

Wheel Loader Specifications

L 15.5

L 20.5

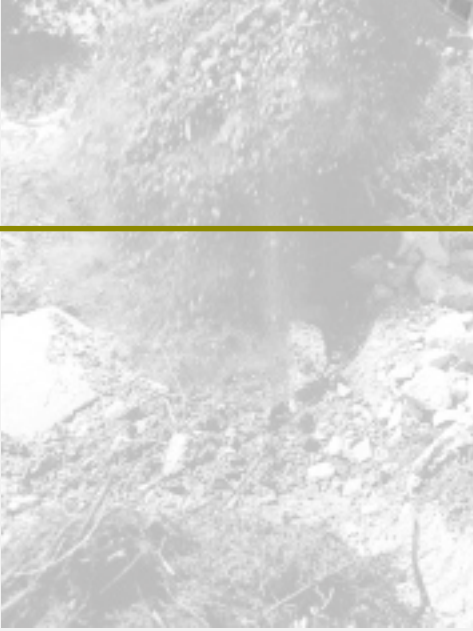


	L 15.5	L 20.5
Service weight t	9.3	11.4
Engine output kW	82	101
Loading buckets m ³	1.5 - 3.0	2.0 - 3.8

- LEAR geometry with parallel guide
- Electro-hydraulic servo control
- Bigger bucket capacity
- Ergopower transmission
- Higher torque, higher tractive forces
- Ultramodern ergonomic cab
- Easy servicing from the ground



L 15.5 and L 20.5: the most productive 1.5 and 2 m³



CE seal according to EC Machinery Directive

TÜV certificate for compliance with DIN ISO EN 9001

Easy operation with programmable functions and vast flexibility with electro-hydraulic servo control

LEAR geometry for earthmoving and parallel operation



Wet multi-disc hub-mounted brakes for easy access without removing the wheels

loaders with patented 2-in-1 geometry

Hydraulically cushioned cab with multi-functional control lever and electronic management system

Electronic immobilizer standard

Excellent all-round visibility, stylish tail-end for even more rear safety

Rugged fuel-efficient, high-torque Cummins construction machinery engine

Easy service-ability from the ground

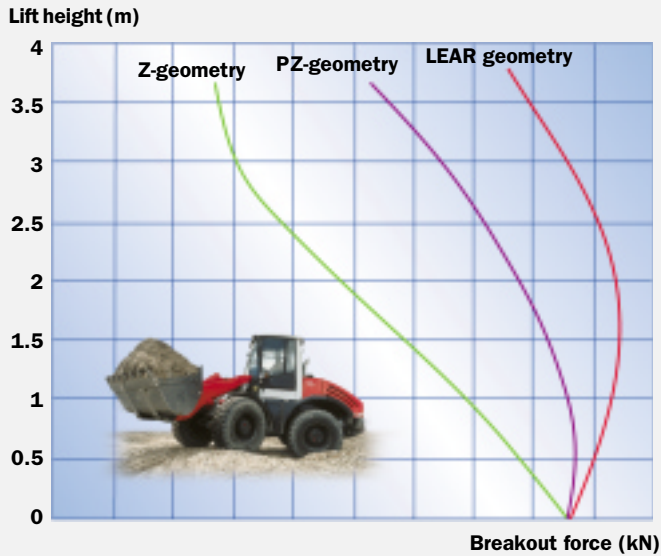


Best possible power transfer with larger, widely spaced bearings

Multi-disc self-locking differential and Ergopower transmission for powerful tractive forces even across difficult terrain

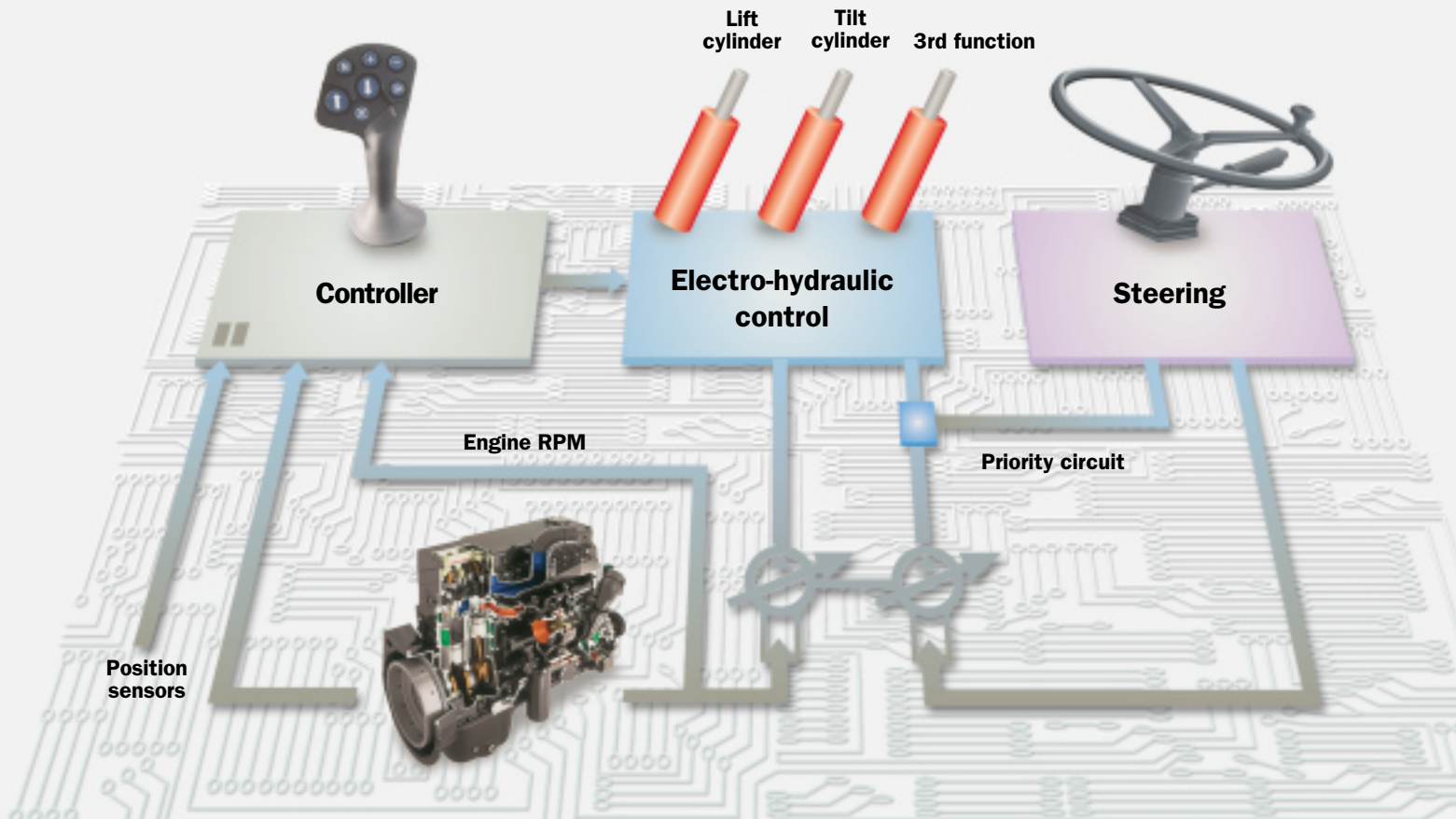
Unique LEAR geometry for earthmoving and industry

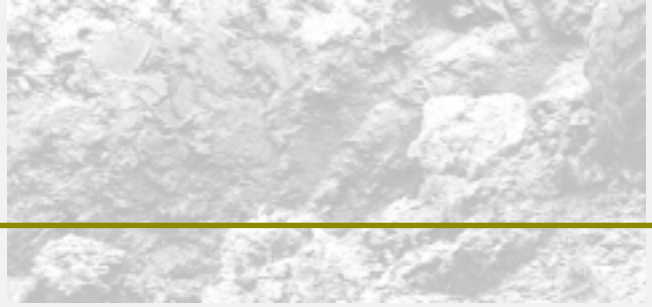
No-compromise merger of parallel and Z-geometry advantages



O&K's patented LEAR geometry sets new standards in wheel loader flexibility merging into one machine functions for which operators normally need two loaders. The systems used until now each had their specific advantages: Z-geometry generated high digging forces at ground level while industrial geometry permitted parallel fork control across the entire lift range as well as strong lifting capacities when clamping pipes or logs.

Significant breakout boost using LEAR geometry compared with other systems (schematic)





O&K's LEAR geometry merges the benefits of both systems into one. Ample breakout force stays virtually constant across the entire lift range and any slackening of lift force (as is typical on Z-geometry) is ruled out. What's more, this system guarantees absolutely precise until now unachievable parallel control at all working positions. Two sensors constantly record the positions of the lift frame and tilt control lever. The actual values are then electronically compared with the stored target data and the working attachment is automatically guided into the ideal position. This makes life a lot easier for the operator who need not make continuous adjustments.

The structure is of simple and hence rugged design. Operator visibility is excellent. A taller dump height and ideal reach have improved truck loading functions considerably. The mast profile is redesigned to prevent damage to the truck's sidewalls.



Extra comfort, extra productivity



This cab incorporates new dimensions of output-enhancing comfort. The futuristic design creates an atmosphere that is conducive to productivity. The comfortable suspension seat is adjustable to the weight of operator. All of the controls are ergonomically positioned and conveniently placed.

Space to spare inside allows the operator ample freedom of movement. There is enough head clearance even for the helmet. The heater/ventilation system with integrated fresh-air blower ensures an agreeable working climate.

Getting in and out of the cab is very easy as the door is extra wide and the steering column steplessly adjustable. Visibility is perfect, in any direction! The attachment and the reversing area are easily in the operator's vision. Visibility is unobstructed even down between the wheels.

A standard feature of these loaders is an electronic immobilizer, an effective deterrent to construction-site theft of increasing frequency.

Single-handedly

Lift, lower, roll-back, dump, gearshifting, backing ... all single-handedly. The computerized controls allow certain functions to be automated such as return-to-loading position and additional chores in the form of a "black-white" mode using the multi-functional lever. The "teach-in" key tells the machine what to do in a fraction of a second. All in all, standard-setting comfort.



Open for business

The powerful, liquid-cooled Cummins diesels run at low revs for extended longevity. Outstanding torque at low engine speed delivers plenty of fuel-efficient lugging ability.

The large engine hood opens wide and easily to allow access to all the components. Daily routine maintenance is completed in no time at all.



Generous dump angle and cushioned end-of-stop



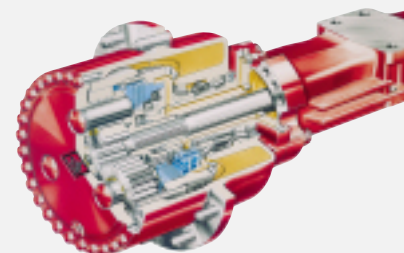
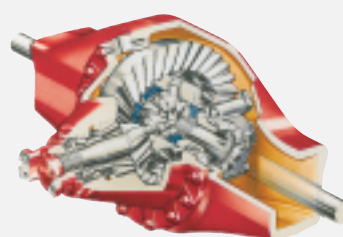
A generous dump angle easily in excess of 90° makes emptying easier while allowing the machine to extricate itself from tricky situations. When working with highly adhesive loads, the shake-out intensity can be electronically adjusted. End-of-stop is also adjustable, cushioned or aggressive.



Multi-disc brakes and self-locking differentials

Hydraulic dual-circuit brakes and wet multi-disc brakes in the wheel hubs ensure safe braking response. The brakes themselves are easily accessible without removing the wheels.

The automatic self-locking differential provides ideal power transfer, excellent traction and crowding forces even on difficult terrain.



Smart electro-hydraulic control

Innovative developments and longstanding experience in microchip technology have enabled O&K to completely redesign the wheel loader electronic control system. Until now, the various functions had been performed by a large number of mechanical-hydraulic components. On the L 15.5 and L 20.5 these basic and supplementary functions are masterminded electro-hydraulically by smart software. When the lift frame rises to exceed a certain height, the electronics automatically shuts off the lifting function. Resetting the desired lift height is just as uncomplicated. Instead of the hardware adjustments required previously, now the operator simply presses the "teach-in" key and the new maximum height is immediately stored. This makes the work a lot easier for the operator and improves the equipment's flexibility. No mechanical/hydraulic components and hence no servicing or repair of such components.

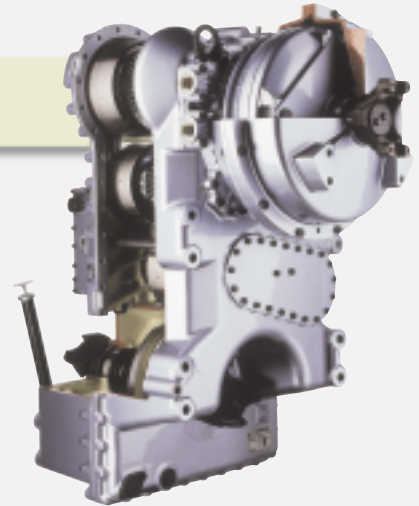
The electro-hydraulic system also takes care of additional functions such as ground-level return-to-load after dumping or bucket shake-out intensity.

Electronic control handles many of the chores previously left to the operator. Controllability is significantly improved and the multifunctional lever works as smoothly and effortlessly as a joystick.

New high-efficiency Ergopower transmission

The new Ergopower transmission is a standard-setter in terms of travel performance, shiftability and noise reduction. Slim-contoured gearing, generous helical overlapping and distortion-proof short shafts combine to cut noise emissions by over one half. As each of the six couplings has its own pressure regulator, shifting is smooth, with no interruption in tractive force. In fact, the operator barely notices the automatic gear shifting, and spine and spillage are spared.

All the important operating data is continuously logged and any variances from preset values are displayed. The machine's own diagnosis system constantly monitors all the main control components and if any part should fail, the control system shifts back into a safer mode. This lessens the risk of damage and improves durability.



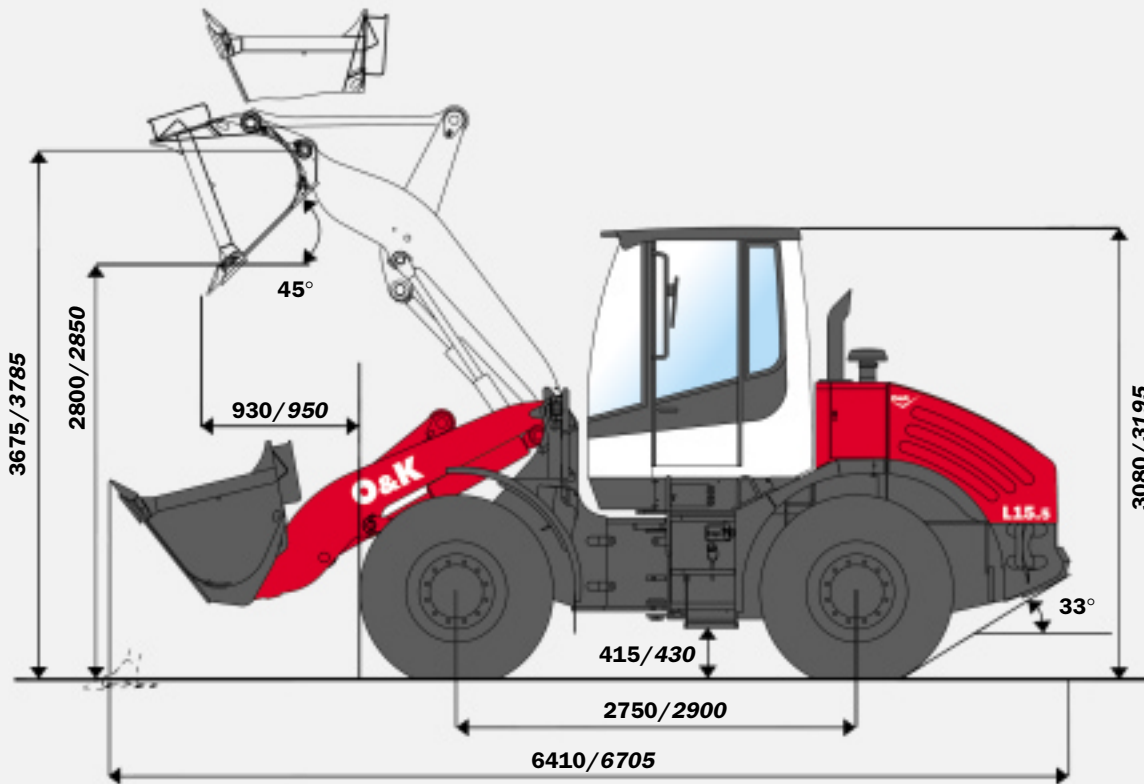
The improved mechanical efficiency and automatic shifting help to accelerate handling speed while cutting fuel consumption.

Adjustment-free articulating joint

Widely-spaced, sealed bearings optimize force distribution for even safer operation. Elastic stops prevent damage and easy accessibility facilitates maintenance.



Weights and dimensions



L 15.5/L 20.5

		L 15.5	L 20.5
Width over tyres (17.5 R 25, L-3)	mm	2240	
Width over tyres (555/70 R 25, L-3)	mm		2345
Track (17.5 R 25, L-3)	mm	1790	
Track (555/70 R 25, L-3)	mm		1800
Artic angle	°	+/- 41.5	+/- 41.5
Overall length at ground level (flat on ground)	mm	6408	6704
Turning radius (to outside edge of bucket) (bucket in carry)	mm	5286	5526
Turning radius (to outside edge of tyres)	mm	4740	5030

Operating data			
Standard buckets with teeth		L 15.5	L 20.5
Capacity (SAE/CECE heaped)	m ³	1.5/1.7	2.0/2.2
Perm. spec. loose weight	t/m ³	1.8/1.6	1.8/1.6
Bucket width	mm	2330	2500
Bucket weight	kg	670/710	910/1010
Breakout force	kN	85/79	98/92
*Tipping load, straight (static) ISO	kg	6600/6550	8850/8700
*Tipping load, art. 41.5° ISO	kg	5750/5700	7800/7650
*Service weight	kg	9250/9300	11400/11500
Lift capacity, straight (level, firm terrain)	kg	3830	5195
Lift capacity, art. 41° at S 1.25 (level, firm terrain)	kg	3310	4560

*Including all lubricants, full fuel tank, tyres 17.5 R 25 L-3 (L 15.5) and 555/70 R 25 L-3 (L 20.5), ROPS/FOPS cab and operator. Service weight and static tipping load depend on tyres and any options/special equipment fitted. All figures approximate.

Technical Data L 15.5



Engine

Cummins diesel	4BT A 3.9 – C110
Water cooled • Direct injection, turbocharged, intercooler	
Engine output SAE J1995	82 kW / 2200 rpm
Max. torque at 1500 rpm	414 Nm
Cylinders / displacement	4 / 3922 cm ³
Bore / stroke	102 mm / 120 mm
Voltage	24 V
2 batteries	each 12 V / 88 Ah
Alternator	980 W
Starter	4 kW
Exhaust emissions to COM 95/350 Step 1	



Hydraulics

Load sensing attachment hydraulics • 2 variable-displacement pumps with steering priority • Delivery independent of load pressure

Max. delivery, main pumps	120 l/min
Max. operating pressure	280 bar



Torque converter

Single-stage, integrated with transmission

Conversion ratio	2.3 : 1
Heat-exchanger cooling	



Transmission

Ergo-powershift, 4 forward and 3 reverse gears shifting on-the-go • Smooth automatic gear shifting • Multi-functional lever for gear shifting and loader functions



Travel speed

Travel speeds in km/h with 17.5 - 25 tyres

Gear	Forward	Reverse
1.	6.5	6.5
2.	12.0	12.0
3.	25.0	25.0
4.	35.5	



Axles

All-wheel-drive, Front axle: Rigid, with multi-disc self-locking differential, Rear axle: Rigid, with multi-disc self-locking differential

Articulating angle	+/- 12°
Wheel-hub mounted planetary gears	



Tyres

Standard	17.5 R 25, L-3
Other options	17.5 R 25 EM, L-2, L-4, L-5 555/70 R 25, L-3 550/65 R 25, L-3



Brakes

Hydraulic dual-circuit pump accumulator, with hub-mounted wet multi-disc brakes • Additional pedal for automatically disconnecting power from the transmission during work

Parking brake: disc-type acting on the transmission



Steering

Any-angle steering wheel (telescopic optional) • Variable steering wheel reduction • Automatic adjustment to job conditions • Mid-mounted artic steering with load-sensing variable displacement pump • Two double-acting hydraulic cylinders • Maintenance-free artic joint • Emergency steering

Max. pressure	210 bar
Artic angle	41.5°



Loading attachment

LEAR geometry for both earthmoving and industrial applications • Frame from solid steel with torsion-stiff cross-members • Sealed mounting points • Multi-functional lever

Function	Lift	Lower	Dump	Total
Sec.	5.0	4.0	1.4	11.2



Capacities

Fuel	130 l
Engine oil and filter change	10 l
Transmission and torque converter	17 l
Front axle/wheel hubs	10/9 l
Rear axle/wheel hubs	10/9 l
Hydraulics total	120 l



Cab

Noise-insulated cab • Hydraulic cushioning • Folding door locks into place • Lockable sliding windows • ROPS to DIN/ISO 3471/SAE J 1040 c • FOPS to DIN/ISO 3471/SAE J 231

Technical Data L 20.5



Engine

Cummins diesel	6 BT 5.9 – C 135
Water cooled • Direct injection, turbocharged	
Engine output SAE J1995	101 kW / 2200 rpm
Max. torque at 1600 rpm	568 Nm
Cylinders / displacement	6 / 5900 cm ³
Bore / stroke	102 mm / 120 mm
Voltage	24 V
2 batteries	each 12 V / 92 Ah
Alternator	1689 W
Starter	4 kW
Exhaust emissions to COM 95/350 Step 1	



Hydraulics

Load sensing attachment hydraulics • 2 variable-displacement pumps with steering priority • Delivery independent of load pressure

Max. delivery, main pumps	135 l/min
Max. operating pressure	285 bar



Torque converter

Single-stage, integrated with transmission

Conversion ratio	2.55 : 1
Heat-exchanger cooling	



Transmission

Ergo-powershift, 4 forward and 3 reverse gears shifting on-the-go • Smooth automatic gear shifting • Multi-functional lever for gear shifting and loader functions



Travel speed

Travel speeds in km/h with 555-70 R 25 tyres

Gear	Forward	Reverse
1.	6.6	7.0
2.	12.0	12.7
3.	23.0	24.3
4.	37.3	



Axles

All-wheel-drive, Front axle: Rigid, with multi-disc self-locking differential, Rear axle: Rigid, with multi-disc self-locking differential

Articulating angle	+/- 12°
Wheel-hub mounted planetary gears	



Tyres

Standard	555/70 R 25, L-3
Other options	550/65 R 25, L-3 17.5 R25, L-4, L-5 20.5 R 25, L-2, L-3



Brakes

Hydraulic dual-circuit pump accumulator, with hub-mounted wet multi-disc brakes • Additional pedal for automatically disconnecting power from the transmission during work

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Steering

Any-angle steering wheel (telescopic optional) • Variable steering wheel reduction • Automatic adjustment to job conditions • Mid-mounted artic steering with load-sensing variable displacement pump • Two double-acting hydraulic cylinders • Maintenance-free artic joint • Emergency steering

Max. pressure	210 bar
Artic angle	41.5°



Loading attachment

LEAR geometry for both earthmoving and industrial applications • Frame from solid steel with torsion-stiff cross-members • Sealed mounting points • Multi-functional lever

Function	Lift	Lower	Dump	Total
Sec.	5.4	3.8	1.8	11.0



Capacities

Fuel	200 l
Engine oil and filter change	18 l
Transmission and torque converter	18 l
Front axle/wheel hubs	13/13 l
Rear axle/wheel hubs	13/13 l
Hydraulics total	120 l



Cab

Noise-insulated cab • Hydraulic cushioning • Folding door locks into place • Lockable sliding windows • ROPS to DIN/ISO 3471/SAE J 1040 c • FOPS to DIN/ISO 3471/SAE J 231

Standard equipment

CE seal as per EC Directive 89/322 EEC
 Noise insulated removable ROPS/FOPS cab •
 Heater and defroster nozzles • Ventilation options: recirculating or outside air • Air filter • Electric windscreen wipers, washers, front and rear • Heated rear window • Steplessly adjustable, vibration dampened swing seat • Adjustable steering column • Multi-functional lever and automatic gear shifting • Towing device • Float position • Programmable automated return-to-loading position • Adjustable cushioned end-of-stop • Programmable lift limit • Parallel guide for forks • Standard tool kit • 2 spot lights front, 2 rear

Inside/outside noise levels to the new EEC Directive 2000/14/EC

Electronic monitoring and warning lamps for the following functions:

Torque converter oil temperature, transmission oil pressure, engine oil temperature, engine oil pressure, service brake pressure, battery charge

Other displays and warning lamps:

Gear shift position display, fuel meter, coolant level, engine oil level (L 20.5), operating hours meter, speedometer, beacon, direction indicators, main lights, warning light for hydraulic tank, air filter contamination indicator

Optional equipment

Standard for Germany:

Fitted for road traffic
 TÜV approved

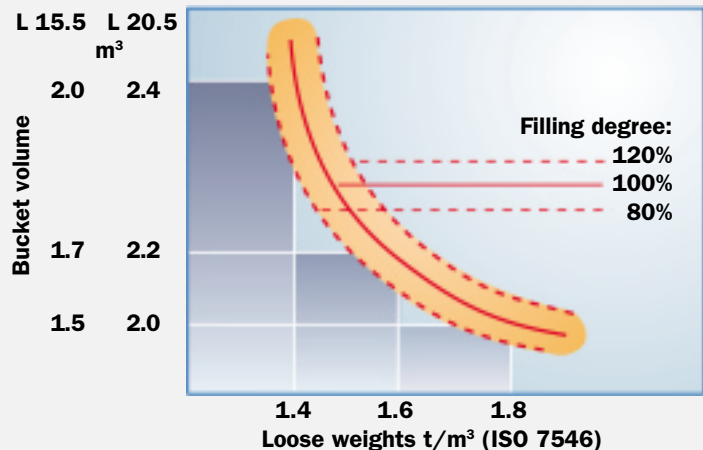
Optional:

Loading buckets (with or w/o teeth)
 Light-materials bucket
 High-dump bucket
 Hydraulic quick-hitch
 Cutting edge
 Fork lift
 Log grapple
 Air filter with ejector
 4th gear lock (max. 25 km/h with 17.5-25 tyres)
 Electronic speed limit
 Acoustic reversing warning signal
 Amber beacon
 Additional tools
 3rd circuit for hydraulic attachments
 Air conditioning
 OLS
 Semi drop window right/left
 Eco-friendly hydraulic liquid (Panolin)

Types of bucket – Loose weights – Filling degree

	L 15.5	L 20.5
Standard bucket	1.5 m ³	2.0 m ³
Bulk material bucket	1.7 m ³	2.2 m ³
Bulk material bucket	2.0 m ³	2.4 m ^{3*}

Material	Density	Bucket fill
Soil	1.5 – 1.6 t/m ³	100 – 110 %
Clay	1.5 – 1.7 t/m ³	100 – 110 %
Sand	1.4 – 1.8 t/m ³	100 – 110 %
Gravel	1.5 – 2.0 t/m ³	100 – 105 %
Rock	1.6 – 2.0 t/m ³	75 – 100 %



Actual volumes normally exceed ISO/SAE.



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