

# **GIANT**

## ***SuperEX***

### **EX1800**

Rated engine HP(gross): 746 kW(1 000 HP)

Operating weight

EX1800-2 Loading shovel: 177 000 kg(390 000 lb)

EX1800-2 Backhoe: 177 000 kg(390 000 lb)

Loading shovel bucket

PCSA heaped: 10.3–14.5 m<sup>3</sup>(13.5–19.0 cu yd)

Backhoe bucket

PCSA heaped: 4.3–14.0 m<sup>3</sup>(5.6–18.3 cu yd)

CECE heaped: 3.8–12.5 m<sup>3</sup>





# YOUR GIGANTIC, FRIENDLY PARTNER...

The Hitachi Super EX1800. This impressive monster of a machine delivers all the power and speed you expect for top production. But it is operator-friendly... through an array of ergonomically designed controls and instruments that enhance operator comfort and convenience. So the Super EX1800 can get the job done, even ahead of tight schedules. The Super EX1800. A colossal and dependable partner at your work site.





### **Super-Deluxe Operator's Seat — Your Reserved**

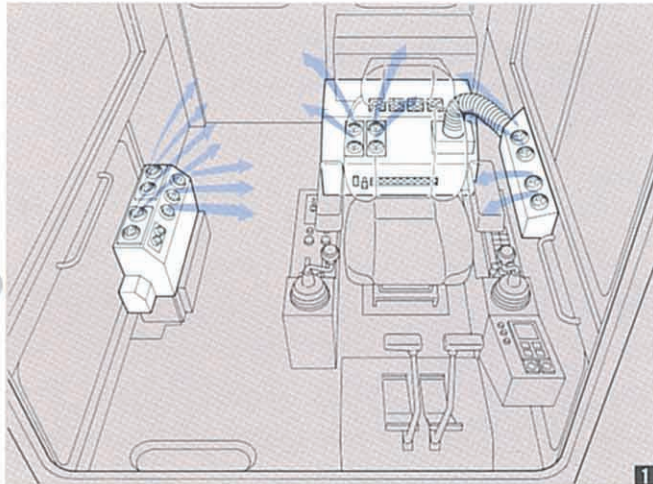
**Place:** The operator's seat is truly comfort-designed. The world-renowned Bostrom seat gives superb operator comfort and durability. The seat can be fully adjusted to the weight and proportions of each operator. The seat moves up and down, as well as fore and aft. And its back-rest angle, seating angle and head-rest height are also adjustable. Sit in the super-deluxe operator's seat and feel what we mean...operator-friendly design.



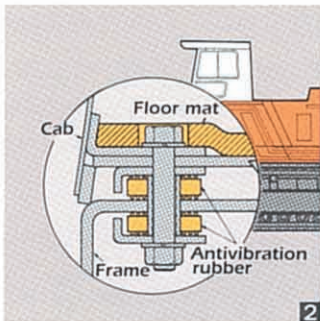


# OPERATING EASE AND COMFORT

A truly productive machine calls for power and speed, as well as operating ease and convenience. The Super EX1800 is carefully designed, bearing these concepts in mind. Notice how a number of elaborate measures contribute to a common goal of operating ease and comfort.



**1 Dual Air Conditioners:** Using dual air conditioners — main and auxiliary. The cab pressure is higher than the surrounding atmosphere, sealing out dirt and keeping clean air in. Cooling capacity is ample, maintaining operator comfort in all seasons.



**2 Roomy Cab with Headguard:** The spacious cab is integrated with the headguard for increased shock resistance, ruggedness and durability. Double floor structure and shock-absorbing rubber effectively reduce shocks.

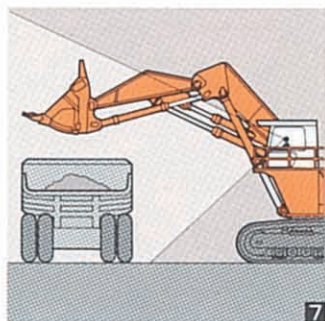
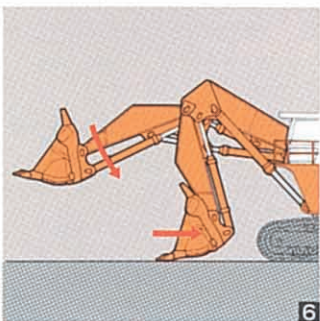
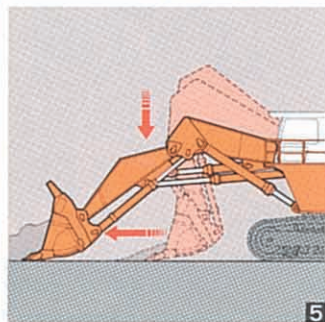
**3 Easy-to-Read Monitors:** Machine operating conditions can be checked at a glance with the logically arranged monitors.

**4 Intermittent Wipers:** Upper/lower intermittent parallel link-type wipers are provided as standard for job efficiency in rainy weather.

**5 Auto-Leveling Crowd Mechanism:** Hitachi's original Auto-Leveling Crowd Mechanism gives outstanding operating ease and maximum job efficiency, with one-lever control.

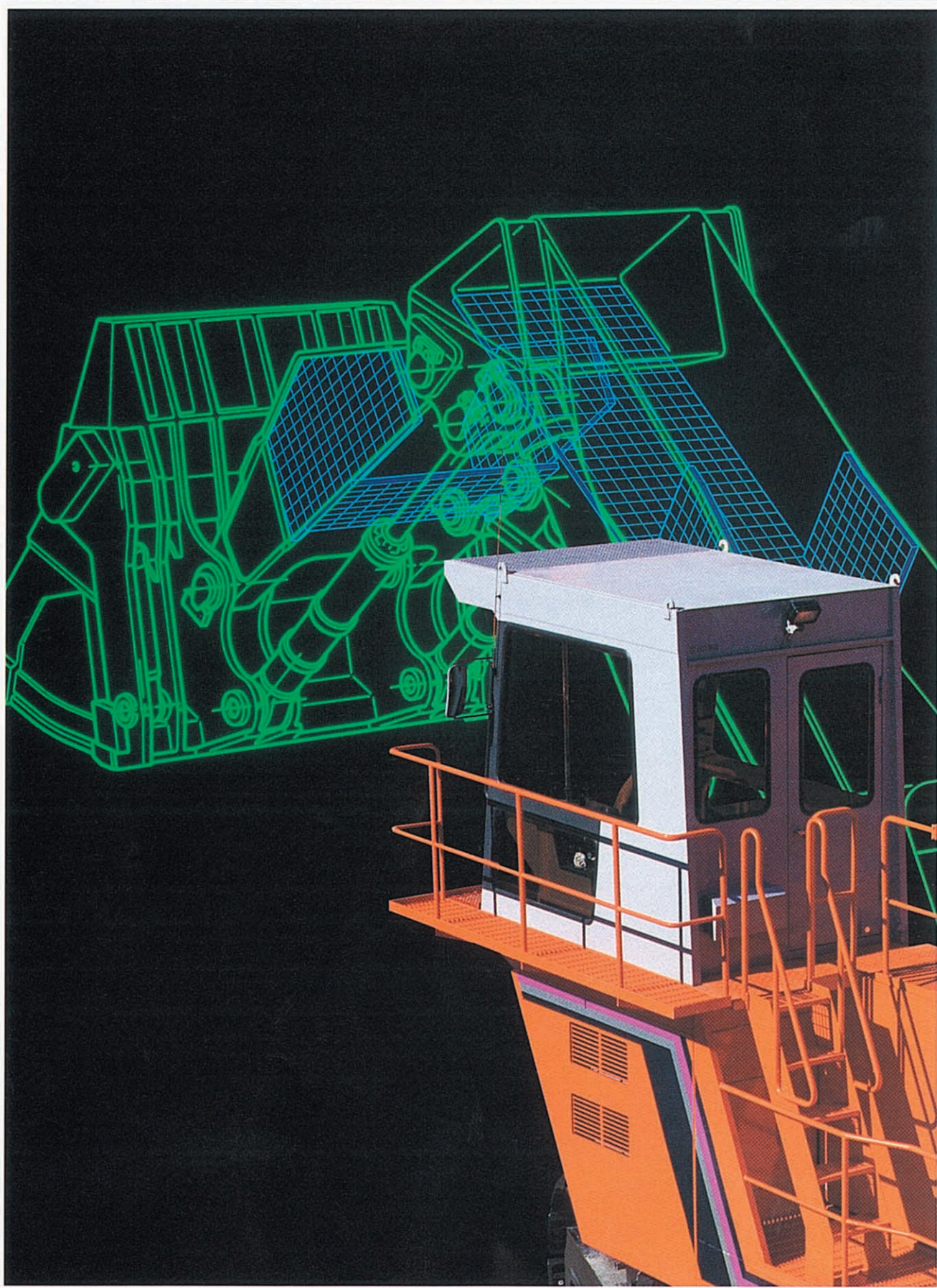
**6 Double Arm Actions:** The operator selects either arm actions: horizontal retracting for efficient dumping onto a dump truck; and circular arc retracting for speedy work.

**7 High Operator Eye Level:** The operator eye level is high, 5.26 m (17'3") in the high-mounted cab — giving excellent downward visibility, and always keeping the vessel of the dump truck being loaded clearly in the operator's sight.



- Using 2 emergency engine stop switches.
- Travel motion alarm interlocked with travel levers.
- 6-digit hourmeter can record nearly 100 000 hours.
- 12-V power supply for various electrical accessories.





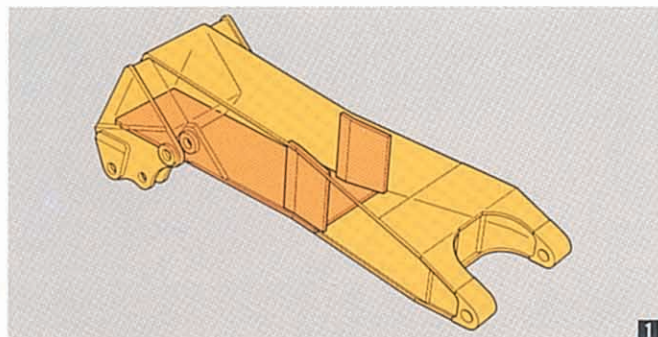


# RUGGED "MONSTER" BODY

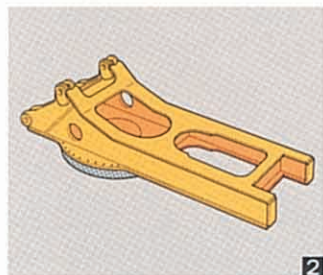
Brute power calls for a big, tough body.

Hitachi's advanced technologies and years of experience are built into body designs.

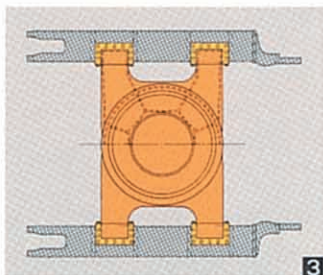
This means unmatched reliability and durability.



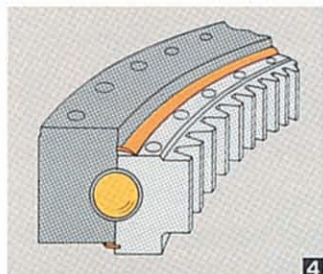
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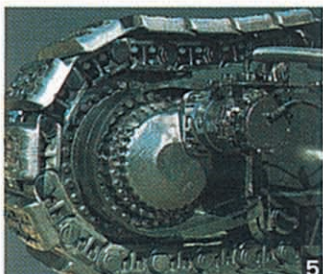
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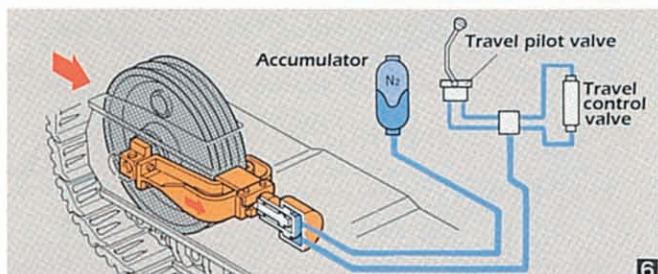
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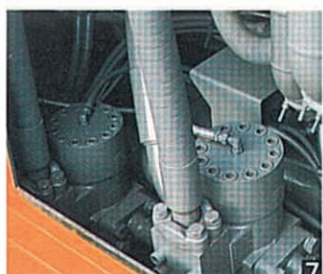
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**1 Rugged Front Design:** The boom and arm are full-box section, made of low-stress high-tensile steel, and reinforced with bulkheads.

**2 Box-Section Main Frame:** The main frame is also full box-section structure, with remarkable resistance to bending and torsional forces.

**3 Sturdy Track Center Frame and Side Frames:** The track center frames is a sturdy X-type structure. The side frames are firmly bolted to the track center frame, using both vertical and horizontal flanges.

**4 Swing Circle with Single-Row Type Swing Gear:** The swing circle is rugged, and utilizes single-row type swing gear for toughness. It is also sealed to keep dirt out.

**5 Elevated Travel Motors:** Compact travel motors are elevated for protection against rocks and stones.

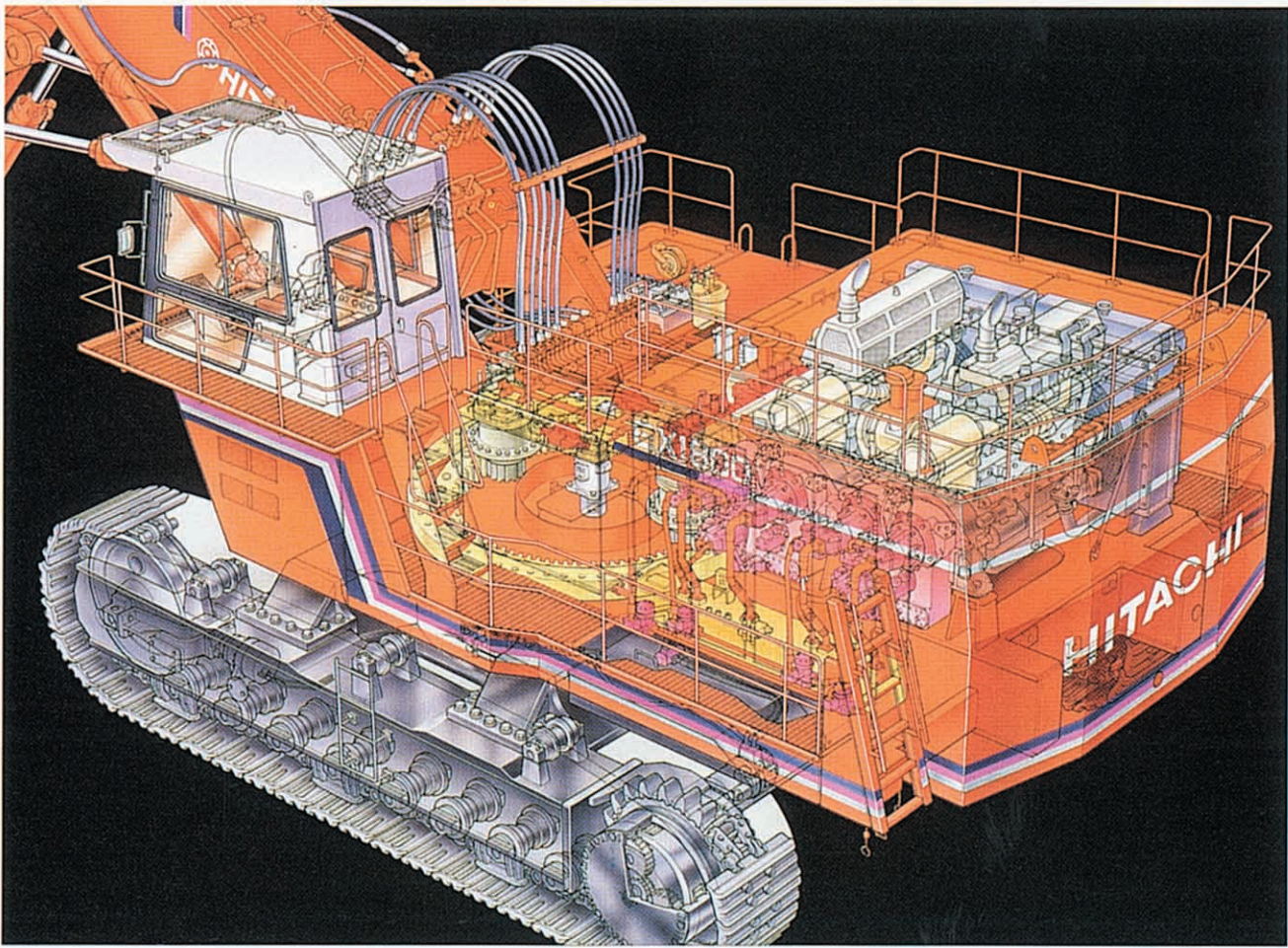
**6 Abnormal Track Tension Protection System Using Accumulators:** Nitrogen gas-filled accumulators absorb abnormal track tension caused by earth, for example, when caught inside the track. If track tension exceeds a certain limit, travels is automatically stopped.

**7 High-Pressure Line Filter:** A high-pressure line filter next to the pump effectively eliminates contaminants.

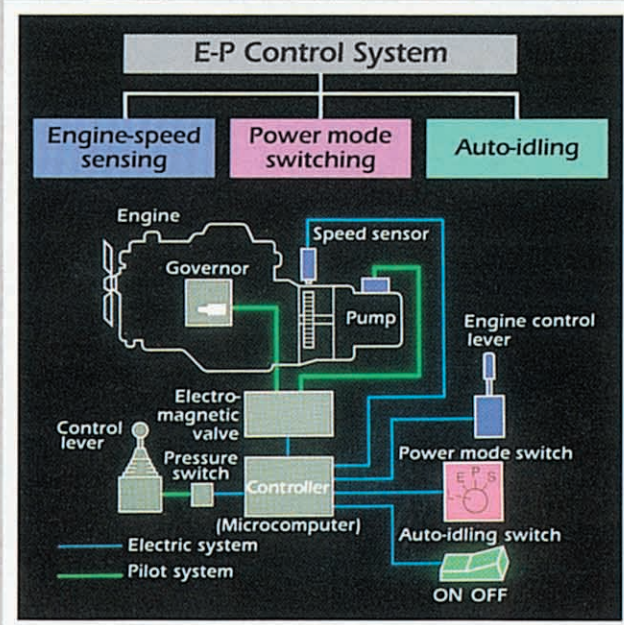
**8 Pump Contamination Sensor:** This sensor always monitors the pump to warn of contamination. If contaminated, the sensor alerts the operator.

- Improved piping and wire harnesses for tough jobs.
- The bucket cylinder is protected from reverse installation and damage.
- Spherical bearings with seals in boom cylinders absorb bending force.
- TIG (Tungsten Inert Gas) welded piping.
- Dual support-type boom/arm/bucket pin linkage.





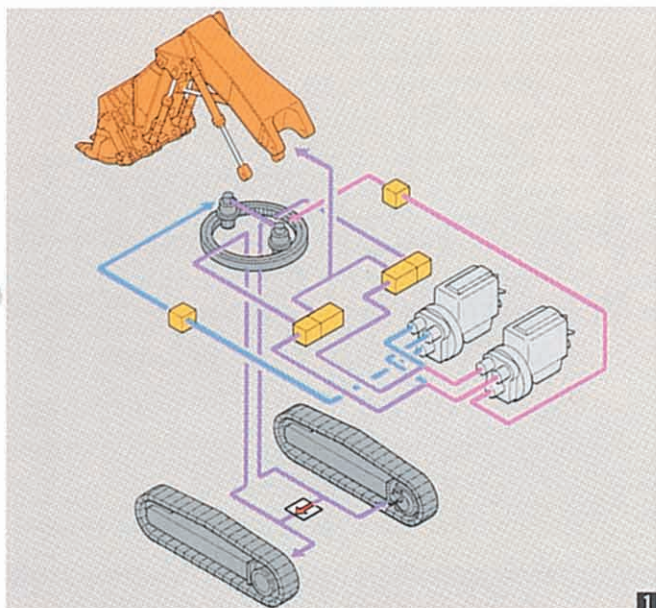
**E-P Control System:** The E-P control system, a Hitachi original, satisfies the two contradictory needs of high production and low fuel consumption. Its on-board computer regulates the engine output and pump delivery flow to suit each job. The electric engine speed-sensing control system regulates the pump by detecting changes in engine speed with each new load. This permits maximum use of engine horsepower. For each job, you can select the optimum operation mode for your needs: S mode for heavy-duty operation, P mode for general, E mode for energy-saving and L mode for light-duty operation.





# HITACHI TECHNOLOGICAL BREAKTHROUGHS

The technological edge in Giant EX — OHS (Optimum Hydraulic System), FPS (Fuel-saving Pump System), and more. The result is unmatched performance — brute power, speed and controllability.



**1 OHS for Smooth Combined Operation:** The OHS (Optimum Hydraulic System) gives the actuators a high degree of independence. The use of a hydraulic system with 4 main pumps and 2 swing pumps delivers smooth combined operations, such as swing/front for efficient leveling and digging while pressing the bucket to ditch side; swing/straight travel for operation and travel in confined sites; and travel/front for work on blasted stones and climbing slopes.

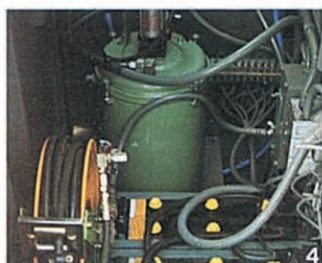
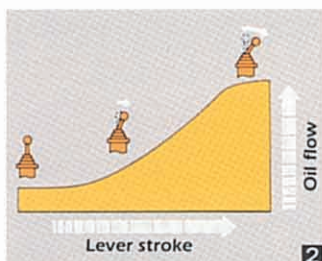
**2 FPS:** The FPS (Fuel-saving Pump System) eliminates hydraulic energy waste. It regulates pump output by lever control. The pump delivery flow is minimized when the lever is in neutral, and it increases in proportion to the lever stroke, thus reducing oil discharge loss from the control valve.

**3 Air Drier Enhances Air Circuit Reliability:** The air drier eliminates moisture inside the air piping for greater durability and reliability.

**4 Auto Lubrication System (Optional):** The front joint pins and swing circle are automatically lubricated. This eliminates cumbersome daily lubrication.

**5 Hold-in Type Ladder for Easy Access to the Cab:** The operator can get in and out of the cab on the hold-in type ladder. There is no obstruction to operation and travel when the ladder is held in. When it is left extended, swing is disabled.

**6 Catwalks for Servicing Convenience:** ISO-rated handrails, stairs and catwalks are well arranged for convenient servicing and inspection.



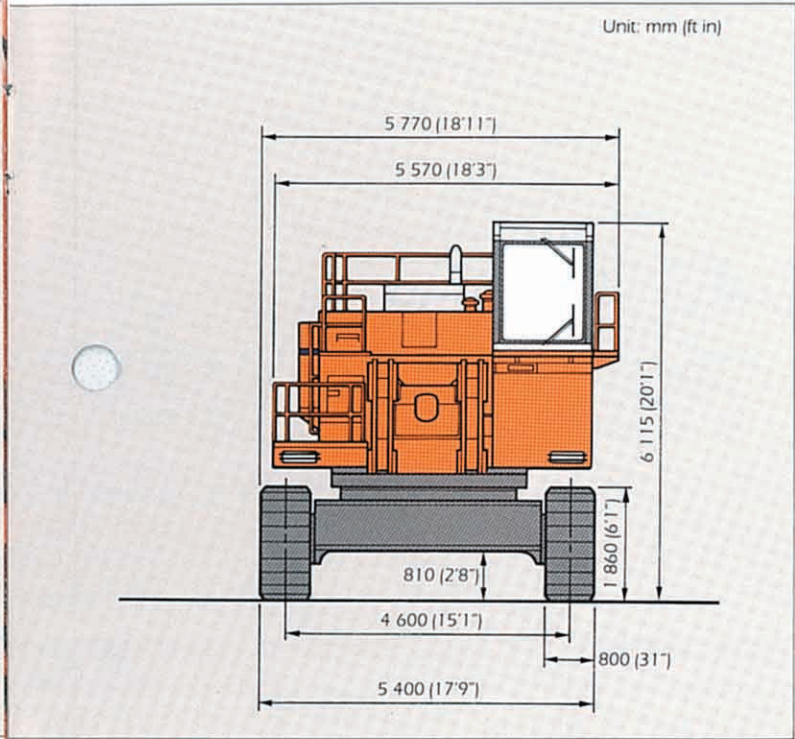
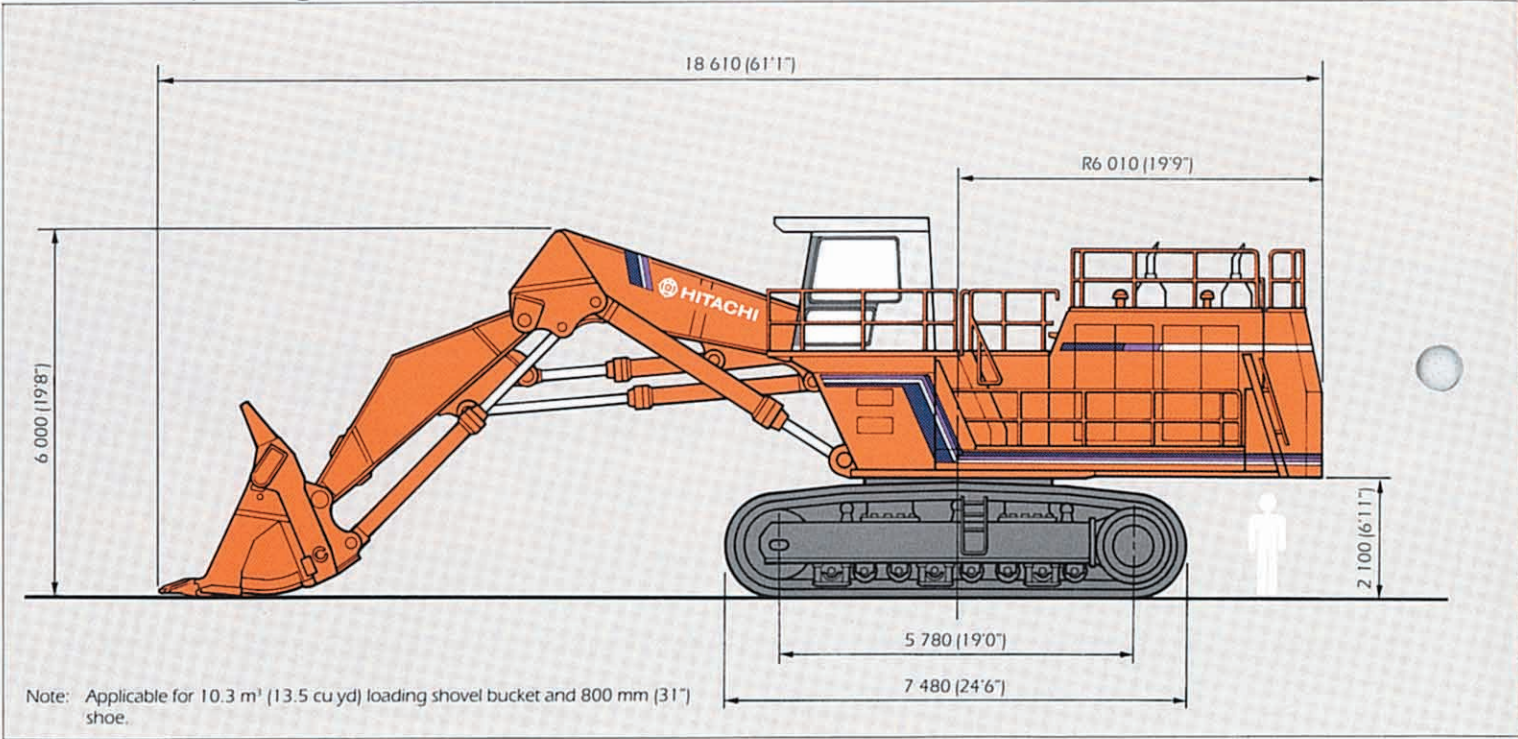
- The auto-idling system reduces the engine speed for fuel economy when the lever is in neutral.
- The RMS (Relief-oil Minimizing System) minimizes pump delivery flow when hydraulic pressure is released.
- A hydraulic warm-up system assures easy starts in cold weather.
- A centralized lubrication system simplifies maintenance.
- Cartridge-type filters for engine oil, engine oil bypass, fuel and coolant.



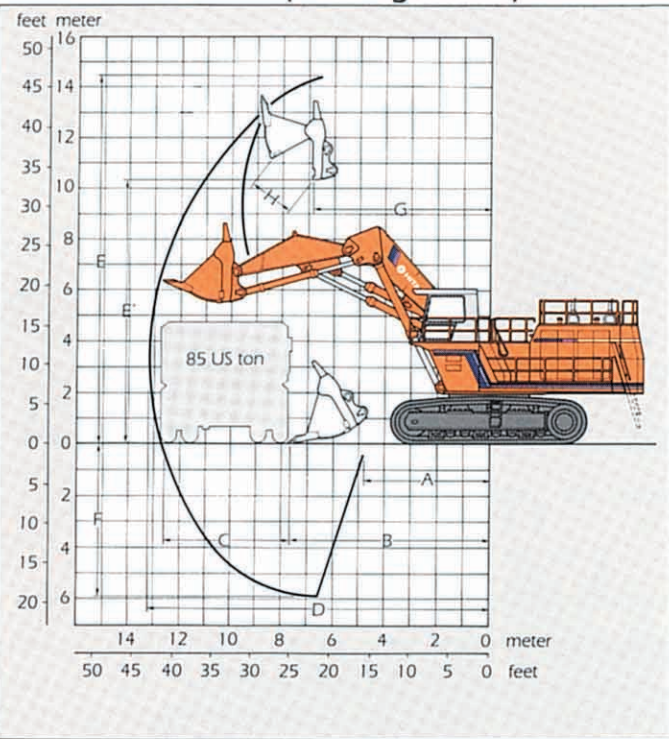
# The Intelligent Machine — The Hitachi Super EX1800

## LOADING SHOVEL

DIMENSIONS (Loading Shovel)



WORKING RANGES (Loading Shovel)



WORKING RANGES (Loading Shovel)

A. Min. digging distance	4 990 mm (16'4")
B. Min. level crowding distance	7 730 mm (25'4")
C. Level crowding distance	4 940 mm (16'2")
D. Max. digging reach	13 400 mm (44'0")
E. Max. cutting height	14 550 mm (47'9")
F. Max. dumping height	10 400 mm (34'1")
G. Working radius at max. dumping height	6 890 mm (22'7")
H. Max. bucket opening width	2 100 mm (6'11")

Crowding force	10.3 m³ (13.5 cu yd)	716 kN (73 000 kgf, 161 000 lbf)
	14.5 m³ (19.0 cu yd)	667 kN (68 000 kgf, 150 000 lbf)
Breakout force	10.3 m³ (13.5 cu yd)	667 kN (68 000 kgf, 150 000 lbf)
	14.5 m³ (19.0 cu yd)	628 kN (64 000 kgf, 141 000 lbf)

Data in [ ] are those of the Coal bottom dump type bucket.

BUCKETS (PCSA heaped)

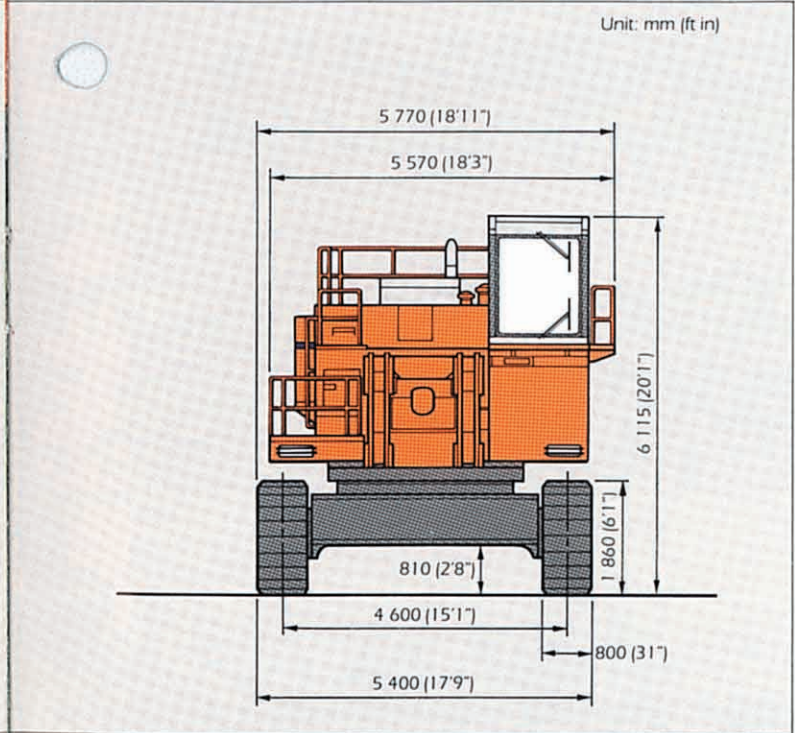
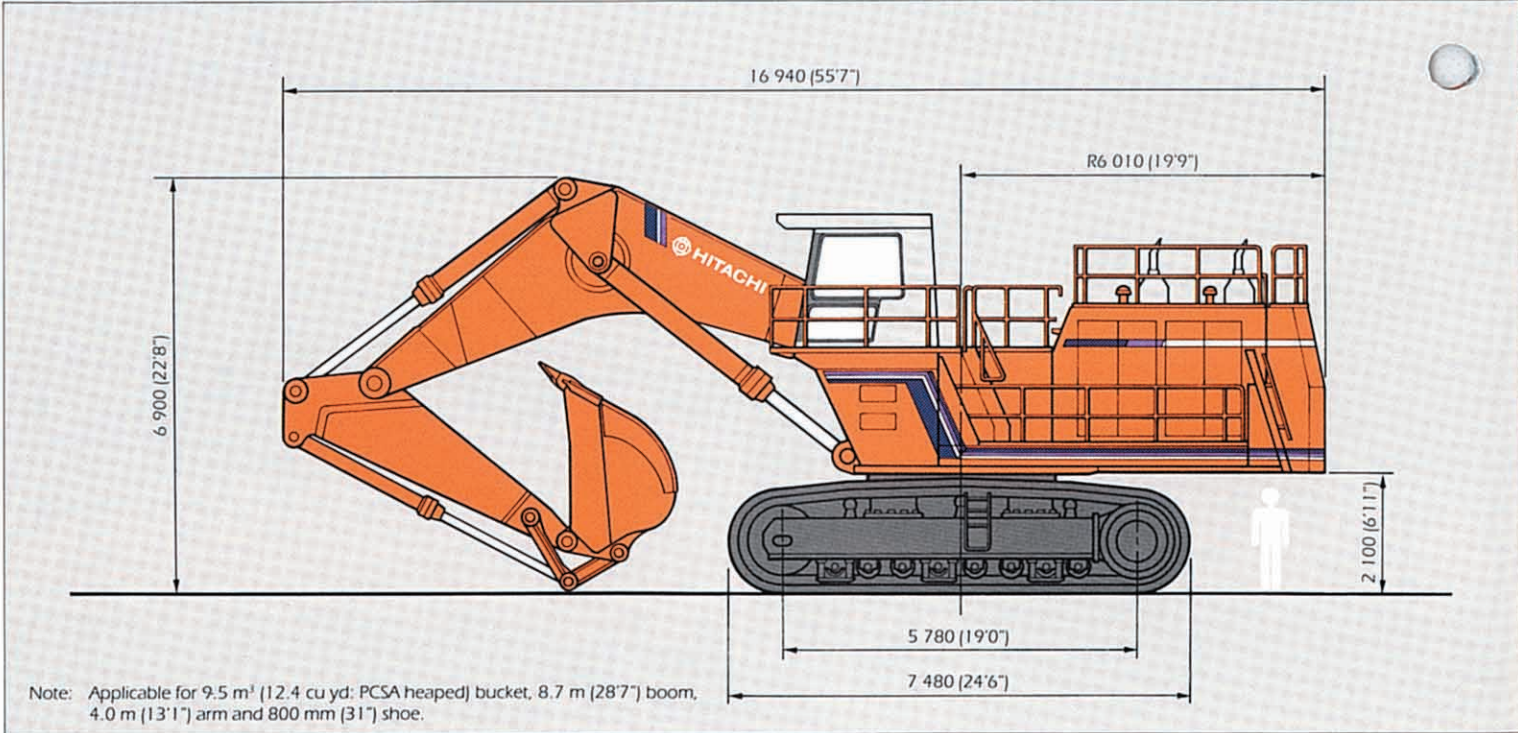
Capacity	Width	No. of teeth	Weight	Type
10.3 m³ (13.5 cu yd)	3 440 mm (11'3")	6	14 100 kg (31 100 lb)	Bottom dump type general purpose bucket
14.5 m³ (19.0 cu yd)	4 340 mm (14'3")	6	15 100 kg (33 000 lb)	Bottom dump type coal handling bucket

SPECIFICATIONS (Loading Shovel)

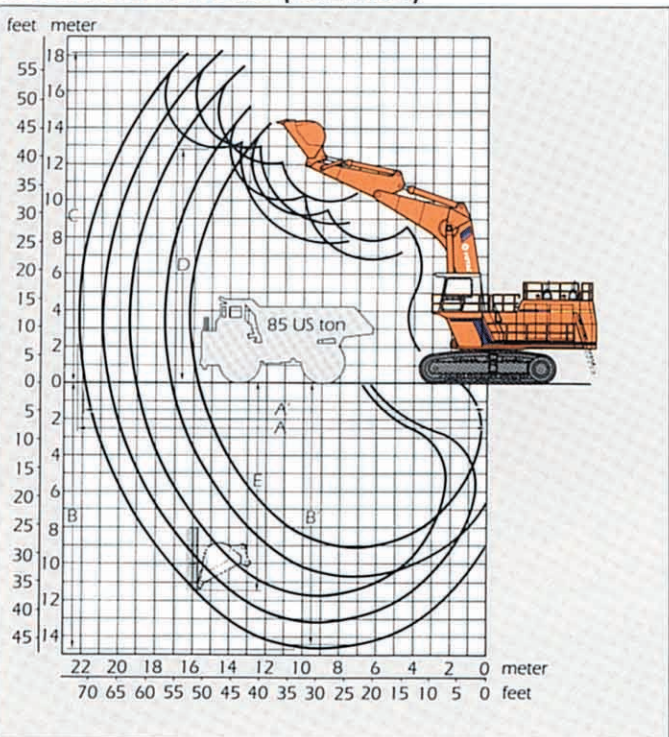
Operating weight	kg (lb)	177 000 (390 000)
Bucket capacity PCSA heaped	m³ (cu yd)	10.3 ~ 14.5
Shoe width	mm (in)	800 (31")
Ground pressure	kPa (kgf/cm², psi)	170.6 (1.74, 24.7)

## BACKHOE

DIMENSIONS (Backhoe)



WORKING RANGES (Backhoe)



WORKING RANGES (Backhoe)

Boom length	8.70 m (28'7")	11.80 m (38'9")
Arm length	4.00 m (13'1")	5.50 m (18'1")
A. Max. digging reach	16 070 (52'9")	20 860 (68'5")
A'. Max. digging reach (on ground)	15 640 (51'4")	20 530 (67'4")
B. Max. digging depth	9 260 (30'5")	13 320 (43'8")
B'. Max. digging depth (8' level)	9 150 (30'0")	13 230 (43'5")
C. Max. cutting height	14 450 (47'5")	18 170 (59'7")
D. Max. dumping height	9 160 (29'9")	12 620 (41'5")
E. Max. vertical wall	6 620 (21'9")	11 480 (37'8")
Digging force (arm cylinder)	559 (57 000, 126 000)	455 (46 400, 102 300)
Digging force (bucket cylinder)	589 (60 000, 132 000)	500 (51 000, 112 400)

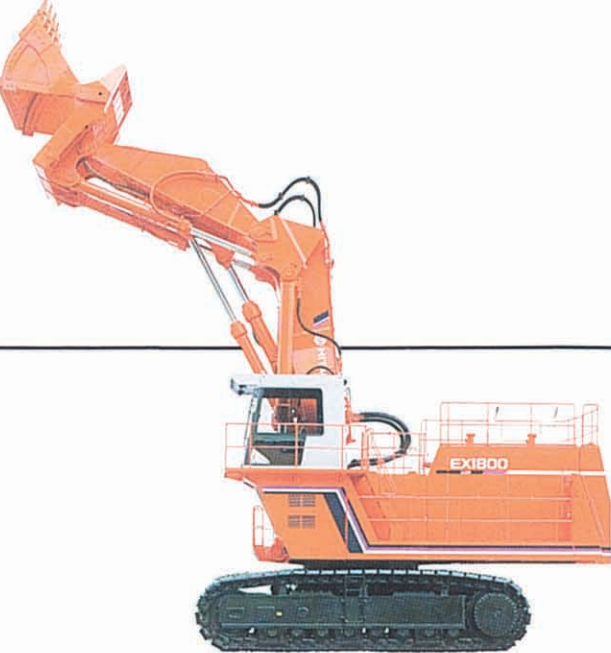
SPECIFICATIONS (Backhoe)

Operating weight	kg (lb)	177 000 (390 000)
Bucket capacity	PCSA heaped m³ (cu yd)	4.3 (5.6) ~ 14.0 (18.3)
	CECE heaped m³	3.8 ~ 12.5
Shoe width	mm (in)	800 (31") 1 000 (39")
Ground pressure	kPa (kgf/cm², psi)	170.6 (1.74, 24.7) 138.3 (1.41, 20.1)

BACKHOE BUCKETS

Capacity		Recommendation				
		8.70 m (28'7") boom	5.50 m (18'1") boom	4.00 m (13'1") boom	5.50 m (18'1") boom	7.00 m (23'0") boom
PCSA heaped	CECE heaped	4.00 m (13'1") arm	5.50 m (18'1") arm	4.00 m (13'1") arm	5.50 m (18'1") arm	7.00 m (23'0") arm
4.3 m³ (5.6 cu yd)	3.8 m³ (5.0 cu yd)					⊙
5.0 m³ (6.5 cu yd)	4.5 m³ (5.9 cu yd)				⊙	
5.9 m³ (7.7 cu yd)	5.3 m³ (6.9 cu yd)			⊙		
7.8 m³ (10.2 cu yd)	7.0 m³ (9.2 cu yd)		⊙			
9.5 m³ (12.4 cu yd)	8.4 m³ (11.0 cu yd)	⊙				
14.0 m³ (18.3 cu yd)	12.5 m³ (16.3 cu yd)	○				

⊙ General for materials with density of 2 000 kg/m³ (3 370 lb/cu yd) or less.  
○ Suitable for materials with density of 1 100 kg/m³ (1 850 lb/cu yd) or less.





# LOADING SHOVEL/BACKHOE

## MAIN SPECIFICATIONS

Model	EX1800-2
<b>ENGINE</b>	
Model	2 x Cummins KTA19-C525
Type	Water-cooled, 4-cycle, 6 cylinders direct injection with turbocharger
Piston displacement liter (cu in)	2 x 18.9 (1 150)
Flywheel horsepower	
DIN 6271 NET kW (PS)	2 x 321 (436)
SAE J1349 GROSS kW (HP)	2 x 373 (500)
Fuel tank capacity liter (US gal, Imp gal)	2 350 (621, 517)

Model	EX1800-2
<b>HYDRAULIC SYSTEM</b>	
Main pump	4-variable displacement bent-axis piston
Swing pump	2-variable displacement axis piston
Max. oil pressure MPa (kgf/cm <sup>2</sup> , psi)	29.4 (300, 4 270)
Max. oil flow ℓ/min (US gpm, Imp gpm)	4 x 500 (132.1, 110.0) 2 x 344 (90.9, 75.7)
Swing speed min <sup>-1</sup> (rpm)	4.8 (4.8)
<b>UNDERCARRIAGE</b>	
Travel speed km/h (mph)	2.8 - 2.1 (1.7 - 1.3)
Max. traction force kN (kgf, lbf)	941.5 (9 600, 21 200)
Gradeability deg (%)	30 (60)
Parking brake	Hydraulic with disc

## STANDARD EQUIPMENT

●Tool kit ●Suspension seat ●Car radio ●Intermittent windshield wiper with window washer ●Defroster ●Rearview mirror ●Ashtray ●Cigarette lighter ●Air horn ●6 working lights, cab light and access light ●2 engine room lamps ●Travel motion alarm device ●12-V power supply ●Pneumatic grease gun with hose reel ●Handrails and catwalks ●Hold-in type ladder with spring-type balancer

## OPTIONAL EQUIPMENT

●Auto-lubrication system (Lincoln) ●Air conditioner unit ●Cooling unit ●Seat belt

## BACKHOE LIFTING CAPACITIES

### METRIC MEASURE

Rating over-side or 360 degrees Rating over-front Unit: 1 000 kg

Conditions	Load point height m	Load radius						At max. reach		
		8 m		10 m		12 m		At max. reach		
										@ m
Boom 8.70 m Arm 4.00 m Bucket PCSA: 9.5 m <sup>3</sup> CECE: 8.4 m <sup>3</sup> Shoes 800 mm	8					*22.4	*22.4	*9.67	*9.67	15.1
	6			*27.0	*27.0	*23.6	*23.6	*9.87	*9.87	15.5
	4	*41.8	*41.8	*31.1	*31.1	*25.6	*25.6	*10.4	*10.4	15.5
	2	*48.1	*48.1	*33.5	*34.8	24.9	*27.6	*11.4	*11.4	15.2
	0 (ground)	46.1	*50.7	31.8	*37.1	23.1	*28.9	*12.9	*12.9	14.6
	-2	45.4	*49.8	31.0	*37.2	22.6	*28.6	*15.0	*15.0	13.5
	-4	45.7	*45.8	31.0	*34.6	23.0	*24.9			
	-5	*42.3	*42.3	31.5	*31.7					

Notes: 1. Ratings are based on SAE J1097.  
2. Lifting capacity of the EX Series does not exceed 75% of tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.

### ENGLISH MEASURE

Rating over-side or 360 degrees Rating over-front Unit: 1 000 lb

Conditions	Load point height ft	Load radius						At max. reach		
		25 ft		35 ft		45 ft		At max. reach		
										@ ft in
Boom 28'7" Arm 13'1" Bucket PCSA: 12.4 cu yd Shoes 31"	30							*21.4	*21.4	48'5"
	20			*56.2	*56.2			*21.7	*21.7	50'9"
	10			*67.1	*67.1	41.7	*49.1	*23.8	*23.8	50'7"
	5			65.1	*71.7	40.5	*50.3	*25.8	*25.8	49'7"
	0 (ground)	110.2	*119.4	62.7	*74.7			*28.5	*28.5	47'10"
	-10	109.3	*112.2	61.0	*73.0			*27.1	*27.1	41'11"
	-15	*102.0	*102.0	61.9	*65.8					
	-20	*85.2	*85.2							

3. The load point is a hook (not standard equipment) located on the back of the bucket.  
4. \*Indicated load limited by hydraulic capacity.



# ONLY HITACHI OUTDOES HITACHI



These specifications are subject to change without notice.  
Illustrations may or may not include optional equipment and accessories,  
and all standard equipment.

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