P&H® 670–WLC

70–ton Crawler Crane

UPPER MACHINERY

POWER PLANT:

ENGINE	STANDARD	OPTIONAL
Make	Cummins	Detroit Diesel
Model	N-855P	6-71 (6-71N with Converter)
Type	Diesel	Diesel
No. of Cylinders	6	6
Bore x Stroke, In.	5.50 x 6.00	4.25 x 5.00
cm	139.7 x 152.4	107.9 x 127
Displacement, In.	855	426
liters	14.011	6.981
Cycles	4	2
Air Induction	Nat. Aspirated	Super-Charged (Roots Blower)
Cooling	Liquid	Liquid
Starter	24 V.	24 V.
Alternator	24 V. - 50 A.	24 V. - 50 A.

TRANSMISSION:	STANDARD	OPTIONAL
Make	Cotta	Cotta
Model	T3U-1771	T3U-1771
Type	3-Speed Manual (2nd Gear Normal)	3-Speed Manual (2nd Gear Normal)
RATINGS:		
Net HP@RPM (at Flywheel)	160@ 2000	162@2000
Net HP@ RPM (at Trans. Output Shaft)	154@1000	156@1000
Altitude Range, Ft.	0-6500 ft.	0-7000 ft.
, M.	(0-1981.2)	(0-2133.6)
Temp. Range in F.	-20° to 110°	-20° to 110°
in C.	(-28° to 43°)	(-28° to 43°)

TORQUE CONVERTER:	OPTIONAL	
Make	Twin Disc	Allison
Model	CO-10066	TCDOA-475
Type	3-Stage	1-Stage
RATINGS:		
Net HP@RPM (at Flywheel)	198@ 2100	189@2100
Net HP@RPM (at Trans. Output Shaft)	160@ 1090	160@ 1640
Altitude Range, Ft.	0-3000 ft.	0-5000 ft.
, M.	(0 to 914.4)	(0 to 1524)
Temp. Range in F.	-20° to 110°	-20° to 110°
in C.	(-28° to 43°)	(-28° to 43°)

Input disconnect clutch — Transmission: Double plate dry type mechanically engaged. 11.5" dia. Torque converter: Twin Disc - 3 stage (opt. with Cummins engines only), or Allison - single stage (opt. with D.D.A. engines only).

Converter charging hydraulic system — Gear type pump charges converter. Oil to water heat exchanger cools fluid. Filtered with full flow pressure filters with replaceable paper elements.

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

Fuel tank capacity — 75 gallons (283.9 liters).

	Cummins N-855P	Detroit 6-71
Lube Oil Capacity	Engine-24 qts. (22.7 liters) Filter-16 qts. (15 liters)	Engine-18 qts. (17.4 liters) Filter-2 qts. (1.9 liters)
Coolant Capacity	Engine-5 gal. (18.9 liters) Radiator-12 gal. (45 liters)	Engine-5.5 gal. (21.3 liters) Radiator-3.25 gal. (12.6 liters)
Air Cleaner	Farr, 2 stage dry type	Donaldson, 2 stage dry type
Lube Oil Filter	Full flow - replaceable By-pass - replaceable	Full flow - replaceable By-pass - none
Fuel Filter	Primary - none Secondary - replaceable spin on	Primary - replaceable Secondary - replaceable

Starting aid — Required below 14°F (-10°C.) ether-measured shot standard equipment for all power plants.

Hydraulic pump — Flange mounted, constant displacement in-line piston pump. 3000 psi (210 kg/cm^2), 5 GPM (19 liters per minute).

Batteries — (2) - 12 volt H.D. rated, series connected. Disconnect switch prevents start-up while servicing. 215 amp. hours@20 hour rate.

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

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

GANTRY: Three position telescopic gantry. Power raise and lowering — 6 sheaves — 12.875" (32.7 cm) P.D.

OPERATORS CAB: Totally enclosed from weather. Full vision cab has safety glass throughout, sliding front window and door. Operators four-way adjustable seat is standard. Cab heater — defroster, signal horn, windshield wiper, drum turn indicator, boom angle indicator and boom hoist kick-out limit switch available.

CONTROLS:

In front of operator are foot pedals for front and rear drum brakes, hand levers for swing control, front and rear drum controls, boom hoist control, swing brake and engine speed control. At operators left are console mounted switches for front and rear drum pawls and brake locks, master switch, engine start, starting aid and lights, included are gauges for upper hydraulic oil pressure, fuel level, engine water temperature, oil pressure, ammeter, hourmeter, drum brake pressure, converter oil charging pressure and temperature (on torque converter equipped machines only), engine clutch hand lever, trouble light receptacle and drum turn indicators (opt.).

HYDRAULIC SYSTEM: Full flow hydraulic system for infinitely variable pressure to front and rear drums and boom hoist brakes and clutches. System at 1400 psi (98 kg/cm^2) line pressure. Response is instant, positive and smooth to operators touch. Pumped fluid is filtered, stored in an accumulator under pressure, cooled in 15 gal. (57 liter) reservoir and filtered again before returning to pump.

Specifications

BOOM HOIST:

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

DRUM: 13.75" (34.9 cm) P.D. x 7" (17.8 cm) long. Total wire rope length per drum for 3/4" (19 mm) wire rope is 400 ft. (181.4 m) storage or 342 ft. (155.1 m) working length.

Transmission Range			Low	Normal	High
	Gear Ratio		3.217 to 1	2.000 to 1	1.000 to 1
HOISTING	Line Speed	F/min	73.4	118	236
		M/min	22.4	36	72
	Line Pull	lb.	22,519	14,000	7,000
		kg.	10,214.6	6,350.4	3,175
LOWERING	Line Speed	F/min	43.1	69.3	138.6
		M/min	13.1	21.1	42.2

CLUTCH SIZE: 23" (58.4 cm) dia. x 4" (10.2 cm) wide, band type, internal expanding.

BRAKE SIZE: (2) - 25" (63.5 cm) dia. 3" (7.6 cm) wide, band type external contracting "full wrap" design.

LOAD DRUMS:

Standard Drum:
FRONT AND REAR: (Crane & Clamshell) REAR: ((Dragline)
18.375" (46.7 cm) P.D. x 13.875" (35.2 cm) long smooth drum. Total wire rope length per drum for 7/8" (22 mm) wire rope is 510.4 ft. (155.6 m) storage or 409 ft. (124.7 m) working length.

FRONT: (Dragline)
18.5" (47 cm) P.D. x 13.875" (35.2 cm) long grooved drum. Total wire rope length per drum for 1" (25 mm) wire rope is 468 ft. (142.6 m) storage or 373.5 ft. (113.8 m) working length.

High-Speed Drum: OPTIONAL
FRONT AND REAR:
19.875" (50.5 cm) P.D. x 13.875" (35.2 cm) long smooth drum. Total wire rope length per drum for 7/8" (22 mm) wire rope is 435.7 ft. (132.8 m) storage or 335.7 ft. (102.3) working length.

Transmission Range			Low	Normal	High
	Gear Ratio		3.217 to 1	2.000 to 1	1.000 to 1
HOISTING: Front Crane & Clam-shell	Line Speed	F/min	97.2	156.4	312.8
		M/min	29.6	47.7	95.3
	Line Pull	lb.	47,550.5	29,562	14,781
		kg.	21,568.9	13,409.3	6,704.7
Front Drag-line	Line Speed	F/min	97.9	157.5	315
		M/min	29.8	48	96
	Line Pull	lb.	47,290	29,400	14,700
		kg.	21,450.7	13,336	6,668
Front High Speed	Line Speed	F/min	105.2	169.2	338.4
		M/min	32.1	51.6	103.1
	Line Pull	lb.	43,912	27,300	13,650
		kg.	19,918	12,383.3	6,191.6
HOISTING: Rear Standard	Line Speed	F/min	97.2	156.4	312.8
		M/min	29.6	47.7	95.3
	Line Pull	lb.	46,191.8	28,717.3	14,358.7
		Kg.	20,952.6	13,026.2	6,513.1
Rear High Speed	Line Speed	F/min	105.2	169.2	338.4
		M/min	32.1	51.6	103.1
	Line Pull	lb.	42,705.7	26,550	13,275
		Kg.	19,371.3	12,043.1	6,021.5
LOWERING: Standard	Line Speed	F/min	150.8	242.6	485.2
		M/min	46	73.9	147.9
High Speed	Line Speed	F/min	163.1	262.4	524.8
		M/min	49.7	80	160

CLUTCH: 28" (71.1 cm) dia. x 4" (10.2 cm) wide, band type internal expanding.

BRAKE: 32.5" (82.5 cm) dia. x 5" (12.7 cm) wide, band type, external contracting hydraulic set, with additional spring set hydraulically released brake lock and external ratchet for locking drum.

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

THIRD DRUM:

Mounts on extension of front shaft to left of main drum. Does not interfere with any machine function or front end attachment. (Optional).

DRUM: 16.125" (40.9 cm) P.D. x 6" (15.2 cm) long. Total wire rope length of 625" (16 mm) wire rope is 212.3 ft. (64.7 m) storage or 263.3 ft. (80.2 m) working length.

Transmission Range		Low	Normal	High
Gear Ratio		3.217 to 1	2.000 to 1	1.000 to 1
Line Speed	F/min	85.2	137	274
	M/min	26	41.8	83.6
Line Pull	lb.	12868	8000	4000
	kg.	5829.2	3624	1812

CLUTCH: 23" (58.4 cm) dia. x 4" (10.1 cm) wide, band type, internal expanding.

BRAKE: 25.5" (64.8 cm) dia. x 3" (7.6 cm) wide, band type, external contracting "full wrap" design

SWING:

CLUTCH: (2) - 26" (66 cm) dia. x 6.25" (15.8 cm) wide, electro-magnetic Magnetorque®. Powered by engine driven alternator.

BRAKE: 18" (45.7 cm) dia. x 2.5' (6.3 cm) wide, band type, external contracting, hydraulic release, spring set.

SWING GEAR: 120 internal cut teeth, 48" (122 cm) P.D.

Transmission Range	Low	Normal	High
Gear Ratio	3.217 to 1	2.000 to 1	1.000 to 1
Swing Speed	3.12 rpm	5.02 rpm	10.04 rpm

FASTENING TO LOWER: P&H roller bearing 61.42" (156 cm) O.D. Swing Circle ® with swing gear integral.

COUNTERWEIGHT: 30,000 lb. (13,608 kg). Removable manually or with optional gantry lowering method. Back stops required.

LOWER MACHINERY

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

CRAWLER

Crawler side frames are extendible and retractable by means of hydraulic cylinders to convert from wide track operating condition to a narrower overall width for travel and transportation. Two banks of valves, one on each end of the car body, control the extension cylinders of each side frame. A valve in the upper diverts fluid from the upper control system to the extension cylinders. Jacks are not needed to extend or retract crawlers. Crawlers designed with quick disconnect feature for individual removal as a unit from axles. Crawler belt tension maintained by automatic spring-loader track tensioner. 10 lower rollers in each frame, with double rolling surfaces, 11.5" (27.9 cm) dia.

CRAWLER DRIVE: Independent travel. Chain drive with chain located on outside of crawler frame.

CRAWLER BRAKES: Spring loaded double acting propel and steering brakes, release automatically under engine power when traveling, set automatically when propelling power is not applied.

STEERING MECHANISM: Sliding jaw clutches, one on each side, control application of propelling power to each crawler. When either side is disengaged, propel brake on that side remains set, thus locking that crawler.

CRAWLER SHOES: Total number both sides 102. Standard width 30" (76 cm) flat forged. 36" width (91 cm) flat forged (opt. extra).

ATTACHMENTS

STANDARD BOOM:

Two piece 40' (12.1 m) long, open throat lattice type tubular boom consisting of a 20' (6.1 m) long tapered base section and a 20' long standard tapered tip section. All boom sections are pin connected, have a 50" x 50" (127 cm x 127 cm) cross section and complete with suspension cable assemblies. Sections are fabricated from seamless tubular T-1 steel and reinforced with contour-cut tubular lacings for strongest welded joints.

STANDARD TIP: 20' (6.1 m) long section has 4 offset boom point sheaves 18.625" (47.3 cm) P.D. with roller bearings. Boom extendible to 180' (54.6 m).

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

JIB: 20' (6.1 m) long jib, open throat lattice type, two equal tapered sections, pin connected, having a 22" x 24" (56 cm x 61 cm) cross section and with single 17.375" (44.1 cm) P.D. jib point sheave, compression strut and guy cables assemblies. Extendible to 60' (18.3 m). Extends reach to 203' (61.9 m). For lifts not exceeding 22,000 lb. (9979 kg). Optional.

JIB INSERT SECTIONS:
10' (3.1 m) jib insert with cable assemblies.......... optional
20' (6.1 m) jib insert.......... optional

MID-POINT SUSPENSION: Required when boom length is 170' (51.8 m) or longer.

BOOM HOIST REEVING: 10 parts of line 3/4" (19 mm) wire rope.

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

WIRE ROPE GUIDE ROLLERS: Use as required to eliminate cable interference.

SHEAVE AND DRUM TO WIRE ROPE RATIOS: Pitch diameter.

	Sheave to Wire Rope	Drum to Wire Rope
Boom Hoist	17.16 to 1	18.33 to 1
Third Drum	———	25.8 to 1

	Front		Rear	
	Sheave to Wire Rope	Drum to Wire Rope	Sheave to Wire Rope	Drum to Wire Rope
Crane	21.29 to 1	21 to 1	18.86 to 1	21 to 1
Clamshell	21.29 to 1	21 to 1	21.29 to 1	21 to 1
Dragline	———	18.5 to 1	18.625 to 1	21 to 1
High Speed Crane	21.29 to 1	22.7 to 1	18.86 to 1	22.7 to 1
High Speed Clamshell	21.29 to 1	22.7 to 1	21.29 to 1	22.7 to 1
High Speed Dragline	———	———	18.625 to 1	22.7 to 1

HOOK BLOCKS:

Block Capacity	Number Sheaves	Wire Rope Size	Weight	Wire Rope to Sheave Ratio	Part No.
22,000 lbs. (9979 kg)	1	.75	350 lbs. (158.8 kg)	16.66 to 1	8U7-D4 (Jib-opt.)
52,500 lbs. (23,814 kg)	1	.875	575 lbs. (260.8 kg)	18.7 to 1	8U7-D10 (Std.)
87,500 lbs. (39,690 kg)	2	.875	840 lbs. (381 kg)	20.86 to 1	8U7-D24 (Opt.)
105,000 lbs. (47,628 kg)	3	.875	2220 lbs. (1007 kg)	24.4 to 1	8U7-D71 (Opt.)
140,000 lb. (63,504 kg)	4	.875	1820 lb. (825.5 kg)	20.86 to 1	8U7-D26 (Opt.)
14,500 lbs. (6577 kg)	Weighted Hook		364 lbs. (165:1 kg)	——	8U7-D503 (Jib-opt.)

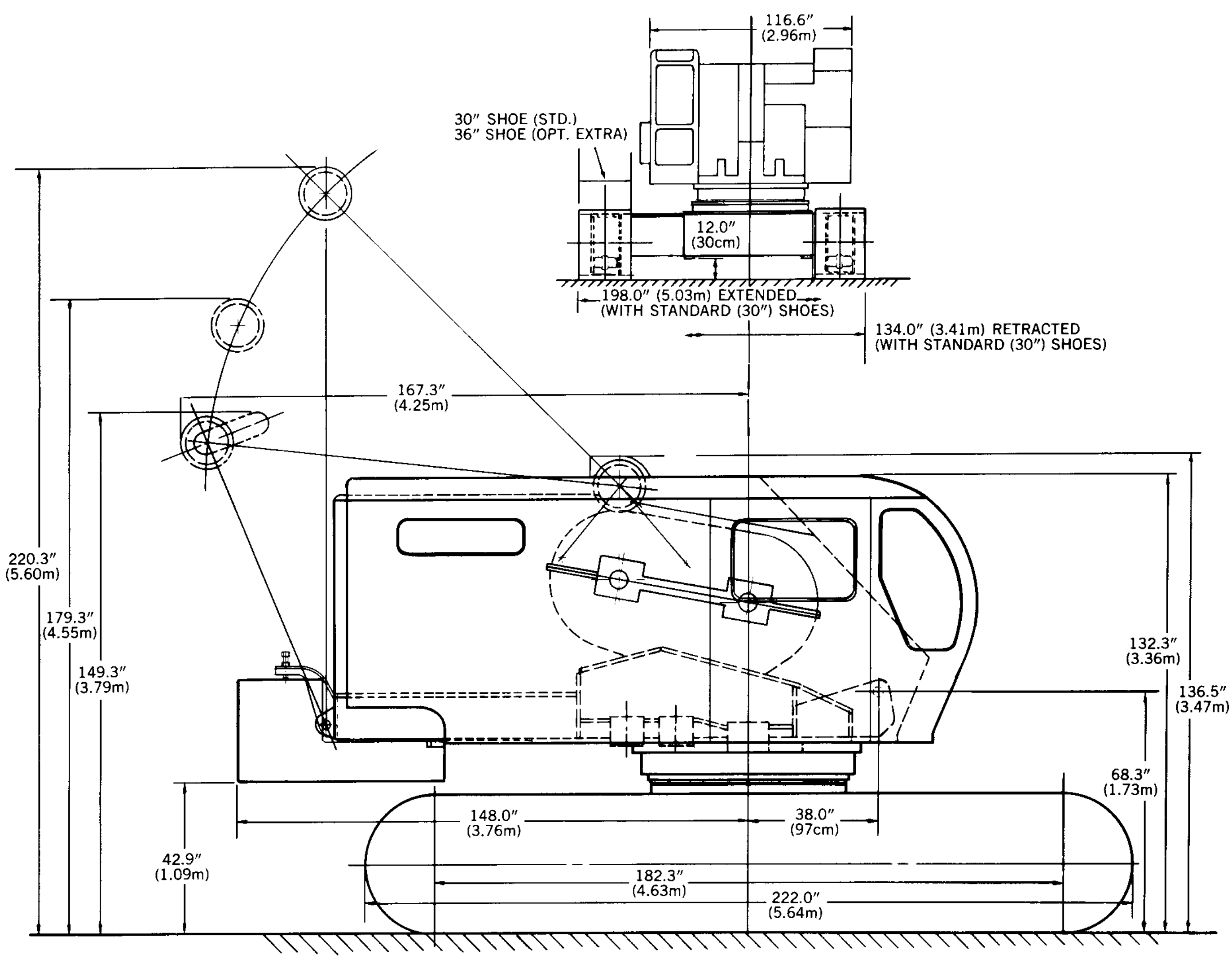
WEIGHTS:
Upper machine — 38,308 lb. (17,376.5 kg)
Gantry — 1742 lbs. (790.2 kg)
Counterweight — 30,000 lbs. (13,608 kg)
Boom:
Base — 1722 lbs. (781.1 kg)
Inserts — 10 ft. (3 m) — 625 lbs. (283.5 kg)
20 ft. (6.1 m) — 1000 lbs. (453.6 kg)
30 ft. (9.1 m) — 1405 lbs. (637.3 kg)
50 ft. (15.2 m) — 2180 lb. (988.8 kg)
Tip — 3076 lbs. (1395.3 kg)
Jib:
Base — 333 lbs. (151 kg)
Inserts — 10 ft. (3 m) — 187 lbs. (84.8 kg)
20 ft. (6.1 m) — 337 lbs. (152.9 kg)
Tip — 395 lbs. (179.2 kg)
Lower machine with std. shoes — 59,000 lb. (26,762 kg)
Carbody with axles — 19,164 lb. (8,692.8 kg)
Crawler side frame (each) —
w/30" flat forged shoes — 19.918 lb. (9,034.8 kg)
w/36" flat forged shoes — 21,730 lb. (9,844.5 kg)

AVERAGE GROUND BEARING PRESSURES:
Machine w/30" flat forged shoes — 10.6 psi (0.75 kg/cm^2)
w/36" flat forged shoes — 9.1 psi (0.64 kg/cm^2)

PERFORMANCE:

Transmission Range	Low	Normal	High
Gear Ratio	3.217 to 1	2.000 to 1	1.000 to 1
Travel Speed	.84 mph (1.34 kph)	1.35 mph (2.16 kph)	2.7 mph (4.31 kph)
Gradeability%	32.4%	20.2%	10.1%

General Dimensions



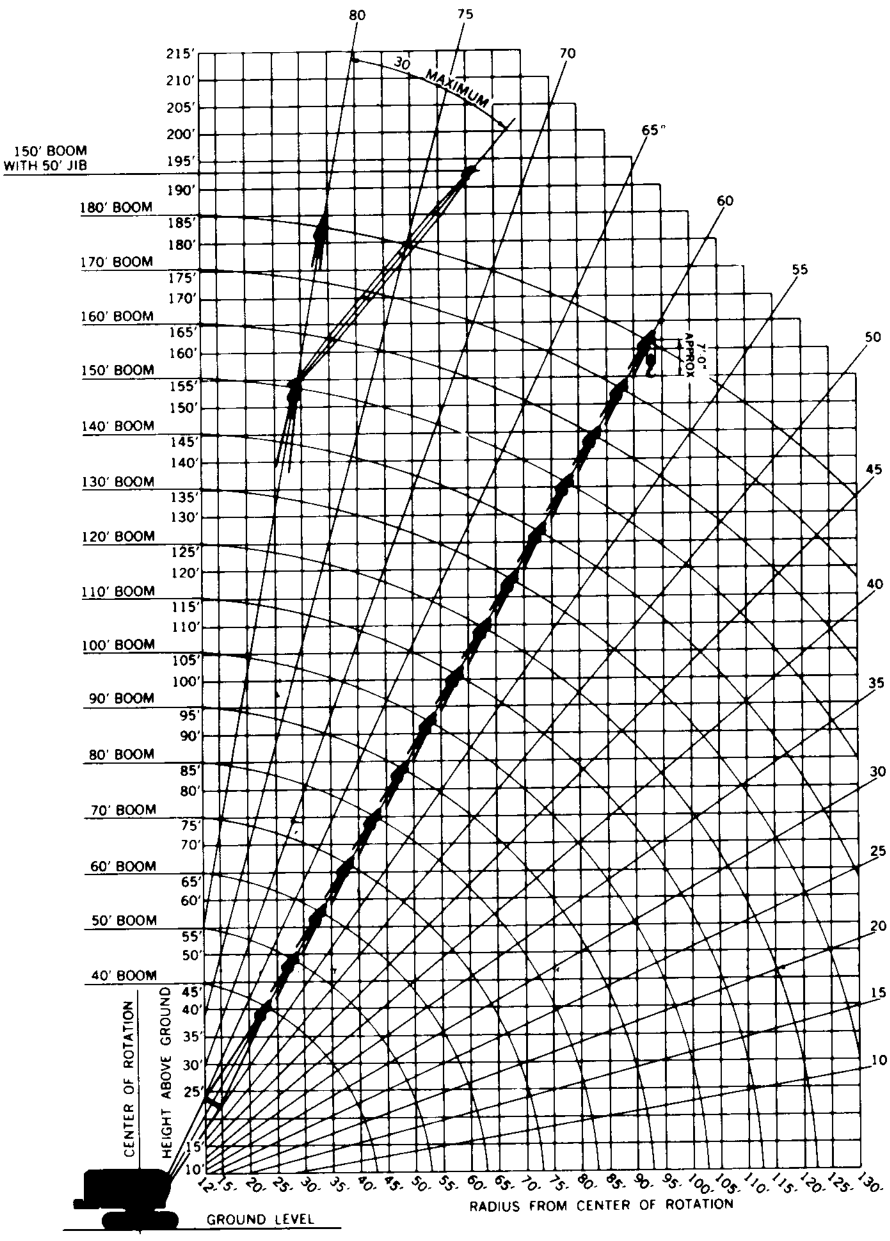
NOTE: All designs, specifications and components of the equipment described above are subject to change at the manufacturer's sole discretion at any time without advance notice. Data published herein is informational in nature and shall not be construed to warrant suitability of the machine for any particular purpose as performance may vary with the conditions encountered. The only warranty applicable is our standard written warranty for this machine. Manufactured and sold in conformance with U. S. Department of Commerce Commercial Standard CS-90-58.

Harnischfeger
P&H
milwaukee, wisconsin. 53201

Address inquiries to:

P&H® 670-WLC

70-ton Crawler Crane
150' Boom plus 50' Jib
180' boom



Your versatile P & H 670-WLC adapts readily to your special operating needs. This brochure contains these crane rating charts:

Standard Boom:

1 • 30,000 lbs. counterweight
  • Crawlers extended
  • 40 to 180 foot booms

2 • 30,000 lbs. counterweight
  • Crawlers retracted
  • 40 to 150 foot booms

Jib Ratings

THIS P&H MODEL 670-WLC MEETS THE REQUIREMENTS OF ANSI B30.5-1968. BOOM STRUCTURE HAS BEEN TESTED PER SAE J987. MACHINE STABILITY HAS BEEN TESTED PER SAE J765.

Standard
50" wide x 50" deep
Boom

crane lifting capacities working ranges

PCSA CLASS 12-271

1 rated crane loads in pounds — main boom (50" w. x 50" d.) in . . . .

Oper. Rad. Ft.	Angle	40 Ft. Boom Boom Pt. El.	40 Ft. Boom Rating Lbs.	Angle	50 Ft. Boom Boom Pt. El.	50 Ft. Boom Rating Lbs.	Angle	60 Ft. Boom Boom Pt. El.	60 Ft. Boom Rating Lbs.	Angle	70 Ft. Boom Boom Pt. El.	70 Ft. Boom Rating Lbs.	Angle	80 Ft. Boom Boom Pt. El.	80 Ft. Boom Rating Lbs.	Angle	90 Ft. Boom Boom Pt. El.	90 Ft. Boom Rating Lbs.	Angle	100 Ft. Boom Boom Pt. El.	100 Ft. Boom Rating Lbs.	Angle	110 Ft. Boom Boom Pt. El.	110 Ft. Boom Rating Lbs.
12	78	46.4	140,000																					
15	74	45.6	106,000	77	55.9	105,700																		
20	66	43.9	74,300	71	54.6	74,300	74	65.0	74,300	77	75.3	74,300	78	85.5	74,200									
25	58	41.2	52,500	65	52.6	52,500	69	63.4	52,400	72	74.0	52,400	75	84.4	52,200	76	94.7	52,100	78	104.9	52,000	79	115.1	51,800
30	49	37.4	40,300	58	49.9	40,300	64	61.3	40,200	68	72.2	40,100	71	82.9	40,000	73	93.4	39,800	75	103.7	39,700	76	114.1	39,500
35	38	32.0	32,600	51	46.3	32,500	59	58.5	32,400	64	69.9	32,300	67	80.9	32,100	70	91.7	31,900	72	102.3	31,800	74	112.7	31,600
40	24	23.3	27,200	43	41.6	27,100	53	55.1	27,000	59	67.2	26,900	63	78.6	26,700	66	89.7	26,500	69	100.5	26,400	71	111.2	26,200
45				34	35.1	23,200	47	50.8	23,000	54	63.8	22,900	59	75.9	22,700	63	87.3	22,500	66	98.4	22,400	68	109.3	22,200
50				21	25.2	20,200	39	45.3	20,000	49	59.8	19,800	55	72.6	19,600	59	84.5	19,400	63	96.0	19,300	65	107.1	19,100
60							19	26.8	15,700	36	48.6	15,500	45	64.1	15,300	51	77.5	15,100	56	90.0	14,900	59	101.9	14,700
70										18	24.4	12,600	34	51.7	12,300	43	68.0	12,100	48	82.1	11,900	53	95.1	11,700
80													17	29.9	10,200	32	54.6	10,000	40	71.8	9,800	46	86.5	9,600
90																16	31.2	8,400	30	57.3	8,200	38	75.3	8,000
100																			15	32.5	6,950	29	59.9	6,750
110																						14	33.8	5,750
120																								

WARNING:
WHEN BOOM IS EQUIPPED WITH JIB, MAIN HOOK RATING MUST BE REDUCED TO COMPENSATE FOR JIB ATTACHMENT WEIGHT.

Jib Length	20 Ft.	30 Ft.	40 Ft.	50 Ft.
Deduct — Lbs.	1,500	1,500	2,000	2,500

WARNING: Welding or other repair to tubular steel booms may weaken the structure. See your P & H dealer for authorized boom repair service. Unauthorized repair will void all warranties.

2 rated crane loads in pounds — main boom (50" w. x 50" d.) in. . . . . . .

Oper. Rad. Ft.	40 Ft. Boom Angle	40 Ft. Boom Rating Lbs.	50 Ft. Boom Angle	50 Ft. Boom Rating Lbs.	60 Ft. Boom Angle	60 Ft. Boom Rating Lbs.	70 Ft. Boom Angle	70 Ft. Boom Rating Lbs.	80 Ft. Boom Angle	80 Ft. Boom Rating Lbs.	90 Ft. Boom Angle	90 Ft. Boom Rating Lbs.	100 Ft. Boom Angle	100 Ft. Boom Rating Lbs.	110 Ft. Boom Angle	110 Ft. Boom Rating Lbs.	120 Ft. Boom Angle	120 Ft. Boom Rating Lbs.	130 Ft. Boom Angle	130 Ft. Boom Rating Lbs.
12	78	98,000																		
15	74	68,700	77	68,700																
20	66	45,400	71	45,400	74	45,300	77	45,200	78	45,000										
25	58	33,600	65	33,600	69	33,400	72	33,300	75	33,100	76	32,900	78	32,800	79	32,600				
30	49	26,400	58	26,400	64	26,200	68	26,100	71	25,900	73	25,700	75	25,500	76	25,400	77	25,100	78	25,000
35	38	21,700	51	21,600	59	21,400	64	21,300	67	21,100	70	20,800	72	20,700	74	20,500	75	20,300	76	20,200
40	24	18,200	43	18,100	53	18,000	59	17,800	63	17,600	66	17,400	69	17,200	71	17,000	72	16,800	74	16,700
45			34	15,600	47	15,400	54	15,200	59	15,000	63	14,800	66	14,600	68	14,400	70	14,200	72	14,100
50			21	13,600	39	13,400	49	13,200	55	13,000	59	12,700	63	12,600	65	12,400	67	12,200	69	12,100
60					1,9	10,500	36	10,300	45	10,000	51	9,800	56	9,650	59	9,450	62	9,200	64	9,100
70							18	8,300	34	8,000	43	7,750	48	7,600	53	7,400	57	7,150	59	7,050
80									17	6,600	32	6,300	40	6,100	46	5,900	51	5,650	54	5,550
90											16	5,250	30	5,000	38	4,750	44	4,550	48	4,400
100													15	4,150	29	3,900	37	3,650	42	3,500
110															14	3,250	27	2,950	35	2,750
120																	14	2,400	26	2,200

with 30,000 lbs. counterweight

. . . 360° work areas with crawlers fully extended

Oper. Rad. Ft.	Angle	120 Ft. Boom Boom Pt. El.	120 Ft. Boom Rating Lbs.	Angle	130 Ft. Boom Boom Pt. El.	130 Ft. Boom Rating Lbs.	Angle	140 Ft. Boom Boom Pt. El.	140 Ft. Boom Rating Lbs.	Angle	150 Ft. Boom Boom Pt. El.	150 Ft. Boom Rating Lbs.	Angle	160 Ft. Boom Boom Pt. El.	160 Ft. Boom Rating Lbs.	Angle	170 Ft. Boom Boom Pt. El.	170 Ft. Boom Rating Lbs.	Angle	180 Ft. Boom Boom Pt. El.	180 Ft. Boom Rating Lbs.	Oper. Rad. Ft.
12																Midpoint suspension (center hitch) required. Attach 80 ft. up boom from boom foot pin.						12
15					Boom lengths 80 ft. and above, locate jib backstay anchor at top end of second insert below boom tip section.																	15
20																						20
25																						25
30	77	124.3	39,300	78	134.5	39,200																30
35	75	123.1	31,400	76	133.4	31,300	77	143.7	31,100	78	153.9	30,900										35
40	72	121.7	26,000	74	132.1	25,900	75	142.5	25,600	76	152.8	25,400	77	163.1	25,400	78	173.3	25,100				40
45	70	120.0	22,000	72	130.6	21,800	73	141.1	21,600	74	151.5	21,400	75	161.9	21,300	76	172.2	21,100	77	182.5	20,900	45
50	67	118.0	18,900	69	128.8	18,800	71	139.4	18,500	72	150.0	18,300	73	160.4	18,200	74	170.9	18,000	75	181.2	17,800	50
60	62	113.3	14,500	64	124.5	14,400	66	135.5	14,100	68	146.4	13,900	69	157.1	13,800	71	167.7	13,600	72	178.3	13,400	60
70	57	107.4	11,500	59	119.2	11,400	62	130.6	11,100	64	141.9	10,900	66	153.0	10,800	67	163.9	10,600	68	174.7	10,400	70
80	51	99.9	9,350	54	112.6	9,200	57	124.7	9,000	59	136.5	8,750	62	148.0	8,650	63	159.3	8,400	65	170.9	8,200	80
90	44	90.6	7,750	48	104.5	7,600	52	117.5	7,350	55	130.0	7,100	57	142.1	7,000	60	153.8	6,750	61	165.3	6,550	90
100	37	78.6	6,500	42	94.5	6,300	47	108.9	6,050	50	122.3	5,800	53	135.1	5,700	56	147.4	5,450	58	159.4	5,250	100
110	27	62.3	5,500	35	81.8	5,300	41	98.2	5,050	45	113.1	4,800	48	126.9	4,650	51	140.0	4,450	54	152.6	4,200	110
120	14	34.9	4,700	26	64.7	4,450	34	84.9	4,200	39	101.8	3,950	43	117.1	3,800	47	131.2	3,600	50	144.7	3,350	120

32R16

WARNING: OPERATION OF THIS EQUIPMENT IN EXCESS OF LOAD RATINGS AND DISREGARD OF INSTRUCTIONS VOIDS THE WARRANTY.

360° work areas with . . . . crawlers fully retracted

Oper. Rad. Ft.	140 Ft. Boom Angle	140 Ft. Boom Rating Lbs.	150 Ft. Boom Angle	150 Ft. Boom Rating Lbs.	Oper. Rad. Ft.
12					12
15					15
20					20
25					25
30					30
35	77	20,000	78	19,700	35
40	75	16,500	76	16,300	40
45	73	13,900	74	13,600	45
50	71	11,800	72	11,600	50
60	66	8,850	68	8,650	60
70	62	6,800	64	6,550	70
80	57	5,300	59	5,050	80
90	52	4,150	55	3,900	90
100	47	3,250	50	3,000	100
110	41	2,500	45	2,300	110
120	34	1,950	39	1,700	120

WARNING: When assembling boom inserts, do not cantilever more than 60 ft. of inserts past point of pendant rope attachment to boom. Relocate point of attachment out on boom as additional inserts are added.

jib ratings, reeving and boom make-up

Maximum Jib (24" W. x 22" D.) Ratings for Lifting Crane Service — Lbs.				
Three-Quarter Inch Dia. P&H Type 4 Wire Rope				
* Use Two Parts of Line for Loads Above 14,500 Lbs.				
Offset Angle Jib to Boom Under Full Load	20 Ft. Jib	30 Ft. Jib	40 Ft. Jib	50 Ft. Jib
10°	22,000*	20,000*	16,000*	12,000
20°	16,000*	14,500	12,000	9,500
30° Max.	13,000	11,000	8,500	7,000
Maximum Jib Ratings for Bucket Service — Lbs.				
* Use Three-Quarter Inch Dia. P&H Type 25 Wire Rope for Loads Above 14,500 Lbs.				
10°	16,500*	16,000*	12,800	9,600
20°	12,800	11,600	9,600	7,600
30° Max.	10,400	8,800	6,800	5,600

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

DRUM SHAFT ASSEMBLY					
Laggings Smooth P.D.	Cable Dia.	Single Layer Drum Cap.	Max. Cable Cap.	*Line Pull	*Line Speed
Front — 19-7/8" Rear — 19-7/8"	7/8" 7/8"	78' 78'	570' 570'	27,500 Lbs. 26,750 Lbs.	162 FPM 162 FPM

*Line pulls and speeds based on single line and first layer of rope and engine at full load speed. Second gear normal operating gear.

MAIN HOIST DRUM RATED LOADS FOR SEVEN-EIGHTHS INCH DIAMETER P&H TYPE 4 WIRE ROPE				
Number of Parts of Main Hoist Reeving	1	2	3	4
Maximum Load — Lbs.	17,500	35,000	52,500	70,000
Number of Parts of Main Hoist Reeving	5	6	7	8
Maximum Load — Lbs.	87,500	105,000	122,500	140,000

MAXIMUM BOOM LENGTH TO LIFT OFF GROUND				
Boom Over	Crawlers Retracted		Crawlers Extended	
	Boom Only	Boom & Jib	Boom Only	Boom & Jib
Side	150	130 + 30	170	150 + 50
Front	150	150 + 50	180	150 + 50

RECOMMENDED WIRE ROPE LENGTHS FOR DRUMS — FT.		
Boom Length Ft.	Main Hoist Drum	Jib Hoist Drum
40	415	235
50	450	290
60	400	350
70	460	380
80	435	410
90	485	440
100	535	470
110	470	500
120	510	530
130	410	560
140	440	585
150	470	615
160	500	620
170	530	620
180	560	

BOOM MAKE UP ARRANGEMENT CHART*			
Base Length = 20'; Tip Length = 20' Inserts: A = 10'; B = 20'; C = 30'; D = 50'			
Boom Length	Boom Make-Up	Boom Length	Boom Make-Up
50'	Base-A-Tip	120'	Base-D-C-Tip
60'	Base-B-Tip	130'	Base-A-C-D-Tip
70'	Base-B-A-Tip	140'	Base-B-C-D-Tip
80'	Base-C-A-Tip	150'	Base-A-B-C-D-Tip
90'	Base-C-B-Tip	160'	Base-B-D-D-Tip
100'	Base-A-B-C-Tip	170'	Base-A-D-B-D-Tip
110'	Base-D-B-Tip	180'	Base-A-D-C-D-Tip
*One specified insert may be replaced by two shorter inserts without reducing load ratings.			

operating instructions printed below and throughout this brochure are for your safety and will contribute to the long life of your P&H 670-WLC

Operating radius is the horizontal distance from center-line of rotation to a vertical line through the center of gravity of the load.

Ratings shown are only for combination of P & H manufactured upper, boom, jib, counterweights, carrier and crawler. Boom backstops are required for all boom lengths. Boom inserts must be arranged as shown in the Boom Make-Up Chart. Standard boom hoist reeving is 10 part line. Gantry must be in raised position for all "crawler extended" ratings. When boom is equipped with jib, main hook ratings must be reduced by 1500 lbs. for 20 ft. or 30 ft. jib; 2000 lbs. for 40 ft. jib; 2500 lbs: for 50 ft. jib. Refer to diagrams for applicable working area.

Ratings shown are based on freely suspended loads and make no allowance for such factors as wind effect on lifted loads, ground conditions, out-of-level, operating speeds or any other condition that could be detrimental to the safe operation of this equipment. The operator, therefore, has the responsibility to judge the existing conditions and reduce lifted loads and operating speeds accordingly. Ratings do not exceed 75% of tipping load as determined by SAE J 765. Deduct weight of hook block(s), slings, cement bucket, and all other load handling accessories from main boom or jib rating shown. Ratings shown are based on 30,000 lbs. counterweight.

WARNING: The wind effect on the lifted load can cause sufficient side load to overstress boom or jib structure. When suspended load will not remain in line with boom, derate chart 25%. We recommend stopping operation when wind is above 30 m.p.h. and tieing off or lowering boom when wind is above 50 m.p.h. When continued operation under windy conditions is necessary, consult factory for special derated load rating chart.

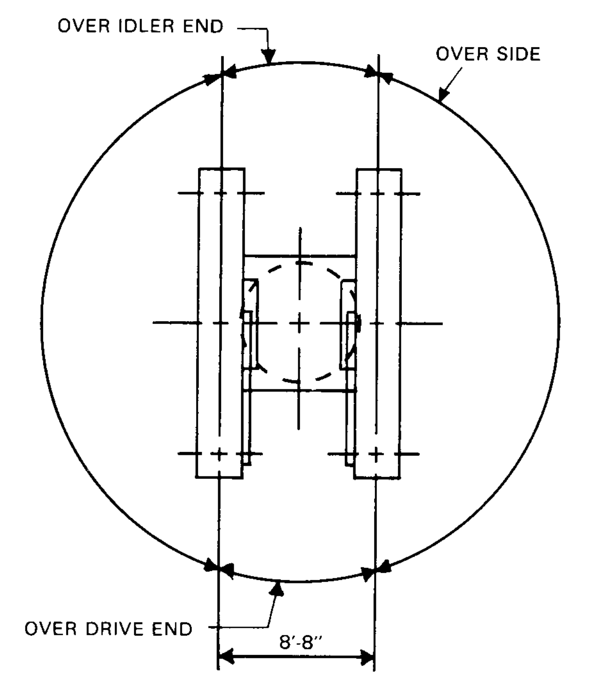
P & H type 4 wire rope: 6 x 25 with filler wire, preformed improved plow steel wire rope 7 x 7 I.W.R.C.

P & H type 25 wire rope: 6 x 25 I.W.R.C., preformed extra improved plow steel wire rope (filler wire).

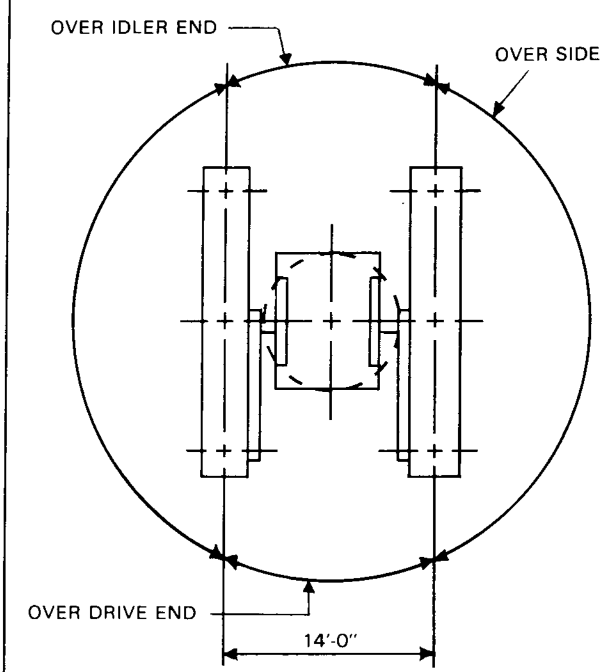
Machine with basic 40 ft. boom length may be traveled with gantry in lowered position.

WARNING: When ¾" diameter P & H type 11 wire rope (18 x 7 non-rotating preformed plow steel wire rope fiber core) is used for jib line on rear drum maximum lifted load including hook must not exceed 12,000 lbs. Do not use dead-end swivels with non-rotating wire rope.

WORK AREAS WITH CRAWLERS FULLY RETRACTED

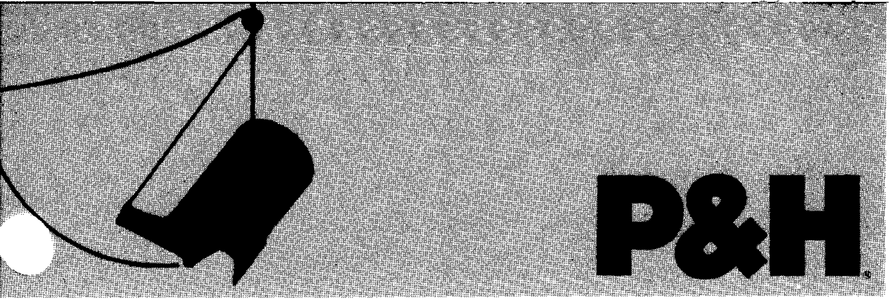


WORK AREAS WITH CRAWLERS FULLY EXTENDED



WARNING

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



670-WLC

DRAGLINE SPECIFICATIONS

P&H DRAGLINE BOOM

Tubular boom using 100,000 lbs. tensile strength alloy steel, gives the strongest boom available with the lowest relative weight.

In dragline operation, this relative lightness permits heavier loads and faster work cycles. Basic boom sections and inserts are designed for greater rigidity, fast assembly and take-down. Open throat and offset boom point design assure excellent performance when converted to heavy-duty crane service.

DRAGLINE WORKING RANGES

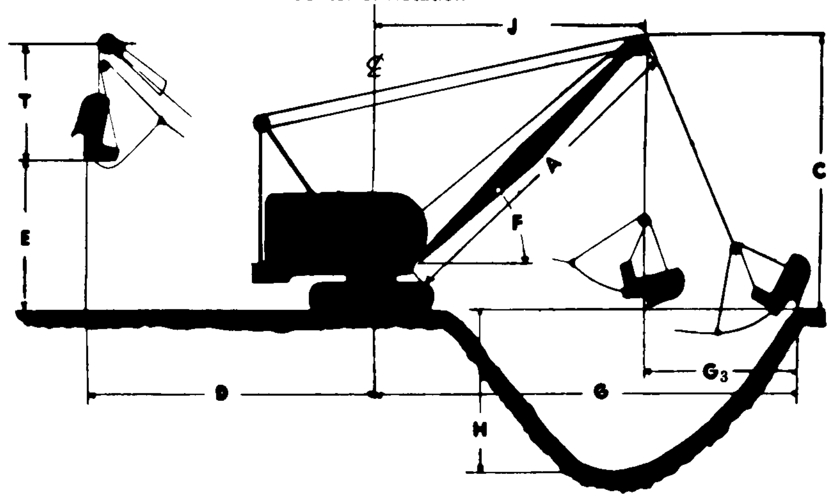
A	Boom Length	40′		50′		60′		70′		80′	
F	Boom Angle	25°	40°	25°	40°	25°	40°	25°	40°	25°	40°
		Ft. & In.	Ft. & In.	Ft. & In.	Ft. & In.	Ft. & In.	Ft. & In.	Ft. & In.	Ft. & In.	Ft. & In.	Ft. & In.
C	Clearance Height of Boom Point	23-7	32-6	27-10	38-11	32-1	45-4	36-4	51-9	40-7	58-2
D	Dumping Radius	40-6	34-11	49-7	42-7	58-7	50-3	67-0	57-11	76-9	65-6
E	Dumping Height (Max.)	9-6	18-5	13-9	24-10	18-0	31-3	22-3	37-8	26-6	44-1
G	Digging Reach (Approx.)	48-0	45-4	58-6	55-2	68-11	65-0	75-2†	74-9	75-2†	75-2†
G_3	Casting Distance (Approx.)	7-6	10-5	8-11	12-7	10-4	14-9	7-6†	16-10	•	9-7†
H	Max. Digging Depth (Approx.)	24-6	21-10	35-0	31-8	45-5	37-2*	46-3*	30-9*	42-0*	24-4*
J	Clearance Radius of Boom Point	41-0	35-5	50-1	43-1	59-1	50-9	68-2	58-5	77-3	66-0
T	Height of Dragline Bucket 2 Cu. Yd.	12-11	12-11	12-11	12-11	12-11	12-11				

DRAGLINE WORKING RANGES (METRIC)

A	Boom Length	12.19 m		15.24 m		18.29 m		21.34 m		24.38 m	
F	Boom Angle	25°	40°	25°	40°	25°	40°	25°	40°	25°	40°
		m	m	m	m	m	m	m	m	m	m
C	Clearance Height of Boom Point	7.18	9.92	8.50	11.86	9.79	13.81	11.07	15.75	12.39	17.71
D	Dumping Radius	12.35	10.64	15.10	12.97	17.86	15.31	20.41	17.65	23.37	19.96
E	Dumping Height (Max.)	2.89	5.62	4.19	7.59	5.49	9.53	6.79	11.48	8.08	13.43
G	Digging Reach (Approx.)	14.63	13.20	17.83	16.81	21.00	19.81	22.90†	22.77	22.90†	22.90†
G_3	Casting Distance (Approx.)	2.28	3.18	2.72	3.84	3.15	4.47	2.29†	5.13	•	2.92†
H	Max. Digging Depth (Approx.)	7.47	6.67	10.67	9.66	13.85	11.31*	14.10*	9.46*	12.80*	7.42*
J	Clearance Radius of Boom Point	12.50	10.80	15.27	13.12	18.00	15.44	20.75	17.80	23.53	20.10
T	Height of Dragline Bucket 1.53 m^3	3.94	3.94	3.94	3.94	3.94	3.94				

† Limited by digging drum cable capacity.
• Prohibited by digging drum cable capacity.
* Limited by hoist drum cable capacity.
Limits are based on one layer of rope on hoist and digging drums.

Center of Rotation



670-WLC

DRAGLINE

GENERAL DATA

BOOM: T-1 steel chords with lattice construction. Pin connected and open throat.
Two equal length sections —
basic length .... 40 ft. (12.19 m)
(Boom dimensions 50" wide x 50" deep.)
Single wide throat boom point sheave mounted on anti-friction bearings .... 23⅞" P.D. (607 mm)
10 part boom hoist reeving.

FAIRLEAD: Two sheave swivel type, with two front guide rollers — anti-friction bearings.

GANTRY: High gantry — telescoping type, 3 position.

BOOM BACKSTOP: Telescoping type with spring bumper (optional).

WORKING WEIGHT: (Without bucket with standard 30" wide flat forged shoes) approx. 125,500 lbs. (56,925 kg) (30,000 lbs. (13610 kg) removable counterweight included in weight)

DRUM SHAFT ASSEMBLY					
Laggings	Pitch Dia.	Cable Dia.	Single Layer Drum Cap.	*Line Pulls	*Line Speeds
Front Digging Drum (Grooved)	18-½"	1"	55 ft.	29521 lbs.	151.5 fpm
Rear Hoisting Drum (Smooth)	19⅞"	⅞"	78 ft.	26750 lbs.	162 fpm.

DRUM SHAFT ASSEMBLY (METRIC)					
Laggings	Pitch Dia.	Cable Dia.	Single Layer Drum Cap.	*Line Pulls	*Line Speeds
Front Digging Drum (Grooved)	471 mm	25.4 mm	16.76 m	13390 kg.	46.2 m/min.
Rear Hoisting Drum (Smooth)	505 mm	21.2 mm	23.75 m	12135 kg	49.4 m/min.

*Line Speeds and Line Pulls based on single part line — normal operating second gear — single wrap of cable on drum and engine at full load speed.

DRAGLINE RATED LOADS IN POUNDS					
Operating Radius in Feet	Boom Lengths in Feet 40	50	60	70	80
35	13500	.....	.....	.....	.....
40	13500	13500	.....	.....	.....
45	.....	13500	13500	.....	.....
50	.....	.....	13400	.....	.....
60	.....	.....	.....	10300	10000
70	.....	.....	.....	8300	8000

DRAGLINE RATED LOADS IN KILOGRAMS					
Operating Radius in Meters	Boom Lengths in Meters 12.19	15.24	18.29	21.34	24.38
10.67	6125	....	....	....	....
12.19	6125	6125	....	....	....
13.72	....	6125	6125	....	....
15.24	....	....	6080	....	....
18.29	....	....	....	4670	4535
21.34	....	....	....	3765	3630

Above ratings are combined weights of bucket and material.
Maximum boom length recommended for dragline .... 80 ft. (24.38 m)
Limit on dragline rating is .... 13500 lbs. (6125 kg)
Ratings are contingent upon machine being equipped with proper P&H boom.
Maximum allowable size of bucket is 2 cu. yds. (1.53 m³).
Crawlers must be in retracted position for dragline ratings.

GROUND PRESSURES		
Shoe Width (inches)	30 Flat Forged	36 Flat Forged
Lbs. per sq. inch	10.7	9.2

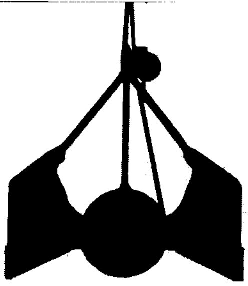
GROUND PRESSURES (METRIC)		
Shoe Width (mm)	762 Flat Forged	914 Flat Forged
Kilos per sq. cm.	0.75	0.64

MEMBER PCSA

NOTE: All designs, specifications and components of the equipment described above are subject to change at the manufacturer's sole discretion at any time without advance notice. Data published herein is informational in nature and shall not be construed to warrant suitability of the machine for any particular purpose as performance may vary with the conditions encountered. The only warranty applicable is our standard written warranty for this machine. Manufactured and sold in conformance with U. S. Department of Commerce Commercial Standard CS-90-58.

Harnischfeger
P&H
milwaukee, wisconsin. 53201

Address inquiries to:



P&H

670-WLC

CLAMSHELL SPECIFICATIONS

P&H CLAMSHELL BOOM

Tubular boom using 100,000 lbs. tensile strength alloy steel, gives the strongest boom available with the lowest relative weight.

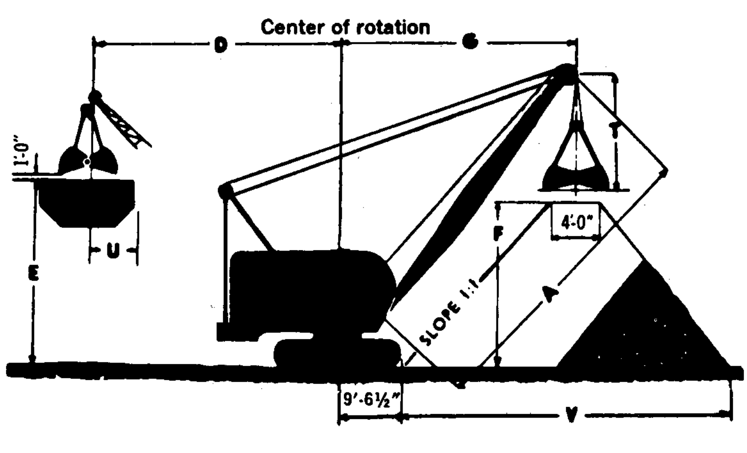
In clamshell operation, this relative lightness permits heavier loads and faster work cycles. Basic boom sections and inserts are designed for greater rigidity, fast assembly and take-down. Open throat and offset boom point design assure excellent performance when converted to heavy-duty crane service.

CLAMSHELL WORKING RANGES

A BOOM	40 Ft. Boom		50 Ft. Boom		60 Ft. Boom		70 Ft. Boom		80 Ft. Boom		90 Ft. Boom	
Operating Radius	Height and ½ Width of Bin		Height and ½ Width of Bin		Height and ½ Width of Bin		Height and ½ Width of Bin		Height and ½ Width of Bin		Height and ½ Width of Bin	
D in Feet	E Ft. & In.	U Ft. & In.	E Ft. & In.	U Ft. & In.	E Ft. & In.	U Ft. & In.	E Ft. & In.	U Ft. & In.	E Ft. & In.	U Ft. & In.	E Ft. & In.	U Ft. & In.
25	26-8	6-3	—	—	—	—	—	—	—	—	—	—
30	23-1	8-11	35-4	6-2	—	—	—	—	—	—	—	—
35	17-10	12-11	31-10	8-3	43-9	6-3	—	—	—	—	—	—
40	—	—	27-4	10-11	40-8	7-9	52-5	6-2	—	—	—	—
45	—	—	21-3	15-1	36-5	9-10	49-4	7-6	61-0	6-2	—	—
50	—	—	—	—	31-2	12-8	45-5	9-2	58-1	7-3	69-6	6-2
55	—	—	—	—	24-2	17-0	40-6	11-3	54-3	8-7	66-10	7-1
60	—	—	—	—	—	—	34-7	14-1	49-9	10-4	63-1	8-3
70	—	—	—	—	—	—	—	—	37-10	15-5	53-9	11-4
80	—	—	—	—	—	—	—	—	—	—	40-9	16-7
Height and Width of Stock Pile	F	V	F	V	F	V	F	V	F	V	F	V
	20-10	45-8	27-11	59-10	35-0	74-0	42-1	88-2	49-2	102-4	56-3	116-6
Radius G	32-4		39-5		46-6		53-7		60-8		67-9	
Height of Clam. Bkt. T	2 Cu. Yd. = 12-0		1¾ Cu. Yd. = 11-6		1½ Cu. Yd. = 11-0		—		—		—	

CLAMSHELL WORKING RANGES (METRIC)

A BOOM	12.19 m Boom		15.24 m Boom		18.29 m Boom		21.34 m Boom		24.38 m Boom		27.43 m Boom	
Operating Radius	Height and ½ Width of Bin		Height and ½ Width of Bin		Height and ½ Width of Bin		Height and ½ Width of Bin		Height and ½ Width of Bin		Height and ½ Width of Bin	
D in Meters	E m	U m	E m	U m	E m	U m	E m	U m	E m	U m	E m	U m
7.62	8.14	1.90	—	—	—	—	—	—	—	—	—	—
9.14	7.05	2.72	10.77	1.88	—	—	—	—	—	—	—	—
10.67	5.44	3.95	9.71	2.54	13.33	1.90	—	—	—	—	—	—
12.19	—	—	8.33	3.33	12.39	2.36	15.95	1.88	—	—	—	—
13.72	—	—	6.51	4.60	11.11	2.99	15.02	2.28	18.60	1.88	—	—
15.24	—	—	—	—	9.50	3.86	13.82	2.79	17.71	2.21	21.20	1.88
16.77	—	—	—	—	7.37	5.18	12.34	3.43	16.52	2.62	20.40	2.16
18.29	—	—	—	—	—	—	10.52	4.29	15.17	3.15	19.23	2.51
21.34	—	—	—	—	—	—	—	—	11.56	4.71	16.38	3.46
24.38	—	—	—	—	—	—	—	—	—	—	12.42	5.06
Height and Width of Stock Pile	F	V	F	V	F	V	F	V	F	V	F	V
	6.38	13.92	8.52	18.24	10.67	22.55	12.83	24.90	14.95	31.21	17.13	35.55
Radius G	9.87		12.03		14.17		16.39		18.50		20.63	
Height of Clam. Bkt. T	1.53 m³ = 3.66 m		1.34 m³ = 3.51 m		1.15 m³ = 3.36 m		—		—		—	



670-WLC CLAMSHELL

GENERAL DATA

BOOM: Tubular T-1 steel chords with lattice construction.
Pin connected and open throat.
Two equal length sections —
basic length .... 40 ft. (12.19 m)
Two boom point sheaves mounted on anti-friction bearings .... 18⅝" P.D. (473 mm)
Third boom point sheave (optional).
10-part boom hoist reeving.

BACKSTOP: Telescoping type with spring bumper (optional).

TAGLINE WINDER: McCaffrey Spring Type No. 648.

GANTRY: High gantry — telescoping type, 3 position.

WORKING WEIGHT: (Without bucket with standard 30" wide flat forged shoes) approx. 125,000 lbs. (56,700 kg) (30,000 lbs. (13610 kg) removable counterweight included in weight)

DRUM SHAFT ASSEMBLY					
Laggings (Smooth)	Pitch Dia.	Cable Dia.	Single Layer Drum Cap.	*Line Pulls	*Line Speeds
Front Digging Drum	19⅞"	⅞"	78 ft.	27500 lbs.	162 fpm.
Rear Hoisting Drum	19⅞"	⅞"	78 ft.	26750 lbs.	162 fpm.

DRUM SHAFT ASSEMBLY (METRIC)					
Laggings (Smooth)	Pitch Dia.	Cable Dia.	Single Layer Drum Cap.	*Line Pulls	*Line Speeds
Front Digging Drum	505 mm	21.2 mm	23.75 m	12475 kg	45.8 m/min.
Rear Hoisting Drum	505 mm	21.2 mm	23.75 m	12135 kg	45.8 m/min.

*Line Speeds and Line Pulls based on single part line — normal operating second gear — single wrap of cable on drum and engine at full load speed.

GROUND PRESSURES		
Shoe Width (Ins.) lbs. per sq. in.	30 Flat Forged 10.6	36 Flat Forged 9.1

GROUND PRESSURES (METRIC)		
Shoe Width (mm) kg. per sq. cm²	762 Flat Forged 0.74	914 Flat Forged 0.63

CLAMSHELL RATED LOADS IN LBS.						
Operating Radius in Feet	Boom Lengths in Feet					
	40	50	60	70	80	90
20	15000	.....	.....	.....	.....	.....
25	15000	15000	.....	.....	.....	.....
30	15000	15000	15000	.....	.....	.....
35	15000	15000	15000	15000	.....	.....
40	.....	15000	15000	15000	15000	.....
45	.....	14100	13900	13700	13500	13300
50	.....	.....	12100	11900	11700	11500
60	.....	.....	.....	9200	9000	8800
70	.....	.....	.....	.....	7200	7000
80	.....	.....	.....	.....	.....	5600

CLAMSHELL RATED LOADS IN KILOGRAMS						
Operating Radius in Meters	Boom Lengths in Meters					
	12.19	15.24	18.29	21.34	24.83	27.43
6.10	6805	....	....	....	....	....
7.62	6805	6805	....	....	....	....
9.14	6805	6805	6805	....	....	....
10.67	6805	6805	6805	6805	....	....
12.19	....	6805	6805	6805	6805	....
13.72	....	6395	6305	6214	6125	6035
15.24	....	....	5490	5400	5310	5215
18.29	....	....	....	4175	4080	3990
21.34	....	....	....	....	3265	3175
24.38	....	....	....	....	....	2540

Above ratings are combined weights of bucket and material.
Maximum boom length recommended for clamshell .... 90 Ft. (27.43 m)
Limit on clamshell rating is .... 15000 Lbs. (6805 kg)
Ratings are contingent upon machine being equipped with proper P&H boom.
Maximum allowable size of bucket is 2 cu. yds. (1.53 m³).
Crawlers must be in retracted position for dragline ratings.

NOTE: In furtherance of our policy of continual product improvement, all designs and specifications are subject to change without advance notice. Data published herein is informational in nature and shall not be construed to warrant suitability of the machine for any particular purpose as performance may vary with the conditions encountered. The only warranty applicable is our standard written warranty for this machine. Manufactured and sold in conformance with U. S. Department of Commerce Commercial Standard CS-90-58.

Harnischfeger
P&H
milwaukee, wisconsin. 53201

Address inquiries to:

D10-373 Litho in U.S.A.

P&H® 670-WLC

70-ton Crawler Crane

wire rope chart

FOR 50"x 50" BOOM

FOR	BOOM LENGTH FT.	WIRE ROPE TYPE NO.	WIRE ROPE DIA. IN.	PARTS OF LINE — CRANE* 1 FT.	2 FT.	3 FT.	4 FT.	5 FT.	6 FT.	7 FT.	8 FT.	DRAG-LINE FT.	CLAM-* SHELL FT.
BOOM HOIST LINE	All	4	3/4	385' — 10 PARTS OF LINE									
BOOM GUYLINES	All			REFER TO PARTS BOOK									
HOIST LINE (FRONT)	40	4	7/8		145	190	235	280	325	370	415		
	50	4	7/8		170	230	285	340	395	450			
	60	4	7/8		200	270	335	400					
	70	4	7/8		230	310	385	460					
	80	4	7/8		260	350	435						
	90	4	7/8		290	390	485						
	100	4	7/8		320	430	535						
	110	4	7/8		350	470							
	120	4	7/8		380	510							
	130	4	7/8		410								
	140	4	7/8		440								
	150	4	7/8		470								
	160	4	7/8		500								
	170	4	7/8		530								
	180	4	7/8		560								
HOIST LINE (REAR)	40	4	7/8									125	
	50	4	7/8									135	
	60	4	7/8									145	
	70	4	7/8									155	
	80	4	7/8									165	
DIGGING LINE	40	4	1									60	
	50	4	1									70	
	60	4	1									80	
	70	4	1									90	
	80	4	1									100	
CLOSING LINE	40	4	7/8										145
	50	4	7/8										165
	60	4	7/8	*EXTRA ROPE LENGTH REQUIRED FOR OPERATING BELOW GROUND LEVEL									185
	70	4	7/8										205
	80	4	7/8										225
	90	4	7/8										245
HOLDING LINE	40	4	7/8										115
	50	4	7/8										135
	60	4	7/8										155
	70	4	7/8										175
	80	4	7/8										195
	90	4	7/8										215
TAGLINE	40-90	12	3/8										70

105N350

CONTINUED

P & H type 4 wire rope: 6 x 25 with filler wire, preformed improved plow steel wire rope, 7 x 7 I.W.R.C.

P & H type 12 wire rope: 6 x 37 with filler wire, preformed improved plow steel wire rope fibre core.

FOR	BOOM LENGTH FT.	WIRE ROPE TYPE NO.	WIRE ROPE DIA. IN.	PARTS OF LINE 20' JIB 1	20' JIB 2	30' JIB 1	30' JIB 2	40' JIB 1	40' JIB 2	50' JIB 1	50' JIB 2	60' JIB 1	60' JIB 2
JIB HOIST (REAR)	40	4	3/4	140	205	160	235						
	50	4	3/4	160	235	180	265	200	290				
	60	4	3/4	180	265	200	295	220	320	235	350		
	70	4	3/4	200	295	220	325	235	350	255	380	275	410
	80	4	3/4	220	325	240	350	255	380	275	410	295	440
	90	4	3/4	240	355	260	380	275	410	295	440	315	470
	100	4	3/4	260	385	275	410	295	440	315	470	335	500
	110	4	3/4	280	415	295	440	315	470	335	500	355	525
	120	4	3/4	300	440	315	470	335	500	355	530	375	555
	130	4	3/4	320	470	335	500	355	530	375	560	395	585
	140	4	3/4	335	500	355	530	375	560	395	585	415	615
	150	4	3/4	355	530	375	560	395	590	415	615		
	160	4	3/4	375	560	395	590	415	620				
	170	4	3/4	395	590	415	620						

FOR	BOOM LENGTH FT.	WIRE ROPE TYPE NO.	WIRE ROPE DIA. IN.	20' JIB		30' JIB		40' JIB		50' JIB		60' JIB	
GUYLINE JIB TO STRUT	Flared Strut	4	3/4	(2) 28'		(2) 37'		(2) 47'		(2) 57'		(2) 67'	
	Std. Strut	4	3/4	51'		70'		89'		109'		129'	

FOR	BOOM LENGTH FT.	WIRE ROPE TYPE NO.	WIRE ROPE DIA. IN.			
GUYLINE STRUT TO BOOM	40	4	3/4	Anchor on Base Section	Std. Strut (1) 90'-0"	Flared Strut (2) 50'-0"
	50	4	3/4		Std. Strut (1) 102'-0"	Flared Strut (2) 60'-0"
	60	4	3/4	20' From Boom Point	Std. Strut (1) 60'	Flared Strut (2) 35'
	70 & 80	4	3/4	30' From Boom Point	Std. Strut (1) 79'	Flared Strut (2) 44'
	90 & 110	4	3/4	40' From Boom Point	Std. Strut (1) 101'	Flared Strut (2) 50'
	100 & 120	4	3/4	50' From Boom Point	Std. Strut (1) 122'	Flared Strut (2) 60'
	130 & Above	4	3/4	70' From Boom Point	Std. Strut (1) 159'	Flared Strut (2) 84'

MEMBER PCSA

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