

KOMATSU

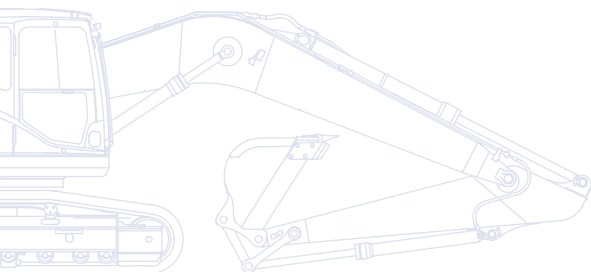
HB
215LC



Hydraulic Excavator

HB215LC-2

Hybrid



ENGINE POWER
110 kW / 148 HP @ 2.000 rpm

OPERATING WEIGHT
22.580 - 23.440 kg

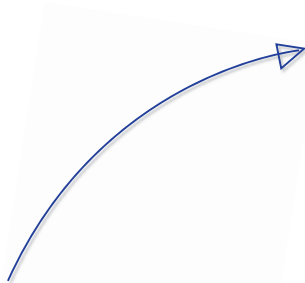
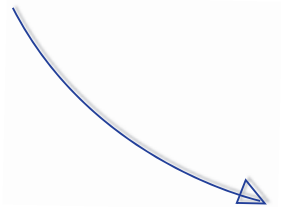
BUCKET CAPACITY
max. 1,68 m³

Walk-Around

The Komatsu HB215LC-2 third-generation Hybrid excavator is a product of patented Komatsu technology – and of more than 90 years experience in construction manufacturing. Dependable and durable Komatsu components harness free kinetic energy, convert it to electricity for a powerful and quiet performance and help to reduce your carbon footprint and fuel consumption by up to 40%. Enjoy a new work experience with the most reliable and technologically advanced excavator in the industry today. HB215LC-2: it makes a difference.

Powerful and environmentally friendly

- Low consumption EU Stage IIIB engine
- Fuel-saving hydraulic technology
- Adjustable Eco-gauge and idle caution
- Reduced wastage
- 100% passive regeneration and requires no DPF



Total versatility

- Ideal for a wide range of applications
- 6 working modes
- Built-in versatility
- Improved stability and lift capacity
- Exceptionally Eco-friendly



Complimentary maintenance program for customers



Komatsu Wireless Monitoring System

HB215LC-2

Fuel consumption

Based on typical work pattern collected via KOMTRAX™

Reduced by **30% / 20% / 5%**
(vs. PC210-8) (vs. PC210-10) (vs. HB215LC-1)

ENGINE POWER
110 kW / 148 HP @ 2.000 rpm

OPERATING WEIGHT
22.580 - 23.440 kg

BUCKET CAPACITY
max. 1,68 m³

First-class operator comfort

- Wide, spacious cab
- Low noise design, low vibration levels
- Pressurised cab
- Large, widescreen TFT monitor panel
- Joysticks with proportional control button for attachments

Hybrid

Improved Komatsu Hybrid System

- Third generation proven technology
- Reliable and durable hybrid system components
- Electric swing to capture and regenerate energy
- New engine and hydraulic pump control technology
- Massive reduction in fuel consumption



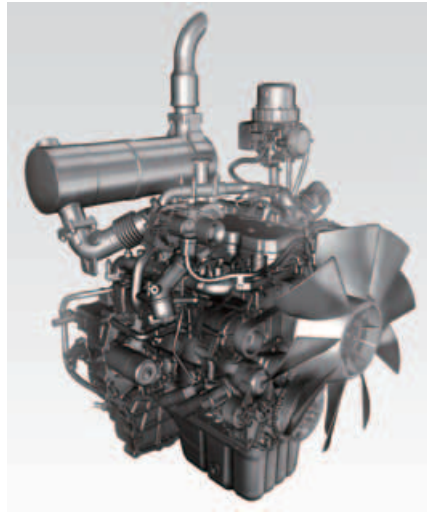
Quality you can rely on

- Reliable and efficient
- Rugged design
- Komatsu-quality components
- Extensive dealer support network
- 5 years or 10.000 hours warranty on hybrid components

Powerful and Environmentally Friendly

New Komatsu engine technology

The powerful and fuel-efficient Komatsu SAA4D107E-2 engine in the HB215LC-2 delivers 110 kW / 148 HP and is EU Stage IIIB certified. To maximise power, fuel efficiency and emission compliance, it is turbo charged and features direct fuel injection, air-to-air after cooling and cooled EGR.

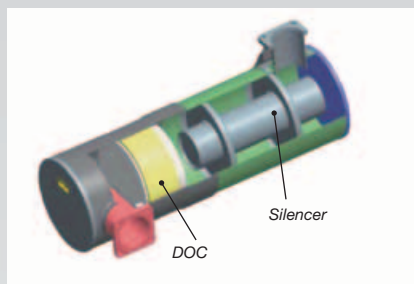


Fuel-saving hydraulic technology

The HB215LC-2 features variable speed matching of the engine and hydraulic pump, and an automatic low idle. The new engine and pump control technology lower total fuel consumption and guarantee efficiency and precision during single and combined movements.

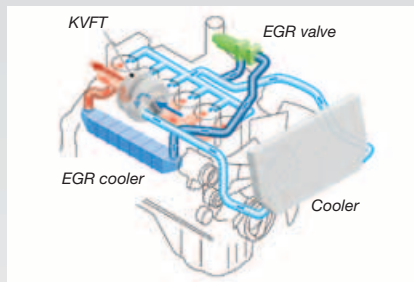
Komatsu Diesel Oxidation Catalyst (KDOC)

A simple and high efficiency diesel oxidation catalyst that eliminates the need for PM regeneration and simplifies the engine control system. It integrates a high performance exhaust noise silencer and helps to reduce engine noise.



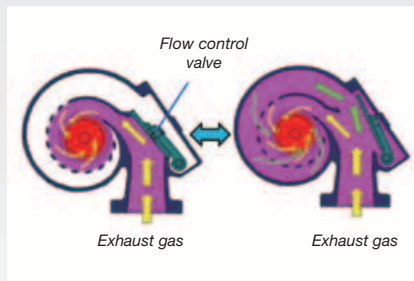
Exhaust Gas Recirculation (EGR)

Cooled EGR is a technology well-proven in current Komatsu engines. The increased capacity of the EGR cooler now ensures very low NOx emissions and a better engine performance.



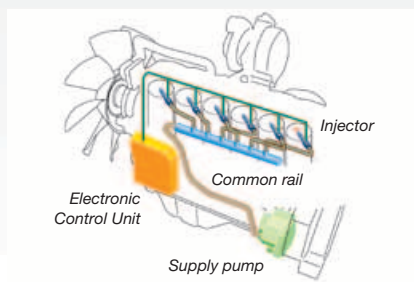
Komatsu Variable Flow Turbocharger (KVFT)

Varies the intake air flow. The wheel speed of the exhaust turbine is controlled by a valve for optimum air flow to the engine combustion chamber, under any load or speed conditions. The exhaust gas is cleaner, with no reduction in power or performance.



Komatsu Closed Crankcase Ventilation (KCCV)

Crankcase emissions (blow-by gas) are passed through a CCV filter. The oil mist trapped in the filter is returned back to the crankcase while the filtered gas is returned to the air intake.



High-Pressure Common Rail (HPCR)

To achieve complete fuel burn and lower exhaust emissions, the heavy duty High-Pressure Common Rail fuel injection system is computer controlled to deliver a precise quantity of pressurised fuel into the redesigned engine combustion chamber by multiple injections.

More fuel-saving technology

The selectable engine mode and adjustable idle shutdown considerably lower fuel usage. The HB215LC-2's Eco-gauge displays active recommendations on the cab's monitor to help you to maximise those fuel savings.



Adjustable Eco-gauge and idle caution

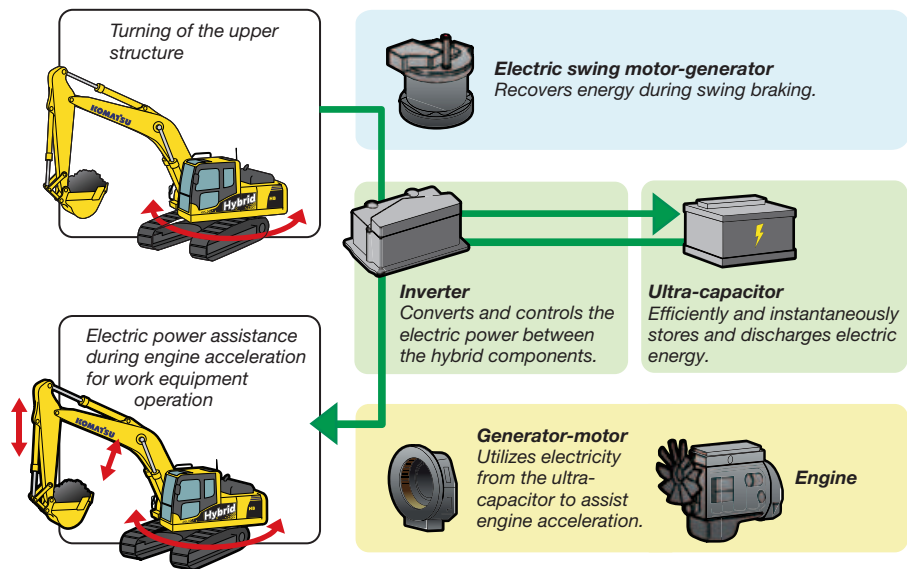


Adjustable idle shutdown

Komatsu Hybrid System

The Komatsu hybrid system

In Komatsu's unique hybrid system, the electric swing motor-generator captures and regenerates energy as the upper structure slows down and converts it into electric energy. The regenerated energy is stored in the ultra-capacitor and used by the generator-motor to assist the engine when it needs to accelerate. Thus, the hybrid system reduces fuel consumption significantly.



Third generation-proven technology
Komatsu Hybrid system

Reliable and durable hybrid system components

In addition to the engine, hydraulic components, main valve and electronic components that control them, the hybrid system components such as the generator-motor, electric swing motor-generator, inverter and ultra-capacitor are also developed and manufactured by

Komatsu. They are neatly arranged on the machine. Controlling the inverter enables the optimum operation of the generator-motor, electric swing motor-generator and engine according to the work at hand, allowing the machine to demonstrate its potential fully while reducing fuel consumption significantly.



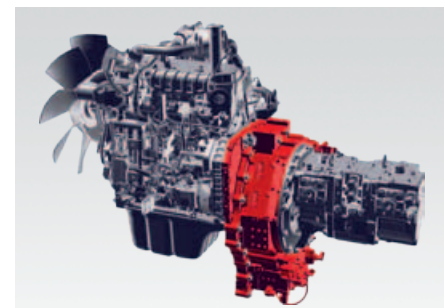
Electric swing motor-generator

An electric swing motor-generator is used in place of the usual hydraulic swing motor and is designed to recover energy during swing braking. Energy is sent to the ultra-capacitor for storage.



Ultra-capacitor assembly

The ultra-capacitor assembly includes an inverter that switches the AC electricity from the generator-motor and electric swing motor-generator into DC electricity for storage in the ultra-capacitor. Since capacitors require migration of electrons and ions for charging and discharging, they can transfer power much faster than batteries, which use chemical reactions to produce electricity.



Generator-motor

The generator-motor is positioned between the engine and hydraulic pumps. The generator produces electric power to charge the ultra-capacitor as needed. The motor uses electricity from the ultra-capacitor to provide power up engine assistance to the engine.

Total Versatility

Ideal for a wide range of applications

Powerful and precise, the Komatsu HB215LC-2 is equipped to efficiently carry out any task your business requires. On big sites or small, for digging, trenching, landscaping or site preparation, the Komatsu original equipment hydraulic system always ensures maximum productivity and control.

6 working modes

Power, Lifting, Breaker, Economy, Attachment Power and Attachment Economy modes are all available, ensuring that the HB215LC-2 delivers the power you need with minimised fuel usage. The Economy mode can be adjusted for an ideal balance between power and economy to match your work. The oil flow delivered to hydraulic attachments is adjustable directly on the class-leading wide screen monitor panel.

Built-in versatility

To allow the use of a variety of buckets and attachments such as breakers, a power supply for a hydraulic quick coupler with adjustable pressure setting, and an additional hydraulic circuit controlled by a foot pedal are standard on the HB215LC-2.

Exceptionally Eco-friendly

HB215LC-2 is a perfect machine for urban and night work and for job sites where performance, low emissions and reduced noise levels are needed. Komatsu's exclusive hybrid technology is backed by proven features such as an efficient low-emissions engine, a highly advanced engine/hydraulic matching system, and an eco-gauge on the cabin monitor to guide the operator. All this advanced technology leads to a sizeable reduction in fuel consumption, emissions and noise levels.

Improved stability and lift capacity

A heavier counterweight increases both the stability and the lift capacity of the HB215LC-2. You can concentrate on production, safely and efficiently.





First-Class Operator Comfort

Wide spacious cab

The wide and spacious cab includes a heated air suspension seat with a reclining backrest. The seat height and longitudinal inclination are easily adjusted with a pull-up lever. You can also set the operational posture of the armrest and the position of the console.

Cab damper mounting

The built-in stability of the Komatsu HB215LC-2, combined with a highly rigid deck and a sprung multi-layer viscous mount system, drastically reduces vibration levels for the operator.

Hybrid operation monitor

The operator can check recent fuel consumption rates and the energy flow among engine and hybrid components on the machine monitor at any time.

Low noise design

The Komatsu HB215LC-2 Hybrid excavator features the lowest in-class external noise levels and is especially well-suited for work in confined spaces or urban areas. Reduced fan speed, a large capacity radiator, and the optimal usage of sound insulation and of sound absorbing materials help to make noise levels inside the Hybrid excavator comparable to those inside an executive car.

Pressurised cab

An automatic air conditioner, an air filter and a positive internal air pressure (60 Pa) combine to prevent external dust from entering the cab.



Current fuel consumption and fuel consumption history display



Hybrid energy management screen



Joysticks with proportional control button for attachments are standard



Hot and cool box



Large, widescreen TFT monitor

To enable safe, accurate and smooth work, the user friendly monitor is the highly intuitive user interface for the machine's Equipment Management and Monitoring System (EMMS). Multilingual and with all essential information available at a glance, it features simple and easy to operate switches and multifunction keys that provide the operator with fingertip access to a wide range of functions and operating information.



Highest Safety Standards

Safe SpaceCab™

The cab is ROPS compliant with ISO 12117-2:2008. It has a tubular steel frame and provides very high shock absorbency, impact resistance and durability. The seat belt is designed to keep the operator in the safety zone of the cab in the event of a roll-over.

Rear view camera

A standard fitment camera gives an exceptionally clear view of the rear work zone on the wide-screen monitor panel. The low profile camera is adjustable and integrated into the counterweight's shape. On request, another camera can be added to the right side of the machine.



Safe SpaceCab™

Optimal job site safety

Safety features on the Komatsu HB215LC-2 comply with the latest industry standards and work together as a system to minimise risks to personnel in and around the machine. An audible travel alarm further promotes job site safety. Very durable anti-slip plates – with additional high friction covering – maintain long term traction performance.

Safe and easy maintenance

Thermal guards are placed around high temperature parts of the engine. The fan belt and pulleys are well protected and in case of damage, fire risk is reduced by a pump/engine partition that prevents hydraulic oil from spraying onto the engine.



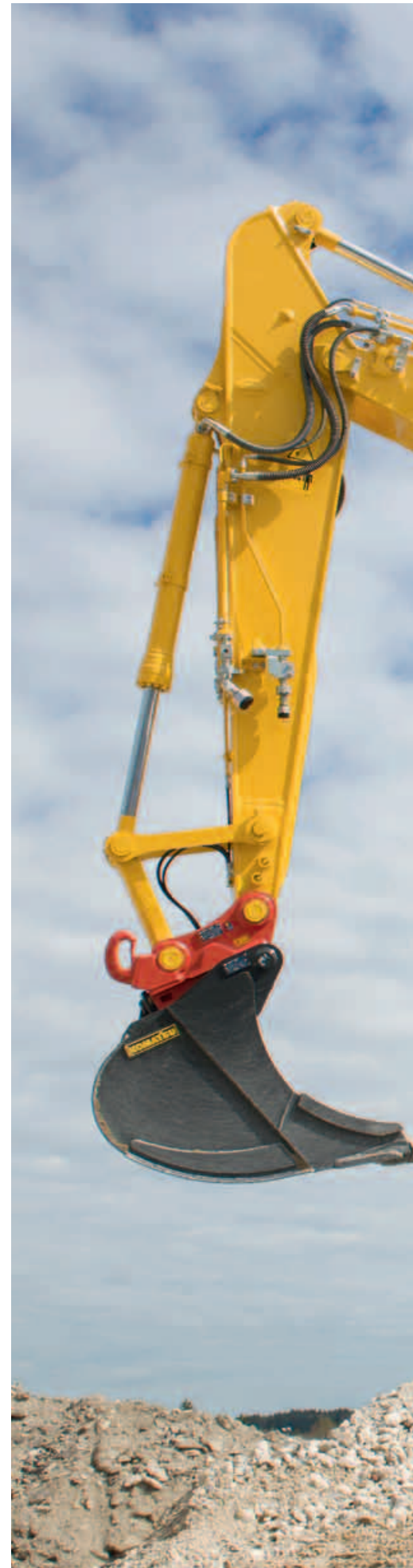
Rear view camera



Anti-slip plates



Additional camera, right side mounted (option)





Quality You Can Rely On

Reliable and efficient

Productivity is the key to success – all major components of the HB215LC-2 are designed and directly manufactured by Komatsu. Essential machine functions are perfectly matched for a highly reliable and productive machine.

Rugged design

Maximum toughness and durability – along with top class customer service – are the cornerstones of Komatsu's philosophy. Single piece plates and castings are used in key areas of the machine's structure for good load distribution. Highly durable rubbing strips on the underside of the arm protect the structure from material falling from the bucket.

5 years or 10.000 hours warranty on hybrid components

The reliability of Komatsu hybrid components is world renowned and they are covered by a free "5 years or 10.000 hours" warranty. In case of breakdown, new spare components are ready for express delivery, for the quick restart of your operations.

Komatsu-quality components

With the latest computer design techniques and a thorough test programme, Komatsu's global know-how produces machines that are designed, manufactured and tested to meet your highest standards.

Extensive dealer support network

The extensive Komatsu distribution and dealer network is standing by to help keep your fleet in optimum condition. Customised servicing packages are available, with express availability of spare parts, to make sure that your Komatsu will continue to perform at its peak.



Cast boom foot



Single piece boom plates



Komatsu Wireless Monitoring System

The easy way to higher productivity

KOMTRAX™ is the latest in wireless monitoring technology. It delivers insightful and cost saving information about your fleet and equipment and offers you a wealth of information to facilitate peak machine performance. By creating a tightly integrated web of support it allows pro active and preventive maintenance and helps you to efficiently run a business.

Knowledge

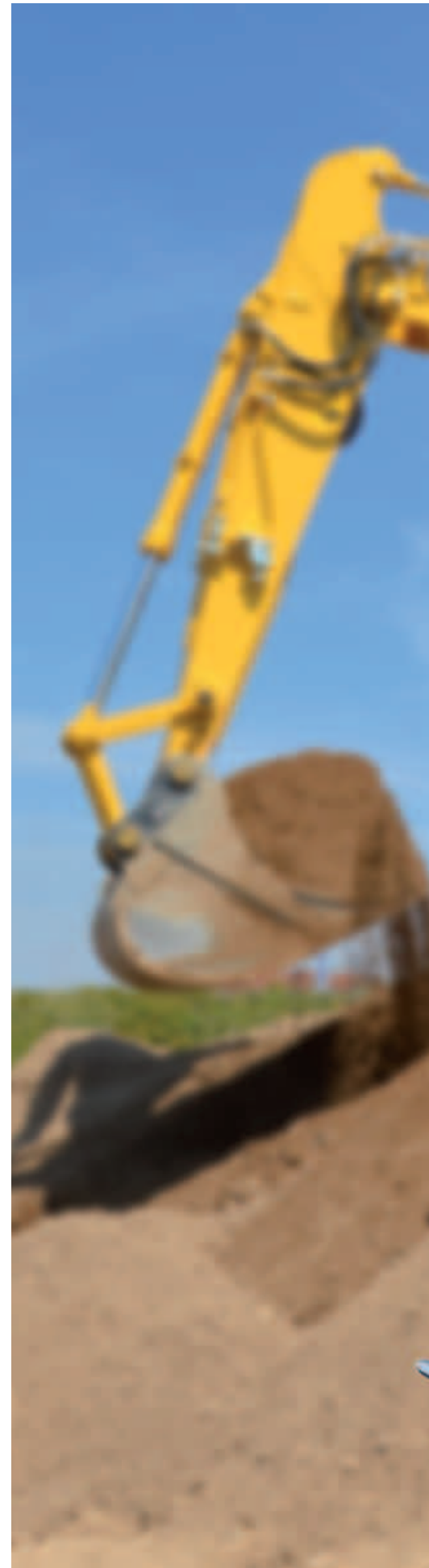
You get quick answers to basic and critical questions about your machines – what they're doing, when they did it, where they're located, how they can be used more efficiently, and when they need to be serviced. Performance data is relayed by mobile phone technology from your machine to your computer and to your local Komatsu distributor – who's readily available for expert analysis and feedback.

Convenience

KOMTRAX™ helps to conveniently manage your fleet on the web, wherever you are. Data is analysed and packaged specifically for easy and intuitive viewing in maps, lists, graphs and charts. You can anticipate the type of service and parts your machines could require, or troubleshoot problems before Komatsu technicians arrive on site.

Power

The detailed information that KOMTRAX™ puts at your fingertips 24 hours a day, 7 days a week gives you the power to make better daily and long-term strategic decisions. You can anticipate problems, customize maintenance schedules, minimize downtime and keep your machines where they belong – working on the job site.





Easy Maintenance

Side-by-side cooling

Since the radiator, aftercooler and oil cooler are arranged in parallel, it is easy to clean, remove and install them.



High efficiency fuel filter

The fuel system's reliability is improved by a high efficiency fuel filter that is easily accessible for servicing.



Gas-assisted engine hood damper cylinders

The engine hood can be easily opened and closed with help of the gas-assisted engine hood damper cylinders.



Komatsu CARE is a complimentary maintenance program for Komatsu customers that comes as standard with every new Komatsu EU Stage IIIB construction machine. For the first 3 years or 2,000 hours it covers factory-scheduled maintenance, performed by Komatsu-trained technicians with Komatsu Genuine parts.

Water separator

This is standard equipment which removes any water that has become mixed with the fuel, preventing fuel system damage.



Long-life oil filters

The hydraulic oil filter uses high-performance filtering material for long element replacement intervals, which significantly reduces maintenance costs.



Specifications

ENGINE

Model	Komatsu SAA4D107E-2
Type	Common rail direct injection, water-cooled, emissionised, turbocharged, after-cooled diesel
Engine power	
at rated engine speed	2.000 rpm
ISO 14396	110 kW / 148 HP
ISO 9249 (net engine power)	104 kW / 139 HP
No. of cylinders	4
Bore × stroke	107 × 124 mm
Displacement	4,46 ltr
Battery	2 × 12 V / 140 Ah
Alternator	24 V / 90 A
Starter motor	24 V / 5,5 kW
Air filter type	Double element type with monitor panel dust indicator and auto dust evacuator
Cooling	Suction type cooling fan with radiator fly screen

HYDRAULIC SYSTEM

Type	HydrauMind. Closed-centre system with load sensing and pressure compensation valves
Main pump	2 variable displacement piston pumps supplying boom, arm, bucket and travel circuits
Maximum pump flow	452 ltr/min
Relief valve settings	
Implement	380 kg/cm ²
Travel	380 kg/cm ²
Pilot circuit	33 kg/cm ²

UNDERCARRIAGE

Construction	X-frame centre section with box section track frames
Track assembly	
Type	Fully sealed
Shoes (each side)	49
Tension	Combined spring and hydraulic unit
Rollers	
Track rollers (each side)	9
Carrier rollers (each side)	2

OPERATING WEIGHT (APPR.)

Triple grouser shoes	Operating weight	Ground pressure
600 mm	22.580 kg	0,47 kg/cm ²
700 mm	22.850 kg	0,41 kg/cm ²
800 mm	23.170 kg	0,37 kg/cm ²
900 mm	23.440 kg	0,33 kg/cm ²

Operating weight, including mono boom, 2,9 m arm, 0,8 m³ bucket, operator, lubricant, coolant, full fuel tank and the standard equipment.

SWING SYSTEM

Type	Electric drive
Swing reduction	Planetary gear
Swing brake	Electric brake
Swing lock	Mechanical disc brake
Swing speed	0 - 12,4 rpm
Swing torque	69 kNm

DRIVES AND BRAKES

Steering control	2 levers with pedals giving full independent control of each track
Drive method	Hydrostatic
Travel operation	Automatic 3-speed selection
Gradeability	70%, 35°
Max. travel speeds	
Lo / Mi / Hi	3,0 / 4,1 / 5,5 km/h
Maximum drawbar pull	20.600 kg
Brake system	Hydraulically operated discs in each travel motor

SERVICE REFILL CAPACITIES

Fuel tank	400 ltr
Coolant engine	23,0 ltr
Coolant Hybrid	6,0 ltr
Engine oil	18,0 ltr
Swing drive	6,5 ltr
Swing motor	1,6 ltr
Generator-motor	6,0 ltr
Hydraulic tank	132 ltr
Final drive (each side)	5,0 ltr

ENVIRONMENT

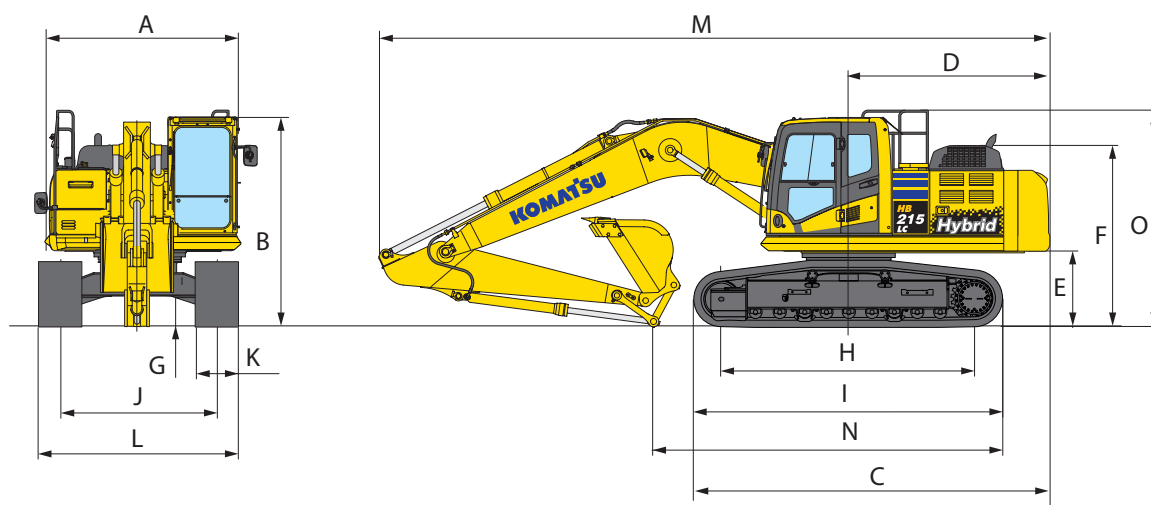
Engine emissions	Fully complies with EU Stage IIIB exhaust emission regulations
Noise levels	
LwA external	102 dB(A) (2000/14/EC Stage II)
LpA operator ear	69 dB(A) (ISO 6396 dynamic test)
Vibration levels (EN 12096:1997)*	
Hand/arm	≤ 2,5 m/s ² (uncertainty K = 0,51 m/s ²)
Body	≤ 0,5 m/s ² (uncertainty K = 0,30 m/s ²)

* for the purpose of risk assessment under directive 2002/44/EC, please refer to ISO/TR 25398:2006.

Dimensions & Performance Figures

MACHINE DIMENSIONS

A	Overall width of upper structure	2.705 mm
B	Overall height of cab	3.045 mm
C	Overall length of basic machine	5.135 mm
D	Tail length	2.910 mm
	Tail swing radius	2.940 mm
E	Clearance under counterweight	1.085 mm
F	Machine tail height	2.610 mm
G	Ground clearance	440 mm
H	Tumbler centre distance	3.655 mm
I	Track length	4.450 mm
J	Track gauge	2.380 mm
K	Track shoe width	600, 700, 800, 900 mm
L	Overall track width with 600 mm shoe	2.980 mm
	Overall track width with 700 mm shoe	3.080 mm
	Overall track width with 800 mm shoe	3.180 mm
	Overall track width with 900 mm shoe	3.280 mm



TRANSPORT DIMENSIONS

	Arm length	2,9 m
M	Transport length	9.625 mm
N	Length on ground (transport)	5.000 mm
O	Overall height (to top of handrail)	3.135 mm

BUCKET AND ARM FORCE

	Arm length	2,9 m
	Bucket digging force	14.100 kg
	Bucket digging force at PowerMax	15.200 kg
	Arm crowd force	10.300 kg
	Arm crowd force at PowerMax	11.000 kg

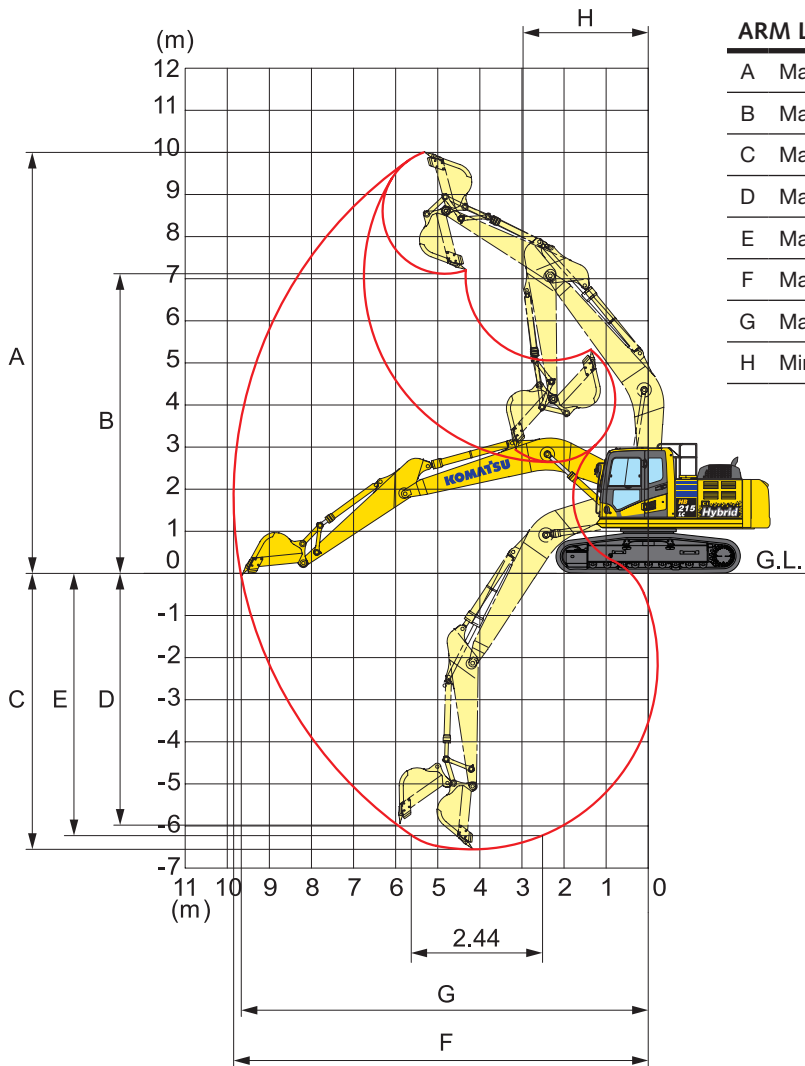
MAX. BUCKET CAPACITY AND WEIGHT

	Arm length	2,9 m
	Material weight up to 1,2 t/m ³	1,65 m ³ 1.150 kg
	Material weight up to 1,5 t/m ³	1,40 m ³ 1.025 kg
	Material weight up to 1,8 t/m ³	1,22 m ³ 925 kg

This table is for reference only. Buckets shown are not necessarily available. Please consult with your distributor for the correct selection of buckets and attachments to suit the application.

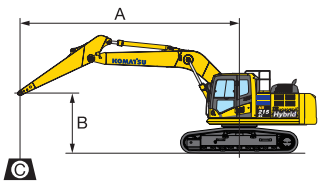


WORKING RANGE



ARM LENGTH		2,9 m
A	Max. digging height	10.000 mm
B	Max. dumping height	7.110 mm
C	Max. digging depth	6.620 mm
D	Max. vertical wall digging depth	5.980 mm
E	Max. digging depth of cut for 2,44 m level	6.370 mm
F	Max. digging reach	9.875 mm
G	Max. digging reach at ground level	9.700 mm
H	Min. swing radius	3.040 mm

LIFTING CAPACITY



- A - Reach from swing center
- B - Bucket hook height
- C - Lifting capacities

- Rating over front
- Rating over side
- Rating at maximum reach

With 700 mm shoes

Arm length	A		7,6 m		6,1 m		4,6 m		3,0 m		1,5 m	
	B											
 2,9 m	7,6 m	kg	*4.100	*4.100								
	6,1 m	kg	*3.850	*3.850		*6.550	5.800					
	4,6 m	kg	*3.850	*3.850	*5.250	4.050	*7.250	5.650	*8.050	*8.050		
	3,0 m	kg	*3.950	3.550	5.900	4.000	8.250	5.450	*10.400	8.200	*12.850	*12.850
	1,5 m	kg	*4.250	3.400	5.800	3.900	8.000	5.250	12.550	7.750		
	0,0 m	kg	*4.750	3.500	5.700	3.800	7.800	5.100	12.200	7.500	*7.500	*7.500
	-1,5 m	kg	5.650	3.750	5.650	3.800	7.750	5.000	12.100	7.400	*12.000	*12.000
	-3,0 m	kg	6.750	4.450			7.800	5.050	12.200	7.450	*18.500	14.150
-4,6 m	kg	*9.000	6.300					*10.750	7.650	*15.050	14.500	

* 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.

When lifting with additional equipment installed to the arm, please subtract the weight of all additional equipment from the values stated.

Hydraulic Excavator

HB215LC-2

Standard and Optional Equipment

ENGINE

Komatsu SAA4D107E-2 turbocharged common rail direct injection diesel engine	●
EU Stage IIIB compliant	●
Suction type cooling fan with radiator fly screen	●
Automatic engine warm-up system	●
Engine overheat prevention system	●
Fuel control dial	●
Auto-deceleration function	●
Adjustable idle shutdown	●
Adjustable Eco-gauge and idle caution	●
Engine key stop	●
Engine ignition can be password secured on request	●
Alternator 24 V/90 A	●
Starter motor 24 V/5,5 kW	●
Batteries 2 × 12 V/140 Ah	●

HYBRID SYSTEM

Electrical swing motor energy recover system	●
Ultra-capacitor with built in inverter	●
Combined generator-motor	●

HYDRAULIC SYSTEM

Electronic closed-centre load sensing (E-CLSS) hydraulic system (HydrauMind)	●
Pump and engine mutual control (PEMC) system	●
6-working mode selection system; power mode, economy mode, breaker mode, attachment power and attachment economy mode, and lifting mode	●
PowerMax function	●
Adjustable PPC wrist control levers for arm, boom, bucket and swing, with sliding proportional control for attachments and 3 auxiliary buttons	●
Prepared for hydraulic quick-coupler	●
Two additional hydraulic circuits	●

UNDERCARRIAGE

Track roller guards	●
Track frame under-guards	●
LC undercarriage	●
600, 700, 800, 900 mm triple grouser track-shoes	●

CABIN

Reinforced safety SpaceCab™; Highly pressurised and tightly sealed hyper viscous mounted cab with tinted safety glass windows, large roof window with sun shade, pull-up type front window with locking device, removable lower window, front window wiper with intermittent feature, sun visor, cigarette lighter, ashtray, luggage shelf, floor mat	●
Heated, high back air suspension seat with lumbar support, height adjustable arm rests and retractable seat belt	●
Automatic climate control system	●
12 Volt power supply	●
Beverage holder and magazine rack	●
Hot and cool box	●
Radio	●
Auxiliary input (MP3 jack)	●
Lower wiper	○
Rain visor (not with OPG)	○

SERVICE AND MAINTENANCE

Automatic fuel line de-aeration	●
Double element type air cleaner with dust indicator and auto dust evacuator	●
KOMTRAX™ – Komatsu wireless monitoring system	●
Multi-function video compatible colour monitor with Equipment Management and Monitoring System (EMMS) and efficiency guidance	●
Komatsu CARE	●
Toolkit	●
Service points	○
Automatic greasing system	○

WORK EQUIPMENT

Mono boom	●
2,9 m arm	●
Komatsu buckets	○
Komatsu breakers	○

LIGHTING SYSTEM

Working lights: 4 cab roof (front), 1 boom, 1 counterweight (rear), beacon	●
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SAFETY EQUIPMENT

Rear view camera system	●
Electric horn	●
Overload warning device	●
Lockable fuel cap and covers	●
Audible travel alarm	●
Boom safety valves	●
Large handrails, rear-view mirrors	●
Battery main switch	●
ROPS compliant to ISO12117-2:2008	●
Arm safety valve	●
Additional camera, right side mounted	○
OPG Level II front guard (FOPS), hinged type	○
OPG Level II top guard (FOPS)	○

DRIVES AND BRAKES

Hydrostatic, 3-speed travel system with automatic shift and planetary gear type final drives, and hydraulic travel and parking brakes	●
PPC control levers and pedals for steering and travel	●

OTHER EQUIPMENT

Standard counterweight	●
Remote greasing for swing circle and pins	●
Electric refuelling pump with automatic shut off function	●
Standard colour scheme and decals	●
Parts book and operator manual	●

Further equipment on request

- standard equipment
- optional equipment

Your Komatsu partner:

UK Distributor

Marubeni-Komatsu Ltd
Redditch
Worcestershire

01527 512 512

UENSS17100 10/2014

Materials and specifications are subject to change without notice.

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KOMATSU

**Komatsu Europe
International NV**

Mechelsesteenweg 586
B-1800 VILVOORDE (BELGIUM)
Tel. +32-2-255 24 11
Fax +32-2-252 19 81
www.komatsu.eu