KOMATSU®

WA700-3

NET HORSEPOWER
502 kW 672 HP @ 2.000 rpm

OPERATING WEIGHT
72.080 kg

BUCKET CAPACITY
8,0 - 9,4 m³

WA
700

WHEEL LOADER

WA700-3

WALK-AROUND

Komatsu-integrated design

For the best value, reliability, and versatility. Hydraulics, power train, frame, and all other major components are engineered by Komatsu. You get a machine with components that are designed to work together to deliver higher production levels, greater reliability, and more versatility.

Major features

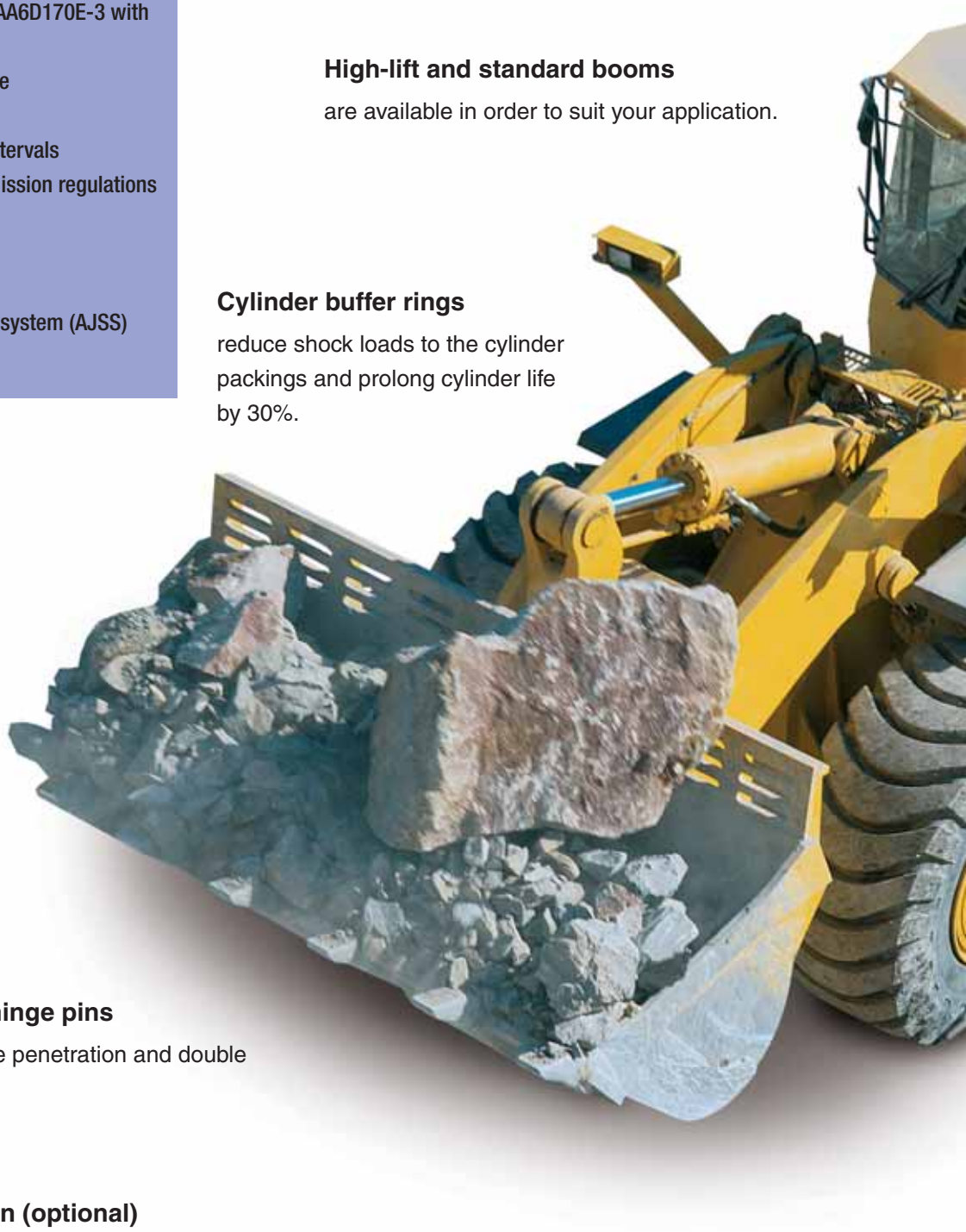
- High performance engine SAA6D170E-3 with increased torque
- Improved brake performance
- Increased rimpull
- Extended oil filter change intervals
- Meets European Stage II emission regulations
- Lower noise
- Increased hill climb speed
- Larger radiator capacity
- Advanced Joystick steering system (AJSS) (option)

High-lift and standard booms

are available in order to suit your application.

Cylinder buffer rings

reduce shock loads to the cylinder packings and prolong cylinder life by 30%.



A full range of buckets and wear parts

Low mounted bucket hinge pins

Low mounted for better pile penetration and double sealed for long life.

Automatic transmission (optional)

Standard equipped with kick-down and transmission hold switch.

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Cab damper mounting for low vibration levels

The WA700-3 uses a viscous damping mount system. The new cabin damper mounting aids the reduction of vibrations to the operator's seat, resulting in less fatigue.

Easy access to engine for servicing

Large doors lock with cab key. Wide opening to all engine service points and filters.

Rear-mounted large-capacity fuel tank

allows for ground level fuelling.

New joystick steering system (AJSS) (optional)

for precise control in V-type loading applications.

New emissionised Stage II engine

Komatsu SAA6D170E-3 diesel engine provides better productivity, serviceability and reliability. Engine oil and filter change intervals have been extended from 250 hours to 500 hours.

Ground level greasing

in centralised service banks, reduces and simplifies maintenance.

WORKING ENVIRONMENT

The cab improvements on the WA700-3 go well beyond providing a large cab with an optional comfortable air-ride seat. Improvements include the production-enhancing standard and optional features noted below:

At-a-glance instrument monitor

The main monitor panel is mounted in front of the operator and can be tilted for optimal viewing, allowing the operator to easily check gauges and warning lights. Depending on operation conditions and operation request, the WA700-3 can be delivered with a standard steering wheel or an Advanced Joystick Steering System (AJSS).

Automatic transmission

The optional automatic shift control gives the operator maximum control with a minimum of effort. The transmission hold switch allows the operator to select either automatic or manual shifting. The unique combination of the transmission hold and kick-down switches, located on the hydraulic boom lever, offers the operator optimum control in all conditions.

Low-effort brake pedals

Actuate fully hydraulic brakes. Both the service and parking brakes are wet-disc type for a long lifetime.

The EDIMOS II instrument gauge cluster display

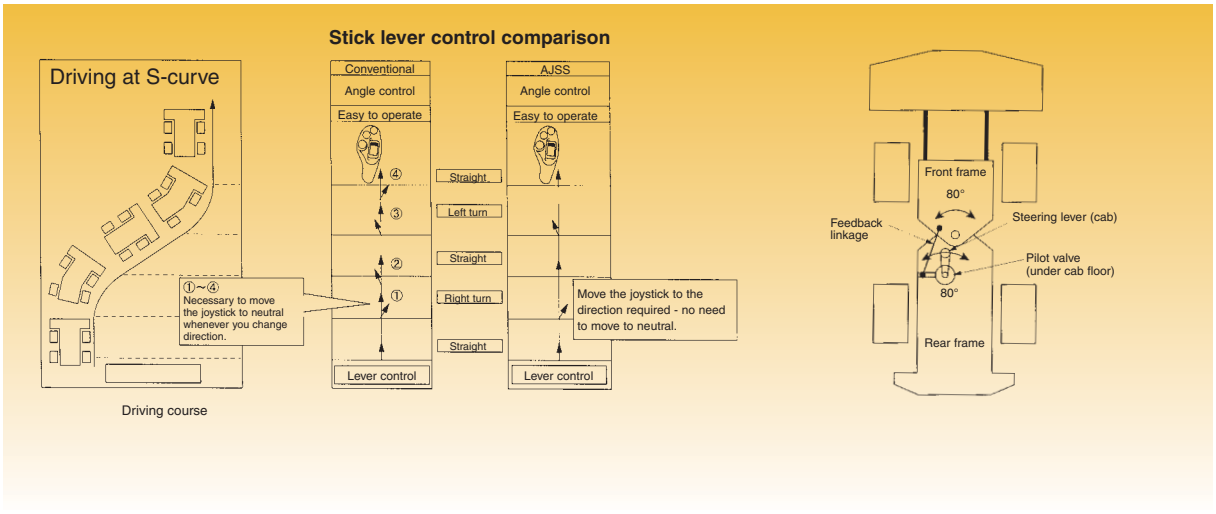
The maintenance monitor panel shows all machine functions and systems, which are only a glance away on the side panel.

Easy steering

Komatsu's fully hydraulic steering provides a fast response with low effort, even at low engine RPM.

Advanced Joystick Steering System (AJSS) control (optional)

This system provides a precise steering operation that's sometimes needed on narrow, long quarry roads. The joystick steering is also ideal in V-shape cycle loading.



Two-door, walk-through cab

Komatsu is offering the safest cabin on the market, with an easy entry and exit from both sides of the cab.

Cabin damper mounting for low vibration levels

The silicone oil filled rubber mounts result in reducing the fatigue caused by mechanical vibrations and noise. This helps the operator to remain productive the whole day. It also increases the lifetime of all operator compartment components.

Low noise design

The noise levels are substantially reduced. Engine compartment noise isolation plus the specially designed low speed radiator cooling fan give class leading noise levels: guaranteed sound level at the operators ear; LpA, below 79 dB(A) (ISO 6369).

The five-mode air-conditioner ensures a stress free and productive working day

Large entrance to cabin

EDIMOS II maintenance monitor panel

KOMATSU DESIGNED POWER TRAIN

Komatsu's integrated design results in components that are matched to provide the most efficient use of power, whether you're excavating or stock handling.

Engine

The Komatsu SAA6D170E-3 delivers the power and efficiency to get the job done quickly and cost-effectively while meeting the European Stage II emission regulations. It's a water-cooled, four-stroke cycle, six-cylinder inline, turbo-charged, air-to-air after cooled, direct injection engine that produces high performance and excellent fuel economy. With a piston displacement of 23,15 litres, the Komatsu SAA6D170E-3 has a net flywheel horsepower of 502 kW (672 HP) at 2.000 rpm (SAE J1349).

Komatsu SAA6D170E-3 features include:

- Environmentally friendly, meets European Stage II emission regulations.
- Engine oil and filter change intervals have been extended from 250 hours to 500 hours.
- High pressure fuel rail injection (HPI) system provides excellent low-speed torque and optimum fuel efficiency.
- Large-capacity muffler mounted under the bonnet reduces noise. The noise level is now one of the lowest in its class.
- Wet-type cylinder liners dissipate heat more efficiently and are replaceable for engine rebuild.
- Dry, two-stage cyclonic air cleaner. A 5-stage dust indication makes the observation of dustfilter clogging easy.

Large gull-wing doors

Allow easy access to the engine and radiator for routine maintenance and cleaning.

Spin-on filters

Easily accessible lubrication points reduce maintenance time and the change of maintenance items. Oil filter lifetime has been extended from 250 to 500 hours.

Gear pump-driven forced lubrication

System has full flow filtration whilst all fuel and oil filters are spin-on for easy maintenance.

Four-Speed Automatic Transmission

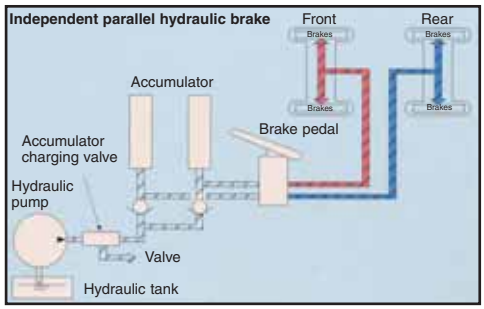
Provides maximum speed of 30,0 km/h in forward and 32,3 km/h in reverse. The transmission is a full power shift, planetary gear type.

Komatsu designed axles and final drives

Provide rugged reliability with low maintenance. Axle shafts are full-floating. The front axle is fixed, whilst the rear axle is a centre pin support design that provides a total oscillation of up to 22 degrees. The differential reduction gear is a heavy-duty spiral bevel gear, for strength and reliable performance. The rugged, outboard planetary final drives carry the total gear reduction of the drive train to the wheel, which is mounted to the axle hub.

Wet multi-disc service brakes (front and rear)

Fully sealed. Contaminants are kept out, reducing wear and maintenance. Brakes require no adjustments for wear, further reducing maintenance costs. There is no air system to bleed, which eliminates the condensation of water in the system that can lead to contamination and corrosion. The braking system's reliability has been increased with the use of two independent hydraulic circuits, providing hydraulic backup in the event that one circuit fails.



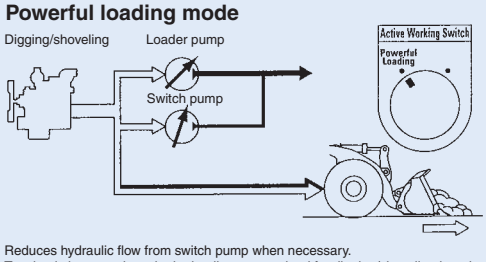
Active working system

Realize high efficient operation by selecting the best mode

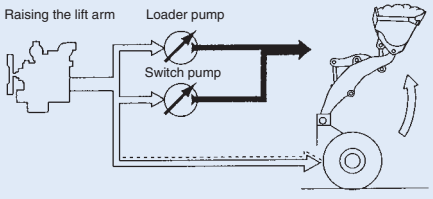
The machine can be equipped with an optional two mode active working system, a great improvement on the already well received two stage hydraulic system.

This system provides the most efficient hydraulic flow for your operation.The active working switch has two modes: powerful loading or normal loading. In powerful loading mode hydraulic flow towards the work equipment can be increased and reduced as and when required. In normal loading mode all hydraulic flow is transferred directly to the work equipment.

Powerful loading mode



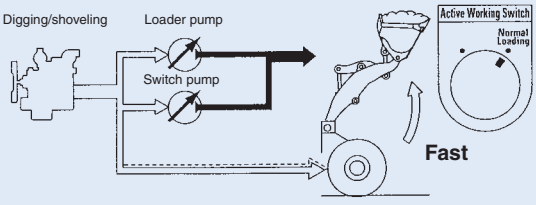
Reduces hydraulic flow from switch pump when necessary.
Traction is increased, as the hydraulic pressure load for digging/shoveling is reduced.
Easy for heavy digging.



While the lift arm is raised, all the hydraulic flow from the switch pump goes to the work equipment.

2 modes switch

Normal loading mode

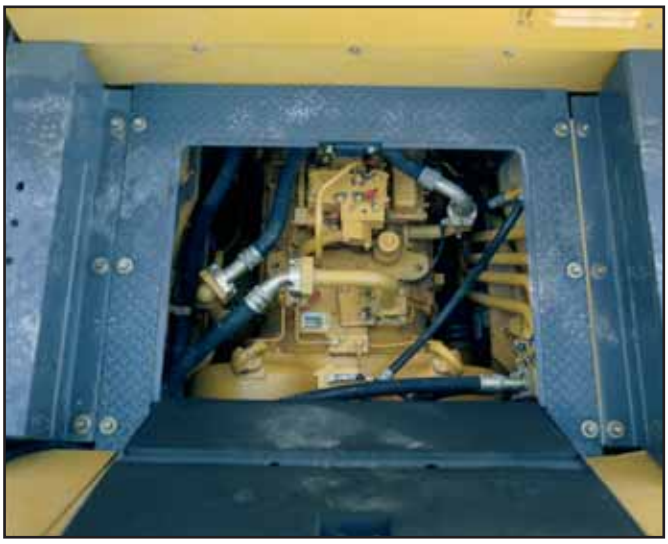


The hydraulic flow from switch pump goes to work equipment.
Traction while digging/shoveling is not increased.
The speed of the lift arm is increased in all operations.

EASY MAINTENANCE

Service with a smile

It would be better if most of us approached routine maintenance and service as something that made us smile. That's why Komatsu designed the WA700-3 wheel loader to make servicing as easy as possible. We know that by doing this, routine maintenance and servicing are less likely to be skipped, which can mean a reduction in costly downtime later. Here are some of the many service features found on the WA700-3:



- Large service doors provide easy access to all engine service points and filters, and can be locked with the ignition key.
- Ground level greasing: all grease points are easily reached from ground level and grease banks are provided in strategic areas to reduce maintenance time.
- Large platforms provide easy access to cab windows.
- Full-hydraulic service and parking brakes eliminate air system maintenance.
- Sealed loader linkage pins – designed to keep grease contained longer and prevent the entrance of dust, thereby lengthening greasing intervals.
- Cylinder buffer rings reduce shock loads to the cylinder packing and prolong cylinder life by 30%.
- Batteries are located next to the counterweight for ground level access.
- Easy to reach toolbox for grease gun and tool storage.
- Optional automatic lubrication system and wiggins fast fuel system are available to reduce maintenance time.

SERVICEABILITY AND CUSTOMER SUPPORT

The Komatsu dealer network guarantees you the lowest operating costs

When you purchase Komatsu equipment, you gain access to a broad range of programmes and services that have been designed to help you get the most from your investment. These all support substantial productivity, long and useful equipment lifetime, low operating costs, and a high trade-in or resale value.

- Many of the vital components in the WA700-3 have been installed and proven totally reliable in other heavy-duty Komatsu earthmoving equipment.

- Komatsu's extensive parts warehouses and logistics system across Europe and around the globe ensure unparalleled parts availability.

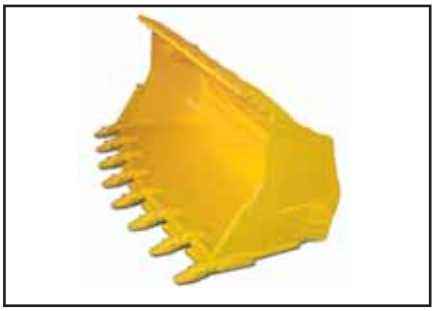
- Continuous training programmes for Komatsu service personnel guarantee that your equipment is serviced properly and maintained in top running condition.

- The Komatsu Oil Wear Analysis (KOWA) programme offers sophisticated oil analysis to identify problems to be followed up during preventative, scheduled maintenance.

- KFWP (Komatsu's Flexible Warranty Programme) is available, providing a range of extended warranty options on the machine and its components. These can be chosen, based on individual needs and activities. This programme is designed to help reduce total operating costs.

- A Komatsu Repair & Maintenance Contract is a way to establish a fixed operating cost and ensure optimal machine availability for the duration of the contract.

BUCKETS AND CUTTING TOOLS



Universal buckets

This type of bucket with a long, flat bucket floor features an outstanding material retaining capacity. The universal bucket can be equipped with a V-shaped edge, bolt on edge or flush mount adapters and interchangeable Kmax™ teeth.

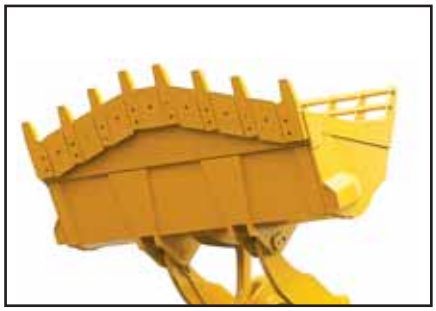
Rock buckets

Buckets with capacities up to 8,7 m³ are available for rock applications. The trapezoidal form supports outstanding material penetration. Welded or bolted wear plates made of abrasion resistant steel ensure a long service life. Stone deflectors are standard. All bucket areas in contact with the material are made of Hardox 400 or better steel.

Heavy duty rock buckets with Bladesaver™ II

The ideal bucket for hard abrasive rock conditions. The Bladesaver™ II increases profits by protecting the bucket investment and reduces repair works. It offers total bucket protection by using highly wear resistant exchangeable parts. A bolt on teeth system reduces welding on the bucket and prevents loss of teeth.

WA700-3 High-lift in action



Extra heavy-duty rock buckets with KVX™ teeth

XHD rock buckets with KVX™ teeth as well as bolt on segments are available for highly abrasive materials. This extremely durable system as well as the standard stone deflectors guarantee maximum service life even under the most severe operating conditions. A bolt on teeth system reduces welding on the bucket.

Ultra-wear resistant ground engaging equipment – Lower costs per tonne

With the brands Komatsu KVX™, Kmax™ and Hensley™-Parts, Komatsu has extensive know-how, making it a leading supplier of GET in the global market. The comprehensive range of ultra-wear resistant teeth, segments and wear plates covers all applications even under the toughest working conditions.

MACHINE MATCHING SOLUTIONS

Easy loading

Thanks to its versatility, the WA700-3 can be used for stockpile, bank excavation and load and carry operations. Depending on the buckets used and the application, the WA700-3 can load the following machines thanks to its superior reach and clearance:

The HD405 (41 metric tonnes maximum payload) in 3 passes.
The HD465 and the HD605 (55 and 63 metric tonnes maximum payload respectively) in 4 to 5 passes.

The WA700-3 high-lift version can load the HD785 (91 metric tonnes maximum payload) in 6 to 7 passes and the HD985 (105 metric tonnes maximum payload) in 7 to 8 passes.

With its complete range of loading and hauling machines, Komatsu is able to offer several machine matching solutions with the goal of increasing your production and bottom line. Using our Optimum Fleet Recommendation or 'OFR' program, Komatsu has qualified production and application specialists available throughout Europe, willing to recommend and assist customers with detailed evaluations of their applications. Please contact your nearest Komatsu distributor for more information.

SPECIFICATIONS

ENGINE

Model ..... Komatsu SAA6D170E-3
Type ..... Water-cooled, 4-stroke, turbocharger, aftercooled
Rated capacity ..... 502 kW/672 HP (SAE J1349)
at engine speed ..... 2.000 rpm
Torque/engine speed ..... max. 2.903 Nm/1.400 rpm
No. of cylinders 6
Bore × stroke ..... 170 × 170 mm
Displacement ..... 23,15 ltr
Governor ..... Electronic, all speed
Injection system ..... High pressure direct injection
Lubricating system ..... Gear pump, pressure feed lubrication filter
Filter ..... Full-flow and bypass combined type
Air-filter type ..... Dry type with monitor panel dust indicator and auto dust evacuator

TRANSMISSION

Torque converter ..... One-stage, one-phase, 3-element
Transmission ..... Powershift, planetary gear

Travel speed (40/65-39-36PR(L5) tubeless tyres)				
Gear	1.	2.	3.	4.
Forwards	6,4 km/h	11,1 km/h	18,7 km/h	30,0 km/h
Backwards	7,1 km/h	12,3 km/h	20,5 km/h	32,3 km/h

AXLES AND FINAL DRIVES

System ..... 4-wheel drive
Front axle ..... HD axle, fixed, full-floating
Rear axle ..... HD axle, full-floating, 22° swing angle
Reduction gear ..... Spiral bevel gear
Differential gear ..... Straight bevel gear
Final drive ..... Planetary gear, single reduction

SERVICE REFILL CAPACITIES

Cooling system ..... 209 ltr
Fuel tank ..... 1100 ltr
Engine oil ..... 52 ltr
Hydraulic system ..... 470 ltr
Axle (both front and rear axle) ..... 245 ltr
Torque converter and transmission ..... 105 ltr
Brake tank ..... 27 ltr

BRAKES

Operating brakes ..... Hydraulically actuated, wet multi-disc brakes on all wheels
Parking brake ..... Dry-disc, hydraulically-released, spring applied on front axle input shaft

HYDRAULIC SYSTEM

Circulating capacities
Loader pump ..... 405 ltr/min
Switch pump ..... 203 ltr/min
Steering pump ..... 203 ltr/min
Working pressure (relief valve setting)
Loader ..... 320 kgf/cm²
Steering ..... 320 kgf/cm²
Control valve 2-spool
No. of boom/bucket cylinders 2/1
Bore diameter × stroke
Boom cylinder ..... 225 × 1.196 mm
Bucket cylinder ..... 280 × 729 mm
Hydraulic control lever positions
Boom ..... Raise, hold, lower, and float
Bucket ..... Tilt back, hold and dump
Hydraulic cycle with rated load bucket filling
Stroke time (raise time) ..... 9,7 s
Lowering time (empty) ..... 3,6 s
Dumping time ..... 2,5 s

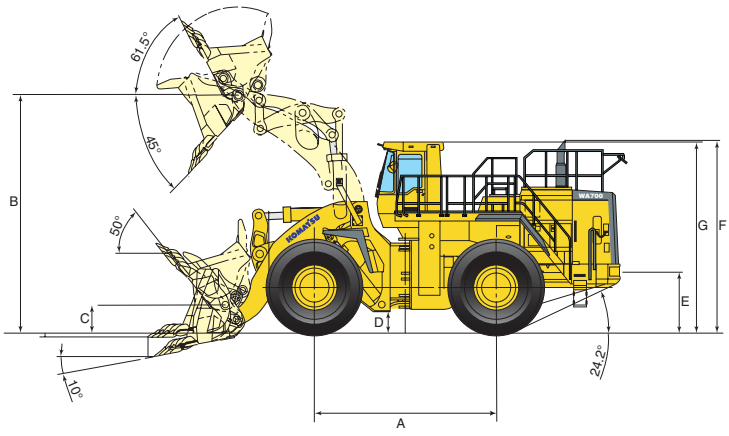
STEERING SYSTEM

System ..... Articulated frame steering
Type ..... Completely hydraulic power steering
Steering angle to either side ..... 40°
No. of steering cylinders 2
Bore diameter × stroke ..... 130 × 532 mm
Smallest turn (outer edge of tyre) ..... 8.095 mm

ENVIRONMENT

Engine emissions ..... Fully complies with EC Stage II exhaust emission regulations
Noise level
LpA operator ear ..... 79 dB(A) (ISO 6369 dynamic test)

DIMENSIONS AND PERFORMANCE FIGURES



WA700-3		
	Tread	3.060 mm
	Width over tyres	4.182 mm
A	Wheelbase	4.800 mm
B	Hinge pin height, maximum height	
	Standard boom	6.035 mm
	High-lift boom	6.595 mm
C	Hinge pin height, carry position	765 mm
D	Ground clearance	585 mm
E	Hitch height (standard boom)	1.575 mm
E	Hitch height (high-lift)	1.590 mm
F	Overall height, exhaust stack	4.870 mm
G	Overall height, ROPS cab	4.835 mm

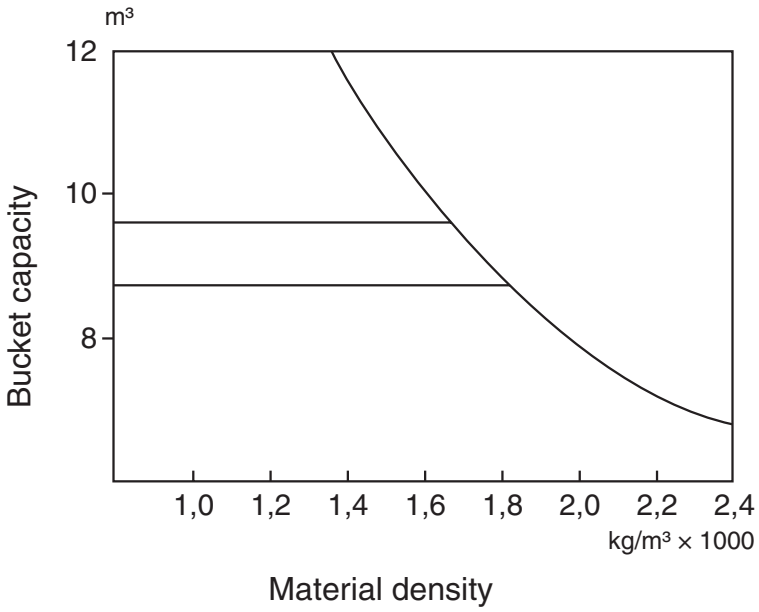
Measurements and working specifications

Bucket type		Standard boom			High-lift boom	
		Straight edge	Spade nose	General purpose	Excavating spade nose	Stock handling spade nose
		with teeth	with teeth	straight edge with teeth	with tip type teeth	with tip type teeth
Bucket capacity, heaped	m^3	8,7	8,7	9,4	8,0	8,7
Bucket capacity, struck	m^3	7,6	7,6	8,2	7,0	7,6
Bucket width (to cutting edge)	mm	4.330	4.330	4.330	4.330	4.330
Bucket weight	kg	6.770	7.150	7.150	6.830	7.150
Static tipping load, straight	kg	47.160	46.810	47.460	42.660	42.360
Static tipping load, 40° articulated	kg	41.400	41.070	41.750	37.070	36.770
Dump clearance, maximum height and 45° discharge angle *	mm	4.325	4.085	4.240	4.690	4.620
Reach at maximum height and 45° discharge angle *	mm	1.890	2.135	1.975	2.120	2.185
Reach with boom horizontal and bucket level	mm	3.500	3.840	3.620	4.190	4.190
Operating height, fully raised	mm	8.215	8.215	8.365	8.670	8.765
Breakout force	kN	635	517	624	547	517
Digging depth, when digging angle 0°	mm	125	125	125	140	145
Digging depth, when digging angle 10°	mm	465	525	490	525	545
Operating weight	kg	71.700	72.080	72.080	73.280	74.480
Overall length (with tip teeth)	mm	12.135	12.475	12.255	13.290	13.385
Turning radius, outside corner of bucket	mm	9.630	9.615	9.660	9.945	9.975

* at end of tooth

- Specifications and ratings conform to all applicable standards recommended by the Society of Automotive Engineers. SAE standard J732c and J742b.
- Static tipping load and operating weight shown include 45/65 R39 (L-5) tyres, enclosed cab, ROPS canopy, lubricant, full fuel tank, optional counterweight, and operator.
- Machine's stability and operating weight are affected by counterweight, tyre size, and other weight changes to operating weights and static tipping load.

BUCKET SELECTION GUIDE



This guide, representing bucket sizes for general purpose applications, will help you select the proper bucket size for material density, loader configuration, and operating conditions. Optimum bucket size is determined after adding or subtracting all tipping load changes due to optional equipment. Bucket fill factors represent the approximate amount of material as a percent of rated bucket capacity. Fill factors are primarily affected by material, ground conditions, breakout force, bucket profile, and the cutting edge of the bucket used. For bench excavating bucket sizes, please contact your nearest Komatsu distributor for more information.

WA700-3

WHEEL LOADER

STANDARD EQUIPMENT

Engine
- Komatsu SAA6D170E-3 emissionised Stage II engine
- Alternator 75 A
- Batteries 2 × 12 V/200 Ah
- Air intake extension

Cab
- ROPS/FOPS frame to SAE
- Air conditioner
- Electronic display/monitoring system (EDIMOS II)
- Tiltable steering wheel
- Air-suspended seat with seat belt (50 mm)
- Washer, front & rear
- Wiper, front & rear, front intermittent

Powertrain
- Electronically controlled transmission (4F, 4R)
- Hydraulically activated oil cooled disc service brakes
- Dry disc parking brake
- Full floating axles

Hydraulics
- 2-spool main control valve
- Automatic return-to-dig
- Automatic boom kick-out

Others
- Standard boom
- Counterweight 2.500 kg
- Corrosion resistor
- Front fenders

Safety
- Back-up alarm
- Rear-view mirrors
- Electric horn
- Secondary steering

Tyres
- 45/65 R39 radial tyres

Lights
- Reverse lights
- Stop and tail lights
- Turn signal with hazard switch (2 front, 2 rear)

OPTIONAL EQUIPMENT

Engine
- Starter motor (large capacity) 2 × 11 kW

Cab
- Advanced Joystick Steering System (AJSS)
- Radio-cassette

Tyres
- 40.65 R39 rims
- Bias and radial ply tyres

Buckets
- Special buckets as requested

Machine
- Automatic shift control
- Active power-up system (two stage hydraulics)
- Additional counterweight 1.040 kg
- Provision for fast fuel fill
- Auto greasing
- Boom for high-lift arrangement
- Cold area arrangement (-30 °C to 40 °C)
- Payload meter

Safety
- Rear under view mirror

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