PC1250-7 BACKHOE
PC1250-7 LOADING SHOVEL

FLYWHEEL HORSEPOWER
485 kW 651 HP @ 1800 rpm

OPERATING WEIGHT
106700–109500 kg
235,270–241,410 lb

Photo may include optional equipment.

Hydraulic Excavator
PC1250-7 Series Hydraulic Excavator

Walk-Around

Productivity Features
- Largest digging force
  Bucket digging force and arm crowd force are largest in its class.
- Largest bucket capacity
  The wide opening shape and shallow bottom facilitates loading.
- Faster hydraulics
  The high-output engine on the PC1250-7 provides plenty of hydraulic horsepower for faster cycle times and increased productivity.
- Fuel consumption
  is reduced 13% with Economy Mode.
  See page 4.

Excellent Reliability and Durability
- Strengthened boom
  and arm have larger cross-sections and improved welding for maximum strength and reliability.
- Two-mode setting for boom
  Switch selection allows either powerful digging or smooth boom operation.
- Shockless boom
  Switch selection reduces chassis vibration after sudden stops.  See page 5.
- Boom foot hoses
  are arranged on the inside, improving hose life and safety.  See page 6.

Harmony with Environment
- Low emission engine
  Powerful turbocharged and air-to-air aftercooled Komatsu SAA6D170E-3 engine provides 485 kW 651 flywheel HP.
  See page 4.

Large Comfortable Cab
- Low noise and vibration with cab damper mounting
- Large-capacity cab with narrow corner posts provides improved visibility
- Large-capacity air conditioner (option)
  Pressurized cab prevents external dust from entering
  See page 8.

Easy maintenance
- Replacement intervals are extended for engine oil, engine oil filter, and hydraulic filter

Genuine Answers for Land and Environment Optimization

Building on the technology and expertise Komatsu has accumulated since its establishment in 1921, GALEO presents customers worldwide with a strong, distinctive image of technological innovation and exceptional value. The GALEO brand will be employed for Komatsu’s full lineup of advanced construction and mining equipment. Designed with high productivity, safety and environmental considerations in mind, the machines in this line reflect Komatsu’s commitment to contributing to the creation of a better world.

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Protected hydraulic circuit
  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.

Sturdy guards
  shield the travel motors against damage from rocks.

Highly Reliable Electronic Devices
  Exclusively designed electronic devices have passed severe testing.
  - Controller
  - Sensors
  - Connectors
  - Heat resistant wiring
  See page 7.

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**Productivity Features**

High Production and Low Fuel Consumption

**Engine**

The PC1250-7 gets its exceptional power and work capacity from its Komatsu SAA6D170E-3 engine. Output is 485 kW (651 flywheel HP) providing more hydraulic power.

In addition, the fuel consumption is reduced by 13% when using Economy Mode.

Noise levels are reduced for greater operator comfort.

**Largest Bucket Capacity**

Bucket capacity is the largest in its class and its large opening and shallow bottom offers easy loading.

**Improved Machine Stability**

The center of gravity is moved rearward and the 18.0 tonne (19.8 U.S. ton) counterweight provides the stability and lifting capacity needed for maximum productivity.

**Additional Features**

- Large digging force
- Large drawbar pull
- Fast cycle times

**Working Mode Selection**

**Hydraulics**

Unique three-pump system assures smooth compound movement of the work equipment. OLSS (Open Center Load Sensing System) controls all three pumps for efficient engine power use. This system also reduces hydraulic loss during operation.

**Active and Economy mode**

The PC1250-7 excavator is equipped with two working modes. Each mode is designed to match engine speed, pump speed, and system pressure with 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>A</td>
<td>Active Mode</td>
<td>Maximum production/power</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fast cycle times</td>
</tr>
<tr>
<td>E</td>
<td>Economy Mode</td>
<td>Good cycle times</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Good fuel economy</td>
</tr>
</tbody>
</table>

**Heavy Lift Mode**

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

**Two Settings for the 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.

**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.

**Shockless Boom Control**

The PC1250-7 features a shockless valve (double-check slow return valve) that 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 prevented.

**EMMS (Equipment Management Monitoring System)**

1. **Monitor Function**
   Controller monitors engine oil level, coolant temperature, battery charge and air clogging, etc. The controller finds any abnormality, and displays it on the LCD.

2. **Maintenance Monitor Function**
   informs replacement time of oil and filters on LCD when the replacement interval is reached.

3. **Trouble Data Memory Function**
   stores machine abnormalities (error codes) in the monitor for effective trouble shooting.
Increased Reliability

The PC1250-7 incorporates many improvements in strength and reliability.

Frame structure. Plate thickness of the revolving frame and center frame is increased and stiffener plates are added to improve durability.

The boom and arm have increased cross section and plate thickness, as well as continuous both-side groove welding, improving digging and side contact strength.

All of the major machine components such as engine, hydraulic pumps, hydraulic motors, control valves, etc., are exclusively designed and manufactured by Komatsu.

Machine Availability Is Increased by Vehicle Health Monitoring System (VHMS) (Optional)

Vehicle Health Monitoring System (VHMS) collects and stores operation data of machine and major components in real time. Collected data are not only various kinds of machine data such as engine oil temperature, engine exhaust temperature etc., but also includes operating condition data such as fuel consumption, engine load factor etc. These data can be utilized by downloading personal computer to effectively diagnose machine health conditions. Moreover, combined with EMMS function which displays error code, machine and maintenance information on color graphics screen (patent pending), VHMS reduces maintenance time and increases machine availability.

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

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

Heat-resistant wiring is utilized not only for the electric circuit of the engine, but also for other whole units.

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

In-line filtration

High-pressure in-line filtration. The PC1250-7 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.

Employment of DT-type connectors which seal tight and have higher reliability.
Operator’s Cab

Superb Visibility
The PC1250-7’s large capacity cab and increased glass area provide superb front visibility.

Cab Mounts
The new cab damper mounting reduces vibration and noise at operator’s seat.

Safety Features

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

Step light with timer automatically provides light for two minutes to allow the operator to get off the machine safely.

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

Horn interconnected with flash light [optional] give visual and audible notice of the excavator’s operation when activated.

Large handrails and wide walkways are provided around revolving frame for easier and safer access to engine and hydraulic components.

Noise
The noise levels at the operator’s ear are decreased by improving the cab mounts and cab sealing performance.

Multi-Position Controls
The multi-position, pressure proportional control levers allow the operator to work in comfort while maintaining precise control.

A double-slide mechanism allows the seat and controllers to move together or independently, allowing the operator to position the controllers for maximum productivity and comfort.

Pressurized Cab
Cab pressurization is increased to prevent external dust from entering the cab with optional air conditioner.

Automatic Air Conditioner [Optional]
A 6,900 kcal (SAE) 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.

Pull up front window with assist [Optional]

Photo shown includes optional Falling Object Guard (FOG).
**SPECIFICATIONS & EQUIPMENT**

**ENGINE**
- Model: Komatsu SAA6D170E-3
- Type: 4-cylinder, water-cooled, direct injection
- Turbocharged and air-to-air intercooled
- Number of cylinders: 6
- Stroke: 170 mm 6.69"
- Piston displacement: 23.15 ft³ 1.413 m³
- Fuel tank: 670 ltr
- Engine, Komatsu SAA6D170E-3
- Type: All-speed, electronic

**HYDRAULIC SYSTEM**
- Type: Open-center load-sensing system
- Number of selectable working modes: 2
- Main pump:
  - Type: Variable capacity piston pumps
  - Pumps for:
    - Boom, arm, bucket, swing, and travel circuits
- Maximum flow:
  - Main: 2 x 494 ft³/min 2 x 130.5 U.S. gpm
  - Swing: 1 x 629 ft³/min 1 x 166.2 U.S. gpm
- Sub-pump for control circuit: Gear pump
- Hydraulic motors:
  - Travel: 2 x axial piston motor with parking brake
  - Swing: 1 x axial piston motor with holding brake
- Brake circuits:
  - Implement circuits:
    - Backhoe: 31.4 MPa 320 kg/cm² 4,550 psi
    - Loading shovel: 33.3 MPa 340 kg/cm² 4,830 psi
    - Travel circuit: 27.0 MPa 275 kg/cm² 3,910 psi
    - Pilot circuit: 2.9 MPa 30 kg/cm² 420 psi
- Hydraulic cylinders:
  - Number of cylinders—bore x stroke
    - Backhoe:
      - 2 - 225 mm x 2390 mm 8.9" x 94.1"
      - 1 - 250 mm x 2435 mm 9.8" x 95.9"
    - Bucket:
      - 2 - 160 mm x 1625 mm 6.3" x 63.7"
      - 1 - 160 mm x 1550 mm 6.3" x 61.0"
    - Arm:
      - 2 - 160 mm x 1625 mm 6.3" x 63.7"
      - 2 - 200 mm x 1700 mm 7.9" x 66.9"
    - Bottom dump:
      - 2 - 160 mm x 435 mm 6.3" x 17.1"

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

**UNDERCARRIAGE**
- Center frame:
  - H-leg frame
- Track frame:
  - Box-section
- Track chain:
  - Seated
- Track adjuster:
  - Hydraulic
- No. of shoes:
  - 48 each side
- No. of carrier rollers:
  - 3 each side
- No. of track rollers:
  - 8 each side
- Fuel tank:
  - 1360 ltr 359.3 U.S. gal
- Radiator:
  - 140 ltr 37.3 U.S. gal
- Engine:
  - 655 ltr 145 U.S. gal
- Final drive, each side:
  - 20 ltr 5.3 U.S. gal
- Swing circuit:
  - 24.3 ltr 6.4 U.S. gal
- Hydraulic tank:
  - 670 ltr 177.0 U.S. gal

**OPERATING WEIGHT (APPARENT)**
- BACKHOE PC1250-7:
  - Operating weight, including 9100 mm 29’6" boom, 3400 mm 11’2" arm, SAE heaped 6.7 m³ 8.8 yd³ backhoe bucket, operator, lubricant, coolant, full fuel tank, and the standard equipment.
  - Operating weight, including 7800 mm 25’7" boom, 3400 mm 11’2" arm, SAE heaped 6.7 m³ 8.8 yd³ backhoe bucket, full length roller guard, operator, lubricant, coolant, full fuel tank, and the standard equipment.

**COOLANT AND LUBRICANT CAPACITY (REFILLING)**
- Engine:
  - 1 x 166.2 U.S. gpm
- Hydraulic tank:
  - 670 ltr
- Oil cooler:
  - 14.5 U.S. gal
- Hydraulic oil:
  - 3,980 psi
- Coolant:
  - 3400 mm 11’2"
- Bucket:
  - 2 – 200 mm x 1700 mm 7.9" x 66.9"
- Arm:
  - 1 – 250 mm x 2435 mm 9.8" x 95.9"
- Boom:
  - 2 – 225 mm x 2390 mm 8.9" x 94.1"

**Drives and Brakes**
- Steering control:
  - Two levers with pedals
- Drive method:
  - Fully hydrostatic
- Travel motor:
  - In-shoe design
- Reduction system:
  - Planetary double reduction
- Maximum drawbar pull:
  - 7000 kg 15,430 lb
- Gradability:
  - 70%
- Maximum travel speed:
  - Low: 2.1 km/h 1.3 mph
  - High: 3.2 km/h 2.0 mph
- Service brake:
  - Hydraulic lock

**LOADING SHOVEL**
- Operating weight, including 5300 mm 17’5" boom, 3800 mm 12’6" arm, 6.5 m³ 8.5 yd³ heaped bucket, operator, lubricants, coolant, fuel tank, and standard equipment.

**ELECTRICAL SYSTEM**
- Alternator, 50 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 side, 1 cab/Rip/Stop light with timer
- Auto deconstructor

**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 operator and oil cooler
- Pump/engine room partition cover
- 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, floor mat, cigarette lighter and ashtray
- Instrument panel with electronic display monitor system, electronically-controlled throttle dials, electric service meter, gauges (coolant temperature and fuel level), caution lights (electric charge, engine oil pressure, 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
- Review mirrors
- Seat, fully adjustable with suspension
- Cab with fixed front window

**EQUIPMENT**
- One-touch engine oil drainage
- Wide catwalk and large handrails
- Vandalism protection locks
- Cab with fixed front window
- Marks and plates, English
- Horn, air
- Counterweight, 18000 kg 39,660 lb
- Counterweight, 18000 kg 39,660 lb
- Horiz. dollar, air pump
- Arm, air
- Marks and plates, English
- Air cleaner, double element, dry
- In-line filter
- Shockless boom control
- Two-mode setting for boom

**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 for travel with counter balance valve
- Three variable capacity piston pumps
- 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
- 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"
- Shocks:
  - 1000 mm 39.4" double grouser
- Spare parts for first service
- Track roller guard (full length)
- Track frame undercover (center)
- Travel alarm
- Vehicle Health Monitoring System (VHMS)
### PC1250-7 Lifting Capacity

<table>
<thead>
<tr>
<th>A</th>
<th>( \text{Maximum} )</th>
<th>12.2 m</th>
<th>10.7 m</th>
<th>9.1 m</th>
<th>7.6 m</th>
<th>6.1 m</th>
<th>4.6 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.1 m</td>
<td>15500</td>
<td>13000</td>
<td>13750</td>
<td>12500</td>
<td>11250</td>
<td>10000</td>
<td>8750</td>
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<tr>
<td>10.7 m</td>
<td>14200</td>
<td>11700</td>
<td>12450</td>
<td>11200</td>
<td>10000</td>
<td>8750</td>
<td>7500</td>
</tr>
<tr>
<td>12.2 m</td>
<td>13000</td>
<td>10500</td>
<td>11250</td>
<td>10000</td>
<td>8750</td>
<td>7500</td>
<td>6250</td>
</tr>
</tbody>
</table>

#### Equipment:
- Boom: 9.1 m 29°10’
- Arm: 3.4 m 11°2’
- Bucket: 4.0 m 5.2°y’d

#### Unit kg

### PC1250SP-7 Lifting Capacity

<table>
<thead>
<tr>
<th>A</th>
<th>( \text{Maximum} )</th>
<th>13.7 m</th>
<th>12.0 m</th>
<th>10.4 m</th>
<th>8.9 m</th>
<th>7.6 m</th>
<th>6.1 m</th>
<th>4.6 m</th>
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</thead>
<tbody>
<tr>
<td>8.9 m</td>
<td>11550</td>
<td>9000</td>
<td>10100</td>
<td>8900</td>
<td>7900</td>
<td>6900</td>
<td>6000</td>
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<tr>
<td>10.4 m</td>
<td>10300</td>
<td>7750</td>
<td>8800</td>
<td>7600</td>
<td>6600</td>
<td>5600</td>
<td>4800</td>
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<tr>
<td>12.0 m</td>
<td>9200</td>
<td>6650</td>
<td>7700</td>
<td>6500</td>
<td>5500</td>
<td>4500</td>
<td>3700</td>
<td></td>
</tr>
</tbody>
</table>

#### Equipment:
- Boom: 7.8 m 25°7’
- Arm: 3.4 m 17°’
- Bucket: 6.7 m 8.8°y’d

#### Unit kg

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*Load is limited by hydraulic capacity rather than tipping. Ratings are based on Standard No. J1097. Rated loads do not exceed 87% of hydraulic capacity or 75% of tipping load.*
**Transportation Guide**

Transportation volume (length x height x width)

Specs shown include the following equipment:

**Backhoe:** boom 9100 mm 29'10", arm 3400 mm 11'2", bucket 5.0 m³ 6.5 yd³, shoes 700 mm 28" double grouser

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**Work Equipment Assembly (Backhoe)**

- **Weight**: PC1250: 25.1 t [27.7 U.S.ton], PC1250SP: 27.0 t [29.8 U.S.ton]

**Boom**

- PC1250: 11.0 t [12.1 U.S.ton], 6.5 U.S.ton: 9475 x 2894 x 1474
- PC1250SP: 10.9 t [12.0 U.S.ton], 6.9 U.S.ton: 8170 x 3095 x 1474

**Arm**

- PC1250: 5.9 t [6.5 U.S.ton], 6.5 U.S.ton: 4895 x 1626 x 890
- PC1250SP: 6.3 t [7.0 U.S.ton], 6.9 U.S.ton: 4914 x 1683 x 890

**Bucket**

- PC1250: 4.3 t [4.7 U.S.ton], 5.1 U.S.ton: 2700 x 2100 x 2050
- PC1250SP: 5.9 t [6.5 U.S.ton], 6.9 U.S.ton: 2527 x 2420 x 2520

**Undercarriage**

- **Weight**: PC1250: 30 t [33.1 U.S.ton], PC1250SP: 30.9 t [34.1 U.S.ton]

**Arm Cylinder**

- 1.0 t [1.1 U.S.ton]

**Boom Cylinder**

- 2.4 t [2.5 U.S.ton], 2.6 U.S.ton: [1.32 U.S.ton x 2]

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**Upper Structure**

- **Width**: 3490 [11'5''], **Weight**: 34 t [37.5 U.S.ton]

**Undercarriage**

- **Weight**: 30 t [33.1 U.S.ton]

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**Others**

- **Weight**: 18.0 t [19.8 U.S.ton]

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