



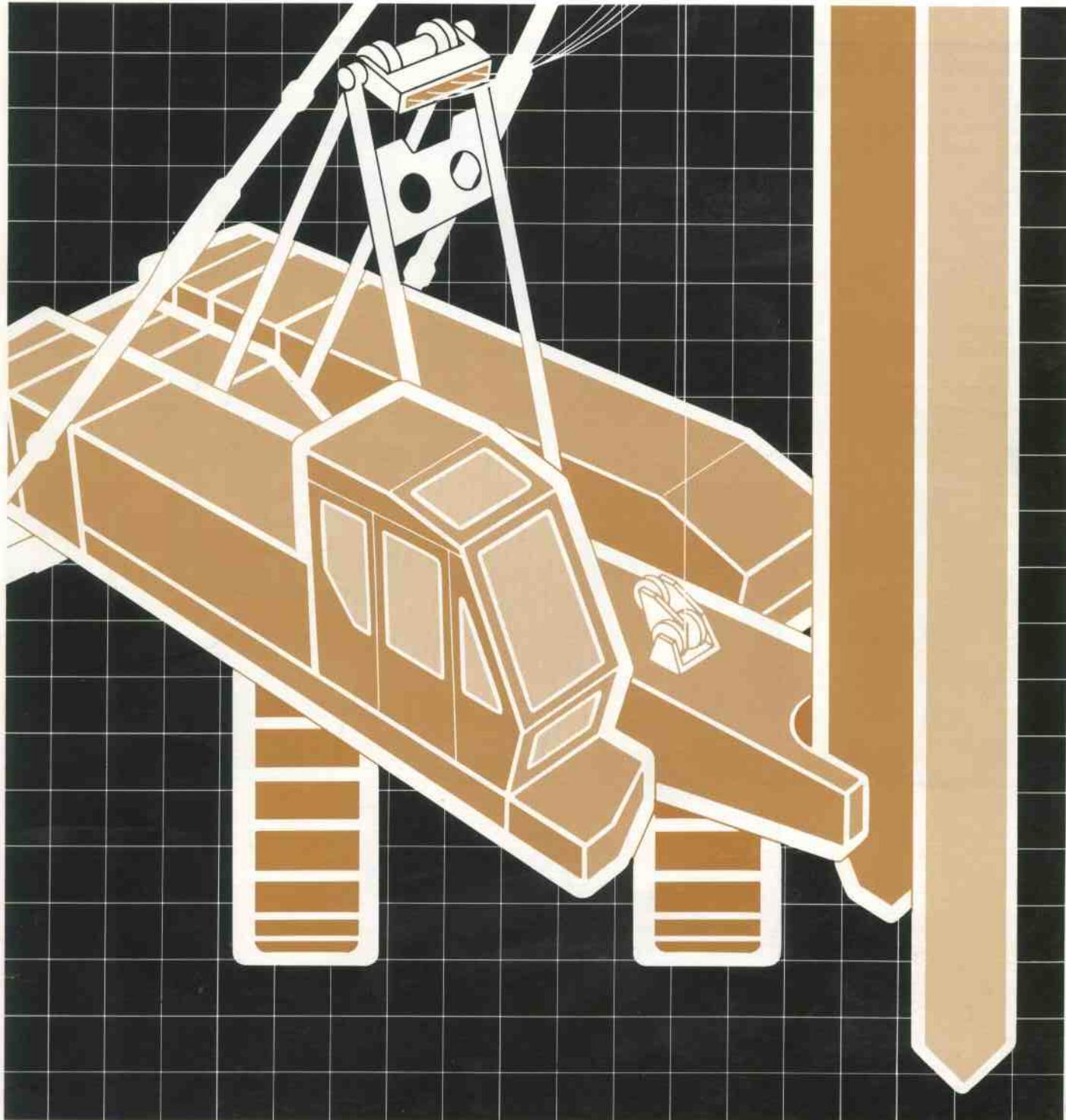
HITACHI

SPECIFICATIONS

# PD100

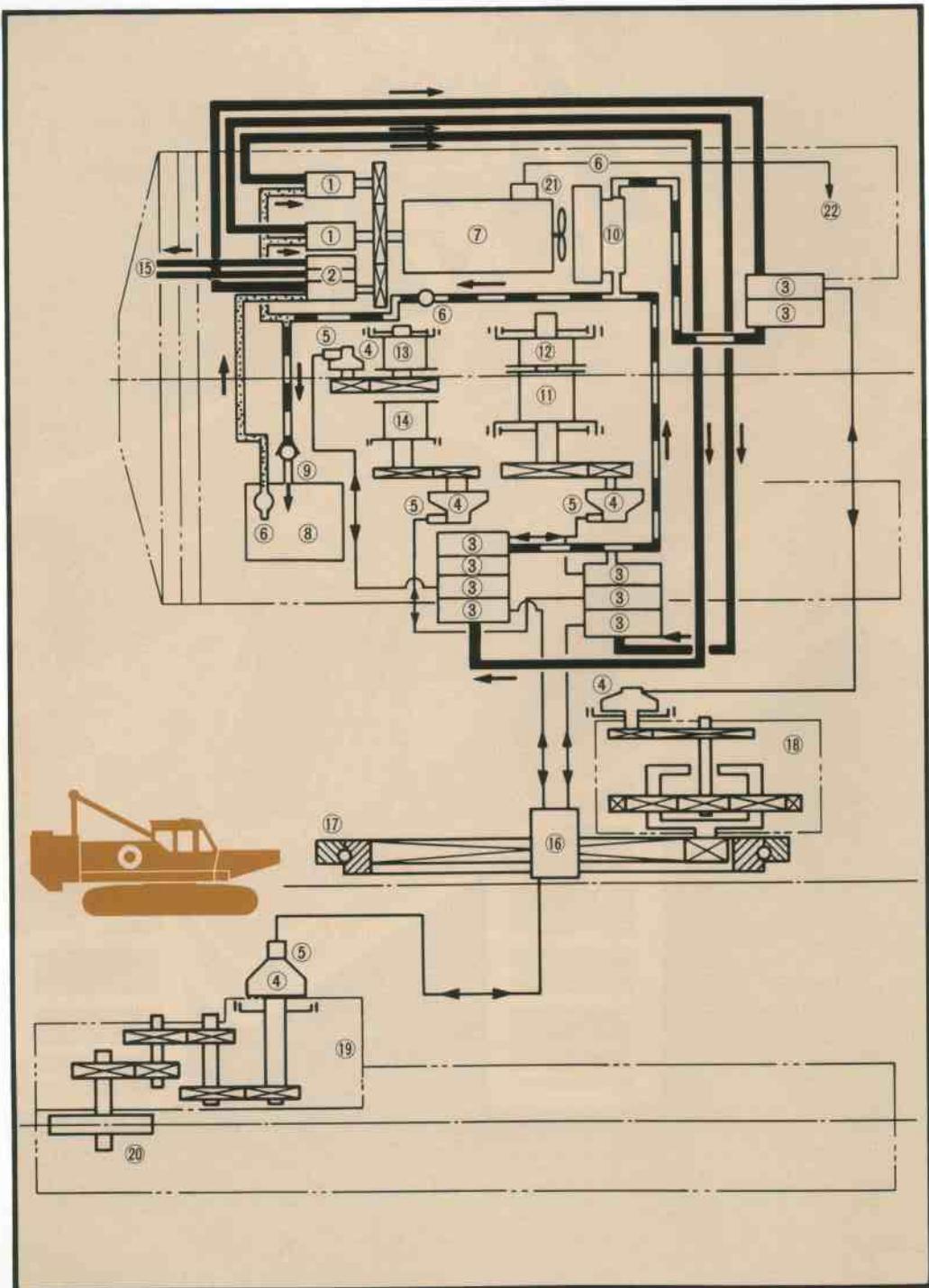
## HYDRAULIC PILE DRIVER

Full Equipped Operating Weight (except pile weight):  
100 000 kg (220 000 lb)

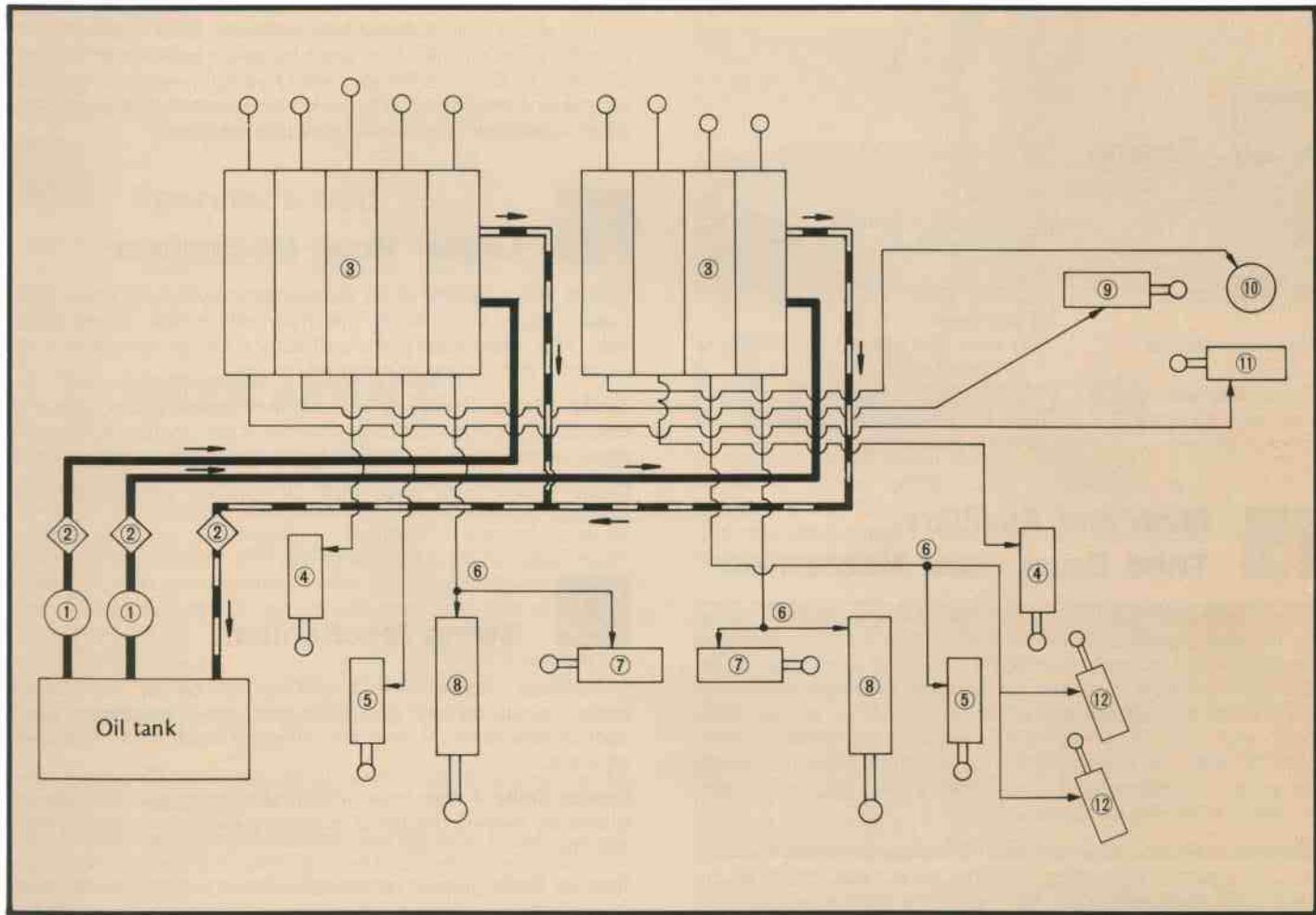


# Power Transmission Mechanism and Hydraulic System

- 1 Variable displacement pump
- 2 Fixed displacement pump
- 3 Control valve
- 4 Fixed displacement motor
- 5 Counterbalance valve  
(Brake valve)
- 6 Filter
- 7 Engine
- 8 Oil tank
- 9 Check valve
- 10 Oil cooler
- 11 Main drum
- 12 Aux. drum
- 13 Third drum
- 14 Leader hoist drum
- 15 To pile driver attachment
- 16 Center joint
- 17 Swing circle
- 18 Swing mechanism
- 19 Travel mechanism
- 20 Drive tumbler
- 21 Vane pump
- 22 To pilot valve



# Hydraulic System for Pile Driver Attachment



- 1 Gear pump
- 2 Filter
- 3 Control valve
- 4 Front jack (Option)
- 5 Rear jack (Option)
- 6 Quick coupler
- 7 Rear beam slide cylinder
- 8 Back stay cylinder
- 9 Leader slide cylinder
- 10 Leader rotating device  
(for 60RA, 80R-3 and 90R leader)
- 11 Leader rotating lock  
(for 60RA, 80R-3 and 90R leader)
- 12 A-frame hoist cylinder

# Specifications



## SUPERSTRUCTURE



### Engine

Model . . . . .	NISSAN PD604
Type . . . . .	Water-cooled, 4-cycle, 6-cylinder, direct injection chamber type diesel engine
Net flywheel HP . . . . .	112 kW (152 PS) at 2 000 min <sup>-1</sup> (2 000 rpm)
Maximum torque . . . . .	598 N·m (61 kgf·m, 441 ft·lbf) at 1 400 min <sup>-1</sup> (1 400 rpm)
Piston displacement . . . . .	10.308 l (729 cu in)
Fuel tank capacity . . . . .	250 l (55 Imp gal, 66 US gal)
Electric system . . . . .	24V AC generating



### Main and Auxiliary, Third Drum Hoist Mechanism

Hoist mechanism consists of main and auxiliary drums installed on an axis. Load hoisting/lowering is done by normal/reverse driving of the high-torque piston motor. Third drum mechanism also is of the same construction. Smooth, precise power lowering is made possible by the hydraulic brake. Main and auxiliary hoist lever and third hoist lever gives a choice of two speeds, high or low, for hoisting/lowering. Hoisting/lowering speeds are proportionally related to the lever stroke, making it easier to match exact job conditions.

**Clutches** Main and auxiliary hoist clutches, third drum clutch, are of internal expanding friction band type, powered by hydraulic clutch cylinders. Spring loaded type accumulator is provided to produce boost pressure when engine stops.

**Brakes** External contracting friction band-type mechanical brakes; integrated with link lever, etc., when under normal load. When under a larger load, spring type boost device is provided to ensure fatigue-free operation. Mechanical brake locks are equipped as standard.

**Drums** Main and auxiliary drums, third drum, are of special alloy cast iron, mounted on the lifetime-lubricated anti-friction ball bearings. Drum pawl locks are provided for integral lock of drums. They are manually controlled from operator's seat.



### Fourth Drum (Option)

Fourth drum is an independent hydraulic drive type. Drum is directly fixed on the winch shaft by spline connection without any clutch. Brake is of spring-set hydraulic-released, external contracting friction band type. Brake is automatically actuated when hoist lever is returned to neutral position.



### Leader Hoist Mechanism

Leader hoist winch is an independent hydraulic drive type. Leader drum is driven by the hydraulic motor via reduction gear. This leader hoist drum is directly fixed on the winch shaft by spline connection without any clutch.

**Leader Drum Brake** Spring-set, hydraulic-released, external contracting friction band type. Brake is automatically actuated when control lever is returned to neutral position.

**Drum Lock** Drum pawl lock is manually controlled from operator's seat.



### Swing Mechanism

Completely independent operation. Driven by high-torque piston motor through reduction gear, swing speeds are freely controllable within 0 to maximum speed range with single lever stroking.

**Service Brake** A disc type swing brake can be hydraulically actuated by moving the swing lever from neutral position toward the right.

**Parking Brake** A disc type swing brake is mechanically actuated by pulling up on the swing parking brake lever located at the right side of operator's seat.

**Swing Lock** Manually operated mechanical lock with a rod tip which is engaged in a hole of track frame during transportation.

**Swing Circle** Single-row shear-type ball bearing with heat-treated internal gear.

Swing speed . . . . . 0 – 2.7 min<sup>-1</sup> (2.7 rpm)



### Revolving Frame

All steel welded construction, stress-relieved, precision machined unit, especially designed for rigidity and strength.

**Gantry** Lowerable for transportation. Speedy, easy raising/lowering are possible with optional hydraulic cylinders.

**Counterweight** 3-piece welded structure, readily removable for weight reduction of machine for transportation.

Total weight . . . . .	15 000 kg (33 000 lb)
One 5 200 kg (11 400 lb)	
One 5 500 kg (12 100 lb)	
One 4 300 kg (9 500 lb)	

## Operator's Cab

All-weather, well-ventilated, all-round visibility, roomy operator's cab. The completely independent cab is insulated against noise and vibration. Sliding, fold-in front window slides up and stores in roof. Fully adjustable reclining seat.

## UNDERCARRIAGE

**Traction Mechanism** Each track is driven by a high-torque piston motor through 3-stage reduction gear. This mechanism allows counter-rotation of tracks for maximum maneuverability in close quarters. When lever is returned to neutral position, both hydraulic brake and spring-set/hydraulic-released multi-plate disc brake are automatically actuated to effect reliable stopping. Upper and lower rollers, sprockets and idlers are lifetime-lubricated.

Gradeability . . . . .	22° (40%) (without leader)
Travel speed . . . . .	0 – 0.8 km/h (0 – 0.50 mph)

**Track Frame** All-welded, stress relieved, box section construction.

**Side Frames** Side frames of all-welded construction can be retracted for transportation.

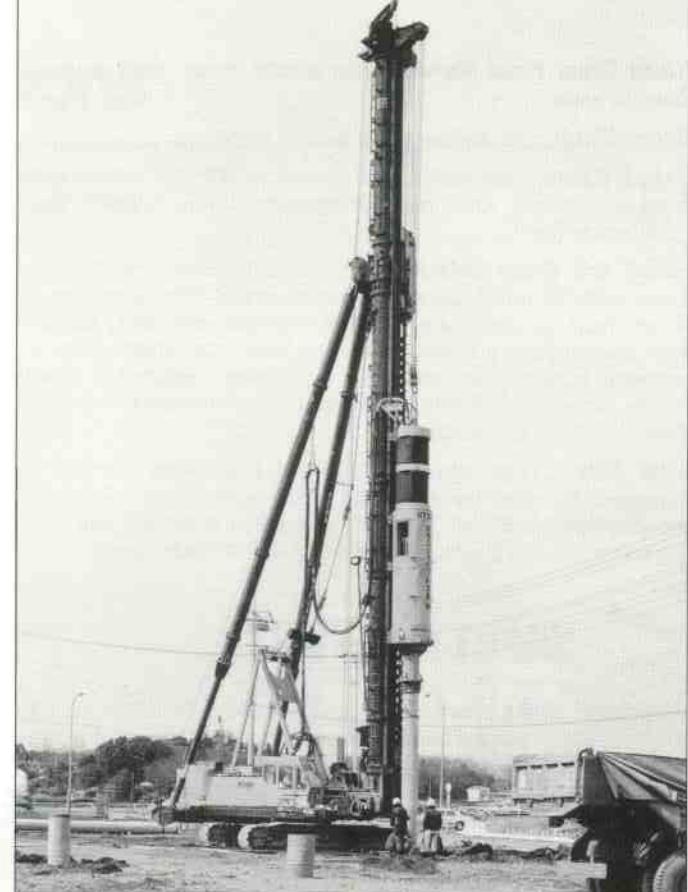
**Side Frame Extending/Retracting Device** Side frame extending/retracting is done with the cylinder provided inside the track frame. Hydraulic power source for this extending/retracting cylinder is the same as that for the left track. All that's required is to operate the switching valve installed inside the track frame and shift the left travel lever.

Then, side frame extending/retracting can easily be done quickly, eliminating troublesome piping, etc.

**Track Link Disengaging Prevention Device** Track link disengaging prevention device goes up and down together with the track link to prevent it from coming off.

**Track Shoes** Heat-treated alloy steel casting with induction-hardened roller path and driving lugs. Shoes are connected by induction-hardened steel pins.

No. of upper rollers (on each side) . . . . .	2
No. of lower rollers (on each side) . . . . .	9
No. of track shoes (on each side) . . . . .	59
Shoe width . . . . .	760 mm (30")



## H HYDRAULIC SYSTEM

2 variable displacement piston pumps plus 3 gear pumps hydraulic system allows both independent and combined operations of all functions. Variable-displacement piston pumps not only adequately control operating speeds, but also utilize engine horsepower to maximum.

	Pump-1	Pump-2	Pump-3
Type of Pump	Variable displacement pump		Gear pump
Pressure Setting	250 bar (250 kgf/cm <sup>2</sup> , 3600 psi)	185 bar (185 kgf/cm <sup>2</sup> , 2600 psi)	
Use	<ul style="list-style-type: none"> <li>• Travel (Right)</li> <li>• Main hoist (Low)</li> <li>• Aux. hoist (Low)</li> <li>• Leader hoist</li> </ul>	<ul style="list-style-type: none"> <li>• Travel (Left)</li> <li>• Main hoist (High)</li> <li>• Aux hoist (High)</li> <li>• Third drum (Low)</li> <li>• Crawler Extending/retracting</li> </ul>	<ul style="list-style-type: none"> <li>• Swing</li> <li>• Third drum (High)</li> </ul>

	Pump-4	Pump-5	Pump-6
Type of pump	Tandem gear pump		Vane pump
Pressure Setting	140 bar (140 kgf/cm <sup>2</sup> , 1990 psi)	40 bar (40 kgf/cm <sup>2</sup> , 570 psi)	
Use	<ul style="list-style-type: none"> <li>• Front jack (Right)</li> <li>• Rear jack (Right)</li> <li>• Rear beam slide (Right)</li> <li>◦ Back-stay (Right)</li> <li>• Leader rotating lock</li> <li>• Leader slide</li> </ul>	<ul style="list-style-type: none"> <li>• Front jack (Left)</li> <li>• Rear jack (Left)</li> <li>• Rear beam slide (Left)</li> <li>◦ Back-stay (Left)</li> <li>• Leader rotating</li> </ul>	<ul style="list-style-type: none"> <li>• Remote controlled hydraulic servo system</li> <li>• Main and Aux. third drum clutches</li> <li>• Main and Aux. third drum brakes</li> </ul>

◦ Pressure setting of back-stay cylinder . . . . . 85 bar  
(85 kgf/cm<sup>2</sup>, 1200 psi)

**Main and Auxiliary Hoist Motor** (One motor, common to both) Radial piston motor with counterbalance valve.

**Leader Hoist Motor** Radial piston motor with counterbalance valve.

**Third Drum Hoist Motor** Radial piston motor with counterbalance valve.

**Swing Motor** High torque radial piston motor.

**Travel Motors** Low-speed, high-torque axial piston motor with hydraulic brake valve and spring-set/hydraulic-released multiplate disc brake.

**Relief and Brake Valves** Each hydraulic circuit incorporates large-capacity relief valves to protect circuit from overload or shock load. Counterbalance valve (compensates safe, positive load lowering and prevents accidental load drop when hydraulic power is suddenly reduced) are provided for hoist motor. Brake valves (consisting of relief valve and counterbalance valve) are provided for travel circuit.

**Line Filters** High filtration  $10\mu$  full-flow filter element is provided to keep hydraulic oil clean and ensure long-term, trouble-free operation. Pilot filter, suction filter and line filter (in the attachment circuits) are provided for each circuit.

## SAFETY DEVICES

**Automatic Brake** Leader hoist device is provided with a spring-set/hydraulic-released band brake which automatically actuates when control lever is shifted to neutral position, plus a pawl type drum lock.

**Swing Lock** Swing lock device is provided to lock the superstructure while not in operation or during transport.

**Leader Angle Indicator** Mechanical leader angle indicator is provided for check on leader's verticality in both fore/aft and right/left directions.

Electric leader angle indicator is available as an option.

**Counterbalance Valve** (brake valve) A counterbalance valve is incorporated in travel motors, leader hoist motor, main and auxiliary hoist motor and third drum motor respectively. In case the hydraulic line is broken, this valve is automatically actuated to prevent accidents.

**Main and Auxiliary Hoist Brake Alarm Equipment, Fail Safe Brake Mechanism** A fail safe brake device is adopted that automatically actuates by spring setting when the engine stalls while foot brake is off. However, load fall might occur because the brake may automatically be released by hydraulic pressure when engine starts again. Accordingly, foot brake must be on without fail when engine is stopped while hoisting load. To prevent accidents, a brake alarm device is provided. This device works when stopping the engine without foot-braking.

**Drum Lock** A pawl type drum lock is adopted for main, auxiliary, third drums and leader hoist drum.

### Overhoist Prevention Device for Auger Hoisting

**Auger Pull-out Load Indicator** The auger pull-out load indicator is provided to avoid overload in auger pull-out operation.

## SERVICE REFILL CAPACITIES

	Liters	U.S. gal.	Imp.gal.
• Fuel tank . . . . .	250.0	66.0	54.9
• Engine coolant . . . . .	58.0	15.3	12.8
• Engine oil . . . . .	25.0	6.6	5.5
• Pump transmission . . . . .	1.2	0.32	0.27
• Winch reduction device			
Main/aux. and leader hoist			
drum . . . . .	40.0	10.6	8.8
Third hoist drum . . . . .	10.0	2.6	2.2
• Swing reduction device . . . . .	10.0	2.6	2.2
• Final drive (on each) . . . . .	24.0	6.3	5.3
• Hydraulic system . . . . .	380.0	100.3	83.0
• Hydraulic tank . . . . .	327.0	86.3	71.9



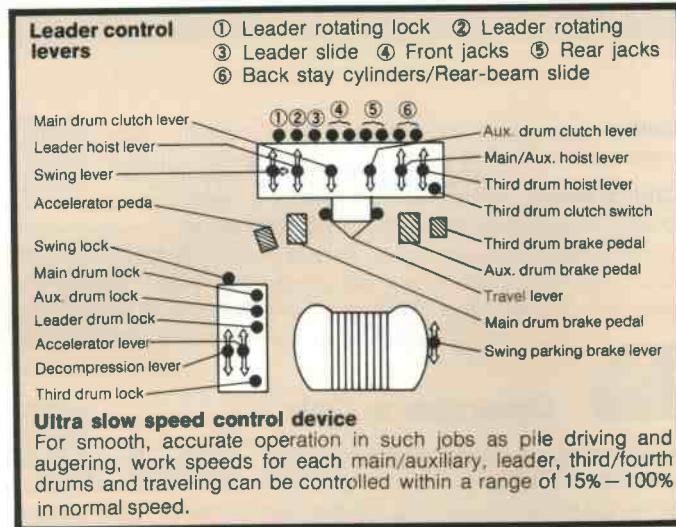
## CONTROLS

**Leader, Main and Auxiliary Hoist, Third Drum and Travel** Remote-controlled hydraulic servo. Working speed can be precisely controlled by changing lever stroke.

**Swing** Mechanical linkage type.

**Pile Driver Attachment** Mechanical linkage type.

**Fuel Control** Foot throttle and hand throttle controls equipped as standard.



## STANDARD EQUIPMENT

**Operator's Cab** All-weather cab with  $360^\circ$  visibility, wide screen wiper, sliding fold-in front window, sunvisor, fully adjustable reclining seat.

**Instrument Panel** Engine oil pressure gauge, engine coolant temperature gauge, pilot oil pressure gauge, cigarette lighter, engine tachometer with hour meter.

**Lights** Working lights, interior light.

**Miscellaneous** Electric horn, swing lock, complete tool kit, fuel level indicator, air cleaner dust indicator, lifetime-lubricated rollers, idlers and sprocket, electric refueling device, leader angle indicator.

## OPTIONAL EQUIPMENT

**Operator's Cab** Electric fan, car radio, cab aircooler, electric leader angle indicator.

### Fourth Drum

**P.T.O.** Driving a generator. A built-in type lifting magnet or a welder can be installed.

### P.T.O. for Hydraulic Equipment

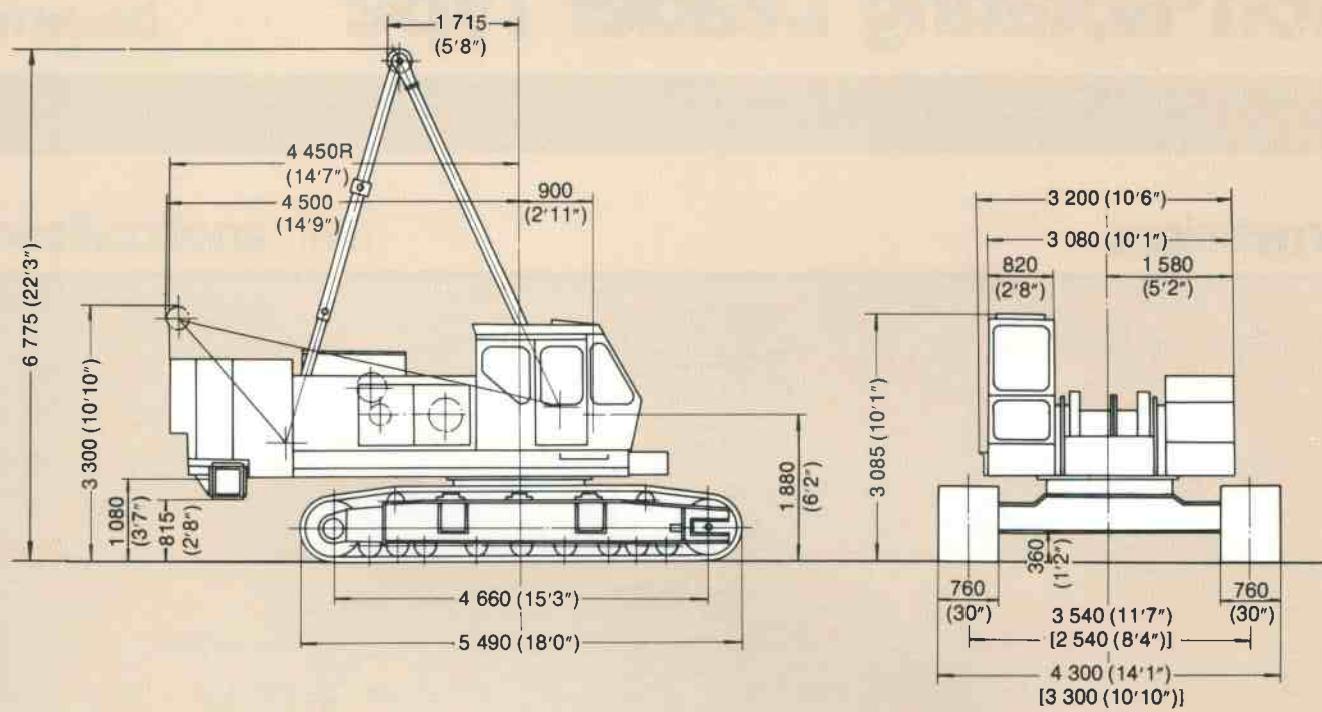
**Gantry raising cylinders** Front/Rear jacks

## FRONT-END ATTACHMENTS AVAILABLE

- 3-point support type pile driver, earth auger
  - A. Rotating leader type . . . . . Model 90R, 80R-3, 60RA
  - B. Non-rotating leader type . . . . . Model 110S, 90S
- Crane • Clamshell

# Basic Machine Dimensions

Unit: mm (ft in)



Dimensions in [ ] are of crawlers retracted.

## Specifications

<b>Line Speed</b>	Main hoist drum	Hoist/Lower	High	60 m/min (197 ft/min)	
			Low	30 m/min (99 ft/min)	
	Aux. hoist drum	Hoist/Lower	High	60 m/min (197 ft/min)	
			Low	30 m/min (99 ft/min)	
	Third drum	Hoist/Lower	High	55 m/min (180 ft/min)	
			Low	35 m/min (115 ft/min)	
Fourth drum (option)			Hoist/Lower		
			40 m/min (131 ft/min)		
Leader hoist drum			Hoist/Lower		
			45 m/min (148 ft/min)		
<b>Swing Speed</b>				0–2.7 min <sup>-1</sup> (0–2.7 rpm)	
<b>Travel Speed</b>				0–0.8 km/h (0–0.5 mph)	
<b>Gradeability (without leader and counterweight)</b>				22° (40%)	
<b>Basic Weight with Counterweight</b>				50 000 kg (110 000 lb)	

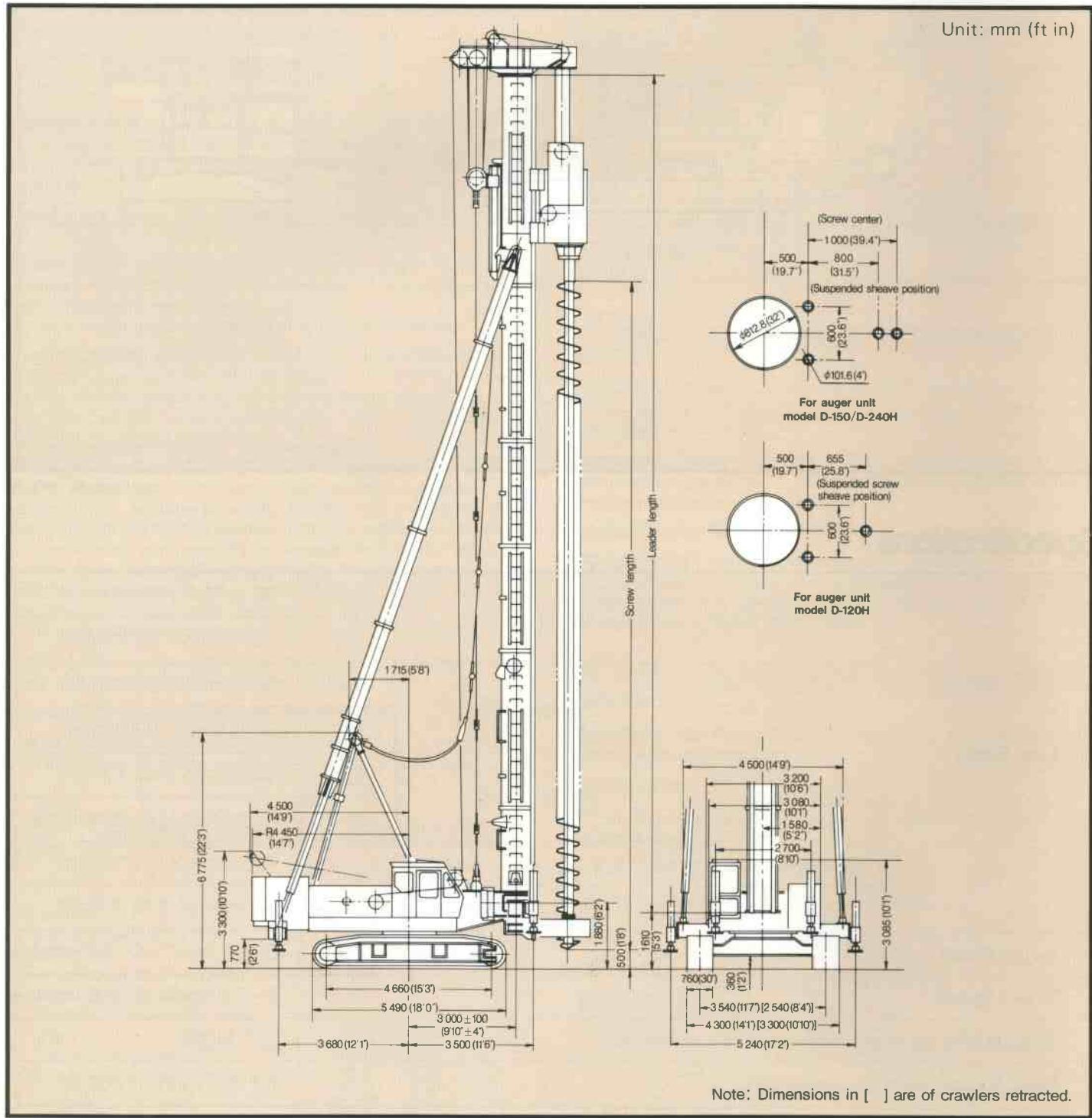
Note: Hoisting line speeds and travel speeds varies with load.

# 3-POINT SUPPORT TYPE

## Non-Rotating Leader Type

(Model 110S)

### Dimensions



# EARTH AUGER

## Specifications [110S]

Front bracket: Type 3 000

Leader length m (ft in)	Pile		Earth auger					Operating weight Approx. kg (lb)	Ground pressure bar (kgf/cm <sup>2</sup> , psi)		
	Length m (ft in)	Weight kg (lb)	Auger unit		Screw		Allowable auger pull-out force kN (kgf, lbf)				
			Model	Weight kg (lb)	Length m (ft in)	Weight kg (lb)					
Augering	30 (98'5")	24 (78'9")	8 000 (17 600)	D-120H	9 500 (20 900)	26 (85'4")	6 500 (14 300)	785 (80 000, 176 000)	99 700 (220 000)	1.32 (1.32, 18.8)	
	27 (88'7")	20 (65'7")	8 000 (17 600)	D-150H-P	11 700 (25 800)	22 (72'2")	7 700 (17 000)	883 (90 000, 198 000)	102 200 (225 000)	1.35 (1.35, 19.2)	
	24 (78'9")	17 (55'9")	6 000 (13 200)	*SMD-200H	16 500 (36 400)	16 (52'6")	7 500 (16 500)	981 (100 000, 220 000)	104 600 (231 000)	1.39 (1.39, 19.8)	
	21 (68'11")	14 (45'11")	8 000 (17 600)	D-240H	16 300 (35 900)	16 (52'6")	8 000 (17 600)	1 079 (110 000, 243 000)	103 500 (228 000)	1.37 (1.37, 19.5)	
	24 (78'9")	17 (55'9")	8 000 (17 600)		11 800 (26 000)	19 (62'4")	9 500 (20 900)	981 (100 000, 220 000)	103 000 (227 000)	1.36 (1.36, 19.3)	

Notes:

- This chart shows the standard specifications for the PD100 110S type Earth Auger.
- Please consult your Hitachi dealer regarding specifications other than those given in this chart.
- The screw weights in this chart have been fixed at 250 kg/m (14 lb/in) for the D-120H, 350 kg/m (20 lb/in) for the D-150H-P, and 500 kg/m (28 lb/in) D-240H.
- Auger screw lengths and weights include auger head lengths and weights.
- The leader up to 21 m (68'11") long can be set-up by its own power. In case that leader is extended more than 24 m (78'9"), an auxiliary crane is required for setting-up the leader.
- Operating weight does not include pile weight.
- The asterisk (\*) indicates that the SMD-200H auger should be operated within the rated electric current value (orientational) value 600A.
- If the auger pull-out force exceeds 686 kN (70 000 kgf, 154 000 lbf) be sure to use the back-tension unit.
- In operation, crawlers must be extended.

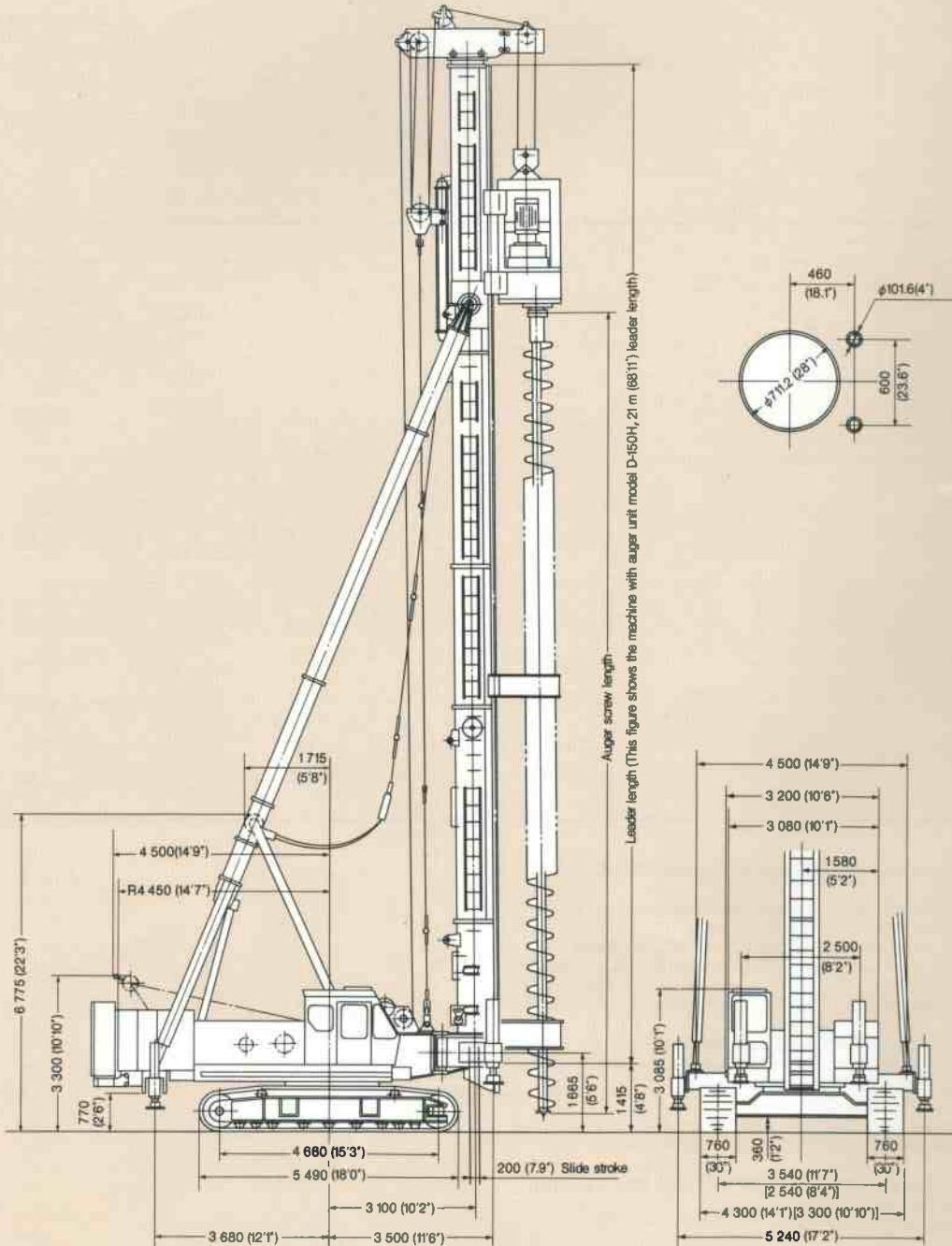
# 3-POINT SUPPORT TYPE

## Non-Rotating Leader Type

(Model 90S)

### Dimensions

Unit: mm (in)



Note: Dimensions in [ ] are of crawlers retracted.

# PILE DRIVER

## Specifications [90S]

Front bracket: Type 3 100

Leader length m (ft in)	Pile		Hammer			Earth auger					Max. leader inclination angle (Backward) degree	Operating weight kg (lb)	Ground pressure bar (kgf/cm <sup>2</sup> , psi)
	Length m (ft.in)	Weight kg (lb)	Model	Weight kg (lb)	Cap weight kg (lb)	Auger unit		Screw		Allowable auger pull-out force kN (kgf,lbf)			
24 (78'9")	16 (52'6")	7000 (15 400)	KB80	20 500 (45 100)	4 000 (8 800)	-	-	-	-	-	15°	96 900 (213 000)	1.28 (1.28, 18.2)
24 (78'9")	16 (52'6")	6 000 (13 200)	MB70	21 100 (46 400)	4 000 (8 800)	-	-	-	-	-	15°	97 400 (214 000)	1.29 (1.29, 18.3)
27 (88'7")	19 (62'4")	10 000 (22 000)	KB60	15 000 (33 000)	3 000 (6 600)	-	-	-	-	-	12°	91 700 (202 000)	1.21 (1.21, 17.2)
30 (98'5")	22 (72'2")	10 000 (22 000)									10°	93 200 (205 000)	1.23 (1.23, 17.5)
33 (108'3")	26 (85'4")	10 000 (22 000)	*45	11 000 (24 200)	2 000 (4 400)	-	-	-	-	-	8°	89 900 (198 000)	1.19 (1.19, 16.9)
21 (68'11")	14 (45'11")	8 000 (17 600)	-	-	-	D-240H	16 300 (35 900)	16 (52'6")	8 000 (17 600)	491 (50 000, 110 000)	-	97 600 (215 000)	1.29 (1.29, 18.3)
24 (78'9")	17 (55'9")	10 000 (22 000)	-	-	-	D-150H	11 700 (25 700)	19 (62'4")	5 700 (12 500)	491 (50 000, 110 000)	-	92 100 (203 000)	1.22 (1.22, 17.3)
27 (88'7")	20 (65'7")	10 000 (22 000)						22 (72'2")	6 600 (14 500)	491 (50 000, 110 000)	-	94 400 (208 000)	1.25 (1.25, 17.8)
30 (98'5")	24 (78'9")	10 000 (22 000)	-	-	-	D-120H	9 500 (20 900)	26 (85'4")	6 000 (13 200)	491 (50 000, 110 000)	-	92 900 (204 000)	1.23 (1.23, 17.5)
33 (108'3")	27 (88'7")	10 000 (22 000)						29 (95'2")	6 600 (14 500)	392 (40 000, 88 000)	-	95 000 (209 000)	1.26 (1.26, 17.9)

Notes:

- This chart shows the standard specifications for the PD100 90S type Pile Driver.
- Please consult your Hitachi dealer regarding specifications other than those given in this chart.
- Auger screw lengths and weights include auger head lengths and weights.
- Be sure to always use the rear jacks when doing backward inclined pile driving.
- The leader up to 24 m (78'9") long can be set-up by its own power. In case that leader is extended more than 27 m (88'7"), an auxiliary crane is required for setting-up the leader.
- When using the 45 type hammer, please use the optional, supplementary leader (this is a metal part which changes guide pipe pitch).
- Operating weight does not include pile weight.
- Different specifications apply if the maximum excavation diameter is 600 mm (23.6").
- In operation, crawlers must be extended.

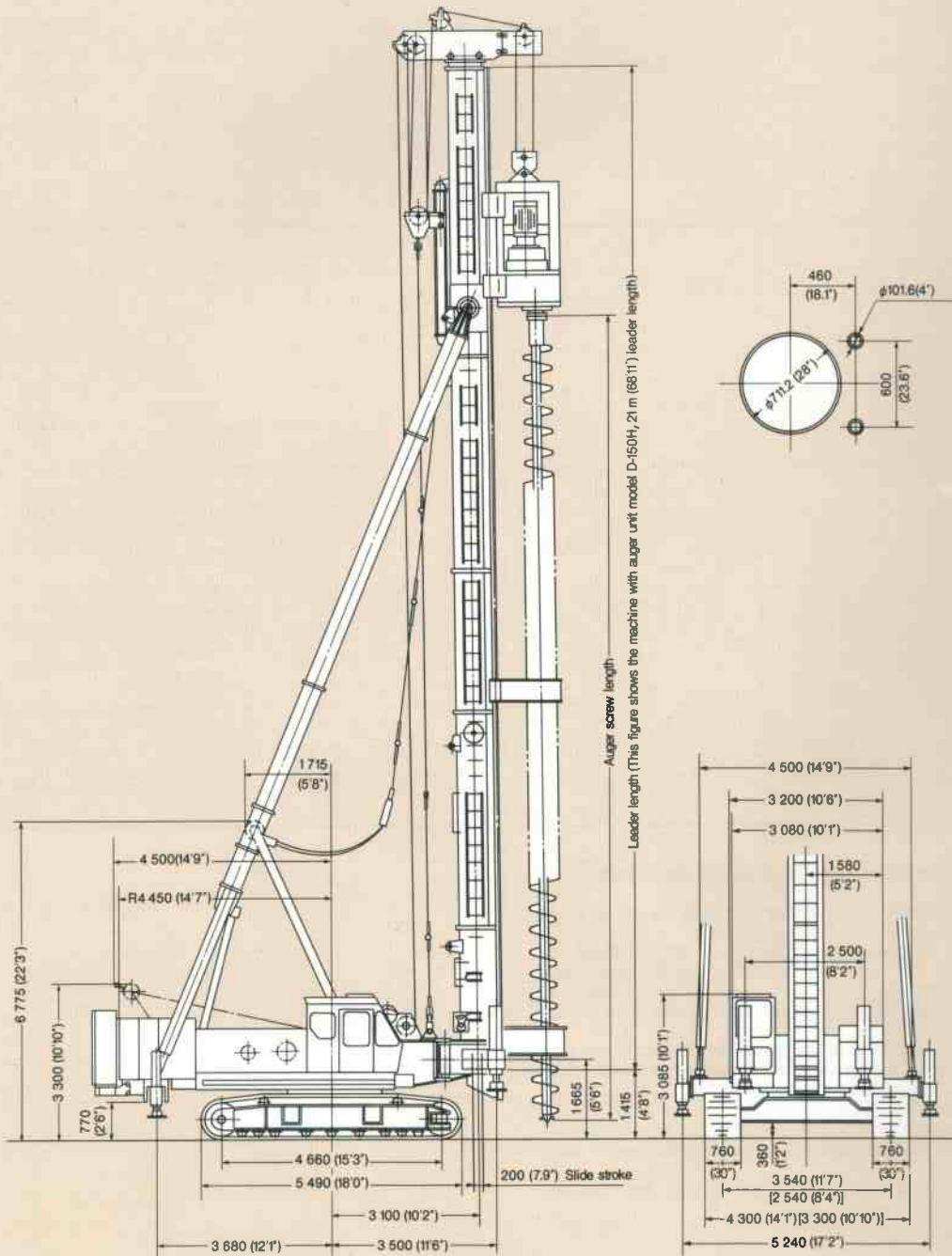
# 3-POINT SUPPORT TYPE

## Non-Rotating Leader Type

(Model 905)

### Dimensions

Unit: mm (in)



Note: Dimensions in [ ] are of crawlers retracted.

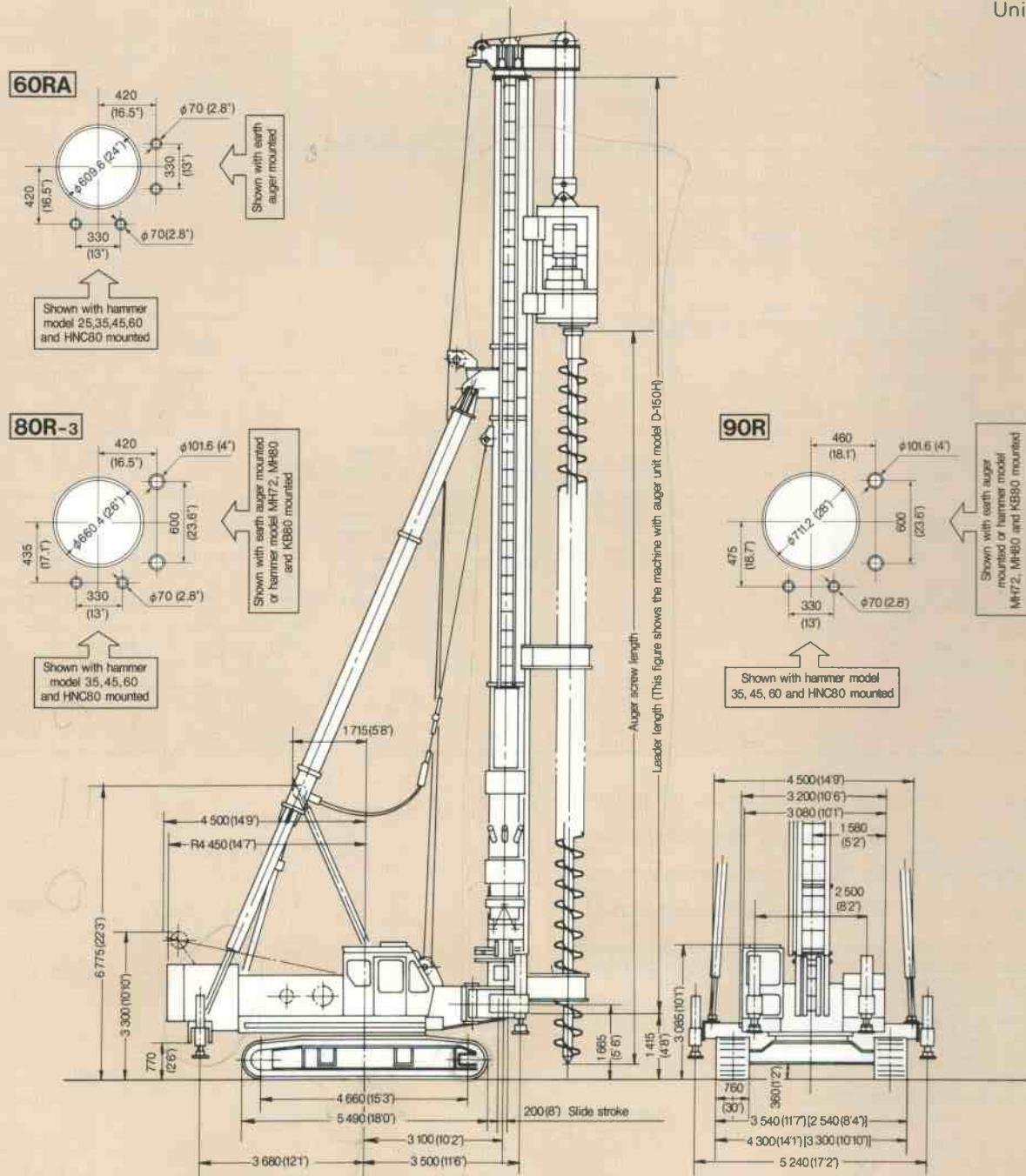
# 3-POINT SUPPORT TYPE

## Rotating Leader Type

(Model 90R, 80R-3, 60RA)

### Dimensions

Unit: mm (ft in)



Note: Dimensions in [ ] are of crawlers retracted.

# PILE DRIVER

## Specifications [90R]

Front bracket: Type 3 100

Leader length m (ft in)	Pile		Hammer			Earth auger				Max. leader inclination angle (Backward) degree	Operating weight Approx. kg (lb)	Ground pressure bar (kgf/cm <sup>2</sup> , psi)		
	Length m (ft in)	Weight kg (lb)	Model	Hammer weight kg (lb)	Cap weight kg (lb)	Anger unit	Screw	Allowable auger pull-out force KN (kgf, lbf)						
Hammering	21 (68'11")	13 (42'8")	10 000 (22 000)	KB80	20 500 (45 200)	4 000 (8 800)	—	—	—	18°	97 700 (215 000)	1.29 (1.29, 18.3)		
	24 (78'9")	16 (52'6")	7 000 (15 400)		—	—	—	—	—	15°	99 500 (219 000)	1.32 (1.32, 18.8)		
	21 (68'11")	13 (42'8")	10 000 (22 000)	MH72	18 400 (40 600)	3 500 (7 700)	—	—	—	18°	95 100 (210 000)	1.27 (1.27, 18.1)		
	24 (78'9")	16 (52'6")	9 000 (19 800)		—	—	—	—	—	15°	96 900 (214 000)	1.28 (1.28, 18.2)		
	27 (88'7")	19 (62'4")	10 000 (22 000)	KB60	15 000 (33 000)	3 000 (6 600)	—	—	—	12°	94 700 (209 000)	1.26 (1.26, 17.9)		
	30 (98'5")	22 (72'2")	10 000 (22 000)		—	—	—	—	—	10°	96 300 (212 000)	1.28 (1.28, 18.2)		
	30 (98'5")	23 (75'6")	10 000 (22 000)		—	—	—	—	—	10°	913 000 (201 000)	1.21 (1.21, 17.2)		
	33 (108'3")	26 (85'4")	10 000 (22 000)	45	11 000 (24 200)	2 000 (4 400)	—	—	—	8°	93 000 (205 000)	1.23 (1.23, 17.5)		
	30 (98'5")	18 (59'1")	10 000 (22 000)		—	—	—	—	—	—	93 300 (206 000)	1.24 (1.24, 17.6)		
	33 (108'3")	21 (68'11")	8 000 (17 600)	HNC80	14 200 (31 300)	1 200 (2 600)	—	—	—	—	95 200 (210 000)	1.26 (1.26, 17.9)		
Augering	21 (68'11")	16 (52'6")	10 000 (22 000)		—	—	D-240H	16 300 (35 900)	16 (52'6")	8 000 (17 600)	491 (50 000, 110 000)	—	100 200 (221 000)	1.33 (1.33, 18.9)
	24 (78'9")	19 (62'4")	10 000 (22 000)	—	—	—	D-150H	11 700 (25 800)	19 (62'4")	5 700 (12 500)	491 (50 000, 110 000)	—	94 800 (209 000)	1.26 (1.26, 17.9)
	27 (88'7")	22 (72'2")	10 000 (22 000)		—	—			22 (72'2")	6 600 (14 500)	491 (50 000, 110 000)	—	97 500 (215 000)	1.29 (1.29, 18.3)
	30 (98'5")	26 (85'4")	10 000 (22 000)	—	—	—	D-120H	9 500 (20 900)	26 (85'4")	6 000 (13 200)	491 (50 000, 110 000)	—	95 800 (211 000)	1.27 (1.27, 18.1)
	33 (108'3")	29 (95'2")	10 000 (22 000)		—	—			29 (95'2")	6 700 (14 700)	392 (40 000, 88 200)	—	98 300 (217 000)	1.30 (1.30, 18.5)
Auger and Hammer Combination	21 (68'11")	14 (45'11")	10 000 (22 000)	45	11 000 (24 200)	2 000 (4 400)	D-120H	9 500 (20 900)	17 (55'9")	3 900 (8 600)	491 (50 000, 110 000)	—	101 800 (224 000)	1.35 (1.35, 19.2)
	24 (78'9")	17 (55'9")	10 000 (22 000)		—	—			20 (65'7")	4 600 (10 100)	491 (50 000, 110 000)	—	104 300 (230 000)	1.38 (1.38, 19.6)
	21 (68'11")	15 (49'3")	8 000 (17 600)	35	8 500 (18 700)	1 000 (2 200)	D-150H	11 700 (25 800)	16 (52'6")	4 800 (10 600)	491 (50 000, 110 000)	—	101 800 (224 000)	1.35 (1.35, 19.2)
	24 (78'9")	18 (59'1")	8 000 (17 600)						20 (65'7")	4 600 (10 100)	491 (50 000, 110 000)	—	100 800 (222 000)	1.34 (1.34, 19.1)
	27 (88'7")	21 (68'11")	8 000 (17 600)		—	—	D-120H	9 500 (20 900)	23 (75'6")	5 300 (11 700)	491 (50 000, 110 000)	—	103 300 (228 000)	1.37 (1.37, 19.5)
	27 (88'7")	15 (49'3")	6 000 (13 200)	HNC80	14 200 (31 300)	1 200 (2 600)	D-80H	7 000 (15 400)	17 (55'9")	3 900 (8 600)	491 (50 000, 110 000)	—	104 900 (231 000)	1.39 (1.39, 19.8)

### Notes:

- This chart shows the standard specifications for the PD100 90R type Pile Driver.
- Please consult your Hitachi dealer regarding specifications other than those given in this chart.
- Auger screw lengths and weights include auger head lengths and weights.
- Be sure to always use the rear jacks when doing backward inclined pile driving.
- The leader up to 24 m (78'9") long can be set-up by its own power. In case that leader is extended more than 27 m (88'7"), an auxiliary crane is required for setting-up the leader.

6. Operating weight does not include pile weight.

7. In operation, crawlers must be extended.

8. Different specifications apply if the maximum excavation diameter is 600 mm (23.6').

# Specifications [80R-3]

Front bracket: Type 3 100

Leader length m (ft in)	Pile		Hammer			Earth auger				Allowable auger pull-out force kN (kgf, lbf)	Max. leader inclination angle (Backward) degree	Operating weight Approx. kg (lb)	Ground pressure bar (kgf/cm <sup>2</sup> , psi)
	Length m (ft in)	Weight kg (lb)	Model	Hammer weight kg (lb)	Cap weight kg (lb)	Auger unit	Screw						
						Model	Weight kg (lb)	Length m (ft in)	Weight kg (lb)				
Hammering	21 (68'11")	13 (42'8")	10 000 (22 000)	KB80	20 500 (45 100)	4 000 (8 800)	—	—	—	—	20°	94 900 (209 000)	1.26 (1.26, 17.9)
	24 (78'9")	16 (52'6")	8 000 (17 600)		18 400 (40 600)	3 500 (7 700)	—	—	—	—	16°	96 500 (213 000)	1.28 (1.28, 18.2)
	21 (68'11")	13 (42'8")	10 000 (22 000)	MH72	18 400 (40 600)	3 500 (7 700)	—	—	—	—	20°	92 300 (203 000)	1.22 (1.22, 17.4)
	24 (78'9")	16 (52'6")	10 000 (22 000)		15 000 (33 000)	3 000 (6 600)	—	—	—	—	16°	93 900 (207 000)	1.24 (1.24, 17.6)
	24 (78'9")	16 (52'6")	10 000 (22 000)	KB80	11 000 (24 200)	2 000 (4 400)	—	—	—	—	16°	90 000 (198 000)	1.19 (1.19, 16.9)
	27 (88'7")	19 (62'4")	10 000 (22 000)		14 200 (31 300)	1 200 (2 600)	—	—	—	—	13°	91 600 (202 000)	1.21 (1.21, 17.2)
	27 (88'7")	20 (65'7")	10 000 (22 000)	45	14 200 (31 300)	1 200 (2 600)	—	—	—	—	13°	86 600 (191 000)	1.15 (1.15, 16.4)
	30 (98'5")	23 (75'6")	10 000 (22 000)		14 200 (31 300)	1 200 (2 600)	—	—	—	—	11°	87 900 (194 000)	1.16 (1.16, 16.5)
Augering	30 (98'5")	18 (59'1")	10 000 (22 000)	HNC80	26 (85'4")	6 000 (13 200)	9 500 (20 900)	392 (40 000, 88 000)	—	—	—	90 400 (199 000)	1.20 (1.20, 17.1)
	33 (108'3")	21 (68'11")	8 000 (17 600)		29 (95'2")	6 700 (14 800)	—	343 (35 000, 77 000)	—	—	—	91 900 (203 000)	1.22 (1.22, 17.4)
	33 (108'3")	26 (85'4")	10 000 (22 000)		29 (95'2")	6 700 (14 800)	D-120H	343 (35 000, 77 000)	—	94 500 (208 000)	1.25 (1.25, 17.8)		
	36 (118'1")	29 (95'2")	10 000 (22 000)		32 (105'0")	7 400 (16 300)	D-80H	32 (105'0")	—	96 800 (213 000)	1.28 (1.28, 18.2)		
Auger and hammer combination	30 (98'5")	26 (85'4")	10 000 (22 000)	45	26 (85'4")	3 900 (8 600)	D-120H	17 (55'9")	—	94 100 (207 000)	1.25 (1.25, 17.8)		
	33 (108'3")	29 (95'2")	10 000 (22 000)		20 (65'7")	4 600 (10 100)	D-120H	20 (65'7")	—	95 900 (211 000)	1.27 (1.27, 18.1)		
	24 (78'9")	17 (55'9")	10 000 (22 000)		20 (65'7")	4 600 (10 100)	D-80H	23 (75'6")	—	101 000 (223 000)	1.34 (1.34, 19.1)		
	24 (78'9")	17 (55'9")	10 000 (22 000)		23 (75'6")	5 300 (11 700)	D-80H	23 (75'6")	—	103 400 (228 000)	1.37 (1.37, 19.5)		
	27 (88'7")	20 (65'7")	10 000 (22 000)	35	20 (65'7")	4 600 (10 100)	D-120H	20 (65'7")	—	100 700 (222 000)	1.33 (1.33, 18.9)		
	24 (78'9")	18 (59'1")	8 000 (17 600)		23 (75'6")	5 300 (11 700)	D-120H	23 (75'6")	—	100 300 (221 000)	1.36 (1.36, 19.3)		
	27 (88'7")	21 (68'11")	8 000 (17 600)		26 (85'4")	6 000 (13 200)	D-80H	26 (85'4")	—	99 900 (220 000)	1.32 (1.32, 18.8)		
	27 (88'7")	21 (68'11")	8 000 (17 600)		23 (75'6")	5 300 (11 700)	D-80H	23 (75'6")	—	102 200 (225 000)	1.35 (1.35, 19.2)		
Auger	30 (98'5")	24 (78'9")	8 000 (17 600)	HNC80	20 (65'7")	4 600 (10 100)	D-120H	20 (65'7")	—	101 600 (224 000)	1.35 (1.35, 19.2)		
	27 (88'7")	15 (49'3")	6 000 (13 200)		23 (75'6")	5 300 (11 700)	D-80H	23 (75'6")	—	102 000 (225 000)	1.35 (1.35, 19.2)		
	27 (88'7")	21 (68'11")	8 000 (17 600)		26 (85'4")	6 000 (13 200)	D-80H	26 (85'4")	—	102 000 (225 000)	1.35 (1.35, 19.2)		

Notes:

- This chart shows the standard specifications for the PD100 80R-3 type Pile Driver.
- Please consult your Hitachi dealer regarding specifications other than those given in this chart.
- Auger screw lengths and weights include auger head lengths and weights.
- Be sure to always use the rear jacks when doing backward inclined pile driving.
- The leader up to 27 m (88'7") long can be set-up by its own power. In case that leader is extended more than 30 m (98'5"), an auxiliary crane is required for setting-up the leader.
- Operating weight does not include pile weight.
- In operation, crawlers must be extended.
- Different specifications apply if the maximum excavation diameter is 600 mm (23.6").

# Specifications [60RA]

Front bracket: Type 3 100

Leader length m (ft in)	Pile		Hammer			Earth auger				Max. leader inclination angle (Backward) degree	Operating weight Approx. kg (lb)	Ground pressure bar kgf/cm <sup>2</sup> , psi
	Length m (ft in)	Weight kg (lb)	Model	Hammer weight kg (lb)	Cap weight kg (lb)	Auger unit Model	Weight kg (lb)	Length m (ft in)	Weight kg (lb)			
Hammering	24 (78'9")	16 (52'6")	10 000 (22 000)	KB60	15 000 (33 100)	3 000 (6 600)	—	—	—	—	16°	88 100 (194 000) 1.17 (1.17, 16.6)
	27 (88'7")	19 (62'4")	10 000 (22 000)		—	—	—	—	—	—	13°	89 400 (197 000) 1.18 (1.18, 16.8)
	27 (88'7")	20 (65'7")	10 000 (22 000)		45	11 000 (24 200)	2 000 (4 400)	—	—	—	—	13°
	30 (98'5")	23 (75'6")	10 000 (22 000)	35	—	—	—	—	—	—	11°	85 800 (189 000) 1.14 (1.14, 16.2)
	30 (98'5")	24 (78'9")	8 000 (17 600)		8 500 (18 700)	1 000 (2 200)	—	—	—	—	11°	82 300 (181 000) 1.09 (1.09, 15.5)
	33 (108'3")	27 (88'7")	8 000 (17 600)		—	—	—	—	—	—	9°	83 800 (185 000) 1.11 (1.11, 15.8)
	24 (78'9")	12 (39'4")	5 000 (11 000)		HNC80	14 200 (31 300)	1 200 (2 600)	—	—	—	—	—
	27 (88'7")	15 (49'3")	6 000 (13 200)	—	—	—	D-80H	7 000 (15 400)	23 (75'6") 5 300 (11 700)	343 (35 000, 77 000)	—	87 500 (193 000) 1.16 (1.16, 16.5)
Augering	27 (88'7")	23 (75'6")	10 000 (22 000)	—	—	—	D-80H	7 000 (15 400)	26 (85'4") 6 000 (13 200)	294 (30 000, 66 000)	—	86 900 (192 000) 1.15 (1.15, 16.4)
	30 (98'5")	26 (85'4")	10 000 (22 000)		—	—	D-80H	7 000 (15 400)	23 (75'6") 5 300 (11 700)	343 (35 000, 77 000)	—	89 200 (197 000) 1.18 (1.18, 16.8)
Auger and Hammer Combination	21 (68'11")	14 (45'11")	10 000 (22 000)	45	—	—	D-80H	7 000 (15 400)	17 (55'9") 3 900 (8 600)	368 (37 500, 82 700)	—	95 800 (211 000) 1.27 (1.27, 18.1)
	24 (78'9")	17 (55'9")	10 000 (22 000)		11 000 (24 200)	2 000 (4 400)	D-80H	7 000 (15 400)	20 (65'7") 4 600 (10 100)	368 (37 500, 82 700)	—	98 100 (216 000) 1.30 (1.30, 18.5)
	24 (78'9")	18 (59'1")	8 000 (17 600)	35	—	—	D-80H	7 000 (15 400)	20 (65'7") 4 600 (10 100)	368 (37 500, 82 700)	—	94 600 (209 000) 1.25 (1.25, 17.8)
	27 (88'7")	21 (68'11")	8 000 (17 600)		8 500 (18 700)	1 000 (2 200)	D-80H	7 000 (15 400)	23 (75'6") 5 300 (11 700)	343 (35 000, 77 000)	—	96 600 (213 000) 1.28 (1.28, 18.2)
	27 (88'7")	21 (68'11")	6 000 (13 200)		—	—	D-80H	7 000 (15 400)	23 (75'6") 5 300 (11 700)	343 (35 000, 77 000)	—	93 100 (205 000) 1.23 (1.23, 17.5)
	30 (98'5")	24 (78'9")	6 000 (13 200)	25	5 500 (12 100)	500 (1 100)	D-80H	7 000 (15 400)	26 (85'4") 6 000 (13 200)	294 (30 000, 66 000)	—	95 400 (210 000) 1.26 (1.26, 17.9)
	27 (88'7")	15 (49'3")	6 000 (13 200)		—	—	D-80H	7 000 (15 400)	17 (55'9") 3 900 (8 600)	368 (37 500, 82 700)	—	100 600 (222 000) 1.33 (1.33, 18.9)
	27 (88'7")	15 (49'3")	6 000 (13 200)	HNC80	14 200 (31 300)	1 200 (2 600)	D-60H	6 000 (13 200)	17 (55'9") 2 700 (5 900)	368 (37 500, 82 700)	—	97 900 (218 000) 1.30 (1.30, 18.5)

Notes:

- This chart shows the standard specifications for the PD100 60RA type Pile Driver.
- Please consult your Hitachi dealer regarding specifications other than those given in this chart.
- Auger screw lengths and weights include auger head lengths and weights.
- Be sure to always use the rear jacks when doing backward inclined pile driving.
- The leader up to 27 m (88'7") long can be set-up by its own power. In case that leader is extended more than 30 m (98'5"), an auxiliary crane is required for setting-up the leader.
- Operating weight does not include pile weight.
- In operation, crawlers must be extended.
- Different specifications apply if the maximum excavation diameter is 600 mm (23.6").

# Leader Construction

## 110S Non-rotating Leader Type Earth Auger Front Construction

Leader length m (ft in)	Leader m (ft in)	Back-Stay m (ft in)	Pendant Rope m (ft in)
18 (59'1")			
21 (68'11")			
24 (78'9")			
27 (88'7")			
30 (98'5")			

## 90S Non-rotating Leader Type Pile Driver Front Construction

Leader length m (ft in)	Leader m (ft in)	Back-Stay m (ft in)	Pendant Rope m (ft in)
18 (59'1")			
21 (68'11")			
24 (78'9")			
27 (88'7")			
30 (98'5")			
33 (108'3")			



### 90R Rotating Leader Type Pile Driver Front Construction

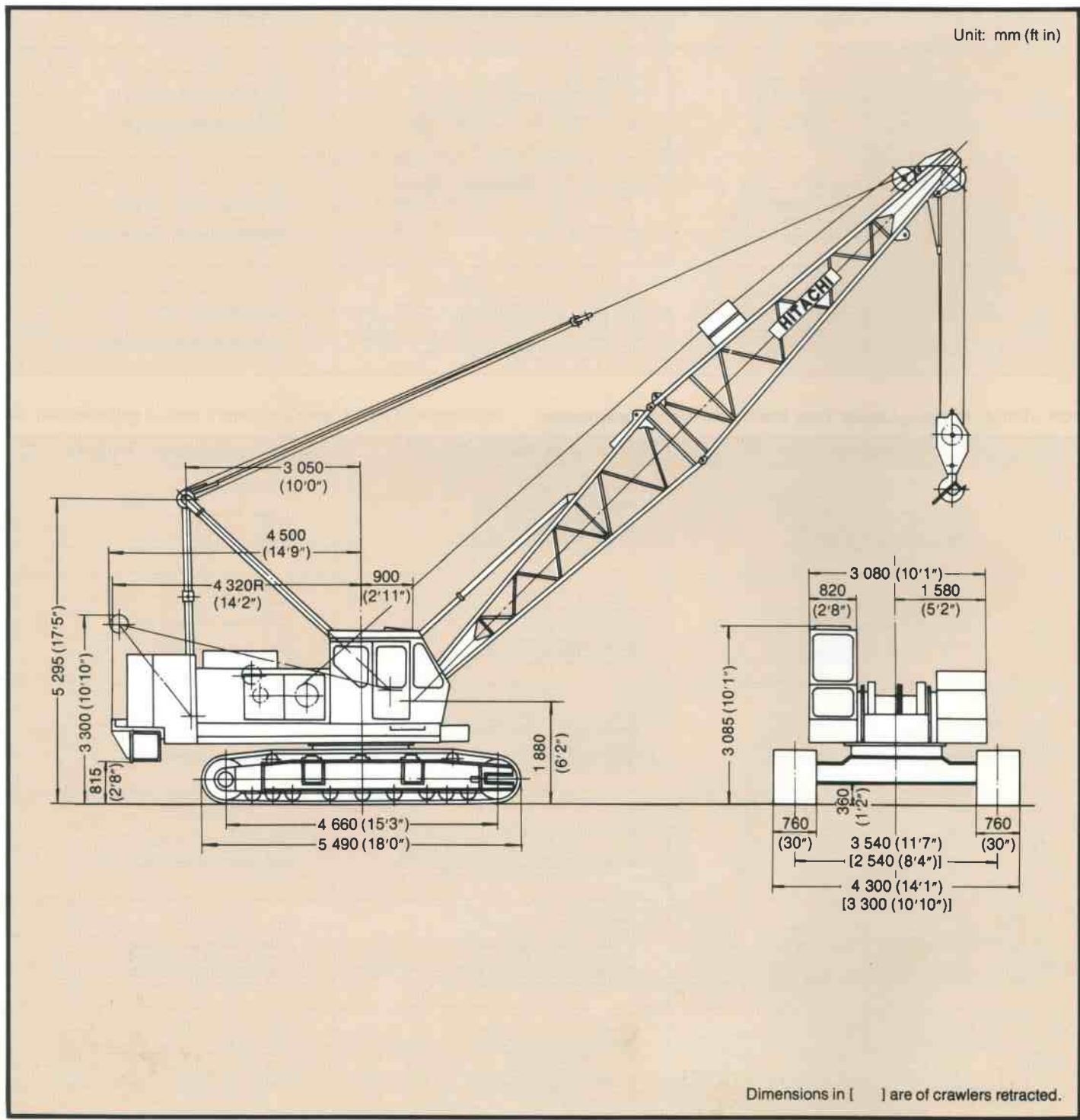
Leader length m (ft in)	Leader m (ft in)	Back-Stay m (ft in)	Pendant Rope m (ft in)
21 (68'11")			
24 (78'9")			
27 (88'7")			
30 (98'5")			
33 (108'3")			

### 80R-3-60RA Rotating Leader Type Pile Driver Front Construction

Leader length m (ft in)	Leader m (ft in)	Back-Stay m (ft in)	Pendant Rope m (ft in)
21 (68'11")			
24 (78'9")			
27 (88'7")			
30 (98'5")			
33 (108'3")			
36 (118'1")			

# CRAWLER CRANE

## Dimensions



## Main Boom

Main boom ..... 1 300 mm (51") wide by 1 300 mm (51") deep at connection, lattice construction, high tensile strength steel tubular chord.

Basic boom ..... 2 pieces, total length 13.0 m (42'8"); upper section 6.5 m (21'4") and lower section 6.5 m (21'4").

Boom point ..... Offset boom point, 5 sheaves [pitch circle dia. 420 mm (16.5")] mounted on anti-friction bearings on boom peak.

Boom insert ..... 3.0 m (9'10"), 6.0 m (19'8") and 9.0 m (29'6") long available with appurtenant pendants.

Connection type ..... Pin-connected.

Boom backstop ..... Dual-rail, telescopic tubular construction with spring bumper.

Boom hoist bridle ..... Serves as connection between pendants, and boom hoist wire rope reeving. Equipped with 6 sheaves [300 mm (12") p.c.d.] for 12-part boom hoist wire rope reeving.

## Jib (Option)

Jib ..... 550 mm (22") wide by 480 mm (19") deep at connection lattice construction, high tensile strength steel tubular chord.

Basic jib ..... 2 pieces, total length 6.10 m (20'0"); upper section 3.05 m (10'0") and lower section 3.05 m (10'0").

Jib point ..... 1 sheave [400 mm (16") p.c.d.] mounted on anti-friction bearings on jib peak.

Jib insert ..... 3.05 m (10'0") long available. Connection type... Pin-connected.

Maximum boom length ..... 52.0 m (170'7")

Maximum boom and jib combination length ..... 58.25 m (191'0")  
43.0 m (141'0") + 15.25 m (50'0")

## Specifications

Rated Load		50 000 kg (110 000 lb) at 3.7 m (12'2") working radius.	
Line Speed	Main hoist drum Hoist/Lower	High	60 m/min (197 ft/min)
		Low	30 m/min ( 99 ft/min)
	Aux. hoist drum Hoist/Lower	High	60 m/min (197 ft/min)
		Low	30 m/min ( 99 ft/min)
	Third drum Hoist/Lower	High	55 m/min (180 ft/min)
		Low	35 m/min (115 ft/min)
Boom hoist drum Hoist/Lower		45 m/min (148 ft/min)	
Swing Speed		0–2.7 min <sup>-1</sup> (0–2.7 rpm)	
Travel Speed		0–0.8 km/h (0–0.5 mph)	
Gradeability		22° (40%)	
Operating Weight		48 800 kg (107 000 lb) when equipped with 13.0 m (42'8") boom, 50 000 kg (110 000 lb) capacity hook and 10 700 kg (23 500 lb) counterweights	
Ground Pressure		0.65 bar (0.65 kgf/cm <sup>2</sup> , 9.24 psi)	

Note: Hoisting line speed and travel speed varies with load.

# Main Boom & Jib Construction

## Main Boom Construction

Element \ Boom length	13.0m (42'8")	16.0m (52'6")	19.0m (62'4")	22.0m (72'2")	25.0m (82'0")	28.0m (91'10")	31.0m (101'8")	34.0m (117'7")	37.0m (121'5")	40.0m (131'3")	43.0m (141'0")	46.0m (150'11")	49.0m (160'9")	52.0m (170'7")	
Element	13.0m (42'8")	16.0m (52'6")	19.0m (62'4")	22.0m (72'2")	25.0m (82'0")	28.0m (91'10")	31.0m (101'8")	34.0m (117'7")	37.0m (121'5")	40.0m (131'3")	43.0m (141'0")	46.0m (150'11")	49.0m (160'9")	52.0m (170'7")	
Upper Boom 6.5m (21'4")	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Lower Boom 6.5m (21'4")	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
3.0m (9'10") Boom insert	-	1	2	-	1	-	2	-	1	2	-	1	2	-	
6.0m (19'8") Boom insert	-	-	-	1	1	-	1	2	-	2	3	3	1	4	
9.0m (29'6") Boom insert	-	-	-	-	-	1	-	-	1	1	1	-	2	-	
Available hook	50 000 kg (110 000 lb.) hook				30 000 kg (66 000 lb.) hook				15 000 kg (33 000 lb.) hook						
Number of rope reeving	9	9	7	6	5	5	4	3	3	3	3	3	2	2	
Available jib					<p>Jib length 6.10m (20'0") Jib length 9.15m (30'0") Jib length 12.20m (40'0") Jib length 15.25m (50'0")</p>										

Note:

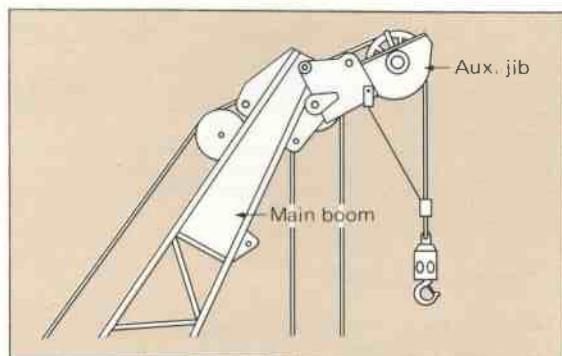
Please note with those figures for boom construction given in the white boxes in some columns, that it is not always possible to make extensions in 3 m (9 ft, 10 in) units.

## Jib Construction

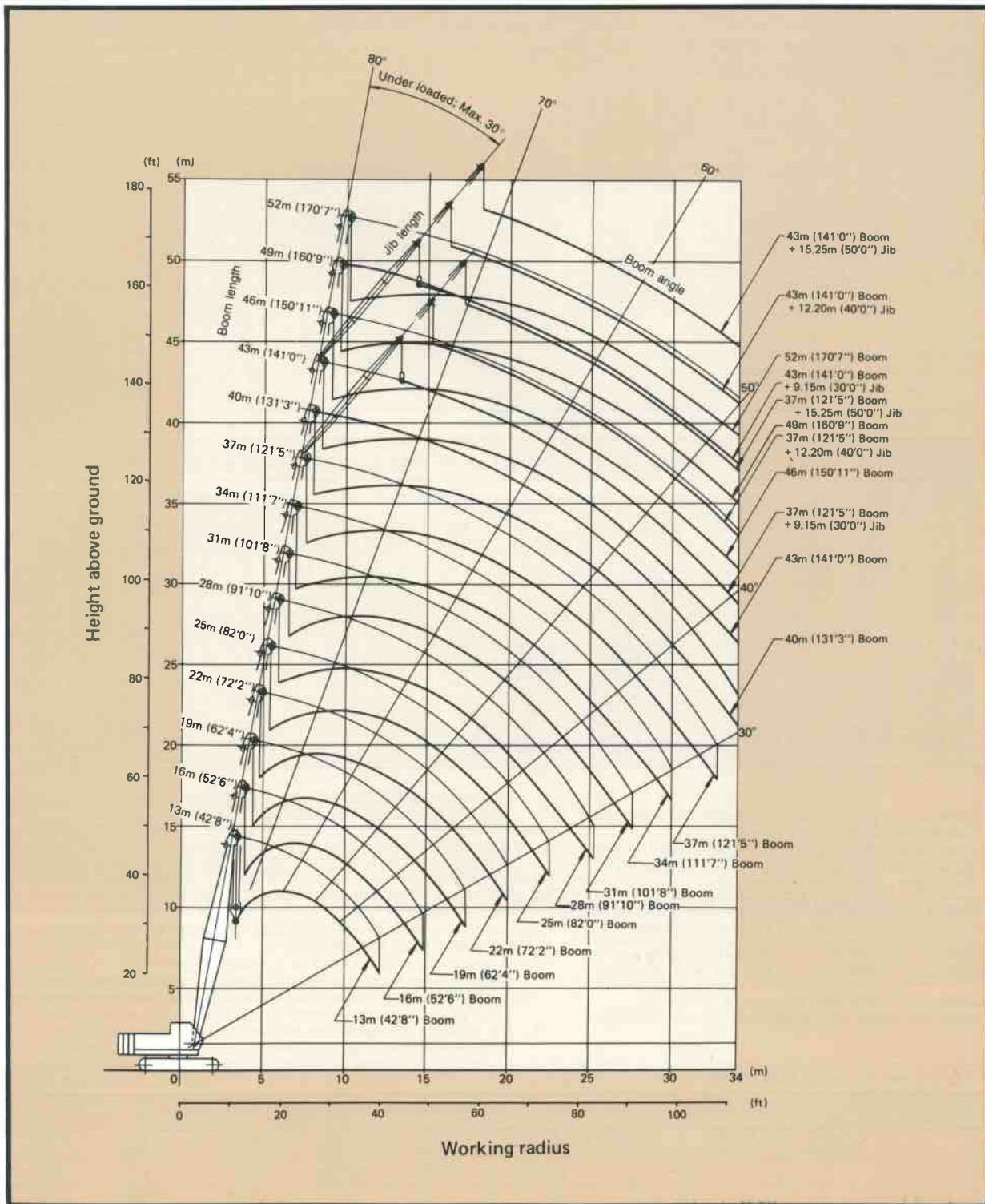
Element \ Jib length	6.10m (20'0")	9.15m (30'0")	12.20m (40'0")	15.25m (50'0")
Element	6.10m (20'0")	9.15m (30'0")	12.20m (40'0")	15.25m (50'0")
Lower Jib 3.05m (10'0")	1	1	1	1
Upper Jib 3.05m (10'0")	1	1	1	1
Jib Insert 3.05m (10'0")	-	1	2	3

### Auxiliary Jib (Optional)

Attachable to main boom top for hoisting lightweight load quickly with a single rope used. (Never use the main and auxiliary hooks at the same time.)



# Working Ranges



# Rated Loads for Main Boom

Unit: kg (lb)

Boom length Working radius	13.0 m (42'8")	16.0 m (52'6")	19.0 m (62'4")	22.0 m (72'2")	25.0 m (82'0")	28.0 m (91'10")	31.0 m (101'9")
3.7 m (12'2")	50 000 (110 000)						
4.0 m (13'1")	44 850 (98 700)	44 800 (98 600)					
4.5 m (14'9")	36 650 (80 600)	36 600 (80 500)	36 550 (80 400)				
5.0 m (16'5")	31 000 (68 200)	30 900 (68 000)	30 850 (67 900)	30 850 (67 900)			
5.5 m (18'1")	26 800 (59 000)	26 700 (58 700)	26 650 (58 600)	26 600 (58 500)	26 550 (58 400)		
6.0 m (19'8")	23 550 (51 800)	23 500 (51 700)	23 400 (51 500)	23 400 (51 500)	23 300 (51 300)	23 200 (51 000)	
7.0 m (23'0")	18 900 (41 600)	18 850 (41 500)	18 800 (41 400)	18 750 (41 300)	18 650 (41 000)	18 600 (40 900)	18 550 (40 800)
8.0 m (26'3")	15 750 (34 700)	15 650 (34 400)	15 600 (34 300)	15 550 (34 200)	15 500 (34 000)	15 450 (34 000)	15 350 (33 800)
9.0 m (29'6")	13 450 (29 600)	13 350 (29 400)	13 300 (29 300)	13 250 (29 200)	13 150 (28 900)	13 100 (28 800)	13 050 (28 700)
10.0 m (32'10")	11 700 (25 700)	11 600 (25 500)	11 550 (25 400)	11 500 (25 300)	11 400 (25 100)	11 350 (25 000)	11 250 (24 800)
12.0 m (39'4")	9 200 (20 200)	9 150 (20 100)	9 050 (19 900)	9 000 (19 800)	8 900 (19 600)	8 850 (19 500)	8 800 (19 400)
14.0 m (45'11")	* <sup>1</sup> 8 950 (19 700)	7 450 (16 400)	7 400 (16 300)	7 350 (16 200)	7 250 (16 000)	7 200 (15 800)	7 100 (15 600)
16.0 m (52'6")		* <sup>2</sup> 26 900 (15 200)	6 200 (13 600)	6 150 (13 500)	6 050 (13 300)	6 000 (13 200)	5 900 (13 000)
18.0 m (59'1")			* <sup>3</sup> 35 500 (12 100)	5 200 (11 400)	5 150 (11 300)	5 050 (11 100)	5 000 (11 000)
20.0 m (65'7")				4 500 (9 900)	4 450 (9 790)	4 350 (9 570)	4 300 (9 460)
22.0 m (72'2")					3 850 (8 470)	3 800 (8 360)	3 700 (8 140)
24.0 m (78'9")					* <sup>4</sup> 3 700 (8 140)	3 350 (7 370)	3 250 (7 150)
26.0 m (85'4")						* <sup>5</sup> 3 100 (6 820)	2 850 (6 270)
28.0 m (91'10")							* <sup>6</sup> 2 550 (5 610)

\* .... Working radius \*<sup>1</sup> ... 12.3 m (40'4") \*<sup>2</sup> ... 14.9 m (48'11") \*<sup>3</sup> ... 17.5 m (57'5") \*<sup>4</sup> ... 22.7 m (74'6") \*<sup>5</sup> ... 25.3 m (83'0") \*<sup>6</sup> ... 27.9 m (91'6")

Boom length Working radius	34.0 m (111'7")	37.0 m (121'5")	40.0 m (131'3")	43.0 m (141'1")	46.0 m (150'11")	49.0 m (160'9")	52.0 m (170'7")
8.0 m (26'3")	15 300 (33 700)	15 200 (33 400)					
9.0 m (29'6")	12 950 (28 500)	12 900 (28 400)	12 850 (28 300)	12 750 (28 100)			
10.0 m (32'10")	11 200 (24 600)	11 150 (24 500)	11 050 (24 300)	11 000 (24 200)	10 900 (24 000)	10 850 (23 900)	
12.0 m (39'4")	8 700 (19 100)	8 650 (19 000)	8 550 (18 800)	8 500 (18 700)	8 400 (18 500)	8 350 (18 400)	8 250 (18 200)
14.0 m (45'11")	7 050 (15 500)	6 950 (15 300)	6 900 (15 200)	6 800 (15 000)	6 750 (14 900)	6 650 (14 600)	6 600 (14 500)
16.0 m (52'6")	5 850 (12 900)	5 750 (12 700)	5 700 (12 500)	5 600 (12 300)	5 550 (12 200)	5 450 (12 000)	5 350 (11 800)
18.0 m (59'1")	4 900 (10 800)	4 850 (10 700)	4 750 (10 500)	4 700 (10 300)	4 600 (10 100)	4 550 (10 000)	4 450 (9 790)
20.0 m (65'7")	4 200 (9 240)	4 150 (9 130)	4 050 (8 910)	3 950 (8 690)	3 900 (8 580)	3 800 (8 360)	3 750 (8 250)
22.0 m (72'2")	3 650 (8 030)	3 550 (7 810)	3 500 (7 700)	3 400 (7 480)	3 350 (7 370)	3 250 (7 150)	3 150 (6 930)
24.0 m (78'9")	3 200 (7 040)	3 100 (6 820)	3 000 (6 600)	2 950 (6 490)	2 850 (6 270)	2 800 (6 160)	2 700 (5 940)
26.0 m (85'4")	2 800 (6 160)	2 700 (5 940)	2 650 (5 830)	2 550 (5 610)	2 450 (5 390)	2 350 (5 170)	2 250 (4 950)
28.0 m (91'10")	2 450 (5 390)	2 350 (5 170)	2 300 (5 060)	2 200 (4 840)	2 100 (4 620)	2 000 (4 400)	1 900 (4 180)
30.0 m (98'5")	2 150 (4 730)	2 100 (4 620)	2 000 (4 400)	1 900 (4 180)	1 800 (3 960)	1 700 (3 740)	1 600 (3 520)
32.0 m (105'0")	* <sup>7</sup> 2 100 (4 620)	1 800 (3 960)	1 700 (3 740)	1 600 (3 520)	1 500 (3 300)	1 400 (3 080)	1 300 (2 860)
34.0 m (111'7")	* <sup>8</sup> 1 700 (3 740)	1 500 (3 300)	1 350 (2 970)	1 250 (2 750)	1 150 (2 530)	1 050 (2 310)	

\*<sup>7</sup> .... 30.5 m (100'1") \*<sup>8</sup> .... 33.0 m (108'3")

Notes:

1. The rated loads shown do not exceed 78% of tipping loads with the machine on firm level ground when crawlers are extended.
2. The rated loads shown include the weight of all lifting attachments, such as hook and bucket. The load to be actually lifted will be the rated load minus the weight of all lifting attachments.

Jib length	6.10 m (20'0")	9.15 m (30'0")	12.20 m (40'0")	15.25 m (50'0")	Auxiliary jib
Weight to be reduced	700 kg (1 540 lb)	850 kg (1 870 lb)	1 000 kg (2 200 lb)	1 150 kg (2 530 lb)	200 kg (440 lb)

4. The jib can be attached to boom of 25.0 m (82'0") to 43.0 m (141'0") long.
5. Counterweight is 10 700 kg (5 200 kg + 5 500 kg) [23 500 lb. (11 400 lb. + 12 100 lb.)].
6. In operation, crawlers must be extended.
7. The rated load for auxiliary jib is equal to that of main boom at the same working radius, but do not exceed maximum rated load 5 000 kg (11 000 lb.).
8. The auxiliary jib can be attached to the main boom of 13.0 m (42'8") to 46.0 m (150'11") long.

## 9. Number of Rope Reeling and Maximum Rated Loads

Unit: kg (lb)

No. of rope reeling	9	8	7	6	5	4	3	2	1
Hook capacity	50 000 kg (110 000 lb)	30 000 kg (66 000 lb)	15 000 kg (33 000 lb)	5 000 kg (11 000 lb)					
Hook weight	600 kg (1 320 lb)	400 kg (880 lb)	300 kg (660 lb)	130 kg (290 lb)					
50 000 (110 000)	50 000 (110 000)	44 800 (98 600)	39 200 (86 200)	33 600 (73 900)	28 000 (61 600)	22 400 (49 300)	16 800 (37 000)	11 200 (24 600)	5 600 (12 300)
30 000 (66 000)				30 000 (66 000)	28 000 (61 600)	22 400 (49 300)	16 800 (37 000)	11 200 (24 600)	5 600 (12 300)
15 000 (33 000)							15 000 (33 000)	11 200 (24 600)	5 600 (12 300)
5 000 (11 000)									5 000 (11 000)

# Rated Loads for Jib Boom

Unit: kg (lb)

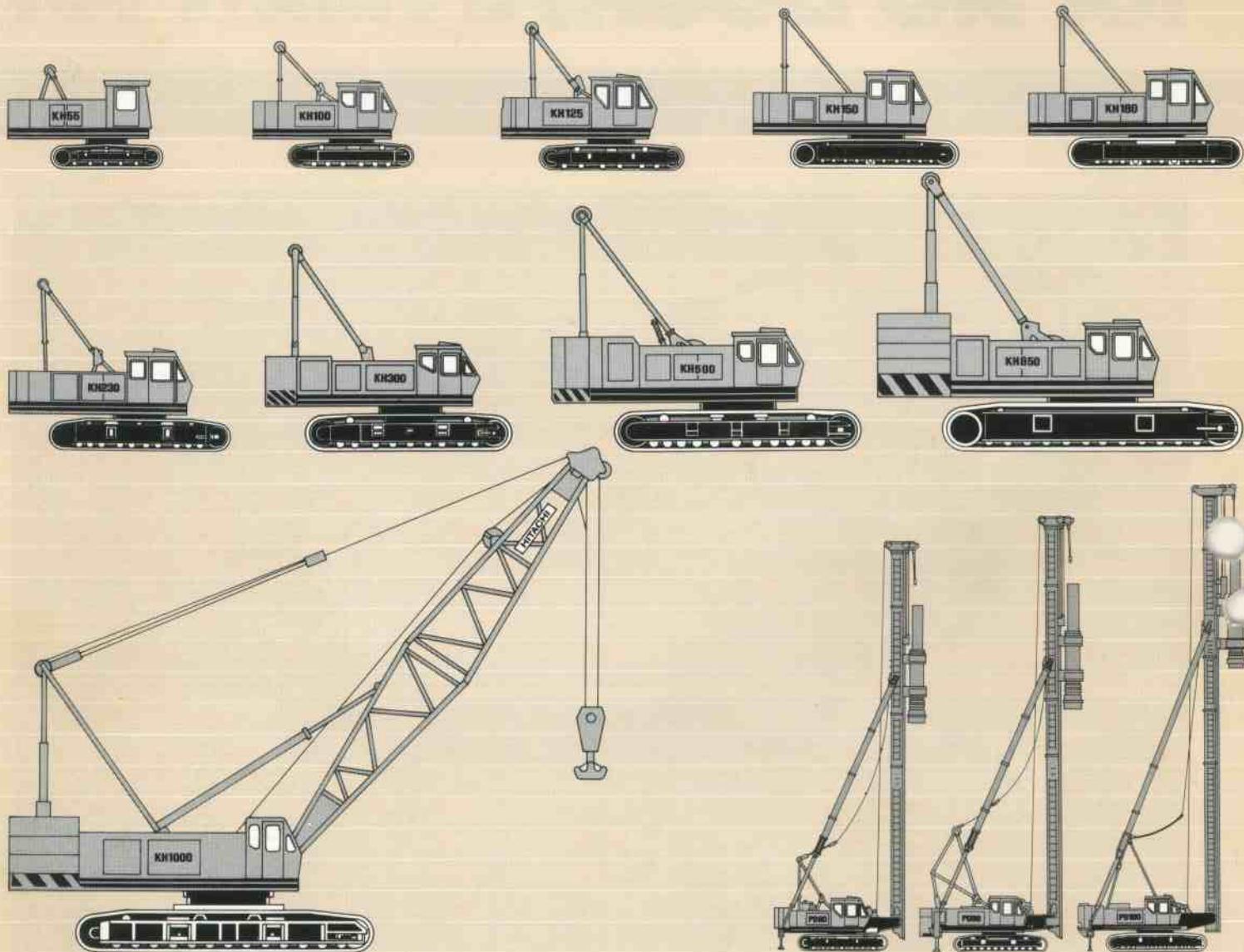
Main boom length	25.0 m (82'0")				28.0 m (91'10")				31.0 m (101'9")				34.0 m (111'7")			
Jib length	6.10 m (20'0")	9.15 m (30'0")	12.20 m (40'0")	15.25 m (50'0")	6.10 m (20'0")	9.15 m (30'0")	12.20 m (40'0")	15.25 m (50'0")	6.10 m (20'0")	9.15 m (30'0")	12.20 m (40'0")	15.25 m (50'0")	6.10 m (20'0")	9.15 m (30'0")	12.20 m (40'0")	15.25 m (50'0")
Working radius																
11.0 m (36'1")	5 000 (11 000)				*5 000 (11 000)											
12.0 m (39'4")	5 000 (11 000)	*2 4 100 (9 020)			5 000 (11 000)	*7 4 100 (9 020)			5 000 (11 000)				*11 5 000 (11 000)			
14.0 m (45'11")	5 000 (11 000)	4 100 (9 020)	*3 3 200 (7 040)		5 000 (11 000)	4 100 (9 020)	*8 3 200 (7 040)		5 000 (11 000)	4 100 (9 020)			5 000 (11 000)	*13 4 100 (9 020)		
16.0 m (52'6")	5 000 (11 000)	4 100 (9 020)	3 200 (7 040)	*4 2 300 (5 060)	5 000 (11 000)	4 100 (9 020)	3 200 (7 040)	*9 2 300 (5 060)	5 000 (11 000)	4 100 (9 020)	3 200 (7 040)		5 000 (11 000)	4 100 (9 020)	*14 3 200 (7 040)	
18.0 m (59'1")	5 000 (11 000)	4 100 (9 020)	3 200 (7 040)	2 300 (5 060)	5 000 (11 000)	4 100 (9 020)	3 200 (7 040)	2 300 (5 060)	5 000 (11 000)	4 100 (9 020)	3 200 (7 040)	2 300 (5 060)	4 900 (10 800)	4 100 (9 020)	3 200 (7 040)	*15 2 300 (5 060)
20.0 m (65'7")	4 450 (9 790)	4 100 (9 020)	3 200 (7 040)	2 300 (5 060)	4 350 (9 570)	4 100 (9 020)	3 200 (7 040)	2 300 (5 060)	4 300 (9 460)	4 100 (9 020)	3 200 (7 040)	2 300 (5 060)	4 200 (9 240)	4 100 (9 020)	3 200 (7 040)	2 300 (5 060)
22.0 m (72'2")	3 850 (8 470)	3 850 (8 470)	3 200 (7 040)	2 300 (5 060)	3 800 (8 360)	3 800 (8 360)	3 200 (7 040)	2 300 (5 060)	3 700 (8 140)	3 700 (8 140)	3 200 (7 040)	2 300 (5 060)	3 650 (8 030)	3 650 (8 030)	3 200 (7 040)	2 300 (5 060)
24.0 m (78'9")	*13 700 (8 140)	*13 700 (8 140)	*13 200 (7 040)	*12 300 (5 060)	3 350 (7 370)	3 350 (7 370)	3 200 (7 040)	2 300 (5 060)	3 250 (7 150)	3 250 (7 150)	3 200 (7 040)	2 300 (5 060)	3 200 (7 040)	3 200 (7 040)	3 200 (7 040)	2 300 (5 060)
26.0 m (85'4")					*6 3 100 (6 820)	*6 3 100 (6 820)	*6 3 100 (6 820)	*6 2 300 (6 270)	2 850 (6 270)	2 850 (6 270)	2 850 (6 270)	2 300 (6 160)	2 800 (6 160)	2 800 (6 160)	2 800 (6 160)	2 300 (5 060)
28.0 m (91'10")									*10 2 550 (5 610)	*10 2 550 (5 610)	*10 2 550 (5 610)	*10 2 300 (5 060)	2 450 (5 390)	2 450 (5 390)	2 450 (5 390)	2 300 (5 060)
30.0 m (98'5")													2 150 (4 730)	2 150 (4 730)	2 150 (4 730)	2 150 (4 730)
32.0 m (105'0")													*12 2 100 (4 620)	*12 2 100 (4 620)	*12 2 100 (4 620)	*12 2 100 (4 620)

Main boom length	37.0 m (121'5")				40.0 m (131'3")				43.0 m (141'1")				Working radius			
Jib length	6.10 m (20'0")	9.15 m (30'0")	12.20 m (40'0")	15.25 m (50'0")	6.10 m (20'0")	9.15 m (30'0")	12.20 m (40'0")	15.25 m (50'0")	6.10 m (20'0")	9.15 m (30'0")	12.20 m (40'0")	15.25 m (50'0")	6.10 m (20'0")	9.15 m (30'0")	12.20 m (40'0")	15.25 m (50'0")
Working radius																
12.0 m (39'4")	*2 5 000 (11 000)															
14.0 m (45'11")	5 000 (11 000)	*3 4 100 (9 020)			5 000 (11 000)				*13 5 000 (11 000)							
16.0 m (52'6")	5 000 (11 000)	4 100 (9 020)	*4 3 200 (7 040)		5 000 (11 000)	4 100 (9 020)			5 000 (11 000)	*14 4 100 (9 020)						
18.0 m (59'1")	4 850 (10 700)	4 100 (9 020)	3 200 (7 040)	*17 2 300 (5 060)	4 750 (10 500)	4 100 (9 020)	3 200 (7 040)		4 700 (10 300)	4 100 (9 020)	*18 3 200 (7 040)					
20.0 m (65'7")	4 150 (9 130)	4 100 (9 020)	3 200 (7 040)	2 300 (5 060)	4 050 (8 910)	4 050 (8 910)	3 200 (7 040)	2 300 (5 060)	3 950 (8 690)	3 950 (8 690)	3 200 (7 040)	*19 2 300 (5 060)				
22.0 m (72'2")	3 550 (7 810)	3 550 (7 810)	3 200 (7 040)	2 300 (5 060)	3 500 (7 700)	3 500 (7 700)	3 200 (7 040)	2 300 (5 060)	3 400 (7 480)	3 400 (7 480)	3 200 (7 040)	3 200 (5 060)				
24.0 m (78'9")	3 100 (6 820)	3 100 (6 820)	3 100 (6 820)	2 300 (5 060)	3 000 (6 600)	3 000 (6 600)	3 000 (6 600)	2 300 (5 060)	2 950 (6 490)	2 950 (6 490)	2 300 (6 490)	2 300 (5 060)				
26.0 m (85'4")	2 700 (5 490)	2 700 (5 490)	2 700 (5 490)	2 300 (5 060)	2 650 (5 830)	2 650 (5 830)	2 300 (5 060)	2 650 (5 060)	2 550 (5 610)	2 550 (5 610)	2 550 (5 610)	2 300 (5 060)				
28.0 m (91'10")	2 350 (5 170)	2 350 (5 170)	2 350 (5 170)	2 300 (5 060)	2 300 (5 060)	2 300 (5 060)	2 300 (5 060)	2 300 (5 060)	2 200 (4 840)	2 200 (4 840)	2 200 (4 840)	2 200 (4 840)				
30.0 m (98'5")	2 100 (4 620)	2 100 (4 620)	2 100 (4 620)	2 100 (4 620)	2 000 (4 400)	2 000 (4 400)	2 000 (4 400)	2 000 (4 400)	1 900 (4 180)	1 900 (4 180)	1 900 (4 180)	1 900 (4 180)				
32.0 m (105'0")	1 800 (3 960)	1 800 (3 960)	1 800 (3 960)	1 800 (3 960)	1 700 (3 740)	1 700 (3 740)	1 700 (3 740)	1 700 (3 740)	1 600 (3 520)	1 600 (3 520)	1 600 (3 520)	1 600 (3 520)				
34.0 m (111'7")	*16 1 700 (3 740)	*16 1 700 (3 740)	*16 1 700 (3 740)	*16 1 700 (3 740)	1 500 (3 300)	1 500 (3 300)	1 500 (3 300)	1 500 (3 300)	1 350 (2 970)	1 350 (2 970)	1 350 (2 970)	1 350 (2 970)				

Notes:

- The rated loads shown do not exceed 78% of tipping loads with the machine on firm level ground.
- The rated loads shown include the weight of all lifting attachments such as hook and bucket. The load to be actually lifted will be rated load minus the weight of all lifting attachments.
- Jib hook weight..... 130 kg (290 lb)
- Jib boom offset angle to the main boom is 30° under loaded.
- Counterweight is 10 700 kg (5 200 kg + 5 500 kg) / 23 500 lb (11 400 lb + 12 100 lb)
- In operation, the crawlers must be extended.

# KH AND PD SERIES



These specifications are subject to change without notice.

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