



ELLE system

***Super*EX**

EX220

Rated engine HP: 118 kW (160 PS)

Operating weight

EX220-2 : 22 500 kg (49 600 lb)

EX220LC-2 : 23 800 kg (52 500 lb)

Bucket capacity

PCSA heaped: 0.80 — 1.40 m³

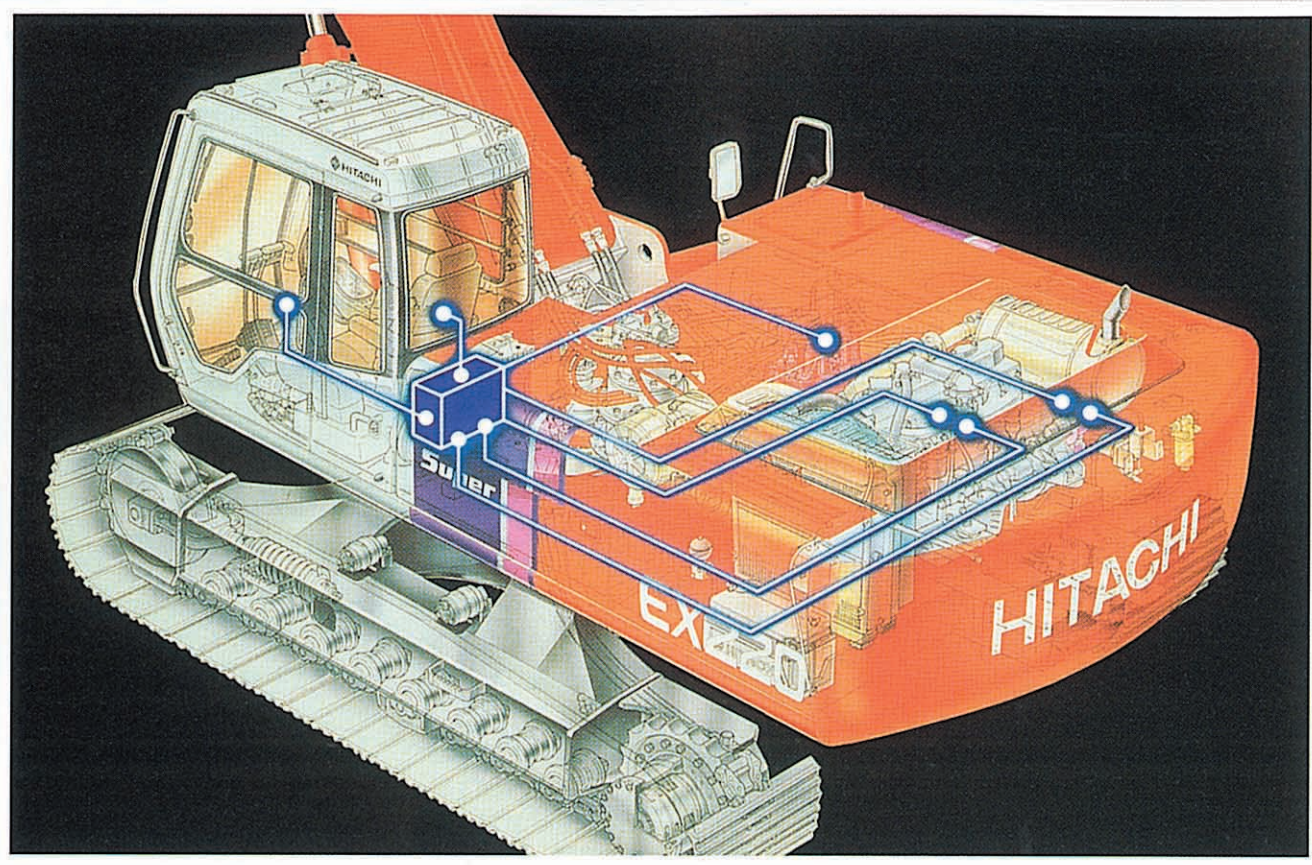
(1.05 — 1.83 cu yd)

CECE heaped: 0.70 — 1.20 m³

GIVING MECHATRONICS A NEW FACE

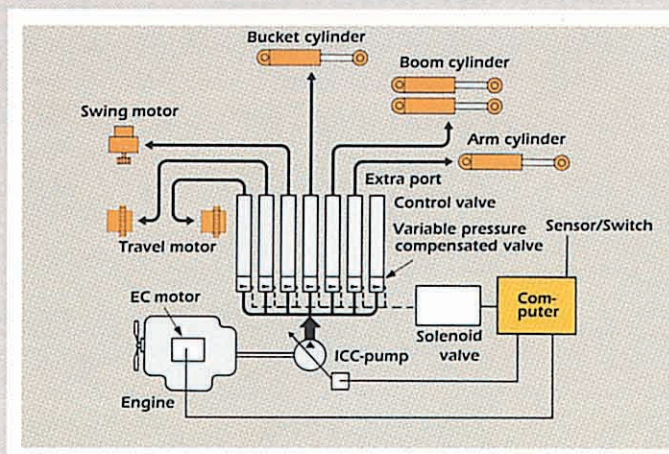


The SuperEX. At the forefront in the age of intelligent excavators. The successor of the renowned intelligent EX series. ELLE (Electronic Load-sensing Excavation), the heart of the SuperEX, is a hyper-system of electronics and hydraulics, delivering dynamic action with the responsiveness of human-touch operation. The ultra-modern design, with dynamic stripes and a coral white cab, matches the intelligence and power of the machine. The SuperEX series opens new prospects for intelligent hydraulic excavators.



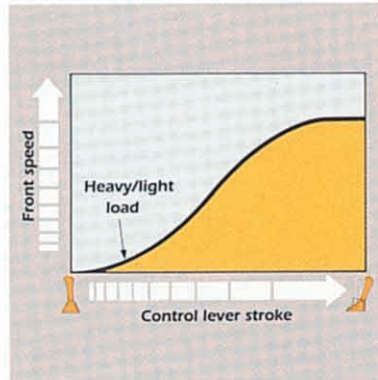
A breakthrough in Intelligent Hydraulic Systems:

Hydraulic Systems: The ELLE system controls the engine, pump and control valve via a special computer, ensuring the optimum oil flow/hydraulic pressure for ideal simultaneous operations. ELLE provides smooth operation and the responsiveness of "human-touch" control.



THE ELLE SYSTEM AT THE LEADING EDGE OF HYDRAULICS

With the ELLE system, the most advanced computer-aided hydraulic system available today, excavation, swing and dump can all be computer-controlled to facilitate simultaneous operations. Years of operator skill and experience are packed into the ELLE system, giving you direct access to professional expertise each time you get behind the controls. The ELLE system enables every operator to do the job like an experienced operator. Simple control makes simultaneous operations easy, at unmatched cost performance.



Exceptional Controllability: The ELLE system delivers the optimum oil flow to the motors and cylinders, boosting bucket speed to give you all the power and speed you need. Maximum controllability is maintained regardless of whether the job is heavy or light.

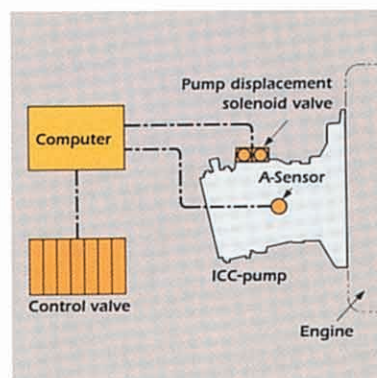


Power Selector: The power selector makes full use of the engine horsepower by sensing the changes in engine speed that occur with each new load. Depending on the job, you can select the mode which best suits your needs: P (Power) mode, E (Economy) mode, L (Low speed) mode, and I (low idle) mode.

Four Work Modes: There is a choice of four work modes at finger touch to meet any job requirement.

- ① **General-purpose mode:** Delivers the optimum flow to the motor and cylinder for efficient job performance.
- ② **Trenching mode:** Gives priority to the swing in combined swing/boom raise operations, enhancing trenching efficiency.
- ③ **Grading mode:** The arm rolls in slowly and powerfully, and rolls out quickly for efficient grading.
- ④ **Precision mode:** When you need precise front and swing motions, select this mode. Even if you move the control lever at full stroke, the front and swing speeds remain slow and precise, while the travel speed remains constant.

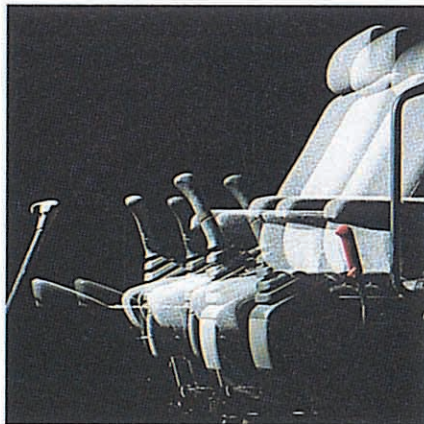
- Swing dampener valve in the swing circuit prevents coasting, when swing is stopped.
- Shockless valve absorbs shocks when stopping the front.
- Power boost mode instantly increases the digging force when needed.
- Holding valve prevents lowering of the boom and arm under gravity.
- Extra port available for full-flow connection.
- Auto idle mode is engaged when lever is in neutral, to minimize energy consumption.



Human-touch Control: Controls are exceptionally sensitive and accurate — an extension of your own hand. Operation is fun, and efficient and productive. The secret is ELLE — wholly designed with ergonomics in mind. ELLE minimizes shocks caused at the start of travel by boom action, etc., by regulating the rush oil when starting the pump or when switching the control valve.



The Cockpit: Operator comfort and convenience are a top priority in the Super EX. Sit in the comfortable suspension seat, and notice how relaxed you feel. The seat can slide by itself, or together with the control levers and panel, to adjust to the proportions of any operator. This simultaneous seat/lever movement also makes deep excavation easier and more efficient.

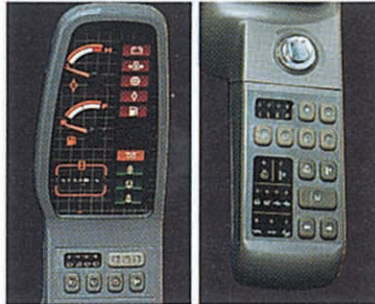


THE UTMOST IN OPERATOR COMFORT

This is a new level of operator comfort and controllability. Sit in the comfort designed seat and grip the levers. You'll feel what we mean. The most advanced mechanisms are governed by clear, simple controls... for the utmost in operator comfort and convenience.



Ergonomically Designed Lever Grip: Lever grip, ergonomically designed, enhances pleasant human-touch control, minimizing operator fatigue.



Easy-to-Read Monitor and Finger-Touch Switches: The monitor is curved for easy reading. Touch switches are resin-molded for dust protection. The engine speed control unit, which also functions as the power selector, can be controlled with one touch for simple operation, boosting operating efficiency.



Curved Rear Window Glass: The cab rear window is curved and large enough to give excellent rear visibility. Low-profile engine hood helps increase rear visibility.



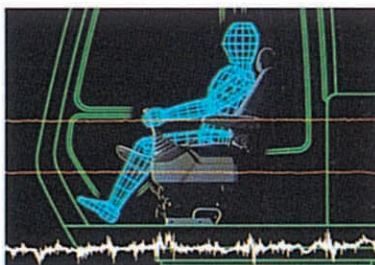
Multi-position Overhead Window: Roof window can be positioned at any angle for excellent overhead visibility and increased ventilation.

Spring-assisted Storable Front Window: The front window is spring-assisted for easy storing in the cab and for absorbing shocks when repositioned.



Auto-tuning Radio with Digital Clock: An auto-tuning radio with digital clock is standard equipment, letting the operator feel as if he was in an automobile.

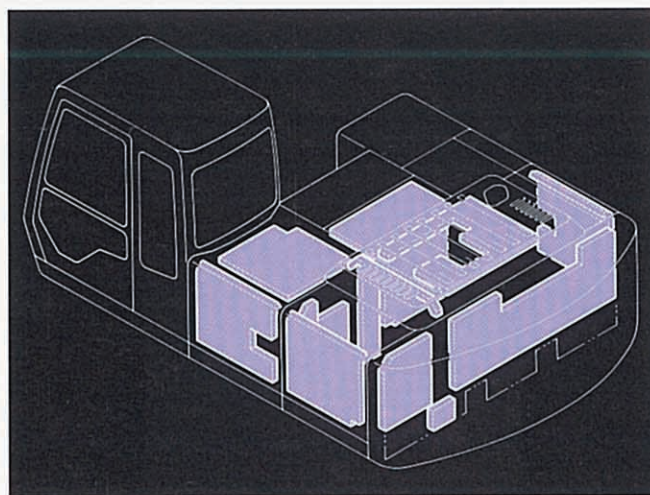
- Window washer and intermittent wiper keep the front window clean.
- Rear tray for operator convenience.
- Durable cold-foamed seat cushions.
- Lower light on cab allows excellent forward lighting in darkness.
- Opening right cab window.
- Travel lever dampers eliminate rattling.
- Storable front lower window.
- Air conditioner (optional).



Low Noise and Vibration Design: The cab is rubber-mounted to absorb shocks and sealed to shut out noise. What's more, the cab is molded for improved rigidity to resist resonance.

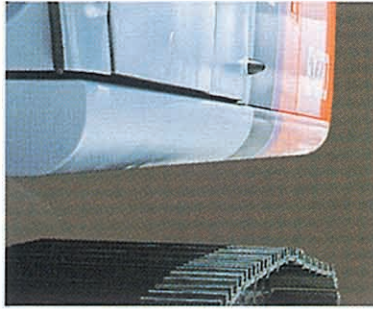


Low Noise Design: The SuperEX is insulated against sound and shock. Machine body is all pressed for increased rigidity to avoid resonance. All noise sources are boxed in, using covers lined with sound-absorbing materials. The air cleaner is housed inside the machine cover.



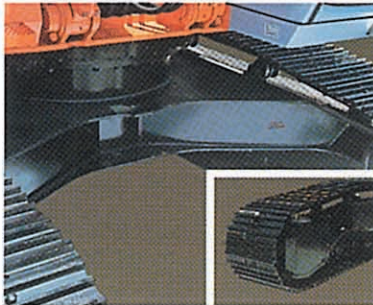
MOST ADVANCED DESIGN DETAILS

Excavators play an important role in urban construction work. But the operator is the star. The Super EX is built with this concept in mind — operator-first design. Quiet, comfortable cab, ergonomically designed controls with self-diagnostic functions, all-pressed machine body with high durability, and much more.



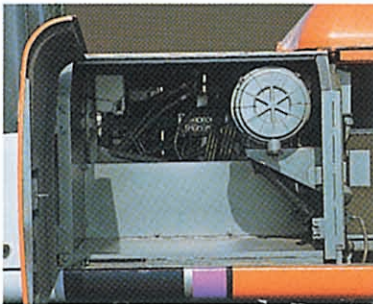
Rugged D-section Frame Skirt:

Rugged D-section frame skirt, proven on the EX series, provides high resistance to deformation.

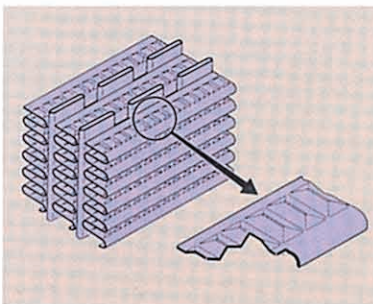


Sturdy X-type Track Frame: Sturdy X-type track frame is utilized for tough operation on rough terrain.

Excellent Job-to-Job Travel: The SuperEX demonstrates outstanding mobility even on rough terrain. You have a choice of three travel speeds — high, medium and low — to suit all job requirements. Compact travel motors and piping are logically arranged inside the track frame.



Ample Utility Space: Ample utility space is provided for storing a large tool box and can for servicing convenience.



Wave-finned Radiator for Clog

Protection: Radiator is fitted with waved fins to prevent clogging and ensure ease of maintenance.

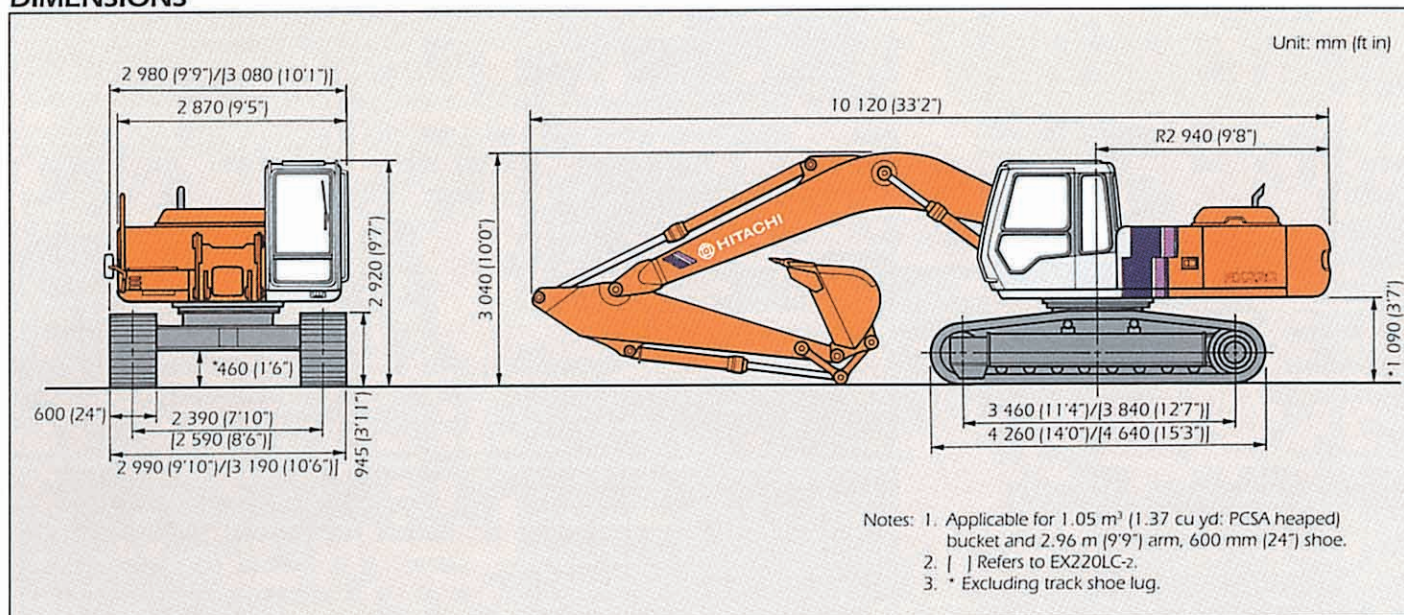
- Large tool box with room for a large can (20 liters, 5 gallons).
- Quick warm-up system for pilot circuit.
- Hydraulic warm-up control system for engine and hydraulic oil.
- Positive swing/parking brake.
- Large-sized, reinforced track links with pin seals.
- Pilot control shutoff lever.
- Simple hydraulic circuit for energy saving.
- Bucket clearance adjust mechanism.
- Handrails, steps and nonslip surfaces for servicing convenience.



Dr. EX, Self-diagnostic System: A portable self-diagnostic system, Dr.EX, provides instant status checks of a number of machine conditions, including engine RPM, hydraulic pressure, oil flow, and electrical systems. Dr. EX enables Hitachi servicemen to service and inspect the machine instantly.

Amazing Potential... Specifications Tell It All

DIMENSIONS










































SPECIFICATIONS

Model			EX220-2	EX220LC-2
Operating weight		kg (lb)	22 500 (49 600)	23 800 (52 500)
Bucket capacity	PCSA heaped	m ³ (cu yd)	0.80 - 1.40 (1.05 - 1.83)	
	CECE heaped	m ³	0.70 - 1.20	
ENGINE				
Model			Hino H06C-T	
Type			Water-cooled, 4-cycle, 6 cylinders direct injection with turbocharger	
Piston displacement		liter (cu in)	6.485 (396)	
Flywheel horsepower				
DIN 6271 NET		kW (PS)	118 (160)	
SAE J1349 NET		kW (HP)	116 (156)	
Fuel tank capacity liter (US gal, Imp gal)			310.0 (81.9, 68.2)	

Model	EX220-2	EX220LC-2
HYDRAULIC SYSTEM		
Main pumps	2-variable displacement axial piston	
Max. oil pressure MPa [kgf/cm², psi]	34.3 [350, 4 980]/36.3 [370, 5 260] *	
Max. oil flow l/min (US gpm, Imp gpm)	2x189 [49.9, 41.6]	
Swing speed min ⁻¹ (rpm)	10.0 [10.0]	
UNDERCARRIAGE		
Travel speed km/h (mph)	5.5 - 3.5 - 2.5 [3.4 - 2.2 - 1.6]	
Max. traction force kN [kgf, lbf]	176.5 [18 000, 39 700]	
Gradeability deg (%)	35 [70]	
Parking brake	Hydraulic with disc	
Shoe width mm (in)	600 [24"]	800 [31"]
Grand pressure kPa [kgf/cm², psi]	48.1 [0.49, 6.97]	35.3 [0.36, 5.12]

Note: * At power boost.

BACKHOE BUCKETS

Capacity		Width		No. of teeth	EX220-2			EX220LC-2		
PCSA heaped	CECE heaped	Without side cutters	With side cutters		2.32 m (7'7") arm	2.96 m (9'9") arm	3.61 m (11'10") arm	2.32 m (7'7") arm	2.96 m (9'9") arm	3.61 m (11'10") arm
0.80 m ³ (1.05 cu yd)	0.70 m ³	940 mm (37")	1 080 mm (43")	4						
1.05 m ³ (1.37 cu yd)	0.90 m ³	1 160 mm (46")	1 300 mm (51")	5						
1.15 m ³ (1.50 cu yd)	1.00 m ³	1 270 mm (50")	1 410 mm (56")	5						
1.25 m ³ (1.63 cu yd)	1.10 m ³	1 380 mm (54")	1 520 mm (60")	5			—			
1.40 m ³ (1.83 cu yd)	1.20 m ³	1 490 mm (59")	—	5		—	—		—	—
*0.92 m ³ (1.20 cu yd)	0.80 m ³	1 120 mm (44")	—	5						
Ripper bucket: 0.70 m ³ (0.92 cu yd: CECE heaped) Width 1 000 mm (39")				3			—			—
One-point ripper				1			—			—

- Rock bucket

◎ Suitable for materials with density of 2 000 kg/m³ (3 370 lb/cu yd) or less

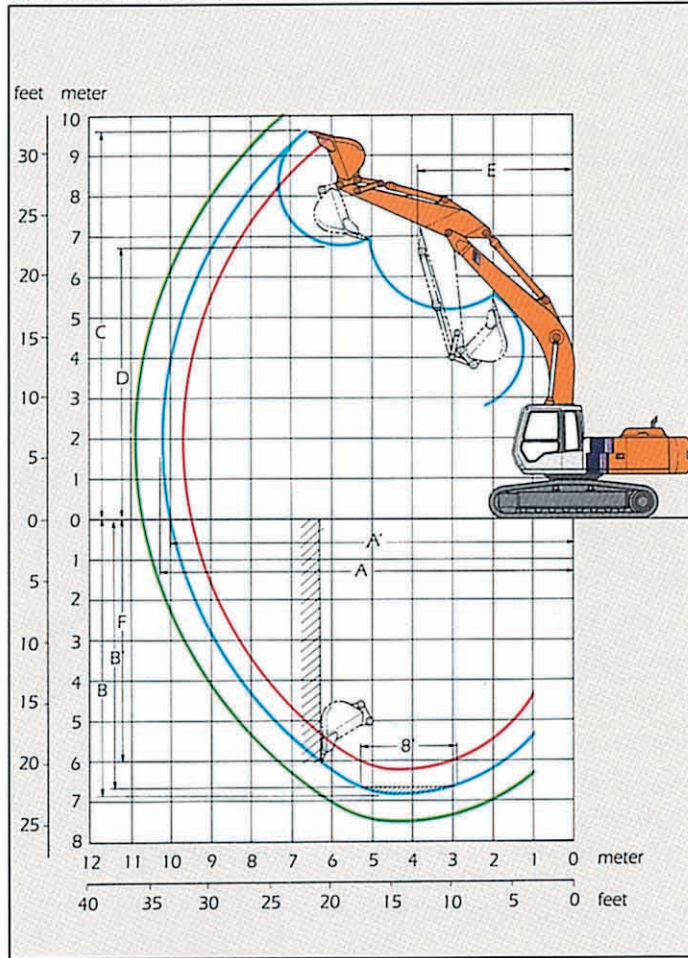
○ Suitable for materials with density of 1 600 kg/m³ (2 700 lb/cu yd) or less

☐ Suitable for materials with density of 1 100 kg/m³ (1 850 lb/cu yd) or less

● Heavy-duty service

— Not recommended

WORKING RANGES



Working Ranges

Arm length	2.32 m (7'7")	2.96 m (9'9")	3.61 m (11'10")
A. Max. digging reach	9 710 mm (31'10")	10 270 mm (33'8")	10 900 mm (35'9")
A'. Max. digging reach (on ground)	9 530 mm (31'3")	10 100 mm (33'2")	10 730 mm (35'2")
B. Max. digging depth	6 310 mm (20'8")	6 950 mm (22'10")	7 600 mm (24'11")
B'. Max. digging depth (8' level)	6 070 mm (19'11")	6 740 mm (22'1")	7 430 mm (24'5")
C. Max. cutting height	9 410 mm (30'10")	9 630 mm (31'7")	9 980 mm (32'9")
D. Max. dumping height	6 530 mm (21'5")	6 760 mm (22'2")	7 100 mm (23'4")
E. Min. swing radius	3 920 mm (12'10")	3 850 mm (12'8")	3 880 mm (12'9")
F. Max. vertical wall	5 400 mm (17'9")	6 030 mm (19'9")	6 740 mm (22'1")
Bucket digging force	136.3 kN (13 900 kgf, 30 600 lbf)	136.3 kN (13 900 kgf, 30 600 lbf)	136.3 kN (13 900 kgf, 30 600 lbf)
	144.2 kN (14 700 kgf, 32 400 lbf)	144.2 kN (14 700 kgf, 32 400 lbf)	144.2 kN (14 700 kgf, 32 400 lbf)
Arm crowd force	132.4 kN (13 500 kgf, 29 800 lbf)	105.9 kN (10 800 kgf, 23 800 lbf)	92.2 kN (9 400 kgf, 21 000 lbf)
	139.3 kN (14 200 kgf, 31 300 lbf)	118.8 kN (11 400 kgf, 25 100 lbf)	97.1 kN (9 900 kgf, 21 800 lbf)

Note: Excluding rack shoe lug. At power boost.

STANDARD EQUIPMENT

- Tool kit ● Suspension seat ● Heater ● Auto-tuning radio with digital clock
- Intermittent windshield wiper with window washer ● Cigarette lighter
- Ashtray ● 3 working lights and 1 cab light ● Electric double horn
- Rearview mirror ● Rear tray ● Parcel pocket ● Power boost device

OPTIONAL EQUIPMENT

- Air conditioner ● Multi selection lever with rotary valve ● Hose rupture valves
- Electric refilling pump ● Swing motion alarm device with lamps
- Travel motion alarm device ● Additional pump ● Piping kit for extra port
- PTO valve & additional valve with piping kit

LIFTING CAPACITIES

METRIC MEASURE

EX220-2

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

Conditions	Load point height m (ft in)	Load radius m (ft in)						At max. reach		
		4 (13'1")		6 (19'8")		8 (26'3")				
										⊙ m (ft in)
Boom 6.00 m (19'8") Arm 2.96 m (9'9") Bucket PCSA: 1.05 m³ (1.37 cu yd) CECE: 0.90 m³ Shoes 600 mm (24")	6 (19'8")							2.39 (5.27)	2.41 (5.31)	9.07 (29'9")
	4 (13'1")			*4.77 (10.5)	*4.77 (10.5)	2.94 (6.48)	*4.28 (9.44)	1.98 (4.37)	*2.48 (5.47)	9.71 (31'10")
	2 (6'7")			4.50 (9.92)	*6.35 (14.0)	2.75 (6.06)	4.22 (9.31)	1.83 (4.04)	*2.72 (6.00)	9.85 (32'4")
	0 (Ground)	*5.47 (12.1)	*5.47 (12.1)	4.12 (9.08)	6.42 (14.2)	2.58 (5.69)	4.03 (8.89)	1.90 (4.19)	3.03 (6.68)	9.51 (31'2")
	-2 (-6'7")	7.69 (17.0)	*12.4 (27.3)	3.98 (8.78)	6.26 (13.8)	2.50 (5.51)	3.95 (8.71)	2.26 (4.98)	3.56 (7.85)	8.62 (28'3")
	-4 (-13'1")	7.88 (17.4)	*11.2 (24.7)	4.04 (8.91)	6.32 (13.9)					

- 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.

EX220LC-2

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

Conditions	Load point height m (ft in)	Load radius m (ft in)						At max. reach		
		4 (13'1")		6 (19'8")		8 (26'3")				
										⊙ m (ft in)
Boom 6.00 m (19'8") Arm 2.96 m (9'9") Bucket PCSA: 1.05 m³ (1.37 cu yd) CECE: 0.90 m³ Shoes 800 mm (31")	6 (19'8")							*2.41 (5.31)	*2.41 (5.31)	9.07 (29'9")
	4 (13'1")			5.72 (12.6)	*4.77 (10.5)	3.43 (7.56)	*4.28 (9.44)	2.35 (5.18)	*2.48 (5.47)	9.71 (31'10")
	2 (6'7")			5.23 (11.5)	*6.35 (14.0)	3.24 (7.14)	*4.90 (10.8)	2.20 (4.85)	*2.72 (6.00)	9.85 (32'4")
	0 (Ground)	*5.47 (12.1)	*5.47 (12.1)	4.85 (10.7)	*7.67 (16.9)	3.06 (6.75)	5.00 (11.0)	2.28 (5.03)	*3.17 (6.99)	9.51 (31'2")
	-2 (-6'7")	9.10 (20.1)	*12.4 (27.3)	4.70 (10.4)	7.80 (17.2)	2.98 (6.57)	4.91 (10.8)	2.70 (5.95)	*4.05 (8.93)	8.62 (28'3")
	-4 (-13'1")	9.29 (20.5)	*11.2 (24.7)	4.76 (10.5)	*7.52 (16.6)					

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



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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