

KOMATSU

Utility

WB
91R-2



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RIGID BACKHOE LOADER

NET POWER
SAE J1349
61,5 kW - 82,5 HP

OPERATING WEIGHT
From 7.590 kg
to 8.630 kg

SPECIFICATIONS



ENGINE

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

ModelKomatsu 4D106-2SFA
 Type.....vertical, 4-cycle water-cooled diesel engine
 Displacement4.412 cm³
 Cyl. bore x stroke106 x 125 mm
 N° of cylinders4
 Compression ratio17,5:1
 Combustiondirect injection (DI)
 Aspirationnatural aspiration
 Gross power63,6 kW
 Maximum rated power:
 (SAE J 1349)61,5 kW / 82,5 HP / 2.200 rpm
 (80/1269/EC)61 kW / 82 HP / 2.200 rpm
 Max torque312,1 Nm - 1.600 rpm
 Cooling systemradiator
 Air filterdry filter with safety element
 Starting systemelectric motor with pre-heating air system for cold climate



OPERATING WEIGHT

Standard machine operating weight.....7.590 kg
 Total machine weight.....8.630 kg

operating weight increase

4x1 bucket.....250 kg
 offset boom.....150 kg
 telescopic arm260 kg
 pallet forks.....200 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.

System.....*SyncroSystem*
 Type.....Close Load Sensing System CLSS
 Pumps typeVariable displacement axial pistons
 Pumps control system.....Load Sensing
 Main Valve (backhoe).....LIFD "*Load Independent Flow Divider*" modular type

Max delivery165 l/min
 Working pressure.....185 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
 Battery155 Ah
 Alternator80 A
 Starter3 kW



FRAME

The frame is modular and has been developed for computer based welding processes; every main element is bolted directly to the frame to improve maintenance and to reduce down time.



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 bucket5.450 mm
 at outer edge of front tyre4.000 mm
 Turning radius (using brakes):
 at the corner of the bucket4.950 mm
 at outer edge of front tyre3.400 mm



TRANSMISSION

Switching between 4WD and 2WD is obtained through an electro-hydraulic system. The 4 speed mechanical shift is synchronised. The transmission is operated through a torque converter and a power shuttle reversing shift "*Power Shuttle*" type.

Travelling speed:

GEAR	FORWARD	REVERSE
1 st	6,5	6,5
2 nd	12	12
3 rd	23	23
4 th	40	40



AXLES

"Heavy duty" axles with planetary reduction gears in the wheel hubs. Front axle total oscillation angle 20°. Differential total lock.

Max front strength (Dynamic)6.300 daN
 Max rear strength (Dynamic)12.000 daN



BRAKES

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

Disc diameter270 mm
 Total friction area.....2.310 cm²

The parking or safety brake acts on the service brakes through a hand operated lever.



TYRES

Standard:

front12.5/80 R18 - 10 PR
 rear16.9 x 28 - 12 PR

Option:

front365/70 R18
 rear18.4 x 26 - 12 PR



CAB

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 windows 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.

WB91R-2 BACKHOE LOADER



LOADER

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

Standard bucket width	2.320 mm
Standard bucket capacity (ISO 7546)	1,03 m ³
STD bucket weight	430 kg
Lifting capacity	
at maximum height	3.538 daN (3.610 kg)
Lifting capacity	
at ground level (ISO 8313)	4.700 daN (4.785 kg)
Breakout force (ISO 8313)	5.963 daN (6.085 kg)
4x1 bucket width	2.340 mm
4x1 bucket capacity (ISO 7546)	1,0 m ³



REFILLS

Engine oil	8,6 /
Cooling system	18 /
Diesel tank	130 /
Hydraulic oil tank	92 /
Front axle oil	8,5 /
Rear axle oil	17,5 /
Gearbox oil	16 /

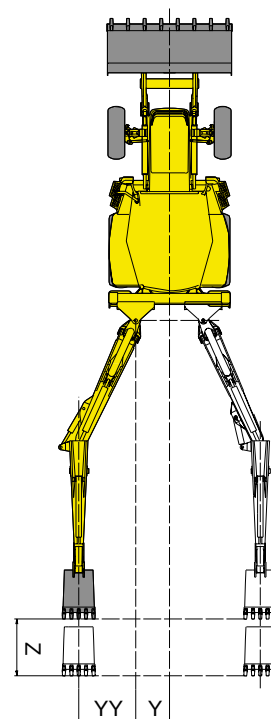
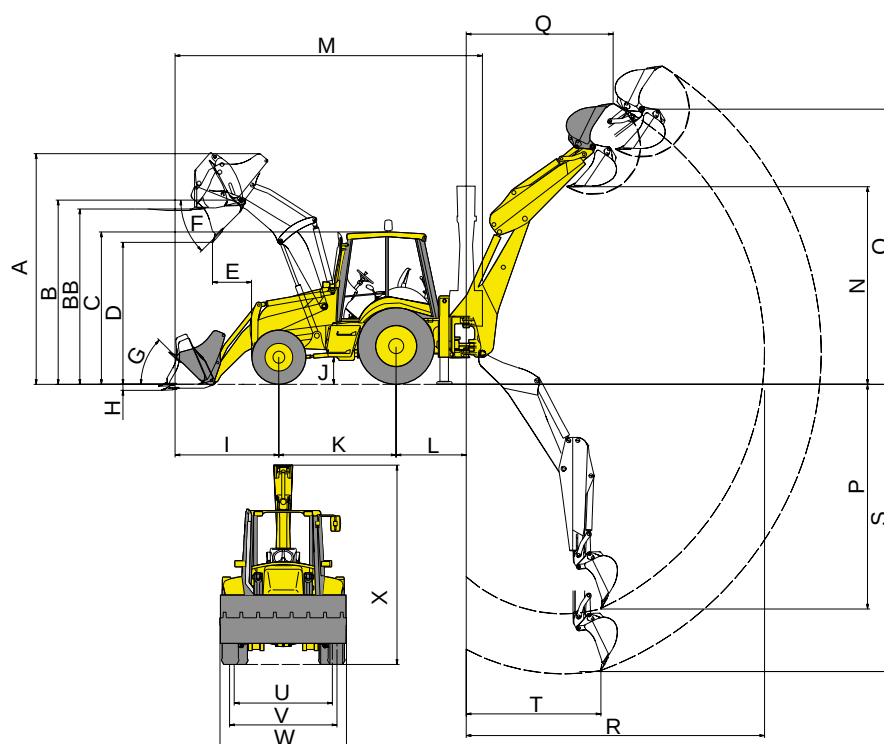


BACKHOE

The main boom has a reinforced structure built with cast ends, allows 180° rotations, always maintaining high rotation torque. Vertical outriggers with adjustable wear device.

Bucket breakout force (ISO 6015)	5.450 daN (5.550 kg)
Arm breakout force (ISO 6015)	3.510 daN (3.570 kg)

Dimensions



A. max height	4.220 mm	P. digging depth SAE	4.500 mm
B. pin height	3.400 mm	- with extended telescopic	5.650 mm
BB. forks loading max height	3.200 mm	Q. reach at max height	2.500 mm
C. cab height	2.750 mm	- with extended telescopic	3.500 mm
D. max dumping height	2.750 mm	- with extended off-set	2.510 mm
E. max dumping reach (45°)	750 mm	R. max reach from swing centre	5.550 mm
F. dumping angle	45°	- with extended telescopic	6.550 mm
G. rollback angle	45°	S. max digging depth	4.950 mm
H. digging depth	110 mm	- with telescopic	6.100 mm
I. bucket reach (in transport)	1.930 mm	T. digging reach	2.750 mm
J. ground clearance	430 mm	U. rear tread	1.780 mm
K. wheel base	2.175 mm	V. front tread	1.934 mm
L. backhoe swing centre distance	1.320 mm	W. overall width (with bucket)	2.320 mm
M. transport length	5.895 mm	X. transport hoe height	3.660 mm
N. dumping height SAE	3.700 mm	- with telescopic	3.700 mm
max dumping height	3.950 mm	- with off-set	3.760 mm
- with extended telescopic SAE	4.830 mm	Y. side shift	.605 mm
- with extended telescopic max	5.050 mm	YY side shift with off-set	1.080 mm
O. max digging height	5.510 mm	Z. telescopic stroke	1.150 mm
- with extended telescopic	6.510 mm		

STANDARD EQUIPMENT

- Aspirated STAGE 2 Komatsu engine "Power Shuttle" transmission with 4 synchronised gears 4 wheel drive - Electro-hydraulic 100% differential lock - Declutch switch - Foot pedal and hand control accelerator - Horn - Maintenance-free battery 155 Ah 12V external electric plug 12V power outlet in the cab - Antifreeze (-36°C) - Front and rear working lights	- Road homologation - Lights for road travel - Rotating beacon - Internal and external mirrors - ROPS/FOPS cab with heater and fan - Tinted glass - Adjustable steering wheel - Adjustable seat with safety belt - Front and rear windshield wipers - Lockable internal storage compartment - Clothes hook and cup-holder - Fully opening bonnet - Air cleaner, dry type, radial seal with clogging	- indicator - Fuel filter with water separator - Load Sensing, variable displacement axial pump - Indicators: transmission oil temperature, 4WD engagement, brake oil level, differential lock, fuel level indicator, hour meter, engine tank reservoir, preheating, engine speed, engine coolant temperature, engine oil pressure, air filter clogging
LOADER "Speed-Up" switch	Lifting cylinder safety lock	General purpose bucket with bolted teeth
BACKHOE Electro-hydraulic backhoe shifting lock	Backhoe swing transport lock	Electro-hydraulic backhoe slide frame release lock

OPTIONAL EQUIPMENT

- Air Conditioning - Additional front counterweights (150 kg, 300 kg, 300 + 170 kg) - De-Luxe seat with 3" retractable safety belt - Drive shaft guard - Optional tyres - Bumpers - Cold area arrangement (-22°C) - Cold area arrangement (-30°C) and engine pre-heater	- TÜV + TBG version (20 km/h or 40 km/h) - Battery disconnection safety switch - Rubber pads for stabilisers - Hose burst valves: - loader arm - backhoe - stabilisers - Hydraulic biodegradable oil - Hydraulic hand hammer circuit - Air cyclone pre-filter	- Fuel filling pump - Additional toolbox - Additional rear view mirror (right) - Radio - Backup alarm
LOADER - LSS (<i>Load Stabiliser System</i>) - Auxiliary hydraulic circuits: - auxiliary 3rd spool valve with floating function - auxiliary 3rd spool valve with floating function and "return-to-dig" - front auxiliary hydraulic circuit	- additional front auxiliary hydraulic circuit (6-way valve) - Attachments: - bolt-on cutting edge - cutting edge on teeth 4x1 bucket	- flip-over forks on 4x1 bucket - hydraulic and mechanic quick hitch - forks (for quick hitch) - gen. purpose bucket (for quick hitch) 4x1 bucket (for quick hitch) - angle-dozer blade (for quick hitch)
BACKHOE - Alternative control pattern - Auxiliary hydraulic circuits: - hammer aux. circuit - auger aux. circuit 2-way aux. circuit for hydraulic attachments (including clamshell bucket with	- hydraulic swing) - Offset boom - Telescopic arm - Offset boom with telescopic arm - Attachments: - mechanical quick hitch (for std buckets)	- 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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COMPANY WITH
ENVIRONMENTAL MANAGEMENT
SYSTEM CERTIFIED BY DNV
ISO 14001