

P&H® *Century 114D thru 120D*

Designed and manufactured by Century II, Inc.

Rough Terrain Cranes (Cab Down) 14-1/2 to 20 Ton Maximum Capacity 113 Feet (34.4 m) Maximum Tip Height

Built to Celebrate Over a Century of Quality and Service.



- **Superior lifting performance** provided by P&H rectangular full depth four-plate boom welded inside and out.
- **Choice of boom attachments** - with lattice extension, telescoping lattice extension, or "A" frame jib options. Lattice extensions can be offset 22°.
- **Walk-thru cab accessibility** - easiest cab entry in the industry. Spacious cab has convenient placement of controls, lots of leg and elbow room, and full vision of work.
- **A duty-cycle machine** - powerful single-speed 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.*
- **Ultra-simple controls** - Direct-acting mechanical controls for all crane operating functions - no switches, relays or solenoids.
- **Heavy-duty electrical system** is built for maximum reliability. Triple-sealed electrical connectors protect against corrosion and vibration. Environmentally protected switches, relays and solenoids.
- **Less downtime** - The industry's most serviceable crane is engineered for maximum reliability of all systems, parts commonality, accessibility, and easy maintenance.
- **Outstanding pick & carry crane** with low center of gravity, excellent machine balance and driving visibility.
- **Takes the bounce out of travel** - exclusive P&H Easy Ride® shock-absorbing device cancels vehicular bouncing motion during travel between jobs.

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 Century II, inc.

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. Extension mechanism consists of one hydraulically powered cylinder with holding valve, which extends simultaneously, both the powered "first" section and the cable extended "second" section.

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: 62' (18.90M) three (3) section powered boom, 25' (7.62M) retracted length, 62' (18.90M) extended length, consisting of one base section, one hydraulically powered "first" section, and one cable powered "second" section with boom point.

For performance characteristics, see Chart No.1: Range Diagram 72' Boom and Chart No.3: Lifting Capacities, 62" Boom.

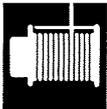
Cable Extend Mechanism: As the "first" section is extended, it pulls out the "second" section by a system of twin .875" (22mm) dia. extend cables and 15.75" (400mm) P.D. metallic sheaves with roller bearings. The extend cables are connected to a bracket on the top of the base section, pass around the sheaves which are pinned to the front end of the "first" section, and then connected to a bracket at the rear end of the "second" section to equalize the load on the "extend ropes". The design safety factor is 3.5 to 1. As the powered "first" section is retracted it simultaneously pulls the cable extended "second" section back into the "first" section. The twin retract cables are .50" (13mm) dia. and are connected to brackets on the top of the base section, pass around the 10.31" (262mm) P.D. sheaves with bronze bushings that are pinned inside the rear end of the "first" section, and then connected to a bracket that is mounted inside the rear end of the "second" section.

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

Counterweights (as furnished)

For 62' boom w/o auxiliary hoist - 6000 lbs.(2722kg)
w auxiliary hoist - 5500 lbs.(2495kg)
For 72' boom w/o auxiliary hoist - 7300 lbs.(3311kg)
w auxiliary hoist - 6800 lbs.(3084kg)

Upperstructure



Main Winch: P&H model 1080 single speed, 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.

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

Wire Rope (Standard): 1/2" (13mm) dia. 6x25 extra improved plow steel, with 7x7 I.W.R.C.

(See options, page 4, for spin resistant rope).

See Chart No. 21, Hoist Reeving, for rope capacities and parts of line required.

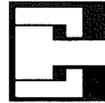
Drum Capacity: 543 ft. (165M) 5 layers.

Line Pull (Max.): 10,263 lbs. (4,655kg) 1st layer.

Line Pull (Permissible - based on strength of wire rope): 7,600 lbs. (3,454kg) 6x25 cable.

Line speed Up (max.): 404 fpm (123M/m) 5th layer.

(See options for Auxiliary Winch)



Boom Hoist: One 10.0" (254mm) bore X 58.0" (1473 mm) stroke cylinder, double-acting. Hydraulically powered raising and lowering with holding valve. Cylinder has internal accumulator providing a stabilizing "Easy Ride" when roading machines. Stabilizer is controlled from operator's cab.

Boom Telescope: One 6.0" (152mm) I.D. - double-acting cylinder for powered section. Hydraulically powered extending and retracting with holding valve.

Hydraulic System: System utilizes two tandem gear type pumps. One tandem pump, operating at 2650 rpm, provides 44 gpm (167 lpm) to the main and/or auxiliary winches and 44 gpm (167 lpm) to the boom hoist and boom telescope cylinders. A second tandem pump, operating at 2650 rpm, provides 27 gpm (102 lpm) to the swing circuit and 27 gpm (102 lpm) for the steering, winch boost and outrigger circuits. Total flow at 2650 engine rpm is 142 gpm (538 lpm). All hydraulic oil is filtered to 7 microns on return to the reservoir. Maximum pressure drop of return filter with clean element and oil at normal operating temperature is 25% of by-pass setting to assure minimum fluid resistance and power loss while protecting seals in cylinders, valves and motors.

The 90 gal. (340 l) reservoir is located on the left 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. Swing circuit has pressure compensated valve for swing metering control. Cable linkage connects valve to control levers. Hydraulic oil cooler is optional.



Swing Unit: Hydraulic motor driving through gear reducer to pinion gear, 360° continuous rotation to 3.9 rpm.

Swing Gear: External cut spur gear 39.667" (100.75cm) P.D. Ring gear dust cover is available (optional).

Swing Brake: Fully automatic swing brake, spring applied, hydraulically released, dry disc brake, integral with swing reducer.

House Lock: Single position (front) pin-in-hole lock manually engaged with house lock lever. A positive 360° position lock is available (optional).

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 is mounted on top of hydraulic swivel.



Carrier

Carrier: 4x4x4 (Four wheels drive. Four wheels steer) - for rough terrain with limited turning area.

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 46,000 psi (3234kg/sq. cm) minimum yield steel and reinforced with rectangular box cross members of high strength 50,000 psi (3515 kg/ sq. cm) minimum yield steel.



Hydraulic Outriggers: Four (4) independent arm-type assemblies that hydraulically swing from carrier frame and down to form a stable working platform. Four (4) double-acting hydraulic cylinders equipped with holding valves provide independent movement. Cylinders are actuated by directional joystick control valves operated from cab. Housings and arms are rectangular box members of high strength 80,000 psi (5624 kg/cm) minimum yield steel with four (4) fabricated 14" (35.6cm) sq. floats. Extended spread is 14'-6" (4.42M) from C/L to C/L of floats. Retracted within carrier width of 8'-0" (2.44M).



Operator's Cab: Low profile, easy entry environmental cab with two slide-by doors of steel construction is mounted forward of the front axle on the carrier frame. Large safety glass windows are used throughout, providing full view in all directions. Sliding rear window opens for ventilation. Operator's three-way adjustable seat has torsion suspension and seat belt.

Cab Equipment (Standard): Cab contains all roading and crane function controls. Front console includes gauges for engine water temperature, engine oil pressure, transmission clutch pressure, transmission oil temperature, hydraulic oil temperature, air pressure, and fuel. Also includes hour meter, voltmeter, winch high speed indicators, electric anti-two-block warning indicator, audio back-up alarm, windshield wiper, fire extinguisher, electric horn, tachometer, speedometer, rearview mirror and dash light.



Controls: In front of operator are foot pedals for service brakes, and engine throttle. Far left of steering wheel are console mounted double-acting levers for swing, telescope and outrigger mode. At the right are levers for house lock, auxiliary winch (optional), main winch and boom hoist. Standard console mounted switches for ignition, engine start, windshield wiper, highway lights and travel stabilizer (Easy Ride®). Console has pre-wired, removable modules for ease of service. At operator's right are console mounted levers outrigger and transmission control, and a hand throttle. Parking brake lever is mounted on inner cab frame.



Steering Options: (A) Front axle steer - pressure compensated hydrostatic power system fully controlled by steering wheel; (B) Front and rear axle steer - pressure compensated hydrostatic power system fully controlled by steering wheel for front and rear axles. Two wheel, four wheel and crab steer mode selection is controlled by three-position hydraulic valve lever located in cab on side console. Center position of lever locks position of rear wheels and only front wheels are steerable. The amount of rear wheel turn is controlled by steering wheel.

Front axle: Steer and drive or non-drive axle driven through differential with planetary in hubs. Axle rigid mounted with power steering.

Rear Axle: Steer and drive axle driven through differential with planetary in hubs. Power steering, with optional no-spin differential. Axle is pivot mounted with automatic hydraulic lockout cylinders to prevent oscillation (vertical movement of axle). Total oscillation attainable is 8" (20.3cm).

Service Brakes: Hydraulic assisted dual circuit brakes on all four wheels, internal expanding shoe type, actuated by foot pedal in cab.

Parking Brake: Mechanical hand lever operated on 10 in. x 3 in. ((254x76.2mm) drum brake on output yoke of front axle.

Tires: Standard - 14:00X24-20 PR tube type (ML-3)
See Chart Nos. 11-19 for "On Rubber" lifting capacities.
Alternate tires and spares available. See Options.

Miscellaneous Equipment (Standard): Sliding engine hood, tow lugs, hydraulic axle oscillation lockout, highway lights, manual front axle disconnect.

Additional accessories listed under Options.



Power Plant: (Standard)

Make	Cummins
Model	6BT5.9
Type	Diesel
Cylinders	6
BoreXStroke	4.02X4.72 in. 102X120mm
Displacement	359 cu.in. 5.88 liters
Cycles	Four
Air Induction	Turbocharged
Starting	12 volt motor Negative Ground
Charging	12 volt alternator, 80 amp
Compressor, Air	9.5 CFM @ 1250 rpm

Governor Air Fan 100-120 psi
6 blade, suction type
22 in. (559mm)

Ratings:
Gross HP @ rpm 130 @ 2650
Kilowatts @ rpm 97 @ 2650

Accessories:

Cooling	Liquid recirculating, bypass, pressurized.
Radiator	Tube and fin type, thermostat controlled, with sealed baffle, rapid warm-up.
Starting Electrical	12 volt, negative ground. System is 12 volt, negative ground. Wire harnesses have protective braided nylon covering and are individually clamped to framework. Environmentally-sealed toggle-type switches and harness connectors are used.
Battery	Reserve capacity 239 minutes. Cold cranking amps at 0°F - 669 amps.
Fuel Tank	50 gal. (189 L) Meets FHWA requirements, (right side between tires).
Air Cleaner	Single stage dry - replaceable element.
Lube oil filter	Replaceable element. Full-flow.
Fuel Filter	Spin-on replaceable element.



Transmission (standard): Powershift with high/low range. Fully electric gear shift, 6 speeds forward and 6 reverse, with high-low electric controlled air range shift. Manual front axle disconnect for highway travel.

Fully sequential transmission is optional.



Performance: Standard Powershift Transmission - 6 forward, 6 reverse speeds. Performance in highest and lowest gear based on engine at full load rpm, 42,774 lb. gross vehicle weight, 16:00X24 tires, 62' boom, 6000 lbs. counterweight and good surface road. Maximum grade at 1 mph is approximately 57%.

Low Range Speeds		High Range Speeds	
1st	2.5 mph (4.0 kmph)	1st	6.0 mph (9.7 kmph)
2nd	5.3 mph (8.5 kmph)	2nd	13.0 mph (20.9 kmph)
3rd	12.0 mph (19.3 kmph)	3rd	27.0 mph (43.5 kmph)

(End - BASIC MACHINE)

OPTIONS

ITEM NO.

Boom Options and Accessories

115

72' (21.90M) three (3) section powered boom, 29' (8.8M) retracted length, 72' (21.90M) extended length, consisting of one base section, one hydraulically powered "first" section, and one cable powered "second" section with boom point.

For performance characteristics, see Chart No.6: Range Diagram 72' Boom and Chart No.8: Lifting Capacities, 72' Boom.

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.

cont. next page

ITEM NO.

135 **25'6" to 35'6" (7.8 - 10.8m) Lattice Extension:** Swing-around tapered lattice structure with welded four-plate telescopic section and single 13" (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.

For performance characteristics see Chart Nos. 4, 5, 9, and 10.

138 **Extension Offset Mechanism:** Pivoting link which allows lattice extensions to be offset 22° from main boom. For reach up and over structures.

140 **14' 6" (4.4m) Jib:** Underslung "A" frame structure with single 14.17" (360mm) P.D. metallic boom point sheave with bronze bushing. Easily installed from ground level by pivoting from its stored position on under side of boom base. Pin and pendant connected to boom point. Includes Anti-Two Block material. Offset at 0°, 10° and 20°. For extending reach of boom. Includes Item 155 with new machine. Use with 72' boom only.

For performance characteristics, See chart Nos. 20.

145 **Material for storing 25' extension on right side of boom.**

150 **Material for storing 25' 6" - 35' 6" extension on right side of boom.**

155 **Material for storing 14' 6" "A" frame jib under 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.

205 **Auxiliary Winch:** Same as main winch. Mounted on rear of revolving frame. Complete with 360' (110m) wire rope and additional boom point idler sheave.

215 **Spin Resistant Wire Rope (main winch):** 1/2" x 425' 8 x 19 extra improved plow steel w/ 7 x 7 I.W.R.C.

220 **Wire Rope (aux. winch):** 1/2" x 360' 6 x 25 extra improved plow steel w/ 7x7 I.W.R.C.

225 **Spin Resistant Wire Rope (aux. winch):** 1/2" x 360' 8x19 extra improved plow steel w/ 7x7 I.W.R.C.

See Chart no. 24, Hoist Reeving and Wire Rope Capacities.

230 **Electrical Drum Turn Indicators**

235 **18 & 20 ton Hook Block:** (20 metric ton) 3 sheaves with swivel and safety latch, for 1/2" (13mm) wire rope.

240 **14.5 & 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.

250 **5 ton Weighted Hook:** (4.5 metric ton) with swivel and safety latch, for 1/2" (13mm) wire rope.

255 **Cable Spooling Device:** main or auxiliary winch.

260 **Plumbing and Controls for Auxiliary Winch:** (No winch) (For later installation of winch).

265 **Frame-Mounted Single Speed Winch:** 15,000 lb. line pull. (Less cable and hook)

Power Train Options

300 **Power Plant (Optional)**

Make:	Detroit Diesel
Model:	8.2L
Type:	Diesel
No. of Cylinders:	8
Bore x Stroke:	4.25 x 4.41 in. 108 x 112mm
Displacement:	500 cu.in. 8.2 liters
Cycles:	Four
Air Induction:	Nat. Aspirated
Starting:	12 volt moter Negative ground
Charging:	12 volt alternator, 65 amp
Compressor, air:	12 CFM @ 1250 rpm
Governor, air:	100-120 psi
Fan:	6 blade, suction type, 22" (559mm)
Ratings:	
Gross HP:	128 @ 2650 rpm
Kilowatts:	95.5 @ 2650 rpm

315 **Sequential Powershift Transmission:** 6 speeds forward, 3 speeds reverse, electrically controlled and operated gear shift. Neutral safety start. Electrically controlled, hydraulically operated front axle disconnect for highway travel. For standard or optional engines.

330 **No Spin Axle** - rear axle only. Consult factory when quoting.

340 **Cold Weather Starting Aid:** (measured shot) required below 30°F. (-1°C)

345 **Two Battery Start System**

350 **Override for axle lockout**

355 **Rear Steer Indicator w/Light**

TH - 869

365 **Engine Condition Warning System**

406 **Windshield Washer**

410 **Roof Window Wiper**

415 **Heater & Defroster:** - Diesel

420 **Heater & Defroster:** - Propane w/o Tank

422 **Heater & Defroster:** Hot Water

435 **Vandalism Kit:** - Lexan Glass

440 **Tinted Glass**

450 **Air Conditioner**

455 **Amber Rotating Beacon:** Top of Cab

460 **Floodlight:** (3), Includes Standard Alternator

465 **Boom Hoist Foot Pedal** (Must order item 665)

510 **Tires 16:00x25-24 Ply Tubeless:** Hard Rock Lug (E-3)

515 **Tires 17.5x25-20 Ply Tubeless:** Sure Grip Loader (L-2)

520 **Tires 20.5x25-20 Ply Tubeless:** Sure Grip Lug Wide Base (E2)

525 **Tires 20.5x25-20 Ply Tubeless:** Super Hard Rock Lug Wide Base (E-3)

See "on rubber" lifting Charts nos. 11-19.

530 **Spare Tire & Wheel:** 14:00x24-20 Ply Tubetype Hard Rock Lug(ML-3)

540 **Spare Tire & Wheel:** 16:00x25--24 Ply Tubeless Hard Rock Lug (E3)

545 **Spare Tire & Wheel:** 17.5x25-20 Ply Tubeless Sure Grip Loader (L-2)

550 **Spare Tire & Wheel:** 20.5x25-20 Ply Tubeless Sure Grip Lug Wide Base (E2)

555 **Spare Tire & Wheel:** 20.5x25-20 Ply Tubeless Super Hard Rock Lug Wide Base (E-3)

605 **Positive Swing Lock:** 360 Degrees (Required to meet NYC Codes).

610 **Slewing Rim Sheet Metal Cover**

625 **Pintle Hook:** (Front or Rear)

650 **Tool Box**

665 **Hydraulic Oil Cooler**

Operational Aids

720 **P.A.T. Load Moment Operational Aid:** DS350 Microprocessor System Includes: Load Moment Device w/ Audio-Visual Warning, Rated Load, Actual Load, Tare, Radius, Angle, Length & Height of Boom Tip Indicators. Includes Control Lever Lockouts (Magnet Valve Shut-Off Devices).

730 **Krueger (HAP) Boom Angle Indicator:** W/ Audio-Visual Warning

735 **Krueger (HLAP) Boom Angle, Length, Radius Indicators:** w/ Angle Preset and Audio-Visual Warning.

740 **P&H Control Lever Lockouts:** (Magnetic Valve Shut-Off Devices) for Anti-Two Block Device and Item 730 or 735.

745 **Krueger Load Moment System (Mark III):** Includes - Load Moment Device w/ Audio-Visual Warning, Radius, Angle, Length, w/ Angle Preset. Includes Control Lever Lockouts (Magnetic Valve Shut-Off Devices).

815 **Special Paint**

820 **Deduct for Omitting Finish Coat of Paint**

NOTE: CAPACITY CHARTS ARE IN A SEPARATE PUBLICATION.



P.O. Box 2952602
Conway, SC 29526-7002
USA
Phone: 803 347-6900