

KOMATSU

WB93R-5E0

Backhoe loader

EPA Tier III EU stage 3A



Photos may include optional equipment.

Engine power
74 kW / 99.2 hp @ 2,200 rpm (ISO 14396).

Operating weight
7,510 - 8,115 kg.

Bucket capacity
Front loader 1.03 m³.
Backhoe loader 0.19 m³.

Walk around

The WB93R-5EO model is part of the last generation of Komatsu backhoes. This model, developed bearing in mind the needs of our customers around the world, brings different innovations into the market. The result is a high-performance user-friendly equipment.



Photo may include optional equipment.

WB93R-5E0 Backhoe loader

Exclusive design

- Optimal parallel lifting.
- Excellent loading performance.
- S-shape backhoe boom.
- Functional design with hydraulic pipes and hoses along the boom.
- Increased breakout force and lifting capacity of front bucket.

Superior performance

- Standard PPC servo control in front loader.
- Full servo transmission.
- CLSS (Closed load sensing system).
- Variable flow pistons pump.
- "Power" and "Economy" working modes.

Exceptional comfort

- Ergonomic interior design.
- Reduced noise inside the cab.
- Air conditioning.

Excellent visibility

- Round and wide glass surface.
- Inclined narrow bonnet.
- Upper and front windows provide full view of front bucket.
- Permanent control of surrounding area.



Total versatility

- Several different configurations (optional).
- X-type rear outriggers with reversible rubber pads and hydraulic safety valve.
- Hydraulic quick couplers for front and rear accessories (optional).

Superior performance

Hydraulic system

The WB93R-5E0 models offers great productivity, superior performance and increased breakout force and lifting capacity. In fact, the key of the hydraulic system of the Komatsu backhoe loader is its CLSS (closed center sensing system).

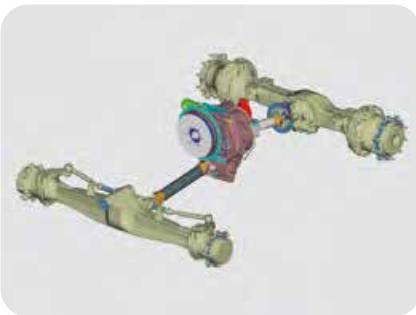
Due to its variable flow, the system provides the required power efficiently. Two working modes are available: "Power" and "Economy". The operator can choose between maximum power and minimum fuel consumption.



Absolute control

PPC servo-controls are standard for the front loader.

The "Power Shuttle" transmission provides eight synchronized speeds, four forward and four reverse. The electro-hydraulic differential lock, jointly with the "Heavy-Duty" axles, provide increased efficiency and generate more confidence for the operator confidence at whichever working conditions.



Exclusive design



Loader

Design of the front loader ensures optimal parallel lifting. Additionally, the divergent shape of the arm improves visibility significantly and provides excellent loading performance. The backhoe has a completely new, clean and functional design with hydraulic pipes and hoses along the boom.

S-shape

The S-shaped boom of the backhoe increases the loading ability, overcomes difficulties more easily and guarantees breakout force.

The telescopic arm improves the equipment versatility considerably.



Exceptional comfort

Operator's working environment

The modern design of the fully-equipped cab has ROPS/FOPS structures. Its increased interior space and the wide and round glass surface maximize the ventilation system that includes several conveniently located vents. Special attention has been paid to the interior design: easily reachable control panel, ergonomic controls, different holders and storage compartments. This is evidence of Komatsu's concern for providing the best working conditions for the operator.

Tiltable steering column

The steering column has a lever that locks it once the adequate position has been reached.



(*) **PPC joystick** for excavator arm operation and air suspension seat available as an option.



Excellent visibility



360° perfect view

The round and wide glass surface provides more visibility. The shape of the bonnet and the upper front window make working with the front loader easy and safe. When operating the backhoe, the operator can separate the window easily from the frame to open it and look around comfortably.



Specifications

Engine

The engine has been developed following the strictest European standards (97/68/EC 2004/26/EC – EU Stage IIIA) on reduction of exhaust emissions.	
Model	Komatsu SAA4D104E-1.
Type	Vertical 4-cycle, water-cooled diesel engine.
Displacement	4,485 cm ³
Bore per stroke	104 x 132 mm.
Number of cylinders	4
Compression ratio	17.5:1
Combustion	Direct injection (DI)
Aspiration	Turbo with intercooler.
Engine power	
SAE J1995	74 kW / 99.2 hp.
ISO 14396	74 kW / 99.2 hp.
Rpm nominal	2,200 r. p. m.
Engine torque / max speed	420Nm / 1,200 r. p. m.
Cooling system	Radiator.
Air filter	Dry with safety element.
Breakout system	Electric engine with air preheating system for cold weather.

Operating weight

Operating weight with standard equipment	7,510 kg.
Optional counterweight	+ 230 kg.
Optional counterweight for telescopic boom	+ 170 kg. + 205 kg.

Steering system

A hydrostatic load sensor that includes a steering priority valve system controls the front wheels.

Turning radius (no brakes applied)	
Bucket corner	4,350 mm.
Front wheel external corner	4,000 mm.
Turning radius (with brakes applied)	
Bucket corner	4,700 mm.
Front wheel external corner	3,200 mm.

Hydraulic system

The Syncro System (synchronization system) allows the operator to make simultaneous and precise movements. This system incorporates two different working modes "Power" and "Economy". In addition, the advanced hydraulic system includes the "Speed-Up" function that accelerates the front loader movements only by pressing the button in the joystick.

System	SyncroSystem.
Type	CLSS (Closed load sensing system)
Pump type	Variable displacement axial pistons.
Control pump system	Load sensing.
Main valve	LIFD (Load independent flow divider) modular type.
Maximum flow	165 ltr/min.
Maximum pressure	250 bar.

Transmission

Full "Power Shift" servo transmission with 4-WD automatic electronic control and travel lever with dial at its end to select speed without losing drive power.

Travel speed

Speed	Forward	Reverse
1st	6 km/h.	6 km/h.
2nd	10 km/h.	10 km/h.
3rd	23 km/h.	23 km/h.
4th	40 km/h.	40 km/h.

Axles

Heavy-duty axles with reduction planetary gears in wheel hubs. Front axle total swing angle is 20°. An electro-hydraulic switch in the load lever controls the differential lock in the rear axle.

Maximum front strength (dynamic)	8,500 DAn.
Maximum rear strength (dynamic)	7,600 DAn.

Brakes

Two separate pedals activate the oil-bathed brake discs individually. When both pedals are pushed simultaneously, the brakes actuate on the four wheels to stop the engine.

Disc diameter	300 mm.
The parking and emergency brakes operate manually.	

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Electric system

The protected electric system can be accessed easily: all connections are sealed, waterproof and in compliance with the strictest international safety standards.

Tension	12 V.
Battery	155 Ah.
Alternator	120 A.
Starter	3kW.

Environment

Vibration levels (EN12.096:1.997)*

Hand/arm	≤2,5 m/s ² (deviation K = 1,2 m/s ²)
Battery	≤0,5 m/s ² (deviation K = 0,2 m/s ²)

*For risk assessment purposes in accordance with guideline 2002/44/EC, please see standard ISO/TR 25.398:2.006.

Frame

The frame is a closed and reinforced structure that increases stiffness and reliability.

Capacity

Engine oil	12.8 L.
Cooling system	16.5 L.
Fuel tank	150 L.
Hydraulic oil tank	41 L.
Hydraulic oil system	97 L.
Front axle oil	8.5 L.
Rear axle oil	14.5 L.
Transmission	16 L.

Tires

Standard

Front	12.5/80 R18 - 10 PR
Rear	16.9 x 28 - 12 PR

Cab

Cab with ROPS system (ISO 34171, SAEJ1040) and FOPS system (ISO 3449, SAEJ231), improved visibility and ergonomics, low level of noise and superior comfort for the operator. It has two doors, full opening rear window and front and rear wipers. Interior layout includes a fully adjustable seat, fresh filtered air intake ventilation and easy-to-read front and side dash board.

Loader

When lifting and lowering the bucket, the front loader design allows the load to be distributed evenly. Additionally and due to the linkage geometry, the number of greasing points has been reduced.

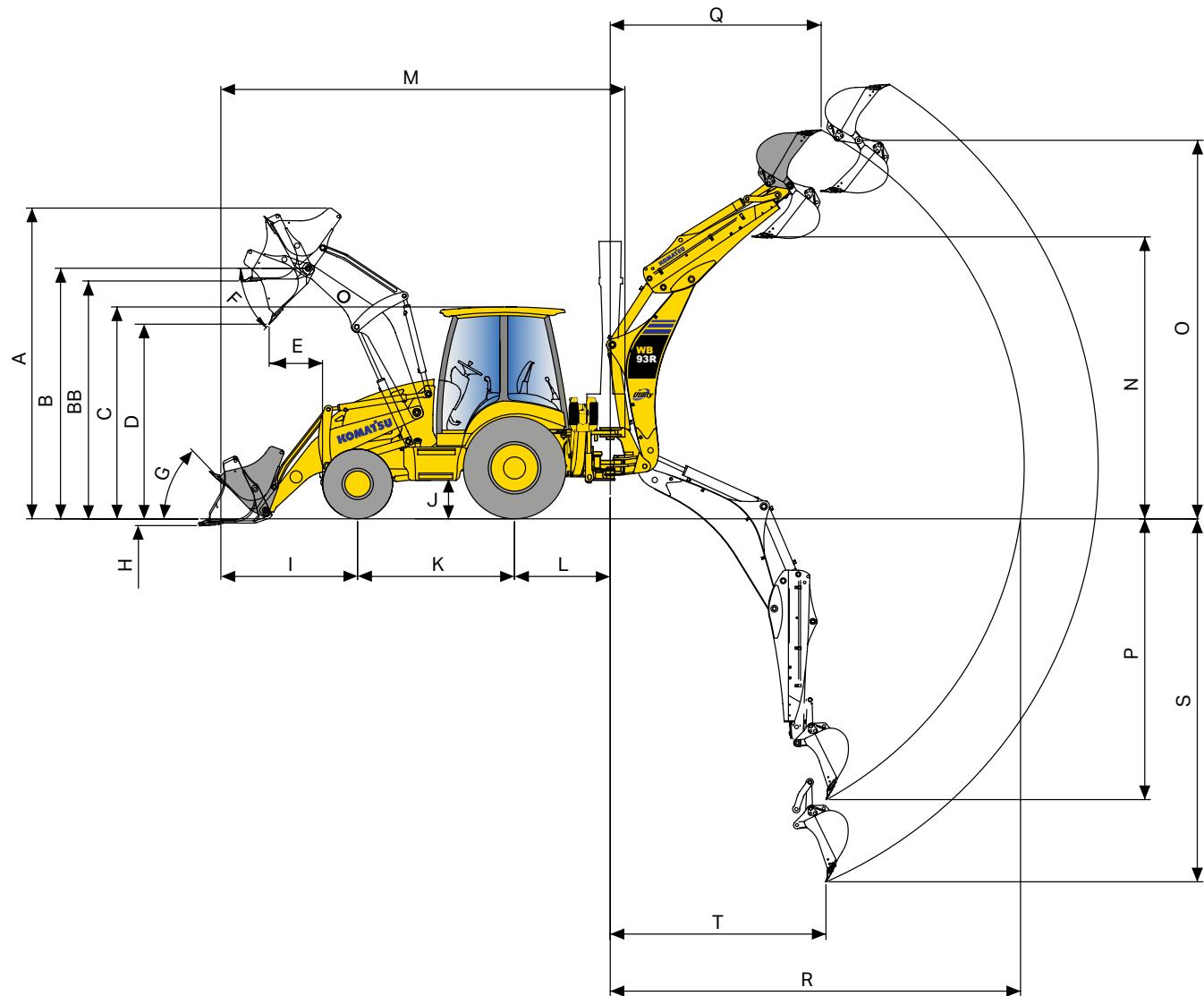
Standard bucket width	2,320 mm.
Standard bucket capacity (ISO 7546)	1.03 m ³
Capacidad de elevación	
At maximum height	3,820 DAn (3,900 kg.)
At ground level (ISO 14.397)	5,195 DAn (5,300 kg.)
Bucket breakout force (ISO 14.397)	6,383 DAn (6,500 kg.)
Bucket width 4x1 optional	2,340 mm.
Bucket capacity 4x1 (ISO 7.546) optional	1.0 m ³

Excavator

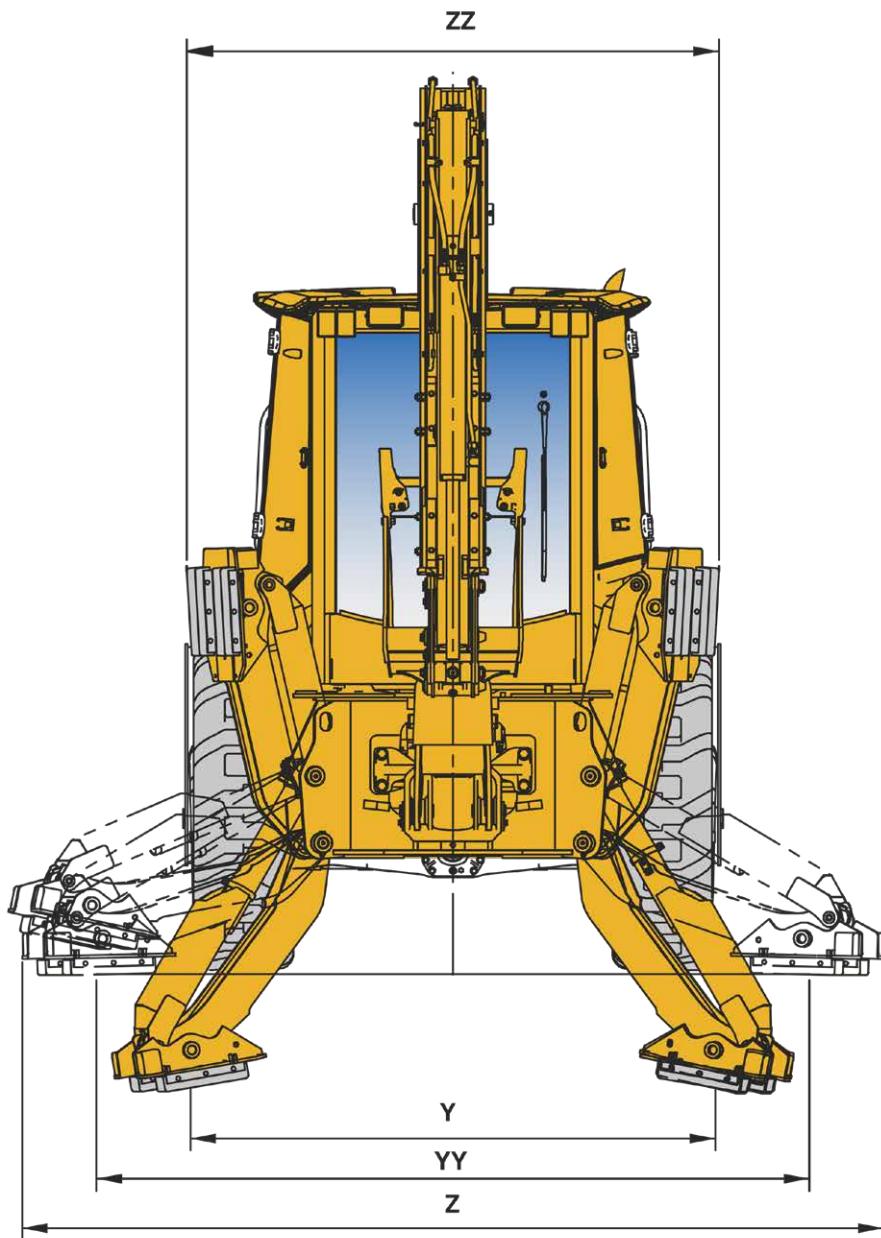
The reinforced structure of the boom allows 180° rotation still preserving high torque. The casted swing support and arm ends ensure high resistance to fatigue. It also has X-Type outriggers.

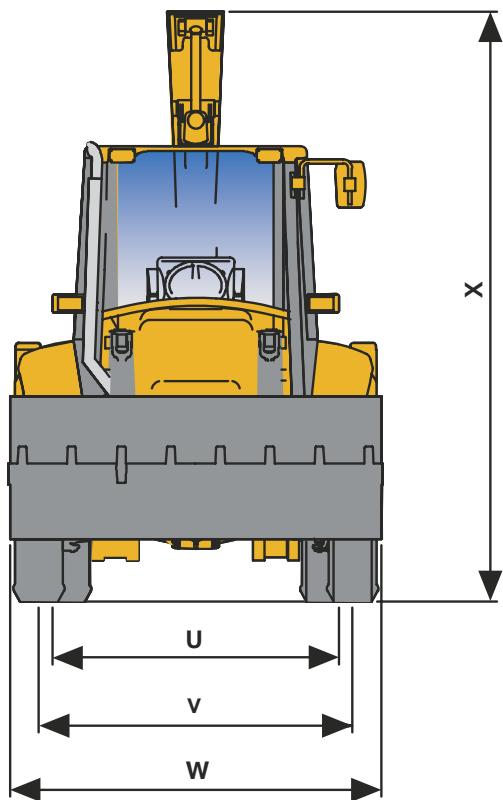
Standard bucket width	600 mm.
Standard bucket capacity (ISO 7.546)	0.19 m ²
Bucket breakout force (ISO 6015)	5,980 DAn (6,100 kg.)
Arm breakout force (ISO 7546)	3,920 DAn (4,000 kg.)

Dimensions



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A	Maximum height	4,298 mm.
B	Pin height	3,428 mm.
BB	Fork loading maximum height	3,182 mm.
C	Cab height	2,900 mm.
D	Dumping maximum height	2,778 mm.
E	Dumping maximum reach (45°)	724 mm.
F	Dump angle	43°
G	Digging angle	45°
H	Digging depth	137 mm.
I	Bucket reach (transport)	2,133 mm.
J	Ground clearance	380 mm.
K	Wheel base	2,173 mm.
L	Backhoe swing center distance	1,325 mm.
M	Transport distance	5,933 mm.
	SAE dumping height	3,720 mm.
N	Maximum dumping height	4,171 mm.
	SAE with extended telescopic arm	4,550 mm.
	With extended telescopic arm	4,891 mm.
O	Maximum digging height	5,792 mm.
	With extended telescopic arm	6,497 mm.
P	SAE digging depth	4,257 mm.
	With extended telescopic arm	5,369 mm.
Q	Maximum height reach	2,554 mm.
	With extended telescopic arm	3,816 mm.
R	Maximum reach from swing center	5,754 mm.
	With extended telescopic arm	6,767 mm.
S	Maximum digging depth	4,977 mm.
	With telescopic arm	6,021 mm.
T	Digging reach	1,973 mm.
U	Rear wheelbase	1,800 mm.
V	Front wheelbase	1,910 mm.
W	Total width (bucket included)	2,320 mm.
X	Backhoe transport height	3,750 mm.
	With telescopic arm	3,860 mm.
Y	Distance from center with outriggers fully extended	2,256 mm.
YY	Distance from center of outriggers	3,063 mm.
Z	Distance from outside outriggers	3,702 mm.
ZZ	Total width (with bucket)	2,340 mm.

When used to handle objects, the backhoe must have safety valves (boom, arm and overload warning device) in accordance with standard EN474- 5 to operate in compliance with the related local regulations.

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Standard equipment

Engine:

- Komatsu turbo diesel engine in compliance with emission standard EU Stage 3A and EPA Tier.
- Parallel radiator.
- Coolant (-36° C).
- Road homologation.
- Dry air filter with clogging indicator.

Electric system:

- 155 Ah maintenance-free battery.
- 12V external electric supply plug.
- 12V internal electric supply plug.
- Horn.

Powertrain and controls:

- Power Shuttle transmission with 4 synchronised gears.
- Electro-hydraulic 100% differential lock.
- Declutch switch.

Drive system:

- Four-wheel drive.

Hydraulics and controls:

- CLSS (closed load sensing system).
- Variable flow pistons pump.

Cab:

- Hand and pedal accelerator.
- Rearview mirrors.
- ROPS/FOPS cab with heater and fan.
- Tinted glasses.
- Adjustable steering column.
- Adjustable seat with safety belt.
- Cup holder.
- Front and rear wipers.
- Interior compartments.
- Sun visor.
- Pre-setting radio/cassette.

Lights system:

- Front and rear work lights.
- Road lights.
- Rotating light.

Safety equipment:

- Seat safety sensors.
- PPC lock control switch.

Other:

- Tiltable bonnet.
- Toolbox with lock.
- Fuel filter with integrated water separator.

Service and maintenance equipment:

- KOMTRAX - Komatsu monitoring system.
- Indicators: Transmission oil temperature, four-wheel drive connections, brake oil level, differential lock, fuel level, hour meter, pre-heater, rpm meter, coolant temperature, engine oil pressure and air filter clogging.

Tires:

- Front tires: 12.5/80 R18 - 10 PR.
- Rear tires: 16.9 x 28 - 12 PR.

Loader:

- PPC servo controls.
- Acceleration function.
- Heavy-duty safety lock.
- Self-levelling.
- General purpose bucket with standard teeth.

Optional equipment



Telescopic arm



PPC joystick for excavator arm operation and air suspension seat



4x1 multipurpose bucket



Komatsu JTHB 50 hydraulic breaker

Satellite monitoring system



KOMTRAX is an innovative equipment tracking system designed to save time and money. Now you can track your equipment at any time and from any place. Use the valuable information that you receive through the KOMTRAX webpage to optimize maintenance planning of your equipment and performance.

Characteristics

Location

KOMTRAX uses a satellite positioning network to inform the location of the equipment.

Meter reading service

Daily report of the working hours of the work team, which allows to project maintenance and replacement of components.

Locking the anti-theft engine

KOMTRAX has a system of locking and unlocking the motor of the equipment, which will allow them to only operate in the days, hours and areas assigned.

Geofence

In partnership with your Komatsu Distributor, owners can create virtual fences (Geo) to receive alerts when teams enter or leave the designated range for operations.

Komtrax operational maps

In the operations maps you can check the times of day when the equipment is in operation and if the workers are performing their duties in the stipulated times.

Check with your Komatsu dealer for the information available for your model and service availability in your country.



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