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
Relentless Improvements in Performance.
The Launch of the New Productive EX1200

From light to heavy excavation, engine output and hydraulic power are well matched to yield large-scale production using less fuel. The robust undercarriage and strengthened front offer impressive durability and reliability. Several safety measures and environmental factors have been taken into consideration for mining, quarry and civil-engineering applications.

Note: Photos shown in this brochure may include optional or custom-designed devices such as pre-cleaners and specialized front-end piping.
In combined operation of swing + boom lower + arm roll-out, or in leveling (boom lower + arm roll-out), arm roll-out speed can be significantly increased. A variable throttle, provided in the arm circuit, adjusts the oil flow in combined operation with arm roll-out. The new hydraulic system and enhanced fundamental performance boost productivity and fuel economy.

**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 significantly increased. A variable throttle, provided in the arm circuit, adjusts the oil flow in combined operation with arm roll-out.

**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.

**Boom- and Swing-Priority Modes**
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-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.

**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 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)

- **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.

**Fuel Consumption**

- **Improved Fuel Consumption**
  6% Down (at the Same Production)

**Production**

- **Improved Production**
  9% Up (in H/P Mode)

**Excavation Closer to Machine**
The front linkage is redesigned to allow the front to excavate closer to the machine for more efficient operation with dump trucks.

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**Increased Digging Force**
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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
The front-idler-supporting portion of the idler pedestal extends by about 1.9 times, as compared to the conventional model, to increase durability 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.

Rugged Travel Devices
Here are in-shoe motors. These compact motors are protected from damage with obstacles to increase durability and reduce downtime.

Strengthened Access Steps
Newly designed access steps increase strength, allowing easy improved accessibility to cab and reduced damage by rocks.

Sophisticated Designs

Rearranged Hydraulic Hoses to Enhance Durability
Hydraulic hoses, between the boom and base machine, are rearranged in the downward setup, instead of the conventional upward setup, to avoid their deflection and extend service life.

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.

Rock Buckets
5.2 m³ / 5.8 m³
Rock buckets are specifically strengthened to resist wear and impact.

(1) Dual wear plates
(2) Reinforced bucket corners
(3) Cutting edge shrouds
(4) Dual side shrouds
(5) Large bucket teeth for rock excavation

Reliable Grease-Filled Floating Pins
Two grease-filled floating pins, at the arm 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.
EX1200’s Cab to Reduce Operator Fatigue, Using Fluid-Filled Elastic Mounts

The new large-sized cab is exclusively developed for the EX1200 providing additional space, greater comfort and improved visibility. The new fluid-filled elastic mounts greatly reduce shocks and noise for better comfort reducing operator 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 improved foot control.

Short-Stroke Levers

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

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

Enhanced Operator Comfort

Alongside excellent visibility, the spacious cab is ergonomically designed to improve operator comfort and reduce fatigue.

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Comfort-Designed Operator Seat

The operator seat is ergonomically designed for long-hour operation. The seatback is widened to hold the operator securely, and the headrest is reshaped for 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 light bulb, lights up the cab and allows operators to log on a night shift.

Miscellaneous Accessories

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

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.

Rear View Camera

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

Notes: This photo includes optional air-suspension seat and switches.
Environmentally-conscious design with improved 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 top guard level II (ISO) guard to protect the operator from falling objects. The cab front guard is an option.*

Pilot Control Shut-Off Lever
The shut-off lever for pilot control helps to prevent unintentional movements.

Angle-Adjustable Headlights
Cab headlights can be angle-adjusted for maximised lighting of the jobsite.

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

Safer Access to the Cab with Wide Sidewalks and Large Handrails
Wide sidewalks with large handrails are provided at key locations for safer, easier servicing and inspection. The sidewalk next to the cab is widened for easy door opening and cab accessibility. Large handrails conform to European safety standards.

A Series of Safety Devices

Environmentally-Conscious Design

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

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.

Variable-Speed Fan
The large 1120 mm-diameter variable-speed electro-hydraulic fan is provided for cooling of the oil cooler. Fan speed is optimally controlled according to job conditions, including atmospheric temperature, for effective cooling and noise suppression.

Aluminum Radiator, Oil Cooler and Air Conditioner Condenser
The aluminum radiator, oil cooler and air conditioner condenser are corrosion-resistant and recyclable.
Simplified Maintenance
Focusing on simple servicing, inspection and cleaning

Functional Layout of Devices and Utility Space
Devices and walkways are laid out for efficient servicing and inspection. The central walkway facilitates the servicing and maintenance of the engine.

Simplified Cleaning around Oil Cooler
The radiator and oil cooler are arranged side by side to increase cooling efficiency. This drastically reduces cleaning time and effort.

Simplified Cleaning around Oil Cooler
The air conditioner condenser is openable and easily accessible with cleaning of the oil cooler positioned behind this access area.

Parallel Arrangement of Radiator and Oil Cooler
The radiator and oil cooler are arranged side by side to increase cooling efficiency. This drastically reduces cleaning time and effort.

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

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.

Simplified Maintenance

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.

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 in the side of the cab door 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.

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.

SC Painting
The machine cover is coated with SC paint that can wash dirt away with water. The SC paint has the hydrophilic property, and can keep the machine cover clean by self-cleaning.

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**.

Reports (Optional)
Customer Dealers
PC
Upon Request
MMS
Transmit Downloaded Data
Download via Cable
Download Program
[Server]
Data Viewer Program
Upload via Internet
MACHINESATELLITES PC & PDA INTERNET
* Personal Digital Assistant
**ENGINE**

Model: Cummins QSK23-C  
Type: Water-cooled, 4-cycle, 6-cylinder in line, turbo-charged direct injection chamber-type diesel engine.  
Emission Certification: U.S. EPA Tier 2

- Rated power: 567 kW (760 HP) at 1,800 min⁻¹ (rpm)  
- Net power: 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/cm²)

**UPPERSTRUCTURE**

- Swing speed: 5.2 min⁻¹ (rpm)

**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  
  - EX1200-6 BE-front: Equipped with 7.55 m BE-boom, 3.4 m BE-arm, and 6.7 m³ (SAE, PCSA heaped) bucket  
- Loading Shovel: Equipped with 6.5 m³ (heaped) bottom dump bucket

**WORKING RANGES**

- Bucket digging force:  
  - ISO: 599 kN (61,000 kg)  
  - SAE/PCSA: 512 kN (52,100 kg)  
- Arm crowd:  
  - ISO: 438 kN (44,700 kg)  
  - SAE/PCSA: 425 kN (43,400 kg)  
- Max. bucket opening width: 1,880 mm  
- Arm crowding force on ground: 585 kN (59,700 kg)  
- Bucket digging force: 709 kN (72,300 kg)
STANDARD EQUIPMENT

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

CAB
- Adjustable armrests
- Adjustable reclining seat
- All-weather sound-suppressed steel integrated cab
- Ashtray
- Auto-air conditioner with defroster
- Auto-idle switch
- Auto-tuning AM-FM radio
- Cigarette lighter
- Digital clock
- Electrical horn
- Engine control dial
- Evacuation hammer
- Floor mat
- Footrest
- Glove compartment
- Hot and cool box
- Intermittent wiper interlocked with front windshield washer
- Laminated glass windshield
- LED room lamp
- OPG top guard level ll (ISO)
- Parcel pocket
- Pilot control shut-off lever
- Reinforced/tinted (green color) glass side and rear windows
- Seat belt

MONITOR SYSTEMS
- Meters:
  - Auto-idle
  - Engine coolant temperature gauge
  - Fuel gauge
  - Hour meter
  - Indicator
  - Lubrication mode indicator
- Warning indicators:
  - Air-filter restriction
  - Alternator
  - Auto-lubrication
  - Engine oil level
  - Engine oil pressure
  - Engine stop
  - Engine warming
  - Fuel level
  - Hydraulic oil level
  - Over heat
  - Preheat
  - Pump transmission oil pressure
  - Radiator water level

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

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

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

DATA LOGGING SYSTEM
- DLU (Data-logging unit) continuously records performance of the engine and the hydraulic system. The record can be down-loaded by PC.

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

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- Footrest
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- Hot and cool box
- Intermittent wiper interlocked with front windshield washer
- Laminated glass windshield
- LED room lamp
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- Pilot control shut-off lever
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- 700 mm shoe

MISCELLANEOUS
- Auto-lubrication system for front-attachment (except bucket arm joint part)
- Elevated cab (for Loading Shovel)
- ISO conforming stairs and handrails
- Slip resistance tapes
- Wide side walk
- 12 V power terminal board

OPTIONAL EQUIPMENT
- Air-suspension seat
- Cold weather package*
- Communication system**
- GPRS communication system
- Satellite data transmitting system
- Electric fuel refilling pump device
- Fuel refilling piping
- Front window scatter-preventing film
- Full track guard
- Heater seat
- High cab kit (for Backhoe)
- Highland application*
- Large sized air cleaner
- Pre-cleaner
- Standard tool kit
- Slide ladder
- Sun visor
- Theft deterrent system
- Travel motion alarm device
- 2 high brightness working lights
- 900 mm shoe

*: Engineered on request
**: The availability of the system depends on licensing regulations in each country. Please contact Hitachi dealer for more information.

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.