HITACHI

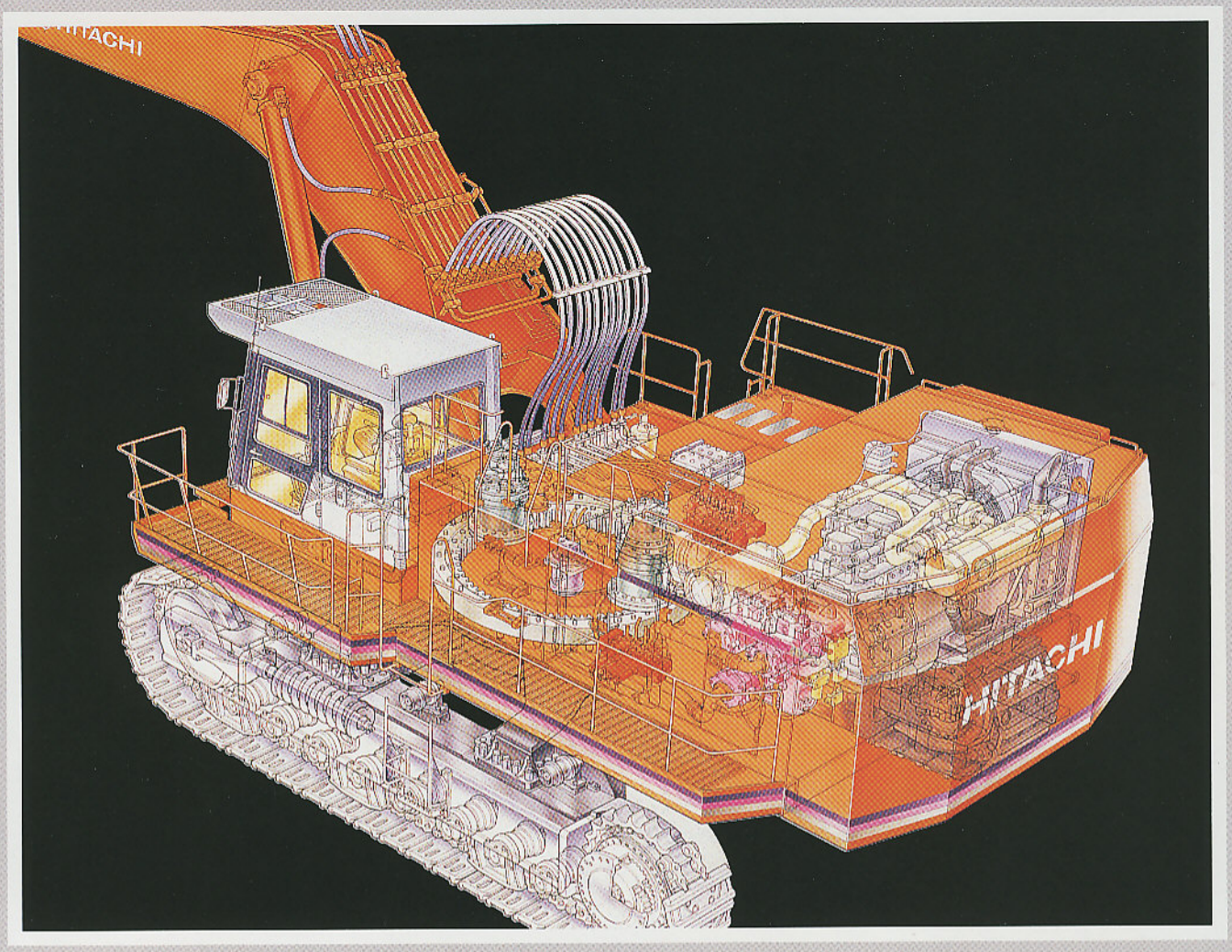
GIANT
Super EX

EX1100

Rated engine HP (gross) : 470 kW (630 HP)
Operating weight
Loading shovel : 105 000kg (231 500 lb)
Backhoe : 103 000kg (227 100 lb)
Bucket capacity
Loading shovel PCSA heaped : 5.6—6.3m³ (7.3—8.2 cu yd)
Backhoe PCSA heaped : 4.6m³ (6.0 cu yd)
CECE heaped : 4.0m³

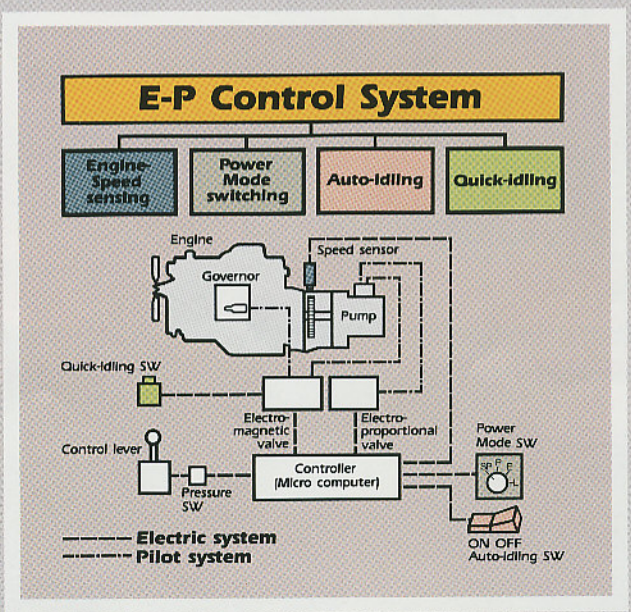
STEP INTO THE HITACHI GIANT EXCAVATOR WORLD. IT'S THE POWER; IT'S USER FRIENDLY

Here's the new-generation giant hydraulic excavator—the Hitachi Super EX1100. It packs a hyper-system combining electronics and hydraulics. Featuring exceptional production and operator-friendly design. This means dynamic action with plenty of power, unmatched mobility with brute traction force, long-lasting performance with minimum downtime, and the responsiveness of human-touch operation. The Super EX1100 opens new prospects for intelligent hydraulic excavators with the utmost in operator comfort. It delivers performance for the toughest job sites.



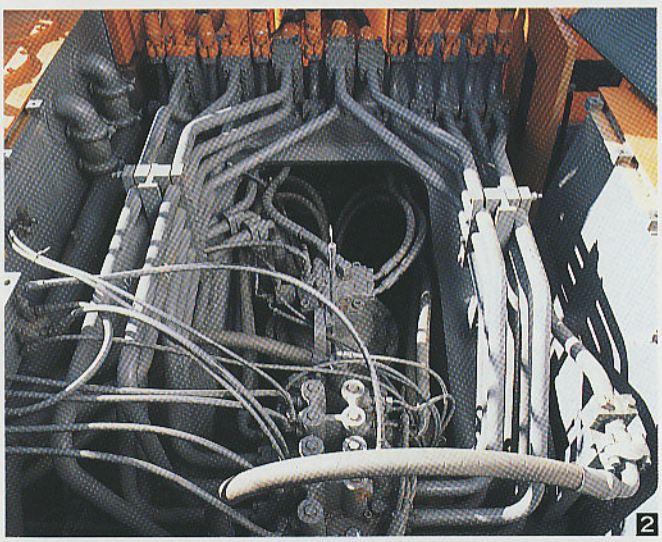
E-P Control — Exceptional Production with Economy

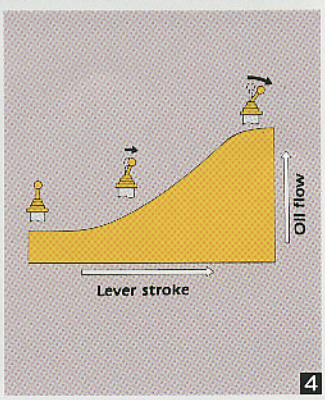
The Super EX1100 meets two contradictory needs — high production and low fuel consumption — through Hitachi's renowned E-P (computer-aided engine-pump) control system. It controls the engine output and pump delivery flow to suit the job.



THE ULTIMATE FUSION OF POWER AND OPERATION EASE

The Super EX1100 delivers the brute power . . . with the huge 590 PS engine horsepower. It yields a maximum 56.6 ton digging force (Loading shovel). A variety of advanced mechatronics, — the E-P control, the work mode selection, and more — make maximum use of this brute power.





1 E-P Control: The E-P control system computer regulates the engine output and pump delivery flow to suit job requirements. The electronic engine speed-sensing control system controls 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 which best suits your needs: SP mode for heavy-duty, P mode for general, E mode for energy-saving and L mode for light-duty operation.

2 OHS (Optimum Hydraulic System): The OHS provides the actuators with a high degree of independence. This enables smooth combined operations, such as swing/front and travel/front, with short cycle times.

3 Auto-Idling System/Quick-Idling: The Auto-idling system reduces the engine speed when the lever is in neutral for fuel conservation and excellent inching operation. With the quick idling function, the operator, while waiting for dump trucks to arrive, can depress the foot switch to reduce the engine speed, thus cutting wasteful fuel consumption and noise.

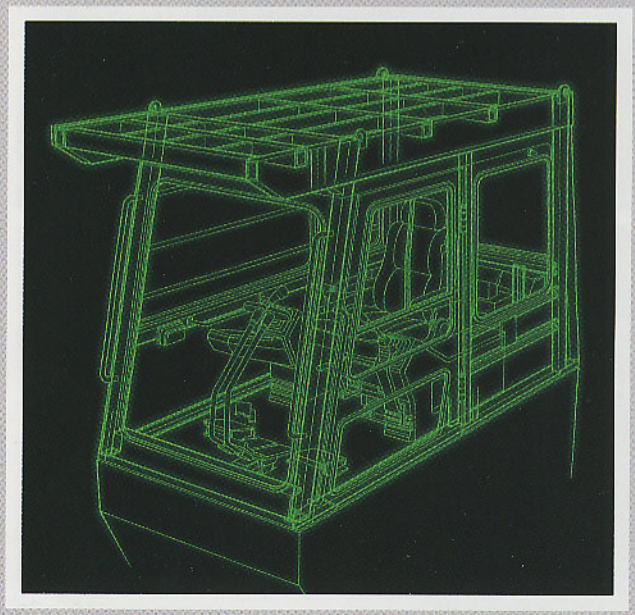
4 FPS (Fuel-saving Pump System): FPS eliminates hydraulic energy waste, it regulates pump output by lever control. The pump delivery flow is minimized with the lever in neutral, increasing in proportion to the lever stroke, thus reducing the oil discharge loss from the control valve.

Heavy Lift (Option) to Enhance Lifting Capability (Backhoe): Turning on the heavy lift switch builds up the hydraulic pressure setting, boosting the lifting force to handle rocks and heavy materials with ease.

- Shockless valve absorbs shocks when stopping the front.
- Cylinder cushion mechanism absorbs shocks at the stroke ends.
- Quick warm-up system for controls assures rapid starts in cold climates.
- Simple hydraulic circuit enhances energy savings.
- Positive swing/parking brake.
- Easy-to-operate auto-leveling crowd mechanism. (Loading shovel)
- Horizontal retracting mechanism allows easy dumping onto trucks (Loading shovel)

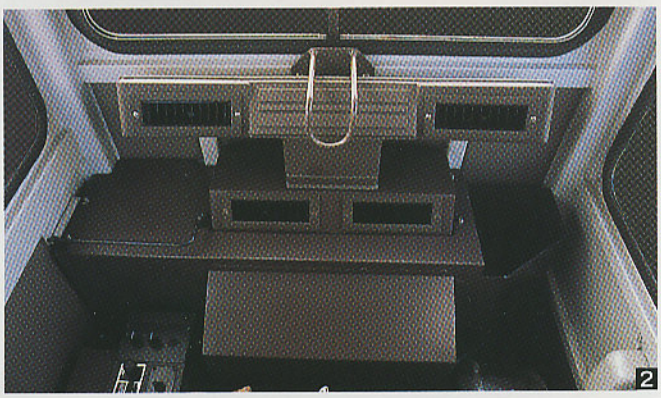
Roomy Cab with Headguard Giving New Operator Comfort

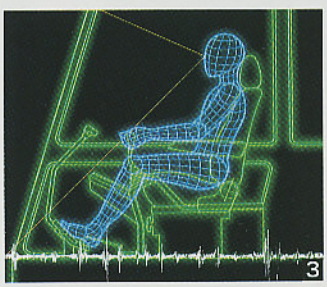
Operator comfort and convenience are top considerations in the design of the Super EX1100. The rugged cab is integrated with the headguard for increased ruggedness and durability. That's not all. The pressurized, airtight cab keeps dirt out, and using the pilot control lever allows excellent fine control and exceptional responsiveness to the job.



MAN-MACHINE INTERFACE. THAT'S HITACHI'S USER-FRIENDLY CAB.

Hitachi applies its most advanced user-friendly designs. The impressive result is extra-wide, pressurized cab integral with the headguard. Operation is a pleasure. Years of operator skill and experience are packed into the Super EX1100, giving direct access to professional expertise each time you get behind the controls.





1 Roomy Cab with Headguard: The spacious cab is integrated with the headguard for increased shock resistance, ruggedness and durability, for exceeding those of the conventional column type. The cab interior is spacious, keeping the operator relaxed, and boosting operating efficiency. The operator's eye level is also high — 4.7 m (15'5") in the high-mounted cab — giving excellent downward visibility, and always keeping the vessel of the dump truck to be loaded in the operator's sight.

2 Pressurized, Air-tight Cab: The cab is pressurized slightly higher than the atmospher around it, sealing out dirt and keeping clean air in. Cooling capacity is a high 4 200 kcal.

3 Low Noise Design with Minimal Shocks: The pressurized, air-tight cab is very effective in cutting noise and shocks. This enhances quietness and operator comfort inside the cab.

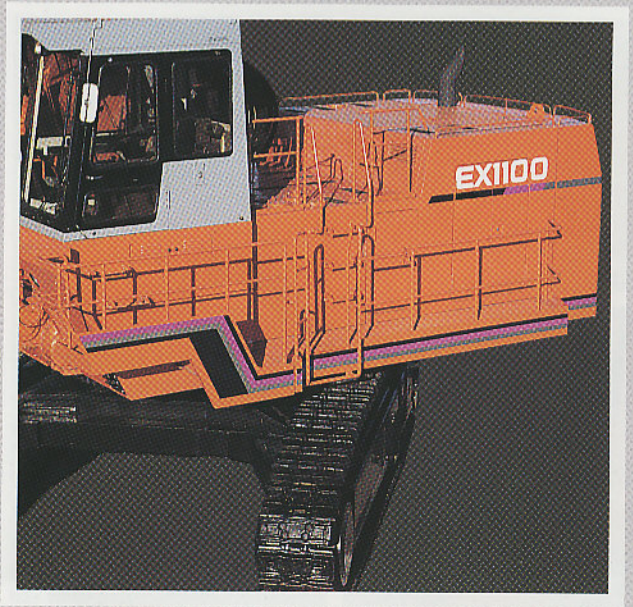
4 Comfort-designed Suspension Seat: The operator deserves first-class accommodation. Hitachi has reserved the ideal seat — designed with ergonomics in mind, and packed with extras. A comfortable suspension seat is slidable, adjusting to the proportions of each operator.

5 Easy-to-Read Monitor: Machine operating conditions can be checked at a glance. Engine oil pressure, air pressure, engine coolant temperature, and fuel level are indicated on the monitoring panel. That is also fitted with a digital clock. If trouble arises, the red alarm lamp lights and a buzzer sounds.
Of course, the before-work monitor lets the operator quickly check the hydraulic oil level and engine coolant level.

- Pilot control shutoff lever.
- Travel lever dampers eliminate rattling.
- Window washer and 2 (upper/lower) intermittent wipers.
- Ergonomically designed tilt-type control lever.
- Halogen headlight.
- Magazine box and parcel tray for operator convenience.
- Rear cab window opens.

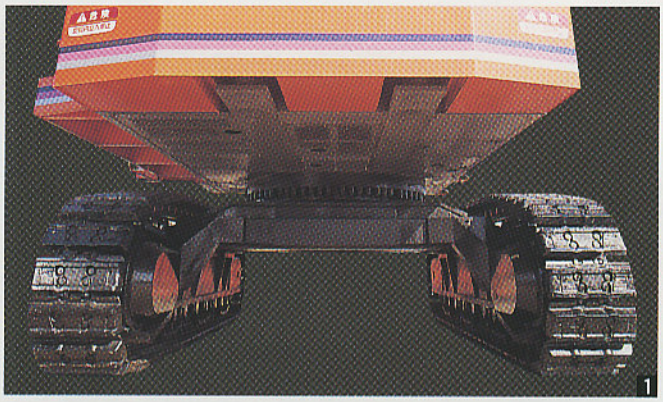
Simplified Maintenance with Minimal Downtime

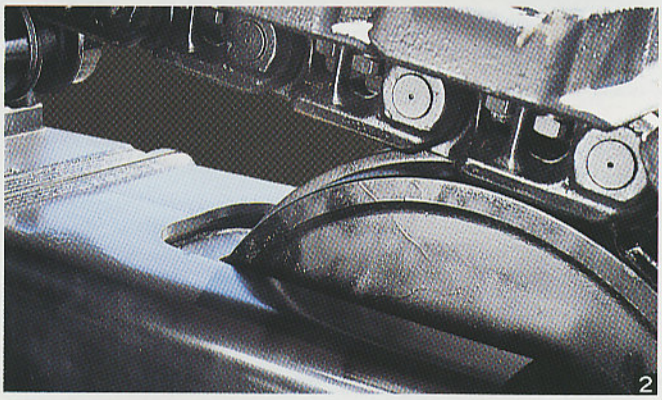
The Super EX1100 is designed and built with the ultimate maintainability in mind. Features include single engine design, modular design of travel device, heat-/shock-resistant harnesses, and much more. These sophisticated designs and simple structure minimize downtime. This allows you to tackle the toughest jobs on your job site and to reduce maintenance time greatly. What's more, greasing and changing the air conditioner filter are easy and simple.

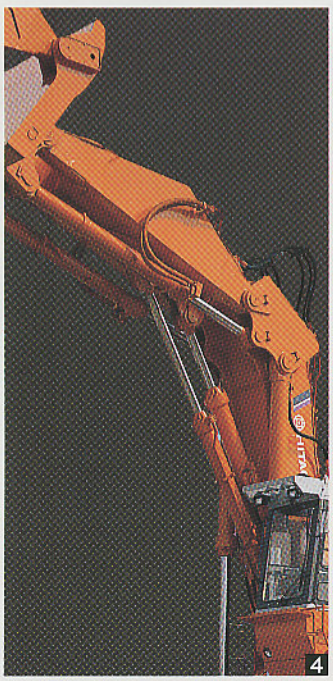


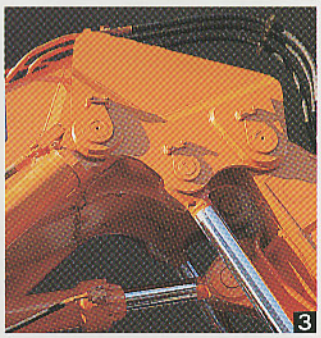
EXCEPTIONAL DURABILITY AND SIMPLE STRUCTURE

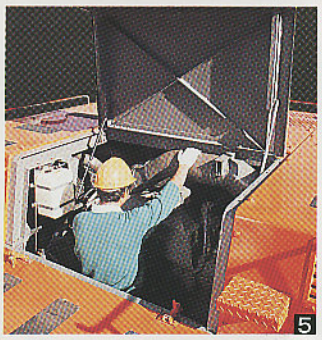
Maintenance-free — the ultimate need.
Hitachi technology and years of experience are built into the Super EX1100. It deserves to be called the operator-friendly machine . . . and it offers a minimum of downtime.











1 Compact yet Rugged Undercarriage: Large undercarriage, 6 460 mm (21 '2") long and 4 600 mm (15 '1") wide, provides stable travel. But the travel device is compact and rationally arranged inside the undercarriage. The use of reinforced track links, fitted with struts and pin seals, improves durability and reliability for sure footing on rough terrain.

2 Spring-loaded Track Adjuster: The spring-loaded track adjuster, featuring simple structure, assures trouble-free operation. Stone-catching guard is provided between front idler and track frame.

3 Rugged Front Design: The boom and arm are full-box section, low-stress high-tensile steel made, and reinforced with bulkheads. The use of cast steel boss and reversible double-lip seal at pins and bushes enhances durability of the front.

4 Damage Protection Structure: The bucket cylinders (Loading shovel) are protected from damage. Their cylinder rods are directed upward for freedom from collision with rocks, and their pipings are oriented to each other for protection against falling rocks. The bucket cylinder also has the damage protection structure at its bottom.

5 Engine Inspection Access: At the top center of the engine compartment is the engine, pump inspection access for direct inspection and maintenance.

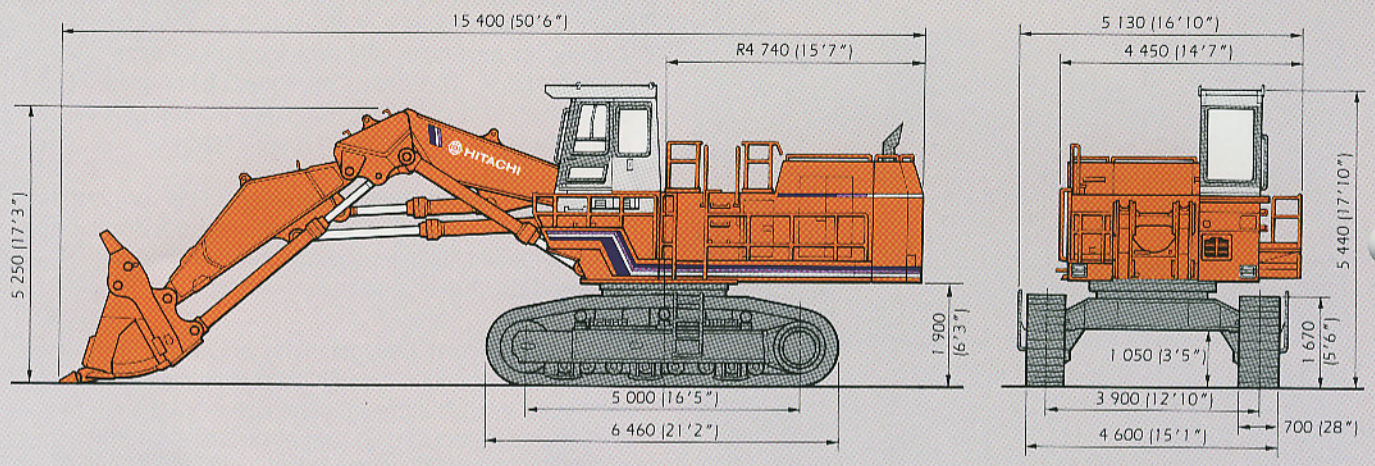
- ISO-rated handrails, step and catwalks with nonslip gratings and tapes.
- Bucket clearance adjust mechanism. (Backhoe)
- Tool box and utility room for a large pail and pneumatic grease gun with hose reel.
- Remote, centralized lubricating of the front and swing circle.
- Radiator fitted with dust-proof net.
- Fuel filter with stop valve for fuel-leak prevention.
- Control valve fitted with auto air release.

Amazing Potential... Specifications Tell It All

LOADING SHOVEL

DIMENSIONS

Unit: mm (ft in)

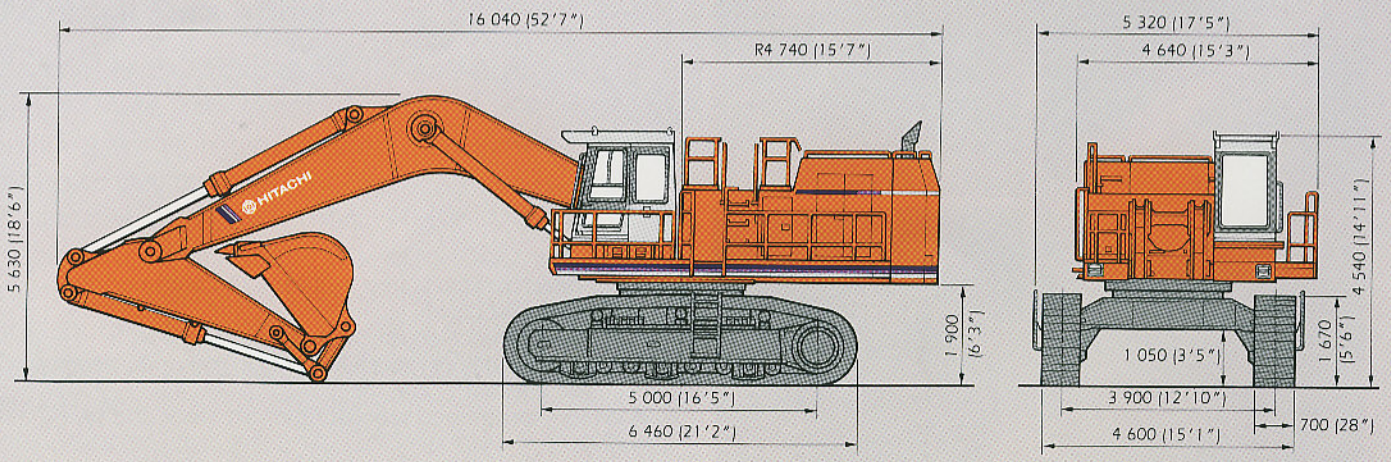


Note: Applicable for 6.3 m^3 (8.2 cu yd) loading shovel bucket and 700 mm (28") shoe.

BACKHOE

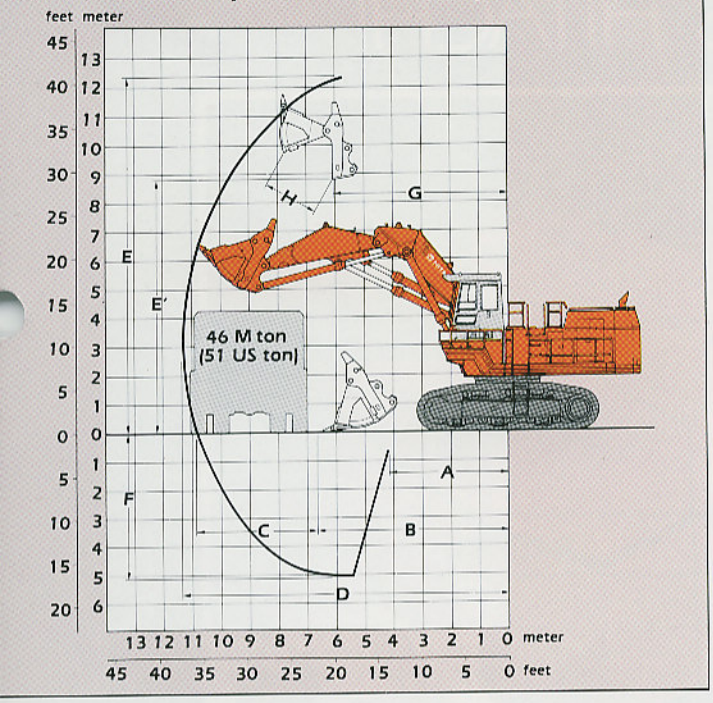
DIMENSIONS

Unit: mm (ft in)



Note: Applicable for 4.6 m^3 (6.0 cu yd: PCSA heaped) bucket, 9.1 m (29'11") boom, 3.4 m (11'2") arm and 700 mm (28") shoe.

ORKING RANGES (LOADING SHOVEL)



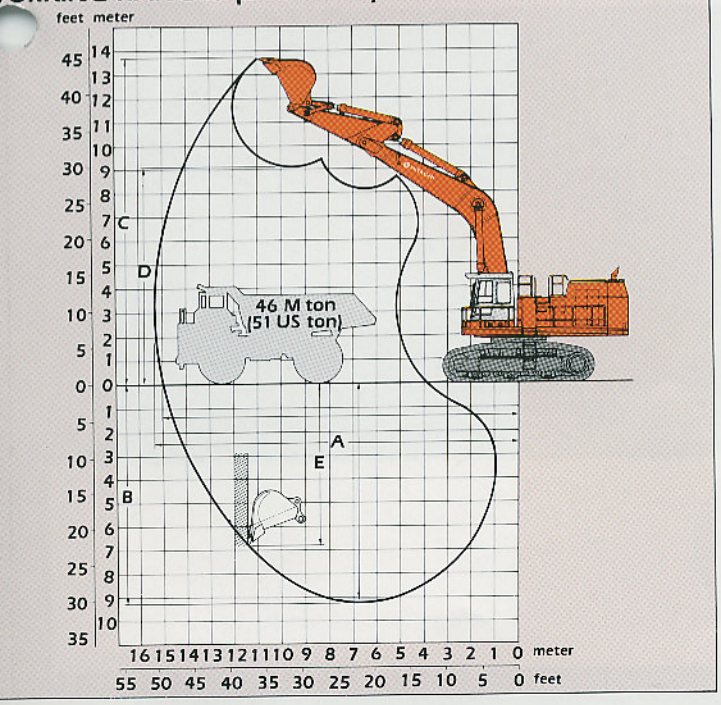
Working Ranges (Loading Shovel)

A.	Min. digging distance	4 200 mm (13'9")
B.	Min. level crowding distance	6 590 mm (21'7")
C.	Level crowding distance	4 210 mm (13'10")
D.	Max. digging reach	11 440 mm (37'6")
E.	Max. cutting height	12 400 mm (40'8")
E'.	Max. dumping height	8 790 mm (28'10")
F.	Max. digging depth	5 180 mm (17'0")
G.	Working radius at max. dumping height	6 090 mm (20'0")
H.	Max. bucket opening width	1 920 mm (6'4")
Crowding force		555.1 kN (56 600 kgf, 124 800 lbf)
Breakout force		553.1 kN (56 400 kgf, 124 400 lbf)

Loading Shovel Specifications

Operating weight	kg (lb)	105 000 (231 500)
Bucket capacity (PCSA heaped)	m^3 (cu yd)	5.6 — 6.3 (7.3 — 8.2)
Shoe width	mm (in)	700 (28")
Ground pressure	kPa (kgf/cm^2, psi)	131 (1.34, 19.1)

ORKING RANGES (BACKHOE)

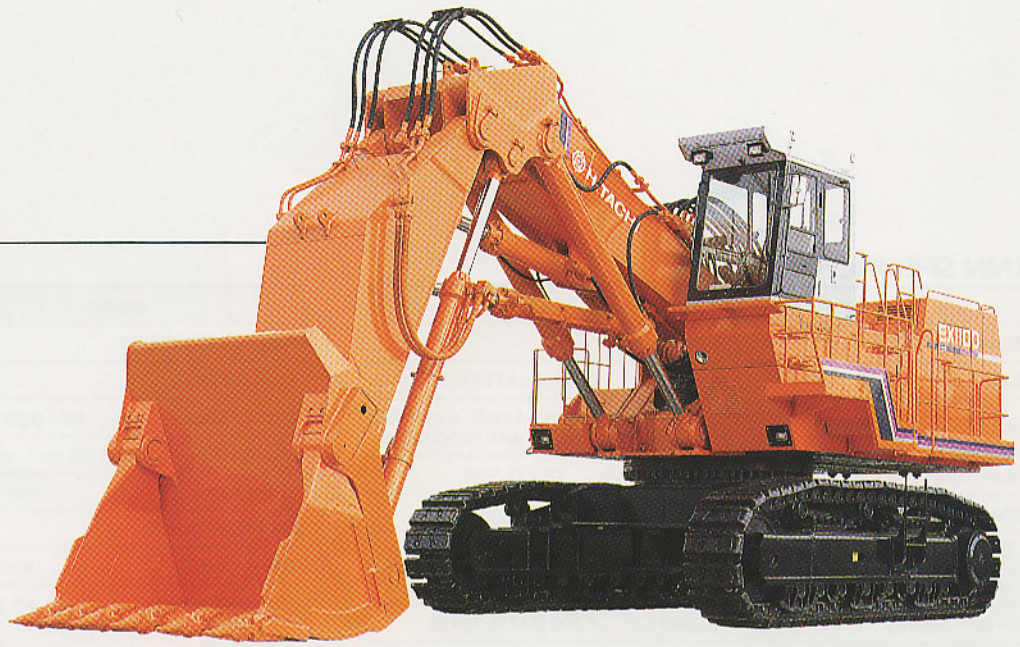


Working Ranges (Backhoe)

	Arm length	3.4 m (11'2")
A.	Max. digging reach	15 350 mm (50'4")
A'.	Max. digging reach (on ground)	15 000 mm (49'3")
B.	Max. digging depth	9 270 mm (30'5")
B'.	Max. digging depth (8' level)	9 140 mm (30'0")
C.	Max. cutting height	13 630 mm (44'9")
D.	Max. dumping height	9 060 mm (29'9")
E.	Max. vertical wall	6 800 mm (22'4")
Digging force (arm cylinder)		362.9 kN (37 000 kgf, 81 600 lbf)
Digging force (bucket cylinder)		392.2 kN (40 000 kgf, 88 200 lbf)

Backhoe Specifications

Operating weight		kg (lb)	103 000 (227 100)	
Bucket capacity	PCSA heaped	m^3 (cu yd)	4.6 (6.0)	
	CECE heaped	m^3 (cu yd)	4.0 (5.2)	
Shoe width		mm (in)	700 (28")	900 (35")
Ground pressure		kPa (kgf/cm^2, psi)	129 (1.32, 18.8)	103 (1.05, 14.9)



Loading Shovel Bucket (PCSA heaped)

Capacity	Width	No. of teeth	Weight	Type
5.6 m^3 (7.3 cu yd)	2 690 mm (8'10")	6	9 590 kg (21 150 lb)	Boom dump type rock rucket
6.3 m^3 (8.2 cu yd)	2 890 mm (9'6")	6	8 600 kg (18 960 lb)	Bottom dump type general purpose bucket

Backhoe Bucket

Capacity		Width		No. of teeth	Weight
PCSA heaped	CECE heaped	Without side cutters	With side cutter		
4.6 m^3 (6.0 cu yd)	4.0 m^3 (5.2 cu yd)	1 810 mm (5'11")	1 990 mm (6'6")	5	4 140 kg (9 130 lb)

LIFTING CAPACITIES
METRIC MEASURE

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

Conditions	Load point height	Load radius 8 m		10 m		12 m		At max. reach		
										@ m
Boom 9.1 m Arm 3.4 m Bucket PCSA: 4.6 m^3 CECE: 4.0 m^3 Shoes 700 mm	8 m					*11.9	*11.9	*6.79	*6.79	14.4
						12.3	*14.7	*8.27	*8.27	
	6 m			*13.9	*13.9	11.9	*12.2	*6.81	*6.81	14.8
				*17.0	*17.0	11.9	*15.1	7.36	*8.30	
	4 m			15.9	*15.9	11.3	*13.1	6.93	*7.04	15.0
				15.9	*19.5	11.3	15.6	6.93	*8.57	
	0 m (Ground)			13.9	*18.9	10.1	14.4	7.43	*8.27	14.2
				13.9	19.5	10.1	14.4	7.43	*9.96	
	−4 m	20.0	*23.4	13.6	*17.9			10.1	*13.1	11.8
		20.0	28.1	13.6	19.2			10.1	14.4	
	−6 m	*19.7	*19.7	14.2	*14.6					
		20.6	*24.3	14.2	*18.2					

With heavy lifting system (option)

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	Load radius 25 ft		30 ft		35 ft		At max. reach		
										@ ft in
Boom 29'11" Arm 11'2" Bucket PCSA: 6.0 cu yd Shoes 28"	25 ft					*26.9	*26.9	*14.9	*14.9	47'6"
						*33.2	*33.2	17.8	*18.2	
	20 ft			*32.9	*32.9	*28.8	*28.8	*15.0	*15.0	48'8"
				*40.2	*40.2	33.6	*35.6	16.3	*18.3	
	10 ft			39.0	*41.9	30.1	*34.2	15.2	*15.9	48'11"
				39.0	*51.1	30.1	41.4	15.2	*19.4	
	0 ft (Ground)			35.4	*47.1	27.4	*38.1	16.4	*18.2	46'8"
				35.4	49.7	27.4	38.6	16.4	*22.0	
	−10 ft	47.5	*56.8	34.7	*46.1	26.7	*37.6	21.3	*23.0	41'4"
		47.5	67.1	34.7	48.9	26.7	37.8	21.3	*26.3	
	−20 ft	*45.0	*45.0	36.3	*36.5					
		49.6	*55.3	36.3	*45.3					

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

MAIN SPECIFICATIONS

Model		EX1100
ENGINE		
Model		Cummins KTTA19-C
Type		Water-cooled, 4-cycle, 6 cylinders direct injection with turbocharger
Piston displacement	liter (cu in)	18.9 (1 150)
Flywheel horsepower		
DIN 6271 NET	kW (PS)	434 (590)
SAE J1349 GROSS	kW (HP)	470 (630)
Fuel tank capacity	liter (US gal, Imp gal)	1 200 (317.0, 264.0)

Model		EX1100
HYDRAULIC SYSTEM		
Main pumps		3-variable displacement axial piston
Max. oil pressure	MPa (kgf/cm^2, psi)	29.4 (300, 4 270)
Max. oil flow	ℓ/min (US gpm, Imp gpm)	3 x 490 (129.5, 107.8)
Swing speed	min^{-1} (rpm)	5.8 (5.8)
UNDERCARRIAGE		
Travel speed	km/h (mph)	3.6 - 2.5 (2.2 - 1.6)
Max. traction force	kN (kgf, lbf)	617.8 (63 000, 138 900)
Gradeability	deg (%)	35 (70)
Parking brake		Hydraulic with disc

STANDARD EQUIPMENT

● Tool kit ● Suspension seat ● Air conditioner (Pressurized cab) ● Car radio ● Intermittent windshield wiper with window washer ● Cigarette lighter ● Ashtray ● 4 working lights and 2 cab lights ● Air horn ● Sun visor ● Rearview mirror ● Parcel pocket ● Rear tray ● Cab high mount under cover (Loading shovel) ● Pneumatic grease gun with hose real

OPTIONAL EQUIPMENT

● Torsion bar spring & Hyd. damping type suspension seat ● Auto-lubrication system (Lincoln) ● Travel motion alarm device ● Heavy lifting system (Backhoe) ● Cab high mount under cover (Backhoe) ● Refilling pump device

ONLY HITACHI OUTDOES HITACHI

This 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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