

EX-6 series

HITACHI

EX
1200



Notes: This picture includes optional slide ladder.

HYDRAULIC EXCAVATOR

- **Model Code:** EX1200-6
- **Engine Gross Power:** 567 kW (760 HP)
- **Operating Weight:** Backhoe: 111 000 kg
BE-front: 112 000 kg
Loading Shovel: 114 000 kg
- **Backhoe Bucket:** SAE, PCSA Heaped: 5.2 - 6.7 m³
CECE Heaped: 4.6 - 5.9 m³
- **Loading Shovel Bucket:** Heaped: 5.9 - 6.5 m³

The New-Generation Hydraulic Excavator: The Hitachi Giant EX1200

The Hitachi EX1200, a new-generation giant hydraulic excavator, is designed for extraordinary production and toughness on large-scale mines, quarries and civil-engineering projects. The EX1200 comes with lots of leading-edge technologies, including the high-power engine, sophisticated hydraulic system, strengthened undercarriage, an array of safety devices, and eco- and environment-friendly design.





Notes: This picture includes optional slide ladder and custom-designed reinforcing plates for side track frame.

Impressive Productivity

More production thanks to Hitachi's cutting-edging technologies

Production: Approximately 9% Increase (H/P modes)

(vs. conventional model with BE front)

Advanced Hydraulic Technologies

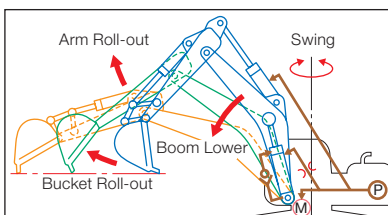
Boom Recirculation System

Pressurized oil is efficiently recirculated in the boom circuit, assisted by the boom self-weight when the boom lowers. This design delivers more pressurized oil to the arm from the pump to increase arm lowering speed in combined operation of the boom and arm.



Combined Operation of Boom and Arm

In combined operation of swing + boom lower + arm roll-out, or in leveling (boom lower + arm roll-out), arm roll-out speed can be increased greatly. A variable throttle, provided in the arm circuit, adjusts the oil flow in combined operation with arm roll-out.



Boom- and Swing-Priority Modes

The boom- or swing-priority mode can be selected for higher production.

■ Boom-Priority Mode

When swing angle is small in a cycle of digging, swinging and dumping, boom raise speed increases to reduce a cycle time.

■ Swing-Priority Mode

When swing angle is large in a cycle of digging, swinging and dumping, swing speed increases to reduce a cycle time.

Three work modes can be selected by setting the switch to the three positions below.



- Position 1: Boom-priority mode**
- Position 2: Normal mode**
- Position 3: Swing-priority mode**

Boom Mode Selector

The two boom modes, comfort and powerful modes, can be selected according to job needs, extending the service life of the machine. When the boom mode selector is On, the comfort mode is selected for efficient excavation, while the selector is Off, the powerful mode for productive excavation.

Including optional switches

<p>ON Comfort mode</p> <p>↓</p> <p>There is little lifting or pulling of the body so there is less vibration and shock.</p>	<p>OFF Powerful mode</p> <p>↓</p> <p>Much lifting and pulling of the body so there is more vibration and shock.</p>
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Notes: The bucket pictured is custom designed.

Improved Performance

Increased Boom Lifting Force

The boom lifting force is increased to easily lift large rocks on quarries and mines.

- **Boom lifting force:**
Approximately 8% increase
 (vs. conventional model with BE front; arm positioned vertically and bucket resting on ground)

Improved Mobility

Mobility is improved to achieve sharper steering with more traction force.

- **Traction force:**
Approximately 14% increase
 (vs. conventional model)

Increased Digging Force

Digging force is increased for powerful excavation on quarries and mines, using the BE or standard front.

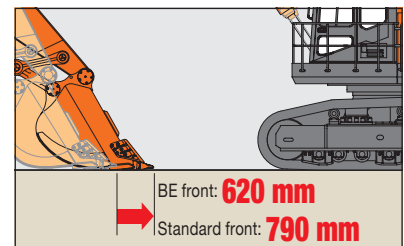
Improved Swing Performance

Swing performance, even on a gradient, is improved for efficient trenching for piping laying, and for wall excavation using the bucket side.

- **Swing torque:**
Approximately 8% increase
 (vs. conventional model)

Excavation Closer to Machine

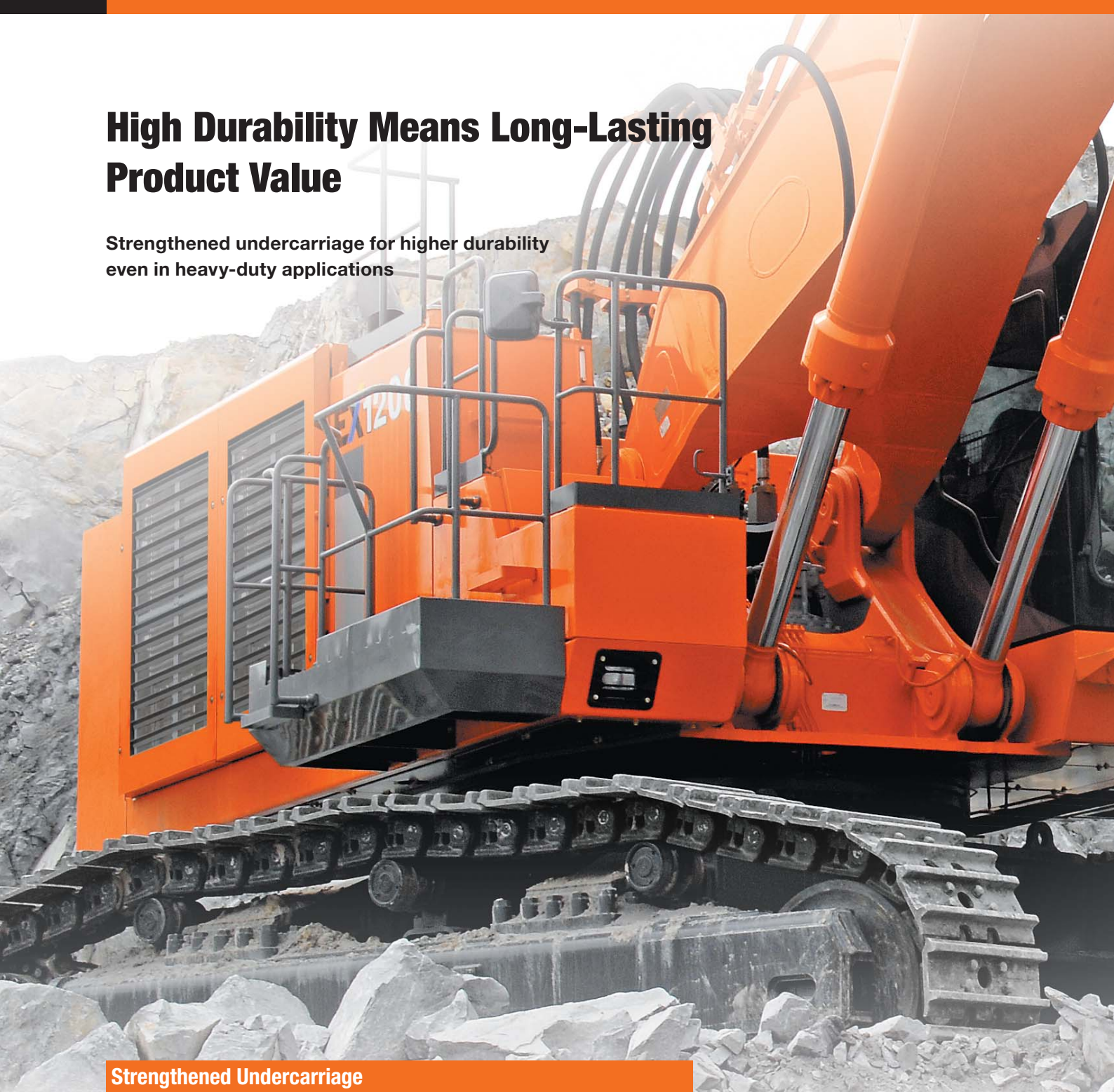
The front linkage is redesigned to allow the front to excavate closer to the machine for well combination with dump trucks.



(vs. conventional model)

High Durability Means Long-Lasting Product Value

Strengthened undercarriage for higher durability even in heavy-duty applications



Strengthened Undercarriage

Enlarged Track Links

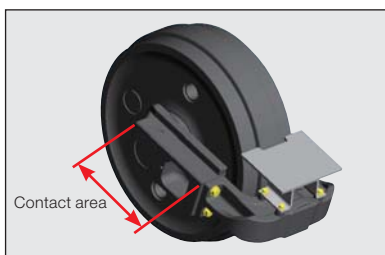
Track links are enlarged to increase strength for higher durability and reliability especially on rugged ground.

Strengthened Idler Pedestal

At the idler pedestal that sustains the front idler, its contact length is lengthened by approximately 90% to increase strength and service life.

Durable Idler Brackets

Thickened durable plates of idler brackets increase reliability of the idlers.



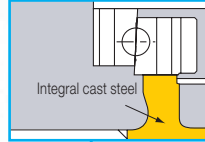
Enlarged Upper/Lower Rollers, Sprockets and Idlers

Tracks are strengthened for higher mobility by increasing roller width and diameter, sprocket tooth width, and idler width.

Sophisticated Designs

Center Track Frame

The center track frame of integral cast steel structure can avoid stress concentration, and increase reliability.



Durable Swing Bearing

The number of balls, in the swing bearing that sustain the upperstructure, is increased to boost the load-carrying capacity by approximately 6% (vs. conventional model). This improvement allows for smoother swing even in heavy-duty operation.

Separate Oil Cooler

The oil cooler is separated from the radiator to effectively cool down hydraulic oil. This helps extend the service life of hydraulics.



New Delivery Filters

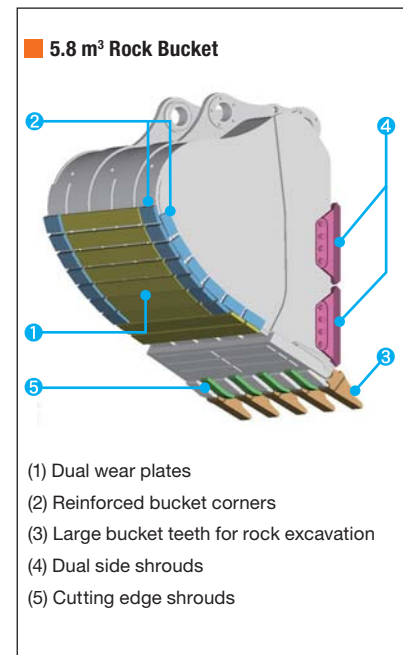
Delivery filters, newly added to the delivery side of hydraulic pumps, effectively protect hydraulic lines from accidents.



Rock Buckets

5.2 m³ / 5.8 m³

Rock buckets are specifically strengthened to resist wear and impact.



Reliable Grease-Filled Floating Pins

Two grease-filled floating pins, at the boom top and at A linkage, increase the sealing ability, extend pin life, and reduce repair costs. Wear plates are provided on both sides of a boss at the arm top.

Notes: This picture includes custom-designed components, including reinforcing plates for side track frame.

Rugged Travel Devices

The travel devices are compact-designed to reduce damage for higher mobility, reducing downtime.

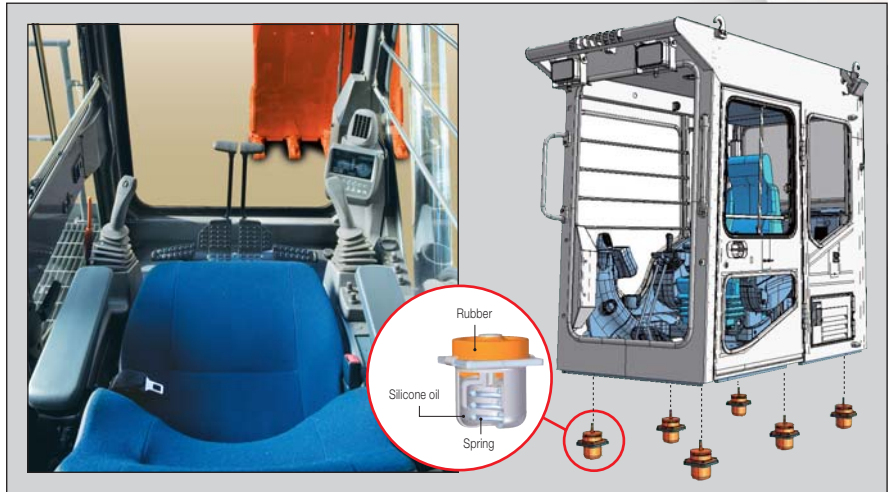


Enhanced Operator Comfort

The spacious cab is ergonomically designed with excellent visibility to enhance operator comfort with less operator fatigue

New Spacious, Operator-Oriented Cab

The new spacious cab, resting on elastic fluid-filled mounts, enhances operator comfort, and gives excellent visibility. Vibration and sound are insulated for comfort ride and pleasant operation with less fatigue.



Excellent Visibility

The glass windows are enlarged for excellent visibility, especially right-forward visibility during travel and excavation.



Ample Foot Space

Foot space is extended forward, and pedals are reshaped for pleasant foot control.



Short-Stroke Levers

Fingertip-control short-stroke levers allows for long, continuous operation, with the help of armrests.

- **Control lever effort:**
Approximately 30% decrease
(vs. conventional model)

Comfort-Designed Operator Seat

The operator seat is ergonomically designed for long-hour pleasant operation. The seatback is widened to hold the operator securely, and the headrest is reshaped for operator comfort.



Pressurized Cab

The cab is pressurized to keep out dust and debris.

Overhead LED Light

An overhead LED light, with longer service life than lightbulb, is newly utilized for lighting in the cab. This allows the operator to log on a night shift.





Notes: This picture includes optional air-suspension seat and switches.

Miscellaneous Accessories

Control Panel	Full-Auto Air Conditioner and FM/AM Radio	Drink Holder	Hot & Cool Box	Large Storage Space	Sun visor (Optional)

Multi-Function, Multi-Language Monitor

A large multi-function, multi-language LCD monitor is well positioned for easy reading.



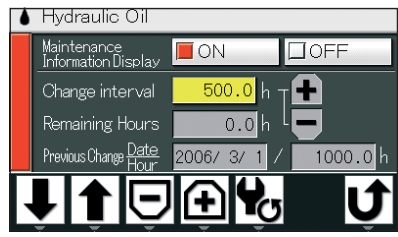
Rearview Camera

The large color LCD monitor, teamed up with a rearview camera atop the counterweight, gives unobstructed rearward view. This enhances safety when the machine swings and moves rearward.



Scheduled Maintenance

Replacement intervals of engine oil, hydraulic oil, filters can be preset on the monitor. The monitor alerts the operator of the scheduled replacement when necessary.



Environment-Friendly Design with Enhanced Safety

Safety-First Design, and Environmental Awareness with the Clean Engine

Safety-First Design

Rugged Cab with Integrated Headguard

The rugged cab is integrated with the OPG* Level II (ISO) guard to protect the operator from falling objects. The cab front guard is an option.

**Operator Protective Guard*



Pilot Control Shut-Off Lever

The shut-off lever for pilot control helps to prevent unintentional movements.



Angle-Adjustable Headlights

Headlights at the cab can be angle-adjusted for proper lighting at job site.



Step Light for Night Work

The step light turns On for one minute after key-off. This feature is convenient in night-shift work.



Wide Sidewalks and Large Handrails

Wide sidewalks and large handrails are provided at key locations for easy access to the cab, and for safe servicing and inspection. Handrails conform to EN*.

**European Norm*



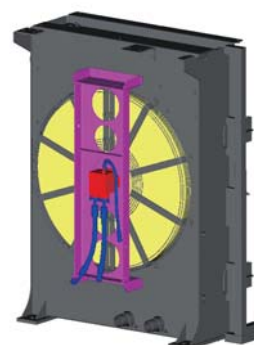
Environment Conscious Design

New Clean Engine

The clean engine, complying with the emission regulations EPA (U.S.) Tier 2, is mounted to reduce emissions containing NOx and PM (Particulate Matter).

Variable-Speed Fan

The large 1 120 mm-diameter variable-speed electro-hydraulic fan is provided for oil cooler cooling. Fan speed is optimally controlled according to job conditions, including atmospheric temperature, for effective cooling and noise suppression.





An Array of Safety Devices

Evacuation Hammer



Engine Stop Switch



Cab Right-Side Window Guard



Recoiled Seat Belt



Light on Counterweight



Aluminum Radiator, Oil Cooler and Air Conditioner Condenser

The aluminum radiator, oil cooler and air conditioner condenser are corrosion-resistant and recyclable.

Marking of Recyclables

All recyclable resin parts are marked for the convenience of recycling.

Reducing the Burden to the Environment

Lead-free components, including wire harness covering, oil cooler and control unit, are utilized. No asbestos is used.

Simplified Maintenance

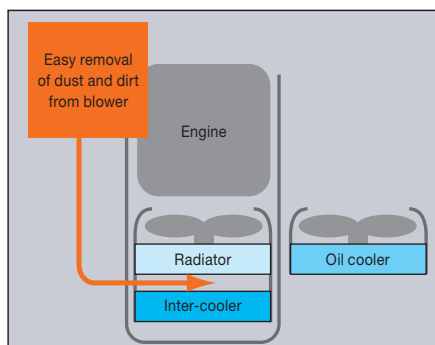
Focusing on simple servicing, inspection and cleaning



Simplified Cleaning Around Engine

Parallel Arrangement of Radiator and Oil Cooler

The radiator and oil cooler are arranged side by side to increase cooling efficiency. This also reduces cleaning time and effort remarkably.



Simplified Cleaning around Oil Cooler

The air conditioner condenser is openable for easy access and cleaning of the oil cooler located behind.



Simplified Maintenance

Auto Dust Ejector (Air Cleaner)

The auto dust ejector automatically ejects airborne dust and particles to keep filter elements clean and extend their replacement intervals.



Extended Filter Replacement Intervals

Replacement intervals of hydraulic oil filters are extended from 500 hours to 1000 hours, thus reducing running costs.

Auto Lubrication System

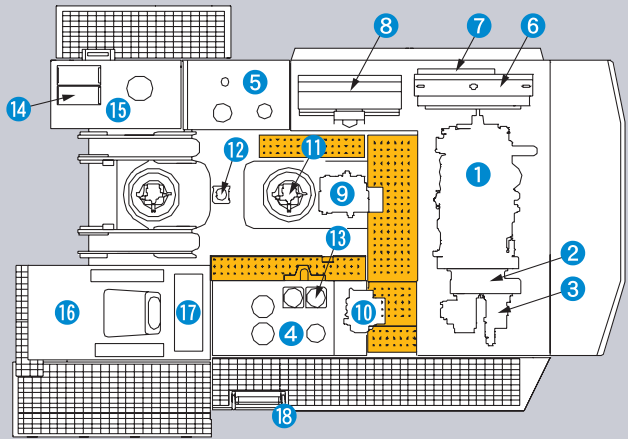
The auto lubrication system is provided standard at the front attachment to simplify daily maintenance, except for the bucket pin and swing circle.



Functionally Layout of Devices and Utility Space

Devices and walkways are functionally laid out for efficient servicing and inspection. The central walkway facilitates the servicing and maintenance of the engine.

- | | |
|----------------------|---------------------------------|
| 1 Engine | 10 Swing Control Valve |
| 2 Pump Drive Unit | 11 Swing Device x 2 |
| 3 Hydraulic Pump x 3 | 12 Center Joint |
| 4 Hydraulic Oil Tank | 13 Filters |
| 5 Fuel Tank | 14 Batteries |
| 6 Engine Radiator | 15 Batteries and Lubricator Box |
| 7 Engine Air Cooler | 16 Operator Cab |
| 8 Oil Cooler | 17 Air Conditioning Unit |
| 9 Main Control Valve | 18 Slide Ladder (Optional) |



Electric Grease Gun

An electric grease gun (pail can type) is provided standard with a hose reel for convenient lubrication of the swing circle and bucket pin.



Easily Replaceable Air Conditioner Filter

An air conditioner filter is located to the cab door side behind the operator seat for easy cleaning and replacing.



Conveniently Located Switchboard

The switchboard is located in the cab at its rear for the convenience of inspection.



With switchboard lid opened

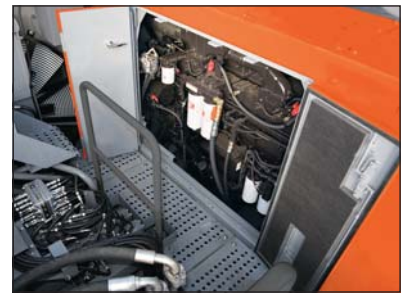
Optional Slide Ladder

The slide ladder is optionally available on the left side of the machine for easy access to the cab and working platform.



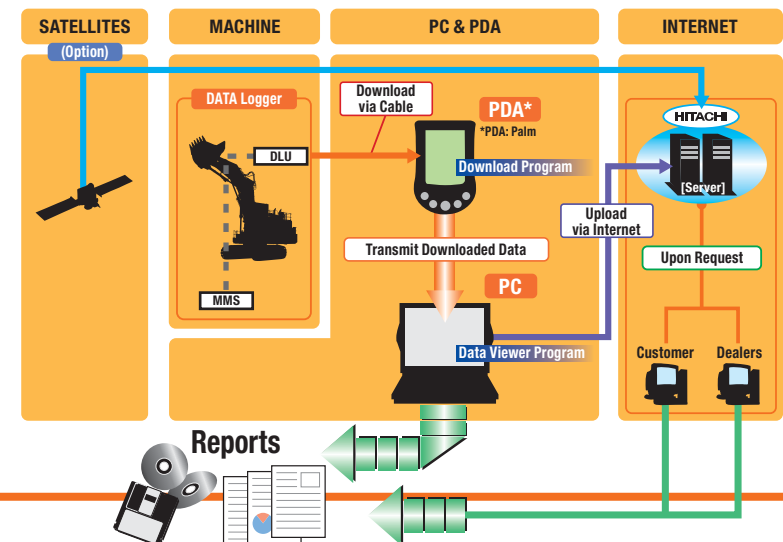
Wide-Open Inspection Doors

Inspection doors open wide for easy maintenance.



MIC Mining

The Hitachi MIC mining system comprises the DLU (Data Logging Unit) that logs daily operating conditions and warnings, including operating data on the engine and hydraulics. The log can be downloaded by PC or PDA.



SPECIFICATIONS

ENGINE

Model	Cummins QSK23-C
Type	Water-cooled, 4-cycle, 6-cylinder in line, turbo-charged direct injection chamber-type diesel engine.
Rated power	
SAE J1995, gross	567 kW (760 HP) at 1 800 min ⁻¹ (rpm)
Net	552 kW (740 HP) at 1 800 min ⁻¹ (rpm)
Piston displacement	23.15 L
Fuel tank capacity	1 470 L

HYDRAULIC SYSTEM

Main pumps	3 variable-displacement, swash plate type axial piston pumps
Maximum oil flow	3 x 520 L/min
Pressure setting	31.9 MPa (325 kgf/cm ²)

UPPERSTRUCTURE

Swing speed	5.2 min ⁻¹ (rpm)
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UNDERCARRIAGE

Travel speeds	High: 0 to 3.5 km/h Low: 0 to 2.4 km/h
Maximum traction force ...	707 kN (72 100 kgf)
Gradeability	70% (35 degree) max.

WEIGHTS AND GROUND PRESSURE

Backhoe

EX1200-6: Equipped with 9.0 m boom, 3.6 m arm, and 5.2 m³ (SAE, PCSA heaped) bucket

Shoe type	Shoe width	Operating weight	Ground pressure
Double grousers	700 mm	111 000 kg	142 kPa (1.45 kgf/cm ²)
	900 mm	113 000 kg	112 kPa (1.14 kgf/cm ²)

EX1200-6 BE-front: Equipped with 7.55 m BE-boom, 3.4 m BE-arm, and 6.7 m³ (SAE, PCSA heaped) bucket

Shoe type	Shoe width	Operating weight	Ground pressure
Double grousers	700 mm	112 000 kg	143 kPa (1.46 kgf/cm ²)
	900 mm	114 000 kg	113 kPa (1.15 kgf/cm ²)

Loading Shovel

Equipped with 6.5 m³ (heaped) bottom dump bucket

Shoe type	Shoe width	Operating weight	Ground pressure
Double grousers	700 mm	114 000 kg	146 kPa (1.49 kgf/cm ²)

BACKHOE ATTACHMENTS

Bucket

Capacity		Width		No. of teeth	Weight	Type	Materials density kg/m ³	
SAE, PCSA heaped	CECE heaped	Without shroud	With shroud				BE-front	9.0 m boom
							7.55 m BE-boom 3.4 m BE-arm	3.6 m arm
5.2 m ³	4.6 m ³	1 940 mm	2 120 mm	5	4 910 kg	☉	—	1 800
5.2 m ³	4.6 m ³	1 900 mm	2 000 mm	5	5 930 kg	●	—	1 800
5.8 m ³	5.1 m ³	2 120 mm	2 220 mm	5	6 930 kg	●	1 800	—
6.7 m ³	5.9 m ³	2 300 mm	2 400 mm	5	6 650 kg	☉	1 800	—

● Rock bucket ☉ General purpose bucket — Not applicable

LOADING SHOVEL ATTACHMENTS

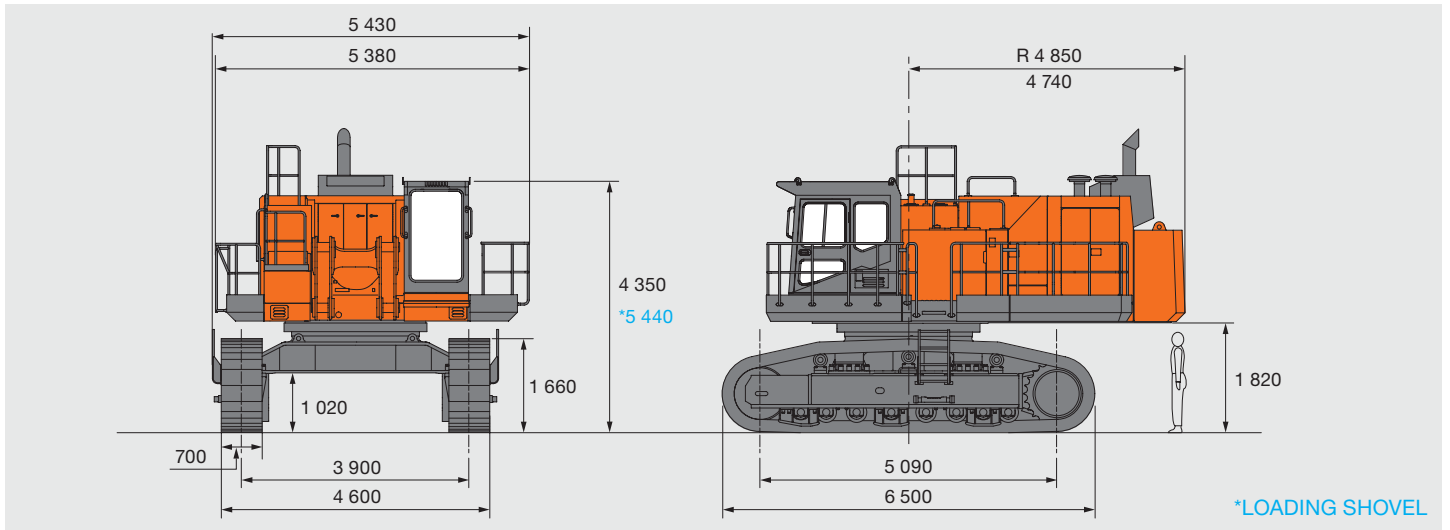
Bucket

Capacity (heaped)	Width	No. of teeth	Weight	Type	Materials density
5.9 m ³	2 510 mm	6	9 780 kg	●	1 800 kg/m ³
6.5 m ³	2 700 mm	6	9 200 kg	☉	1 800 kg/m ³

● Bottom dump type rock bucket
☉ Bottom dump type general purpose bucket

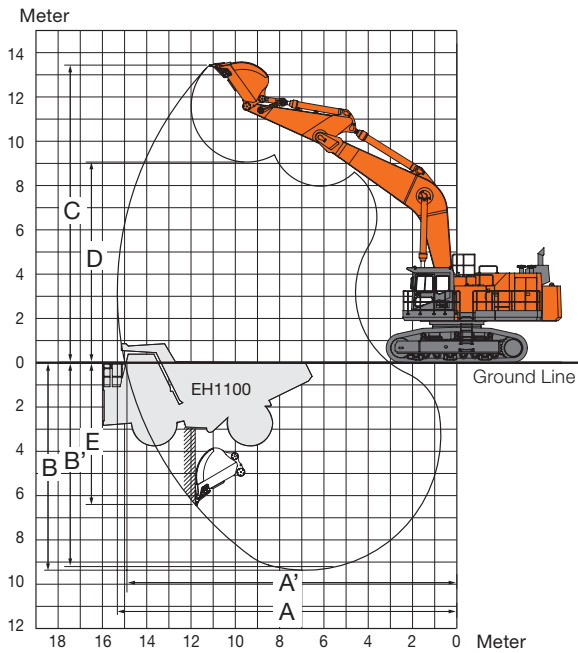
DIMENSIONS

Unit: mm



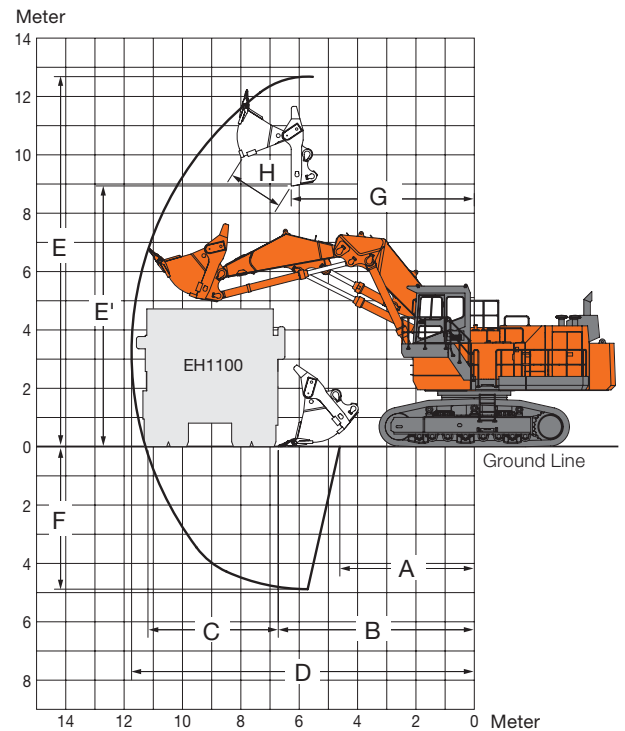
WORKING RANGES

Backhoe



Boom length		7.55 m BE-boom	9.0 m
Arm length		3.4 m BE-arm	3.6 m
A	Max. digging reach	13 750 mm	15 350 mm
A'	Max. digging reach (on ground)	13 360 mm	15 010 mm
B	Max. digging depth	8 050 mm	9 380 mm
B'	Max. digging depth (8' level)	7 920 mm	9 260 mm
C	Max. cutting height	12 410 mm	13 460 mm
D	Max. dumping height	8 050 mm	9 080 mm
E	Max. vertical wall	5 180 mm	6 450 mm
Bucket digging force	ISO	569 (58 000)	482 (49 200)
	SAE: PCSA	512 (52 200)	440 (44 900)
Arm crowd force	ISO	438 (44 700)	430 (43 900)
	SAE: PCSA	425 (43 400)	422 (43 000)

Loading Shovel



Bucket capacity (heaped)		6.5 m ³
A	Min. digging distance	4 510 mm
B	Min. level crowding distance	6 580 mm
C	Level crowding distance	4 370 mm
D	Max. digging reach	11 500 mm
E	Max. cutting height	12 410 mm
E'	Max. dumping height	8 750 mm
F	Max. digging depth	4 780 mm
G	Working radius at max. dumping height	6 140 mm
H	Max. bucket opening width	1 880 mm
Crowding force		577 kN (58 900 kgf)
Breakout force		594 kN (60 600 kgf)

STANDARD EQUIPMENT

Standard equipment may vary by country, so please consult your Hitachi dealer for details.

ENGINE

- H/P mode control
- P mode control
- E mode control
- 75 A alternator
- Dry-type air filter with clean dust cup
- Cartridge-type engine oil filter
- Cartridge-type fuel filter
- Water filter
- Radiator, air cooler and oil cooler with dust protective net
- Radiator reserve tank
- Fan guard
- Isolation-mounted engine
- Auto-idle system
- Overheat prevention device

HYDRAULIC SYSTEM

- Engine speed sensing system
- E-P control system
- OHS (Optimum Hydraulic System)
- FPS (Fuel-saving Pump System)
- Swing/boom priority mode system
- Heavy lifting system
- Boom mode selector system
- Forced-lubrication and forced cooling pump drive system
- Control valve with main relief valve
- Line filter (Delivery filter)
- Suction filter
- Full-flow filter
- Pilot filter
- Pump drain filter

CAB

- All-weather sound-suppressed steel integrated cab with headguard (OPG Level II (ISO conforming), laminated glass windshield, reinforced/tinted (green color) glass side and rear windows, intermittent wiper interlocked with front windshield washer, adjustable reclining seat with adjustable armrests, footrest, electrical horn, auto-tuning AM-FM radio with digital clock, seat belt, cigarette lighter, ashtray, parcel pocket, glove compartment, floor mat, auto-idle switch, evacuation hammer, auto air conditioner with defroster, hot and cool box, engine control dial, pilot control shut-off lever, LED room lamp.

MONITOR SYSTEM

- Meters: Hour meter, engine coolant temperature gauge and fuel gauge, auto-idle, indicator, lubrication mode indicator.
- Warning indicators: Radiator water level, engine oil level, hydraulic oil level, fuel level, auto lubrication, air-filter restriction, pump transmission oil pressure, alternator, over heat, engine oil pressure, engine stop, preheat and engine warning.

DATA LOGGING SYSTEM

- DLU (Data-logging unit) continuously records performance of the engine and the hydraulic system. The record can be downloaded by PDA (Palm).

LIGHTS

- 2 working lights
- 2 cab lights
- 1 step light
- 2 counterweight lights

UPPERSTRUCTURE

- Undercover
- 17 500 kg counterweight
- Electric grease gun with hose reel
- Centralized lubrication system for swing bearing
- Control valves with main relief valves and port relief valves
- Slow return orifices and make up valves for cylinder circuits

UNDERCARRIAGE

- Spring-set/hydraulic-released disc type parking brake
- Hydraulic (grease) track adjuster with shock absorbing recoils spring
- Travel motor cover
- Track and idler guards

MISCELLANEOUS

- Standard tool kit
- ISO conforming stairs and handrails
- Wide side walk
- Auto-lubrication system for front-attachment
- 12 V power terminal board
- Slip resistance tapes
- Elevated cab (for Loading Shovel)

OPTIONAL EQUIPMENT

Optional equipment may vary by country, so please consult your Hitachi dealer for details.

- Air-suspension seat
- Travel motion alarm device
- High cab kit (for Backhoe)
- Full track guard
- Slide ladder
- Sun visor

These specifications are subject to change without notice.

Illustrations and photos show the standard models, and may or may not include optional equipment, accessories, and all standard equipment with some differences in color and features. Before use, read and understand the Operator's Manual for proper operation.



KS-EN112EU