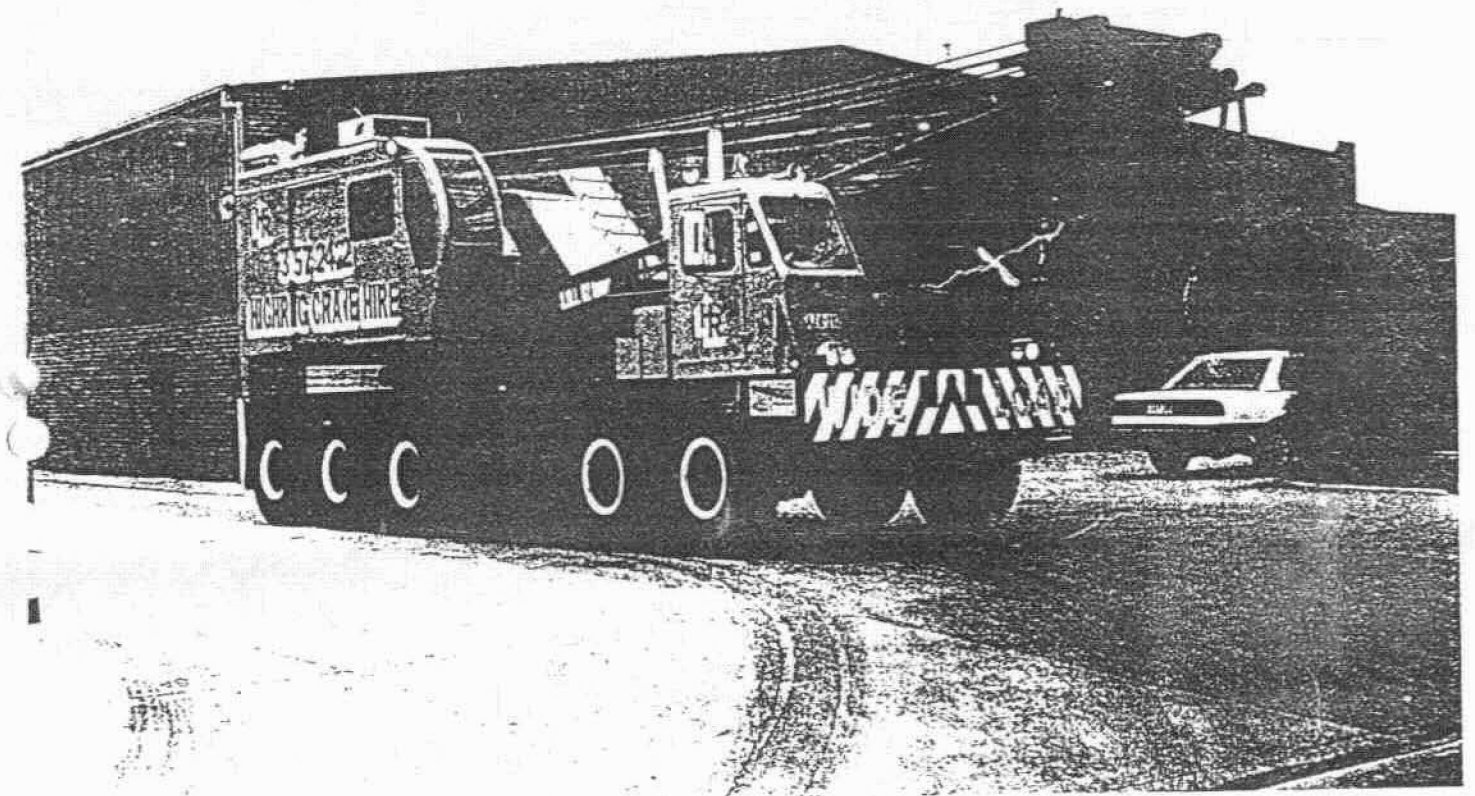


# **P&H - 790-TC**

**90 tonne truck crane**

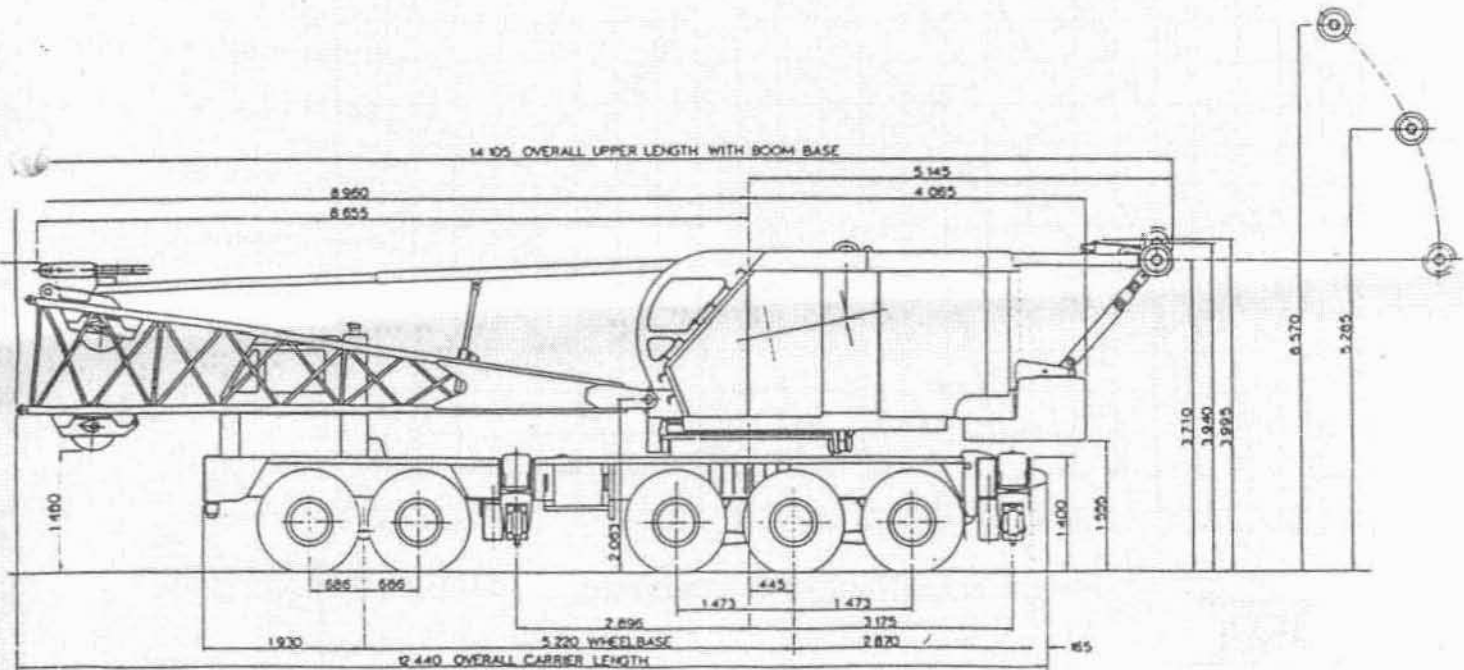
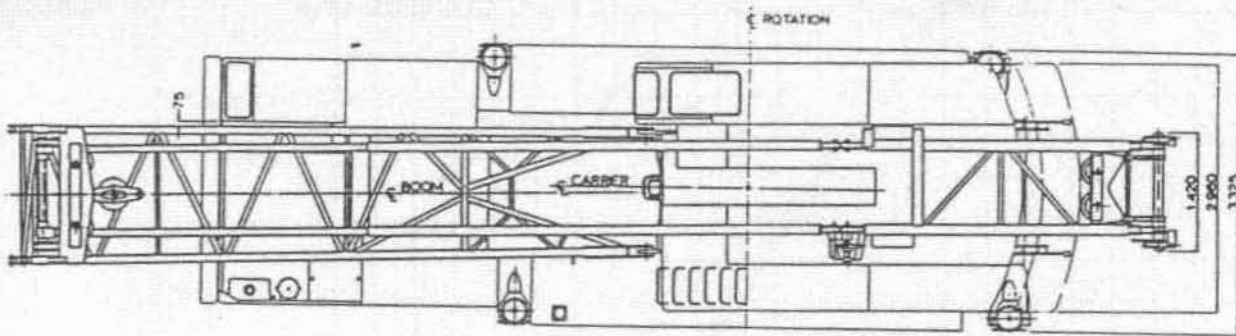
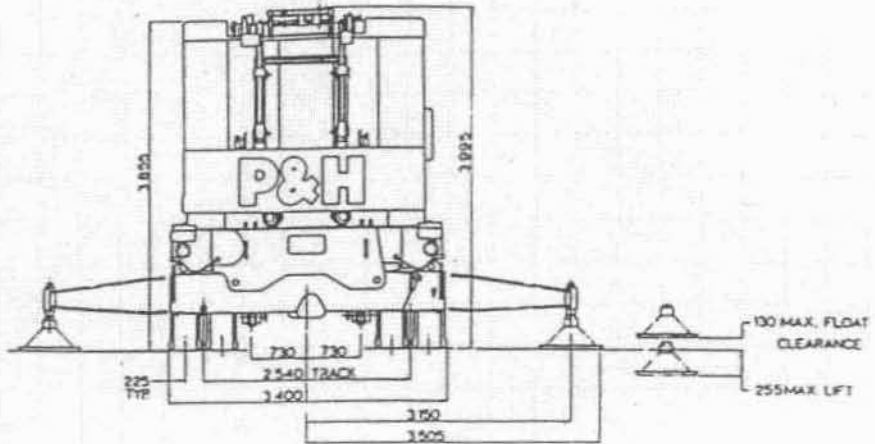
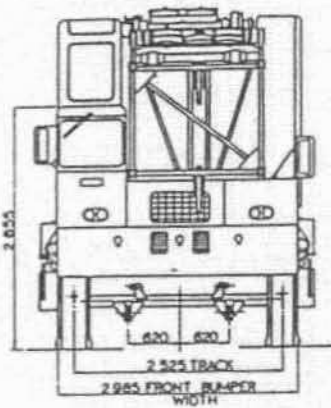
**79 metres maximum boom and jib**



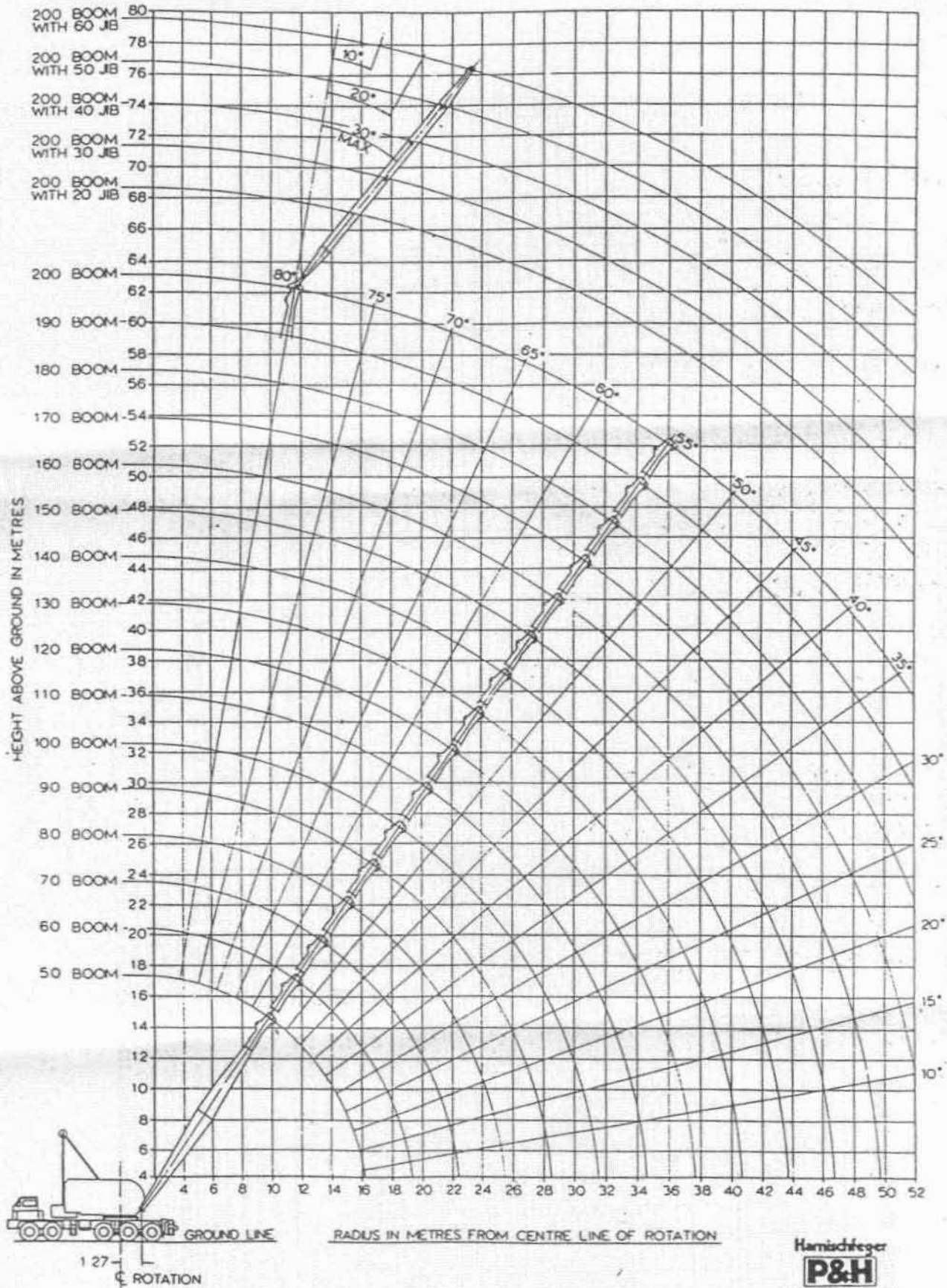
# **P&H**

# general dimensions

ALL DIMENSIONS IN MILLIMETRES



# range diagram



Harnischfeger  
**P&H**  
CONSTRUCTION EQUIPMENT 1981





**POWER PLANT:**

<b>DESCRIPTION</b>	<b>STANDARD</b>
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. 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. Dearation 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	Kg	Kg
10,260	34,000	44,260

#### 2/ BOOM OVER REAR

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

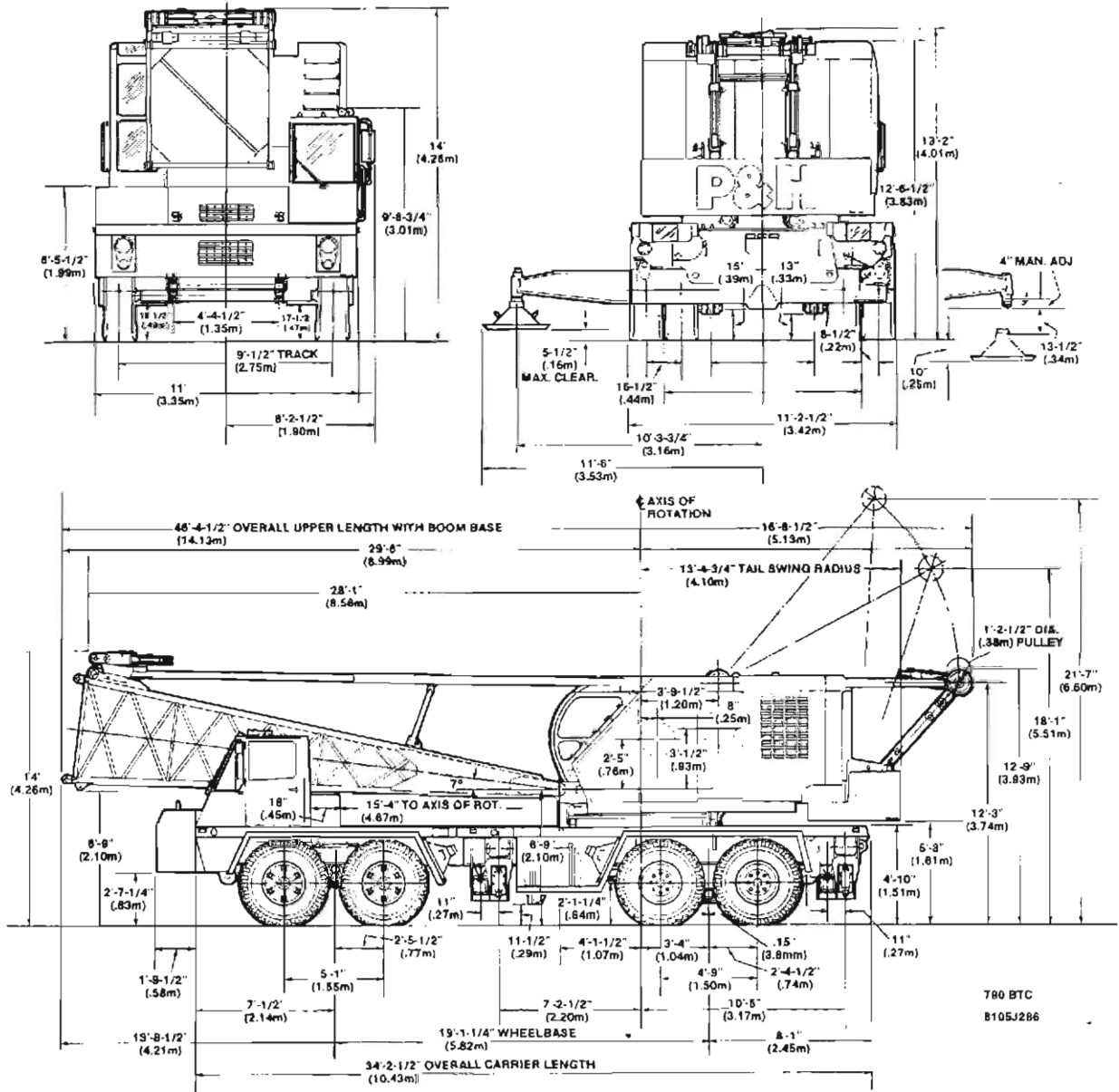
**WEIGHT:** Including turret, hydraulic outriggers, floats, roller circle, and tires. 28.85 tonnes.

**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.



**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

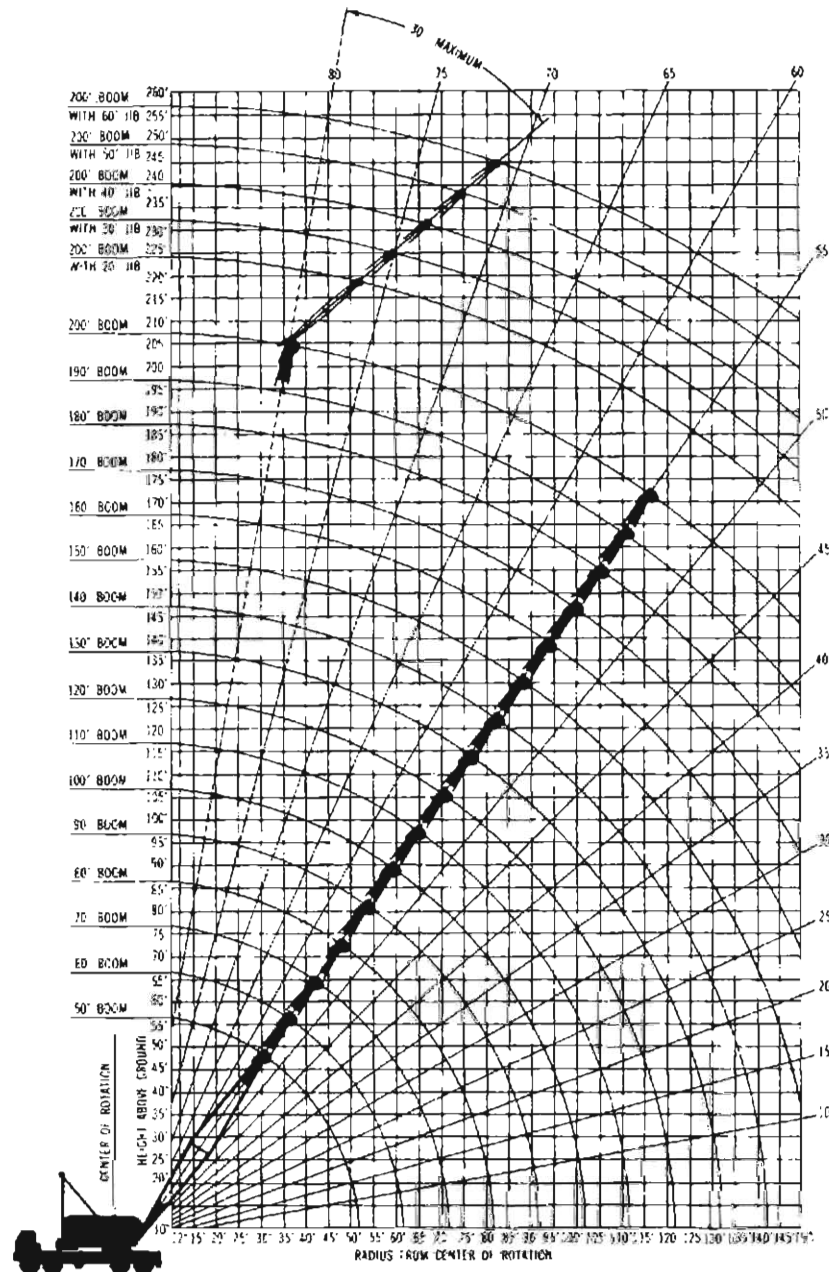


Address inquiries to



# P&H<sup>®</sup> 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

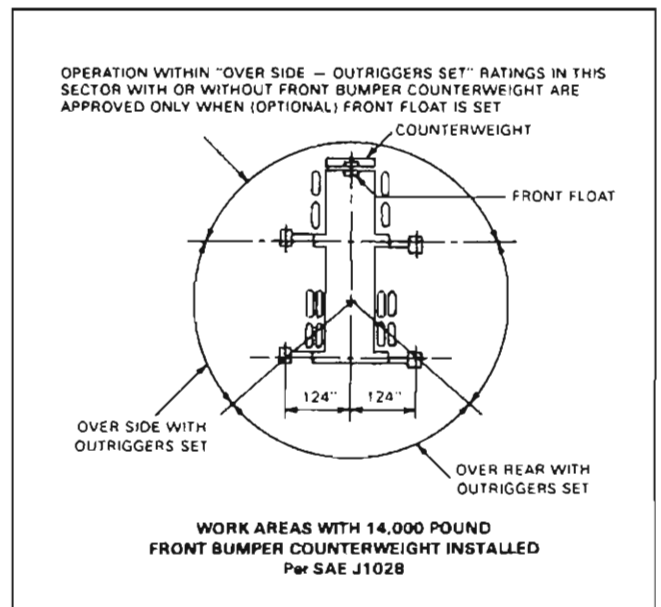
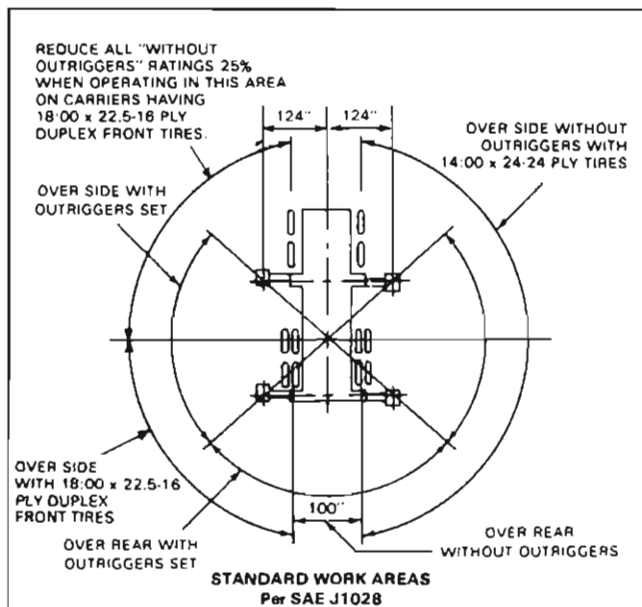
- On Outriggers for Heavy Rigging
- On Rubber "Walking" Ratings for Tilt-up Work

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.**



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**Harnischfeger**  
**P&H**  
MILWAUKEE, WISCONSIN 53201

Address inquiries to:



