

# P&H®

## Century 114 thru 120

Designed and manufactured by Century II, Inc.

### Rough Terrain Cranes

14 -1/2, 15, 18 and 20 Ton Max. Capacities

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°.
- **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.
- **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.*
- **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.
- **Takes the bounce out of travel** - exclusive P&H Easy Ride® shock-absorbing device cancels vehicular bouncing motion during travel between jobs.

## Specifications

[dzwigi24.pl](http://dzwigi24.pl)

# 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. SPECIFICATIONS 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 three load sheaves with roller bearings. Metallic sheaves are 11.88" (301.7mm) pitch diameter.

**Standard Boom:** 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.

**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 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 10.50" (292mm) 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 72' boom w/o auxiliary hoist - 7300 lbs.(3311kg)  
w/auxiliary hoist - 6800 lbs.(3084kg)  
For 62' boom w/o auxiliary hoist - 6500 lbs.(2948kg)  
w/auxiliary hoist - 6000 lbs.(2722kg)

### Upperstructure



**Operator's Cab:** All-weather environmental cab of steel has hinged tinted ceiling window, slide-by right side window, locking slide-by door and large windows with a full view in all directions. Safety glass used throughout. Operator's three-way adjustable seat has torsion suspension and seat belt. Cab is 33.5" (850mm) wide with a stand-up height of 56" (1422mm) and is cushion-mounted for vibration dampening and noise reduction.

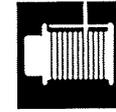
**Cab Equipment (Standard):** Cab contains all roading and crane function controls. Front console includes gauges for engine water temperature, engine oil pressure, transmission clutch pressure, transmission oil temperature, hydraulic oil temperature, air pressure, and fuel. Also includes hour meter,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



**Controls:** In front of operator are foot pedals for boom hoist, swing brake, service brakes, and engine throttle. Far left of steering wheel are console mounted double-acting levers for swing and telescope. At the right are levers for auxiliary winch (optional), main winch and boom hoist. Drum rotation indicators (optional) are mounted on main and auxiliary winch levers and an optional directional indicator (emergency flasher) switch on steering column. At operator's front console are mounted switches for optional starting aid, master ignition, engine start, optional windshield wiper, optional master lights. At operator's right are console mounted switches for emergency/parking brake, defroster (optional), hi-low transmission range, steering mode selection and outrigger controls, circular level, gear range selector

switch, forward-reverse selector lever, hand throttle, swing brake lever, travel stabilizer switch (Easy Ride), and house lock lever. Console has pre-wired, removable modules for ease of service.

**Main Winch:** P&H model 1080 two 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 Hoist Reaving Chart for rope capacities and parts of line required.

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

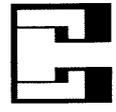
**Line Pull (Max.):** 10,263 lbs. (4,655kg) 1st layer.

**Line Pull (Permissible - based on strength of wire rope):** 7,600 lbs. (3,454kg) 6x25 cable, 6,680 lbs. (3030 kg) 8x19 spin resistant cable.

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

(See options for Auxiliary Winch)

**Boom Hoist:** One 10.04" (255mm) bore X 58.0" 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 6.04" (153mm) I.D. cylinder - double-acting 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 (166 lpm) to the main and/or auxiliary winches and 44 gpm (166 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 (536 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 standard.



**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).

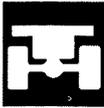
**Swing Brake:** Spring applied, hydraulically released, dry disc brake, integral with swing reducer. Hand brake control lever mounted on side console. A manual foot pedal applies brake for static holding.

**House Lock:** 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 for servicing. Electrical swivel is mounted on top of air and 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 45,500 psi (3200kg/sq. cm) minimum yield steel and reinforced with rectangular box cross members of high strength 47,000 psi (3300 kg/ sq. cm) minimum yield steel. Lifting Lugs front and rear.

**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) provide vertical rod movement. Vertical cylinders are equipped with holding valves. Cylinders are actuated by electric solenoid directional control valves operated from cab console switches. Beams are rectangular box members of high strength 79,600 psi (5600 kg/cm) minimum yield steel. Four (4) fabricated 14" (35.6cm) sq. floats are removable and stored on the frame. Extended spread is 18'-0" (5.4M) from C/L to C/L of verticle cylinders Retracted within carrier width of 8'-0" (2.44M).



**Steering Options:** (A) Front axle steer - hydrostatic power system fully controlled by steering wheel; (B) Front and rear axle steer - 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 sealed switch located in cab on side console. Center position of switch 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:** Air over hydraulic brakes on all four wheels, internal expanding shoe type, actuated by foot pedal in cab.

**Parking Brake:** Spring-set air chamber on drum brake on output yoke of transmission. Spring set and air release.

**Tires:** Standard - 16:00X24-16 PR tubeless (G-2)

*Alternate tires and spares available. See Options.*

**Miscellaneous Equipment (Standard):** Sliding engine hood, tow lugs, hydraulic pump disconnect, automatic moisture ejector for air system, oil to air transmission cooler, front axle disconnect and oil to hydraulic oil cooler. 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	100-120 psi

Fan 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	Cold weather starting aid (measured shot) required below 30° F (-1 C).
Electrical	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 398 minutes. Cold cranking amps at 0°F - 885 amps.
Fuel Tank	50 gal. (189 lit.) 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, 3 speeds forward and 3 reverse, with high-low electric controlled air range shift. Electrically controlled air-generated 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, 45,448 lb. gross vehicle weight, 16:00X24 tires, 72' boom, 7300 lbs. counterweight and good surface road. Maximum grade at 1 mph is approximately 53%.



Low Range Speeds		High Range Speeds	
1st	3.4 mph (5.4 kmph)	1st	7.6 mph (12.2 kmph)
2nd	7.3 mph (11.7 kmph)	2nd	16.1 mph (25.9 kmph)
3rd	13.9 mph (22.4 kmph)	3rd	28.9 mph (46.6 kmph)

(End - BASIC MACHINE)

## OPTIONS

ITEM NO.	Boom Options and Accessories
105	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.
125	<b>25' (7.62 M) Lattice Extension:</b> 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.
- 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" (4.4 m) 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.
- 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.
- 230 **Mechanical Drum Turn Indicator:** (Aux. winch only, standard on main winch).
- 235 **18 or 20 ton Hook Block:** 3 sheaves with swivel hook and safety latch, for 1/2" (13mm) wire rope.
- 240 **14-1/2 or 15 ton Hook Block:** 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.<br>108 x 112mm     |
| Displacement:     | 500 cu.in.<br>8.2 liters           |
| Cycles:           | Four                               |
| Air Induction:    | Nat. Aspirated                     |
| Starting:         | 12 volt motor<br>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)
- 350 **Override for axle lockout**

- ITEM NO.
- 405 **Windshield Washer**
- 410 **Roof Window Wiper**
- 415 **Heater & Defroster:** - Diesel
- 420 **Heater & Defroster:** - Propane w/o Tank
- 435 **Vandalism Kit:** - Lexan Glass
- 440 **Tinted Glass**
- 450 **Air Conditioner**
- 455 **Amber Rotating Beacon:** Top of Cab
- 460 **Floodlight:** (3), Includes Standard Alternator
- 500 **Tires 14:00 x 24-20 Ply Tubetype:** Hard Rock Lug (ML-3)
- 510 **Tires 16:00x25-24 Ply Tubeless:** Earthmover Sure Grip (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-2)
- 530 **Spare Tire & Wheel:** 14:00x24-20 Ply Tubetype Hard Rock Lug(ML-3)
- 535 **Spare Tire & Wheel:** 16:00x24-16 Ply Tubeless Sure Grip Grader (G-2)
- 540 **Spare Tire & Wheel:** 16:00x25--24 Ply Tubeless Earthmover Sure Grip (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)
- 550 **Spare Tire & Wheel:** 20.5x25-20 Ply Tubeless Super Hard Rock Lug Wide Base (E-2)
- 560 **Tire Inflation Kit:**
- 605 **Positive Swing Lock:** 360 Degrees (Required to meet NYC Codes).
- 610 **Slewing Rim Sheet Metal Cover**
- 625 **Pintle Hook:** (Front or Rear) Each
- 635 **Storage Compartment**
- 640 **Alcohol Evaporator**
- 645 **Air Dryer**

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



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