PC1250/1250SP-8 BACKHOE
PC1250-8 LOADING SHOVEL

HORSEPOWER
Gross: 514 kW 688 HP @ 1800 rpm
Net: 502 kW 672 HP @ 1800 rpm

OPERATING WEIGHT
Backhoe: 106500–110700 kg 234,790–244,050 lb
Loading shovel: 110900 kg 244,490 lb

HYDRAULIC CONTROLS:
- Fully hydraulic, with Electronic Open-Center Load-Sensing (EOLSS) and engine speed sensing (pump and engine mutual control system)
- One gear pump for control circuit
- Two axial piston motors for swing with single-stage relief valve
- One axial piston motor per track for travel with counter balance valve
- Three variable capacity piston pumps (2 Main, 1 Swing)
- Three control valves, 5+4+4 spools (boom, arm, bucket, swing, and travel)
- Control levers, wrist control levers for arm, boom, bucket, and swing with PPC system
- Control levers and pedals for steering and travel with PPC system
- Oil cooler
- In-line high pressure filters
- Shockless boom control
- Two-mode setting for boom

DRIVE AND BRAKE SYSTEM:
- Brakes, hydraulic lock travel brakes, oil disc parking
- Hydrostatic two travel speed system with planetary double reduction final drive

OTHER STANDARD EQUIPMENT:
- Automatic swing holding brake
- Corrosion resister
- Counterweight, 1800 kg 39,680 lb
- Horn, air
- Marks and plates, English
- Paint, Komatsu standard
- Vandalism protection locks
- Wide catwalk
- Large handrails
- One-touch engine oil drainage
- FM tune-up service connector
- Travel alarm
- Rear reflector
- Anti-slip plates

FACE PLATE
- Alternator, 90 Amp, 24 V
- Arms (Backhoe):
  - 3400mm 11'2'' arm assembly
  - 3400mm 11'2'' HD arm assembly
  - 4500mm 14'9'' arm assembly
  - 4500mm 14'9'' HD arm assembly
  - 5700mm 18'6'' arm assembly
- Arms (Loading shovel):
  - 3800mm 12'6'' arm assembly
- Automatic grease system, Lincoln 18 hr
- Booms (Backhoe):
  - 7800mm 25'7'' SP boom assembly
  - 9100mm 29'10'' boom assembly
- Booms (Loading shovel):
  - 5300mm 17'5'' boom assembly
- Cab with pull-up type front window
- Communication system for VHMS (Orbcomm)
- General tool kit
- Grease gun, air pump
- Heater
- Interconnected horn and flashing light
- Radio AM/FM
- Seat belt 78 mm 3"
- Shoes:
  - 1000 mm 39.4'' double grouser
- Spare parts for first service
- Track roller guard (full length)
- Track frame undercover (center)
- Vehicle Health Monitoring System (VHMS)

OPTIONAL EQUIPMENT
- Alternator, 60 amp, 24 V
- Batteries, 220 Ah, 2 x 12 V
- Starting motors, 11kw x 2
- Working lights-2 boom, 2 cab top front, 1 cab bottom, 1 cab RH(Step light with timer)
- Auto decelerator
- Dust-proof net for radiator and oil cooler
- Pump/engine room partition wall
- Travel motor guards
- Revolving frame under cover (Heavy-duty)
- Damper mount, all-weather, sound-suppressed cab with tinted safety glass windows, lockable door, intermittent window wiper and washer, foosmal, cigarette lighter and ashtray
- Instrument panel with electronic display/monitor system, electronically-controlled throttle dial, electric service meter, gauges (coolant temperature, hydraulic temperature and fuel level), caution lights (electric charge, engine oil pressure, and air cleaner clogging), indicator lights (engine preheating and swing lock light) level check lights (coolant, engine oil, and hydraulic oil level), self-diagnostic system with trouble data memory
- Rearview mirrors, left and right
- Seat, fully adjustable with suspension
- Cab with fixed front window

STANDARD EQUIPMENT
- Air cleaner, double element, dry
- Variable speed cooling fan, with fan guard
- Engine, Komatsu 6A6D170E-5

ELECTRICAL SYSTEM:
- Alternator, 60 amp, 24 V
- Batteries, 220 Ah, 2 x 12 V
- Starting motors, 11kw x 2
- Working lights-2 boom, 2 cab top front, 1 cab bottom, 1 cab RH(Step light with timer)
- Auto decelerator

UNDERCARRIAGE:
- 700 mm 28'' double grouser
- 8 track/3 carrier rollers (each side)
- Hydraulic track adjusters (each side)
- Track guiding guard (each side)

GUARDS AND COVERS:
- Dust-proof net for radiator and oil cooler
- Pump/engine room partition wall
- Travel motor guards
- Revolving frame under cover (Heavy-duty)

OPERATOR ENVIRONMENT:
- Damper mount, all-weather, sound-suppressed cab with tinted safety glass windows, lockable door, intermittent window wiper and washer, foosmal, cigarette lighter and ashtray
- Instrument panel with electronic display/monitor system, electronically-controlled throttle dial, electric service meter, gauges (coolant temperature, hydraulic temperature and fuel level), caution lights (electric charge, engine oil pressure, and air cleaner clogging), indicator lights (engine preheating and swing lock light) level check lights (coolant, engine oil, and hydraulic oil level), self-diagnostic system with trouble data memory
- Rearview mirrors, left and right
- Seat, fully adjustable with suspension
- Cab with fixed front window

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WALK-AROUND

PC1250-8 HYDRAULIC EXCAVATOR

Economy and Economy Features

- Komatsu SAA6D170E-5 Engine Meets Tier 3 Emissions Certified.
  - World’s first cooled EGR system with bypass-assist type electronically controlled venturi
  - Offers high power and low fuel consumption, while conforming to Tier 3 emission certified.
  - Reduces NOx emission approximately 40%.
  - Equipped with an electronically controlled variable speed fan.

- Economy Mode Four-level Setting
  Enables operator to select the appropriate Economy mode level to match production requirement with lowest fuel consumption.

- Reduction of Ambient Noise
  - Electronically controlled variable speed fan drive
  - Large hybrid fan
  - Glasswool-furnished low-noise muffler and noise reducing cover around the muffler

See page 4.

Productivity Features

- Heavy Lift Mode
  The heavy lift mode increases lifting force by 10%.

- Large Digging Force
  High operation efficiency with large digging force for severe applications.

- Two-mode Setting for Boom
  Switch selection allows either powerful digging or smooth boom operation.

- Twin Swing Motor System
  provides excellent swing performance, even on slopes.

- Large Drawbar Pull and Steering Force
  provide excellent mobility.

- Swing Priority Mode
  The swing priority mode improves efficiency for loading dump trucks at 90° or 180°.

- Shockless Boom
  Switch selection reduces chassis vibration after sudden stops.

See page 5.

Easy Maintenance

- Easy Cleaning of Cooling Unit
  Fan reverse-rotation function facilitates clogged radiator cleaning.

- Centralized Arrangement of Engine Checkpoints

- Anti-slip Plates
  for improved foot traction

- Large Handrail, Step and Catwalk
  provide easy access to the engine and hydraulic equipment.

See page 10.

Excellent Reliability and Durability

- Strengthened Quarry Bucket Provided Outstanding Wear-resistance (optional)

- KMAX Bucket Teeth
  offer superior penetration and long-term sharpness.

- Fuel Pre-filter
  with water separator equipped as standard.

- O-ring Face Seals,
  which have excellent sealing performance, are used for the hydraulic hoses.

- High-pressure In-line Filtration
  The cool-running hydraulic system is protected with the most extensive filtration system available, including a high pressure in-line filter for each main pump.

- Highly Reliable Electronic Devices
  Exclusively designed electronic devices have passed severe testing.
  - Controllers
  - Sensors
  - Connectors
  - Heat resistant wiring
  - Circuit breaker

- Boom Foot Hoses
  are arranged under the boom foot, improving hose life and safety.

See page 6.

Working Environment

- Large Comfortable Cab
  - Low noise and vibration with cab damper mounting
  - Large-capacity air conditioner (optional)
  - Pressurized cab prevents external dust from entering
  - OPS top guard level 2 (by ISO 10682 standard) capable with optional bolt-on top guard.

See pages 8, 9.

Advanced Monitor Features

- Machine condition can be checked with Equipment Management Monitoring System (EMMS).

- Two working modes combine with heavy lift mode for maximum productivity.

See page 5.

See page 11.

Horsepower

Gross: 514 kW 688 HP @ 1800 rpm
Net: 502 kW 672 HP @ 1800 rpm

Operating Weight

Backhoe
106500 – 110700 kg
234,790 – 240,050 lb

Loading shovel
110900 kg
244,490 lb

See page 3.
PRODUCTIVITY & ECOLOGY FEATURES

**Komatsu Technology**

Komatsu develops and produces all major components, such as engines, electronics and hydraulic components, in house. With this “Komatsu Technology,” and adding customer feedback, Komatsu is achieving great advancements in technology. To achieve both high levels of productivity and economical performance, Komatsu has developed the main components with a total control system. The result is a new generation of high performance and environment friendly excavators.

**Environment-friendly Clean Engine Mounted**
The PC1250-8, which is equipped with the Komatsu SAA6D170E-5 engine, meets the Tier 3 emission certified in North America (EPA) and EU stage 3A. The SAA6D170E-5 engine adopts the world’s first cooled EGR system with electronically controlled bypass-assist type venturi. NOx emission is reduced 40%, while maintaining high power and low fuel consumption.

**Electronically Controlled Variable Speed Fan**

Contributes to Low Fuel Consumption and Low Noise

The electronic control system sets the rotational speed of the cooling fan according to the coolant, hydraulic oil, and ambient temperature; effectively uses the engine output to prevent wasteful fuel consumption; and reduces noise during low-speed fan rotation.

**Lower and Economical Fuel Consumption Using Economy Mode**

Enables operator to set the Eco mode to up to four levels according to working conditions so that production requirement is achieved at lowest possible fuel consumption.

**Reduction of Ambient Noise**

Reduced noise by adoption of an electronically controlled variable speed fan drive, large hybrid fan, low-noise muffler and cover with glasswool. Komatsu will launch PC1250 with lower-noise specifications to the EU market.

**Power Mode**

- Maximum production/power
- Fast cycle time

**Economy Mode**

- Good cycle time
- Good fuel economy

**Working Mode Selection**

**Power and Economy Mode**

The PC1250-8 excavator is equipped with two working modes. Each mode is designed to match engine speed, pump flow, and system pressure to the current application, giving the operator flexibility to match equipment performance to the job at hand.

<table>
<thead>
<tr>
<th>Working Mode</th>
<th>Application</th>
<th>Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Power Mode</td>
<td>Maximum production/power</td>
</tr>
<tr>
<td>E (E0,E1,E2,E3)</td>
<td>Economy Mode</td>
<td>Good cycle time, Good fuel economy</td>
</tr>
</tbody>
</table>

**Heavy Lift Mode**

Gives the operator 10% more lifting force on the boom when needed for handling rock or heavy lifting applications.

**Swing Priority Setting**

The swing priority setting allows the operator to use the same easy motion for 180˚ loading as 90˚ loading operations. By altering the oil flow, this setting allows you to select either boom or swing as the priority for increased production.

**Large Digging Force**

Thanks to the high engine output and an excellent hydraulic system, this machine demonstrates powerful digging force.

- Maximum arm crowd force (ISO): 412 kN 42.0 ton
- Maximum bucket digging force (ISO): 479 kN 48.8 ton

**Large Drawbar Pull and Steering Force**

Since the machine has a large drawbar pull and a high steering force, it demonstrates excellent mobility even when it is being used on inclined sites.

**Two-mode Setting for Boom**

Smooth mode provides easy operation for gathering blasted rock and scraping operations. When maximum digging force is needed, switch to power mode for more effective excavating.

**Shockless Boom Control**

The PC1250-8 boom circuit features a shockless valve (double-check slow return valve) to automatically reduces the amount of vibration present when operating the boom. Operator fatigue is reduced (which can improve safety and productivity), and spillage caused by vibration is minimized.

This is an image photo: may differ from the actual engine.
**RELIABILITY FEATURES**

**Excellent Reliability and Durability**

**Boom Foot Hoses**
The boom foot hoses are arranged under the boom foot to reduce hose bend during operation, extending hose life and improving operator safety.

**Strengthened Quarry Bucket Provided Outstanding Wear-resistance (optional)**
The bucket for specific use in quarry is impact and wear resistant, providing high performance and long life. Koma-hard materials* provide excellent wear resistance. Combined with adoption of long-life XS teeth, durability of bucket is drastically enhanced.

* Koma-hard materials (KVX materials):
  Komatsu developed, wear resistant, reinforced materials. Brinell hardness: 500 or more (180kgf/mm² class). Features high wear resistance and little quality change from the heat generated during rock loading, maintaining long-term hardness.

**XS Tooth**
- Unique bucket tooth shape, superior digging performance
- Long-term high sharpness
- Great penetration performance
- Hammerless, safe, and easy tooth replacement
  (Tooth replacement time: Halves the conventional machine.)

**High-pressure In-line Filtration**
The PC1250-8 has the most extensive filtration system available, providing in-line filters as standard equipment. An in-line filter in the outlet port of each main hydraulic pump reduces failures caused by contamination.

**Sturdy Undercarriage**
The undercarriage is strengthened to provide excellent reliability and durability when working on rocky ground or blasted rock.

**Sturdy guards** shield the travel motors and piping against damage from rocks.

**Metal Guard Rings**
Metal guard rings protect all the hydraulic cylinders and improve reliability.

**Heat-resistant Wiring**
Heat-resistant wiring is utilized for the engine electric circuit and other major component circuit.

**Fuel Pre-filter (with Water Separator)**
Removes water and contaminants from fuel to enhance the fuel system reliability.

**Track roller guard (full length) (optional)**

**O-ring Face Seal**
The hydraulic hose seal method has been changed from a conventional taper seal to an O-ring seal. This provides improved sealing performance during operation.

**Circuit Breaker**
With circuit breaker, the machine can be easily restarted after repair.

**Sturdy Undercarriage**

**Heat-resistant Wiring**

**Circuit Breaker**

**DT-Type Connectors**
DT-type connectors seal tight and have higher reliability.

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Photo may include optional equipment.
WORKING ENVIRONMENT

The cab interior is spacious and provides a comfortable working environment...

Large Comfortable Cab

Comfortable Cab
New PC1250-8’s cab offers an exceptionally comfortable operating environment. The large cab enables full flat reclining of the seat back with headrest.

Pressurized Cab
The optional air conditioner, air filter and a higher internal air pressure (6.0 mm Aq 0.2” in Aq) prevent external dust from entering the cab.

Low Noise Design
Noise level is remarkably reduced, not only engine noise but also swing and hydraulic relief noise.

Low Vibration with Cab Damper Mounting
PC1250-8 uses a new, improved cab damper mount system that incorporates longer stroke and the addition of a spring. The new cab damper mounting combined with a strengthened left and right side deck, aids vibration reduction at the operator’s seat.

Vibration at floor is reduced from 120 dB (VL) to 115 dB (VL). dB (VL) is index for expressing size of vibration.

Comparison of Riding Comfort

Automatic Air Conditioner (optional)
A 6,900 kcal air conditioner is utilized. The bi-level control function keeps the operator’s head and feet cool and warm respectively. This improved air flow function keeps the inside of the cab comfortable throughout the year.

Multi-position Controls
The multi-position, PPC (proportional pressure control) levers allow the operator to work in comfort while maintaining precise control. A double-slide mechanism allows the seat and control levers to move together or independently, allowing the operator to position the controls for maximum productivity and comfort.

Washable Cab Floormat
The PC1250-8’s cab floormat is easy to keep clean. The gently inclined surface has a flanged floormat and drainage holes to facilitate runoff.

Seat Sliding Amount: 340 mm 13.4”, increased 120 mm 4.7”

Defroster (optional)

Anti-Slip Plates
Spiked plates on working surfaces provide anti-slip performance.

Safety Features

Step light with timer provides light for about one minute to allow the operator to get off the machine safely.

Pump/engine room partition prevents oil from spraying on the engine if a hydraulic hose should burst.

Thermal and fan guards are placed around high-temperature parts of the engine and fan drive.

Anti-Slip Plates
Horn interconnected with warning light (optional) give visual and audible notice of the excavator’s operation when activated.

Photo may include optional equipment.
**EASY MAINTENANCE FEATURES**

**Komatsu Designed the PC1250-8 for Easy Service Access.**

**Easy Checking and Maintenance**
Wide center walkway provides easy access to many inspection and maintenance points. In addition, inspection and maintenance points are grouped to facilitate easy engine and hydraulic component checks.

**Wide Catwalk, Large Step and Handrails**
Easier, safer operator cab access and maintenance checks.

**Easy Cleaning of Radiator**
The hydraulically driven fan can reversed to facilitate cleaning of the cooling unit. In addition, this feature contributes to reducing warm-up time in low temperatures.

**Reduced Maintenance Costs**
Hydraulic oil filter replacement is extended from 500 to 1000 hours.

**Dust Indicator with 5-step Indication**
Informs of air cleaner clogging in 5 steps to warn of filter condition.

**Convenient Utility Space**
Utility space provides great convenience to store tools, spare parts, etc.

**Electric priming pump**
Bleeding air from fuel system is easily accomplished with the electric priming pump.

**High-Quality EMMS Self-diagnostic System**
- Abnormality Checking Function
  If any abnormality should occur, the monitoring system checks whether hydraulic pressures, solenoid ON/OFF status, engine speed, electrical connections, etc. are within normal condition to keep machine downtime to a minimum.
- Maintenance History Memory Function
  Maintenance records such as replacement of engine oil, hydraulic oil, filters, etc. can be stored. Operator is warned when service is due.
- Trouble Data Memory Function
  Trouble data is stored to serve as references for future trouble-shooting. Error codes are displayed to aid in service diagnosis.

**VHMS (Vehicle Health Monitoring System) (optional)**
VHMS controller monitors the health conditions of major components and enables remote analysis of the machine and its operation. This process is supported by the Komatsu distributors, factory and design team. This contributes to reduced repair costs and to maintaining maximum availability.
**SPECIFICATIONS**

**ENGINE**
- Model: Komatsu SAA6D170E-5
- Type: 4-cylinder, water-cooled, direct injection
- Number of cylinders: 6
- Bore: 170 mm
- Stroke: 170 mm
- Piston displacement: 23.5 l
- Governor: All-speed electronic
- Horsepower: SAE J1995
- Gross: 514 kW
- EDD: 529 kW
- Net: 520 kW
- Rated rpm: 1800

**DRIVES AND BRAKES**
- Steering control: Two lovers with pedals
- Drive method: Fully hydraulic
- Travel motor: Travelcharged, aftercooled, cooled ECR
- Reduction system: Planetary double reduction
- Maximum drawbar pull: 686 kN
- Gradability: 70%
- Maximum travel speed: 2.1 km/h
- Low.: 3.2 km/h
- Service brake: Hydraulic

**HYDRAULIC SYSTEM**
- Type: Open-center load-sensing system
- Number of selectable working modes: 2
- Main pump: Variable capacity piston pumps
- Pumps: For boom, arm, bucket, swing, and travel circuits
- Maximum flow: For implement and travel...2 x 494 l/min
- For swing...1 x 600 l/min
- Sub-pump for control circuit: Gear pump
- Hydraulic motors:
  - Travel: 2 x axial piston motors with parking brake
  - Swing: 2 x axial piston motors with swing holding brake
- Relief valve setting: Implement circuits
- Bucket: 31.4 MPa
- Loading shovel: 31.4 MPa
- Travel: 34.3 MPa
- Swing: 27.5 MPa
- Pilot: 2.9 MPa
- Hydraulic cylinders: Number of cylinders-bore x stroke
- Backhoe:
  - Boom: 2 - 225 mm x 2390 mm
  - Arm: 1 - 250 mm x 2435 mm
  - Bucket: 2 - 160 mm x 1285 mm
- Shovel:
  - Boom: 2 - 225 mm x 1960 mm
  - Arm: 1 - 218 mm x 1765 mm
  - Bucket: 2 - 200 mm x 1700 mm
- Bottom dump: 1 - 260 mm x 435 mm

**COOLANT AND LUBRICANT CAPACITY (REFILLING)**
- Fuel tank: 1360 l
- Radiator: 142 l
- Engine: 86 l
- Final drive, each side: 21 l
- Swing drive: 20 l x 2
- Hydraulic tank: 670 l
- PTO: 13.5 l

**UNDERCARRIAGE**
- Center frame: H-leg frame
- Seal of track: Sealed
- Track adjuster: Hydraulic
- No. of shoes: 48 each side
- No. of carrier rollers: 3 each side
- No. of track rollers: 8 each side

**OPERATING WEIGHT (APPROXIMATE)**
- A: Max. digging height
- B: Max. dumping height
- C: Max. digging depth
- D: Max. dumping height
- E: Max. digging reach
- F: Max. dumping height
- G: Max. dumping height
- H: Max. vertical wall
- I: Max. wall height
d

**WORKING RANGE**
- Unit: mm, lb

**HYDRAULIC EXCAVATOR**

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**SWING SYSTEM**
- Driven by: Hydraulic motors
- Swing reduction: Planetary gear
- Swing circle lubrication: Grease-bathed
- Swing lock: Oil disc brake
- Swing speed: 5.8 rpm

**LOADING SHOVEL**
- Operating weight, including 5300 mm 175° boom, 3800 mm 126° arm, 6.5 m³ 8.5 yd³ heaped bucket, operator, lubricants, coolant, full fuel tank, and standard equipment.

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**BUCKET CAPACITY (HEAPED)**
- SAE, PCSA
- CECE
- Weight (with side cutters) kg
- Weight (without side cutters) kg
- Length arm mm

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**BUCKET, ARM, AND BOOM COMBINATION**
- These charts are based on over-side stability with fully loaded bucket at maximum reach.
- General purpose use, density up to 2.1 t/m³: 2,500 kN
- General purpose use, density up to 1.8 t/m³: 3,000 kN
- Not usable

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**PC1250-8 HYDRAULIC EXCAVATOR**