

# P&H

## CRANE • DRAGLINE • CLAMSHELL

### SPECIFICATIONS

#### UPPER MACHINERY

##### POWER PLANT:

- Gasoline: Waukesha, F554GU, 6 cyl. (with transmission) 127 hp @ 1800 rpm (standard)  
Waukesha, F554GU, 6 cyl. (with torque converter) 144 hp @ 2200 rpm (optional extra)
- Diesel: Cummins, HR61P, 6 cyl. (with transmission) 135 hp @ 1800 rpm (optional extra)  
Cummins, HR61T, 6 cyl. (with torque converter) 150 hp @ 1800 rpm (optional extra)  
General Motors, 6-71, 6 cyl. (with transmission) 135 hp @ 1800 rpm (optional extra)  
Caterpillar, D333T, 6 cyl. (with transmission) 135 hp @ 2200 rpm (optional extra)

**THROTTLE:** Waukesha, General Motors, Cummins and Caterpillar engines — Twist grip on swing lever (standard).  
Twist grip on swing lever in combination with foot throttle (optional extra).

**ANSMISSION:** Three speed Dana (standard). Engine clutch and transmission shifter controls at operator's station.

**TORQUE CONVERTER:** Twin disc — 3 stage (optional with Waukesha and Cummins engines only).

**FUEL TANK:** Capacity — 55 gallons 208 lt.

**CONTROLS:** Power assist hydraulic.

**SWING UNITS:** Swing motion thru two magnetorque units.

**CLUTCHES:** Band type, internal expanding, separate clutch for each machine function.

**BRAKES:** (Hoist and digging) band type — external contracting — full wrap design — with spring set fail safe device.

**BOOM HOIST ASSEMBLY:** Independent internal expanding band type clutch, with automatic brake and planetary lowering. Twin external safety ratchets for locking main drum or planetary drum. Main drum mounted on anti-friction bearings.

Boom hoist line speed (raising) 124.7 fpm 38.01 m/min.  
(lowering) 76.5 fpm 23.32 m/min.

**MAIN DRUMS:** Drums in tandem, mounted on anti-friction bearings (see separate sheets covering attachments for further details).

**THIRD DRUM:** Mounts on extension of front drum shaft to the left of main drum. Does not interfere with any other machine function or front end attachment. (Optional extra.)

**GANTRY:** High gantry, folding type, for use with all attachments.

**COUNTERWEIGHT:** One piece external, pin connected 22,500 lbs. 10,200 kg  
(Removable using two hand operated hydraulic jacks for lowering to carrier deck.)  
Power hydraulic removal available. (Optional extra.)

**TYPE OF FASTENING TO LOWER:** 6 adjustable hook rollers, one double front, two double rear.

**SWING ROLLERS:** 28 rollers, live roller circle.

**SWING GEAR:** Internal cut teeth — 58.8" pitch dia.

**ROTATING SPEED:** 5.02 rpm

**SWING BRAKE:** External band — spring set, hydraulic release.

#### P&H 8 x 4 CARRIER

8 Wheel, 4 Wheel Drive, 12 Tires

**WEIGHT:** Including turret and standard manual type outriggers, with 14:00 x 20 — 18 ply tires approx. 50,356 lbs. 22,045 kg

**FRAME:** Box section frame members of T-1 steel between outrigger housings. Heavily reinforced channel ahead of front outriggers. Removable rear end frame section — standard.)

Metric  
Specs.

**OUTRIGGER HOUSINGS:** Two independent housings, front and rear, pin connected and removable.

**OUTRIGGER BEAMS:** T-1 steel box, full length — reinforced. Jack screw — at beam ends.  
Extended position from center of carrier 10'3" 3.13

**HYDRAULIC OUTRIGGERS:** Total of 8 double acting hydraulic cylinders provide independent horizontal and vertical motion of each beam, solenoid valve controlled — (optional extra).

##### POWER PLANT:

Gasoline: Waukesha, F817G, 6 cyl., 272 hp @ 2400 rpm (standard).

Diesel: Caterpillar, 1673, (Series B) (turbo charged after cooled) 6 cyl., 245 hp @ 2200 rpm (optional extra)  
Cummins, NH220B, 6 cyl., 220 hp @ 2100 rpm (optional extra)  
Cummins, NH250B, 6 cyl., 250 hp @ 2100 rpm (optional extra)  
G.M., 6-71N, 6 cyl., 228 hp @ 2100 rpm (optional extra)

##### CLUTCH:

Lipe-Rollway — 15" — single plate — for Waukesha and Cummins.  
Lipe-Rollway — 14" — 2DPB — double plate — for Caterpillar and G.M., 6-71N.

##### TRANSMISSIONS:

For Waukesha F-817G, Cat. 1673, G.M. 6-71N, Cummins NH220B:

Main — Fuller 5H740T — 5 speed forward, 1 reverse.

Auxiliary — Fuller 4B75 — 4 speed.

For Cummins NH250B:

Main — Fuller 5H740T — 5 speed forward, 1 reverse.

Auxiliary — Fuller 4B75 — 4 speed.

**BRAKES — SERVICE:** Bendix-Westinghouse, front — Maxi Brakes rear. Air on all eight wheels. Shoe type 1,292 sq. in.

**FRONT AXLES:** Shuler, Model FTCS-34L.

**REAR AXLE UNIT:** Timken-Detroit Model SPR250 planetary axle. Single reduction at axle center and planetary drive at wheel hub to four sets of dual wheels with inter-axle differential.

**SUSPENSION:** Solid bogie mounting, with torque rods — front and rear.

**STEERING:** Garrison dual hydraulic power steering with Ross TE-72671 steering gear.\* Steering wheel diameter 21"

**RADIATOR:** Vertical flat tube and fin type core, thermostatic temperature control. Cooling system capacity 69 quarts 6

**FUEL TANK CAPACITY:** (Siphon proof fuel tank, optional extra.) 75 gallons

**TIRES:** Twelve — 14:00 x 20 — 18 ply (standard).

**CAB:** Steel — one man type — offset left side of engine — safety glass.

**LIGHTS:** Dual headlights, tail lights, stop lights, directional signal lights front and rear, license plate lights, clearance lights on outrigger boxes and truck cab. (Clearance lights also furnished on crane cab.) Reflectors on front and rear. All rear lights recessed in frame, also license plate bracket. 12 volt electrical system.

**EQUIPMENT:** Front bumper, full fenders, skirts, running boards, hood, rigging compartment, frame decking, leatherette cushion seat, 12 volt battery, horn, rear view mirror, air pressure operated windshield wiper, air compressor reserve air tank with hose extension and tire inflating valve, illuminated instrument panel, with speedometer, ammeter, oil pressure gauge, fuel gauge, air pressure gauge, water temperature indicator, low air pressure indicator light, tachometer, towing hooks front only, dash mounted air brake valve, tools and accessories including two hydraulic jacks for truck use and counterweight removal and a set of four aluminum outrigger floats. (Note) One only hydraulic jack is furnished when machine is equipped for power removal of counterweight.



Manufactured and sold in conformance with U.S. Department of Commerce Commercial Standard CS90.58.  
Harnischfeger Corporation reserves the right to make changes in specifications without advance notice.  
Data published herein is statistical and for information only. Performance may vary with the conditions encountered.

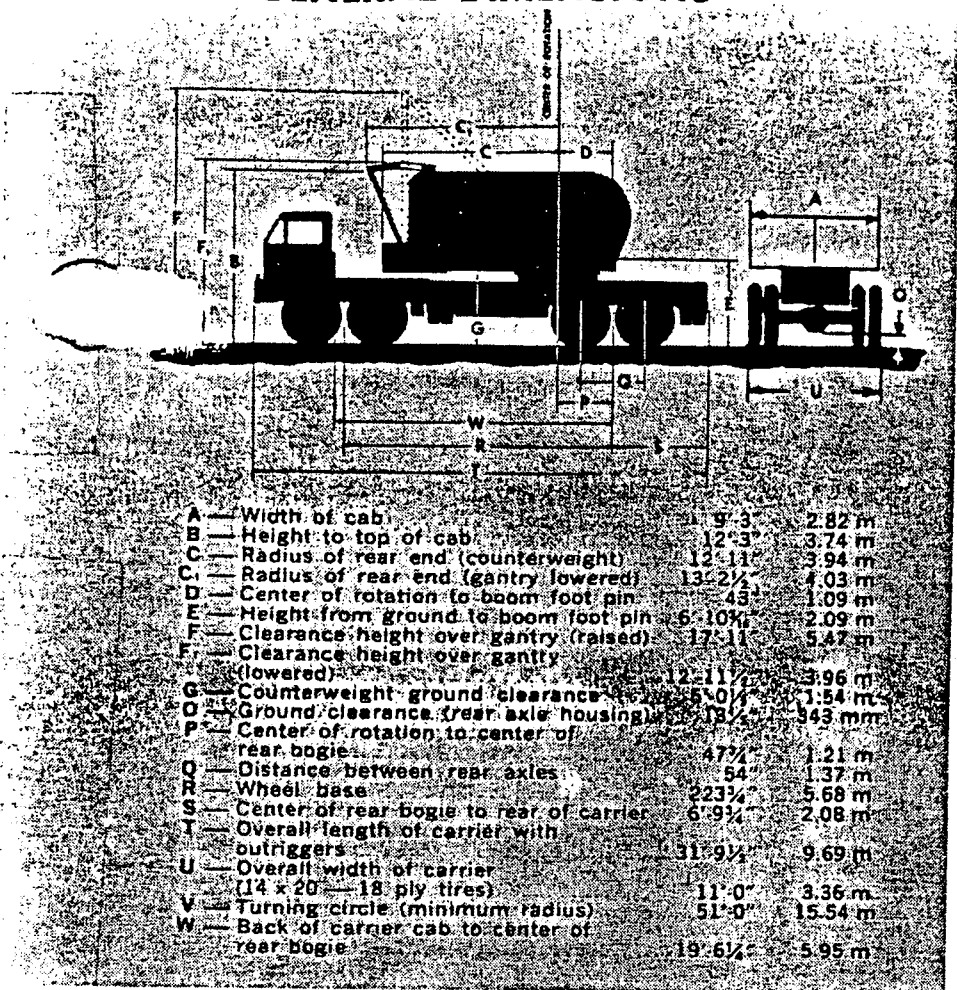
Address inquiries to:

## HARNISCHFEGER

Milwaukee, Wisconsin 53246



# GENERAL DIMENSIONS



## UPPER MACHINERY

### POWER PLANT:

**Gasoline:** Waukesha, F554GU, 6 cyl. (with transmission) 1800 rpm (standard)  
Waukesha, F554GU, 6 cyl. (with torque converter) @ 2200 rpm (optional extra)

**Diesel:** Cummins, HR61P, 6 cyl. (with transmission) 1800 rpm (optional extra)  
Cummins, HR61T, 6 cyl. (with torque converter) @ 1800 rpm (optional extra)  
General Motors, 6-71, 6 cyl. (with transmission) @ 1800 rpm (optional extra)  
Caterpillar, D333T, 6 cyl. (with transmission) 1800 rpm (optional extra)

**THROTTLE:** Waukesha, General Motors, Cummins and C engines — Twist grip on swing lever (standard).  
Twist grip on swing lever in combination with foot throttle (optional extra).

**TRANSMISSION:** Three speed Dana (standard). Engine clutch transmission shifter controls at operator's station.

**TORQUE CONVERTER:** Twin disc — 3 stage (optional with Waukesha and Cummins engines only).

**FUEL TANK:** Capacity — 5

**CONTROLS:** Power assist hydraulic.

**SWING UNITS:** Swing motion thru two magnetorque units.

**CLUTCHES:** Band type, internal expanding, separate clutch for each machine function.

**BRAKES:** (Hoist and digging) band type — external control, full wrap design — with spring set fail safe device.

**BOOM HOIST ASSEMBLY:** Independent internal expanding band clutch, with automatic brake and planetary lowering. Twin safety ratchets for locking main drum or planetary drum mounted on anti-friction bearings.

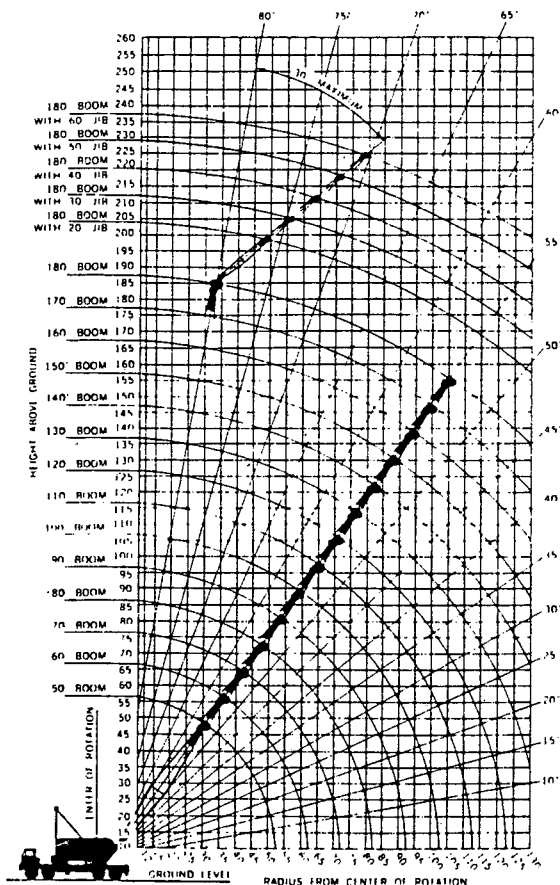
Boom hoist line speed (raising) 1

# P&H

## CRANE SPECIFICATIONS

PCSA CLASS 12-381

### 70 TON TRUCK CRANE



#### DRUM SHAFT ASSEMBLY

Lagings Smooth P.D.	Cable Dia.	Max. Cable Capacity	*Line Pull	*Line Speed
Front — 18 1/4"	7/8"	560 Ft.	22700 Lbs.	166 FPM
Rear — 18 1/4"	3/4"	770 Ft.	22200 Lbs.	165 FPM

Line pulls and speeds based on single line and first layer of rope and engine at full load speed.

#### P&H CRANE BOOM

P&H built, tubular T-1 steel chords, lattice-type all-welded construction. This provides greater strength and added rigidity against twisting strains at a minimum weight. In crane operation, this relative lightness permits greater boom lengths and higher capacities at ex-

tended radii. Basic boom sections and inserts are designed for greater rigidity, fast assembly and take-down. Open throat and offset boom point is the most efficient design for heavy lifting with multiple reeving.

#### HOIST REEVING

Number of parts of Main Hoist Reeving	1	2	3	4
Maximum Load—Lbs.	17500	35000	52500	70000
Number of parts of Main Hoist Reeving	5	6	7	8
Maximum Load—Lbs.	87500	105000	122500	140000

#### MAXIMUM JIB RATINGS — LBS.

OFFSET ANGLE JIB TO BOOM UNDER FULL LOAD	20 Ft. Jib	30 Ft. Jib	40 Ft. Jib	50 Ft. Jib	60 Ft. Jib
10°	22000	20000	16000	12000	8000
20°	16000	14500	12000	9500	7000
30° Max.	13000	11000	8500	7000	6000

Jib crane rating at any radius from center of rotation is the same as crane rating shown in table for main boom when operated at that radius but not to exceed maximum jib ratings shown. For bucket ratings on jib deduct 20% from jib ratings. Maximum jib operating radius not to exceed length of main boom on which it is being used. Use of outriggers recommended when boom is equipped with jib.

#### MAXIMUM BOOM LENGTH TO LIFT OFF GROUND

	WITH OUTRIGGERS		WITHOUT OUTRIGGERS	
	Boom Only	Boom & Jib	Boom Only	Boom & Jib
Side	180	180 + 40	136	100 + 30
Rear	180	180 + 60	140	110 + 30

#### WEIGHT OF LOAD HANDLING ACCESSORIES

Single Sheave Hook Block	460 Lbs.
Four Sheave Hook Block	1820 Lbs.
Slings	200 Lbs.
Clamshell or Dragline Bucket	Depends on size and make

Backstops recommended for all boom lengths. At radii and boom lengths where no ratings are shown on plate, operation is not intended or approved. Ratings are based upon freely suspended loads and machine standing on firm, level, uniformly supporting surface. Safe loads depend upon ground conditions, boom lengths, radius of operation, and proper handling, all of which must be taken into account by the user. Ratings are contingent upon machine being equipped with proper boom.

8'  
16'  
22'

# 670-TC

CRANE

## GENERAL DATA

**BOOM:** Tubular T-1 steel chords (50" x 50" chordal dimension) lattice construction.  
 Basic length, pin connected in two equal sections 40 ft.  
 Open throat with four boom point sheaves on offset boom point on anti-friction bearings — pitch diameter 18 1/2"  
 10 part boom hoist reeving standard, readily convertible to 8 parts within rating chart limitations.  
 Roller type boom point sheave guard, (optional extra).

**HOOK BLOCK** 25 ton  
 Single sheave with swivel hook and 3 part hoist line standard. Additional parts of line optional extra.

**POWER CONTROLLED LOAD LOWERING:** Planetary device for controlling load lowering speed with engine. Available for either or both front and rear main hoist drums (optional extra).

**THIRD HOIST DRUM:** Mounted on extension of main front drum shaft — optional extra.

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

**GANTRY:** High gantry — folding type (standard).

**WORKING WEIGHT:** (including block) 109,300 lbs.  
 (Counterweight included in working weight and removable 22,500 lbs.)

Oper. Rad. Ft.	40 Ft. Boom Over Side	40 Ft. Boom Over Rear	50 Ft. Boom Over Side	50 Ft. Boom Over Rear	60 Ft. Boom Over Side	60 Ft. Boom Over Rear	70 Ft. Boom Over Side	70 Ft. Boom Over Rear	80 Ft. Boom Over Side	80 Ft. Boom Over Rear	90 Ft. Boom Over Side	90 Ft. Boom Over Rear	100 Ft. Boom Over Side	100 Ft. Boom Over Rear
12	82400	96500	58800	69200										
15	59000	69400	39300	46600	39100	46500	38900	46200						
20	39500	46800	29100	34800	29000	34600	28700	34300	28500	34100				
25	29400	35000	21000	25000	20700	24700	20400	24200	20100	23800	20000	23500	19800	23300
30	23100	27700	16700	20000	16500	19700	16300	19400	16000	19100	15700	18800	15400	18500
35	19000	22800	13700	16500	13500	16300	13200	16000	12800	15600	12500	15300	12200	15000
40	16000	19300	11600	14000	11400	13800	11200	13600	11000	13400	10800	13200	10600	13000
45														
50														
60														
70														
80														
90														
100														

WITHOUT OUTRIGGERS								
Oper. Rad. Ft.	90 Ft. Boom		100 Ft. Boom		110 Ft. Boom		120 Ft. Boom	
	Over Side	Over Rear	Over Side	Over Rear	Over Side	Over Rear	Over Side	Over Rear
12	.....	.....	.....	.....	.....	.....	.....	.....
15	.....	.....	.....	.....	.....	.....	.....	.....
20	.....	.....	.....	.....	.....	.....	.....	.....
25	28200	33800	27900	33500				
30	21900	26500	21600	26200	21500	26100	21300	25900
35	17700	21500	17400	21200	17300	21100	17000	20900
40	14600	18000	14300	17600	14200	17600	14000	17300
45	12300	15300	12000	14900	11900	14900	11700	14600
50	10500	13100	10200	12800	10100	12700	9850	12500
60	7900	10100	7600	9750	7500	9650	7200	9400
70	6100	7950	5750	7600	5650	7500	5400	7250
80	4800	6400	4450	6050	4350	5900	4050	5650
90	3850	5250	3450	4900	3300	4750	3050	4450
100	.....	.....	2750	4050	2550	3800	2250	3550

Operating radius is horizontal distance from centerline of rotation to a vertical line through the gravity center of the load. Gross crane ratings shown are for units mounted on P&H crane carrier with dual front and rear axles and do not exceed 85% of tipping loads. Ratings at 25 ft. or less with outriggers are based on strength of material. The crane ratings include weight of hook, block, slings and all other load handling accessories. Ratings with outriggers are based on outriggers extended to a fulcrum point 123" from center of carrier. Ratings without outriggers depend upon proper inflation, capacity, and condition of tires.

Gantry must be in raised position for all conditions except as follows: Crane operation at rated capacity with gantry lowered is allowable with boom lengths 70 ft. or less, at working angles 30° or more above horizontal. Standard boom hoist reeving: 10 part line. Ratings are based on counterweight of 22,300 lbs. Center hitch required for boom lengths 170 ft. and over. Ratings shown are based upon boom insert arrangement shown in the care and operation manual.

When boom is equipped with jib, main hook ratings should be reduced by 1500 lbs. for 20 ft. or 30 ft. jib; 2000 lbs. for 40 ft. jib and 2500 lbs. for 50 ft. jib, and 3000 lbs. for 60 ft. jib.

Ratings on outriggers apply to lifts over sides and rear only. Boom and jib length combinations greater than 200 ft. require front bumper counterweight.

## RATED CRANE LOADS IN POUNDS — MAIN BOOM — OVER SIDE AND REAR

Oper. Rad. Ft.	Angle	40 Ft. Boom		Angle	50 Ft. Boom		Angle	60 Ft. Boom		Angle	70 Ft. Boom		Angle	80 Ft. Boom		Angle	90 Ft. Boom		Angle	100 Ft. Boom		Angle	110 Ft. Boom	
		Boom Pt. El.	Rating Lbs.		Boom Pt. El.	Rating Lbs.		Boom Pt. El.	Rating Lbs.		Boom Pt. El.	Rating Lbs.		Boom Pt. El.	Rating Lbs.		Boom Pt. El.	Rating Lbs.		Boom Pt. El.	Rating Lbs.		Boom Pt. El.	Rating Lbs.
79		47.5	34000																					
74		36.8	34000	78	57.1	133700																		
67		35.1	07000	72	55.8	106700	75	66.2	106400	77	76.5	106100												
59		32.5	80100	66	53.8	80100	70	64.6	80100	73	75.1	80000	75	85.5	79900	77	95.8	79700	78	106.1	79600			
50		38.8	59300	59	51.2	39000	65	62.5	58900	68	73.4	58800	71	84.0	58700	73	94.5	58500	75	104.9	53800	77	115.2	58300
39		33.6	46500	52	47.7	26400	59	59.8	46300	64	71.2	46100	67	82.2	46000	70	92.9	45800	72	103.5	45600	74	111.9	45600
26		25.3	38500	44	43.1	28100	53	56.5	33000	59	68.5	37800	63	79.9	37600	67	90.9	37400	69	101.7	37100	71	112.3	37200
				35	36.8	22200	47	52.2	32100	54	65.2	31800	59	77.2	31600	63	88.6	31400	66	99.6	31100	68	110.5	31200
				23	27.3	27800	40	46.8	27800	49	61.2	27400	55	73.9	27200	59	85.8	26900	63	97.2	26700	65	108.4	26700
							21	29.1	21500	37	50.3	21200	46	65.5	21000	52	78.9	20700	56	91.3	20400	60	103.2	20400
										19	30.8	17100	34	53.4	16800	43	69.6	16600	49	83.6	16300	53	96.5	16300
													18	32.3	14000	32	56.4	13600	41	73.3	13300	46	87.9	13300
																17	33.8	11500	31	59.1	11200	39	76.9	11100
																			16	35.2	9550	29	61.7	9450
																						15	36.5	8150



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