FLYWHEEL HORSEPOWER
124 kW 166 HP @ 2000 rpm

OPERATING WEIGHT
13520 – 13710 kg
29,806 – 30,225 lb

BUCKET CAPACITY
2.3 – 3.2 m³  3.0 – 4.2 yd³

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.

- **Reduced operator noise** to 70 dB(A)
- **Expanded main monitor** and troubleshooting display
- **Larger cab** with new layout design
- **New tilt** steering column
- **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
- **Sealed DT electrical connectors**

Photos may include optional equipment.
**PRODUCTIVITY FEATURES**

**High Productivity and Low Fuel Consumption**

**Powerful Engine**
A powerful SAA6D102E-2 turbocharged air-to-air after-cooled diesel engine provides an output of 124 kW / 166 HP for the WA320-5.

**Low Fuel Consumption**
The fuel consumption is reduced up to 15% due to the high-torque engine and Hydrostatic Transmission (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.

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**Piston Pump Engine**

<table>
<thead>
<tr>
<th>Low speed</th>
<th>High speed</th>
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<tbody>
<tr>
<td>piston motor</td>
<td>piston motor</td>
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</table>

**Transfer case**

- Variable range of travel speed
- Reduced

**Variable Shift Control**

- Travel speed
- MPH

**Traction Control**

- Travel speed
- MPH
Fully Hydraulic Wet Multi-disc Service Brakes
The dual wet 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.

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.

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 DT Connectors
Main harnesses and controller connectors are equipped with sealed DT 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.

Overrun Prevention System
When the machine descends a slope of six degrees or less, maximum travel speed is automatically restricted to approximately 42 km/h 26 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 40 km/h 25 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.
New Cab Layout
Komatsu’s new 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 new 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 piller-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 vis-cous 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 lever
A new lever using PPC (Proportional Pressure Control) 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 max-imum comfort and control. The two-spoke steering wheel allows maximum visi-bility 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 com-fortable and controlled work environment.
**SPECIFICATIONS**

**ENGINE**
- Model: Komatsu SAA6D102E-2
- Type: Water-cooled, 4-cycle, 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: 88.88 ltr 559 cu in
- Governor: Mechanical, all-speed control
- Flywheel horsepower: 198 HP (SAE J1349)
- 124 kW 168 PS (DIN 6270)
- Rated rpm: 2000 rpm
- Fuel system: Direct injection
- Lubrication system: Gear pump, force lubrication
- Transmission: Hydrostatic, 1 pump, 2 motors with speed range select

**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: 61 + 172 ltr/min 16.1 + 46.4 U.S. gal/min
    - Pilot pump: 54 ltr/min 14.3 U.S. gal/min
  - Relief valve setting:
    - Loader: 210 kg/cm² 20.6 MPA 3,000 psi
    - Stearing: 210 kg/cm² 20.6 MPA 3,000 psi
- Control valve:
  - 2-speed open center type

**HYDRAULIC CYLINDERS**
- Hydraulic cylinder:
  - Loader and steering: Double-acting, piston

**SERVICE REFLIL Capacities**
- Cooling system: 18.5 ltr 4.9 U.S. gal
- Fuel tank: 228 ltr 60.2 U.S. gal
- Hydraulic system: 80 ltr 21.1 U.S. gal
- Axle (each, front and rear): 24.0 ltr 6.3 U.S. gal
- Transmission: 6.5 ltr 1.7 U.S. gal

**BUCKET SELECTION GUIDE**
- **Type**: Full-hydraulic power steering independent of engine rpm
- **Steering angle**: 40° each direction
- **Minimum turning radius at the center of outside tire**: 5160 mm 16’11”

**AXLES AND FINAL DRIVES**
- Drive system: Four-wheel drive
- Front: Fixed, semi-floating
- Rear: Center-pin support, semi-floating
- Reduction gear: Planetary gear
- Final reduction gear: Planetary gear, single reduction

**BRAKES**
- Service brakes: Hydraulically-actuated, wet disc brakes actuate on four wheels.
- Parking brake: Wet, multi-disc brake on transfer output shaft.
- Emergency 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: 5160 mm 16’11”

**Dimensions**
- **Stockpile Bucket**
  - With Bolt-On Cutting Edge
    - Bucket Capacity
      - Heaped: 2.8 m³ 2.3 yd³
      - Excavating: 2.6 m³ 2.8 yd³
      - Light Material Bucket
        - With Bolt-On Cutting Edge
          - Bucket Capacity
            - Heaped: 2.8 m³ 2.3 yd³
            - Excavating: 2.6 m³ 2.8 yd³
- **Minimum turning radius at the center of outside tire**
  - 1600 1400 1600 1800 2000 2200
  - Bucket capacity: m³
    - 3.0
    - 2.3

**Tire Sizes**
- **WA320-5 WHEEL LOADER**
  - **Model**: Komatsu SAA6D102E-2
  - **Rated rpm**: 2000 rpm
  - **Hydraulic cycle time (rated load in bucket)**
    - Raise: 6.1 sec
    - Dump: 1.2 sec
    - Lower (empty): 3.3 sec
  - **Total cycle time**: 10.6 sec
  - **Reach at 2130 mm 7° 45° dump angle**
    - 1570 mm 5’ 2”
    - 1675 mm 5’ 6”
    - 1435 mm 4’ 8”
  - **Reach at maximum height and 45° dump angle**
    - 1035 mm 3’ 4”
    - 2420 mm 7’ 11”
    - 1170 mm 3’ 10”
  - **Reach with arm horizontal and bucket level**
    - 2420 mm 7’ 11”
    - 2275 mm 7’ 6”
    - 2610 mm 8’ 7”
  - **Operating Height**
    - 9’0”
    - 9’0”
    - 2740 mm 8’ 11"
  - **Operating Weight**
    - Straight
      - 27400 lb 12,400 kg
      - 24200 lb 11,000 kg
      - 17600 lb 7,990 kg
  - **Fuel tank**
    - 89.0 ltr 23.5 U.S. gal
    - 19.5 ltr 5.2 U.S. gal
  - **Cooling system**
    - 228.0 ltr 60.2 U.S. gal
    - 19.5 ltr 5.2 U.S. gal
  - **Pilot pump**
    - 16.1 + 46.4 U.S. gal/min
    - 54 ltr/min 14.3 U.S. gal/min
  - **Maximum flow for loader circuit**
    - 16.1 + 46.4 U.S. gal/min
    - 54 ltr/min 14.3 U.S. gal/min
  - **Light Material Bucket**
    - Excavating: 2.6 m³ 2.8 yd³
    - With Bolt-On Cutting Edge
      - Bucket Capacity
        - Heaped: 2.8 m³ 2.3 yd³
        - Excavating: 2.6 m³ 2.8 yd³

**Weight Changes**
- **Change in Operating Weight**
- **Change in Tipping Load**
- **Width Over Tire**
- **Ground Clearance**
- **Change in Vertical Dimensions**
  - 30.5-25-12PR (L2)
    - +160 kg 353 lb
    - +120 kg 265 lb
    - +34 kg 75 lb
  - **Additional counterweight**
    - 325 kg 716 lb
    - 860 kg 1900 lb
  - **Air conditioner**
    - 70 kg 154 lb
    - 90 kg 200 lb
  - **Cooling system**
    - 89.0 ltr 23.5 U.S. gal
    - 19.5 ltr 5.2 U.S. gal

**Measurements**
- 1’ = 305 mm
- 1" = 25.4 mm
- 1 mm = 0.040 in
- 1 ft = 0.305 m
- 1 in = 25.4 mm
STANDARD EQUIPMENT

● Alternator, 35A, 24 volt
● Automatic beam kickout
● Axles, semi floating with torque proportioning
● Back-up alarm
● Back-up light, rear
● Batteries, 112 Ah: 2 x 12 V
● Bucket positioner, automatic
● Cab (ROPS/OPS) with adjustable wrist rest, cigarette lighter/ash tray, dome light, front (intermittent) wiper/washer, rear view mirrors (2 outside, 1 inside), right hand and left hand door access with steps, sun visor
● Counterweight
● Differentials, torque proportioning
● EMMS (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)
● Engine, Komatsu SAA6D102E-2
● Engine shut-off system, electric
● Engine water separator
● Fan, hydraulic driven, swing out
● Hard water area arrangement
● 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
● Parking brake, wet disc
● PPC fingertip control, two levers
● Radiator mask, hinged
● Seat belt, 3" wide
● Seat, vinyl, suspension, reclining
● Service brakes, hydraulic, wet multi-disc, inboard
● Starting aid, intake manifold preheater
● Starting motor, 5.5 kW/24 V
● Steering wheel, tiltable
● Tires 20.5-25-12PR (L3), 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

● Air conditioner with heater/defroster/pressurizer
● Auxiliary steering
● Bucket, excavating, 2.3 m³ 3.0 yd³
● Bucket, stockpile, 2.8 m³ 3.7 yd³
● Bucket, light material, 3.2 m³ 4.2 yd³
● Bucket teeth, bolt-on
● Cold area arrangement
● Counterweight, additional
● Cutting edge, bolt-on, reversible
● ECSS (Electronically Controlled Suspension System)
● Fenders, front
● Fenders, rear full
● Fire extinguisher
● Floor mat
● Heater and defroster
● High-lift boom arrangement
● Hydraulic adapter kit (3rd spool), includes valve, lever, and piping
● Limited slip differential, front and rear
● Power train guard
● Pre-cleaner
● Radio, AM/FM stereo with cassette
● Remote grease
● Rims only, less tires
● FITs 20.5-25 tires
● ROPS canopy
● Seat, fabric, suspension, reclining
● Tool kit
● 3-spool valve, lever, piping
● Tires (bias ply) 20.5-25-12PR (L2)
● Vandalism protection kit

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