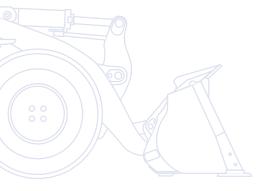
# KOMATSU



Wheel Loader

WA320-6 WA320PZ-6



ENGINE POWER
127 kW / 170 HP @ 2.000 rpm

OPERATING WEIGHT
14.810 - 15.800 kg

BUCKET CAPACITY
2,7 - 3,2 m³

### Walk-Around

The highly versatile Komatsu WA320/PZ-6 wheel loader features a perfect mix of power, comfort and reliability. With the new ecot3 engine and an advanced hydrostatic drive line it offers exceptional tractive force and ultra-low fuel consumption. This machine sets new efficiency standards for wheel loaders.

#### High productivity & low fuel consumption

- High-torque and low-consumption ecot3 Komatsu engine
- Highly efficient hydrostatic drive line
- Best-in-class dumping height and maximum stability
- Boom suspension system for minimum spillage (option)
- Meets EU Stage IIIA



### WA320(PZ)-6

**ENGINE POWER** 127 kW / 170 HP @ 2.000 rpm

**OPERATING WEIGHT** 14.810 - 15.800 kg

BUCKET CAPACITY 2,7 - 3,2 m<sup>3</sup>

#### First-class operator comfort

- Large SpaceCab™ cab with increased leg space
- Outstanding 360° visibility
- PPC-Multifunction lever
- Deluxe heated, air-suspended driver seat
- Electronically controlled air conditioning





#### Easy maintenance

- Wide core radiator with auto reversible fan speeds up cleaning
- Factory fitted automatic lubrication system
- Large gull-wing doors for easy access to service points
- Equipment Management and Monitoring System (EMMS)
- Robust components with a long service life





Komatsu Satellite Monitoring System



- Instant response for fast loading cycles
- Easy control in confined areas
- Advanced traction control system for best traction and minimized tyre wear
- Top speed selection for increased safety

## High Productivity & Low Fuel Consumption

## Low consumption ecot3 engine

The Komatsu SAA6D107E-1 engine provides high torque, a better performance at low speed and low fuel consumption. This ecot3 engine features a new combustion chamber design with optimised ignition and combustion timing. The operating pressure of the new common rail system was increased for improved injection and fuel efficiency. The air-to-air intercooler reduces the temperature of the compressed air supplied by the turbo charger to the cylinders, and further improves fuel consumption.

### Highly efficient hydrostatic drive line

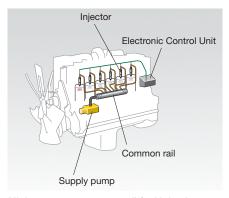
The electronically controlled variable pump and 2-motor system allow highly efficient and powerful operation. At low speeds both motors are engaged to provide highest torque. Bucket filling and scooping are easy, as maximum rim pull is provided from zero travel speed. At high speeds, a clutch cuts off the low speed motor to eliminate drag and achieve excellent fuel efficiency.

#### Meets EU Stage IIIA

The new Komatsu ecot3 engine technology reduces NOx and particle emissions, fuel consumption and noise level. The Komatsu SAA6D107E-1 is certified for EU Stage IIIA emission regulations.

#### Best in class dumping height

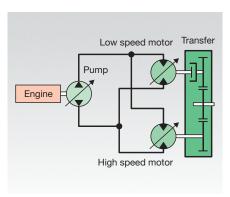
The long lifting frame allows the best in class dumping height of 2,84 m with a straight tipping load of 11,36 tonnes (with 2,9 m³ universal bucket, measured to the cutting edge). With this working range, loading high feeders or trucks becomes easy and fast.



High pressure common rail fuel injection



Air-to-air charge air cooling system



Electronically controlled HST



## Boom suspension system (optional)

The boom suspension system reduces the shocks in the boom when driving with loads. Material can be transported at higher speeds with minimum spillage. When travelling below 7 km/h, the boom suspension is automatically deactivated for precise pallet loading into trucks.





## Versatile Linkages

## Efficient loading and earthmoving

The Komatsu WA320-6 with Z-bar provides excellent machine stability and offers the highest bucket fill factors for maximum bucket loading volumes. It is the best choice for earthmoving and aggregate loading.



The superior break-out force of the WA320-6 turns loading into a child's play, even for an untrained operator. More experienced workers will also appreciate this feature, particularly when working with high density material such as heavy soil or aggregate.

#### **Excellent loading volumes**

The Komatsu WA320-6 with Z-bar achieves class leading rated loads up to 5,1 tonnes. High tilt-in angles combined with optimised genuine Komatsu buckets guarantee maximum loading volumes.





Superior dumping height and reach





## Powerful Z-bar



## Versatile Linkages

## One machine for all applications

The PZ = "parallel Z-bar" has the added advantage of parallel lift for pallet moving and high tilt forces to handle large attachments. The PZ-linkage turns your WA320PZ-6 into a true multipurpose machine ready to take on any job.

#### Easy bucket fill

As with the Z bar option, the PZ-linkage offers large break out forces and makes bucket filling easy and quick. It's perfect for loading coarse material and other earthmoving jobs.

## Parallel lift for fast pallet handling

With the parallel lift PZ-linkage, pallet moving becomes easy. The parallelism has been optimized for safe work over the entire lifting range. The excellent visibility of the front attachment allows an easy pick-up of pallets and precise work when loading onto trucks.





Excellent visibility of the front attachment



## Multipurpose PZ-Linkage

## Controlled work with heavy attachments

With the PZ-linkage design, tilting forces reach an optimal level, especially at maximum boom height. This is essential for controlling large attachments such as high dump buckets or other oversized buckets. The WA320PZ-6 is the ideal choice when working with heavy attachments





## Responsive Hydrostatic Drive Line (HST)

## Instant response for fast loading cycles

The Komatsu HST drive line features exceptional responsiveness that results in quick acceleration and fast forward/reverse changes. The drive line reacts to the operator's command without any time lag and instantly provides torque at the wheels. This allows for fast loading cycles and higher productivity.

#### Easy control in confined areas

The self braking effect of the HST drive line slows down the machine when the accelerator pedal is released. Uncontrolled rolling is prevented, and safety is greatly improved, especially when working in confined spaces or inside industrial buildings. In addition, brake wear is practically eliminated.

## Advanced traction control system

The new advanced traction control system lets the driver adjust traction precisely to working conditions. The provided rim pull can be set to 5 different levels to prevent spinning wheels on any ground conditions, even when operating on snow. Constant traction increases productivity and reduces tyre wear and cost.

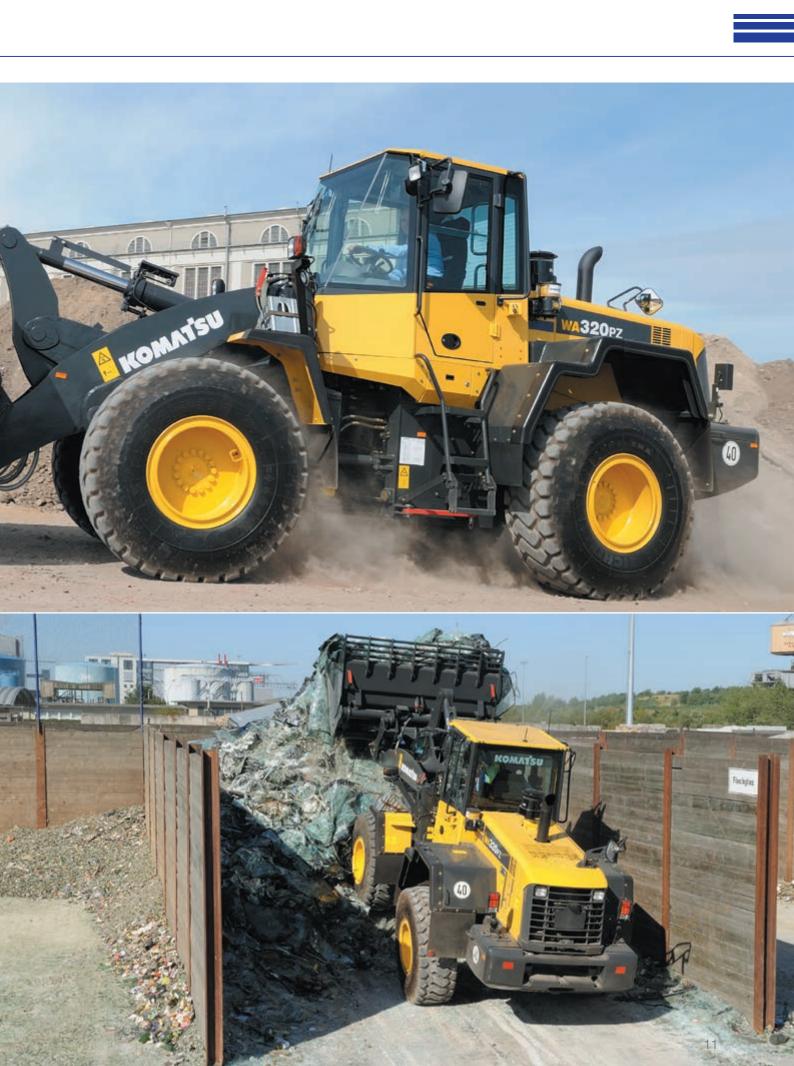
## Top speed selection for increased safety

The variable shift control allows setting the top speed for improved safety and precision. The top speed can be adjusted to the working conditions: max speed for fast travelling between jobsites, reduced speed to increase the safety when working on jobsites with high traffic or for working in confined spaces. In position 1, the speed can be continuously adjusted between 4 and 13 km/h with the fine control. This allows constant low driving speeds that are perfectly adjusted to applications such as lawn mowing or milling jobs.









## First-Class Operator Comfort

#### Large SpaceCab™

Komatsu's SpaceCab™ is among the most spacious in its class and it has been lengthened for greater leg room. It offers a driving convenience comparable to that of a passenger car. The cabin is mounted on viscose shock absorbers that guarantee low vibrations and sound levels.

#### Outstanding 360° visibility

The large frameless windscreen ensures an optimum view of the bucket and tyres. The slanted engine hood gives an excellent view to the rear.

#### Air-suspended, heated seat

The high comfort air-suspended seat, with lumbar support and multiple possibilities for adjustments, ensures the operator's well being during the entire working day. All seats are equipped with a heating function to provide an easy start on cold days.

## Electronically controlled air conditioning

With the electronically controlled air conditioning fitted as standard, the operator can feel at ease regardless of the outside temperature. Concentration and productivity stays high all day.

#### Additional comfort

Further standard features of the Komatsu SpaceCab™ are the CD radio, a "hot and cool" box for beverages, several storage spaces and adjustable arm rests on both sides.

#### **PPC-Multifunction lever**

The servo-assisted multi-function lever with an integrated forward/ reverse switch allows the simplest and most comfortable operation of the equipment. With one hand the driver can simultaneously control the attachment and switch between forward and reverse. As an additional option, the third spool can be controlled by two buttons on the multi-function lever for easy work with a grapple or a high dump bucket.









## Easy Maintenance

#### Easy access to service points

For easy and safe opening the gull-wing doors are supported by gas springs. The large doors give a convenient access from ground level to all daily service points. With long service intervals and all filters collected in a centralised arrangement, machine downtime is reduced to a minimum.

#### State-of-the-art monitoring

The equipment management and monitoring system (EMMS) is clearly structured and easy to read. If a malfunction occurs, it is immediately displayed as plain text in the selected language. The system features an error memory, a selfdiagnosis function and a display of service intervals. The EMMS gives timely notification of required oil and filter replacements. All information can also be accessed off-site via KOMTRAX™. The operator and customer service engineer are constantly informed about the machine's state so that problems can be prevented before they occur.

### Wide core radiator with auto reverse fan

A wide core radiator prevents clogging even when working in a dusty environment. To minimize manual cleaning, a reversible fan blows dust out, automatically or on demand. The "automatic reverse" function allows to set the cleaning length and the time between cleaning to adjust perfectly to the working conditions.

## Factory fitted automatic lubrication system

The automatic lubrication system reduces the daily service work to the absolute minimum. Robust piping ensures consistent lubrication and operating reliability, and significantly increases the machine's service life. The system is electronically monitored and features a signal light in the cabin.











## Komatsu Satellite Monitoring System



KOMTRAX™ is a revolutionary machine tracking system designed to save you time and money. You can now monitor your equipment anytime and anywhere. Use valuable machine data received via the KOMTRAX™ web site to optimise your maintenance planning and machine performances.

#### Full machine monitoring

Get detailed operation data to know when your machines are used and how productive they are. You can monitor fuel consumption to better calculate total costs or schedule fuel deliveries to job sites in time.

#### **Total Fleet Management**

Keep track of the location of your machines at all times and discourage unapproved usage or theft.

#### **Complete machine status**

Receive warnings, alerts and cautions, via a web site or by e-mail, to help with maintenance planning and for longer machine life.

For further details on KOMTRAX<sup>TM</sup>, please ask your Komatsu dealer for the latest KOMTRAX<sup>TM</sup> brochure.



## **KOMTRAX**<sup>TM</sup>



Machine working time - With the "daily working record" chart, get precise engine running time data: when your machine was started and when it was shut down, as well as total engine running time.



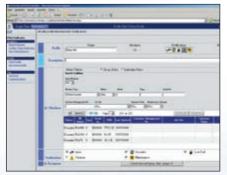
Maintenance planning - To increase productivity and improve maintenance planning, alerts indicate when items such as filters or oil must be replaced.



Fleet location - The machine list instantly locates all your machines, even those in other countries.



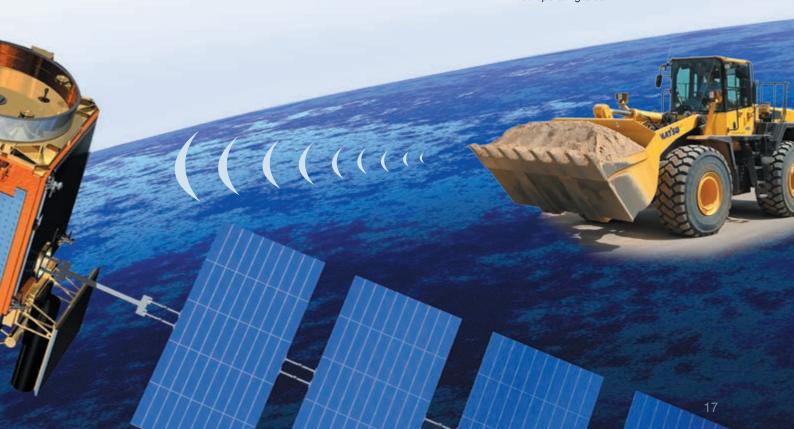
Machine tracking during transport - When your machine is transported, KOMTRAX™ sends travel messages to the web site or by e-mail to inform you of its progress, and confirms when it reaches its destination.



Alarm notifications - You can receive notification of alarms both via the KOMTRAX™ website and by e-mail.



Added security - The "engine lock" feature allows to program when a machine's engine can be started. And with "geo-fence", KOMTRAX™ sends notification every time your machine moves in or out of a predetermined operating area.



### Robust and Reliable

## Designed and built by Komatsu

The engine, hydraulics, power train, front and rear axles are original Komatsu components. All these components are subject to the highest quality standards right down to the smallest screw. All components are fully co-ordinated with one another, thus offering the maximum efficiency and reliability.

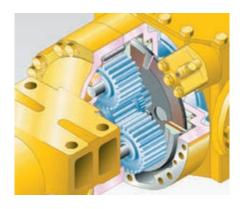
#### Heavy-duty axles

The heavy-duty axles allow exceptional service life even under the toughest working conditions. As standard, the WA320PZ-6 is equipped with torque proportional differentials for work on good ground conditions such as on concrete yards or roads. The optional limited slip differentials are most suitable for soft and slippery ground like sand or wet soil.

## HST drive line with overrun protection

The hydrostatic drive line is equipped with an overrun protection that electronically limits the top speed when driving downhill and thus ensures the long service life of the power train and the drive line system.





#### Wet multi-disc service brake

The multi-disc service brake is encapsulated and runs in an oil bath. The brake stays clean and operates at low temperature for increased service intervals and a long lifetime.



### Robust torsion-resistant main frame

The frame design with hinge points far apart guarantees the high stability for the overall construction and reduces bearing stress in the torsional ranges.

### Tailored Solutions

#### Working gear division

Komatsu wheel loaders combined with a wide range of genuine Komatsu attachments provide the perfect solution for any industry sector. For special applications our "Working Gear" division offers purpose-built machines and attachments. The tailor made solutions allow high performance and outstanding reliability even under toughest conditions.

#### Waste handling

We adapt our wheel loaders to the different conditions that exist on waste handling job sites. Along with heavy duty attachments, we offer solutions to protect your machine against damage.

#### **Timber industry**

A wide range of options specifically developed for the timber industry are available: log grapples, wood chip buckets, cameras, as well as various protections and pre-filters.

#### Agriculture

Availability is the key. Komatsu offers special protections - even against corrosion - for constant work in aggressive environments such as fertilizer handling.





### **Buckets and Attachments**

The WA320/PZ-6 is outstanding due to its versatility. Whether used industrially in structural or civil engineering, earthmoving, road construction, waste recycling, agriculture, forestry or the timber

industry, in landscaping companies or in community services, the right solution is always available for your requirements.

The optional 4-point quick-coupler adds increased versatility to the

machine and thus allows highintensity operation.

Examples from the comprehensive range of original attachments are:



#### Universal bucket

This type of bucket is impressive because of its excellent penetration and loosening properties and its good material holding properties. This universal bucket can be equipped with flush mount adapters and interchangeable teeth.



#### Earthmoving bucket

The earthmoving bucket with a one-piece bucket bottom is suited both for earthworks and loading cohesive material. The slanted sides give powerful penetration. It is equipped either with flush mount adapters and interchangeable teeth or also with a rear removable edge.



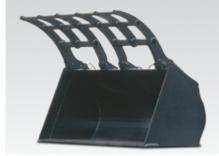
## Stock pile bucket with raised bottom

The stock pile bucket with raised bottom is the right solution for handling loose and relatively light materials on paved grounds. The combination of rounded shovel back and the straight sidewalls contributes to good filling properties and less material spillage.



#### Hydraulic quick-coupler

The WA320/PZ-6 can change attachments in a matter of seconds with the HD hydraulic quick-coupler, available as optional equipment.



#### Mulch grab bucket

Perfectly suited for picking up bulky and compressible materials like gardening or plastic waste, etc. Without the side plates, this bucket can be used also as a grapple.



#### High dump bucket

For maximum dumping heights with light materials like coal or woodchips. The dump cylinders are located either inside or outside the bucket.

## Specifications ==

#### **ENGINE**

| Model Komatsu SAA6D107E-1                                     |
|---|
| Common rail direct injection, water-cooled,                   |
| emissionised, turbocharged, after-cooled diesel               |
| ngine power   |
| 5 1   |
| at rated engine speed   |
| ISO 14396127 kW / 170 HP                                      |
| Max. torque / engine speed672 Nm / 1.500 rpm                  |
| lo. of cylinders6   |
| lore × stroke107 × 124 mm                                     |
| splacement6,69 ltr  |
| ubricating system Gear pump, pressure feed lubrication filter |
| ilterMain-flow filter   |
| lectrical system24 V  |
| attery2 × 110 Ah  |
| lternator60 A   |
| ir-filter type Dry-air filter with automatic dust emission    |
| and preliminary purification including a dust display         |

#### **TRANSMISSION**

| Drive system Electronically controlled hydrostatic transmission, |  |  |  |  |
|--|--|--|--|--|
| switchable in all directions under full power.                   |  |  |  |  |
| Fixed ratio gearbox. Variable speed limiter                      |  |  |  |  |
| Hydrostatic pump 1 variable piston pump                          |  |  |  |  |
| Hydrostatic motor2 variable piston motors                        |  |  |  |  |
| Speed ranges (forwards/backwards)4/4                             |  |  |  |  |
| Max. travel speeds (forwards/backwards) (Tyres 20.5 R25)         |  |  |  |  |
| 1. speed range 4-13 km/h   |  |  |  |  |
| 2. speed range   |  |  |  |  |
| 3. speed range19 km/h  |  |  |  |  |
| 4. speed range   |  |  |  |  |

#### **CHASSIS AND TYRES**

| System         | 4-wheel drive                                 |
|----------------|---|
| Front axle     | HD axle, semi-floating, fixed type,           |
|                | TPD-differential, (LSD-differential optional) |
| Rear axle      | HD axle, semi-floating, centre-pin support,   |
|                | 24° swing angle, TPD-differential,            |
|                | (LSD-differential optional)                   |
| Reduction gear | Spiral bevel gear                             |
| Differential   | Straight bevel gear pair                      |
| Final drive    | Planetary gear in an oil bath                 |
| Tyres          |   |
|                |   |

#### SERVICE REFILL CAPACITIES

| Cooling system                  | 25 ltr  |
|---------------------------------|---------|
| Fuel tank                       |         |
| Engine oil                      | 23 ltr  |
| Hydraulic system                | 89 ltr  |
| Axle (both front and rear axle) | 24 ltr  |
| Transfer                        | 6,5 ltr |
|                                 |         |

#### **BRAKES**

| Operating brakesCompletely hydraulic dual-circuit system, |
|---|
| running in oil bath, multi-disc brakes on                 |
| all wheels, service-free                                  |
| Parking brake Operated mechanically, running in oil bath, |
| multi-disc brake, service-free                            |
| Emergency brakeUses the parking brake                     |

#### **HYDRAULIC SYSTEM**

| Hydraulic pump                          | Gear pump                      |
|---|--------------------------------|
| Working pressure (max)                  | 206 bar                        |
| Circulating capacity of the hydraulic p | ump172 + 61 ltr/min            |
| No. of boom/bucket cylinders            | 2/1                            |
| Type                                    | Double-action                  |
| Bore diameter × stroke                  |                                |
| Boom cylinder                           | 140 × 729 mm                   |
| Bucket cylinder                         | 180 × 558 mm                   |
| Hydraulic control lever                 | Servo-controlled, single lever |
| Hydraulic cycle with rated load bucke   | t filling                      |
| Raise time                              | 5,6 s                          |
| Lowering time (empty)                   | 3,3 s                          |
| Dumping time                            | 1,9 s                          |

#### STEERING SYSTEM

| System                          | Articulated frame steering          |
|---------------------------------|-------------------------------------|
| Type                            | Completely hydraulic power steering |
| Steering angle to either side   | 40°                                 |
| Steering pump                   | Gear pump                           |
| Working pressure                | 206 bar                             |
| Pumping capacity                | 172 ltr/min                         |
| No. of steering cylinders       | 2                                   |
| Type                            | Double-action                       |
| Bore diameter × stroke          | 70 × 453 mm                         |
| Smallest turn (outer edge of th | e tyre 20.5 R25)5.475 mm            |

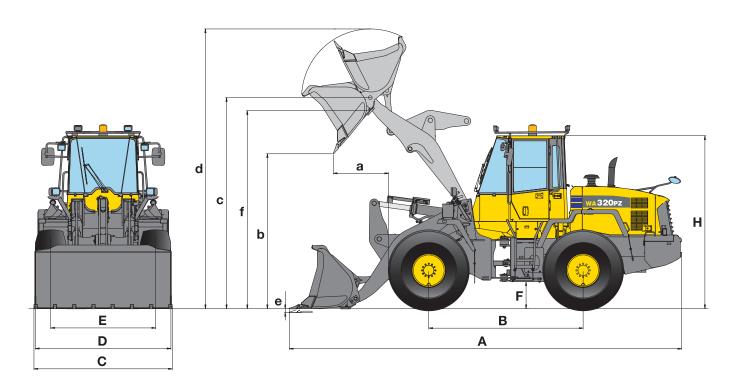
#### **CABIN**

Two-door SpaceCab™ in conformity with ISO 3471 with ROPS (roll over protective structure) in conformity with SAE J1040c and FOPS (falling object protective structure) in conformity with ISO 3449. The air-conditioned pressurised cabin is mounted upon hydrobearings and is noise dampened.

#### **ENVIRONMENT**

| Engine emissionsFully complies with EU Stage IIIA          |
|--|
| exhaust emission regulations                               |
| Noise levels   |
| LwA external104 dB(A) (2000/14/EC Stage II)                |
| LpA operator ear72 dB(A) (ISO 6396 dynamic test)           |
| Vibration levels (EN 12096:1997)                           |
| Hand/arm≤ 2,5 m/s² (uncertainty K = 0,49 m/s²)             |
| Body≤ 0,5 m/s² (uncertainty K = 0,25 m/s²)                 |
| Contains fluorinated greenhouse gas HFC-134a (GWP 1430).   |
| Quantity of gas 0,9 kg, CO <sub>2</sub> equivalent 1,29 t. |

## Dimensions & Performance Figures



#### MEASUREMENTS AND WORKING SPECIFICATIONS

|   | '    | Earthmoving |        | Stockpile |        | Universal |        |
|---|------|-------------|--------|-----------|--------|-----------|--------|
|   |      | w. teeth    | w. BOC | w. teeth  | w. BOC | w. teeth  | w. BOC |
| Bucket mount (direct/quick-coupler)     |      | direct      | direct | direct    | direct | direct    | direct |
| Bucket capacity (heaped, ISO 7546       | ) m³ | 2,7         | 2,9    | 3,0       | 3,2    | 2,7       | 2,9    |
| Sales code                              |      | C42         | C43    | C32       | C33    | C02       | C03    |
| Material density (max)                  | t/m³ | 1,70        | 1,60   | 1,55      | 1,45   | 1,75      | 1,63   |
| Bucket weight                           | kg   | 1.325       | 1.415  | 1.265     | 1.355  | 1.210     | 1.300  |
| Static tipping load, straight           | kg   | 11.465      | 11.300 | 11.470    | 11.235 | 11.560    | 11.360 |
| Static tipping load, 40° articulated    | kg   | 9.850       | 9.695  | 9.860     | 9645   | 9.950     | 9.765  |
| Break-out force hydraulic               | kN   | 171,5       | 160,6  | 163,5     | 153,6  | 171,5     | 160,6  |
| Lifting capability hydr. at ground leve | kN   | 162         | 162,2  | 163,6     | 164,8  | 162,7     | 163,4  |
| Operating weight                        | kg   | 15.350      | 15.440 | 15.290    | 15.380 | 15.235    | 15.325 |
| Turning radius at corner of tyres       | mm   | 5.475       | 5.475  | 5.475     | 5.475  | 5.475     | 5.475  |
| Turning radius at bucket edge           | mm   | 6.180       | 6.150  | 6.195     | 6.165  | 6.180     | 6.150  |
| a Reach at 45°                          | mm   | 1.145       | 1.015  | 1.185     | 1.055  | 1.145     | 1.015  |
| b Dump height at 45°                    | mm   | 2.750       | 2.840  | 2.715     | 2.800  | 2.750     | 2.840  |
| c Hinge pin height                      | mm   | 4.010       | 4.010  | 4.010     | 4.010  | 4.010     | 4.010  |
| d Height top edge of bucket             | mm   | 5.335       | 5.335  | 5.500     | 5.500  | 5.400     | 5.400  |
| e Digging depth                         | mm   | 150         | 180    | 150       | 180    | 150       | 180    |
| f Max. loading height at 45°            | mm   | 3.655       | 3.655  | 3.655     | 3.655  | 3.655     | 3.655  |
| A Overall length, bucket grounded       | mm   | 7.850       | 7.725  | 7.905     | 7.780  | 7.850     | 7.725  |
| B Wheelbase                             | mm   | 3.030       | 3.030  | 3.030     | 3.030  | 3.030     | 3.030  |
| C Bucket width                          | mm   | 2.740       | 2.750  | 2.740     | 2.750  | 2.740     | 2.750  |
| D Width over tyres                      | mm   | 2.580       | 2.580  | 2.580     | 2.580  | 2.580     | 2.580  |
| E Track width                           | mm   | 2.050       | 2.050  | 2.050     | 2.050  | 2.050     | 2.050  |
| F Ground clearance                      | mm   | 465         | 465    | 465       | 465    | 465       | 465    |
| H Overall height                        | mm   | 3.200       | 3.200  | 3.200     | 3.200  | 3.200     | 3.200  |
| -                                       |      |             |        |           |        |           |        |

All measurements with tyres 20.5 R25

BOC: bolt-on cutting edge

## WA320PZ-6

#### **CHANGE IN DATA CAUSED BY:**

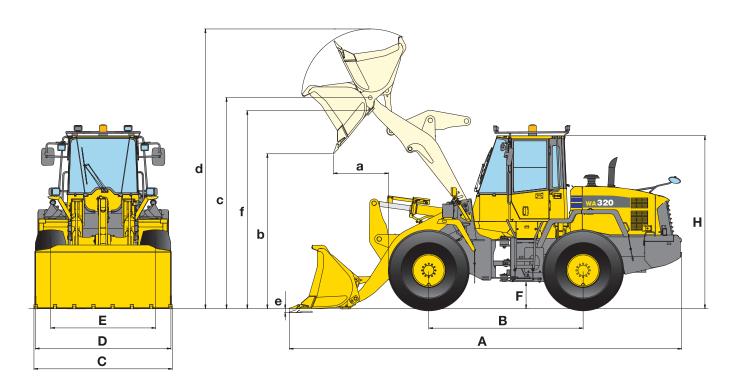
| Tyres                                |    | 20.5 R25 L2 | 20.5 R25 L5 | 23.5 R25 L3 |
|--------------------------------------|----|-------------|-------------|-------------|
| Operating weight                     | kg | -200        | +660        | +340        |
| Static tipping load, straight        | kg | -130        | +430        | +200        |
| Static tipping load, 40° articulated | kg | -115        | +380        | +175        |
| Reach at 45°                         | mm | +0          | -25         | -60         |
| Dump height at 45°                   | mm | -40         | +25         | +60         |
| Width over tyres                     | mm | +0          | +0          | +75         |
| Overall height                       | mm | -40         | +25         | +60         |

| Earthmoving |        | Stoc     | kpile  | Universal |        |
|-------------|--------|----------|--------|-----------|--------|
| w. teeth    | w. BOC | w. teeth | w. BOC | w. teeth  | w. BOC |
| QC          | QC     | QC       | QC     | QC        | QC     |
| 2,7         | 2,9    | 3,0      | 3,2    | 2,6       | 2,7    |
| C72         | C73    | C66      | C67    | C62       | C63    |
| 1,6         | 1,5    | 1,45     | 1,38   | 1,75      | 1,65   |
| 1.230       | 1.320  | 1.130    | 1.220  | 1.025     | 1.115  |
| 10.850      | 10.655 | 10.920   | 10.735 | 11.135    | 10.945 |
| 9.275       | 9.090  | 9.350    | 9.175  | 9.550     | 9.370  |
| 147,6       | 139,5  | 143      | 135,4  | 156,3     | 147,3  |
| 168         | 166,7  | 162      | 160    | 167,3     | 168,2  |
| 15.710      | 15.800 | 15.610   | 15.700 | 15.505    | 15.595 |
| 5.475       | 5.475  | 5.475    | 5.475  | 5.475     | 5.475  |
| 6.215       | 6.180  | 6.225    | 6.195  | 6.190     | 6.160  |
| 1.315       | 1.185  | 1.345    | 1.215  | 1.260     | 1.135  |
| 2.660       | 2.745  | 2.630    | 2.715  | 2.715     | 2.800  |
| 4.010       | 4.010  | 4.010    | 4.010  | 4.010     | 4.010  |
| 5.500       | 5.500  | 5.660    | 5.660  | 5.495     | 5.495  |
| 95          | 125    | 95       | 125    | 95        | 125    |
| 3.690       | 3.690  | 3.690    | 3.690  | 3.690     | 3.690  |
| 7.990       | 7.865  | 8.035    | 7.910  | 7.920     | 7.795  |
| 3.030       | 3.030  | 3.030    | 3.030  | 3.030     | 3.030  |
| 2.740       | 2.750  | 2.740    | 2.750  | 2.740     | 2.750  |
| 2.580       | 2.580  | 2.580    | 2.580  | 2.580     | 2.580  |
| 2.050       | 2.050  | 2.050    | 2.050  | 2.050     | 2.050  |
| 465         | 465    | 465      | 465    | 465       | 465    |
| 3.200       | 3.200  | 3.200    | 3.200  | 3.200     | 3.200  |

#### TYPICAL MATERIAL DENSITY – LOOSE (IN kg/m³)

| Basalt                   | 1.960 |  |  |  |
|--------------------------|-------|--|--|--|
| Bauxite, Kaolin          | 1.420 |  |  |  |
| Earth, dry, ex store     | 1.510 |  |  |  |
| Earth, wet, excavated    | 1.600 |  |  |  |
| Gypsum, broken           | 1.810 |  |  |  |
| Gypsum, crushed          | 1.600 |  |  |  |
| Granite, broken          | 1.660 |  |  |  |
| Limestone, broken        | 1.540 |  |  |  |
| Limestone, crushed       | 1.540 |  |  |  |
| Gravel, unscreened       | 1.930 |  |  |  |
| Gravel, dry              | 1.510 |  |  |  |
| Gravel, dry, 6-50 mm     | 1.690 |  |  |  |
| Gravel, wet, 6-50 mm     | 2.020 |  |  |  |
| Sand, dry, loose         | 1.420 |  |  |  |
| Sand, damp               | 1.690 |  |  |  |
| Sand, wet                | 1.840 |  |  |  |
| Sand and clay, loose     | 1.600 |  |  |  |
| Sand and gravel, dry     | 1.720 |  |  |  |
| Sandstone                | 1.510 |  |  |  |
| Slate                    | 1.250 |  |  |  |
| Slag, broken             | 1.750 |  |  |  |
| Stone, crushed           | 1.600 |  |  |  |
| Clay, natural            | 1.660 |  |  |  |
| Clay, dry                | 1.480 |  |  |  |
| Clay, wet                | 1.660 |  |  |  |
| Clay and gravel, dry     | 1.420 |  |  |  |
| Clay and gravel, wet 1.5 |       |  |  |  |
|                          |       |  |  |  |

## Dimensions & Performance Figures



#### MEASUREMENTS AND WORKING SPECIFICATIONS

|  |      | Earthmoving |        | Stoc     | kpile  | Univ     | ersal  |  |  |
|--|------|-------------|--------|----------|--------|----------|--------|--|--|
|  |      | w. teeth    | w. BOC | w. teeth | w. BOC | w. teeth | w. BOC |  |  |
| Bucket mount (direct/quick-coupler)      |      | direct      | direct | direct   | direct | direct   | direct |  |  |
| Bucket capacity (heaped, ISO 7546)       | m³   | 2,7         | 2,9    | 3,0      | 3,2    | 2,7      | 2,9    |  |  |
| Sales code                               |      | C42         | C43    | C32      | C33    | C02      | C03    |  |  |
| Material density (max)                   | t/m³ | 1,89        | 1,73   | 1,70     | 1,57   | 1,90     | 1,74   |  |  |
| Bucket weight                            | kg   | 1.295       | 1.385  | 1.220    | 1.310  | 1.165    | 1.255  |  |  |
| Static tipping load, straight            | kg   | 12.740      | 12.520 | 12.760   | 12.535 | 12.855   | 12.620 |  |  |
| Static tipping load, 40° articulated     | kg   | 10.860      | 10.650 | 10.890   | 10.675 | 10.980   | 10.760 |  |  |
| Break-out force hydraulic                | kN   | 157,6       | 156,5  | 155,8    | 154,8  | 156,8    | 155,8  |  |  |
| Lifting capability hydr. at ground level | kN   | 134,8       | 125,9  | 129      | 120,8  | 135,4    | 126,4  |  |  |
| Operating weight                         | kg   | 14.940      | 15.030 | 14.865   | 14.955 | 14.810   | 14.900 |  |  |
| Turning radius at corner of tyres        | mm   | 5.475       | 5.475  | 5.475    | 5.475  | 5.475    | 5.475  |  |  |
| Turning radius at bucket edge            | mm   | 6.160       | 6.125  | 6.170    | 6.135  | 6.155    | 6.120  |  |  |
| a Reach at 45°                           | mm   | 1.147       | 1.025  | 1.183    | 1.060  | 1.143    | 1.020  |  |  |
| b Dump height at 45°                     | mm   | 2.678       | 2.780  | 2.642    | 2.746  | 2.682    | 2.785  |  |  |
| c Hinge pin height                       | mm   | 3.910       | 3.910  | 3.910    | 3.910  | 3.910    | 3.910  |  |  |
| d Height top edge of bucket              | mm   | 5.260       | 5.260  | 5.415    | 5.415  | 5.320    | 5.320  |  |  |
| e Digging depth                          | mm   | 105         | 135    | 105      | 135    | 105      | 135    |  |  |
| f Max. loading height at 45°             | mm   | 3.615       | 3.615  | 3.610    | 3.610  | 3.610    | 3.610  |  |  |
| A Overall length, bucket grounded        | mm   | 7.770       | 7.635  | 7.820    | 7.685  | 7.765    | 7.630  |  |  |
| B Wheelbase                              | mm   | 3.030       | 3.030  | 3.030    | 3.030  | 3.030    | 3.030  |  |  |
| C Bucket width                           | mm   | 2.740       | 2.750  | 2.740    | 2.750  | 2.740    | 2.750  |  |  |
| D Width over tyres                       | mm   | 2.580       | 2.580  | 2.580    | 2.580  | 2.580    | 2.580  |  |  |
| E Track width                            | mm   | 2.050       | 2.050  | 2.050    | 2.050  | 2.050    | 2.050  |  |  |
| F Ground clearance                       | mm   | 465         | 465    | 465      | 465    | 465      | 465    |  |  |
| H Overall height                         | mm   | 3.200       | 3.200  | 3.200    | 3.200  | 3.200    | 3.200  |  |  |

All measurements with tyres 20.5 R25

BOC: bolt-on cutting edge

## WA320-6

#### **CHANGE IN DATA CAUSED BY:**

| Tyres                                |    | 20.5 R25 L2 | 20.5 R25 L5 | 23.5 R25 L3 |
|--------------------------------------|----|-------------|-------------|-------------|
| Operating weight                     | kg | -200        | +660        | +340        |
| Static tipping load, straight        | kg | -140        | +480        | +245        |
| Static tipping load, 40° articulated | kg | -130        | +425        | +220        |
| Reach at 45°                         | mm | +0          | -25         | -60         |
| Dump height at 45°                   | mm | -40         | +25         | +60         |
| Width over tyres                     | mm | +0          | +0          | +75         |
| Overall height                       | mm | -40         | +25         | +60         |
|                                      |    |             |             |             |

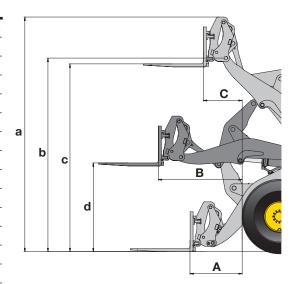
#### **HIGH-LIFT**

| Earthmoving |        | Stoc     | kpile  | Univ     | ersal  | Stoc   | Stockpile |        | ersal  |
|-------------|--------|----------|--------|----------|--------|--------|-----------|--------|--------|
| w. teeth    | w. BOC | w. teeth | w. BOC | w. teeth | w. BOC | w. BOC | w. BOC    | w. BOC | w. BOC |
| QC          | QC     | QC       | QC     | QC       | QC     | direct | QC        | direct | QC     |
| 2,7         | 2,9    | 3,0      | 3,2    | 2,7      | 2,9    | 3,2    | 3,2       | 2,9    | 2,7    |
| C72         | C73    | C66      | C67    | C62      | C63    | C26    | C67       | C06    | C63    |
| 1,75        | 1,60   | 1,58     | 1,46   | 1,76     | 1,62   | 1,17   | 1,13      | 1,32   | 1,35   |
| 1.665       | 1.755  | 1.560    | 1.650  | 1.510    | 1.600  | 1.475  | 1.215     | 1.255  | 1.115  |
| 11.800      | 11.595 | 11.880   | 11.680 | 11.910   | 11.755 | 9.340  | 9.020     | 9.565  | 9.170  |
| 10.000      | 9.815  | 10.095   | 9.905  | 10.120   | 9.975  | 7.960  | 7.675     | 8.190  | 7.815  |
| 149,4       | 148,9  | 145,3    | 143    | 149      | 147,7  | 112    | 94        | 118    | 104    |
| 112,8       | 106,5  | 109,4    | 103,4  | 114      | 107,5  | 101    | 97        | 104    | 98     |
| 15.310      | 15.400 | 15.205   | 15.295 | 15.155   | 15.245 | 15.410 | 15.590    | 15.190 | 15.490 |
| 5.475       | 5.475  | 5.475    | 5.475  | 5.475    | 5.475  | 5.475  | 5.475     | 5.475  | 5.475  |
| 6.225       | 6.185  | 6.235    | 6.200  | 6.220    | 6.180  | 6.410  | 6.460     | 6.395  | 6.420  |
| 1.308       | 1.185  | 1.338    | 1.215  | 1.300    | 1.175  | 1.070  | 1.275     | 1.040  | 1.195  |
| 2.532       | 2.635  | 2.502    | 2.605  | 2.540    | 2.645  | 3.390  | 3.290     | 3.420  | 3.370  |
| 3.910       | 3.910  | 3.910    | 3.910  | 3.910    | 3.910  | 4.550  | 4.550     | 4.550  | 4.550  |
| 5.420       | 5.420  | 5.575    | 5.575  | 5.480    | 5.480  | 6.020  | 6.260     | 5.900  | 6.095  |
| 100         | 130    | 100      | 130    | 100      | 130    | 185    | 110       | 185    | 110    |
| 3.620       | 3.620  | 3.620    | 3.620  | 3.620    | 3.620  | 4.255  | 4.300     | 4.255  | 4.300  |
| 7.980       | 7.845  | 8.020    | 7.885  | 7.965    | 7.830  | 8.290  | 8.465     | 8.250  | 8.350  |
| 3.030       | 3.030  | 3.030    | 3.030  | 3.030    | 3.030  | 3.030  | 3.030     | 3.030  | 3.030  |
| 2.740       | 2.750  | 2.740    | 2.750  | 2.740    | 2.750  | 2.750  | 2.750     | 2.750  | 2.750  |
| 2.580       | 2.580  | 2.580    | 2.580  | 2.580    | 2.580  | 2.580  | 2.580     | 2.580  | 2.580  |
| 2.050       | 2.050  | 2.050    | 2.050  | 2.050    | 2.050  | 2.050  | 2.050     | 2.050  | 2.050  |
| 465         | 465    | 465      | 465    | 465      | 465    | 465    | 465       | 465    | 465    |
| 3.200       | 3.200  | 3.200    | 3.200  | 3.200    | 3.200  | 3.200  | 3.200     | 3.200  | 3.200  |
|             |        |          |        |          |        |        |           |        |        |

## Dimensions & Performance Figures

#### **FORK TINES**

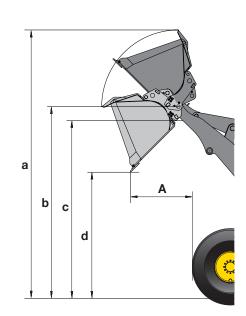
|   |   |    | WA320-6 | WA320PZ-6 |
|---|---|----|---------|-----------|
|   | Sales code                              |    | C57     | C57       |
|   | Fork tine length                        | mm | 1.200   | 1.200     |
| Α | Max. reach at ground level              | mm | 970     | 1.015     |
| В | Max. reach                              | mm | 1.650   | 1.665     |
| С | Max. reach at max. stacking height      | mm | 800     | 770       |
| а | Max. height fork-carrier                | mm | 4.730   | 4.765     |
| b | Hinge pin height                        | mm | 3.910   | 4.010     |
| С | Max. stacking height                    | mm | 3.790   | 3.825     |
| d | Height of forks at maximum reach        | mm | 1.840   | 1.815     |
|   | Max. tipping load, straight             | kg | 9.443   | 8.870     |
|   | Max. tipping load, articulated          | kg | 8.087   | 7.655     |
|   | Max. payload as per EN 474-3, 80%       | kg | 6.000   | 6.120     |
|   | Max. payload as per EN 474-3, 60%       | kg | 4.852   | 4.600     |
|   | Weight in working order with fork tines | kg | 14.574  | 15.055    |
|   |   |    |         |           |



#### LIGHT MATERIAL BUCKET

|                                     |   | WA320PZ-6   |   |  |
|-------------------------------------|---|---|---|--|
|                                     |   | w. BOC  |   |  |
| Sales code                          |   | Q36   | Q67   |  |
| Bucket mount (direct/quick-coupler) |   | QC  | QC  |  |
| Bucket capacity (heaped, ISO 7546)  | m³  | 4,8   | 4,8   |  |
| Material density                    | t/m³  | 0,8   | 1,0   |  |
| Rated load                          | kg  | 3.840   | 4.800   |  |
| Bucket width                        | mm  | 2.740   | * 2.980   |  |
| Bucket weight                       | kg  | 1.240   | 1.400   |  |
| Reach at 45°                        | mm  | 1.350   | 1.240   |  |
| Height top edge of bucket           | mm  | 5.670   | 5.575   |  |
| Hinge pin height                    | mm  | 4.010   | 4.010   |  |
| Max. loading height at 45°          | mm  | 3.680   | 3.685   |  |
| Dump height at 45°                  | mm  | 2.800   | 2.620   |  |
|                                     | Bucket mount (direct/quick-coupler)  Bucket capacity (heaped, ISO 7546)  Material density  Rated load  Bucket width  Bucket weight  Reach at 45°  Height top edge of bucket  Hinge pin height  Max. loading height at 45° | Bucket mount (direct/quick-coupler)  Bucket capacity (heaped, ISO 7546)  Material density  t/m³  Rated load  kg  Bucket width  mm  Bucket weight  kg  Reach at 45°  mm  Height top edge of bucket  Hinge pin height  Max. loading height at 45°  mm | Sales code         Q36           Bucket mount (direct/quick-coupler)         QC           Bucket capacity (heaped, ISO 7546)         m³ 4,8           Material density         t/m³ 0,8           Rated load         kg 3.840           Bucket width         mm 2.740           Bucket weight         kg 1.240           Reach at 45°         mm 1.350           Height top edge of bucket         mm 5.670           Hinge pin height         mm 4.010           Max. loading height at 45°         mm 3.680 |  |

<sup>\*</sup> for wide tyres

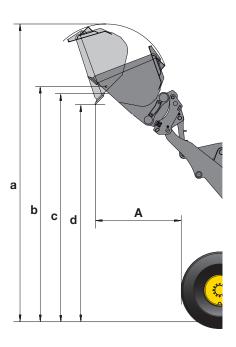


#### HIGH-DUMP BUCKET

|   |                                     |      | WA320PZ-6 |        |  |
|---|-------------------------------------|------|-----------|--------|--|
|   |                                     |      | w. E      | BOC    |  |
|   | Sales code                          |      | Q41       | Q66    |  |
|   | Bucket mount (direct/quick-coupler) |      | QC        | QC     |  |
|   | Bucket capacity (heaped, ISO 7546)  | m³   | 3,5       | 3,5    |  |
|   | Material density                    | t/m³ | 1,0       | 1,1    |  |
|   | Rated load                          | kg   | 3.500     | 3.850  |  |
|   | Bucket width                        | mm   | 2.740     | 2.980* |  |
|   | Bucket weight                       | kg   | 2.120     | 2.040  |  |
| Α | Reach at 45°                        | mm   | 1.775     | 1.715  |  |
| а | Height top edge of bucket           | mm   | 6.380     | 6.410  |  |
| b | Hinge pin height                    | mm   | 4.960     | 4.990  |  |
| С | Max. loading height at 45°          | mm   | 4.825     | 4.855  |  |
| d | Dump height at 45°                  | mm   | 4.570     | 4.660  |  |
|   | ·                                   |      |           |        |  |

Type B, dump cylinders located outside bucket

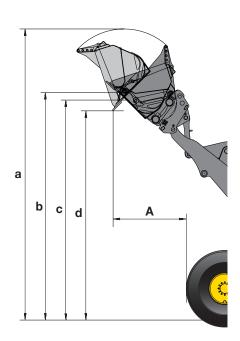
<sup>\*</sup> for wide tyres



#### HIGH-DUMP BUCKET (WASTE HANDLING)

|                                     |      | WA320PZ-6 |
|-------------------------------------|------|-----------|
|                                     |      | w. BOC    |
| Sales code                          |      | Q86       |
| Bucket mount (direct/quick-coupler) |      | QC        |
| Bucket capacity (heaped, ISO 7546)  | m³   | 2,9       |
| Material density                    | t/m³ | 1,0       |
| Rated load                          | kg   | 2.900     |
| Bucket width                        | mm   | 2.740     |
| Bucket weight                       | kg   | 2.250     |
| A Reach at 45°                      | mm   | 1.500     |
| a Height top edge of bucket         | mm   | 6.050     |
| b Hinge pin height                  | mm   | 4.750     |
| c Max. loading height at 45°        | mm   | 4.550     |
| d Dump height at 45°                | mm   | 4.420     |
| ·                                   |      | ·         |

Type B, dump cylinders located outside bucket



## WA320-6/WA320PZ-6

## Standard and Optional Equipment

#### **ENGINE**

| Komatsu SAA6D107E-1 turbocharged common rail |   |
|--|---|
| direct injection diesel engine               | • |
| EU Stage IIIA compliant                      |   |
| Fuel filter with water separator             | • |
| Engine cooling fluid corrosion resistor      | • |
| Alternator 60 A                              | • |
| Starter motor 4,5 kW/24 V                    | • |
| Batteries 2 × 110 Ah/2 × 12 V                | • |

#### TRANSMISSION AND BRAKES

| Electronically controlled HST with 2-motor system | • |
|---|---|
| Speed control with fine adjustment in             | • |
| 1st speed range                                   |   |
| Traction control system (TCS)                     | • |
| Fully hydraulic brake system                      | • |
| Combined brake/inching pedal                      | • |
| 20 km/h limited hydrostatic driveline             | 0 |
| Creeping function: 1 - 4 km/h speed control       | 0 |

#### **CHASSIS AND TYRES**

| • |
|---|
| • |
| • |
| 0 |
| 0 |
| 0 |
| 0 |
|   |

<sup>\*</sup> not acc. to German road regulation StVZO

#### **HYDRAULIC SYSTEM**

| 2-spool main control valve                                 | • |
|--|---|
| PPC control, 1-lever (Multi-function lever)                | • |
| Automatic return-to-dig                                    | • |
| Automatic boom kick-out                                    | • |
| 3-spool main control valve                                 | 0 |
| PPC fingertip control, 2 or 3 levers                       | 0 |
| PPC Multi-function lever with add. 3rd spool lever control | 0 |
| Electr. 3rd spool actuation on joystick                    | 0 |
| Biodegradable oil for hydraulic system                     | 0 |
|  |   |

#### CABIN

| Spacious double door driver's cab to DIN/ISO | • |
|--|---|
| ROPS/FOPS frame according to SAE             | • |
| Air-suspended, heated seat                   | • |
| Electr. controlled air conditioning          | • |
| CD radio                                     | • |
| Hot and cool box                             | • |
| All-round tinted glazing                     | • |
| Front laminated glass                        | • |
| Heated rear window                           | • |
| Rear window wiper                            | • |
| Sun visor                                    | • |
| Seat belt (EU standard)                      | • |
| Adjustable steering column                   | • |
| 12 V power supply                            | 0 |
| Fire extinguisher                            | 0 |

#### **SERVICE AND MAINTENANCE**

| Wide core radiator  | • |
|---|---|
| Hydrostat-driven swing-out radiator fan with automatic reversing function | • |
| EMMS (Equipment Management Monitoring                                     |   |
| System) with self-diagnostic function and                                 | • |
| maintenance display   |   |
| KOMTRAX™ - Komatsu satellite monitoring system                            | • |
| Tool-set  | • |
| Automatic central lubrication   | • |
| Turbo II air pre-cleaner, cyclone type                                    | 0 |
|   |   |

#### SAFETY EQUIPMENT

| Emergency steering system                                   | • |
|---|---|
| Horn  | • |
| Vandalism protection  | • |
| Back-up alarm   | • |
| Battery main switch   | • |
| Front screen protective grid                                | 0 |
| Beacon light  | 0 |
| Electronic anti-theft lock                                  | 0 |
| Electronic anti-theft lock with master key for fleet owners | 0 |
| Additional convex rear view mirror                          | 0 |
| Roof rail and step light                                    | 0 |
|   |   |

#### LIGHTING SYSTEM

| 2 halogen main headlights        | • |
|----------------------------------|---|
| 2 spotlights at front and rear   | • |
| Reversing light                  | • |
| Additional lights front and rear | 0 |
| Xenon working lights             | 0 |

#### **OTHER EQUIPMENT**

| PZ-kinematics: Z-bar boom with parallel movemen [WA320PZ-6] | nt • |
|---|------|
| Z-bar boom [WA320-6]  | •    |
| Counterweight   | •    |
| Additional side counterweights                              | •    |
| Electronically controlled load stabilizer (ECSS)            | 0    |
| Special custom colour                                       | 0    |
| Anti-corrosion specification                                | 0    |
| Cold area kit (engine and cab pre-heating)                  | 0    |
| Roof rail   | 0    |
| Waste handling equipment on request *                       | 0    |

#### **ATTACHMENTS**

| Hydraulic quick-coupler (incl. additional side counterweights, large size) | С |
|--|---|
| Universal buckets  | С |
| Earthmoving buckets  | С |
| Stock pile buckets   | С |
| Fork carrier and tines   | С |
| High-dump buckets *  | С |
| Log grapples *   | С |
| Waste handling high-dump bucket 3,4 m³ with protection grid *              | С |
| Waste handling bucket 4,0 m <sup>3</sup> *                                 | С |
| Waste handling mulch grapple bucket 2,7 m <sup>3</sup> *                   | С |
| Light material bucket 4,8 m <sup>3</sup> *                                 | С |

\* WA320PZ-6 only

Buckets direct or quick-coupler mount, with teeth or BOC (bolt-on cutting edge).
Further equipment on request

The WA320/PZ-6 is equipped in accordance with the safety regulations of the machinery guidelines 89/392 EWG ff and EN474.

- standard equipment
- optional equipment



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