

# KOMATSU®

## WA250-5

### HORSEPOWER

Gross: 104 kW 140 HP / 2000 rpm

Net: 101 kW 135 HP / 2000 rpm

### OPERATING WEIGHT

10565 – 10710 kg

23,292 – 23,611 lb

### BUCKET CAPACITY

1.9 – 2.7 m<sup>3</sup> 2.5 – 3.5 yd<sup>3</sup>

**WA**  
**250**

W  
H  
E  
E  
L  
L  
O  
A  
D  
E  
R



Photo may include optional equipment.

# WALK-AROUND

***Komatsu-integrated design*** offers the best value, reliability, and versatility. Hydraulics, powertrain, frame, and all other major components are engineered by Komatsu. You get a machine whose components are designed to work together for higher production, greater reliability, and more versatility.

***Reduced operator noise***  
to 70 dB(A)

***Expanded main monitor***  
and troubleshooting display

***Larger cab layout***

***Tiltable steering column***

***Easy-to-operate loader control mono-lever***  
using Pressure Proportional Control (PPC)



***Large breakout force***

***Extended service intervals***

***Maintenance-free*** fully hydraulic wet multiple-disc service and parking brakes

***Electronically controlled Hydrostatic Transmission (HST)*** with variable shift control system

***Traction control system***

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Powerful and low emission Komatsu  
SAA6D102E-2 *emissionized engine*

*Full side opening*  
gull-wing engine doors

*Radial sealed*  
air cleaner

*Swing-out hydraulic*  
radiator fan

*Side-by-side type coolers*  
for easy access and cleaning

*Overrun protection system*

*Ground level servicing*  
and fluid checks

*Extremely low*  
fuel consumption

*Flat face "O-ring" hydraulic seals*  
for extended life

*Staircase-type steps*  
with large rear-hinged doors

*Sealed connectors*



Photos may include optional equipment.

# PRODUCTIVITY FEATURES

## High Productivity and Low Fuel Consumption

### Powerful and Low Emission Engine

A powerful SAA6D102E-2 turbocharged air-to-air after-cooled diesel engine provides an output of **101 kW** 135 HP for the WA250-5. This engine is U.S. EPA Tier 2 and EU Stage 2 emissions certified.

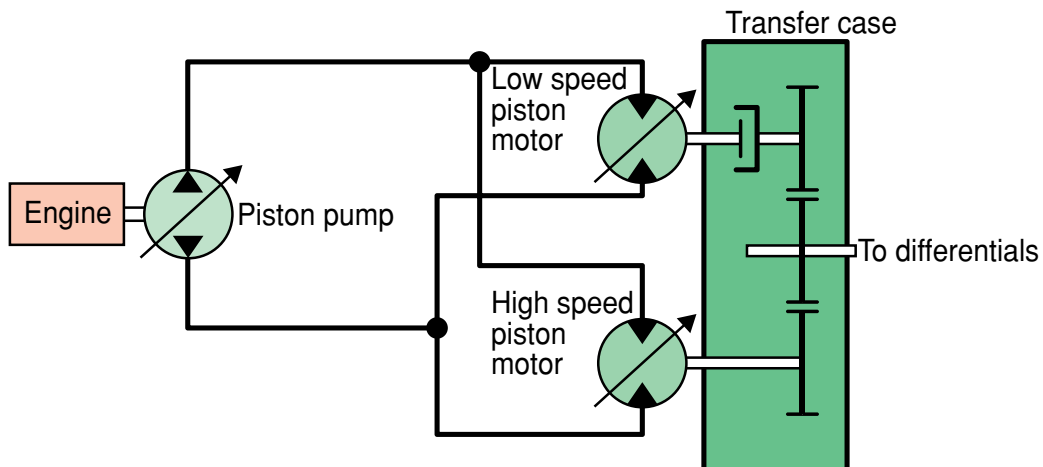
### Low Fuel Consumption

The fuel consumption is reduced up to 15%\* due to the high-torque engine and HST with maximum efficiency in the low-speed range.

\*V-shape loading (25 sec. cycle time)

### Electronically-controlled HST Using a 1-pump, 2-motor System

- The 1-pump, 2-motor system allows for high-efficiency and high tractive effort. Engine power is transmitted hydraulically to a transfer case, then manually out to the differentials and out to the four driving wheels.
- HST provides quick travel response and aggressive drive into the pile. The variable displacement system automatically adjusts to the tractive effort demand to provide maximum power and efficiency.
- Full auto-shifting eliminates any gear shifting and kick-down operation to allow the operator to concentrate on digging and loading.
- When high drive torque is needed for digging, climbing or initiating movement, the pump feeds both motors. This combination makes the loader very aggressive and quick.
- Under deceleration, the HST system acts as a dynamic brake on the mechanical drive system. The dynamic brake can hold the loader in position on most workable slopes. This can be an advantage in stockpiling and ramp loading.
- As the machine moves and gains ground speed, the torque demand decreases and the low speed motor is effectively removed from the drive system by a clutch. At this point, the flow is going to the high-speed motor and the low-speed motor is not causing a drag on the system.
- An inching pedal gives the operator excellent simultaneous control of his travel and equipment hydraulic speeds. By depressing the inching pedal, drive pump flow to the motors will decrease, reducing ground speed and allowing the operator to use his accelerator to increase flow to his equipment hydraulics. Depressing the inching pedal further will activate the service brakes.



### Electronically-controlled HST with Variable Shift Control System

The operator can choose between first, second, third or fourth maximum speeds by dialing the speed range selector switch.

For v-cycles, the operator can set the speed control switch to 1 or 2, which will give him aggressive digging, quick response and fast hydraulics. For load and carry, he can select 3 or 4 which will still give aggressive digging but with much faster travel speed.

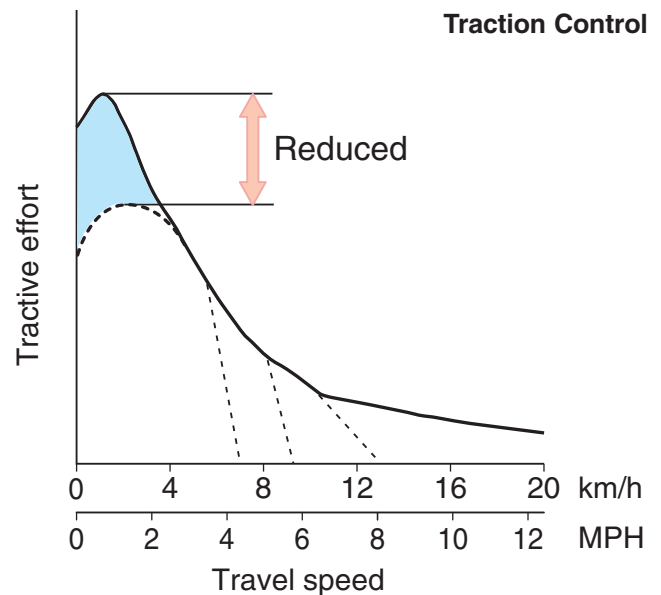
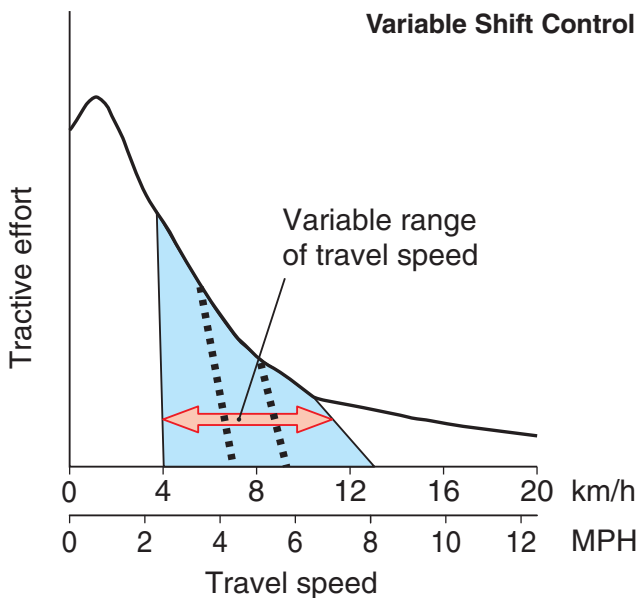


The variable shift switch allows the operator to adjust his machine speed in confined v-loading applications. When in 1, the operator can adjust his travel speed using the variable shift switch to match his machine speed and hydraulics to the distance he must travel.

### Traction Control System

In limited traction situations where the operator would like to avoid tire slippage (such as sandy or wet surface operations), he can automatically reduce slippage by activating the traction control feature. Putting the traction control switch in the "ON" position limits the maximum amount of tractive effort.

Traction control will be an advantage in certain applications such as transfer stations where the loader may be working on slippery concrete.



## INCREASED RELIABILITY AND SERVICEABILITY

### Main Monitor - Equipment Management Monitoring System

Komatsu's main monitor keeps the operator informed of all machine functions at a glance. The monitor is located behind the steering wheel and displays various different machine functions including fluid/filter change intervals and troubleshooting memory display functions. The main gauges are analog type for easy viewing and other functions utilize light symbols or Liquid Crystal Display (LCD) readouts.



### Swing-out Radiator

The Komatsu cooling system is isolated from the engine to provide more efficient cooling and low noise. The swing-out hydraulic fan allows the operator to quickly clean out the cooling system. The radiator, air-to-air cooler and oil cooler are mounted side-by-side for more efficient cooling and easy cleaning. A fully-opening, gas spring assisted rear grill gives the operator excellent access to the swing-out fan and coolers.



### Full Side-opening Gull-wing Engine Doors

Ground level engine service and daily service checks are made easy with the gas spring assisted full side opening gull-wing doors.



### Extended Service Interval

Extended engine oil service interval:

250 H → 500 H

Extended drive shaft greasing interval:

1,000 H → 4,000 H



### Overrun Prevention System

When the machine descends a slope of six degrees or less, maximum travel speed is automatically restricted to approximately **38 km/h** 23 MPH, for safety protection against damage of power train components and brakes by sensing the travel speed and controlling the discharge amount of the HST pump and motor. When the machine descends a steep slope and the travel speed reaches **36 km/h** 22 MPH, the caution lamp lights up to inform the operator to reduce the travel speed.

Note: When the machine descends a steep slope, the use of the service brake is necessary to limit travel speed.

### Fully Hydraulic Wet Multiple-disc Service Brakes

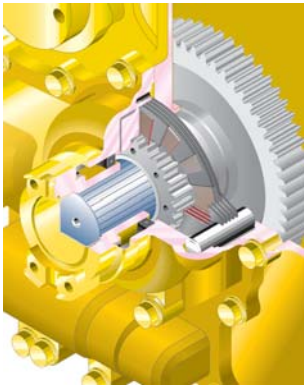
The dual wet multiple-disc brakes at each wheel are fully sealed and adjustment free to reduce contamination, wear and maintenance. The result is lower maintenance costs and higher reliability.

Added dependability is designed into the braking system by the use of two independent hydraulic circuits, providing hydraulic backup should one of the circuits fail.

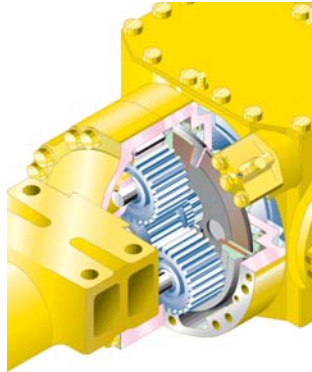
If the brake oil pressure drops, the warning lamp flashes and the warning buzzer sounds intermittently.

The parking brake is mechanically controlled by a lever in the cab.

#### Parking Brake

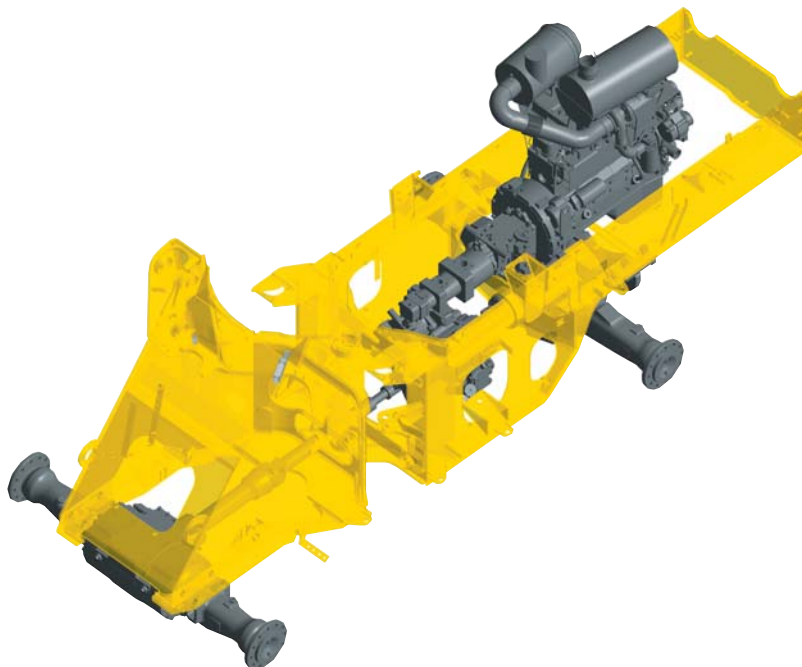


#### Service Brakes



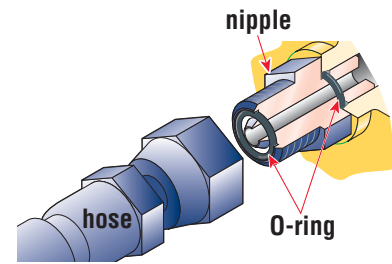
### High-rigidity Frames

The front and rear frames along with the loader linkage have high rigidity to withstand repeated twisting and bending loads to the loader body and linkage. Both the upper and lower center pivot bearings use tapered roller bearings for increased durability. The structure is similar to those of large sized loaders and the reinforced loader linkage ensures high strength.



### Flat Face-to-face O-ring Seals

Flat face-to-face O-ring seals are used to securely seal all hydraulic hose connections and to prevent oil leakage.



### Cathion Electrodeposition Primer Paint/Powder Coating Final Paint

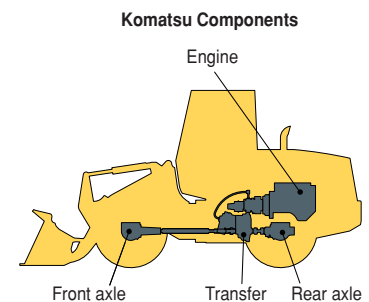
Cathion electrodeposition paint is applied as a primer paint and powder coating is applied as a topcoat to the exterior metal sheet parts. This process results in a durable rust-free machine, even in the most severe environments. Some external parts are made of plastic to provide long life and high impact resistance.

### Sealed Connectors

Main harnesses and controller connectors are equipped with sealed connectors providing high reliability and dust and corrosion resistance.

### Komatsu Components

Komatsu manufactures the engine, transfer case, differentials and electric parts on this wheel loader. Komatsu loaders are manufactured with an integrated production system under a strict quality control system.



## OPERATOR COMFORT

### Cab Layout

Komatsu's cab layout provides the operator with a roomy, quiet and efficient work environment. The low noise level inside the cab leads the industry at 70 dB(A) and loader controls are ergonomically designed to reduce operator fatigue and increase productivity.

### Two Door Walk-through Cab

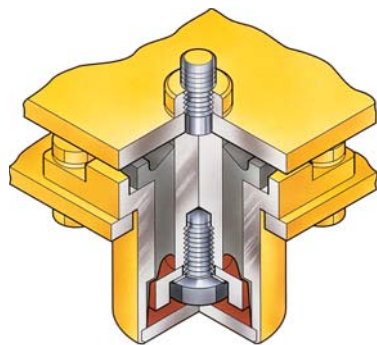
Entry and exit into the Komatsu cab starts with sloped staircase type steps and large diameter handrails for added safety and comfort. The large cab doors are rear-hinged to open 130 degrees offering easy entry/exit and will not hamper visibility when operating the machine with the doors latched open. A wide pillar-less flat glass provides for excellent visibility. The wiper arm covers a large area to provide great visibility even on rainy days.



### Low-noise Design

Operator noise: 70 dB(A)

The large cab is mounted with Komatsu's unique ROPS/FOPS (ISO 3471/ISO 3449) 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, and comfortable operating environment. Pressurization in the cab keeps dirt out further enhancing the operator's comfort.



### Easy-to-operate Loader Control Mono-lever

A mono-lever using PPC allows the operator to easily operate the work equipment, to reduce operator fatigue and to increase controllability. The adjustable wrist rest provides the operator with a variety of comfortable operating positions.



### Electrically Controlled Directional Lever

The operator can change direction with a touch of his fingers without removing his hand from the steering wheel. Solid state electronics makes this possible.





### Tiltable Steering Column

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



### Comforts of Home

The large cab allows room for a large lunch box holder, a variety of cup holders and a hot/cold box storage area. Optional air conditioning and the optional AM/FM stereo cassette system create a comfortable and controlled work environment.



# WA250-5 WHEEL LOADER SPECIFICATIONS



## ENGINE

Model ..... Komatsu SAA6D102E-2  
 Type ..... Water-cooled, 4-cycle  
 Aspiration ..... Turbocharged, and air-to-air aftercooled  
 Number of cylinders ..... 6  
 Bore x stroke ..... **102 mm x 120 mm** 4.02" x 4.72"  
 Piston displacement ..... **5.88 ltr** 359 in<sup>3</sup>  
 Governor ..... Mechanical, all-speed control  
 Horsepower  
 SAE J1995 ..... Gross **104 kW** 140 HP  
 ISO 9249/SAE J1349 ..... Net **101 kW** 135 HP  
 Rated rpm ..... 2000 rpm  
 Fuel system ..... Direct injection  
 Lubrication system  
 Method ..... Gear pump, force-lubrication  
 Filter ..... Full-flow  
 Air cleaner ..... Dry-type with double radial-sealed elements and dust evacuator, plus dust indicator

U.S. EPA Tier 2 and EU Stage 2 emissions certified.



## TRANSMISSION

Transmission ..... Hydrostatic, 1 pump, 2 motors with speed range select

Travel speed (Both forward and reverse)

	17.5-25 tires		20.5-25 tires	
	km/h	mph	km/h	mph
1st*	3.6 - 11.7	2.2 - 7.3	4.0 - 13.0	2.5 - 8.1
2nd	11.7	7.3	13.0	8.1
3rd	16.2	10.1	18.0	11.2
4th	34.2	21.2	38.0	23.6

\*1st speed can be set variably



## AXLES AND FINAL DRIVES

Drive system ..... Four-wheel drive  
 Front ..... Fixed, semi-floating  
 Rear ..... Center-pin support, semi-floating 30° total oscillation  
 Reduction gear ..... Spiral bevel gear  
 Differential gear ..... Torque proportioning  
 Final reduction gear ..... Planetary gear, single reduction



## BRAKES

**Service brakes:** Hydraulically-actuated, wet multiple-disc brakes actuate on four wheels.

**Parking brake:** Wet, multiple-disc brake on transfer output shaft.

**Secondary brake:** Parking brake is commonly used.



## STEERING SYSTEM

Type ..... Full-hydraulic power steering independent of engine rpm  
 Steering angle ..... 40° each direction  
 Minimum turning radius at the center of outside tire ..... **4950 mm** 16'3"



## BUCKET CONTROLS

The use of a PPC hydraulic control valve offers lighter operating effort for the work equipment control levers. The reduction in the lever effort and travel makes it easy to operate in the work environment.

### Control positions

Boom ..... Raise, hold, lower, and float  
 Bucket ..... Tilt-back, hold, and dump



## HYDRAULIC SYSTEM

### Capacity (Discharge flow) @ engine-rated rpm

Maximum flow for loader circuit  
 Loader + steering pump ..... **.78 + 110 ltr/min** 20.6 + 29.1 U.S. gal/min  
 Pilot pump ..... **.37 ltr/min** 9.8 U.S. gal/min  
 (Gear-type pumps)

### Relief valve setting

Loader ..... **210 kg/cm<sup>2</sup>** 20.6 MPa 3,000 psi  
 Steering ..... **190 kg/cm<sup>2</sup>** 18.6 MPa 2,700 psi

### Control valve

2-spool open center type

### Hydraulic cylinders

Loader and steering ..... Double-acting, piston

Hydraulic Cylinders	Number of Cylinders	Bore		Stroke	
		mm	in	mm	in
Boom	2	130	5.1"	717	28.2"
Bucket	1	150	5.9"	491	19.3"
Steering	2	70	2.8"	453	17.8"

### Hydraulic cycle time (Rated load in bucket)

Raise ..... 6.3 sec  
 Dump ..... 1.7 sec  
 Lower (Empty) ..... 3.6 sec

Total cycle time ..... 11.6 sec

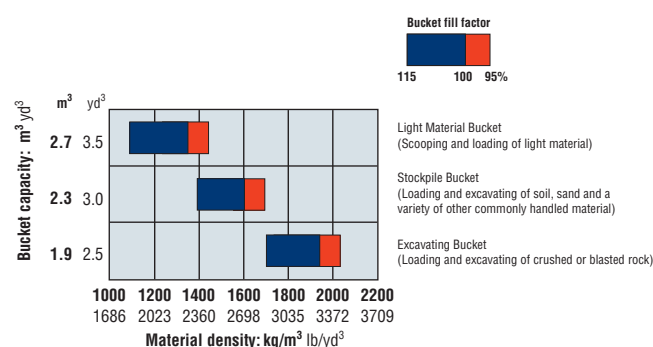


## SERVICE REFILL CAPACITIES

Cooling system ..... **17.5 ltr** 4.6 U.S. gal  
 Fuel tank ..... **184.0 ltr** 48.6 U.S. gal  
 Engine ..... **19.5 ltr** 5.2 U.S. gal  
 Hydraulic system ..... **67.0 ltr** 17.7 U.S. gal  
 Axle (Each, front and rear) ..... **18.0 ltr** 4.8 U.S. gal  
 Transmission ..... **5.5 ltr** 1.5 U.S. gal

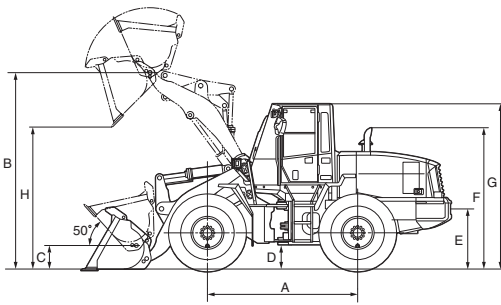


## BUCKET SELECTION GUIDE





**DIMENSIONS**



	17.5-25 tires		20.5-25 tires	
Tread	1930 mm	6'4"	1930 mm	6'4"
Width over tires	2375 mm	7'10"	2470 mm	8'1"
<b>A</b> Wheelbase	2900 mm	9'6"	2900 mm	9'6"
<b>B</b> Hinge pin height at max. height	3725 mm	12'3"	3795 mm	12'5"
<b>C</b> Hinge pin height at carry position	375 mm	1'3"	450 mm	1'6"
<b>D</b> Ground clearance	395 mm	1'4"	465 mm	1'6"
<b>E</b> Hitch height	880 mm	2'11"	950 mm	3'1"
<b>F</b> Overall height, top of stack	2665 mm	8'9"	2735 mm	9'0"
<b>G</b> Overall height, ROPS (ISO 3471) cab	3130 mm	10'3"	3200 mm	10'6"
<b>H</b> See dumping clearance below				

Measured with 17.5-25-16PR (L-2) tires

Bucket	Stockpile Bucket With B.O.C.		Excavating Bucket With B.O.C.		Light Material Bucket With B.O.C.		
	<b>Bucket Capacity</b>	<b>Heaped</b>	2.3 m <sup>3</sup>	3.0 yd <sup>3</sup>	1.9 m <sup>3</sup>	2.5 yd <sup>3</sup>	2.7 m <sup>3</sup>
	<b>Struck</b>	2.0 m <sup>3</sup>	2.6 yd <sup>3</sup>	1.6 m <sup>3</sup>	2.1 yd <sup>3</sup>	2.3 m <sup>3</sup>	3.0 yd <sup>3</sup>
<b>Bucket Width</b>		2685 mm	8'10"	2685 mm	8'10"	2685 mm	8'10"
<b>Bucket Weight</b>		960 kg	2,116 lb	905 kg	1,995 lb	1050 kg	2,315 lb
<b>Static Tipping Load</b>	<b>Straight</b>	8985 kg	19,809 lb	9105 kg	20,073 lb	8825 kg	19,456 lb
	<b>40° Full Turn</b>	7900 kg	17,416 lb	8010 kg	17,659 lb	7910 kg	17,439 lb
<b>Dumping Clearance, Maximum Height and 45° Dump Angle (H)**</b>		2780 mm	9'1"	2855 mm	9'4"	2685 mm	8'10"
<b>Reach at 2130 mm 7' 45° Dump Angle**</b>		1535 mm	5'0"	1495 mm	4'11"	1580 mm	5'2"
<b>Reach at Maximum Height and 45° Dump Angle**</b>		1055 mm	3'6"	980 mm	3'3"	1150 mm	3'9"
<b>Reach with Arm Horizontal and Bucket Level**</b>		2305 mm	7'7"	2200 mm	7'3"	2430 mm	8'0"
<b>Operating Height Fully Raised</b>		4995 mm	16'5"	4875 mm	16'0"	5130 mm	16'10"
<b>Overall Length</b>	<b>Bucket on Ground</b>	7055 mm	23'2"	6950 mm	22'10"	7185 mm	23'7"
<b>Turning Radius*</b>		5820 mm	19'0"	5780 mm	19'0"	5875 mm	19'3"
<b>Digging Depth</b>	<b>0°</b>	145 mm	5.7"	145 mm	5.7"	145 mm	5.7"
	<b>10°</b>	335 mm	1'1"	315 mm	1'0"	355 mm	1'2"
<b>Breakout Force</b>		12340 kg	27,205 lb	13850 kg	30,534 lb	11000 kg	24,251 lb
<b>Operating Weight</b>		10620 kg	23,413 lb	10565 kg	23,292 lb	10710 kg	23,611 lb

B.O.C. : Bolt-On Cutting edge

\* Bucket at carry, outside corner of bucket. \*\*At the end of B.O.C.

All dimensions, weights, and performance values based on SAE J732c and J742b standards. Static tipping load and operating weight shown include lubricant, coolant, full fuel tank, ROPS (ISO 3471) cab and operator. Machine stability and operating weight affected by counterweight, tire size, and other attachments.

**Weight Changes**

	Change in Operating Weight		Change in Tipping Load				Width Over Tire		Ground Clearance		Change in Vertical Dimensions		Change in Reach	
			Straight		Full Turn									
17.5-25-16PR (L-3)	55 kg	121 lb	45 kg	99 lb	35 kg	77 lb	2375 mm	7'10"	395 mm	1'4"	0 mm	0"	0 mm	0"
20.5-25-12PR (L-2)	280 kg	617 lb	215 kg	474 lb	190 kg	419 lb	2470 mm	8'1"	465 mm	1'6"	70 mm	2.8"	-70 mm	-2.8"
20.5-25-12PR (L-3)	430 kg	948 lb	325 kg	717 lb	280 kg	617 lb	2470 mm	8'1"	465 mm	1'6"	70 mm	2.8"	-70 mm	-2.8"
Install ROPS (ISO 3471) Canopy (Instead of Cab)	-250 kg	-551 lb	-250 kg	-551 lb	-220 kg	-485 lb								
Additional Counterweight	300 kg	661 lb	580 kg	1,279 lb	510 kg	1,124 lb								
Air Conditioner (A/C)	70 kg	154 lb	50 kg	110 lb	40 kg	88 lb								



## STANDARD EQUIPMENT

- Alternator, 24 V/35 A
- Axles, semi floating with torque proportioning
- Back-up alarm
- Back-up light, rear
- Batteries, 2 x 12 V/110 Ah
- Bucket positioner, automatic
- Cab [ROPS/FOPS (ISO 3471/ISO 3449)] with cigarette lighter/ash tray, dome light, floor mat, front (Intermittent) and rear wiper/washer, rear view mirrors (2 outside, 1 inside), right hand and left hand door access with steps, sun visor
- Counterweight
- Differentials, torque proportioning
- Engine, Komatsu SAA6D102E-2
- Engine shut-off system, electric
- Engine water separator
- Equipment management monitoring system
  - Gauges (Speedometer, engine water temperature, fuel level, HST oil temperature)
- LCD displays (Filter/oil replacement time, HST selection, odometer, service meter, trouble shooting)
- Lights (Axle oil temperature, battery charge, brake oil pressure, central warning, directional indicator, engine oil pressure, engine pre-heater, HST oil filter clogging, high beam, maintenance, parking brake reminder, parking brake warning, steering oil pressure, transmission speed range, turn signals)
- Fan, hydraulic driven, swing out
- Fenders, rear
- Hard water area arrangement (Corrosion resister)
- Horn, electric
- Lift cylinders and bucket cylinder
- Lifting eyes
- Lights
  - Stop and tail
  - Turn signal (2 front, 2 rear)
  - Working (2 front, 2 rear, 2 outside cab)
- Loader linkage with standard lift boom
- Maintenance monitor panel
- Mono-lever loader control
- Parking brake, wet multiple-disc
- Radiator mask, hinged
- Seat belt, 3" wide
- Seat, rigid type, reclining with a document holder
- Service brakes, hydraulic, wet multi-disc, inboard
- Speedometer (km/h)
- Starting aid, intake manifold preheater
- Starting motor, 24 V/4.5 kW
- Steering wheel, tilttable
- Tires 17.5-25-16PR (L-2), tubeless and rims
- Transmission (Hydrostatic with speed range select), automatic
- Transmission control, electric, steering column
- 2-spool valve for boom and bucket controls with PPC



## OPTIONAL EQUIPMENT

- 3-spool valve, lever, piping
- Air conditioner with heater/defroster/pressurizer
- Alternator, 24 V/60 A
- Auxiliary steering
- Boom kick-out
- Bucket, excavating, **1.9 m<sup>3</sup>** 2.5 yd<sup>3</sup>
- Bucket, stockpile, **2.3 m<sup>3</sup>** 3.0 yd<sup>3</sup>
- Bucket, light material, **2.7 m<sup>3</sup>** 3.5 yd<sup>3</sup>
- Bucket teeth, bolt-on
- Cold area arrangement
- Counterweight, additional
- Cutting edge, bolt-on, reversible
- Electronically controlled suspension system
- Fenders, front
- Fenders, rear full
- Fire extinguisher
- Heater and defroster
- High-lift boom arrangement
- Hydraulic adapter kit (3rd spool), includes valve, lever, and piping
- Limited-slip differential, front and rear
- Radio, AM/FM
- Radio, AM/FM stereo with cassette
- Rims only, less tires
  - Fits 17.5-25 and 20.5-25 tire
- ROPS (ISO 3471) canopy
- Seat, cloth, suspension, reclining with armrests, headrest, and a document holder
- Seat, vinyl, suspension, reclining with armrests, headrest, and a document holder
- Seat belt, retractable, 3" wide
- Spare parts
- Tires (Bias ply)
  - 17.5-25-16PR (L-3)
  - 20.5-25-12PR (L-2)
  - 20.5-25-12PR (L-3)
- Tool kit
- Vandalism protection kit

**KOMATSU**<sup>®</sup>