

KOMATSU

WB91R-5

NET POWER
60 kW / 80 HP @ 2.200 rpm

OPERATING WEIGHT
6.750 kg

WB
91R-5

RIGID BACKHOE LOADER



WB91R-5

WALK-AROUND

Tradition and innovation

The WB91R-5 belongs to the latest generation of Komatsu backhoe loaders, which comes to market with a number of innovations. It has been developed with constant attention to the needs of customers from all over the world. The result is a robust, reliable and user-friendly machine.

COMFORT

The result of extensive ergonomics testing is an outstanding level of comfort that allows the operator to work in the best conditions.

RELIABILITY

High quality standards guarantee longer life to all components, minimizing cost impact due to downtime.



VERSATILITY

Developed to deliver its best in every application, the WB91R-5 offers several possibilities for customisation to get a 'made-to-measure' machine whatever your requirements.



NET POWER
60 kW / 80 HP @ 2.200 rpm

OPERATING WEIGHT
6.750 kg

CONTROL

With the new WB91R-5 total control is standard and it's synonymous of high quality and productivity for every application.



SAFETY

Perfectly in line with Komatsu style, the WB91R-5 includes several features to guarantee maximum safety for the operator.

VISIBILITY

Thanks to the wide glass surfaces the machine offers an excellent visibility in all directions for a total control of the surrounding area.

STRONG POINTS

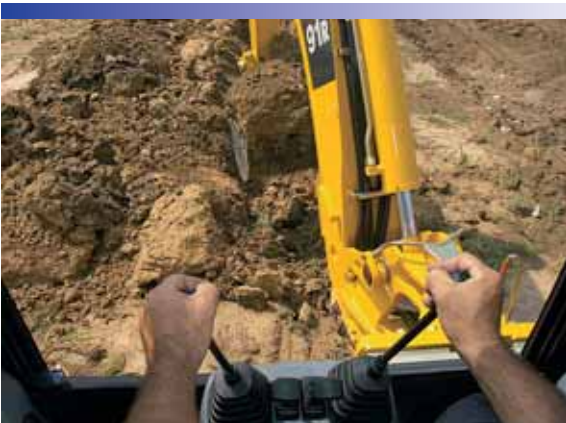


LOADER

The front loader design ensures optimal parallel lifting; in addition, the divergent geometry of the arm provides excellent visibility and torsion resistance. The multifunctional joystick for the loader fits the controls for 4×1 bucket, differential lock, declutch and speed-up functions.

OPERATOR'S ENVIRONMENT

With its ROPS and FOPS structure, the cab has a modern design and is fully equipped. Its increased internal volume and wide, round glass surface offer great comfort to the operator. The spacious design optimises the ventilation system which include several conveniently located vents. With a complete instrumentation, an easy-to-reach control panel and plenty of holders and storage compartments, the WB91R-5 offers a high standard comfort level.



HYDRAULIC SYSTEM

The heart of the KOMATSU backhoe loader hydraulics is the CLSS (Closed Load Sensing System). Thanks to the gear pump, the system efficiently supplies the power the machine requires. With two working modes, "Power" and "Economy", the operator can conveniently choose between maximum power and minimum fuel consumption.



BACKHOE

The rounded shape of the backhoe enhances the loading capacity of the machine and its ability to overcome obstacles. The telescopic arm and a wide range of attachments, significantly increase the machine's versatility.

CUSTOMIZATION

The WB91R-5 is available in 2 versions: 4WD and 2WD, both equipped with the electro-hydraulic 100% differential lock. The "Power Shuttle" transmission provides the machine with four forward and four reverse speeds, with synchronised mechanical shifting. In addition to the cabin version, it's also available the 4 poles open ROPS canopy structure, equipped with water-proof instrumentation and anti-vandalism system.



SERVICEABILITY

The tiltable engine bonnet has been developed with a focus on accessibility and ease of service. ORFS hydraulic face seal connectors increase the reliability of the machine and allow for simple and fast replacement; in addition, the battery and the roomy toolbox are conveniently located on the side of the machine.

SPECIFICATIONS



ENGINE

The engine has been developed in compliance with the strictest European standards (97/68/EC - STAGE 2) on the reduction of exhaust emissions.

ModelKomatsu 4D104E-2
 Type..... vertical, 4-cycle water-cooled diesel engine
 Displacement..... 4.485 cm³
 Cyl. bore × stroke..... 104 × 132 mm
 N° of cylinders 4
 Compression ratio..... 17,5:1
 Combustion..... direct injection (DI)
 Aspiration natural
 Rated power (EEC 80/1269)..... 60 kW / 80 HP / 2.200 rpm
 Max torque320 Nm - 1.400 rpm
 Cooling system.....radiator
 Air filterdry filter with safety element
 Starting systemelectric motor with pre-heating air system for cold climate



OPERATING WEIGHT

Standard machine operating weight 6.750 kg [6.800 kg]
 Total machine weight 7.450 kg [7.500 kg]
 Operating weight increase
 4×1 bucket..... 277 kg
 telescopic arm 180 kg
 pallet forks 245 kg



HYDRAULIC SYSTEM

SyncroSystem hydraulics allows the operator very precise and simultaneous movements. This system incorporates two different working modes: Power and Economy. The advanced hydraulic system includes also the function “Speed Up” to increase the working speed of the front loader.

SystemSyncroSystem
 Type..... Closed Load Sensing System CLSS
 Pumps type Double gear pump
 Pumps control system Load Sensing
 Main Valve LIFD “Load Independent Flow Divider” modular type
 Max delivery 140 l/min
 Working pressure207 bar



ELECTRIC SYSTEM

The electric system is easily accessible and protected: connections are sealed and waterproof, and comply with the strictest international safety rules.

Voltage 12 V
 Battery 120 Ah
 Alternator95 A
 Starter.....3 kW



FRAME

The frame is a reinforced and closed box structure, which increases stiffness and reliability.

[]: 4 wheel drive version



STEERING

The front steering wheels are controlled by a hydrostatic “Load Sensing” with steering priority valve system.

Turning radius (without using brakes):
 at the corner of the bucket5.550 mm
 at outer edge of front tyre4.100 mm
 Turning radius (using brakes):
 at the corner of the bucket5.150 mm
 at outer edge of front tyre3.600 mm



TRANSMISSION

The transmission is operated through a torque converter and a power shuttle reversing shift “Power Shuttle” type. [Switching between 4WD and 2WD is obtained through an electro-hydraulic system]. The 4 speed mechanical shift is synchronised. Travelling speeds:

GEAR	FORWARD	REVERSE
1st	5,2 km/h	5,2 km/h
2nd	8,5 km/h	8,5 km/h
3rd	18,5 km/h	18,5 km/h
4th	37 km/h	37 km/h



AXLES

“Heavy duty” axles with planetary reduction gears in the wheel hubs. Front axle total oscillation angle 22°. Differential total lock in the rear axle controlled by a switch on the loader’s lever.

Max front strength (Dynamic).....7.121daN [6.565 daN]
 Max rear strength (Dynamic) 7.270 daN



BRAKES

Oil immersed disc brakes are actuated by individual braking on each rear wheel with 2 separate pedals. [Total integral braking on the 4 wheels is activated by operating the two pedals at the same time.]

Disc diameter 300 mm
 The caliper parking or safety brake is operated through a hand lever.



TYRES

Standard:
 front 12 x 16,5 - 10 PR
 rear 16.9 x 24 - 12 PR
 Option:
 rear..... 17.5 x 24 - 10 PR



CAB

Two versions available:

- ROPS (ISO 9249, SAEJ1040) and FOPS (ISO 3449, SAEJ 231) cab designed in order to offer the best visibility, ergonomics, low noise and comfort. Two doors, full opening rear window with front and rear windscreen wipers. Internal lay out includes full adjustable seat, fresh filtered air intake ventilation and easy to read front and side dash board.

- Canopy 4 poles open ROPS structure, equipped with water-proof instrumentation and anti-vandalism system.

SPECIFICATIONS



LOADER

The design of the front loader allows excellent parallelism when lifting and lowering the bucket. Furthermore, thanks to the linkage geometry, the greasing points have been reduced.

Standard bucket width.....	2.200 mm
Standard bucket capacity (ISO 7546)	0,8 m ³
STD bucket weight.....	365 kg
Lifting capacity	
at maximum height.....	2.943 daN (3.000 kg)
Lifting capacity	
at ground level (ISO 8313).....	3.777 daN (3.850 kg)
Breakout force (ISO 8313).....	4.710 daN (4.800 kg)
4x1 bucket width.....	2.220 mm
4x1 bucket capacity (ISO 7546).....	0,8 m ³



SERVICE CAPACITIES

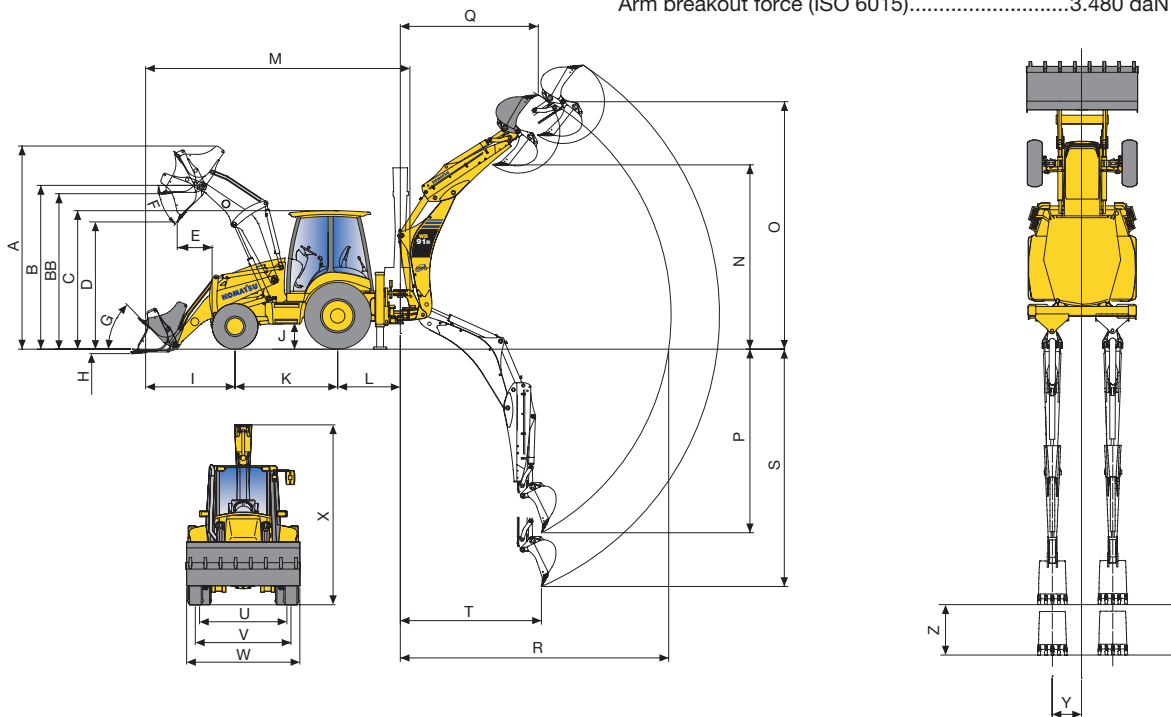
Engine oil.....	12,8 l
Cooling system.....	16,5 l
Diesel tank.....	120 l
Hydraulic oil tank.....	41 l
Hydraulic oil system capacity.....	97 l
Front axle oil.....	0,5 l [7,0 l]
Rear axle oil.....	14,5 l
Gearbox oil.....	15 l [18 l]



BACKHOE

The boom has a reinforced structure and allows 180° rotation, still preserving high torque. The casted swing support and arm ends ensure high fatigue resistance. Vertical outriggers with adjustable wear device.

Bucket breakout force (ISO 6015).....	5.050 daN (5.150 kg)
Arm breakout force (ISO 6015).....	3.480 daN (3.550 kg)



A. Max height.....	4.148 mm
B. Pin height.....	3.353 mm
BB. Forks loading max height.....	3.110 mm
C. Cab height.....	2.818 mm
D. Max dumping height.....	2.723 mm
E. Max dumping reach (45°).....	605 mm
F. Dumping angle.....	44°
G. Rollback angle.....	44°
H. Digging depth.....	147 mm
I. Bucket reach (in transport).....	1.980 mm
J. Ground clearance.....	375 mm
K. Wheel base.....	2.175 mm
L. Backhoe swing centre distance.....	1.325 mm
M. Transport length.....	5.980 mm
N. Dumping height SAE.....	3.625 mm
Max dumping height.....	4.050 mm
- with extended telescopic SAE.....	4.235 mm
- with extended telescopic max.....	4.705 mm

O. Max digging height.....	5.680 mm
- with extended telescopic.....	6.235 mm
P. Digging depth SAE.....	4.160 mm
- with extended telescopic.....	5.135 mm
Q. Reach at max height.....	2.640 mm
- with extended telescopic.....	3.570 mm
R. Max reach from swing centre.....	5.586 mm
- with extended telescopic.....	6.465 mm
S. Max digging depth.....	4.840 mm
- with telescopic.....	5.760 mm
T. Digging reach.....	2.120 mm
U. Rear tread.....	1.720 mm
V. Front tread.....	1.820 mm
W. Overall width (with STD bucket).....	2.200 mm
X. Transport hoe height.....	3.690 mm
- with telescopic.....	3.760 mm
Y. Side shift.....	565 mm
Z. Telescopic stroke.....	1.000 mm

BACKHOE LOADER

STANDARD EQUIPMENT

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|---|--|--|---|
| <ul style="list-style-type: none"> • Aspirated Stage 2 Komatsu engine • Power Shuttle transmission with 4 synchronised gears • Load Sensing, gear pump • Side by side radiator • 4 wheel drive or 2 wheel drive • Electro-hydraulic 100% differential lock • Declutch switch • Foot pedal and hand control accelerator • Horn • Maintenance free battery 120 Ah • 12 V external electric plug • Antifreeze (-36 °C) • Front and rear working lights • Road homologation • Lights for road travel | <ul style="list-style-type: none"> • Rotating beacon • External rear view mirror (left) • ROPS/FOPS cab with heater and fan or • Canopy 4 poles open ROPS Structure • Tinted glass • Adjustable seat with safety belt • Front and rear washer and windshield wipers • Internal storage compartments (one lockable) • Cup-holder • Sun visor • Radio presetting • Fully opening bonnet • External lockable toolbox • Dry type air cleaner with clogging indicator | <ul style="list-style-type: none"> • Fuel filter with integrated water separator • Gauges & Indicators: transmission oil temperature, 4WD engagement (only 4WD machine), brake oil level, fuel level, hour meter, preheating, engine speed, engine coolant temperature, engine oil pressure, air filter clogging • Safe Position seat sensor • Front tyres: 12 x 16.5 10PR • Rear tyres: 16.9 x 24 12PR | <p>LOADER</p> <ul style="list-style-type: none"> • Speed-up function • Heavy duty safety bar • Self-levelling • General purpose bucket with standard teeth <p>BACKHOE</p> <ul style="list-style-type: none"> • Mechanical control levers • Power/Economy working modes • Electro-hydraulic backhoe boom lock • Backhoe swing transport lock • Electro-hydraulic backhoe slide frame release lock • Hydraulic cushions |
|---|--|--|---|

OPTIONAL EQUIPMENT

- | | | | |
|--|--|---|---|
| <ul style="list-style-type: none"> • Additional front counterweights (170 kg, 375 kg) • Drive shaft guard (front) • Cold area arrangement (-30 °C) with 185 Ah battery and pre-heating systems • High ambient/altitude arrangement • TÜV + TBG version (20 km/h or 40 km/h) • Battery disconnection safety switch • Rubber pads for stabilisers • Hose burst valves: <ul style="list-style-type: none"> - loader arm - backhoe - stabilisers • Hydraulic biodegradable oil • Hydraulic hand hammer circuit • Air cyclone pre-filter • Fuel filling pump • Additional rear view mirror (right) • Four additional working lights on cab • Radio | <ul style="list-style-type: none"> • Backup alarm • Rear tyres: 17.5 x 24 10PR | <p>LOADER</p> <ul style="list-style-type: none"> • LSS (Load Stabiliser System) • Safety valve deactivation switch • Auxiliary hydraulic circuits: <ul style="list-style-type: none"> - "Return-To-Dig" function - front auxiliary hydraulic circuit • Attachments: <ul style="list-style-type: none"> - bolt-on cutting edge - cutting edge on teeth - 4x1 bucket with pre-setting for flip-over forks and angle opening indicator - flip-over forks on 4x1 bucket - hydraulic and mechanical quick hitch - forks (for quick hitch) - general purpose bucket (for quick hitch) - 4x1 bucket (for quick hitch) - dozer blade - snow blade - hand hammer | <p>BACKHOE</p> <ul style="list-style-type: none"> • Alternative control pattern • Auxiliary hydraulic circuits: <ul style="list-style-type: none"> - hammer circuit - 2-way circuit for attachments (auger, tilting bucket) • Telescopic arm • Attachments: <ul style="list-style-type: none"> - mechanical quick hitch (for std buckets) - full range of buckets (300 mm - 900 mm) - ditch cleaning bucket (1.400 mm) - ditch digging bucket (1.000 mm) - hydraulic hammer |
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