HORSEPOWER
Gross: 204 kW 273 HP @ 2000 rpm
Net: 203 kW 272 HP @ 2000 rpm

OPERATING WEIGHT
22580–22715 kg 49,780–50,080 lb

BUCKET CAPACITY
3.8–5.2 m³ 5.0–6.8 yd³

WA450-6
With Tier 3 Engine

Photo may include optional equipment.
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.

High Productivity & Low Fuel Consumption

- High performance SAA6D125E-5 engine
- Low fuel consumption
- Dual-mode engine power select system
- Automatic transmission with shift timing select system
- Lock-up Torque Converter (option)
- Variable displacement piston pump & Closed-Center Load Sensing System (CLSS)

Excellent Operator Environment

- Automatic transmission with Electronically Controlled Modulation Valve (ECMV)
- Electronic controlled transmission lever
- Variable transmission cut-off system
- Telescopic/tilt steering column
- Fingertip control levers
- Low-noise designed cab
- Pillar-less large ROPS/FOPS level 2 integrated cab
- Easy entry/exit, rear-hinged doors

Maintenance Features

- Equipment Management Monitoring System (EMMS)
- Easy access, gull-wing type engine side doors
- Automatic reversible fan

KOMTRAX equipped machines can send location, SMR and operation maps to a secure website utilizing wireless technology. Machines also relay error codes, cautions, maintenance items, fuel levels, and much more.
**Reliability**
- Reliable Komatsu designed and manufactured components
- Sturdy main frame
- Adjustment-free, fully hydraulic, wet disc service and parking brakes
- Hydraulic hoses use flat face O-ring seals
- Sealed DT connectors for electrical connections

**Environmentally Friendly**
- EPA Tier 3 and EU stage 3A emissions certified
- Low exterior noise
- Low fuel consumption

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Photo may include optional equipment.
Komatsu's new "ecot3" engines are designed to deliver optimum performance under the toughest of conditions, while meeting the latest environmental regulations. This engine is EPA Tier 3, EU Stage 3A and Japan emissions certified; "ecot3" - ecology and economy combine with Komatsu technology to create a high performance engine without sacrificing power or productivity.

High Performance SAA6D125E-5 Engine
Electronic Heavy Duty Common Rail fuel injection system provides optimum combustion of fuel. This system also provides fast throttle response to match the machine's powerful tractive effort and fast hydraulic response.

Net: 203 kW 272 HP

Low Emission Engine
This engine is EPA Tier 3 emission regulations certified without sacrificing power or machine productivity.

Low Fuel Consumption
The fuel consumption is reduced greatly because of the low-noise, high-torque engine and the large-capacity torque converter with maximum efficiency in the low-speed range.

Dual-Mode Engine Power Select System
This wheel loader offers two selectable operating modes—E and P. The operator can adjust the machine's performance with the selection switch.

- 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 climb.

Eco Indicator
The Eco Indicator will inform the operator when the machine is maximizing fuel efficiency.

Automatic Transmission with Mode Select System
This operator controlled system allows the selection of manual shifting or two levels of automatic shifting modes (low and high). The operator can match the machine's operating requirements with optimum performance efficiency. This system is controlled with a dial on the right control panel.

- **Manual**: The transmission is fixed to the gear speed and selected with the gear lever.
- **Auto Low**: Low mode provides smooth gear shifting at low engine speeds suitable for general excavating and loading while offering reduced fuel consumption.
- **Auto High**: High mode provides maximum rim pull and fast cycle times by shifting the transmission at high engine speeds. This mode is suitable for hill-climb and load and carry operations.
Variable Displacement Piston Pump and CLSS

New design variable displacement piston pump combined with the Closed-center Load Sensing System (CLSS) delivers hydraulic flow just as the job requires preventing wasted hydraulic flow. Minimized waste loss contributes to better fuel economy.

- **New Variable Displacement Piston Pump**: The pump delivers only necessary amounts minimizing waste loss.

- **Fixed Displacement Piston Pump**: The pump delivers the maximum amount at any time and the unused flow is disposed.

Maximum Dumping Clearance and Reach

The long lift arms provide high dumping clearances and maximum dumping reach. The operator can even level loads on the body of a dump truck easily and efficiently.

- **Dumping Clearance**: 3185 mm 10'5"
- **Dumping Reach**: 1235 mm 4'1"
  (4.2 m³ 5.5 yd³ bucket with B.O.C.)

Lock-Up Torque Converter (option)

The Komatsu designed lock-up torque converter provides increased production efficiency, reduced cycle times and optimum fuel savings in load & carry or hill-climb operations. This optional feature allows the operator to activate the system on/off with a switch located on the right-side control panel.
Komatsu Components
Komatsu manufactures the engine, torque converter, transmission and hydraulic units on this wheel loader. Komatsu loaders are manufactured with an integrated production system under a strict quality control system.

Wet multi-disc brakes and fully hydraulic braking system result in lower maintenance costs and higher reliability. The wet disc service and parking brakes are fully sealed and adjustment-free to reduce contamination, wear and maintenance. Added reliability 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, a warning lamp flashes and an alarm sounds intermittently. If the brake pressure continues to drop, the parking brake is automatically applied.

High-Rigidity Frames and Loader Linkage
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.

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

Cylinder Buffer Rings
Buffer rings are installed to the head-side of the all-hydraulic cylinders to lower the load on the rod seals, prolong cylinder life by 30% and maximize overall reliability.

Sealed DT Connectors
Main harnesses and controller connectors are equipped with sealed DT connectors providing high reliability, dust and corrosion resistance.
Main Monitor—EMMS (Equipment Management Monitoring System)

Komatsu’s new main monitor keeps the operator informed of all machine functions at a glance. The monitor is located behind the steering wheel and displays 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 lighted symbols or LCD readouts.

Maintenance Control and Troubleshooting Functions

- **Action code display function:** If an abnormality occurs, the monitor displays action details on the character display at the bottom center of the monitor.
- **Monitor function:** Controller monitors engine oil level, pressure, coolant temperature, air cleaner clogging, etc. If controller finds abnormalities, the error is displayed on LCD.
- **Replacement time notice function:** Monitor informs replacement time of oil and filters on LCD when replacement intervals are reached.
- **Trouble data memory function:** Monitor stores abnormalities for effective troubleshooting.

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.

Ease of Radiator Cleaning

If the machine is operating in adverse conditions, the operator can reverse the hydraulic cooling fan from inside the cab by turning on a switch on the control panel.

Automatic Reversible Fan

The engine fan is driven hydraulically and can be operated in reverse automatically. When the switch is in the automatic position, the fan revolves in reverse for 2 minutes every 2 hours intermittently (default setting).
Easy Operation

Automatic Transmission with Electronically Controlled Modulation Valve (ECMV)

Automatic transmission with ECMV (Electronically Controlled Modulation Valve) automatically selects the proper gear speed based on travel speed, engine speed, and other travel conditions. The ECMV system engages the clutch smoothly to prevent lags and shocks when shifting. This system provides efficient machine operation and a comfortable ride.

- **Kick-down switch:** Consider this valuable feature for added productivity. With the touch of a finger, the kick-down switch automatically downshifts from second to first when beginning the digging cycle. It automatically upshifts from first to second when the direction control lever is placed in reverse. This results in increased rim pull for better bucket penetration and reduced cycle times for higher productivity.

- **One push power-up function:** The kick-down switch also functions as a power-up switch in first gear. The first time the kick-down switch is depressed, it functions as a kick-down switch and gear speed is reduced. When the machine is in E operation mode and first gear, pressing the kick-down switch a second time changes the operation mode to P allowing increased power for heavy digging operation. The operation mode returns to E when machine gear speed changes or direction changes to reverse.

- **Hold switch:** If auto shift is selected and if the operator turns on this switch when the lever is at the 3rd or 4th gear speed position, the transmission is fixed to that gear speed.

**Electronically Controlled Transmission Lever**

The Komatsu two-lever electronic shift control levers provide easy gear selection and directional changes. The transmission levers can be operated without removing the operator’s hand from the steering wheel, allowing improved comfort and control. Solid state electronics and conveniently located direction and gear shift controls make this possible. Automatic shifts in ranges two through four keep production high and manual shifting at a minimum.

Variable Transmission Cut-Off

The operator can select the transmission cut-off pressure desired for the left brake pedal using the switch located on the right-side control panel.

- Higher cut-off pressure allows the transmission to remain engaged at higher engine rpm/hydraulic pressure for increased performance in ramp loading and stockpiling operations.
- Lower cut-off pressure disengages the transmission at lower rpm/hydraulic pressure for more fuel efficient operation on level surfaces.
Comfortable Operation

Low-Noise Design
Noise level at operator’s ear: 72 dB(A)
Dynamic noise level (outside): 112 dB(A)

The large cab is mounted with Komatsu’s unique ROPS/FOPS 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.

Pillar-Less Large Cab
A wide pillar-less flat glass provides excellent front visibility. The wiper arm covers a large area to provide great visibility even on rainy days. The cab area is the largest in its class providing maximum space for the operator. The front mounted air conditioner was introduced to increase seat reclining and backwards seat adjustment.

Rear-Hinged Full Open Cab Doors
Entry and exit into the new Komatsu cab starts with sloped staircase type steps and large diameter handrails. The large cab doors are rear-hinged to open fully offering easy entry/exit and will not hamper visibility when operating the machine with the doors latched open.

Fingertip Work Equipment Control Levers with Large Arm Rest
New PPC control levers are used for the work equipment. The operator can easily operate the work equipment with fingertip controls, reducing operator fatigue and improving fine work equipment control and productivity. The PPC control lever column can be slid forward or backward and the large-sized arm rest can be adjusted up or down to provide the operator with a variety of comfortable operating positions.

Telescopic/Tilt Steering Column
The operator can both 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.
**Specifications**

**Engine**

- **Model**: Komatsu SAA6D125E-5
- **Type**: Turbocharged, aftercooled, cooled EGR
- **Number of cylinders**: 6
- **Bore x stroke**: 125 mm x 150 mm
- **Piston displacement**: 11.04 ltr
- **Governor**: all-speed, electronic
- **Horsepower**
  - SAE J1995: Gross 204 kW (273 HP)
  - ISO 9249/SAE J1349: Net 203 kW (272 HP)
- **Rated rpm**: 2000 rpm
- **Fan drive method for radiator cooling**: Hydraulic
- **Fuel system**: Direct injection

**Transmission**

- **Torque converter**: 3-element, single-stage, single-phase
- **Transmission**: Full-powershift, countershaft type
- **Travel speed**:
  - **Forward**: 6.3, 3.9, 12.1, 7.5, 21.7, 13.5, 34.9, 21.7
  - **Reverse**: 6.7, 4.2, 12.8, 8.0, 23.0, 14.3, 36.0, 22.4

**Axles and Final Drives**

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

**Steering System**

- **Type**: Articulated type, full-hydraulic power steering
- **Steering angle**: 40° each direction
- **Minimum turning radius at the center of outside tire**: 6630 mm (21'9")

**Hydraulic System**

- **Hydraulic pump**: 195 ltr/min
- **Relief valve setting**: 24.5 MPa (350 kgf/cm²)
- **Bore x stroke**: 90 mm x 441 mm

**Service Fill Capacities**

- **Cooling system**: 61 ltr (16.1 U.S. gal)
- **Fuel tank**: 413 ltr (109.1 U.S. gal)
- **Hydraulic system**: 173 ltr (45.7 U.S. gal)
- **Axle**: 60 ltr (15.9 U.S. gal)
- **Torque converter and transmission**: 54 ltr (14.3 U.S. gal)

**Brakes**

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

**Bucket Selection Guide**

- **Light Material Bucket with BOCE**
- **Loose Material Bucket with BOCE**
- **Stock Pile Bucket with BOCE**
- **Excavating Bucket with BOCE**
Bucket capacity: heaped 4.2 m³ 3.8 m³ 4.6 m³ 5.2 m³ 3.8 m³
struck 3.5 m³ 3.2 m³ 3.9 m³ 4.5 m³ 3.2 m³
Bucket width 3170 mm 3170 mm 3170 mm 3170 mm 3170 mm
Bucket weight 2050 kg 2150 kg 2110 kg 2185 kg 2150 kg
Dumping clearance, max. height and 45° dump angle*
Reach at max. height and 45° dump angle*
Reach at 2130 mm (7') clearance and 45° dump angle
Reach with arm horizontal and bucket level
Operating height (fully raised)
Overall length
Loader clearance circle (bucket at carry, outside corner of bucket)
Digging depth: 0°
10°
Static tipping load: straight
-40° full turn
Breakout force
Operating weight

* 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 cab, additional counterweight, and operator. Machine stability and operating weight affected by counterweight, tire size, and other attachments.

Apply the following weight changes to operating weight and static tipping load.
**STANDARD EQUIPMENT**

- 2-spool valve for boom and bucket controls
- 12V converter
- Air conditioner
- Alternator, 50 A
- Auto shift transmission with mode select system
- Back-up alarm
- Back-up lamp
- Batteries, 150 Ah/12 V x 2
- Counterweight, standard and additional
- Directional signal
- Electronically Controlled Suspension System (ECSS)
- Engine, Komatsu SAA6D125E-5 diesel
- Engine shut-off system, electric
- Fan, auto reversing, hydraulic driven
- Floor mat
- Hard water area arrangement (corrosion resister)
- KOMTRAX®
- Lift cylinders and bucket cylinder
- Main monitor panel with EMMS (Equipment Management Monitoring System)
- PPC fingertip control, two levers
- Radiator mask, lattice type
- Rearview mirrors for cab
- Rear window washer and wiper
- ROPS/FOPS level 2 cab
- Seat belt
- Seat, air suspension with automatic weight adjustment
- Service brakes, wet disc type
- Starting motor, 7.5 kW/24 V
- Steering wheel, tiltable, telescopic
- Sun visor
- Rims for 26.5-25 tires
- Transmission, 4 forward and 4 reverse
- Vandalism protection kit

**OPTIONAL EQUIPMENT**

- AM/FM stereo radio cassette
- Cutting edge (bolt-on type)
- Emergency steering (SAE)
- Engine pre-cleaner with extension
- High-lift boom
- Lock-up clutch torque converter
- Limited slip differential (F&R)
- Mono lever loader control with transmission F/R switch
- Rear full fenders

**WEIGHT CHANGES**

<table>
<thead>
<tr>
<th>Attachments</th>
<th>Operating weight</th>
<th>Tipping load straight</th>
<th>Tipping load full turn</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>kg</td>
<td>lb</td>
<td>kg</td>
</tr>
<tr>
<td>Remove additional counterweight</td>
<td>-400</td>
<td>-880</td>
<td>-1070</td>
</tr>
</tbody>
</table>