KOMATSU

WA380-8

Photos may include optional equipment.

Wheel Loader

Net horsepower
143 kW / 191 HP @ 2100 rpm

Operating weight
18,385 – 19,020 kg

Bucket capacity
2.7 – 3.6 m^3

WA380-8

Photos may include optional equiment.

A powerful Komatsu SAA6D107E-3 engine provides a net output of 143 kW 191 HP with up to 15% improved fuel consumption.

Variable Geometry Turbocharger (VGT) is hydraulically actuated to provide optimum air flow under all speed and load conditions.

Fluid neutral or better
Fuel consumption is less than the WA380-6 fuel consumption.

Remote boom and bucket positioners allow the operator to set upper and lower boom kick-outs, as well as the bucket level from inside the cab.

Variable displacement piston pumps with Closed-centre Load Sensing System (CLSS) provide quick hydraulic response and smooth operation to maximise productivity.

Rearview monitoring system (standard)
Enhanced working environment:

- High capacity air suspension seat, heated
- Seat mounted Electronic Pilot Controls (EPC) controls with F-N-R switch
- 2x 12V power outlets

Hydraulically driven cooling fan
Auto-reversing fan is programmable and swings out for easy access to the wider core coolers.

Performance, durability and fuel economy

Large capacity torque converter with lock-up:
Quick acceleration
Lock-up in 2nd, 3rd and 4th gear

Komatsu SmartLoader Logic helps reduce fuel consumption with no decrease in production.

New-style plastic front fenders add durability.

Rear full fenders (standard) are made of durable plastic and swing open for easy access to maintenance points.

7" LCD colour monitor panel
Easy-to-read monitor with "ecology guidance" enables fuel efficient operation. Monitor panel onboard diagnostics remove the need for laptops during service.

Komatsu auto idle shutdown helps reduce idle time and operating costs.

Engine air filter
Externally mounted on the rear LH fender for easier access and maintenance.

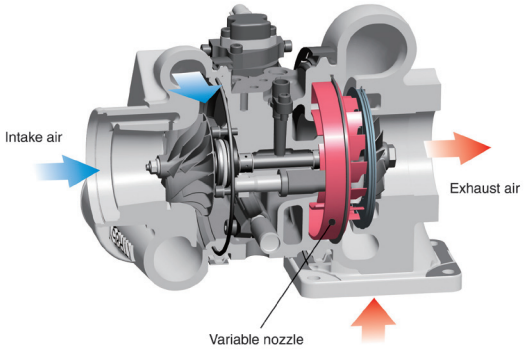
Komtrax® equipped machines send location, SMR and operation maps to a secure website or smart phone via wireless technology. Machines also relay error codes, cautions, maintenance items, fuel levels, and much more.

Operator identification system tracks machine operation for up to 100 operators.

Productivity & Economy Features

Advanced Electronic Control System

The electronic control system performs high-speed processing of all signals from sensors installed in the machine providing total control of equipment in all operating conditions of use. Engine condition information is displayed via an onboard network to the monitor inside the cab, providing necessary information to the operator. Additionally, managing the information via Komtrax® helps customers keep up with required maintenance.

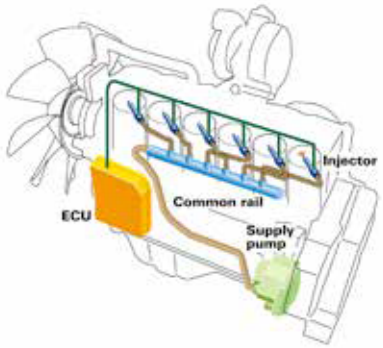


Variable Geometry Turbocharger (VGT) system

The VGT features proven Komatsu-designed hydraulic technology for robust and accurate control under all speed and load conditions for optimal engine performance. The VGT also provides precise exhaust temperature control for efficient KDPF regeneration.

Heavy-duty High-Pressure Common Rail (HPCR) fuel injection system

The system is specifically designed to achieve the optimal injection of fuel for near- complete combustion, which helps reduce PM emissions.



Enhanced Lock-up

The Komatsu designed torque converter with lock-up is standard on the WA380-8.The lock-up function activates in 2nd, 3rd and 4th gears.The lock-up torque converter is effective for both load and carry applications and V-shape loading in lower gears. Komatsu SmartLoader Logic reduces the clutch engagement shock of lock-up by controlling engine torque. The lock-up torque converter, combined with Komatsu SmartLoader Logic results in low fuel consumption and high travel speeds in load and carryand even some V-cycle loading applications.

Komatsu SmartLoader Logic

The WA380-8 features Komatsu SmartLoader Logic, which controls engine torque to match machine demands. For example, engine torque needs are higher for digging in V-shape loading, but lower when driving with an empty bucket. This system optimises the engine torque for all applications to minimise fuel consumption. Komatsu SmartLoader Logic functions automatically and doesn't interfere with operation, saving fuel without decreasing production.

Large-capacity Torque Converter

The Komatsu-designed power train features a large capacity torque converter for optimum efficiency. The WA380-8 has greater productivity in V-shape loading applications because the increased tractive effort does not require full throttle.

The large capacity torque converter allows the loader to up-shift gears faster for improved acceleration and hill climbing ability. The WA380-8 achieves high gear ranges and maintains high travel speed when working in load-and-carry applications. In most applications, production is increased and fuel consumption is reduced, resulting in improved fuel efficiency.

Dual-mode Engine Power Select System

This wheel loader offers two selectable operating modes — Economy (E) and Power (P).

- E Mode: This mode provides maximum fuel efficiency for general loading.
- P Mode: This mode provides maximum power output for hard- digging operation or hill climbing.

1 Dual mode engine power selection switch
2 Transmission shift mode selector switch
3 Torque converter lock-up switch

Automatic Transmission with Mode Select System

This operator-controlled system allows the operator to select manual shifting or two levels of automatic shifting (low, and high). Auto L mode is for fuel-saving operation with the gear-shift timing set at lower speeds than Auto H mode.

CLSS Variable Displacement Piston Pump

The Closed-Centre Load Sensing System (CLSS), with variable displacement piston pump, delivers precise hydraulic flow just as the operator demands. This prevents wasted hydraulic flow, which minimises loss and contributes to better fuel efficiency

Komatsu Auto Idle Shutdown

In order to reduce unwanted idle time, Komatsu offers its auto idle shutdown feature. This will shut the engine off and apply the parking brake and hydraulic lock after a preset idle time limit.

Productivity & Economy Features (Continued)

New Operator Seat with Electronic Pilot Control (EPC) Levers

A new standard, heated, air-suspension seat provides enhanced support on rough roads and dampens machine vibrations, providing a more comfortable ride for the operator.
An EPC-lever console is built into and moves with the seat. The angle of the armrest is fully adjustable for optimum operator comfort.
A secondary F-N-R switch is incorporated in to work equipment lever configurations.

Tiltable / Telescopic Steering Wheel

The operator can tilt and telescope the steering wheel to allow maximum comfort and control. The two-spoke steering wheel allows maximum visibility of the monitor panel and the forward work environment.

Low Noise Design

Operator's ear noise level : 72 dB(A) | Dynamic noise level (outside): 108 dB(A)
The large ROPS/FOPS cab is mounted with Komatsu's unique viscous mounts. The low-noise engine, hydraulically-driven fan, and hydraulic pumps are mounted with rubber cushions, and the cab sealing is improved to provide a quiet, low-vibration, dustproof and comfortable operating environment.

Rear View Monitoring System (standard)

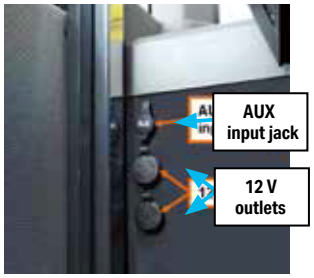
The dedicated full-colour monitor on the right side of the cab provides the operator with a rear view from the machine. This monitor can be always on or only on when the loader shifts into reverse. Guidelines provide the operator with visual cues for the width of the loader.

Engine Shutdown Secondary Switch

The engine stop switch enables machine shutdown when accessing the key switch is not possible.

Auxiliary Input (MP3 Jack) 12 V Outlets

An Aux input for audio devices is standard as well as two 12 volt outlets. These are all located on the front of the right-hand console.



Emergency Stop

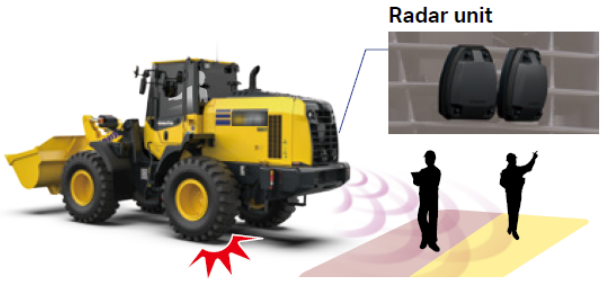
The cabin E-Stop provides the operator with immediate access from the operator's seat and is located on the RHS forward cabin pillar.

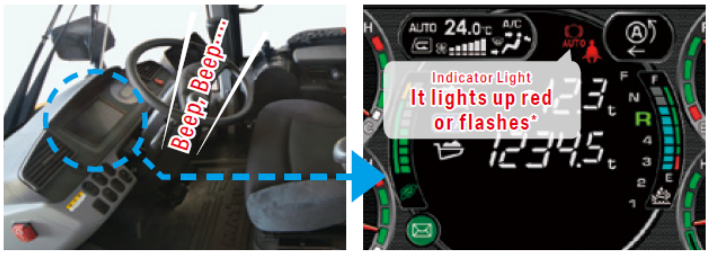
Safety Technology

The Rear Object Detection System with Autobrake assists rearward safety checks. It reduces the risk of the vehicle colliding with people and objects.

It detects collision risks while reversing, warns the operator, and activates the brake if needed.

The Rear Object Detection System with Autobrake uses two quasi-millimeter wave radar units to detect people, cargo, and work vehicles approaching from the rear while reversing. If there is a risk of a collision, it alerts the operator with an indicator light and a warning buzzer. The system activates the brake as necessary to avoid or mitigate collision damage.





* Details vary depending on the model, so please refer to the instruction manual for the applicable model.

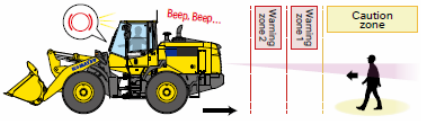
Three-stage warning according to collision risk level

Three stages of caution zone and warning zone are set depending on the collision risk level. Different intermittent sounds of the warning buzzer alert the operator to the level of danger. If the risk level increases, the system automatically activates the brake.

●Caution zone

When an obstacle is detected a long distance away, the indicator light turns on or flashes, * and the warning buzzer sounds intermittently.

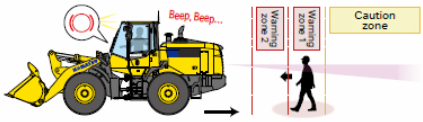
*Please refer to the instruction manual for details



●Warning zone 1

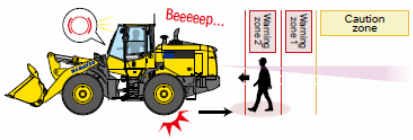
When an obstacle is detected a short distance away, the indicator light turns on or flashes, * and the warning buzzer sounds intermittently at a faster rate.

*Please refer to the instruction manual for details



●Warning zone 2

When an obstacle is detected a short distance away, the indicator light turns red or flashes, and the warning buzzer sounds continuously. The brake is activated if the vehicle's posture and inclination indicate no risk of tipping over.



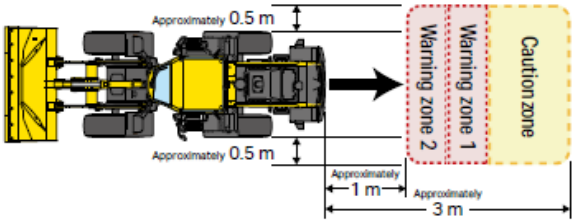
The range of the warning zone depends on the conditions of the vehicle.

● The vehicle speed-linked function

The range of the warning zone is short at low speeds. But at high speeds, it is extended to avoid unnecessary warnings, and brake activations are reduced according to the speed of the vehicle.

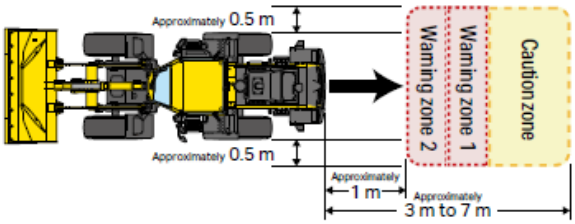
When stopped* and up to a speed of 4 km/h

*Conditions for function activation: When the key is switched to ON, the parking brake is released, and the shift lever or forward/reverse switch (R) is in the ON position or the vehicle is reversing.



During reverse driving at speeds from 4 km/h to 25 km/h

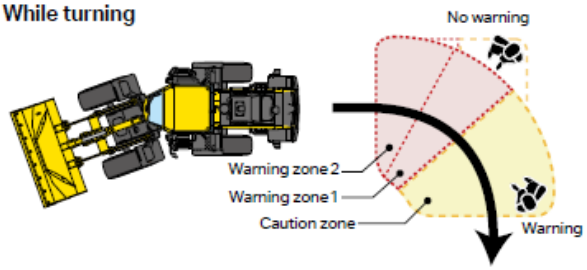
*The collision detection brake does not activate at speeds of 25 km/h or over. However, the warning buzzer will operate depending on the distance to the obstacle.



● The steering-linked function

When this function is activated, the direction of travel is predicted from the steering angle, and range of the warning zone is adjusted to reduce unnecessary warnings.

While turning



● The pilling up operation-linked function

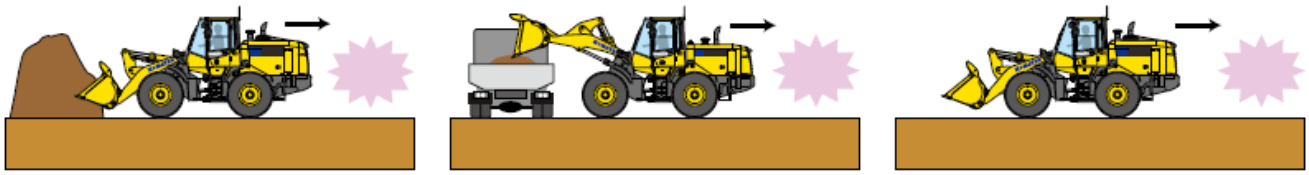
When this function is activated, it detects when pilling up operations are being performed and automatically turns off the warning and brake activation functions to reduce false detections of the ground (if function is activated).

The pilling up operation

It responds to all approaching people, obstacles, and work vehicles

The radar detects all approaching people, obstacles, and work vehicles while reversing. It supports rearward safety monitoring in situations such as the following.

During digging	A lack of rearward monitoring due to attention being focused on operating the bucket
During loading	A lack of rearward monitoring due to attention being focused on operating the bucket
During changes of direction	A lack of rearward monitoring due to attention being focused on the next direction of travel



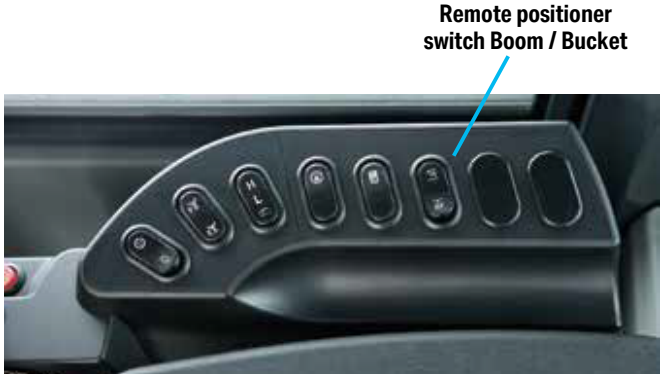
Operator Environment

Easy Entry and Exit

The WA380-8 has an inclined ladder with wide steps and hand holds to ease entry and exit from the cab.

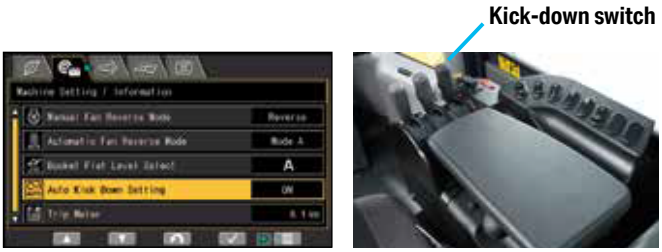
Remote Bucket & Boom Positioner

The operator can set the bucket angle and remote boom positioner from the cab. Both upper and lower boom kick-outs are adjustable in the cab with the push of a button. The bucket positioner can store three horizontal settings, allowing the operator to easily change attachments without resetting the bucket level.



Automatic Kick-down

The WA380-8 has the ability to automatically downshift to F1, eliminating the need for the operator to manually downshift when entering the pile. This can be activated through the monitor.



Electronically Controlled Suspension System

The electronically controlled suspension system, or ride control system, uses an accumulator to minimise boom arm shock, giving the operator a much smoother ride. This reduces operator fatigue and material spillage during load and carry operations. The electronically controlled suspension system is speed sensitive, meaning the boom won't move during low speed digging. This feature is stan-dard on the WA380-8.

Mono Lever With Integrated 3rd Spool Control (optional)

The mono lever option has been designed for improved ergonomics and comfort. When equipped with the optional 3rd spool valve, it allows the operator to control the 3rd spool with the thumb. The 3rd spool valve can be operated in either continuous or proportional flow modes. The mono lever also includes a F-N-R switch.

High Resolution 7-inch Colour LCD Monitor

The 7-inch colour TFT-LCD monitor can display maintenance information, operational records, ecology-guidance records and other machine data. The switch panel is used to select screens and adjust air conditioner and environmental controls.

Machine monitor

1. LCD unit
2. LED unit
3. Engine tachometer
4. Speedometer
5. Ecology gauge
6. Air conditioner display
7. Shift indicator
8. Engine coolant temp. gauge
9. Hydraulic oil temp. gauge
10. Torque converter oil temp. gauge
11. Fuel gauge
12. Message pilot lamp
13. Pilot lamps

Switch panel

1. Air conditioner switches / Numeral key pad
2. Function switches

Visual user menu

Pressing the menu button on the switch panel accesses the user-menu screen. The menus are grouped by function, with easy-to-understand, intuitive icons for easier machine operation.

1. Energy saving guidance
2. Load-meter setting (optional)
3. Machine settings
4. Maintenance
5. Monitor setting
6. Mail check

Operator identification function

An operator identification (ID) code can be set for each operator, and used to manage operation information of individual machines through Komtrax®. Data sent from Komtrax® can be used to analyse operation status by operator job, as well as by machine.

Monitor Panel with troubleshooting function minimises downtime

Various meters, gauges and warning functions are centrally arranged on the monitor panel. The monitor simplifies start-up inspection and warns the operator with a lamp and buzzer if any abnormalities occur. Warnings are indicated in four levels, which the operator must acknowledge and clear. Replacement times for oil and filters are also indicated.

Side-opening Gull-wing Engine Doors

The large, gull-wing-type engine doors require minimal effort to open and close thanks to gas assisted struts. The doors make access and daily maintenance easy. Large steps on each side of the frame also enhance accessibility.

Swing-Out Type Cooling Fan and Wide Core Radiator

The cooling fan swings out for easier cleaning. The coolers feature wide-spaced cooling fins to reduce clogging.

Automatic Greasing System

6 kg reservoir.

Auto Reversing Fan

The engine cooling fan is hydraulically driven. It can be set to reverse automatically during operation. Fan reverse mode and timing can be controlled through the monitor.

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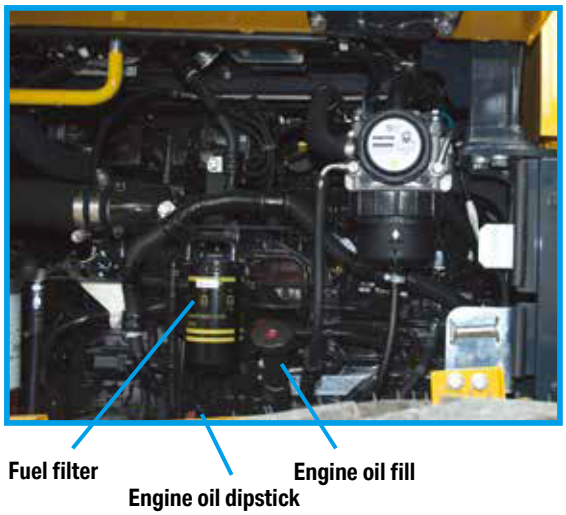
Operator Environment (Continued)

Battery Isolation Switch

The battery isolation switch is located on the right side of the machine. This can be used to disconnect power when performing service work on the machine.

Engine Compartment

The WA380-8 engine compartment is designed for easy serviceability. Placement of maintenance items, such as filters, dipsticks, and oil-fill locations are laid out for easy-to-reach ground level access.



Rear Full Fenders (Standard)

Full rear fenders are standard on the WA380-8. The plastic rear fenders open outward, keeping the force required to open them low, even when covered with mud or snow. The fenders swing out of the way to give technicians easy access to the engine compartment. Mud flaps are also included on the fenders for additional machine protection.

Cab Air Filter

The inside and outside air filters can be replaced easily without the need for tools. The outside filter is located behind a lockable door for security.


Inside air filter


Outside air filter

LED Taillights & E-Stops

LED brake lights and reverse lights provide long bulb life and excellent visibility. External E-Stops are standard and provide ground level access to shut down the machine.

Engine Air Cleaner & Pre-Cleaner

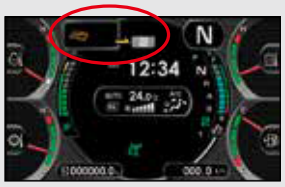
The air cleaner is located on the left-side platform. A Turbo II centrifugal type pre-cleaner for extended filter life and engine protection is standard.

Maintenance Information

"Maintenance time caution lamp" display

When the time before required maintenance dips below 30 hours*, the maintenance-time monitor appears. Pressing the menu switch displays the maintenance screen.

* : The setting can be changed within the range between 10 and 200 hours.




Maintenance screen

Specifications

Engine

Model	Komatsu SAA6D107E-3*
Type	Water-cooled, 4-cycle
Aspiration	Turbocharged, aftercooled
No. of cylinders	6
Bore	107 mm
Stroke	124 mm
Piston displacement	6.69 L
Governor	All-speed, electronic
Engine power:	
SAE J1995	Gross 143 kW / 192 HP
ISO 9249 / SAE J1349	Net 143 kW / 191 HP
Rated rpm	2100 rpm
Fan drive method for radiator cooling	Hydraulic
Fuel system	Direct injection
Lubrication system:	
Method	Gear pump, force-lubrication
Filter	Full-flow type
Air cleaner	Dry type with double elements and dust evacuator, plus dust indicator

* De-tier engine does not comply with US EPA Tier 4 Final regulation

Transmission

Torque converter 3-elements, 1-stage, 2-phase

Travel speed	Forward*	Reverse*
1st	6.6 km/h	7.1 km/h
2nd	11.7 km/h (12.4 km/h)	12.4 km/h (13.3 km/h)
3rd	20.9 km/h (22.4 km/h)	22.3 km/h (24.1 km/h)
4th	36.1 km/h (37.5 km/h)	38.6 km/h (37.5 km/h)

*P-mode Measured with 23.5-25 tyres ( ): Lock-up clutch ON

Axles and final drives

Drive system	Four-wheel drive
Front	Fixed, semi-floating
Rear	Centre-pin support, semi-floating 26° total oscillation
Reduction gear	Spiral bevel gear
Differential gear	Conventional type
Final drive	Planetary gear, single reduction

Brakes

Service brakes	Hydraulically actuated, wet multiple-disc brakes actuate on four wheels
Parking brake	Wet disc brake
Emergency brake	Parking brake is commonly used.

Steering system

Type	Articulated type, fully-hydraulic power steering
Steering angle	35° (40° to max end stop)
Minimum turning radius at the centre of outside tire	6320 mm

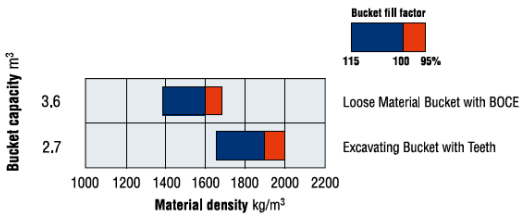
Hydraulic system

Steering system:	
Hydraulic pump	Piston pump
Capacity	137 L/min at rated rpm
Relief valve setting	24.5 MPa 250 kgf/cm^2
Hydraulic cylinders:	
Type	Double-acting, piston pump
Number of cylinders	2
Bore x stroke	75 mm x 442 mm
Loader control:	
Hydraulic pump	Piston pump
Capacity	205 L/min
Relief valve setting	31.4 MPa 320 kgf/cm^2
Hydraulic cylinders:	
Type	Double-acting, piston type
Number of cylinders – bore x stroke:	
Boom cylinder	2 – 130 mm x 713 mm
Bucket cylinder	1 – 150 mm x 535 mm
Control valve	2 Spool type
Control positions:	
Boom	Raise, hold, lower, and float
Bucket	Tilt-back, hold, and dump
Hydraulic cycle time:	
Raise (Rated load in bucket)	5.9 s
Dump (Empty)	1.8 s
Lower (Empty)	3.3 s

Service refill capacities

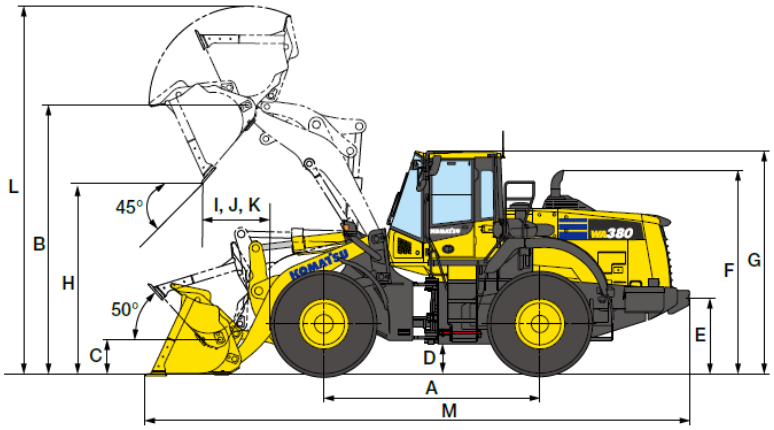
Cooling system	60.6 L
Fuel tank	300 L
Engine	23 L
Hydraulic system	142 L
Axle (each front and rear)	40 L
Torque converter and transmission	54 L

Bucket selection guide



Dimensions

Measured with 23.5R25 (L3) tyres, ROPS/FOPS cab



	Tread		2160 mm
	Width over tyres		2780 mm
A	Wheelbase		3300 mm
B	Hinge pin height, max. height	Standard Boom	4095 mm
		High Lift Boom	4625 mm
C	Hinge pin height, carry position	Standard Boom	520 mm
		High Lift Boom	680 mm
D	Ground clearance		455 mm
E	Hitch height		1150 mm
F	Overall height, top of the stack		3100 mm
G	Overall height, ROPS cab		3390 mm

	Standard Boom			High Lift Boom
	Loose Material Bucket Pin On	General Purpose Bucket Pin On	Excavating Bucket Pin On	General Purpose Bucket Pin On
	Bolt-on Cutting Edge	Teeth	Teeth	Bolt-on Cutting Edge
Bucket capacity: heaped	3.6 m³	3.1 m³	2.7 m³	2.9 m³
struck	2.9 m³	2.7 m³	2.3 m³	2.4 m³
Bucket width	2905 mm	2920 mm	2920 mm	2905 mm
Bucket weight	1610 kg	1540 kg	1650 kg	1720 kg
H Dumping clearance, max. height and 45° dump angle*	2950 mm	2815 mm	2910 mm	3575 mm
I Reach at max. height and 45° dump angle*	1150 mm	1265 mm	1160 mm	1185 mm
L Operating height (fully raised)	5600 mm	5600 mm	5450 mm	5985 mm
M Overall length (bucket on ground)	8310 mm	8490 mm	8350 mm	8810 mm
Loader clearance circle (bucket at carry, outside corner of bucket)	14440 mm	14540 mm	14470 mm	14850 mm
Digging depth: 0°	60 mm	75 mm	75 mm	110 mm
10°	290 mm	335 mm	310 mm	320 mm
Static tipping load: straight	15440 kg	15545 kg	15435 kg	12055 kg
40° full turn	13440 kg	13540 kg	13430 kg	10407 kg
Breakout force	158 kN 16100 kgf	170 kN 17300 kgf	190 kN 19335 kgf	183 kN 18661 kgf
Operating weight	18455 kg	18385 kg	18495 kg	19020 kg

All dimensions, weights, and performance values based on ISO 7131 and 7546 standards.

Static tipping load, operating weight and overall length shown include lubricant, coolant, full fuel tank, ROPS (ISO 3471) cab and operator. Machine stability and operating weight affected by counterweight, tyre size, and other attachments.

Apply the following weight changes to operating weight, static tipping load and overall length.

Standard equipment

Engine:

- Automatic hydraulic-driven fan with automatic reverse rotation
- Engine, Komatsu SAA6D107E-3 diesel*
- Fuel pre-filter with separator
- Komatsu SmartLoader Logic
- Radiator mask, swing out
- Radiator, wider core
- Turbo II engine pre-cleaner with extension

* De-tier engine does not comply with US EPA Tier 4 Final regulation

Electrical System:

- Alternator, 90 A, 24 V
- Batteries, 140 Ah/12V (2), 930 CCA
- Komatsu Auto Idle Shutdown
- Lights
  - Back-up light, LED
  - Flashing beacon, LED with guard
  - Stop and tail light, LED
  - Turn signal, 2 front and 2 rear with hazard switch
  - Working lights, LED, 6 front cab mount
  - Working lights, LED, 4 rear cab mount
  - Working lights halogen, 2 rear grill mount
- Starting motor, 5.5 kW

Cab:

- 2 x DC12V electrical outlets
- Auto air conditioner
- Colour LCD/TFT multi-monitor
- Door LH and RH egress
- Electronically Controlled Suspension System (ECSS)
- Equipment Management Monitoring System (EMMS)
  - Lights (central warning, brake oil pressure, engine oil pressure, parking brake, cooling fan reverse, seat belt caution, Komtrax® message)
  - Gauges (engine water temperature, ecology, fuel level, hydraulic oil temperature, speedometer/tachometer)
- Floor mat
- Operator seat, reclining, air suspensions type, heated
- Radio, AM/FM with AUX input jack
- Rear defroster, electric
- ROPS/FOPS Cab Level 2
- Seatbelt, 2-point retractable, 76mm width
- Steering wheel, tilt and telescopic
- Sun visor, front window
- Windshield washer and wiper, front with intermittent
- Windshield washer and wiper, rear

Safety Equipment:

- Back-up alarm
- Battery isolation switch
- Colour rear view camera and monitor
- Emergency stop switches (3)
- Horn, electric
- Parking brake, electric
- Rear view mirrors, outside (2) inside (2)
- Rear Object Detection (RODS), with Autobrake
- Rollover Warning System
- Service brakes, wet disk type
- Wheel chocks, steel type

Tyres:

- 23.5R25 L3 tyres

Other:

- 3-spool valve for Boom, Bucket and Attachment control
- Auto shift transmission with mode select system
- Automatic greasing system
- Auxiliary steering (SAE)
- Boom kick-out, in-cab adjustable
- Brake cooling system
- Bucket positioner, in-cab adjustable, 3 positions
- Counterweight, standard and additional
- EPC fingertip controls with F-N-R switch, three levers
- Front fenders
- Komtrax® Level 5
- Lift cylinders and bucket cylinder
- Loader linkage with standard lift arm
- Lock-up torque converter
- Rear full fenders
- Transmission, 4 forward and 4 reverse
- Vandalism protection kit, padlocks for battery box (2)

Optional equipment

Additional LED lighting
Bluetooth media system
Clean air cab pressurisation systems
Fire extinguishers
Fire suppression systems
Hi-vis decals
High lift boom
Limited slip differential (F&R)
Mono-lever loader control with transmission F-N-R switch
Reverse sensor
SMART Alarm Broadband reverse alarm
UHF/CB Radio
Various bucket options
Various scale systems
Window tinting

For more information:

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