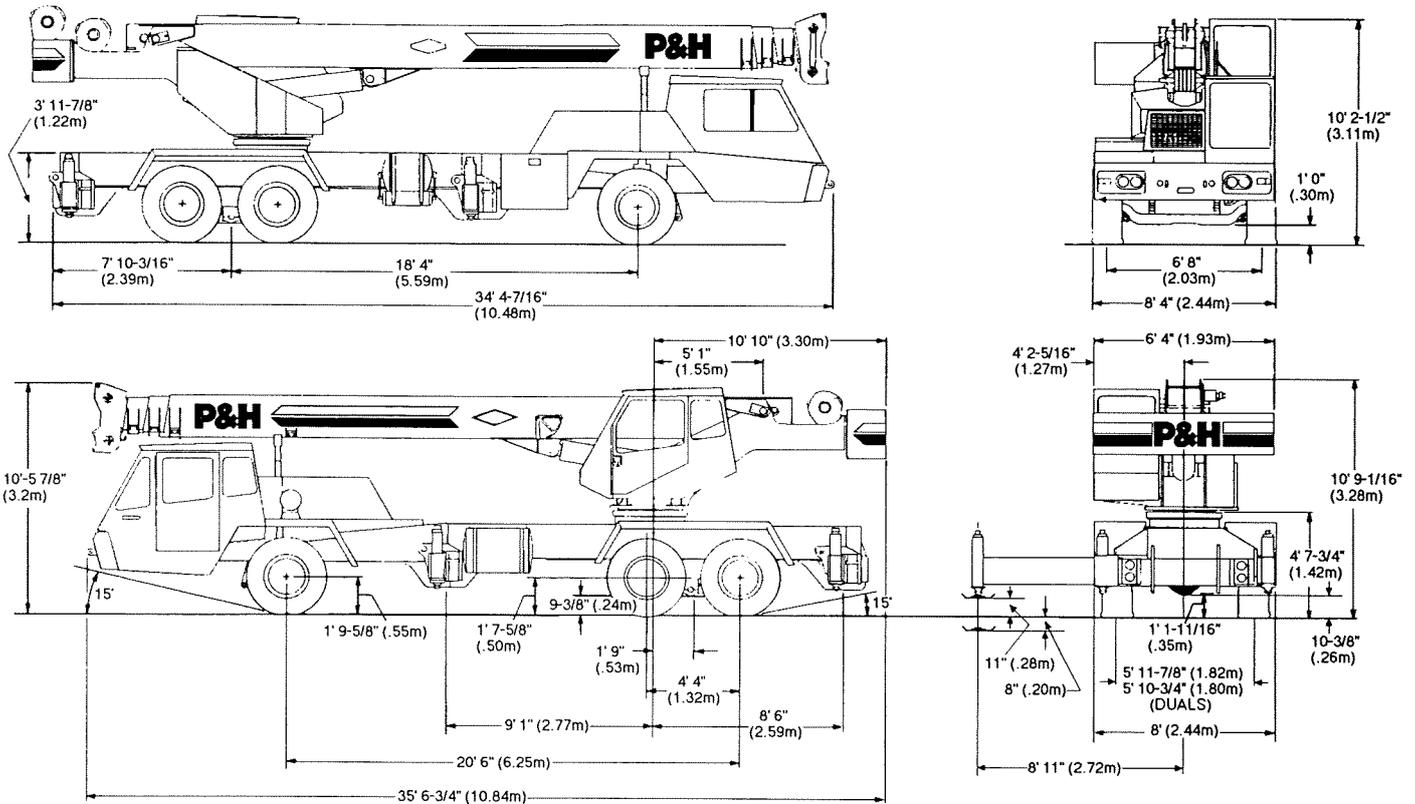
C H A R T 13	DEDUCTIONS TO BE MADE FROM LOAD RATINGS IN POUNDS					
	DESCRIPTION	WITHOUT HOOK BLOCK ON BOOM POINT	HOOK BLOCK ON POWERED BOOM POINT			
			5 TON	10-28 TON	5 TON WITH AUXILIARY SHEAVE	10-28 TON WITH AUXILIARY SHEAVE
HOOK BLOCK WEIGHT	—	150	550	250	650	
25 FT. LATTICE EXTENSION STOWED	—	250	650	350	750	
25.5 FT. LATTICE EXTENSION STOWED	—	300	700	400	800	

Note: These deductions apply only to P&H supplied equipment. (See Information Note No. 1)

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General Dimensions



Vehicle Turning Radius: 35' 1" (10.7m). Vehicle Clearance Radius: 41' 7" (12.7m)
 Dimensions are with standard 425/65R 22.5 (Front) and 10:00 x 20 (Rear) Tires.

Weight Distribution

ITEM	Kilograms			Pounds		
	Gross	Front	Rear	Gross	Front	Rear
Basic Carrier	10224	3829	6395	22540	8442	14098
Basic Upper	2406	-12	2418	5304	-28	5332
Engine - Cummins C8.3 - 250	635	540	95	1400	1190	210
Front Tires 425/65R 22.5	281	281	0	620	620	0
Rear Tires 10:00 x 20	791	0	791	1744	0	1744
Main Winch	515	-155	670	1135	-343	1478
1/2" x 425' MW Wire Rope	89	-29	118	196	-64	260
Slab Cwt. or Aux. Winch	303	-142	445	668	-313	981
Counterweight Shell	348	-163	511	768	-360	1128
91' Four Section Boom	4934	2691	2243	10877	5933	4944
Hoist Cylinder	529	67	462	1166	148	1018
Anti-Two Block Warning Device	41	24	17	90	53	37
Basic Machine	21096	6931	14165	46508	15278	31230
Front Tool Box	Adjustment for Options - Basic Machine					
28 ton Hook Block	76	92	-16	167	203	-36
Stowed on Rear Deck	236	-89	325	520	-196	716
Rear Tires 10.00R x 20	51	0	51	112	0	112
ITEM	Kilograms			Pounds		
	Gross	Front	Rear	Gross	Front	Rear
Adjustments for Options - Basic Machine						
25' Extension	370	253	117	816	558	258
25.5 - 42.5' Extension	671	431	240	1479	950	529
28 ton Block at front	236	336	-100	520	740	-220
Main and Aux. Winch	-58	47	-105	-128	104	-231
Additions for Options - Carrier						
Front Hydraulic Stabilizer	166	206	-40	366	455	-89
Front Counterweight	395	535	-140	871	1180	-309
Pintle Hook	15	-6	21	33	-14	47
Additions for Options - Upper						
Floodlights	16	6	10	35	13	22
Heater - LP	23	-2	25	51	-5	56
Heater - Diesel	20	-2	22	44	-4	48
Counterweight - Removable	875	-364	1239	1930	-714	2644
Removal Device (fixed)	99	-44	143	218	-97	315
Additions for Options - Attachment						
5 ton Ball Hook	55	78	-23	121	173	-51
10 ton Hook Block	148	211	-63	326	464	-138
Aux. Sheave	41	60	-19	90	132	-42
1/2" x 360' AW Wire Rope	75	-33	108	165	-73	238

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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 and without advance notice. The charts and information printed here are only a guide and may not be complete. They should not be relied upon to operate the crane. The individual load charts and related lifting data on each crane must be understood and govern operation of the crane. 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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