KOMATSU

PC220LC-12/PC220LCi-12

hydraulic excavator



Photo may include optional equipment

Engine power
Net 173 HP (129 kW) @ 2,000 rpm

Operating weight
PC220LC-12: 53,352-54,675 lbs. (24,200-24,800 kg)
PC220LCi-12: 53,352-54,675 lbs. (24,200-24,800 kg)

Bucket capacity
0.65 yd^3-1.85 yd^3 (0.50 m^3-1.41 m^3)

Engineered for those who get it done

Designed to empower operators and help them get the most from each shift

Empower your operators and you'll power productivity. That was the thinking behind the design of this next generation of excavators. We've reimagined the operator environment and working experience to build a machine engineered to help unleash the full potential of human and machine.



The most advanced and comfortable excavator working environment we've ever created

The PC2202LC-12 and PC220LCi-12 were designed around the comfort, needs and preferences of hard-working operators. We started with the cab first, and built an efficient, smart and productive machine around it, creating a new generation of excavators for today's next-gen operators.

Both models feature smart technology to help boost operator efficiency. The PC220LCi-12 takes automation to an even higher level. It features the latest intelligent machine control (IMC 3.0) technology, including innovative features such as 3D boundary control, a first in the construction industry.

Explore the future of excavation... available now.



Photo may include optional equipment

Welcome to the next-generation of hydraulic excavators

Improved operator environment +

- Newly designed 28% larger spacious cab
- Premium operator seat with air suspension
- Highly adjustable console position
- Overhead vent heating/air conditioning
- User-friendly and easy-to-navigate high-resolution 8" LCD monitor
- Large full-view polycarbonate tiltable skylight

Intuitive and advanced controls +

- Easy-to-navigate touch panel monitor
- Keyless start
- Integrated Bluetooth®/radio through monitor
- Up to 50 customized operator ID profiles can be stored
- Lower-effort electric work equipment lever controls
- Simplified bucket calibration can be saved to each PC220LCi-12 operator's preferences

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Note:
New features (compared to the PC210LC-11) are indicated by a green plus sign (+)



Enhanced hydraulic control system

- Adjustable boom/swing priority selection +
- Individual work equipment speed adjustments +
- Customizable electric proportional control joystick function mapping by operator ID +
- Reduced hydraulic tank capacity with improved cooling capability and boom regeneration system

Focused on safety

- KomVision with human/object detection including auto swing stop and travel stop integrated functionality +
- KomVision 360° views; operators can select each camera view on the a cab monitor +
- Rollover avoidance warning +
- Travel heading indicator to recognize track orientation +
- Remote courtesy lights +
- Seat belt reminder system +
- High visibility, colored handrails +

Ease of maintenance

- Improved ground level maintenance +
- Extended hydraulic oil and filter change intervals +
- High-capacity DPF with 8,000 hr. exchange interval +
- Ground level DEF filling access
- Delayed engine shutdown +
- Automatic hydraulic system warm-up +
- Improved cooler cleaning access

Machine performance improvements

- Hydraulic boom regeneration for quicker response and improved fuel efficiency +
- 20% more machine hydraulic flow*
- 10% increase in digging force*
- 7% increase in lift capacity*
- 5% increase in engine horsepower*

Introducing IMC 3.0 intelligent machine control *(PC220LCi-12 only)* +

- High-resolution 10.1" LCD touch panel IMC monitor
- Auto grade assist with improved performance and stability
- 3D boundary control
- Auto swing functionality
- Enhanced payload meter with tip-off assistance
- "Build-to-design" capability on the fly

Other standard technology +

- 2D machine control
- 2D boundary control (replaced by 3D boundary control in the PC220LCi-12)
- Track by joystick thumb roller control
- Real-time payload monitoring

Productivity (P+ mode) up to **18% increase***

Fuel efficiency up to **18% improvement***

Maintenance cost up to **20% reduction***

**compared to the PC210LC-11*

Improved operator environment

Cab and visibility improvements

The operation equipment and accessories have been upgraded, including a larger cab and a wider operation space. Experience Komatsu's innovation the moment you sit in the operator's seat and get your hands on the controls. Increases to cab glass surface area, cab pillar structure and monitor position have improved the visibility to the bottom right by 50%.*



Photo may include optional equipment

Adjustable seat and console

A new multi-function operator's seat with significantly improved comfort

The operator seat has a pleasant feel, and is equipped with air suspension, cushion slide adjustment, seat slide adjustment, heating system and lumbar support as standard features, greatly improving ride quality.



** multi-function seat to be introduced as a running change*

Freely adjustable console position



Console pull-back feature provides ample space for the operator to enter the cab



Air conditioner vent ceiling arrangement

- Air from the air conditioner is blown from the ceiling, allowing comfortable and efficient regulation of the temperature in the cab
- Air makes contact with the operator's upper body, cooling them down quickly in the hot summer months



Other operator-focused features

- Openable polycarbonate roof window and sunroller blind
- Front window sunroller blind
- Side and rear window sunroller blind (optional)
- New easy-to-remove, pull-apart, two-part floor mat
- Ample storage


Roof window


Sunroller blind


Smartphone storage


Small item storage space underneath the armrest

Bigger operator cab

30% more legroom*



**compared to the PC210LC-11*

User-friendly and easy-to-navigate, high-resolution 8" LC monitor

An 8-inch touch-panel monitor is within easy reach of the operator for ergonomic and stress-free operation.



Clear, intuitive and user-friendly displays

A high-resolution, easily visible piece of equipment

- Intuitive controls for easy operations
- The attachment, working mode and travel mode can be easily selected from the monitor
- Multilingual support so operators can select from English, French and Spanish; other languages will be available in future software updates



Example: Switching from P mode to E mode



1. Object avoidance settings
2. Error information
3. 2D boundary control
4. Bird's-eye view icon
5. Payload meter
6. 2D machine control
7. Indicator display
8. Working mode, pilot display section for travel speed settings, etc.
9. ECO gauge
10. Bird's-eye view image
11. Single camera image
12. Fuel gauge and meter display for the DEF level, etc.
13. Level indicator

Easy to operate

Keyless start system

Instead of starting the engine using a conventional key, we have adopted a keyless start system with enhanced security.

Monitor startup
Turning the start switch from the A position to the B position causes it to light orange

Security certification
Passcode entry

Engine start
Once authorized, the light turns green
Turn the start switch to the C position to start the engine



Passcode entry



Enter the passcode registered to the operator ID

A PIN code system commonly used in many areas of life

Note: Locking/unlocking the door is done with the physical key as before.



Operator ID

The operator ID and information on the right can be linked so that when you log on, the settings are automatically carried over.

Operator name, security authentication method, operator information, standard screen settings, monitor settings, Bluetooth® settings, KomVision settings, travel heading indicator settings, rollover avoidance settings, lever switch settings, joystick pattern selection, adjustable priority, response adjustment, and speed adjustment, 3DMC app settings, payload meter app settings, etc.

User-friendly functions and equipment for greater work efficiency

Optimal panel layout

The switches are arranged on the right console in consideration of visibility and operability.



Bluetooth® compatibility

If you connect the system to your smartphone via Bluetooth®, you can play music and make hands-free phone calls.

Operate the radio or air conditioner from the monitor



New joystick

Features a new easy-to-operate, ergonomic joystick. The joystick contains five switches on both the left and right.



Hydraulic control system changes

Komatsu's proprietary Electric Hydraulic System (EHS)

The control system has been revamped with our cutting-edge EHS technology. Fuel consumption, operability and robustness have all been improved as a result. Fuel consumption has been significantly reduced while improving performance for increased work efficiency with controlled costs. Komatsu invested considerable time to tune the new EHS system to replicate the feel of our previous joystick controls. With the added capability to make adjustments to everything from response speed for boom, arm and bucket, the operator can further dial-in the machine to their exact preference.

Significant reduction in fuel consumption

Fuel consumption has been significantly reduced by changing the control system, reducing pressure loss due to adopting the new control valve and upgrading the pump capacity.

New four-cylinder engine

A new high output four-cylinder engine with improved robustness and life cycle cost (LCC) has been installed, increasing engine output.

Fuel efficiency up to **18% improvement***

Productivity (P+ mode) up to **18% increase***

Engine output 165 HP* to **173 HP**

(ISO 9249/SAE J1349)

**compared to the PC210LCi-11*



Customizable controls and features

These settings are automatically saved and synced with each operator ID. All custom settings are automatically enabled according to the ID entered.

A wide range of working modes and settings

You can select the working mode of your choice to match your work and purpose.



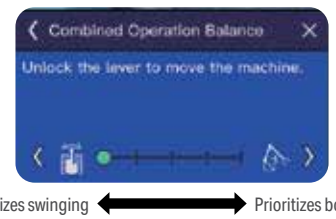
Speed adjustment

The speed of the boom, arm, bucket and swinging mechanism can be adjusted.



Adjustable priority and response adjustment

The joystick responsiveness of the boom, arm, bucket and swinging mechanism can be adjusted (this relates to how much the joystick moves for the corresponding work equipment to move). This allows prioritization of boom raise speed over swing speed or vice-versa. In heavy trenching applications, boom raise priority is recommended. In truck loading swing priority is recommended to optimize the cycle time efficiency.



Prioritizes swinging ⟷ Prioritizes boom raising

**compared to the PC210LC-11*

Easily set joystick patterns on the monitor (joystick pattern selection)

The joystick pattern settings can also sync with operator IDs, enabling joystick patterns to switch automatically according to the operator ID.

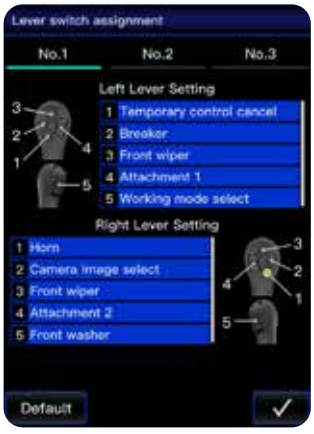


Changing of joystick button settings (lever switch assignment)

Customize joystick button functions on the monitor. These settings are automatically saved in the operator profile and enabled once the ID is entered.

Example of settable functions:
Switching working modes, answering phone calls, adjusting audio volume, selecting audio tracks, breaker operation, track control, etc.





Focus on safety

KomVision with enhanced detection performance (standard)

Machine surroundings camera system: 360-degree view

The field of view of the KomVision cameras (four wide-angle high-definition cameras) has been expanded from 270 degrees to 360 degrees.


Front


Rear


Left side


Right side

Detection areas and buzzers

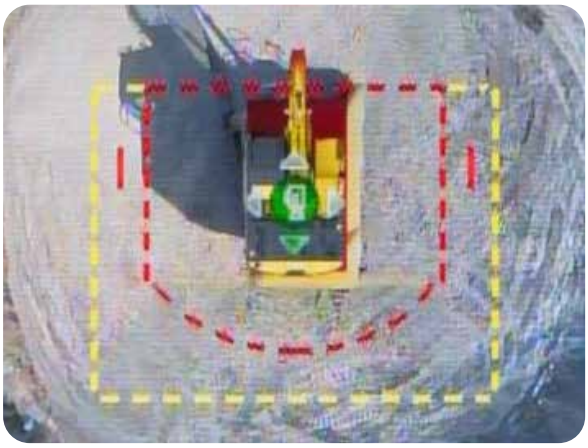
When a person is detected in the deceleration control area or stoppage control area, a marker (yellow or red circle) is displayed on the monitor and a buzzer sounds to warn the operator.

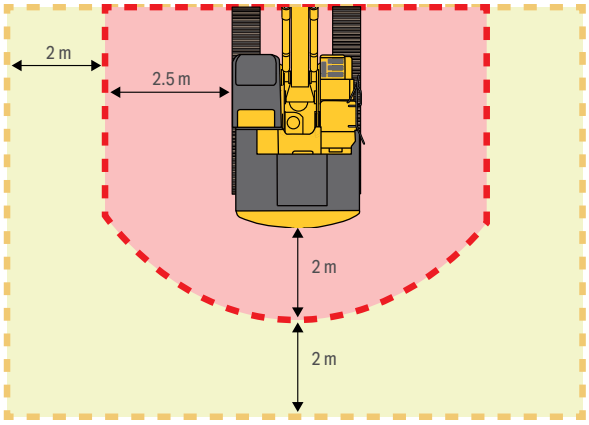
A warning-only mode has also been newly added.

Revolving lamp for stoppage control identification (optional)

This enables you to check from the outside that the machine stoppage control mode is turned on.




KomVision screen



Deceleration control area

Lv.1 buzzer activation
The travel speed limit is restricted to a level equivalent to Lo

Stoppage control area

Lv.2 buzzer activation
Travel stoppage control/start prohibited activates
Swing stoppage control/swing prohibited activates

**with system activated*





Photo may include optional equipment

Drive toward zero harm with object and people detection features

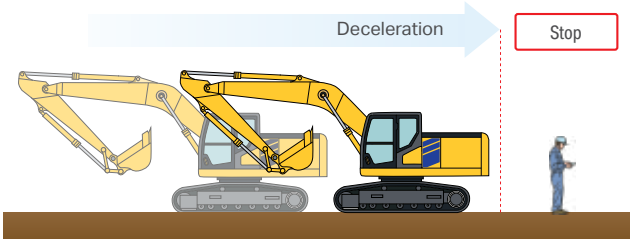
People detection mode

This mode is designed to detect people using machine-mounted cameras and radar system working together. If a person is detected in the machine range, the operator is warned by the mark displayed on top of the graphic image shown on the monitor, as well as the sound of the cab buzzer. Workers around the machine are warned by the travel alarm sounding at the same time.

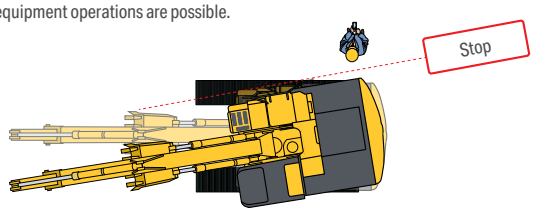
If a person is detected in the machine range after the operator starts work, the brake will be applied according to the travel speed. If a person is still detected close to the machine, the travel and swing operations of the machine are stopped to mitigate damage from a collision. A switch that temporarily cancels the stoppage control has also been added to resume operation when safe.

People + object detection mode

This mode is designed to detect people as well as objects that reflect radio waves, such as a car or forklift. This mode can be particularly useful in busy worksites with many vehicles and personnel.



- If traveling, the machine decelerates/stops. If swinging, the machine stops.
- Work equipment operations are possible.



**with system activated*

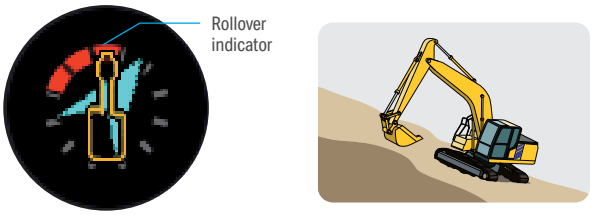
Precautions

- Object avoidance is not a system to reduce collisions under all conditions. There are limitations to performance. Overly relying on or misusing the system can lead to accidents
- Before using this system, be sure to read the Operation and Maintenance Manual, understand the system, and use it correctly
- This system is not intended to prevent operator inattention, such as looking away or careless operation

Cutting edge object avoidance designed for worksite safety

Rollover avoidance

This technology calculates the machine's center of gravity and notifies the operator when a potential rollover is detected with an indicator on the monitor and a warning buzzer.



Travel heading indicator

The travel direction (orientation of the track frame) is displayed on the monitor at all times. If the track faces backward, the arrow indicating the travel direction will change from blue to yellow, helping to prevent incorrect operations when initiating travel.



Remote courtesy lights

When the operator unlocks the cab door, the LED lamp will light up for increased visibility when boarding.

When disembarking the machine: After the cab door is closed, the LED lamp will light up for a certain amount of time and the operator can disembark the machine safely.



Large windshield wiper helps improve visibility in inclement weather.



Seat belt reminder

If working with the seat belt unbuckled, the operator will be warned by a buzzer sound and monitor icon. If the seat belt is unbuckled while performing swinging or travel operations, a buzzer will sound and a warning will display on the monitor.



Other safety features

More safety features include:

- Highly visible seat belt
- Highly visible handrail
- Highly visible safety bar
- LED light
- A ROPS cab designed to protect operators from the machine tipping over or falling objects

Simplified owning and operating

Significant improvement in maintainability

Many parts are consolidated with easy access for inspection on the ground, making regular maintenance more efficient.





Improved DEF replenishment performance

DEF can be replenished on the ground. A storable bracket supports refilling of DEF when not using a bulk tank or nozzle.



*compared to the PC210LC-11

Extension to hydraulic oil replacement interval

5,000 hrs.* → 6,000 hrs.

Extension to hydraulic oil filter replacement interval

1,000 hrs.* → 3,000 hrs.

Extension to KDPF cleaning interval

4,500 hrs.* → 8,000 hrs.

Delayed engine shutdown

This function cools the engine or aftertreatment device if it is still too hot at shutdown, even if the starting switch is turned off. Once the temperature has dropped, the engine will stop automatically and the main power supply will also turn off.

Auto power off

Auto power off is a function that automatically turns off the system to prevent a dead battery. The main power supply will be automatically turned off if the set time passes with no machine monitor operation performed with the engine stationary.

Maintenance costs up to 20% reduction*

Other functions and equipment

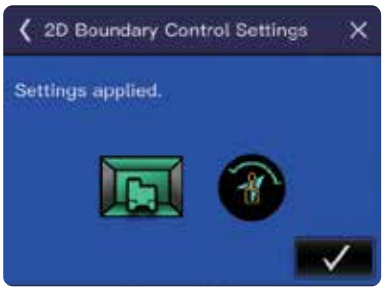
- Maintenance-free battery
- Battery disconnect switch
- Hours until the next recommended replacement of parts can be checked on the monitor
- Fuel pre-filter with water separator
- Air conditioner filter
- Hydraulic oil filter clogging sensor

Technology designed to boost jobsite productivity

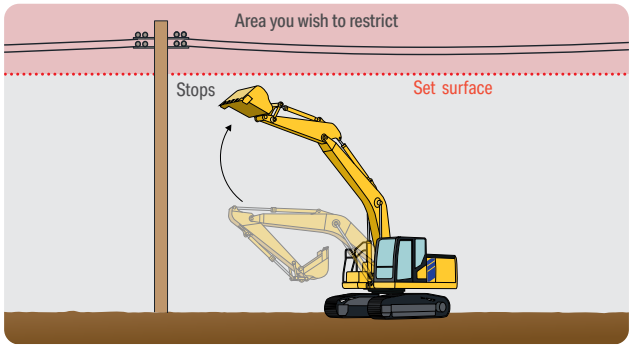
2D boundary control

Operators can easily set up virtual walls on a coordinate system with the machine's center as the origin. The work equipment/swing operation is programmed to decelerate automatically when the operator stops the movement of the machine as it approaches a virtual wall. This function helps reduce the risk of a collision with a worker or a surrounding object.

You can set virtual walls in front of, above, below or to the left and right of the machine. The machine is also fitted with a swing angle limit function.



Example using 2D boundary control: If working near high-voltage cables, operators can set the 2D boundary parameters beforehand, helping to prevent possible contact with this hazard.



2D machine control

You can set a design surface for the coordinate system that uses the center of the machine as the origin. You will receive guidance on the distance and angle up to this surface. If you use semi-auto mode, work equipment is automatically controlled so that the machine does not dig deeper than the design surface, and the cutting edge follows the design surface smoothly.

In addition, Komatsu's 2D machine control enables a seamless sequence of work from dumping to the next step — the set surface does not move even when the machine swings.

Payload meter

The bucket payload and dump payload are displayed in real time, allowing the operator to perform work while checking the payloads.



1. Dump truck remaining payload space display
2. Bucket payload display
3. Start loading, Pause, Resume button

Track control

This helpful feature enables intuitive travel operations with the left and right work equipment control lever wheels. When this function is assigned to the lever wheels, the right joystick wheel becomes forward/reverse function while the left joystick wheel becomes the left/right steering function. Multi-function operations, such as swinging or using work equipment while tracking, can be performed simultaneously.



Machine performance improvements

Increased digging force

The arm and bucket cylinder size has been revised to increase the digging force and enable more powerful operation. The work equipment has also been reinforced to match this.

Arm crowd force

101 (108) kN* → 108 (116) kN

(ISO 6015 rating)

Bucket digging force

139 (149) kN* → 149 (159) kN

(ISO 6015 rating)

The number inside the parenthesis corresponds to when using the one-touch power max. function

Up to 7% increase in lifting capacity

The machine's lifting capacity has increased by up to 7% compared to the PC210LC-11. As a result, the machine is able to use larger buckets for the same width with the previous model.*

Increase in durability of structure

The work equipment has been enhanced to match the increase in digging force, sharing more commonality with larger models.



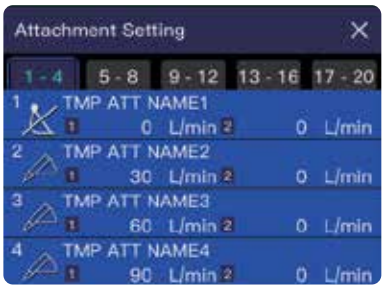
More new functions

Software update

The software can be periodically updated to the latest version with OTA (over-the-air) updates, just like a smartphone. This enables the addition of new features and the updating of software to be done remotely.

Attachment settings (registering and setting up attachment information)

The machine is equipped with a feature that will store everything it needs to know about an attachment. This storage includes flow rates, pressures and weights. For jobsites where multiple operators are using the same machine with multiple attachments, this takes the guesswork out of changing attachments. This simplified system promotes longevity not only for the machine, but also to the attachments it is running.



*compared to the PC210LC-11

Intelligent machine control IMC 3.0

Integrated IMC technology in the PC220LCi-12

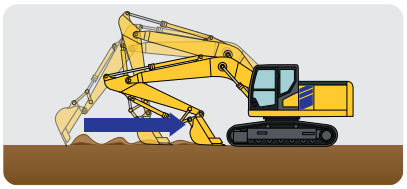
Work equipment operations can be made semi-automatic using satellite-based location information and a control system. To construct as per your design drawings, the work equipment automatically stops when the bucket cutting edge nears the design surface and moves precisely along it, eliminating the need for fine operations. This makes the work stress-free, even for operators with minimal experience.

Komatsu's PC220LCi-12 excavator has new functions, can support a wide range of construction work, and helps to enhance efficiency by reducing work times and the number of personnel needed.



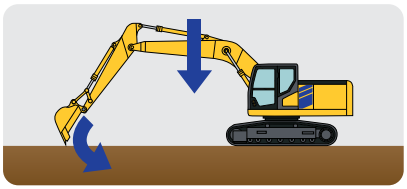
Photo may include optional equipment

Operators-assistive technology that helps make work more efficient



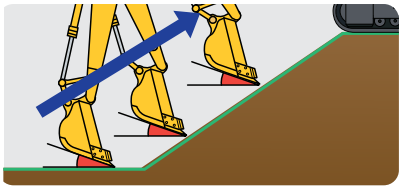
Auto grade assist for exceptional performance and stability

Automatically controls the bucket cutting edge to move it along the design surface according to the arm operation, enabling leveling up to the foot of the machine with arm control operations alone. The performance and stability have been improved compared to the PC210LC-11. This makes it possible to create a smooth design surfaces. Design enhancements have also been made for a more seamless fitting of heavy attachments.



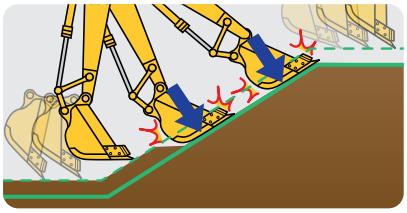
Auto stop control

The work equipment stops automatically when the bucket's cutting edge reaches the design surface from a boom or bucket operation. Aligning the position of the bucket cutting edge can also be done easily.



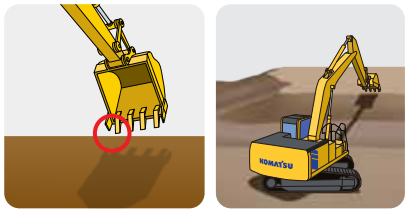
Bucket angle hold feature

The bucket angle can be maintained automatically, with no need to adjust the bucket angle when leveling. This reduces the burden of leveling work. Bucket operations made by the operator in control are given priority.



Compaction control

Compaction can be done with the bottom of the bucket on rough leveling, provided there is room. Furthermore, the series of work up to the final rubbing touches can all be done solely in semi-auto mode.

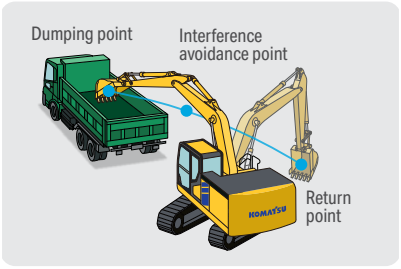


Minimum distance control

A bucket cutting-edge control mechanism automatically detects the point closest to the design surface within the bucket width and contour points. You can perform work without worrying about digging too deep, even when the machine is not directly facing the design surface.

Semi-auto dump-loading

Auto swing



The machine will perform swinging automatically by setting a return point, dumping point, and interference avoidance point with a dump truck or the like.

This allows you to make the dump-loading steps semi-automatic.



Photo may include optional equipment

Advanced technology that helps drive toward zero harm

The latest IMC 3.0 cutting-edge technology can help contribute to a safer worksite with features designed to prevent accidental contact with personnel, machines and jobsite hazards. Machine rollover safeguards also help you drive toward zero harm.

3D boundary control

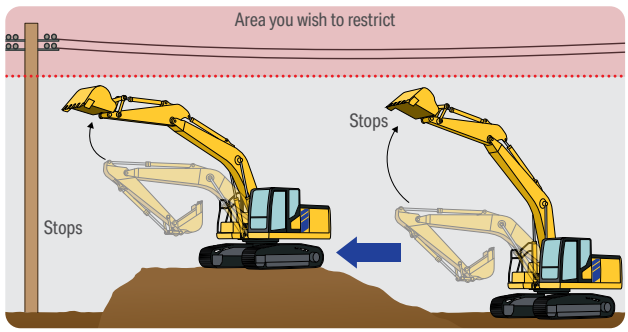
You can set a work-restriction surface with a specified height, depth, front, back and side boundaries so that the machine will stop automatically when it approaches a restricted zone. This cutting-edge technology is designed to help prevent accidents. Restricted zone settings are retained, even when moving the machine.

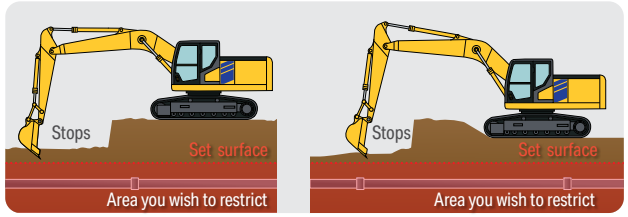
3D boundary control can be used to set multiple work restriction surfaces, either adjusted upfront or when needed as the worksite changes. Unlike 2D Boundary systems, 3D Boundary Control is based on the machine positioning and does not need to be reset as the machine location changes across a jobsite.

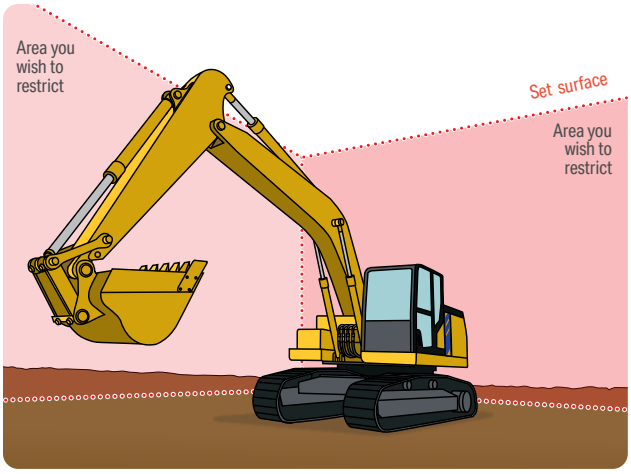
Example using 3D boundary control

Preventing contact with high-voltage cables

3D boundary control can help prevent contact with high-voltage cables. This technology determines the restricted areas based on height above sea level. For instance, even if the position of the machine changes after forming an embankment, the system is still capable of preventing contact with electric cables.

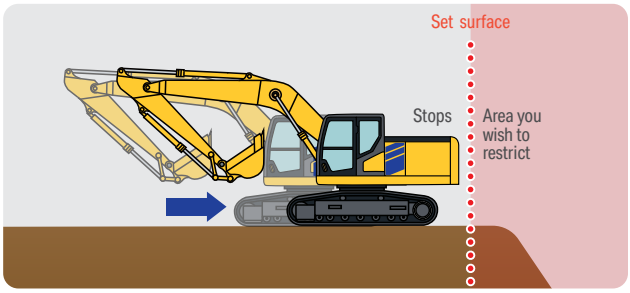






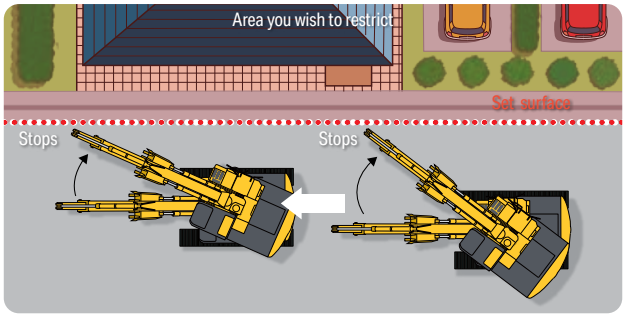
Fall prevention

3D boundary control can add a restriction zone to the rear of the machine to prevent travel at the edge of a bench or slope.



Preventing contact with adjacent buildings

You can prevent contact with things like buildings or trees to the side of the chassis.



Enhanced payload meter

The bucket payload and dump payload are displayed in real time, allowing the operator to perform work while checking the payloads with the 10.1-inch ICT monitor. This function enables the management of payloads and helps prevent overloading.



1 Bucket payload



Default | Confirmed weight

2 Dump truck remaining payload space



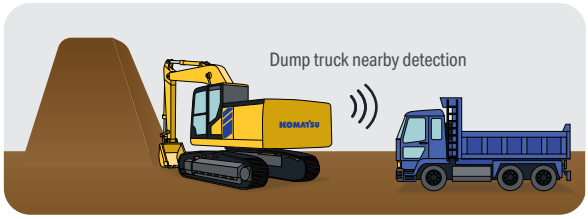
Loading in progress | Confirmed weight



Target achieved | Excessive load

3 Loading count and weight history
4 Delete latest load
5 Dump truck payload loading rate
6 Material selection
7 Select dump truck
8 Start loading
9 Dump truck list/material list
10 Loading history/performance data
11 Settings

With the addition of the Smart Construction Fleet app, operators can view registered dump truck information on the cab monitor when nearing the truck. This technology is designed to deliver efficiency gains with each haul.





Touch

or



Lever button

* The payload meter is not a measuring instrument that has passed a certification examination.



Photo may include optional equipment

Non-bucket attachments also support semi-auto functionality

IMC functions are also compatible with non-bucket attachments and can be used at all kinds of jobsites. A wide range of tilt buckets integrates with IMC simply by installing an inertial measurement unit (IMU).

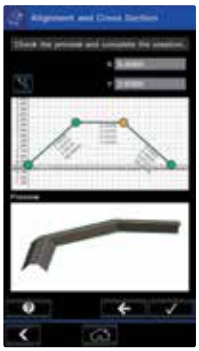
	Conventional bucket			Tilt bucket	Breaker	Extension arm	Twin header	Compactor	Grapple
	Standard	Slope	Trapezoid						
									
PC210LCi-11	●	●	–	●*1	–	●	–	–	–
PC220LCi-12	●	●	●	○*2	●	●	●	●	●

○: To be added soon *1: Stroke sensing hydraulic cylinder type *2: IMU type

In-field design

This feature helps operators easily create design data at the worksite. You can create complex structures such as channels and levels with intuitive operations. With the new linear and cross-section modes, polyline creation and editing, cross-sectional addition to polylines and other capabilities, this state-of-the-art excavator makes it easy to achieve smooth operation.





Easier calibration (simple measurements)

Configuring bucket calibration has been made easy. No special tools are needed, so you can calibrate with a single steel tape measure.



Purpose-built from factory

Recessed GNSS antennas are built into the exterior, eliminating the need to be installed or removed day-to-day. This gives operators more time to get the job done and less time preparing the machine for daily work. Built-in antennas also reduce the possibility of damage or hitting surrounding structures.





Photo may include optional equipment

IMC monitor

The machine is fitted with a 10.1-inch IMC monitor that provides optimal visibility and enables intuitive, user-friendly operations. The IMC monitor features a high-definition, lightweight, and tall, stylish design.



1. Direction indicator
2. Current time
3. GNSS-related icons
4. Shortcut bar
5. Data bar
6. Light bar
7. Settings bar
8. Design surface offset
9. Menu bar

The dashboard contains the frequently used functions and can be operated intuitively.

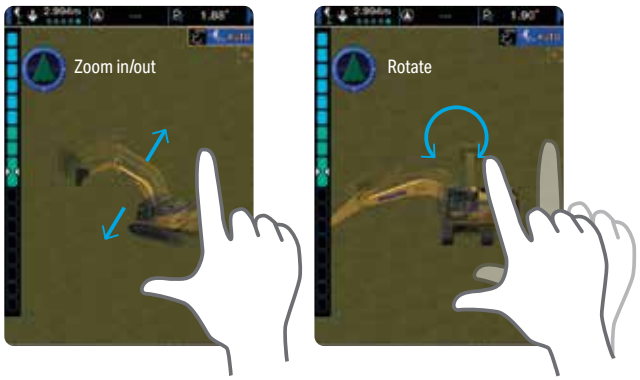








The advanced touch displays make it easy to view data in different ways, similar to finger motions commonly used on smartphones.



Work smarter with the PC220LCi-12 and Smart Construction

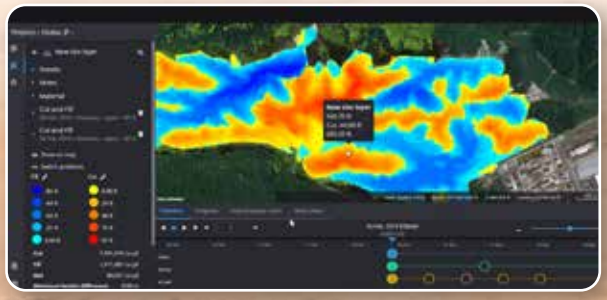
The Smart Construction collection of construction software and hardware solutions is designed to make your hard work easier.

Smart Construction Dashboard

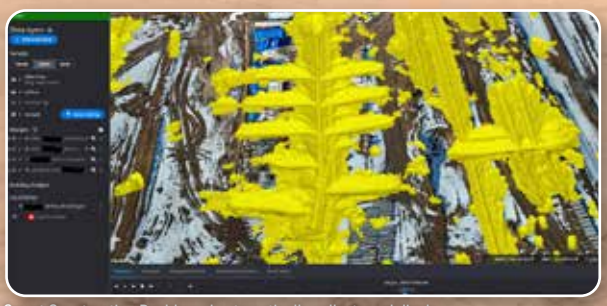
This powerful software is the hub for your site's 3D digital twin, fed by design files, drone aerial mapping data and machine as-built data. The PC220LCi-12 feeds its as-built into dashboard automatically with IMC 3.0. Smart Construction Dashboard can help you:

- Enhance planning and execution with 3D visualizations and aerial maps of your site
- Improve visibility and communication between departments and stakeholders with centralized information
- Minimize project overruns with progress updates and performance metrics
- Precisely manage inventory with precise stockpile measurements
- Optimize equipment allocation with near real-time tracking and monitoring

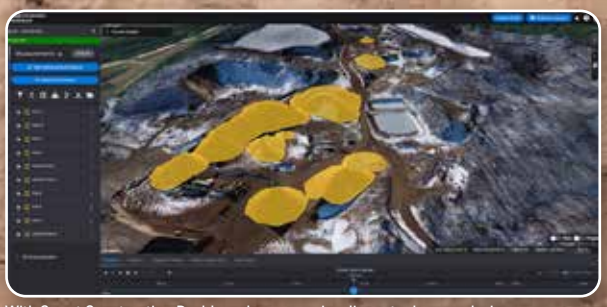
Smart Construction Dashboard



Use Smart Construction Dashboard to quantify site progress.



Smart Construction Dashboard automatically collects and displays as-built data from IMC and other connected machines.



With Smart Construction Dashboard, you can visualize actual versus design and measure volumes with just a few clicks.

Smart Construction Fleet Lite

Smart Construction Fleet Lite works with the PC220LCi-12 standard payload meter to track and report load counts for progress tracking and billing.

Smart Construction Fleet



Smart Construction Remote

Save time by sending and updating design plans wirelessly, even when the machine is offline. No more driving to sites with a USB key. Shared screen control enables you to view machine screens remotely, to troubleshoot with an operator from home, office or another job site. It also assists fleet managers in locating machines.

Smart Construction Remote



Smart Construction technologies facilitate your 3D GPS site

Smart Construction 3D Machine Guidance adds operator guidance and as-built data collection to non-IMC excavators, including non-Komatsu brands.

Smart Construction 3D Machine Guidance Flex adds as-built data collection and operator guidance to almost any site vehicle, such as a scraper or supervisor truck.

Smart Construction Drone is a commercial drone for acquiring aerial mapping data.

Komatsu Base/Rover functions as an RTK base station or RTK rover.

All these technologies work seamlessly with Smart Construction Dashboard.

Make project management and data collection easier

Managing complex construction projects and all their worker data, then using it to make decisions is challenging. **Smart Construction Field** and **Smart Construction Office** are designed to help.

Smart Construction Field is a smart device application and web site to track construction project hours, costs and materials — without paper. It includes machine inspections, weather alerts and more.

Smart Construction Office is advanced project management software specifically designed for the construction industry. Its AI-powered assistant constantly evaluates your progress versus plan and alerts you to issues.

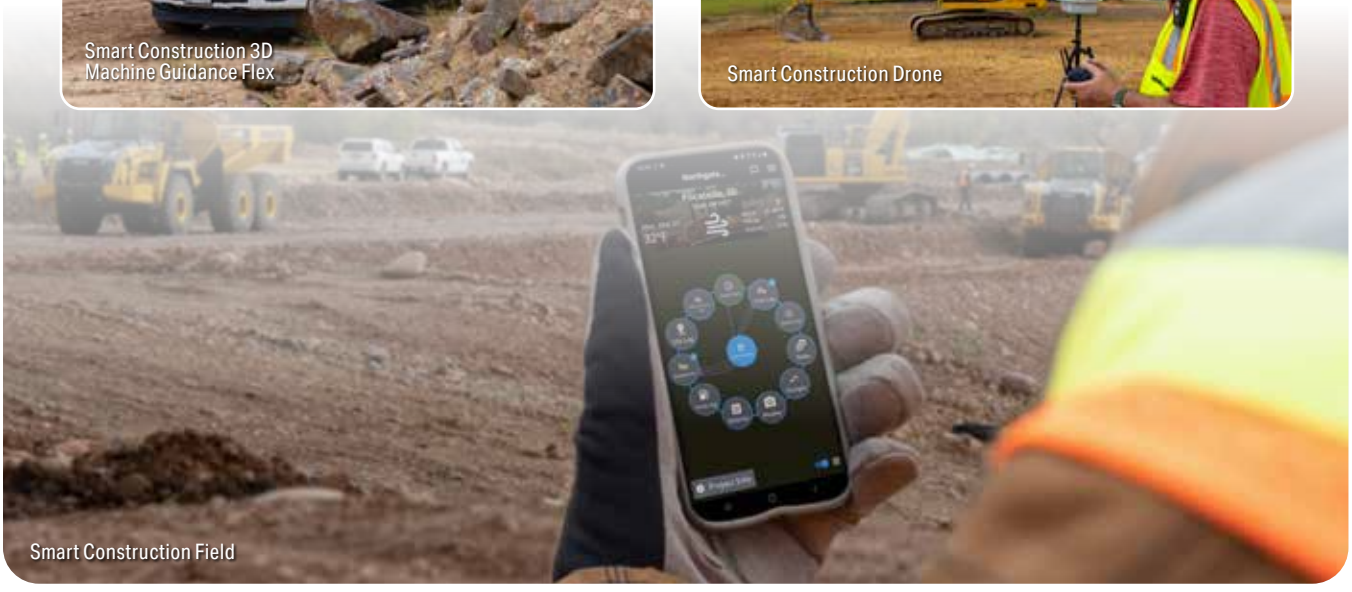
Connect the data from **Smart Construction Field** to **Smart Construction Office** and you can see powerful progress and budget vs. cost insights in near-real time.



Smart Construction 3D Machine Guidance Flex



Smart Construction Drone



Smart Construction Field

Get the most out of your fleet with My Komatsu

We've designed a portal that makes it easy to collect, visualize and monitor data for both Komatsu machines and other OEM machines. My Komatsu also gives you one easy source for accessing manuals and purchasing parts for your machines.

- Quickly collect, view and manage intuitive data displays in one location
- Help keep costs under control
- Benchmark machine performance and track fuel consumption
- Monitor for theft and unauthorized use
- Receive timely maintenance alerts



My Komatsu, our comprehensive portal, analyzes telematics data from your on-machine technology — Komtrax, Komtrax Plus or from other OEMs — and displays it on easy-to-read dashboards. Now you can get the powerful analytics you need to manage your costs and enhance your fleet's efficiency without a complicated process or expensive third-party solutions.



Data
Telematics data is generated by on-machine technology.



Storage
Telematics data flows into data storage. ISO 15143-3 (AEMP 2.0) facilitates the extraction and raw data to your choice of databases.



Connection
Choose how you want to connect and view your data. Go to multiple systems, send to a third party or easily connect it all through My Komatsu.



Analytics
My Komatsu connects telematics data from Komatsu and non-Komatsu equipment and creates powerful analytics dashboard views.

mykomatsu.komatsu

With you from purchase through training and maintenance

Komatsu maintenance and repair programs

Get the service and repairs you need your way. Komatsu offers a tiered maintenance and repair program that simplifies the upkeep of your machine to help control operating costs and get the most from your equipment. Manage your active coverage programs through the My Komatsu customer interface and take advantage of attractive financing options.

- Solutions that fit your needs and ease your mind
- Fixed maintenance and repair costs for the life of the contract
- National coverage

Komatsu Care Complimentary
Complimentary maintenance

Our complimentary scheduled maintenance program for the first 36 months or 1,500 hours, whichever occurs first.

Komatsu Care Plus
Extended maintenance

A continuation of the Komatsu Care program. Along with regularly scheduled maintenance and national distributor coverage, you get a variety of added benefits.

Komatsu Care Plus II
Extended maintenance and repair

Everything in the Komatsu Care Plus program bundled with comprehensive repair coverage for qualifying repairs.

Komatsu Care Plus III
Extended maintenance, repair and consumables

A comprehensive program that simplifies your equipment's total cost of ownership with a fixed cost per hour for qualifying repairs and replacements.

Komatsu Care Advantage Warranty
Extended warranty

Protect your equipment in the event a covered component fails due to a defect in material or workmanship. Repairs are performed by Komatsu-trained experts using Komatsu genuine parts.

komatsu.com/maintenance-repair

Komatsu Financial

Financing can be a major advantage for your operation, enabling you to get the equipment and service you need with terms to fit your business needs. Komatsu Financial offers services built for your business success.

komatsu.com/financing

Komatsu Genuine Parts

Engineered to help extend the life of your Komatsu machine. Now available on the My Komatsu parts store.

komatsu.com/parts

Komatsu training

Comprehensive training support — virtually, at our facility or where most convenient.

komatsu.com/training





Specifications

Engine

Model	Komatsu SAA4D107E-5*
Type	Water-cooled, 4-cycle, direct injection
Aspiration	Turbocharged, aftercooled
Number of cylinders	4
Bore	4.21" (107 mm)
Stroke	4.88" (124 mm)
Piston displacement	272.17 in^3 (4.46 L)
Horsepower:	
SAE J1995	173 HP (129 kW)
ISO 14396	173 HP (129 kW)
ISO 9249 / SAE J1349*	172 HP (129 kW)
Rated rpm	2,000 rpm
Fan drive method for radiator cooling	Mechanical
Governor	All-speed, electronic

* U.S. EPA Tier 4 Final and EU Stage 5 emissions certified.

Hydraulic system

Type	EHS (Electric and Hydraulic System) with closed center load sensing (CLSS) and engine sensing with variable speed match
Number of selectable working modes	4
Main pump:	
Type	Variable displacement piston type
Pumps for	Boom, arm, bucket, swing, and travel circuits
Maximum flow	133.1 gal/min (504 L/min)
Supply for control circuit	Self-reducing valve
Hydraulic motors:	
Travel	2 x axial piston motors with parking brake
Swing	1 x axial piston motor with swing holding brake
Relief valve setting:	
Implement circuits	5,400 psi (37.3 MPa 380 kgf/cm^2)
Travel circuit	5,400 psi (37.3 MPa 380 kgf/cm^2)
Swing circuit	4,190 psi (28.9 MPa 295 kgf/cm^2)
Pilot circuit	470 psi (3.2 MPa 33 kgf/cm^2)
Hydraulic cylinders: (number of cylinders – bore x stroke x rod diameter)	
Boom	2 – 5.1" x 52.7" x 3.5" (2 – 130 mm x 1,335 mm x 90 mm)
Arm	1 – 5.5" x 58.7" x 3.9" (1 – 140 mm x 1,490 mm x 100 mm)
Bucket	1 – 4.7" x 43.9" x 3.4" (1 – 120 mm x 1,114 mm x 85 mm)

Swing system

Drive method	Hydrostatic
Swing reduction	Planetary gear
Swing circle lubrication	Grease-bathed
Service brake	Hydraulic lock
Holding brake/swing lock	Mechanical disc brake
Swing speed	12.4 rpm

Drives and brakes

Steering control		Joystick thumb rollers or two levers with pedals
Drive method		Hydrostatic
Maximum drawbar pull		45,415 lbf (202 kN 20,600 kgf)
Reduction system		Planetary gear triple reduction
Gradeability		70%, 35°
Maximum travel speed:	High	3.4 mph (5.5 km/h)
(Auto-shift)	Mid	2.6 mph (4.1 km/h)
(Auto-shift)	Low	1.9 mph (3.0 km/h)
Service brake		Hydraulic lock
Parking brake		Mechanical disc brake

Undercarriage

Center frame	X-frame
Track frame	Box-section
Seal of track	Sealed track
Track adjuster	Hydraulic
Number of shoes (each side)	49
Number of carrier rollers	2 each side
Number of track rollers (each side)	9

Coolant and lubricant capacity (refilling)

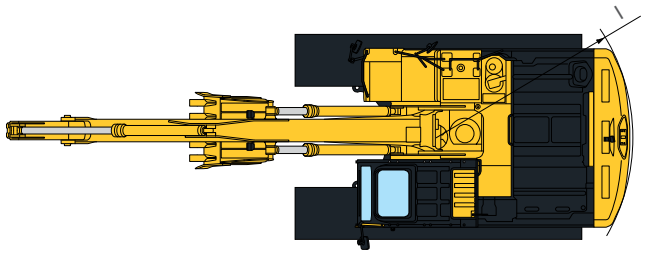
Fuel tank	92.5 U.S. gal (350 L)
Coolant	7.6 U.S. gal (28.2 L)
Engine	4.8 U.S. gal (18.0 L)
Final drive, each side	1.1 U.S. gal (4.1 L)
Swing drive	1.7 U.S. gal (6.5 L)
Hydraulic tank	31.4 U.S. gal (119 L)
DEF tank	16.6 U.S. gal (62.9 L)

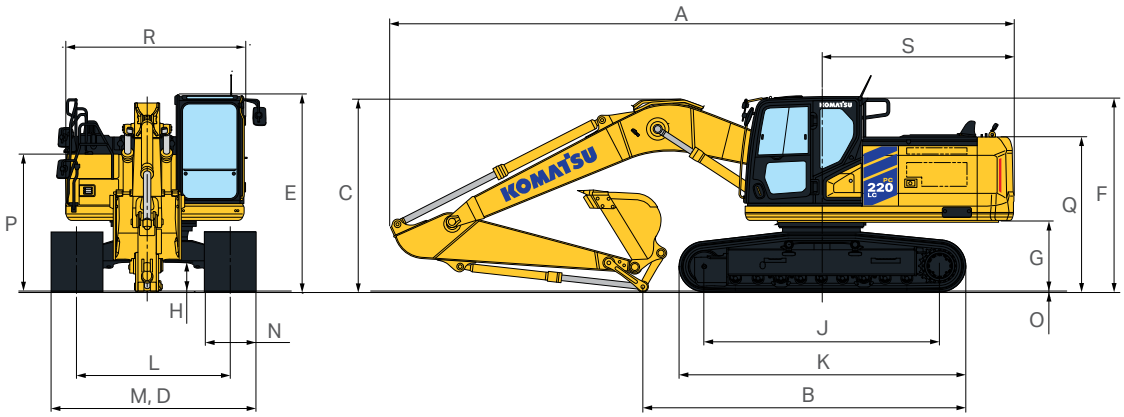
Operating weight (approximate)

Operating weight including 5,700 mm one-piece boom, 2,925 mm arm, heaped 0.8 m^3 bucket, rated capacity of lubricants, coolant, full fuel tank, operator and standard equipment.

Shoes	PC220LC-12		PC220LCi-12	
	Operating weight	Ground pressure	Operating weight	Ground pressure
27.6" (700 mm)	53,352 lb (24,200 kg)	6.3 psi (43 kPa 0.44 kgf/cm^2)	53,352 lb (24,200 kg)	6.3 psi (43 kPa 0.44 kgf/cm^2)
31.5" (800 mm)	54,013 lb (24,500 kg)	5.6 psi (38 kPa 0.39 kgf/cm^2)	54,013 lb (24,500 kg)	5.6 psi (38 kPa 0.39 kgf/cm^2)
35.4" (900 mm)	54,675 lb (24,800 kg)	5 psi (34 kPa 0.35 kgf/cm^2)	54,675 lb (24,800 kg)	5 psi (34 kPa 0.35 kgf/cm^2)

Dimensions





Machine dimensions

	Arm length	9′ 7″ (2,925 mm)
A	Overall length	31′ 9.5″ (9,690 mm)
B	Length on ground (transport)	16′ 5″ (5,000 mm)
C	Overall height (to top of boom)*	9′ 10″ (2,995 mm)
D	Overall width	10′ 5″ (3,180 mm)
E	Overall height (to top of cab)*	10′ .5″ (3,060 mm)
F	Overall height (to top of handrail)*	9′ 10″ (3,000 mm)
G	Ground clearance, counterweight	3′ 7″ (1,085 mm)
H	Ground clearance (minimum)	1′ 5″ (440 mm)
I	Tail swing radius	9′ 11″ (3,020 mm)

J	Track length on ground	12′ (3,655 mm)
K	Track length	14′ 7″ (4,450 mm)
L	Track gauge	7′ 10″ (2,380 mm)
M	Width of crawler	10′ 5″ (3,180 mm)
N	Shoe width	2′ 7.5″ (800 mm)
O	Grouser height	1″ (26 mm)
P	Machine cab height	6′ 11″ (2,115 mm)
Q	Machine height to top of engine cover	7′ 11″ (2,420 mm)
R	Machine upper width	9′ 3″ (2,810 mm)
S	Distance, swing center to rear end	9′ 9″ (2,975 mm)

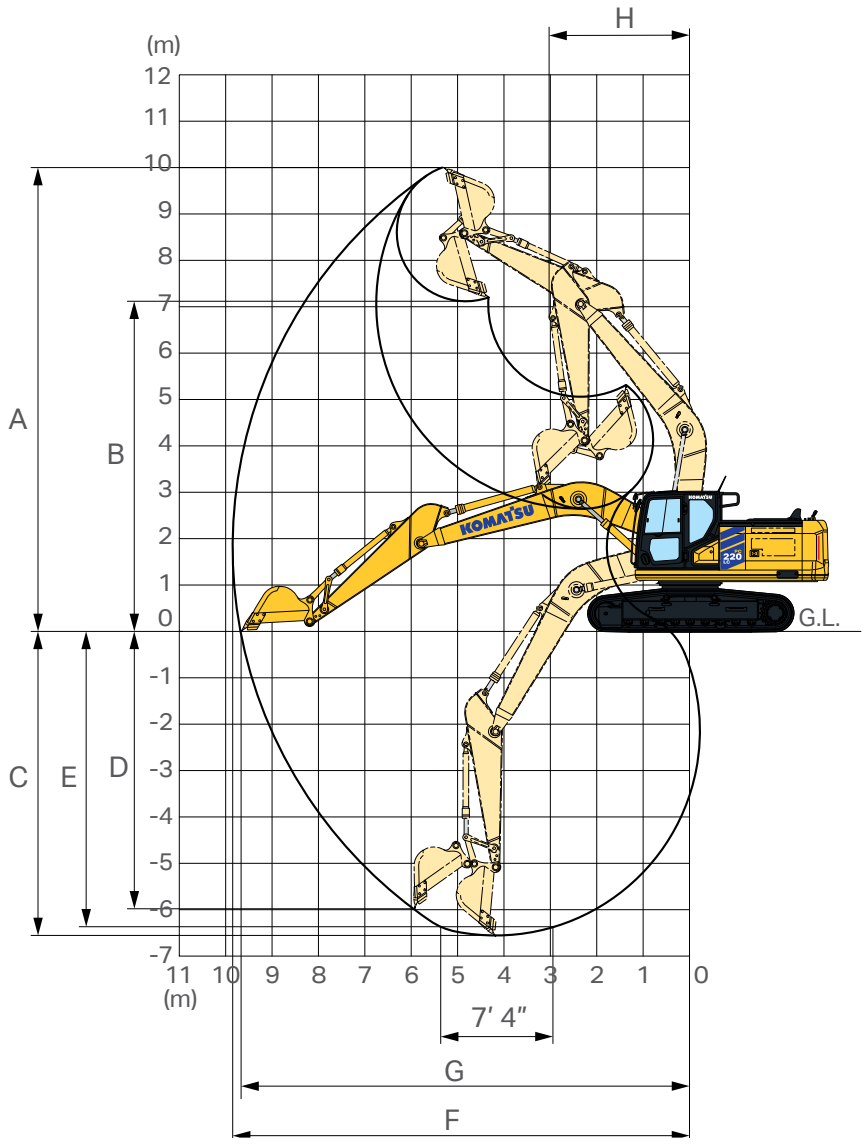
*: Including grouser height

Backhoe bucket, arm and boom combination

Bucket capacity	Width		Weight	Number of teeth	Arm length
	Without side cutters	With side cutters	With side cutters		9′ 7″ (2.92 m)
1.02 yd³ (0.78 m³)	29.44″ (748 mm)	31.5″ (800 mm)	1,998 lbs. (906 kg)	4	○
1.29 yd³ (0.99 m³)	35.44″ (900 mm)	37.5″ (952 mm)	2,308 lbs. (1,047 kg)	5	○
1.57 yd³ (1.2 m³)	41.44″ (1,053 mm)	43.5″ (1,105 mm)	2,523 lbs. (1,144 kg)	5	○
1.85 yd³ (1.41 m³)	47.44″ (1,205 mm)	49.5″ (1,257 mm)	2,740 lbs. (1,243 kg)	5	○

○: General purpose use, density up to 2,600 lbs/yd³ (1,800 kg/m³)
●: Light duty work, density up to 1,730 lbs/yd³ (1,200 kg/m³)

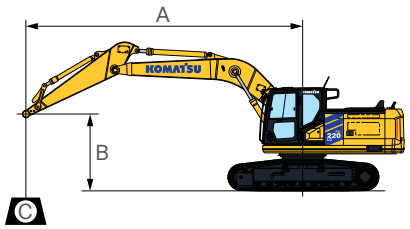
Working range



Working range

Arm length		9' 7" (2,925 mm)
A	Max. digging height	32' 10" (10,000 mm)
B	Max. dumping height	23' 4" (7,110 mm)
C	Max. digging depth	21' 9" (6,620 mm)
D	Max. vertical wall digging depth	19' 7" (5,980 mm)
E	Max. digging depth of cut for 2,440 mm level	20' 11" (6,370 mm)
F	Max. digging reach	32' 5" (9,875 mm)
G	Max. digging reach at ground level	31' 10" (9,700 mm)
H	Min. swing radius	10' 1" (3,065 mm)
ISO 6015 rating	Bucket digging force at power max.	35,715 lbf (159 kN 16,200 kgf)
	Arm crowd force at power max.	26,015 lbf (116 kN 11,800 kgf)

Lifting capacity with lifting mode



A: Reach from swing center
B: Arm top pin height
C: Lifting capacity
Cf: Rating over front
Cs: Rating over side
: Rating at maximum reach

Conditions:
- 18′ 8″ (5,700 mm) one-piece boom

Lifting capacity

Arm: 9′ 7″ (2,925 mm) without bucket Shoe: 31.5″ (800 mm) triple grouser

A	MAX		**25′** (7.6 m)		**20′** (6.1 m)		**15′** (4.6 m)		**10′** (3.0 m)		**5′** (1.5 m)	
B	Radius	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs
25′ (7.6 m)	**20′** (6.0 m)	* **8,800 lb** * 4,000 kg	* **8,800 lb** * 4,000 kg										
20′ (6.1 m)	**24′** (7.2 m)	* **8,150 lb** * 3,700 kg	* **8,150 lb** * 3,700 kg										
15′ (4.6 m)	**26′** (7.9 m)	* **8,050 lb** * 3,650 kg	* **8,050 lb** * 3,650 kg	* **11,450 lb** * 5,200 kg	**9,600 lb** 4,350 kg	* **15,000 lb** * 6,800 kg	**13,650 lb** 6,200 kg	* **16,750 lb** * 7,600 kg	* **16,750 lb** * 7,600 kg				
10′ (3.0 m)	**27′** (8.3 m)	* **8,400 lb** * 3,800 kg	**8,250 lb** 3,750 kg	**14,100 lb** 6,400 kg	**9,350 lb** 4,250 kg	* **17,200 lb** * 7,800 kg	**13,100 lb** 5,950 kg	* **21,850 lb** * 9,900 kg	**19,950 lb** 9,050 kg	* **30,100 lb** * 13,650 kg	* **30,100 lb** * 13,650 kg		
5′ (1.5 m)	**28′** (8.4 m)	* **9,050 lb** * 4,100 kg	**8,050 lb** 3,650 kg	**13,800 lb** 6,250 kg	**9,150 lb** 4,150 kg	**19,300 lb** 8,750 kg	**12,550 lb** 5,700 kg	* **16,550 lb** * 12,050 kg	**18,750 lb** 8,500 kg				
0′ (0 m)	**27′** (8.1 m)	* **10,150 lb** * 4,600 kg	**8,150 lb** 3,700 kg	**13,550 lb** 6,150 kg	**8,950 lb** 4,050 kg	**18,850 lb** 8,550 kg	**12,150 lb** 5,500 kg	* **29,200 lb** * 13,250 kg	**18,100 lb** 8,200 kg	* **17,200 lb** * 7,800 kg	* **17,200 lb** * 7,800 kg		
-5′ (-1.5 m)	**25′** (7.6 m)	* **12,250 lb** * 5,550 kg	**8,800 lb** 4,000 kg	* **12,700 lb** * 5,750 kg	**8,950 lb** 4,050 kg	**18,650 lb** 8,450 kg	**11,900 lb** 5,400 kg	**29,450 lb** 13,350 kg	**17,850 lb** 8,100 kg	* **28,000 lb** * 12,700 kg	* **28,000 lb** * 12,700 kg	* **17,400 lb** * 7,900 kg	* **17,400 lb** * 7,900 kg
-10′ (-3.0 m)	**22′** (6.7 m)	**16,200 lb** 7,350 kg	**10,600 lb** 4,800 kg			**18,750 lb** 8,500 kg	**12,000 lb** 5,450 kg	* **27,800 lb** * 12,600 kg	**18,100 lb** 8,200 kg	* **39,450 lb** * 17,900 kg	**34,700 lb** 15,750 kg	* **28,650 lb** * 13,000 kg	* **28,650 lb** * 13,000 kg
-15′ (-4.6 m)	**17′** (5.3 m)	* **18,500 lb** * 8,400 kg	**15,200 lb** 6,900 kg					* **22,250 lb** * 10,100 kg	**18,500 lb** 8,400 kg	* **31,550 lb** * 14,300 kg	* **31,500 lb** * 14,300 kg		

*: Load is limited by hydraulic capacity rather than tipping. Ratings are based on ISO 10567.
Rated loads do not exceed 87% of hydraulic lift capacity or 75% of tipping load.

Equipment

Functions and hydraulic system

Dial type fuel control	●
Auto-decelerator	●
Swing lock switch	●
Working mode selector	●
Three-gear travel	●
Travel automatic gear shift	●
Auto idle stop	●

Safety devices

ROPS cab (compliant with ISO 12117-2)	●
Keyless start	●
Engine shutdown secondary switch	●
Battery disconnect switch	●
Cab rear window for emergency escape	●
Emergency escape hammer	●
Large movable side view mirror (left and right) and side confirmation mirror	●
LED working lamp (left and right boom, front right of the cab, rear of machine)	●
LED headlamp (two on cab)	●
KomVision (human/object avoidance)	●
Oil pressure lock lever	●
Retractable seat belt	●
Handrail	●
Anti-slip plate	●
Thermal guard	●
Full cover fan guard	●
Firewall divider	●
Travel alarm (with on/off switch function)	●
Reflector	●

Fitted inside the operator cab

Large damper-mounted pressurized cab	●
Air suspension seat	●
High definition 8 inch touch panel monitor	●
Large-capacity, fully automatic air conditioner with fresh air intake	●
Defroster	●
Room light	●
Drink box	●
Front window sunroller blind	●
Luggage box	●
Magazine rack	●
USB charging terminal	●
Cup holder	●
Remote intermittent wiper (with washer)	●
Multi functional audio	●
Washable floor mat	●
Footrest	●
Travel pedal with wing	●
12 V accessory power supply	●
Openable polycarbonate roof window	●

Other equipment

Air cleaner double element	●
Cab guard - Full front guard OPG level 2 (ISO 10262)	○
Cab guard - Bolt-on top guard OPG level 2 (ISO 10262)	○
Cab guard - Half front guard	○
Deck guard	●
Fire extinguisher	○
Handrail (rear of the cab)	●
High efficiency fuel filter	●
Hydraulic oil filter	●
In-line filter	○
Komtrax	●
Lockout, tagout	●
Radiator dustproof net	●
Revolving lamp for auto-stop system indication	○
Seat belt reminder revolving lamp	○
Track frame full roller guard	○
Track frame undercover	○
V-shaped fin radiator	●

Standard equipment	●
Optional equipment	○

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