

KOMATSU®

PC220-7 PC220LC-7

FLYWHEEL HORSEPOWER

125 kW 168 HP @ 2000 rpm

OPERATING WEIGHT

PC220-7: 22840 – 23360 kg

50,350 – 51,500 lb

PC220LC-7: 23990 – 24550 kg

52,890 – 54,120 lb

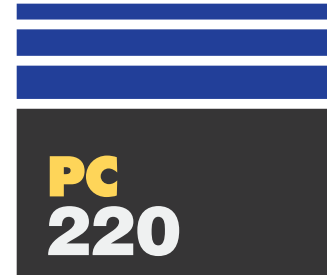


Photo may include optional equipment.

HYDRAULIC EXCAVATOR

WALK-AROUND

FLYWHEEL HORSEPOWER
125 kW 168 HP @ 2000 rpm

OPERATING WEIGHT
PC220-7: 22840–23360 kg
50,350–51,500 lb
PC220LC-7: 23990–24550 kg
52,890–54,120 lb

BUCKET CAPACITY
0.72–1.26 m³
0.94–1.65 yd³

Productivity Features

- **High Production and Low Fuel Consumption**

Production is increased with larger output during Active mode while fuel efficiency is further improved.

- **Maximum Drawbar Pull Increased 16%** offering superb steering and slope climbing performance.

- **Maximum Digging Height is 10 m 32'10"**, a benefit in jobs requiring a longer reach.

See page 4.



Harmony with Environment

- Low emission engine
A powerful turbocharged and air to air aftercooled Komatsu SAA6D102E-2 provides **125 kW** 168 HP.
 - Economic mode saves fuel consumption
 - Low operation noise
 - Easily recycled design
- See page 5.

Large Comfortable Cab

New PC220-7's cab volume is increased by 14%, offering an exceptionally roomy operating environment

- Highly pressurized cab with optional air conditioner
 - Low noise design
 - Low vibration with cab damper mounting
 - FOG capable with optional bolt-on top guard
FOG has been renamed to OPG (Operator Protective Guards) top guard level 2 by ISO 10262
- See page 6.

Easy Maintenance

- Replacement interval is extended for engine oil, engine oil filter and hydraulic filter
- Remote mounted engine oil filter and fuel drain valve for easy access
- Water separator is standard equipment
- Easier radiator cleaning
- Fuel tank capacity is increased
- BMRC bushings on work equipment extend lubricating interval from 100 hours to 500 hours (optional)

See page 8 and 9.

Photo may include optional equipment.

- **Bucket Digging Power Is Increased 21%**

Bucket Digging Power = Bucket digging force x bucket speed. Bucket digging force is increased 9% and bucket digging speed is increased 12%, so bucket digging power is increased 21%. (Compared with PC220-6)

- **Higher Lifting Capacity**

PC220-7's lateral stability is improved, lifting capacity also increased.

Excellent Reliability and Durability

- High rigidity work equipment
- Sturdy frame structure
- Reliable Komatsu manufactured major components
- Highly reliable electronic devices

See page 5.

PRODUCTIVITY FEATURES

High Production and Low Fuel Consumption

The increased output and fuel savings of the Komatsu SAA6D102E-2 engine result in increased production and improved production per unit of fuel.

Engine

The PC220-7 gets its exceptional power and work capacity from a Komatsu SAA6D102E-2 engine. Output is **125 kW** 168 HP, providing increased hydraulic power and improved fuel efficiency.

Hydraulics

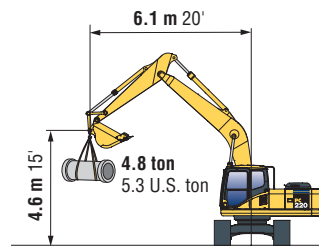
Unique two-pump system ensures smooth compound movement of the work equipment. HydrauMind controls both pumps for efficient engine power use. This system also reduces hydraulic loss during operation.

Large Digging Height

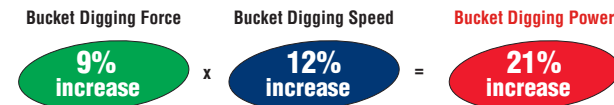
PC220-7's maximum digging height is **10 m 32'10"**, facilitating jobs that require a longer reach, such as demolition and slope finishing.

Larger Lifting Capacity

PC220-7's lateral stability is improved, as a result, the PC220-7 lifting capacity is increased. Example: lifting capacity over side (reach **6.1 m 20'**, height **4.6 m 15'**) is increased from **4.45 ton** 4.9 U.S. ton to **4.8 ton** 5.3 U.S. ton.



Larger Digging Power Provides Increased Production



Bucket Digging Power is obtained by bucket digging force x bucket digging speed. New PC220-7 bucket digging force is increased by 9% and bucket digging speed is increased by 12%, resulting total bucket digging power is increased 21% (bucket digging force compared with PC220-6). The digging force and speed generated result in the largest digging power and the largest production in the **22 ton** 24 U.S. ton class.

Larger Maximum Drawbar Pull

PC220-7's maximum drawbar pull is increased by 16%, provides superb steering and slope climbing performance.

Maximum drawbar pull: 202 kN **20570 kg** 45,350 lb
 Drawbar pull/operating weight: 0.91

Three Working Modes

Working Mode Selection

The PC220-7 excavator is equipped with three working modes (**A**, **E** and **B** mode). Each mode is designed to match engine speed, pump speed, and system pressure with the current application. This provides the flexibility to match equipment performance to the job at hand.

Working Mode	Application	Advantage
A	Active mode	<ul style="list-style-type: none"> Maximum production/power Fast cycle times
E	Economy mode	<ul style="list-style-type: none"> Excellent fuel economy
B	Breaker operation	<ul style="list-style-type: none"> Optimum engine rpm, hydraulic flow

Economy Mode

Economy mode is environmentally friendly. Fuel consumption is reduced 16% (compared with PC220-7 Active mode) and production is equal to the PC220-6 Heavy-duty mode.

Power Max Function

This function temporarily increases digging force by 7% for added power in tough situations.

Excellent Reliability and Durability

High Rigidity Work Equipment

The arm and boom are strengthened to correspond to increasing bucket and arm digging forces. The arm and boom cross sectional strength are also increased 25% and 8% respectively. The boom and arm have large cross-sectional dimensions as well as continuous groove welding, improving digging and side-contact strength.

Sturdy Frame Structure

The revolving frame, center frame and undercarriage are designed by using the most advanced three-dimensional CAD and FEM analysis technology.

Reliable Components

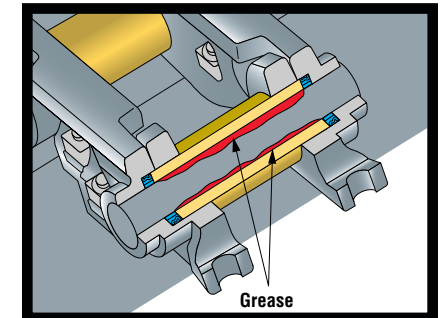
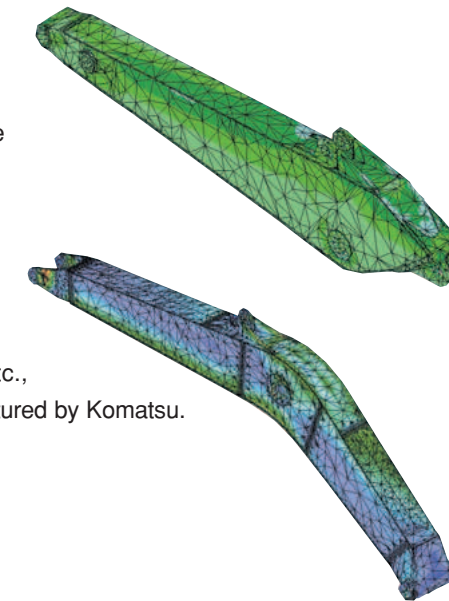
All of the major machine components, such as engine, hydraulic pumps, hydraulic motors and control valves, etc., are exclusively designed and manufactured by Komatsu.

Highly Reliable Electronic Devices

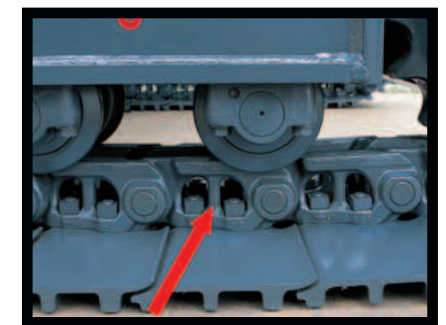
Exclusively designed electronic devices have passed severe testing.

- Controller
- Sensors
- Connectors
- Heat resistant wiring

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



Grease Sealed Track provides excellent undercarriage durability



Track Link with Strut
 PC220-7 uses track links with strut providing superb durability

Harmony with Environment

Low Noise

Noise is reduced not only from the engine but also during swing and hydraulic relief. Dynamic noise level is 104 dB.

Environment Oriented Mode (Economy Mode)

Economy mode meets the needs of the 21st century. Economy mode offers the user fuel savings, quiet operation and less CO₂ emission.

- Fuel consumption is reduced 16% (compared with Active mode).
- Production is the same as the PC220-6 Heavy-duty mode.

Easily Recycled

PC220-7 is designed with consideration of recycling and uses natural resources effectively.

- Sound suppressing material is made from PET (polyethylene terephthalate) resin that is easy to recycle.
- All exterior parts are made from steel.
- Engine and hydraulic system oil and filter replacement interval are extended to save earth resources.
- All resin-made parts are indicated by material code symbol.



WORKING ENVIRONMENT

PC220-7 cab interior is spacious and provides a comfortable working environment...

Large Comfortable Cab

Comfortable Cab

New PC220-7's cab volume is increased by 14%, offering an exceptionally comfortable operating environment. The large cab enables full flat reclining of the seat back with headrest.

Pressurized Cab

With optional air conditioner, air filter and a higher internal air pressure (6.0 mm Aq 0.2" Aq) prevent external dust from entering the cab.

Low Noise Design

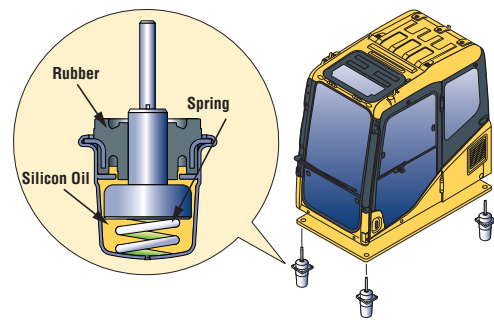
Noise level is remarkably reduced, not only engine noise but also noise when swinging and hydraulic relief.

Low Vibration with Cab Damper Mounting

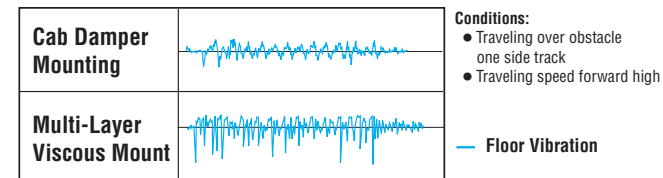
PC220-7 uses new, improved multi-layer viscous mount system that incorporates longer stroke and the addition of a spring. The new cab damper mounting combined with strengthened left and right side decks aids vibration reduction at operator seat.

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

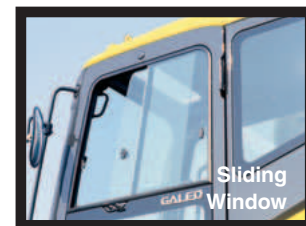
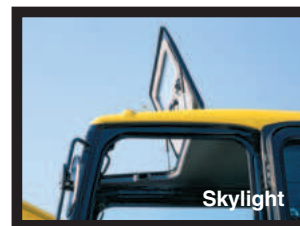
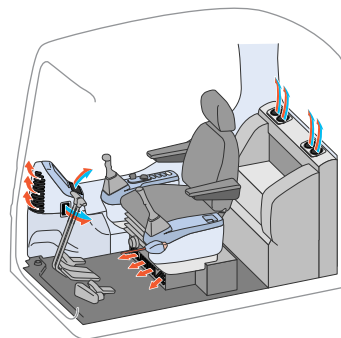


Pitch vertical direction on graph shows size of vibration.



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.



Washable Cab Floor Mat
 The PC220-7's cab floor mat is easy to keep clean. The gently inclined surface has a flanged floor mat and drainage holes to facilitate runoff.



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.



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



Defroster (optional)



Cab Frame Mounted Wiper



Bottle Holder and Magazine Rack

Safety Features

Cab

FOG capable with optional bolt-on top guard.

Wide Visibility

The right side window pillar has been removed and the rear pillar reshaped to provide better visibility. Blind spots have been decreased by 34%.

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.

Steps with non-skid sheet and large handrail. Steps with non-skid sheet provide anti-slip footing for maintenance.



Large Handrail



Thermal Guard and Non-skid Sheet

MAINTENANCE FEATURES

Self-Diagnostic Monitor

The PC220-7 features the most advanced diagnostics system in the industry. The Komatsu exclusive system identifies maintenance items, reduces diagnostic times, indicates oil and filter replacement hours and displays error codes.

Continuous Machine Monitoring System

When turning starting switch ON, Check-before-starting item and caution items appear on the liquid crystal panel. If abnormalities are found, a warning lamp blinks and a warning buzzer sounds. The continuous machine condition checks help prevent the development of serious problems and allows the operator to concentrate on the controls.

Abnormalities on Electronic System Display with Code

When an error occurs during operation, a user code is displayed. When an important user code is displayed, a caution lamp blinks and a warning buzzer sounds to prevent the development of serious problems.

Oil Maintenance Function

When machine exceeds oil or filter replacement time, oil maintenance monitor lights to inform operator.

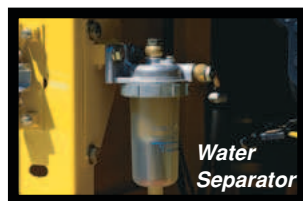
Easy Maintenance

Komatsu designed the PC220-7 to have easy service access. We know by doing this, routine maintenance and servicing are less likely to be skipped, which can mean a reduction in costly downtime later on. Here are some of the many service features found on the PC220-7.

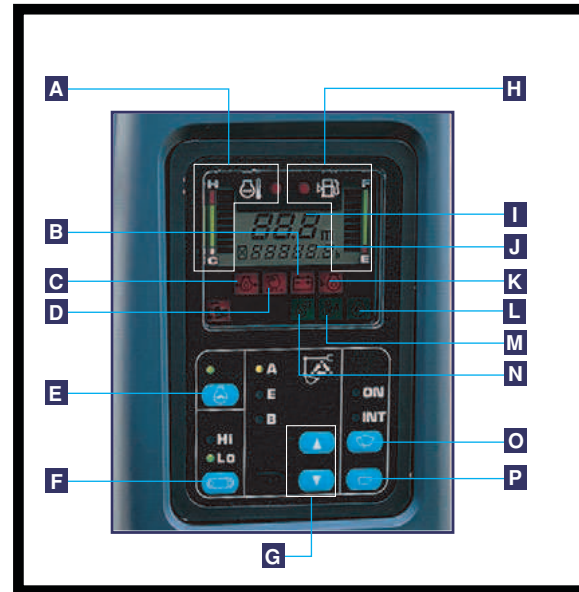


- Easy Radiator Cleaning**
 Clearance between radiator and oil cooler is increased to facilitate radiator core cleaning with an air nozzle.

- Water Separator** is standard equipment, removing water mixed in fuel and preventing fuel system damage.



- Self-diagnostic Monitor** allows display of vital self-diagnosis, as well as displaying up to 39 different faults.



- A Engine Water Temperature
- B Battery Charge
- C Engine Oil Pressure
- D Air Cleaner Clogging Monitor
- E Auto-Decel Switch
- F Travel Speed Select Switch
- G Working Mode Select Switch
- H Fuel Level Monitor
- I User or Trouble Code Display
- J Service Meter Display
- K Engine Oil Level
- L Engine Preheat
- M Swing Lock Display
- N Oil Maintenance
- O Windshield Wiper Switch
- P Windshield Washer Switch

- Easy Access to Engine Oil Filter and Fuel Drain Valve**
 Engine oil filter and fuel drain valve are remotely mounted to improve accessibility.



Reducing Maintenance Costs

- Hydraulic Oil and Filter/Engine Oil and Filter Replacement Interval Extended**

The new high performance filters are used in hydraulic circuit and engine. Hydraulic oil filter, engine oil, and engine oil filter element replacement intervals are significantly extended to reduce maintenance costs.

Comparison of Replacement Intervals unit: hours

	PC220-7	PC220-6
Engine oil	500	250
Engine oil filter	500	250
Hydraulic oil	5,000	5,000
Hydraulic oil filter	1,000	500

- Fuel Tank Capacity Increased**

Fuel tank capacity is increased from **340 ltr** 89.8 U.S. gal to **400 ltr** 105.7 U.S. gal to extend operating hours before refueling. Fuel tank is treated for rust prevention and improved corrosion resistance.

OPTIONS TO UPDATE THE VALUE

Multi-Function Color Monitor

A newly developed Multi-Function Color Monitor has multiple functions, such as Working mode selection, hydraulic pump oil flow adjustment for matching to attachment, and maintenance interval notice, etc.

Working Mode Selection

The Multi-Function Color Monitor has **Lifting mode** in addition to the standard three-mode selection (A, E, and B modes).

Working Mode	Application	Advantage
A	Active mode	<ul style="list-style-type: none"> Maximum production/power Fast cycle times
E	Economy mode	<ul style="list-style-type: none"> Excellent fuel economy
L	Lifting mode	<ul style="list-style-type: none"> Hydraulic pressure is increased by 7%
B	Breaker operation	<ul style="list-style-type: none"> Optimum engine rpm, hydraulic flow

Hydraulic Pump Oil Flow Adjustment System

When installing attachments (breaker, crusher, etc.) and B, A, or E mode is selected, it is possible to adjust engine and hydraulic pump discharge flow to match attachment characteristics. Selection is possible throughout the LCD (Liquid Crystal Display). This system also allows throttling of the attachment side discharge flow to provide smooth work equipment movement and compound operation with work equipment and attachment.

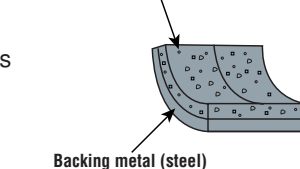
All Work Equipment Lubrication Intervals Are 500 Hours with optional BMRC Bushings (except bucket pin bushings)

Newly developed BMRC bushings are used on the work equipment. All bushing lubrication intervals of work equipment are extended from 100 hours to 500 hours (except bucket pin bushings), reducing maintenance costs.

BMRC (Beta Matrix Reinforced Copper Alloy)

A bushing made by combining a sintered copper layer impregnated with oil for better fitting and a backing metal. It is used for severe application parts which receive low rocking stresses and high loads to prevent creaking and scuffing because of its excellent sliding characteristics.

Sintered Al bronze layer impregnated with high-performance lubricating oil



Backing metal (steel)

Automatic Three-Travel Speed

Travel speed is automatically shifted from high to low speed according to the pressure of the travel. This optional system is available as part of the Multi-Function Color Monitor.

	High	Mid	Low
Travel Speed	5.5 km/h 3.4 mph	4.2 km/h 2.6 mph	3.1 km/h 1.9 mph

Lifting Mode

When the Lifting mode is selected, lifting capacity is increased by 7% by raising hydraulic pressure.



EMMS (Equipment Management Monitoring System)

Monitor Function

Controller monitors engine oil level, coolant temperature, battery charge and air clogging, etc. If controller finds any abnormality, it is displayed on the LCD.

Maintenance Function

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

Trouble Data Memory Function

Monitor stores abnormalities for effective troubleshooting.

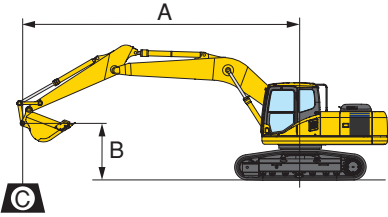
Work Equipment Lubrication Interval unit:hours

PC220-7	PC220-6
500	100

(except bucket pin bushings)



LIFTING CAPACITY WITH LIFTING MODE ON MULTI-FUNCTION COLOR MONITOR



A: Reach from swing center
B: Bucket hook height
C: Lifting capacity
Cf: Rating over front
Cs: Rating over side
⊗: Rating at maximum reach

Conditions:
• 5850 mm 19'2" one-piece boom

Table for PC220-7 with Arm: 3045 mm 10'0", Bucket: 1.0 m³ 1.31 yd³, Shoe: 600 mm 23.6" triple grouser. Columns for reach (A) and rows for bucket height (B).

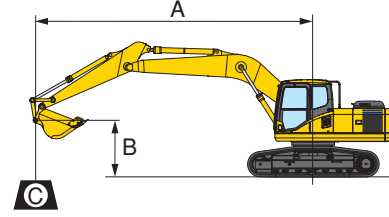
Table for PC220-7 with Arm: 2000 mm 6'7", Bucket: 1.0 m³ 1.31 yd³, Shoe: 600 mm 23.6" triple grouser. Columns for reach (A) and rows for bucket height (B).

Table for PC220-7 with Arm: 2500 mm 8'2", Bucket: 1.0 m³ 1.31 yd³, Shoe: 600 mm 23.6" triple grouser. Columns for reach (A) and rows for bucket height (B).

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



LIFTING CAPACITY WITH LIFTING MODE ON MULTI-FUNCTION COLOR MONITOR



A: Reach from swing center
B: Bucket hook height
C: Lifting capacity
Cf: Rating over front
Cs: Rating over side
⊗: Rating at maximum reach

Conditions:
• 5850 mm 19'2" one-piece boom

Table for PC220LC-7 with Arm: 3045 mm 10'0", Bucket: 1.0 m³ 1.31 yd³, Shoe: 700 mm 27.6" triple grouser. Columns for reach (A) and rows for bucket height (B).

Table for PC220LC-7 with Arm: 2000 mm 6'7", Bucket: 1.0 m³ 1.31 yd³, Shoe: 700 mm 27.6" triple grouser. Columns for reach (A) and rows for bucket height (B).

Table for PC220LC-7 with Arm: 2500 mm 8'2", Bucket: 1.0 m³ 1.31 yd³, Shoe: 700 mm 27.6" triple grouser. Columns for reach (A) and rows for bucket height (B).

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



STANDARD EQUIPMENT

- Alternator, **35 Ampere**, 24V
- Auto-Decel
- Automatic engine warm-up system
- Automatic de-aeration system for fuel line
- Batteries, **110 Ah/2** x 12V
- Boom holding valve
- Cab, capable FOG with optional bolt-on top guard
- Counterweight
- Dry type air cleaner, double element
- Electric horn
- Engine, Komatsu SAA6D102E
- Engine overheat prevention system
- Fan guard structure
- Hydraulic track adjusters (each side)
- Monitor panel, 7-segment
- Power maximizing system
- PPC hydraulic control system
- Radiator & oil cooler dust proof net
- Rear view mirror, R.H.
- Starting motor, **4.5 kW/24 v x 1**
- Suction fan
- Track guiding guard, center section
- Track roller
 - PC220-7, 8 each side
 - PC220LC-7, 10 each side
- Track shoe
 - PC220-7, **600 mm** 24" triple grouser
 - PC220LC-7, **700 mm** 28" triple grouser
- Working light, 2 (boom and RH)
- Working mode selection system



OPTIONAL EQUIPMENT

- Air conditioner with defroster
- Alternator, **60 ampere**, 24 v
- Arms
 - 3045 mm** 10'0" arm assembly
 - 2500 mm** 8'2" arm assembly
 - 2000 mm** 6'7" arm assembly
- Batteries, large capacity
- Bolt-on top guard OPG level 2 (FOG)
- Boom, **5850 mm** 19'2"
- Cab accessories
 - Rain visor
 - Sun visor
- Cab front guard
 - Full height guard
 - Half height guard
- Heater with defroster
- Long lubricating intervals for implement bushing (500 hours)
- Multi-Function Color Monitor
- Rearview mirror (LH)
- Seat belt, retractable
- Seat, suspension
- Service valve
- Shoes, triple grouser shoes
 - PC220-7
 - 700 mm** 27.6",
 - 800 mm** 31.5"
 - PC220LC-7
 - 600 mm** 23.6", **800 mm** 31.5"
- Starting motor, **5.5 kW/24 v x 1**
- Track roller guards (full length)
- Track frame undercover
- Travel alarm
- Working lights (2 on cab)



SPECIAL PURPOSE BUCKET

- **Ditch cleaning bucket**
 - Capacity
 - SAE heaped **0.80 m³** 1.05 yd³
 - CECE heaped **0.70 m³** 0.92 yd³
 - Width **1800 mm** 70.9"
- **Slope finishing bucket** for scraping slopes of banks
 - Capacity
 - SAE heaped **0.4 m³** 0.52 yd³
 - CECE heaped **0.35 m³** 0.46 yd³
 - Width **2000 mm** 78.7"
- **Trapezoidal bucket** is ideal for digging ditches and for drainage works
 - Capacity
 - SAE heaped **0.7 m³** 0.92 yd³
 - CECE heaped **0.5 m³** 0.65 yd³
- **Ripper bucket** for hard and rocky ground
 - Capacity
 - SAE heaped **0.62 m³** 0.81 yd³
 - CECE heaped **0.56 m³** 0.73 yd³
 - Width **990 mm** 39.0"
- **Single-shank ripper** and **three-shank ripper** are recommended for rock-digging and crushing, hard soil digging, pavement-removal works, etc.

KOMATSU®