



P&H - 790-TC

90 tonne truck crane
79 metres maximum boom and jib

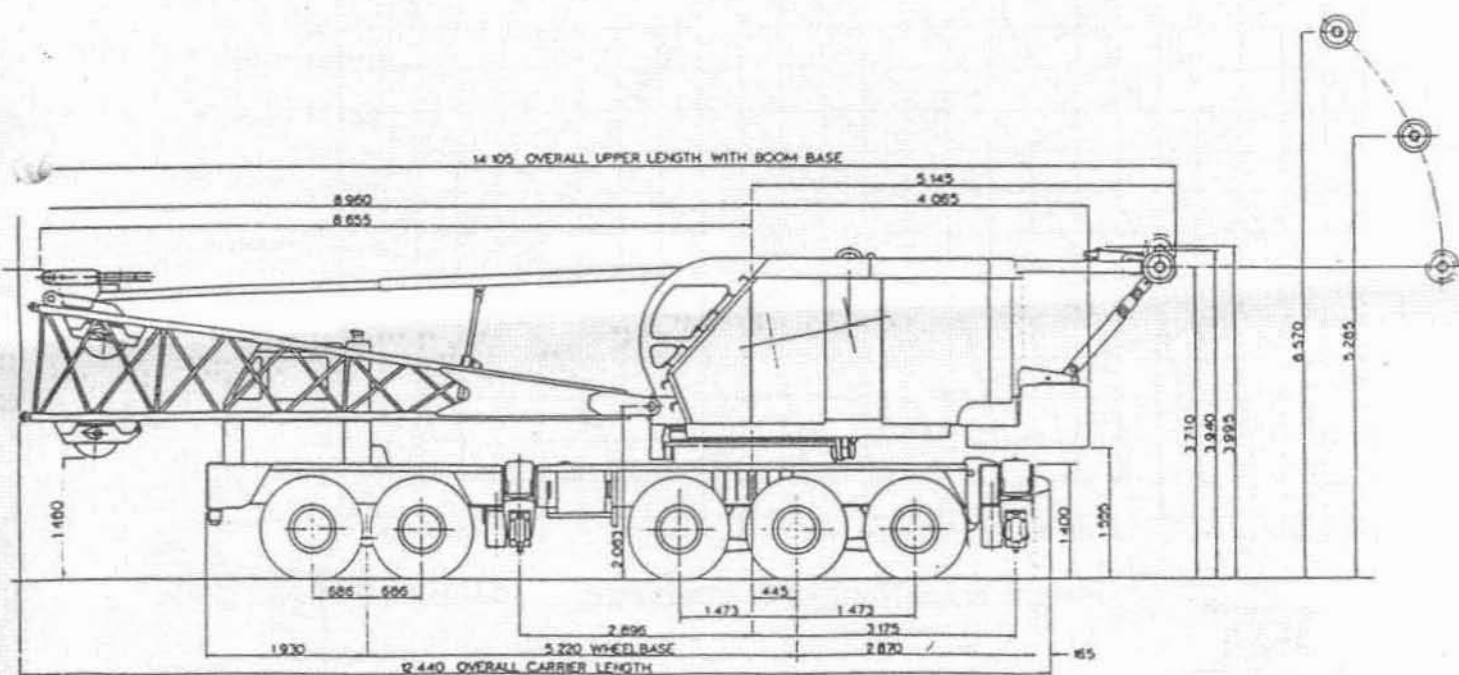
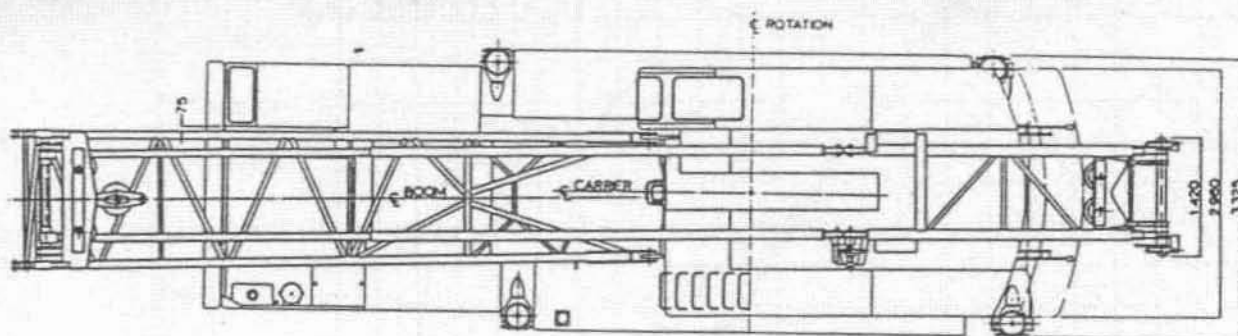
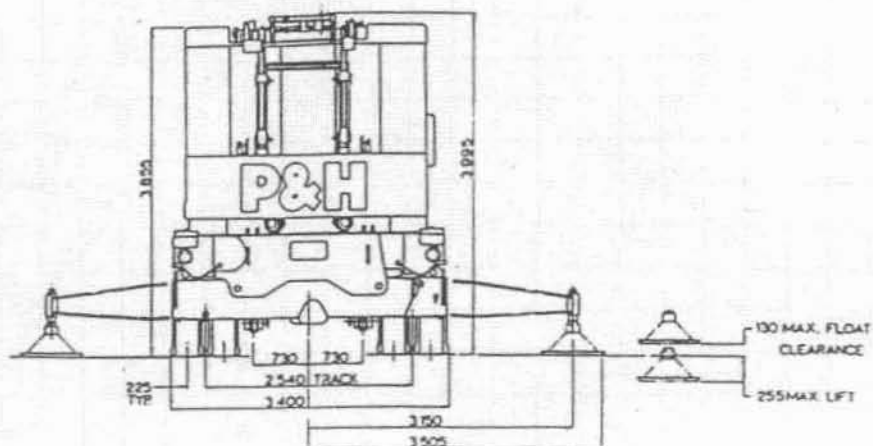
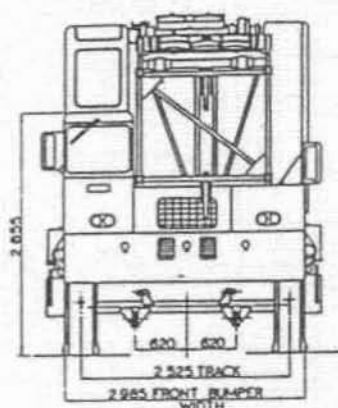


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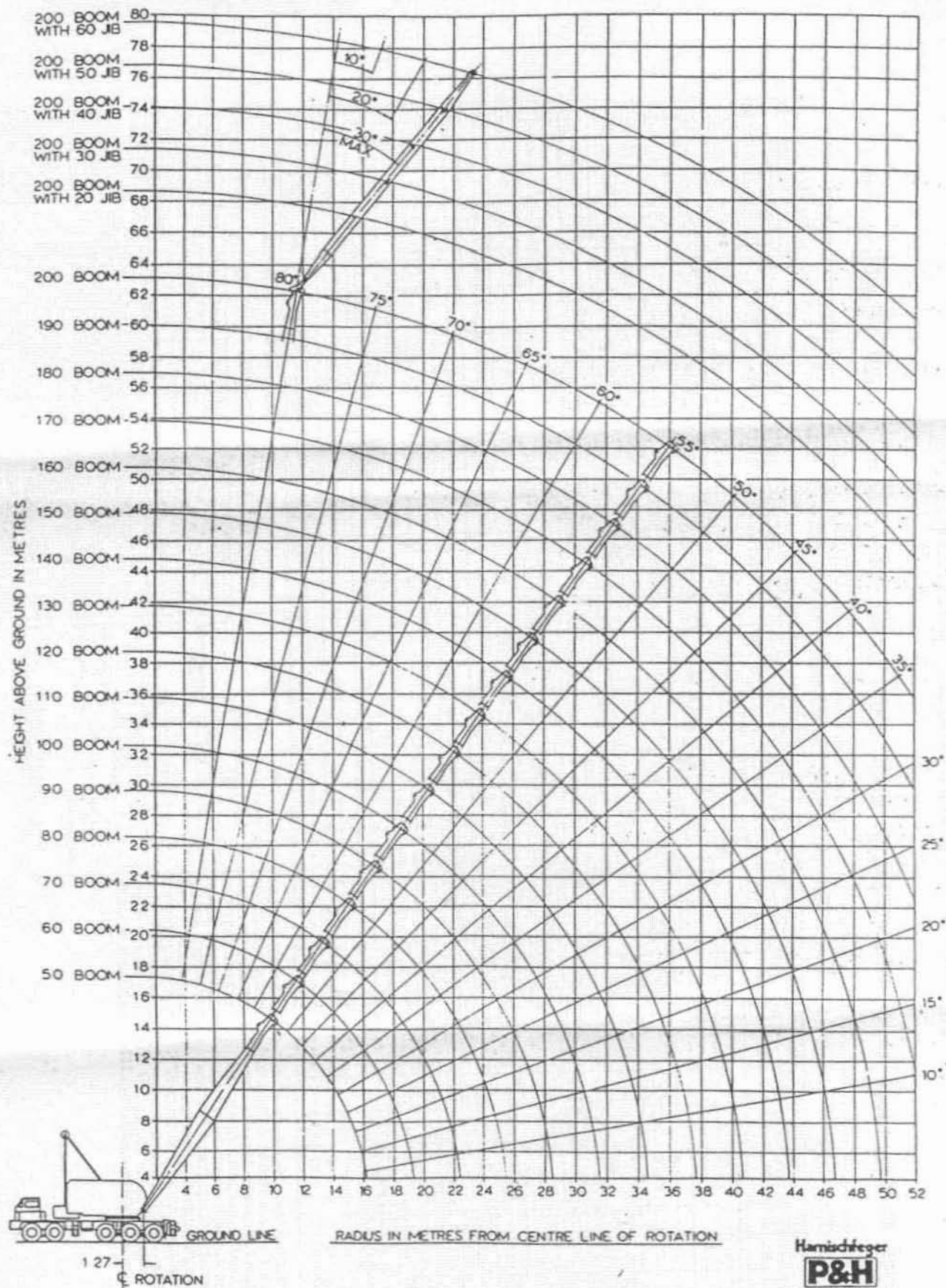
general dimensions

ALL DIMENSIONS IN MILLIMETRES





range diagram





lifting capacities — metric

Harnischfeger **P&H** MODEL 90 T.C. - 82 TONNE TRUCK CRANE (CLASS 4 - 264) WITH FRONT BUMPER COUNTERWEIGHT.

RATED CRANE LOADS IN KILOGRAMS. MAIN BOOM OVER REAR WORK AREA WITH OUTRIGGERS FULLY EXTENDED & SET.

Boom Angle	50 Boom	60 Boom	70 Boom	80 Boom	90 Boom	100 Boom	110 Boom	120 Boom	130 Boom	140 Boom	150 Boom	160 Boom	170 Boom	180 Boom	190 Boom	200 Boom
Boom Angle	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating
Boom Angle	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating
4	80	17 06	82 000													
5	77	16 84	81 000													
6	73	16 55	80 200													
7	69	16 19	78 700													
8	65	15 74	77 000													
9	61	15 20	75 000													
10	56	14 58	72 900													
11	46	12 89	66 420													
12	34	10 44	49 900													
13	16	5 88	13 250													
14																
15																
16																
17																
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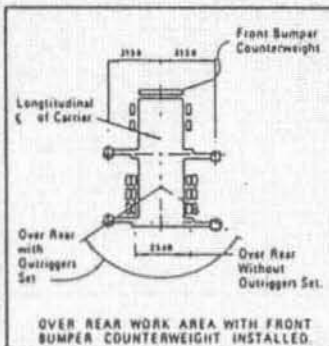
WARNING

WHEN BOOM IS EQUIPPED WITH JIB MAIN HOOK RATINGS MUST BE REDUCED TO COMPENSATE FOR JIB ATTACHMENT WEIGHT.

JIB	20	30	40	50	60
REDUCT KGL	700	800	950	1150	1400

RATED CRANE LOADS OVER REAR WITHOUT OUTRIGGERS

Boom Angle	50 Boom	60 Boom	70 Boom	80 Boom	90 Boom	100 Boom	110 Boom	120 Boom	130 Boom	140 Boom	150 Boom	160 Boom	170 Boom	180 Boom	190 Boom	200 Boom
Boom Angle	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating
4	77	16 84	81 000													
5	73	16 55	80 200													
6	69	16 19	78 700													
7	65	15 74	77 000													
8	61	15 20	75 000													
9	56	14 58	72 900													
10	46	12 89	66 420													
11	34	10 44	49 900													
12	16	5 88	13 250													
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RATINGS SHOWN ARE BASED ON TYRE LOADINGS AND MACHINE STABILITY AND NOT EXCEED 75% OF TIPPING LOAD AS DETERMINED BY S.A.A. CRANE CODE C.B.3. AMDT. 1, 2 & 3. RATINGS SHOWN ARE BASED ON MACHINE COUNTERWEIGHT OF 111 AND FRONT BUMPER COUNTERWEIGHT OF 6300KGS. STANDARD BOOM HOIST RISE IS 10 PART LINE. GANTRY MUST BE IN RAISED POSITION FOR ALL OPERATING CONDITIONS. LOW GEAR OPERATION MAY BE REQUIRED WHEN HOIST OR DIGGING DR OPERATED ON 8th OR 7th LAYER OF CABLE. MACHINE MUST BE ON A FIRM LEVEL LIFTING SURFACE. ALL TYRES MUST BE EVENLY INFLATED TO 655 kPa (95 P.S.I.). MUST BE RESTRAINED FROM SWINGING DURING TRAVEL. MAXIMUM APPROVED TRAVEL SPEED WITH LIFTED LOAD IS 2.5 km/h. MAXIMUM APPROVED TRAVEL SPEED FRONT BUMPER COUNTERWEIGHT INSTALLED IS 10km/h.

Harnischfeger **P&H** MODEL 90 T.C. - 80 TONNE TRUCK CRANE (CLASS 4 - 197).

RATED CRANE LOADS IN KILOGRAMS—MAIN BOOM OVER SIDE AND OVER REAR WORK AREA WITH OUTRIGGERS FULLY EXTENDED & SET.

Line No.	50 Boom			60 Boom			70 Boom			80 Boom			90 Boom			100 Boom			110 Boom			120 Boom			130 Boom			140 Boom			150 Boom			160 Boom			170 Boom			180 Boom			190 Boom			200 Boom			Notes																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
	Angle	Boom Pt. El.	Ratings kgs.	Angle	Boom Pt. El.	Ratings kgs.	Angle	Boom Pt. El.	Ratings kgs.	Angle	Boom Pt. El.	Ratings kgs.	Angle	Boom Pt. El.	Ratings kgs.	Angle	Boom Pt. El.	Ratings kgs.	Angle	Boom Pt. El.	Ratings kgs.	Angle	Boom Pt. El.	Ratings kgs.	Angle	Boom Pt. El.	Ratings kgs.	Angle	Boom Pt. El.	Ratings kgs.	Angle	Boom Pt. El.	Ratings kgs.	Angle	Boom Pt. El.	Ratings kgs.	Angle	Boom Pt. El.	Ratings kgs.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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5	37	18.84	68 750	79	19.97	68 600																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
6	75	18.55	57 600	36	18.73	57 400																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
7	69	18.19	47 530	72	19.42	47 620	75	22.67	47 720	77	25.37	47 820	79	28.89	47 900	80	32.00	47 900																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
8	65	15.74	37 360	69	19.07	37 400	72	22.31	37 480	75	25.30	37 560	78	28.64	37 550	78	31.79	37 520	79	34.91	37 560																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
9	61	15.30	30 660	66	18.64	30 670	70	21.95	30 740	72	25.19	30 800	74	28.38	30 770	76	31.55	30 730	77	34.69	30 780	78	37.81	30 680	79	40.92	30 600	80	44.03	34 600																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
10	58	14.56	25 920	62	18.13	26 910	67	21.63	26 970	70	24.83	26 010	72	28.01	25 910	74	31.25	25 920	75	34.44	25 920	77	37.58	25 770	78	40.71	25 270	79	43.83	24 600	79	46.94	24 600	80	50.04	24 600																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
12	46	13.89	19 870	55	16.87	19 930	61	20.51	19 660	65	23.96	19 690	68	27.31	19 830	70	30.59	19 560	72	33.83	19 540	73	37.03	18 400	75	40.21	18 580	76	43.38	18 400	77	46.51	18 200	78	49.64	18 220	78	52.78	18 400	79	55.97	18 400	80	59.17	18 400	80	62.37	18 400																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
14	34	10.44	15 740	47	15.20	15 660	54	18.19	15 690	59	22.86	15 690	63	26.38	15 610	66	29.76	15 550	68	33.08	15 510	70	36.35	15 370	72	39.58	15 350	73	42.78	15 260	74	45.98	15 250	75	49.14	15 160	76	52.29	15 060	77	55.43	15 070	78	58.58	14 840	78	61.82	14 000	14																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
16	16	5.98	13 060	27	12.90	12 950	34	17.50	12 950	41	22.10	12 960	48	26.71	12 850	54	31.32	12 790	61	35.94	12 600	68	39.58	12 510	70	43.21	12 580	73	46.58	12 460	75	49.87	12 300	77	53.11	10 210	78	56.31	10 210	79	59.41	10 210	79	62.61	10 040	16																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
18				25	9.45	10 990	29	13.28	9 480	31	17.68	9 430	34	22.11	9 310	35	26.11	9 240	37	29.81	9 170	38	33.48	9 040	38	36.98	9 000	44	40.41	8 870	48	43.77	8 870	46	47.09	8 740	46	50.38	8 600	50	53.63	8 600	52	56.88	8 400	52	60.17	8 200	72																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
20							14	7.17	8 310	22	14.90	8 240	42	20.63	8 100	48	26.41	8 030	52	28.42	7 950	56	32.78	7 830	61	39.36	7 760	63	42.81	7 640	65	46.21	7 510	67	49.56	7 430	68	52.86	7 240	69	56.14	7 280	70	59.38	7 220	72																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
24										22	10.99	7 290	35	13.43	7 140	47	22.37	7 060	48	26.71	6 970	52	30.73	6 850	58	38.18	6 760	61	41.53	6 660	63	45.31	6 600	64	48.63	6 440	66	52.00	6 400	67	55.33	6 280	68	58.63	6 220	74																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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RATED CRANE LOADS IN KILOGRAMS. MAIN BOOMS WITHOUT OUTRIGGERS. TYRES AT 655 kPa (95 PSI)

[illegible]

Recommended Wire Rope Length for Drums - Metres

Beam	Main Hoist Drum	Jib Hoist Drum
50	190	95
60	205	100
70	205	110
85	205	120
90	205	120
100	210	140
110	180	150
120	195	155
130	210	165
140	180	175
150	195	185
160	205	195
170	165	205
180	170	210
190	180	220
200	190	230

RATED MAXIMUM JIB LOADS.

FOR LIFTING CRANE SERVICE-KILOGRAMS.

Offset Angle to Boom at Full Load	20 JIB	30 JIB	40 JIB	50 JIB	60 JIB
10°	10 000	7 718	5 900	4 840	3 630
20°	7 280	5 134	3 720	3 030	2 320
30°	5 640	4 050	2 870	2 320	1 810

RATED MAXIMUM JIB LOADS.

FOR BUCKET SERVICE-KILOGRAMS

10 th	7 500	8 785	4 425	3 405	3 830
20 th	8 445	4 695	3 915	2 720	2 040
30 th Max	4 080	3 710	3 320	2 040	1 360

Locate Jlb Backstay as Follows, 50 to 110 Booms at Base of Boom Tip Section, 120 to 200 At Tip Of Second Inverted Boom Tip Section.

HOIST REEVEING LINE LOADS IN KILOGRAMS

Number of Parts Must Reeling	1	2	3	4	5	6	7	8	9	10
Main Line	\$ 300	\$ 400	\$ 600	\$ 800	\$ 1,000	\$ 1,200	\$ 1,400	\$ 1,600	\$ 1,800	\$ 2,000
Aux. Line	\$ 200	\$ 400	\$ 600	\$ 800	\$ 1,000	\$ 1,200				

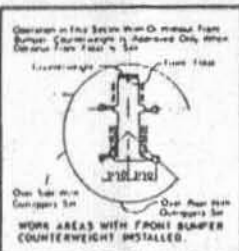
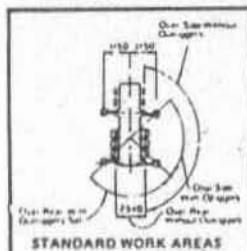
WIRE ROPE	Main Hoist	- 22 Millimetre Diameter - Min 8.5, 295.00 kN
	Aux. Hoist	- 19 Millimetre Diameter - Min 8.5, 225.00 kN
	Boom Hoist	- 15 Millimetre Diameter - Min 8.5, 225.00 kN

MAXIMUM BOOM LENGTH TO LIFT OF GROUND

ROOM OVER	Without Front Bumper Counterweights		With 800 Kp. Front Bumper C/Weight & Outriggers Set.	
	With Outriggers	Without Outriggers		
	Seamless Beam & Litter	Seamless Beam & Litter	Seamless Beam & Litter	Seamless Beam & Litter
SIDE	200	180±60	130	110±30
HEAD	200	180±60	130	110±30

Optional Auxiliary rear flasts may be used in place of a 300kg rear bumper counterweight for erecting maximum beam lengths as shown.

Optional Auxiliary rear floats may be used in place of 4 300kgs front bumper counterweights for erecting maximum boom lengths as shown.



Boom	Insert Arrangement	Approx. Insert Lgh.
80	BASE - 1 - 2 - TIP	BASE
90	BASE - 2 - 2 - TIP	1.5 METRE
100	BASE - 2 - 2 - TIP	1" INSERT
110	BASE - 1 - 2 - 2 - TIP	3 METRE
120	BASE - 2 - 4 - TIP	2" INSERT
130	BASE - 2 - 4 - TIP	6 METRE
140	BASE - 1 - 2 - 4 - TIP	3" INSERT
150	BASE - 2 - 3 - 4 - TIP	9 METRE
160	BASE - 4 1 - 4 - TIP	
170	BASE - 4 2 - 4 - TIP	4" INSERT
180	BASE - 4 3 - 4 - TIP	16 METRE
190	BASE - 4 - 1 - 3 - 4 - TIP	TIP
200	BASE - 2 - 3 4 - 4 - TIP	7.5 METRE

RATINGS DO NOT EXCEED 1/2 IN. OF TIPPING LOAD AS DETERMINED BY 408A CRANE CODE, CRI-1988, APP. 12.4.

RATINGS ARE BASED ON COUNTERWEIGHT OF 1188 HOS. REFER TO DIAGRAM FOR APPLICABLE WORKING AREA. STANDARD BOOM HOIST RELEVING IS 100% OF RATED CAPACITY. RATED CAPACITY FOR ALL OUTRIGGER RATINGS. GANTRY OUTRIGGER RATINGS. LOW BEAR OPERATION MAY BE REQUIRED WHEN FRONT OR REAR DRUM IS USED. MAXIMUM APPROVED TRAVEL SPEED WITH LIFTED LOAD IS 3.1 MPH. LOAD MUST BE RELEASED FROM LIFTED POSITION TO BE LOWERED TO BE PLACED ON A FIRM LEVEL SUPPORTING SURFACE. ALL TYPES OF SURFACES ARE ALLOWED. MAXIMUM APPROVED TRAVEL SPEED WITH FRONT BUMPER COUNTERWEIGHT INSTALLED IS 19 MPH. MAXIMUM APPROVED TRAVEL SPEED WITH REAR BUMPER COUNTERWEIGHT INSTALLED IS 19 MPH. TO AVOID LOAD CHART, GANTRY MUST BE IN RAISED POSITION TO TRAVEL WITH BOOM ATTACHED.

REFER TO RATING PLATE SUPPLEMENTAL DATA FOR ALL POSSIBLE OPERATIONS. RATED CAPACITY INSET MAY BE REPEATED BY TWO SHORTER INCHES TO SHOW MAXIMUM LIFTING RATINGS.

2 CENTER INCH POSITION

WIRE ROPE	Main Hoist	- 22 Millimetre Diameter - Min 8.5, 295.00 kN
	Aux. Hoist	- 19 Millimetre Diameter - Min 8.5, 225.00 kN
	Boom Hoist	- 15 Millimetre Diameter - Min 8.5, 225.00 kN

MAXIMUM BOOM LENGTH TO LIFT OF GROUND	
1	10
2	20
3	30
4	40
5	50
6	60
7	70
8	80
9	90
10	100
11	110
12	120
13	130
14	140
15	150
16	160
17	170
18	180
19	190
20	200
21	210
22	220
23	230
24	240
25	250
26	260
27	270
28	280
29	290
30	300
31	310
32	320
33	330
34	340
35	350
36	360
37	370
38	380
39	390
40	400
41	410
42	420
43	430
44	440
45	450
46	460
47	470
48	480
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78	780
79	790
80	800
81	810
82	820
83	830
84	840
85	850
86	860
87	870
88	880
89	890
90	900
91	910
92	920
93	930
94	940
95	950
96	960
97	970
98	980
99	990
100	1000

BOOM OVER	Without Front Bumper Counterweight		With 6 300 Kp. Front Bumper C/Weight & Outriggers Set.	
	With Outriggers	Without Outriggers		
	Beam only/Beam & lift	Beam only/Beam & lift	Beam only/Beam & lift	
SIDE REAR	200 1160-60	130 1110-30	200 180-60	
	200 1160-60	130 150-30	200 200-60	

Optional Auxiliary rear floats may be used in place of a 300kg front bumper counterweight for erecting maximum boom lengths as shown.

Harnischfeger
P&H
Campbellfield Vic. 3601.

**POWER PLANT:**

DESCRIPTION	STANDARD
Engine make	Cummins
Model number	NTF - 365
Type	Diesel
No. cylinders	6
Bore x stroke	139.7 mm x 152.4 mm
Displacement	14 013 cubic centimetre
Cycle	Four
Air induction	Turbocharged
Cooling	Liquid
Starting	24 volt
Charging	12 volt 75 amp alternator
Compressor, air	6230 cubic centimetre / sec.
Governor, air	724 to 827 kPa.
Power output, gross	272 kilowatt at 2300 r.p.m.

CLUTCH: Lipe rollway 14 - 2 DLB

TRANSMISSION AND PROP. SHAFTS: Fuller model R.T.O. 9509 B.S. progressive forward speeds, 2 reverse, 1810 series shaft yoke - Dana Spicer. Prop. shafts Hardy Spicer. Front and intermediate shafts 1810 series. Interaxle shafts 1700 series.

STEERING: Ross - worm and roller steering gear 28.0 to 1.0 ratio 533 mm diameter steering wheel.

FRONT AXLES: Shuler model FTCS-34-L tubular front axles in tandem. 2359 mm king pin centres.

REAR AXLES: Clark TD 85000 planetary drive tridem axles with interaxle differentials, 2540 mm track total ratio 11.547:1

BRAKES: Service - dual air brake circuit with front and rear brakes on separate circuits. Front linings 438 mm dia. x 102 mm wide. 3226 square centimetre total front lining area. 103 square centimetre air chambers. Rear linings 419 mm dia. x 178 mm wide. Square centimetre total rear lining area. 232 square centimetre air chambers. Total brake lining area.

SUSPENSION: Rear: unsprung box section tridem with torque rods. Self aligning bearings on suspension beams. Front: unsprung box section bogie with torque rods. Self aligning bearings on both ends of bogie beams.

WHEELS / RIMS: Front 14.00 x 20 rims. Rear 14.00 x 20 rims and spacers

TYRES: Seventeen (17) 14.00 x 20 - 18 ply tyres complete with tube and flap non-directional.

FUEL TANK: 284 litre capacity

RADIATOR: Liquid type, rubber mounted, vertical tube and fin type core. Thermostat temperature control. Dearthion baffle in top of tank.

CAB: 812 mm wide one-man cab offset to right side of engine compartment, all windows are safety glass, electric windshield wiper and windshield washer, removable dash with (speedometer, air pressure gauge, voltmeter, coolant temperature gauge, engine oil pressure gauge, fuel level gauge and switches.) electric horn, dome light, seat assembly, west coast mirrors - one on right side of cab - one on left side of carrier, crank down door window, slide - by left side windows. Air vent on right side.

LIGHTING: Four headlights with foot operated dimmer switch. Stop, tail, directional, clearance and rear licence plate lights. Two weather proof sockets provided for upper lighting during transit. In cab - dome light, illuminated gauges, indicator lights for hi-beam lights, directional lights, emergency flasher lights and low air pressure warning light.

CAB AND BODY: Cab, engine hood, front and side panels, front skirts, equipment boxes, dirt shields and body floor plates formed from sheet steel.

MISCELLANEOUS EQUIPMENT - STD: Tyre inflation valve and hose, four (4) aluminium outrigger floats and tool kit

OPTIONS: Front "fifth" jack float for 360° operation, 6350 kilogram counterweight, backup warning device, 1220 mm x 1220 mm aluminium outrigger floats and low silhouette floats.

vehicle weights

FOR TRAVEL CONDITIONS

Machine less counterweight, rear frame, Boom Point.

1/ BOOM OVER FRONT OF CARRIER

FRONT BOGIE	REAR BOGIE	G.V.W.
Kg 10,260	Kg 34,000	Kg 44,260

2/ BOOM OVER REAR

FRONT BOGIE	REAR BOGIE	G.V.W.
Kg 14,130	Kg 30,130	Kg 44,260



upper data

CRANE BOOM

CRANE BOOM — STANDARD: 50'0" (15.25 metre) basic length in two sections, pin connected, extendable up to 200'0" (61.0 metre) tubular "T-1" steel, open throat, cross section 1575 mm wide x 1270 mm deep, 5 offset boom point sheaves 450 mm R.D., anti-friction bearings.

BOOM HOIST REEVING: 10 parts of line, spreader sheaves 330 mm R.D., anti-friction bearings.

HOOK BLOCK — CRANE BOOM:

27 200 Kilogram	Single Sheave,	Swivel Hook — 3 Part Line
40 800 Kilogram	Two Sheave,	Swivel Hook — 5 Part Line
54 400 Kilogram	Three Sheave,	Swivel Hook — 7 Part Line
63 500 Kilogram	Four Sheave,	Swivel Hook — 9 Part Line
81 650 Kilogram	Five Sheave,	Swivel Hook — 10 Part Line

FAIRLEAD:

TAGLINE WINDER:

JIB: 20'0" (6.0 metre) basic length in two sections, pin connected, extendable to 60'0" (18.0 metre) tubular alloy steel, open throat, cross section 610 mm wide x 500 mm deep, jib point sheave 420 mm R.D., anti-friction bearings, flared strut — standard, narrow strut — optional.

POWER PLANT

ENGINE — CUMMINS N-855P: 6 cylinder diesel power. Output 120 kilowatts at 1600 r.p.m. full load speed.

TRANSMISSION — COTTA: 3 speed, 2nd gear normal operating speed, 2.00 to 1.00 ratio.

FUEL TANK: 284 litre capacity

BOOM HOIST

CLUTCH: 585 mm dia. x 102 mm wide band type internal expanding.

BRAKE: 650 mm dia. x 76 mm wide band type external contracting "full wrap" design.

BOOM HOIST ASSEMBLY: independent planetary gear type with external ratchet and automatic brake provides for raising and lowering boom under power and locking boom.

BOOM HOIST DRUM: 330mm R.D. x 127 mm long for 19 mm cable 128 metre cable capacity. Anti-friction bearings.

LINE DATA: Line speed — hoisting 38 metre/min, lowering 23 metre/min, line pull 6800 kilograms.

THIRD DRUM

Mounts on extension of front drum shaft to left of main drum, does not interfere with any machine function or front end attachment available. Optional extra for machine with crane type attachment. 395 mm r.d. x 152 mm long for 16 mm cable. 70 metre cable capacity.

LINE DATA: Line speed — 44 metre / min, line pull 3600 kilograms.

FRONT DRUM (DIGG)

DRUM FOR CRANE: 445 mm R.D. x 352 mm long for 22 mm cable. Single layer capacity 20 metre total capacity 185 metre — smooth.

DRUM FOR CLAMSHELL: 445 mm R.D. x 352 mm long for 19 mm cable. Single layer capacity 25 metre total capacity 274 metre — smooth.

DRUM FOR DRAGLINE: 445 mm R.D. x 352 mm long for 22 mm cable. Single layer capacity 22 metre total capacity 170 metre.

LINE DATA: Line speed — 50 metre / min, line pull 12360 kilograms

CLUTCH: 711 mm dia. 102 mm wide external expanding band type.

BRAKE: 825 mm dia. x 127 mm wide external contracting band type. Hydraulic set brake and additional spring set hydraulically operated fail safe brake.

POWER LOWERING: Planetary gear type power lowering std. with 825 mm dia. x 102 mm wide external contracting band type brake.

REAR DRUM (HOIST)

DRUM FOR CRANE: — JIB: 445mm R.D., x 352 mm long for 19 mm cable. Single layer capacity 25 metre. Total capacity 274 metre — smooth.

DRUM FOR CLAMSHELL: 445 mm R.D., x 352 mm long for 19 mm cable. Single layer capacity 25 metre. Total capacity 235 metre, grooved.

DRUM FOR DRAGLINE: 445 R.D. x 352 mm long for 19 mm cable. Single layer capacity 22 metre, Total capacity 171 metre. Grooved.

LINE DATA: Line speed — 50 metre / min. Line pull 12000 kilograms.

CLUTCH: 711 mm dia. x 102 mm wide band type, internal expanding.

BRAKE: 825 mm dia. x 127 mm wide band type external contracting hydraulic set brake and additional spring set hydraulically operated fail safe brake.

POWER LOWERING: Planetary gear type power lowering std. with 825 mm dia. x 102 mm wide, external contracting band type brake.

MISC.

CONTROLS: Full flow power hydraulic system at 9650 kPa. Line pressure.

GANTRY: High gantry, telescoping three position, power raise.

SWING CLUTCH: Swing motion through two electro-magnetic "magnetorque" units.

SWING BRAKE: 457 mm dia. x 64 mm wide mechanical friction type, spring set, hydraulic release.

COUNTERWEIGHT: 11800 kg, single piece, pin connected, removable using hyd. rams set in carrier.

FASTENING UPPER TO CARRIER

TYPE OF FASTENING: 6 adjustable hook rollers, 1-double front, 2-double rear.

SWING ROLLERS: 30 rollers 127 mm dia. on 1995 mm P.D. live roller circle.

SWING GEAR: Internal cut 170 teeth 1715 mm P.D.

SWING SPEED: 3.88 R.P.M.

carrier data

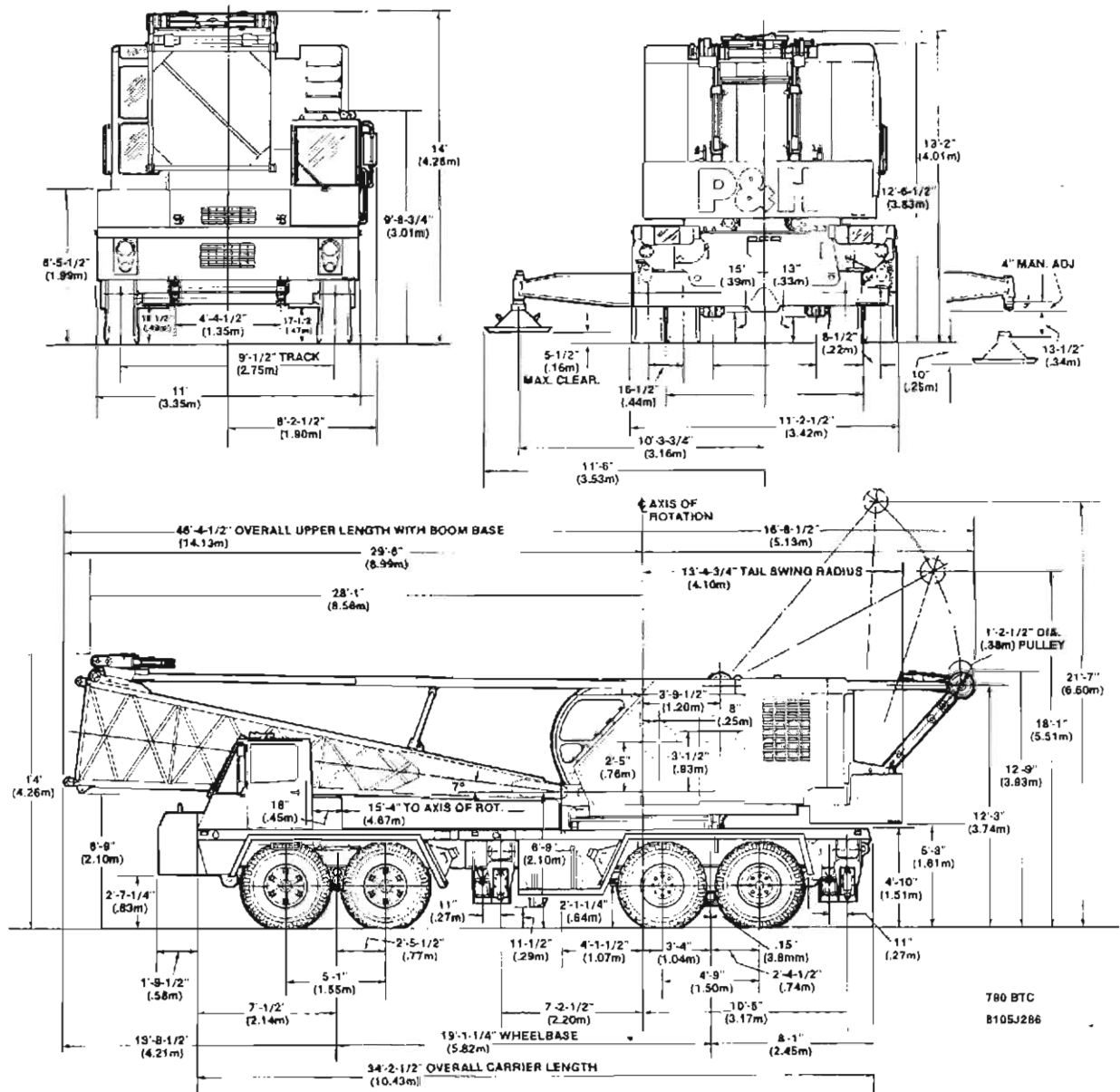
WEIGHT: Including turret, hydraulic outriggers, floats, roller circle, and tires. 28.85 tonnes.

FRAME: Front section is fabricated from 457 mm — 26 kilogram channel. Rear section is a fabricated box section 502 mm deep, crossbraced and reinforced. Front bumper of 10 mm bent plate. High strength low alloy steel plate used extensively. Tow loops front and rear. Removable rear frame section is standard.

OUTRIGGER BOXES: Four (4) fabricated independent boxes of high strength low alloy steel plate. Front and rear boxes are pin connected and removable.

OUTRIGGER BEAMS: Four (4) fabricated reinforced box section beams of high strength low alloy steel plate. Beams telescope to fully extended position of 3150 mm from longitudinal centre line of carrier to centre line of outrigger float pad on hydraulic beams.

HYDRAULIC OUTRIGGER ASSEMBLY: Eight (8) double acting hydraulic cylinders provide independent horizontal and vertical movement of each beam. Electric solenoid actuated directional control valves operated from two control panels. Each panel controls one side only.



Address inquiries to

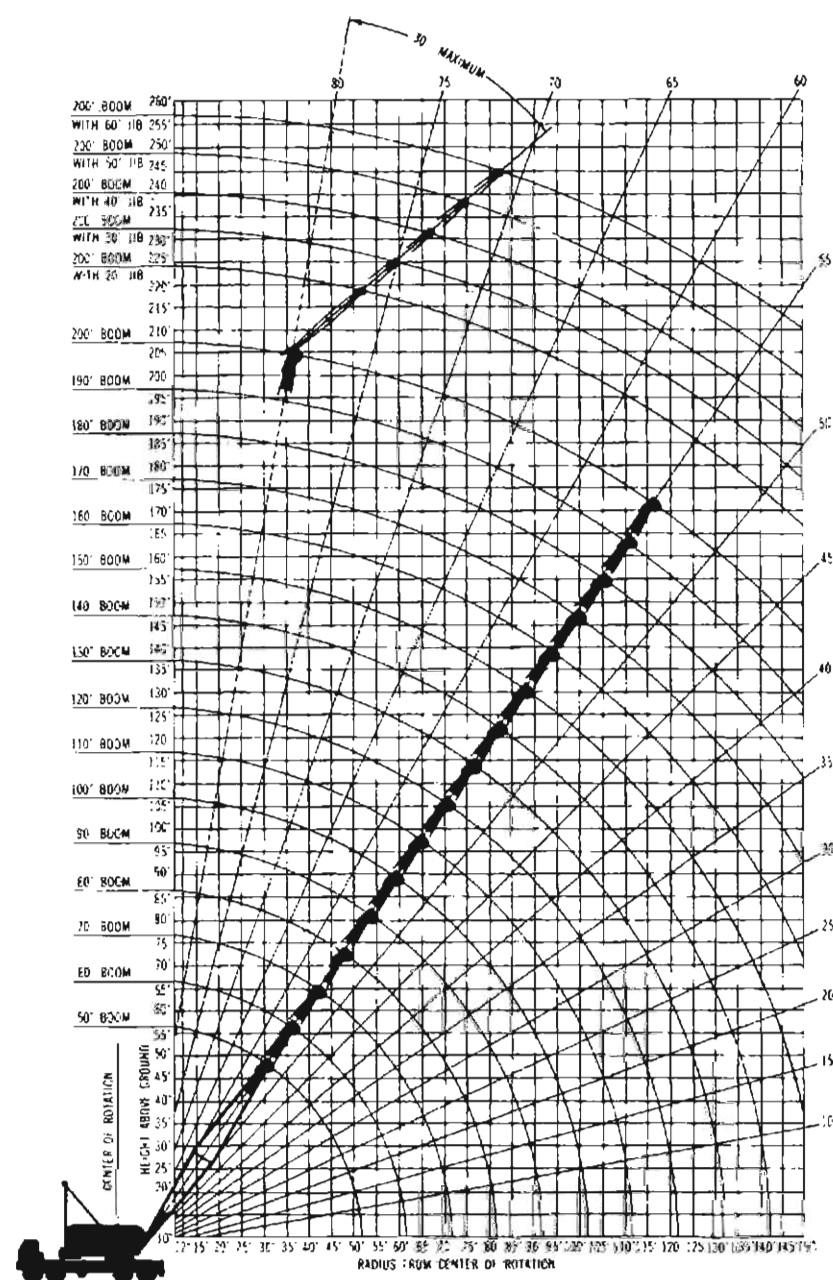
NOTE: All designs, specifications and components of the equipment described above are subject to change at the manufacturer's sole discretion at any time without advance notice. Data published herein is informational in nature and shall not be construed to warrant suitability of the machine for any particular 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

Hamischfeger
P&H
Milwaukee, Wisconsin 53204



P&H® 790-TC

90-ton Truck Crane 200' Boom 180' Boom 60' Jib



Heavy Duty
Standard Boom
62" wide x 62" deep

This Brochure
contains charts for:

Standard Ratings

- On Outriggers
- On Rubber

Over the Rear Ratings

- On Outriggers for Heavy Rigging
- On Rubber "Walking" Ratings for Tilt-up Work

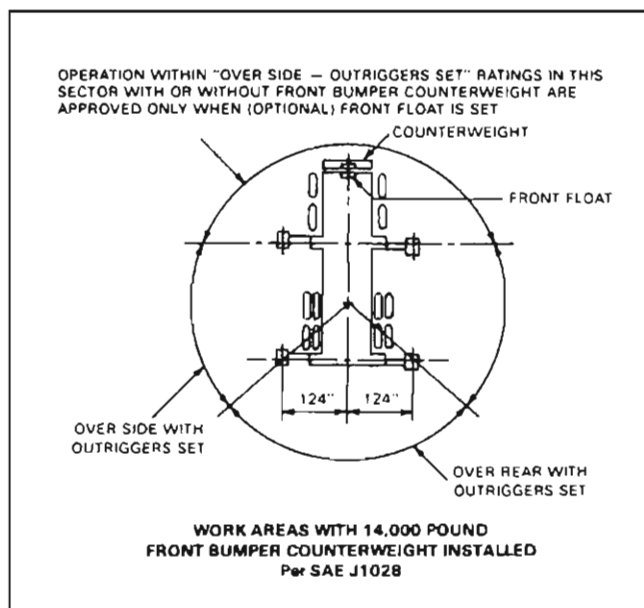
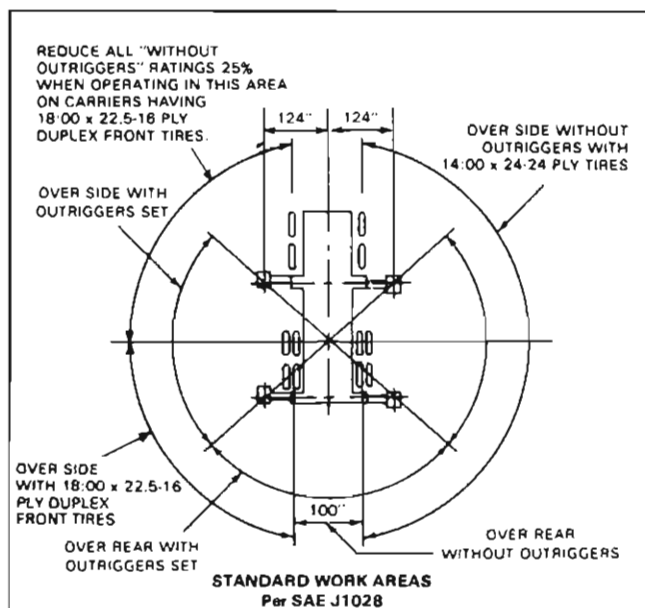
crane

**lifting capacities
working ranges**



P&H 790-TC

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



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.

Address inquiries to:

Harnischfeger
P&H
MILWAUKEE, WISCONSIN 53201

P&H MODEL 790 T.C. — 90 TON TRUCK CRANE (CLASS 12-462)* WITH 26,000 LBS. COUNTERWEIGHT

RATED CRANE LOADS IN POUNDS — MAIN BOOM (62" W. x 62" D.) IN OVER SIDE AND OVER REAR WORK AREAS WITH OUTRIGGERS FULLY EXTENDED AND SET.																																																			
Oper. Rad. Fl.	Angle	50 Ft. Boom		60 Ft. Boom		70 Ft. Boom		80 Ft. Boom		90 Ft. Boom		100 Ft. Boom		110 Ft. Boom		120 Ft. Boom		130 Ft. Boom		140 Ft. Boom		150 Ft. Boom		160 Ft. Boom		170 Ft. Boom		180 Ft. Boom		190 Ft. Boom		200 Ft. Boom		Oper. Rad. Fl.																	
		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.	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.																				
12	82	57.8	180,000					RATINGS ABOVE HEAVY LINE ARE LIMITED BY FACTORS OTHER THAN STABILITY.																															12												
15	78	57.3	152,500																															MID-POINT SUSPENSION (CENTER HITCH) REQUIRED. ATTACH 75 FT. UP BOOM FROM BOOM FOOT PIN.	15																
20	72	56.1	125,000	75	66.4	124,600	78	76.7	121,000																									20																	
25	66	54.2	97,800	70	64.9	97,780	73	75.4	97,760	75	85.8	97,740	77	96.1	97,720	78	106.3	90,000																	25																
30	60	51.6	71,800	65	62.9	71,780	69	73.7	71,760	72	84.4	71,740	74	94.8	71,720	75	105.2	71,700	77	115.5	71,600	78	125.7	71,550	79	135.9	54,000								30																
35	53	48.3	56,400	60	60.3	56,360	64	71.6	56,330	68	82.5	56,300	70	93.2	56,200	72	103.8	56,000	74	114.2	55,900	75	124.5	55,850	77	134.8	54,000	78	145.1	54,000	79	165.5	54,000			35															
40	45	43.8	46,200	54	57.0	46,150	60	69.0	46,100	64	80.3	46,000	67	91.3	45,900	69	102.0	45,700	71	112.7	45,500	73	123.1	45,450	74	133.6	45,400	75	143.9	45,200	76	154.2	45,000	77	164.5	44,800	78	174.7	36,000	79	184.9	35,900	79	195.1	35,700			40			
45	36	37.8	38,900	48	52.9	38,850	55	65.7	38,800	60	77.6	38,600	64	89.0	38,500	66	100.0	38,300	69	110.8	38,100	70	121.5	38,050	72	132.1	38,000	73	142.5	37,800	74	152.9	37,600	75	163.3	37,400	76	173.6	36,000	77	183.8	35,500	78	194.1	35,000	78	204.3	34,000			45
50	24	28.9	33,500	41	47.7	33,450	50	61.8	33,400	56	74.4	33,200	60	86.3	33,000	63	97.7	32,800	66	108.8	32,600	68	119.6	32,550	70	130.3	32,500	71	140.9	32,300	72	151.5	32,000	74	161.9	31,800	75	172.3	31,750	76	182.6	31,500	76	192.9	31,300	77	203.2	31,000			50
60				22	30.9	25,900	38	51.2	25,700	46	66.2	25,500	52	79.5	25,300	56	91.8	25,100	60	103.6	24,900	63	115.0	24,850	65	126.2	24,800	67	137.1	24,500	68	147.9	24,300	70	158.6	24,100	71	169.2	24,000	72	179.8	23,800	73	190.2	23,500	74	200.6	23,200			60
70					20	32.7	20,700	35	54.4	20,400	43	70.3	20,200	49	84.2	20,000	54	97.0	19,800	57	109.2	19,750	60	120.9	19,600	62	132.4	19,400	64	143.6	19,200	66	154.6	18,900	67	165.5	18,800	69	176.2	18,600	70	186.9	18,300	71	197.5	18,000			70		
80								19	34.3	16,900	33	55.4	16,600	41	74.2	16,300	47	88.6	16,100	51	101.9	16,050	55	114.5	16,000	58	126.5	15,700	60	138.3	15,200	62	149.7	15,100	64	160.9	15,100	65	172.0	14,900	67	182.9	14,600	68	193.8	14,300			80		
90	WARNING										18	35.9	14,000	31	60.3	13,700	39	77.8	13,400	45	92.8	13,350	49	106.6	13,300	52	119.5	13,000	55	131.9	12,700	58	143.9	12,500	60	155.6	12,400	62	167.0	12,100	63	178.3	11,800	65	189.4	11,600			90		
100	When boom is equipped with jib, main hook rating must be reduced to compensate for jib attachment weight.												17	37.4	11,600	30	63.0	11,300	37	81.2	11,250	43	96.8	11,100	47	111.0	10,900	51	124.3	10,600	53	137.0	10,400	56	149.3	10,300	58	161.2	10,000	60	172.9	9,700	62	184.4	9,400			100			
110														16	38.8	9,700	28	65.5	9,650	36	84.5	9,450	41	100.6	9,200	45	115.3	8,900	49	128.9	8,650	52	142.0	8,550	54	159.5	8,300	56	166.7	7,950	58	178.6	7,700			110					
120														16	40.2	8,350	27	67.9	8,100	34	87.6	7,800	40	104.3	7,550	44	119.3	7,300	47	133.4	7,150	50	146.7	6,900	53	159.5	6,550	55	171.9	6,300			120								
130	Jib Length	20 Ft.	30 Ft.	40 Ft.	50 Ft.	60 Ft.											15	41.4	7,000	26	70.3	6,700	33	90.6	6,400	38	107.8	6,150	43	123.3	6,000	46	137.7	5,750	49	151.3	5,400	51	164.4	5,150			130								
140	Deduct Lbs.	1,500	1,500	2,000	2,500	3,000																	14	42.7	5,750	25	72.6	5,450	32	93.5	5,200	37	111.2	5,000	41	127.1	4,750	45	141.8	4,450	47	155.8	4,150			140					
150																											14	43.9	4,700	25	74.7	4,400	31	96.3	4,200	36	114.5	3,950	40	130.7	3,600	43	145.8	3,300			150				

RATED CRANE LOADS IN POUNDS — MAIN BOOM — WITHOUT OUTRIGGERS — TIRES AT 100 P.S.I.																												
Oper. Rad ft.	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		Angle	120 Ft. Boom		Angle	130 Ft. Boom		Oper. Rad ft.
		Over Side	Over Rear		Over Side	Over Rear		Over Side	Over Rear		Over Side	Over Rear		Over Side	Over Rear		Over Side	Over Rear		Over Side	Over Rear		Over Side	Over Rear		Over Side	Over Rear	
12	82		85,000																									12
15	78		70,500																									15
20	72		53,600	75	42,200	52,600	78	42,100	52,400																			20
25	66	34,900	39,700	70	34,700	39,500	73	34,600	39,300	75	33,800	39,100	77	33,000	38,800	78	32,700	38,500										25
30	60	26,700	31,600	65	26,500	31,400	69	26,300	31,200	72	26,100	31,000	74	25,900	30,700	75	25,700	30,400	77	25,400	30,100	78	25,200	29,900				30
35	53	21,400	25,800	60	21,200	25,600	64	21,000	25,400	68	20,800	25,200	70	20,600	25,000	72	20,400	24,800	74	20,200	24,500	75	19,900	24,300	77	19,700	24,000	35
40	45	18,100	21,800	54	17,900	21,600	60	17,700	21,400	64	17,500	21,200	67	17,300	21,000	69	17,100	20,800	71	16,900	20,500	73	16,600	20,300	74	16,400	20,000	40
45	36	15,600	18,700	48	15,400	18,500	55	15,200	18,300	60	15,000	18,100	64	14,800	17,900	66	14,600	17,700	69	14,400	17,500	70	14,100	17,200	72	13,900	17,000	45
50	24	13,700	16,100	41	13,500	15,900	50	13,300	15,700	56	13,100	15,500	60	12,900	15,300	63	12,700	15,100	66	12,500	14,900	68	12,200	14,600	70	12,000	14,400	50
60				22	10,200	12,400	38	10,000	12,200	46	9,700	11,900	52	9,500	11,700	56	9,200	11,400	60	9,000	11,200	63	8,700	10,900	63	8,500	10,700	60
70							20	7,800	9,700	35	7,500	9,500	43	7,300	9,200	49	7,000	9,000	54	6,800	8,700	57	6,500	8,500	60	6,300	8,200	70
80										19	5,900	7,600	33	5,700	7,400	41	5,400	7,100	47	5,200	6,900	51	4,900	6,600	55	4,700	6,400	80
90													18	4,500	5,900	31	4,200	5,700	39	4,000	5,400	45	3,200	5,200	49	3,500	4,900	90
100																17	3,300	4,600	30	3,000	4,300	37	2,800	4,100	43	2,500	3,800	100

Optional auxiliary rear floats may be used in place of 14,000 lbs. front bumper counterweight for erecting maximum boom length as specified in chart.						
MAXIMUM BOOM LENGTH TO LIFT OFF GROUND						
Boom Over	Without Front Bumper Counterweight				With 14,000 Lbs. Front Bumper Counterweight and Outriggers Set	
	With Outriggers Set		Without Outriggers Set			
	Boom Only	Boom & Jib	Boom Only	Boom & Jib	Boom Only	Boom & Jib
Side	190	180 • 20	130	118 • 30	190	180 • 20
Rear	200	180 • 40	130	120 • 30	200	200 • 60

32R100-C

Maximum Jib (24" W. x 22" D.) Ratings for Lifting Cranes 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	60 Ft. Jib
10°	22,000*	20,000*	16,000*	12,000	8,000
20°	16,000*	14,500	12,000	9,500	7,000
30° Max	13,000	11,000	8,500	7,000	6,000

Maximum Jib Ratings for Bucket Service — Lbs.					
* Use Three-Quarter Inch Dia. P&H Type 25 Wire Rope for Loads Above 14,500 Lbs.					
Offset Angle Jib to Boom Under Full Load	20 Ft. Jib	30 Ft. Jib	40 Ft. Jib	50 Ft. Jib	60 Ft. Jib
10°	16,500*	16,000*	12,800	9,600	6,400
20°	12,800	11,600	9,600	7,600	5,600
30° Max	10,400	8,800	6,800	5,600	4,800

This P&H Model meets the requirements of ANSI B30.5-1968. Boom structure has been tested per SAE J987. Machine stability has been tested per SAE J785. *Power Crane and Shovel Association Classification.

Operating radius is the horizontal distance from centerline 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, and counterweights mounted on a P&H crawler, carrier and outriggers. Boom backstops are required for all boom lengths. Load ratings are based upon boom assembled as specified on insert arrangement chart.

Ratings shown are based on freely suspended loads and make no allowance for such factors as wind effect on lifted load, 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. Deduct weight of hook, block(s), slings, cement bucket and all other load handling accessories from main boom or jib rating shown.

Clamshell ratings shown also apply to magnets, grapple, and all other material handling buckets except dragline which is rated separately. For clamshell, dragline, and magnet operations, the weight of bucket or magnet is considered a part of the load and the total weight of bucket plus contents or magnet plus load must not exceed the corresponding rating shown.

Standard boom hoist reeving is 10 part line. Gantry must be in raised position for all "with outriggers" ratings. Gantry may be in lowered position only for "without outriggers" ratings. Optional auxiliary rear floats may be used in place of 14,000 lbs. front bumper counterweight for erecting maximum boom length. Ratings do not exceed 85% of tipping load as determined by SAE J765. Ratings are based on counterweight of 26,000 lbs. Refer to diagrams for applicable working area.

Low gear operation may be required when hoist or digging drum is operated on 6th or 7th layer of cable.

P&H type 4 wire rope: 6x25 with filler wire, preformed improved wire rope, 7x7 I.W.R.C.

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

Locate jib backstay as follows: 50 ft. to 90 ft. booms at base of boom tip section, 100 ft. to 200 ft. booms at top end of second insert below boom tip section.

Maximum approved travel speed with 14,000 pound front bumper counterweight installed is 5 M.P.H. All tires must be evenly inflated to 100 P.S.I. Boom must be positioned over the rear carrier. Maximum approved boom length for travel is 120 ft. or 100 ft. boom plus 30 ft. jib. Gantry must be in raised position to travel with boom attached.

WARNING: READ FOR SAFETY

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 tying 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.

When operating truck crane "without outrigger" ads lifted over rear and swung over side, will increase in radius due to tire deflection. The increase in radius must be compensated for by raising boom, or machine may tip over.

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

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

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.

MAIN HOIST DRUM RATED LOADS FOR SEVEN-EIGHTS INCH DIA. P/H TYPE 4 WIRE ROPE										
Number of Parts of Main Hoist Rewing	1	2	3	4	5	6	7	8	9	10
Maximum Load — Lbs.	18,000	36,000	54,000	72,000	90,000	108,000	126,000	144,000	162,000	180,000
Low gear operation may be required when front or rear drum is operated on 6th or 7th layer of cable.										

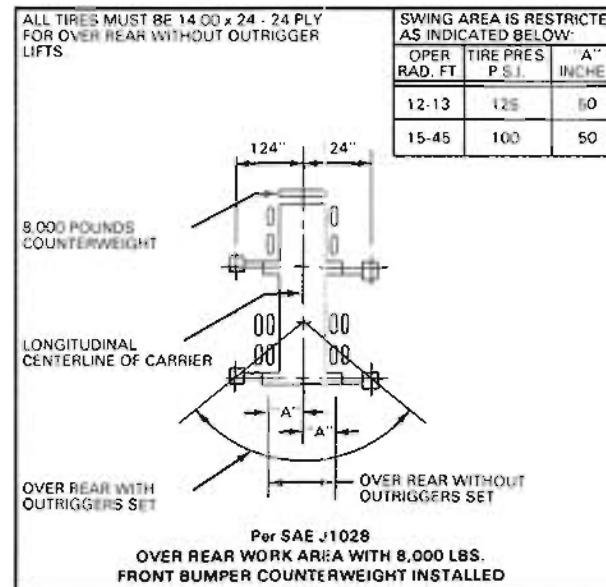
P&H MODEL 790 T.C. — 90 TON TRUCK CRANE (CLASS 12-539)* WITH 26,000 LBS. COUNTERWEIGHT AND 8,000 LBS. FRONT BUMPER COUNTERWEIGHT

RATED CRANE LOADS IN POUNDS — MAIN BOOM (62" W. x 62" D. OR 62" W. x 50" D.) IN OVER REAR WORK AREA WITH OUTRIGGERS FULLY EXTENDED AND SET																																																				
Oper. Rad. Ft.	Angle	50 Ft. Boom		60 Ft. Boom		70 Ft. Boom		80 Ft. Boom		90 Ft. Boom		100 Ft. Boom		110 Ft. Boom		120 Ft. Boom		130 Ft. Boom		140 Ft. Boom		150 Ft. Boom		160 Ft. Boom		170 Ft. Boom		180 Ft. Boom		190 Ft. Boom		200 Ft. Boom		Oper. Rad. Ft.																		
		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.	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.																					
12	82	57.8	180,000					RATINGS ABOVE HEAVY LINE ARE LIMITED BY FACTORS OTHER THAN STABILITY.																											12																	
15	78	57.3	151,500																															15																		
20	72	56.0	125,000	75	66.4	123,000	78	76.7	121,000	79	86.9	108,000																						20																		
25	66	54.1	99,000	70	64.9	98,900	73	75.4	98,800	75	85.8	98,700	77	96.0	98,600	78	106.3	90,000																25																		
30	60	51.6	81,700	65	62.8	81,500	69	73.7	81,300	72	84.3	81,100	74	94.8	80,800	75	105.1	80,600	77	115.4	72,000	78	125.7	72,000	79	135.9	54,000							30																		
35	53	48.2	65,100	60	60.2	64,900	64	71.5	64,700	68	82.5	64,500	70	92.2	64,200	72	103.7	64,000	74	114.1	63,700	75	124.5	63,500	77	134.8	54,000	78	145.0	54,000	79	155.3	54,000		35																	
40	45	43.7	53,900	54	56.9	53,700	60	68.9	53,600	64	80.2	53,300	67	91.2	53,100	69	102.0	52,800	71	112.6	52,500	73	123.1	52,400	74	133.5	52,100	75	143.9	51,900	76	154.2	51,600	77	164.4	51,400	78	174.7	36,000	79	184.9	36,000		40								
45	36	37.7	45,900	48	52.8	45,700	55	65.7	45,400	60	77.5	45,200	63	88.9	44,900	66	100.0	44,700	69	110.8	44,400	70	121.4	44,200	72	132.0	44,000	73	142.5	43,700	74	152.9	43,500	75	163.2	43,200	76	173.5	36,000	77	183.8	36,000	78	194.0	36,000	79	204.3	35,000		45		
50	24	28.7	37,000	41	47.6	39,600	50	61.7	39,300	56	74.4	39,100	60	86.2	38,800	63	97.6	38,500	66	108.7	38,200	68	119.6	38,100	70	130.3	37,800	71	140.9	37,600	72	151.4	37,300	74	161.9	37,100	75	172.2	36,000	76	182.6	36,000	77	192.9	36,000	78	203.2	34,000		50		
60				22	30.7	30,100	38	51.1	30,800	46	66.1	30,600	52	79.4	30,300	56	91.7	30,000	60	103.5	29,700	63	114.9	29,600	65	126.1	29,400	67	137.0	29,100	68	147.9	28,900	70	158.6	28,600	71	169.2	28,400	72	179.7	28,100	73	190.2	27,800	74	200.6	27,700		60		
70							20	32.5	24,600	35	54.3	24,800	43	70.2	24,500	49	84.1	24,200	54	96.9	23,900	57	109.1	23,800	60	120.8	23,600	62	132.3	23,300	64	143.5	23,100	66	154.5	22,800	67	165.4	22,600	69	176.2	22,300	70	186.8	21,900	71	197.5	21,800		70		
80								19	34.2	20,400	33	57.3	20,400	41	74.0	20,100	47	88.5	19,800	51	101.8	19,600	55	114.4	19,400	58	126.5	19,200	60	138.2	18,900	62	149.6	18,600	64	160.9	18,400	65	171.9	18,100	67	182.9	17,800	68	193.7	17,700		80				
90													20	38.1	17,600	32	61.4	17,300	40	78.6	17,000	45	93.5	16,900	49	107.1	16,600	53	120.0	16,400	56	132.3	16,200	58	144.3	15,900	60	155.9	15,700	62	167.4	15,500	64	178.6	15,100	65	189.7	15,000		90		
100														19	39.7	14,800	31	64.2	14,500	38	82.1	14,400	43	97.5	14,200	48	111.6	13,900	51	124.9	13,700	54	137.5	13,400	56	149.7	13,200	58	161.6	13,000	60	173.3	12,600	62	184.7	12,500		100				
110														18	41.3	12,600	29	66.8	12,400	36	85.4	12,200	42	101.4	11,900	46	115.9	11,700	49	129.5	11,500	52	142.5	11,200	55	155.0	11,000	57	167.1	10,600	59	178.9	10,500		110							
120																	17	42.8	10,800	28	69.3	10,600	35	88.6	10,300	40	105.1	10,100	44	120.0	9,850	48	134.0	9,600	51	147.2	9,350	53	160.0	9,000	55	172.4	8,900		120							
130																	16	44.2	9,250	27	71.7	9,000	34	91.7	8,750	39	108.6	8,500	43	124.0	8,250	46	138.3	8,000	49	151.9	7,600	52	164.9	7,550		130										
140																											15	45.5	7,700	26	74.0	7,600	33	94.6	7,350	38	112.1	7,100	42	127.8	6,850	45	142.5	6,500	48	156.3	6,400		140			
150																														25	76.3	6,400	25	76.3	6,400	32	97.5	6,150	37	115.4	5,900	40	131.6	5,500	44	146.5	5,400		150			
160																																		15	48.1	5,200	24	78.5	5,300	31	100.2	5,050	36	118.6	4,650	39	135.2	4,550		160		
170																																					14	49.3	4,600	24	80.6	4,300	30	102.9	3,950	35	121.8	3,850		170		
180																																										14	50.5	3,700	23	82.6	3,300	29	105.5	3,200		180
190																																													13	51.7	2,750	23	84.6	2,600		190

RATED CRANE LOADS — OVER REAR WITHOUT OUTRIGGERS													
Oper Rad. Ft.	50 Ft. Boom		60 Ft. Boom		70 Ft. Boom		80 Ft. Boom		90 Ft. Boom		100 Ft. Boom		Oper Rad. Ft.
	∠°	Ratings Lbs.	∠°	Ratings lbs.	∠°	Ratings Lbs.	∠°	Ratings Lbs	∠°	Ratings Lbs.	∠°	Ratings Lbs	
12	82	96,700											12
13	81	88,000											13
15	78	74,400											15
17	76	64,300	78	63,900									17
20	72	53,300	75	52,900	78	52,500	79	52,100					20
25	66	41,200	70	40,800	73	40,400	75	40,000	77	39,700	78	39,300	25
30	60	33,300	65	33,000	69	32,600	72	32,200	74	31,900	75	31,500	30
35	53	27,800	60	27,500	64	27,100	68	26,800	70	26,400	72	26,000	35
40	45	23,800	54	23,400	60	23,100	64	22,700	67	22,300	69	22,000	40
45	36	20,600	48	20,300	55	19,900	60	19,600	63	19,200	66	18,900	45

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	60 Ft. Jib
10°	22,000*	20,000*	16,000*	12,000	8,000
20°	16,000*	14,500	12,000	9,500	7,000
30° Max.	13,000	11,000	8,500	7,000	5,000
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	6,400
20°	12,800	11,600	9,600	7,600	5,600
30° Max.	10,400	8,800	6,800	5,600	4,800

NOTE: For loads of 88,000 lbs. or less, maximum swing area is 50 inches from longitudinal centerline of carrier at all operating radii with 125 P.S.I. tire pressure. For loads of 74,400 lbs. or less, maximum swing area is 50 inches from longitudinal centerline of carrier at all operating radii with 100 P.S.I. tire pressure.



WARNING: READ FOR SAFETY

When three-quarter inch diameter P&H Type II Wire Rope (18 x 7 Non-Rotating Preformed Improved Plow Steel Wire Rope Fiber Core) is used for jib use, maximum lifted load including hook must not exceed 8,700 lbs. Do not use dead-end swivels on Non-Rotating Wire Rope.

Ratings shown are based on tire loadings and machine stability and do not exceed 85% of tipping load as determined by SAE J765. Ratings shown are based on machine counterweight of 26,000 lbs. and front bumper counterweight of 8,000 lbs. Standard boom hoist reeving is 10 part line. Gantry must be in raised position for all operating conditions. Refer to diagram for applicable restricted work area.

Low gear operation may be required when hoist or digging drum is operated on 6th or 7th layer of cable.

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 F.I.W.R.C., Preformed Extra Improved Plow Steel Wire Rope (Filler Wire)

Machine must be on a firm level, supporting surface. All tires must be 14.00 x 24 — 24 ply inflated to see chart. Load must be restrained from swinging during travel. Maximum approved travel speed: with lifted load is 1.5 M.P.H. Remove front bumper counterweight for travel speeds above 5 M.P.H. unless equipped with boom folding kit. Maximum approved tire pressure for highway travel is 100 P.S.I.

With boom folding kit, a maximum length of 110 ft. can be folded — 45 ft. Under 65 ft. a 100 ft. boom can be folded — 45 ft. Under 55 ft. "Travel" approved with gantry in the first raised position only and 8,000 lbs. front bumper counterweight.

Locate jib backstay anchor as follows: 50 ft. to 90 ft. boom — at base of boom tip section; 100 ft. to 180 ft. boom — at top of second insert below boom tip section.

Maximum boom length on which a jib can be mounted is 180 ft. Maximum boom and jib length to lift off ground, over side, is 160 ft. plus 50 ft. Any combination greater than 160 ft. plus 50 ft. must be lifted over rear.

RECOMMENDED WIRE ROPE LENGTH FOR DRUMS — FT.					
Boom Length Ft.	Main Hoist Drum	Jib Hoist Drum	Boom Length Ft.	Main Hoist Drum	Jib Hoist Drum
50	620	305	130	555	545
60	535	325	140	595	575
70	615	365	150	635	605
80	610	395	160	675	635
90	680	425	170	540	665
100	645	455	180	570	695
110	590	485	190	600	—
120	640	515	200	630	—

Boom Length Ft.	INSERT ARRANGEMENT* For 62" Wide x 62" Deep Boom Only
90	BASE — A — C — TIP
100	BASE — C — B — TIP
110	BASE — A — C — B — TIP
120	BASE — D — B — TIP
130	BASE — C — D — TIP
140	BASE — A — C — D — TIP
150	BASE — B — C — D — TIP
160	BASE — A — B — C — D — TIP
170	BASE — B — D — D — TIP
180	BASE — C — D — D — TIP
190	BASE — D — A — C — D — TIP
200	BASE — B — C — D — D — TIP

BASE SECTION IS 25 FT., TIP SECTION IS 25 FT.
INSERTS: A = 10 FT.; B = 20 FT.; C = 30 FT.; D = 50 FT.

*ONE SPECIFIED INSERT MAY BE REPLACED BY TWO SHORTER INSERTS WITHOUT REDUCING RATINGS

MAIN HOIST DRUM RATED LOADS FOR SEVEN-EIGHTHS INCH DIA. P&H TYPE 4 WIRE ROPE										
Number of Parts of Main Hoist Reeving	1	2	3	4	5	6	7	8	9	10
Maximum Load - Lbs.	18,000	36,000	54,000	72,000	90,000	108,000	126,000	144,000	162,000	180,000