

KOMATSU

PC20E-6



Mini-excavator

ELECTRIC

Motor power
11.8 kW

Operating weight
2190 kg

Bucket capacity
0.02 - 0.03 m³

PC20E-6



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Bucket capacity
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Industry leading characteristics providing unrivalled customer value

Powerful electric system

- Electric Komatsu powertrain
- 11.8 kW Komatsu electric motor
- 23.2 kWh Komatsu battery pack
- Long life battery design
- Fast battery charge (20 to 100%) in 1.8 h with external DC charger (400 V)
- Standard battery charge in 6.2 h with on-board AC charger (230 V)
- High voltage (76.8 V) architecture
- Conventional tail design for maximum stability

Environmentally friendly

- Zero local emissions
- Optimal for indoor use or to work outside of standard working hours
- Participate in low-carbon projects
- Support customers' environmental obligations
- Significantly lower noise and vibration levels (vs. PC20R-5)
- CO₂ reduction equivalent of its own weight (vs. PC20R-5 over 1 year)

Total versatility

- On-board 230 V AC charger and off-board 400 V fast charger option
- Proportional control for attachments
- Adjustable attachment oil flow
- Possibility to use market compatible hydraulic attachments



On-board 230 V AC charger

First-class comfort

- Premium comfort operator seat
- Multi-function monitor with redesigned interface for electric excavators
- Charging status information at a glance
- Machine controls are same as Internal Combustion Engine machines (ICE) and offer familiar working behaviour

Safety first

- Heavy-duty, protected electric components
- High-safety LFP lithium battery design
- ROPS (ISO 3471) / OPG (ISO 10262) level 1 canopy
- LED working lamps
- Dual lock system for PPC controls
- Secondary engine shutdown switch
- Seat belt caution indicator
- ID key (starter key with registered ID)

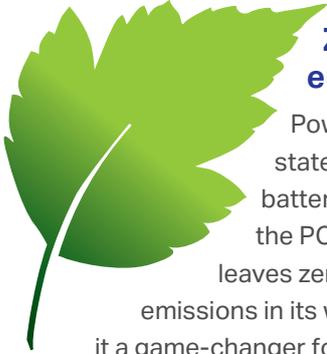
Easy maintenance

- Air cooled maintenance-free electric motor and inverter
- Reduced daily check and periodical maintenance items
- Komatsu E-support programme
- New electric powertrain components with a 5 years warranty

Komtrax

- Komatsu Wireless Monitoring System
- 4G mobile communications
- Includes battery status, charging, power consumption information

Environmentally friendly electric system



Zero emissions

Powered by state-of-the-art battery technology the PC20E-6 leaves zero local emissions in its wake, making it a game-changer for workers nearby and the surrounding environment. From indoor projects to bustling urban areas and landscaping endeavors, the almost noiseless PC20E-6 offers a solution that harmonizes with densely populated spaces, where emissions and noise pollution are paramount concerns. Incorporating this machine into your fleet is also opening the door to lucrative business opportunities. Clients today are increasingly prioritizing environmental sustainability, and the PC20E-6 empowers you to meet their eco-conscious demands.

23.2 kWh battery pack

The PC20E-6 boasts long-lasting lithium-ion batteries, ensuring minimal self-discharge and enduring charge cycles. Swift top-up charges during breaks enable uninterrupted operation, while maintenance-free batteries simplify upkeep. A vigilant battery management system provides real-time monitoring. Should power dwindle mid-operation, the display alerts the operator through a caution and prompts recharging via an alarm and output constraints. Additionally, the system safeguards against over-discharge and battery wear by monitoring and regulating temperature.

Charge everywhere

The PC20E-6 features a standard 3 kW onboard charger with a 'Type 2' connector and a fast charging option via an external DC charger. The onboard AC charger provides standard charging at 230V, while the external DC charger enables fast 400 V battery charging in just 1.8 hours. For even greater flexibility, a smart cable charging set is optionally available. Enhanced safety features include a locking mechanism that prevents accidental disconnection during charging. The operator can conveniently monitor the charging progress and access charger details on the user-friendly monitor screen.





Total versatility



Jobsite flexibility

The narrow machine width, combined with the hydraulically adjustable undercarriage, offers maximum versatility in terms of size and stability.



High lifting capacity

The PC20E-6 delivers all the power and digging speed you are used to from its Diesel counterpart. On top of this, the battery pack acts like an additional counterweight and boosts the lifting capacity over side.



3 working modes

Depending on the load, operators can conveniently choose between 3 working modes designed to match the type of work with energy-saving operation.

First-class comfort

Perfect operator convenience

The suspended operator seat provides excellent comfort. Fully adjustable proportional controls are fitted as standard for ergonomic, safe and precise operation of attachments. They are easy to use and the same as on conventional models. The automatic travel speed shift function allows smooth and efficient operation. Details like a 12-volt power port and a cup holder round off operator convenience.



Multi-function monitor with redesigned interface for electric excavators

A high-definition 3.5-inch LCD monitor provides excellent visibility. The high-definition LCD panel is less affected by the viewing angle and surrounding brightness, ensuring excellent visibility. The monitor is specially designed to assist the operator in the use of an electric machine. Information such as battery charge, current power consumption and energy saving tips are displayed. A multitude of other energy-related status data are also provided.



Battery status and instantaneous power consumption (ECO gauge)

Displays the power consumed in the last three seconds and serves as a guide for energy-saving operation.



Operating modes

Easily select the operating modes according to the type of work.



Power consumption history

Check the power consumption history for the last 12 hours or one week.



Battery charging

The charging process starts automatically when the charging cable is connected to the machine.

Information & communication technology



Knowledge

You get quick answers to basic and critical questions about your machines – what they're doing, when they did it, where they're located, how they can be used more efficiently and when they need to be serviced. Performance data is relayed by wireless communication technology (satellite, GPRS or 4G depending on model) from the machine to a computer and to the local Komatsu distributor – who's readily available for expert analysis and feedback.

Convenience

Komtrax enables convenient fleet management on the web, wherever you are. Data is analysed and packaged specifically for effortless and intuitive viewing in maps, lists, graphs and charts. You can foresee eventual maintenance issues and required spare parts, and troubleshoot a problem before Komatsu technicians arrive on site.



The way to higher productivity

Komtrax uses the latest wireless monitoring technology. Compatible on PC, smartphone or tablet, it delivers insightful and cost saving information about your fleet and equipment, and offers a wealth of information to facilitate peak machine performance. By creating a tightly integrated web of support it allows proactive and preventive maintenance and helps to efficiently run a business.

Power

The detailed information that Komtrax puts at your fingertips 24 hours a day, 7 days a week gives the power to make better daily and long-term strategic decisions – at no extra cost. Problems can be anticipated, maintenance schedules customised, downtime minimised and machines kept where they belong: working on the jobsite.



Easy maintenance



Major reductions in daily inspections and regular maintenance

No inspection items for the engine or fuel means a major reduction in daily inspection and regular maintenance items. The air-cooled electric motor removes the need for coolant inspection and refilling in daily and regular inspections. Maintenance work can be done with peace of mind without worrying about oil and water leaks.

Complete separation of areas for daily inspection and high-voltage area

The daily inspection areas and the high-voltage area are completely separate, with the latter concentrated in the rear of the body. Carry out daily inspections safely without worrying about high-voltage power sources.

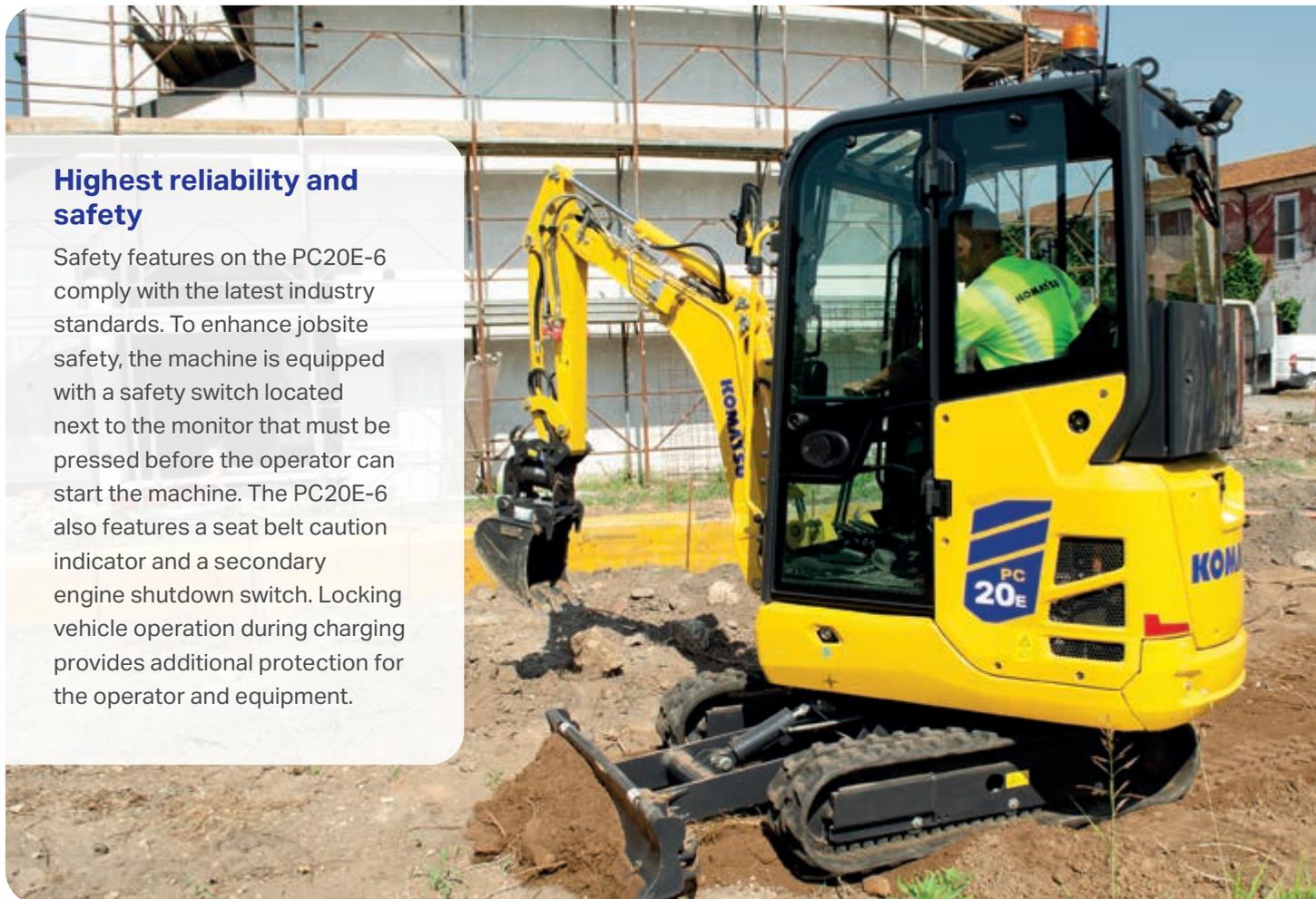
Komatsu E-support programme

E-Support is a support programme that comes as standard with your new Komatsu electric mini excavator. It covers three elements: Factory-scheduled maintenance, performed with Komatsu genuine parts by Komatsu trained technician, and additional warranty on the machine and component warranty for selected electric powertrain components. Please contact your local Komatsu distributor for terms and condition.

Safety first

Highest reliability and safety

Safety features on the PC20E-6 comply with the latest industry standards. To enhance jobsite safety, the machine is equipped with a safety switch located next to the monitor that must be pressed before the operator can start the machine. The PC20E-6 also features a seat belt caution indicator and a secondary engine shutdown switch. Locking vehicle operation during charging provides additional protection for the operator and equipment.



Main battery power switch

The easily accessible main battery power switch inside the cab further enhances safety



Safe and proven electrical components

The electric system of the PC20E-6 features heavy-duty, protected, and vibration-proof components, along with a high-safety LFP lithium battery design, ensuring reliability and safety.



ID key

The motor will not start if the key is not registered to the machine, reducing the risk of machine theft.

Specifications

Electric system

System voltage	76.8 V
Battery	
Type	Komatsu Lithium-ion battery pack LFP (Lithium Iron Phosphate) technology
Capacity	23.2 kWh
Charger (external) input	400 V (CEE 32 A)
Charger (on-board) input	230 V

Electric motor

Type	Permanent magnet
Motor power	
at rated motor speed	11.8 kW
max. torque / motor speed	43.7 Nm / 1800 rpm

Battery charger

Type	External DC charger
Input current	32 A
Input voltage	400 V
Input plug type	CEE 32 A
Dimensions (W × H × D)	914 x 825 x 870 without transport cart
Weight	140 kg (incl. 3 m cable) 175 kg (incl. 3 m cable and cart)

Hydraulic system

Type	Komatsu CLSS
Main pumps	1 × variable displacement pump 1 × gear pump
Max. pump flow	36 l/min
Max. operating pressure	21.0 MPa (210 bar)
Hydraulic motors	
Travel	2 × variable displacement motor
Swing	1 × fixed displacement motor
Hydraulic cylinders (bore × stroke)	
Boom	65 x 475 mm
Arm	55 x 447 mm
Bucket	50 x 378 mm
Boom swing	60 x 292 mm
Blade	65 × 100 mm
Bucket digging force (ISO 6015)	9.9 kN
Arm crowd force (ISO 6015)	6.3 kN

Swing system

The rotation is operated by means of an orbital hydraulic motor. Single ball-bearing ring with internal, induction hardened tooth ring. Centralised lubrication of the unit.

Swing speed	10.5 rpm
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Drives and brakes

Steering control	2 levers with pedals giving full independent control of each track
Drive method	Hydrostatic
Hydraulic motors	2 × axial piston motor
Reduction system	Planetary gear
Max. travel speeds Lo / Hi	2.2 / 4.2 km/h
Max. drawbar pull	1490 daN (1520 kgf)

Undercarriage

Construction	Variable gauge with centre sliding section
Track rollers (each side)	3
Shoe width	230 mm
Ground pressure (standard)	0.34 kg/cm ²

Environment

Engine emissions	Zero
Noise levels (canopy)	
LwA external	88 dB(A) (2000/14/EC Stage II)
LpA operator ear	74 dB(A) (ISO 6396 dynamic test)
Vibration levels (EN 12096:1997)	
Hand/arm	≤ 2.5 m/s ² (uncertainty K = 1.33 m/s ²)
Body	≤ 0.5 m/s ² (uncertainty K = 0.18 m/s ²)

Operating weight (appr.)

Cab	2185 kg
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Operating weight, including rubber shoes, specified work equipment, driver and standard equipment.

Service refill capacities

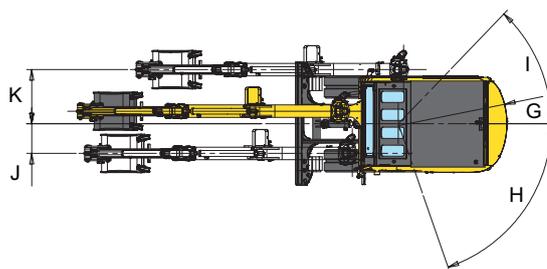
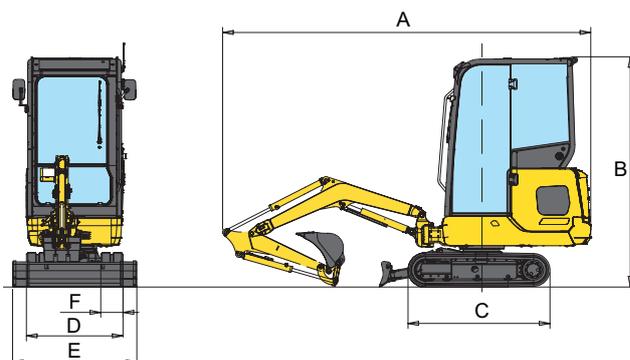
Hydraulic system	23.8 l
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Machine dimensions

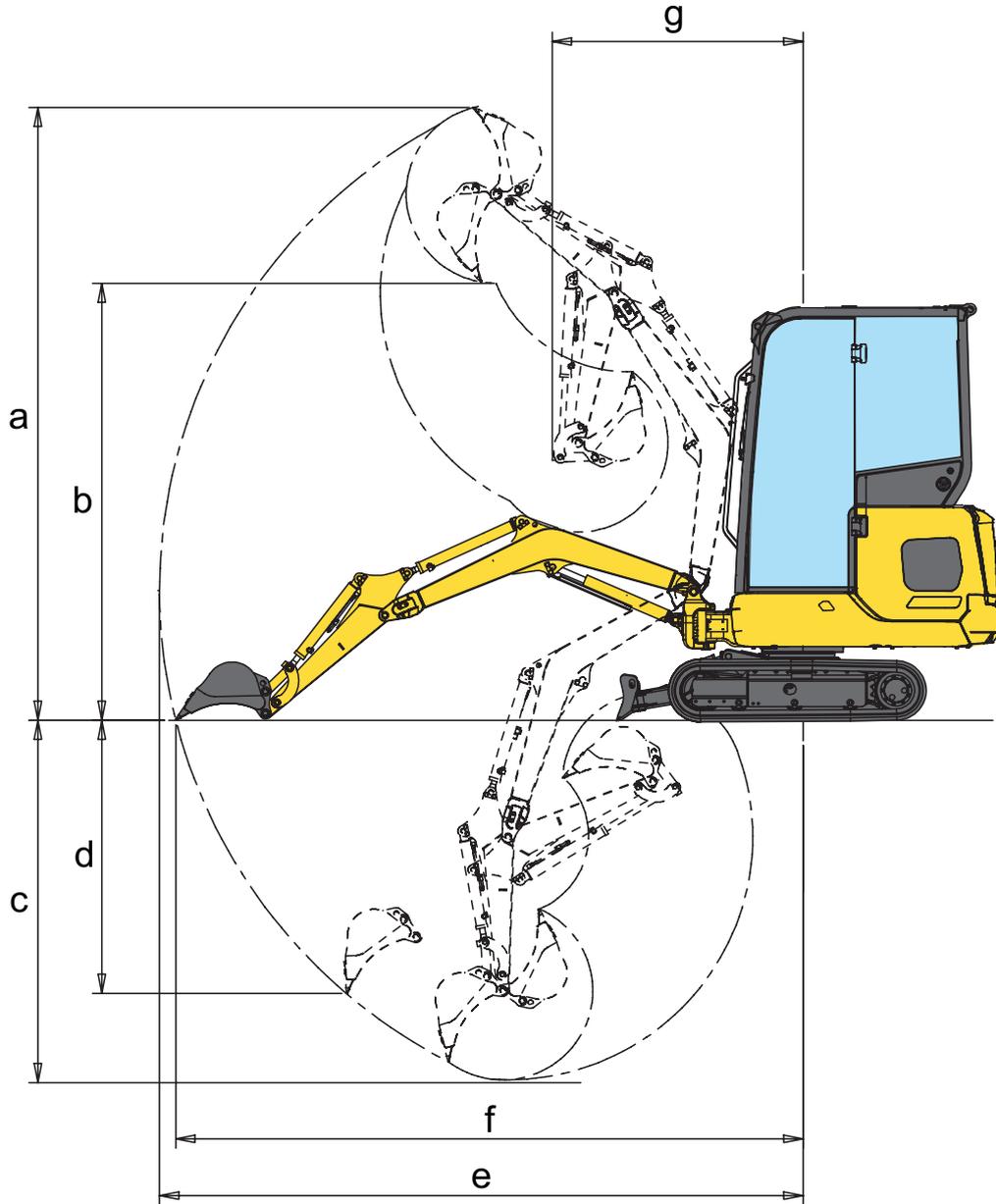
A Overall length	mm	3845
B Overall height	mm	2370
C Track length	mm	1570
D Track gauge (min)	mm	990
E Track gauge (max)	mm	1280
F Shoe width	mm	230
G Tail swing radius	mm	1120
H/I Boom swing angle	°	71 / 46
J Boom offset LH	mm	310
K Boom offset RH	mm	570

Blade

Type	Central welded steel structure with extendable side sections
Width × height	1280 (990) × 250 mm
Blade, max. lifting height	240 mm
Blade, max. digging depth	290 mm



Working range



Working range

Arm length	mm	965	1215
a Max. digging height	mm	3570	3800
b Max. dumping height	mm	2560	2760
c Max. digging depth	mm	2100	2370
d Max. vertical wall digging depth	mm	1685	1980
e Max. digging reach	mm	3830	4100
f Max. digging reach at ground level	mm	3760	4030
g Min. swing radius	mm	1415	1515

Lifting capacity

A Reach from swing centre

B Bucket hook height

Lifting capacities without bucket, blade up

 Rating over front

 Rating over side

 Undercarriage retracted

 Undercarriage extended

Standard arm

Arm length	A	Max.			3.0 m			2.0 m		
	B									
965 mm	3.0 m	*355	*355	*355						
	2.0 m kg	*355	290	*355				*320	*320	*320
	1.0 m kg	*325	230	*325	*370	265	*370	*620	455	*620
	0.0 m kg	*300	235	*300	*340	255	*340	*630	420	610
	-1.0 m	*270	*270	*270				*445	420	*445

Long arm

Arm length	A	Max.			3.0 m			2.0 m		
	B									
1215 mm	3.0 m	*325	*325	*325						
	2.0 m kg	*315	250	*315	*315	275	*315			
	1.0 m kg	*295	215	*295	*355	265	*355	*540	465	*540
	0.0 m kg	*280	215	*280	*355	255	*355	*655	420	615
	-1.0 m	*255	250	*255	*255	250	*255	*495	415	*495

NOTE:

Ratings are based on ISO standard 10567. Rated loads do not exceed 87% of hydraulic lift capacity or 75% of tipping load.

- The values marked with an asterisk (*) are limited by the hydraulic capacities.
- Calculations are based on the machine resting on a uniform and firm surface.
- The lifting point is a hypothetical hook placed behind the bucket.

Standard and optional equipment

Motor

3 phase AC permanent magnet motor	●
Auto-deceleration function	●
Auto idle stop	●
Motor control dial	●

Battery system

Lithium-ion battery 23.2 kWh / 302 Ah	●
On-board AC charger (230 V)	●
Smart charging cable (230 V) with cable box	○
External DC charger (400 V)	○

Hydraulic system

3-working mode selection system	●
Adjustable PPC wrist control levers for arm, boom, bucket and swing, with proportional control for attachments	●
PPC control lever and pedals for steering and travel	●
Hydraulic line for hammer and for 2-way equipment up to boom and arm (HCU-A)	●
Automatic two-speed travel control	●
2nd and 3rd auxiliary hydraulic circuits for Powertilt	○
Preparation for hydraulic quick-coupler single effect	○

Undercarriage

Variable undercarriage (HS version)	●
230 mm rubber shoes	●

Cabin

ROPS (ISO 3471) / OPG (ISO 10262) level 1 cab with heating, skylight, pull-up type front window with locking device, lower window, windscreen-wiper, floor mat	●
Adjustable suspension seat with retractable seat belt	●
Monitor panel 3.5-inch colour display	●
12 Volt power supply	●
USB-A / USB-C power supplies	●
Beverage holder and magazine rack	●
Tinted glass, rear wiper, defroster	●
Radio	○

Service and maintenance

Multi-function video compatible colour monitor with Equipment Management and Monitoring System (EMMS) and efficiency guidance	●
Komatsu E-support programme	●
Battery disconnection switch (inside cab)	●
Battery main switch	●
Komtrax – Komatsu wireless monitoring system (4G)	●

Safety equipment

Electric horn	●
Dual lock system for PPC controls	●
Motor shutdown secondary switch	●
Rear-view mirrors (left and right side)	●
Seat belt caution indicator	●
Travel acoustic alarm	●
ID key (starter key with registered ID)	●
Rotating beacon	●

LED lighting system

Working light on boom	●
Two front working lights on cab	●
Rear working light on cab	●

Work equipment

Blade	●
Boom cylinder protection guard	●
965 mm digging arm	●
1215 mm digging arm	○
Bucket range (250 - 450 mm)	○
1000 mm ditch cleaning bucket	○

Other equipment

Standard colour scheme and decals	●
Parts book and operator manual	●
Change-over valve on bucket cylinder for clamshell bucket utilization	○
Biodegradable oil for hydraulic system	○
Customised paint	○
Special waxing	○
Rear tie down points	○

Further equipment on request

- standard equipment
- optional equipment



A wide range of buckets and attachments is available. Your Komatsu distributor is ready to assist you with the selection of suitable options.

This specification sheet may contain attachments and optional equipment that are not available in your area. Please consult your local Komatsu distributor for those items you may require. Materials and specifications are subject to change without notice.

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