

# Zettelmeyer ZL 502 Series B



## **An Agile Allrounder — Tough and Flexible on any Job**

- **High-performance, environmentally - friendly diesel engine:** quiet, low emissions, economical fuel consumption.

- **Hydrostatic drive**

with significant advantages:

- Easy to operate due to automatic drive facility
- Maintains high drawbar pull even when working hydraulics are engaged
- Advantageous hydrostatic brakes, wear-free and safe

- **Powerful Z-bar loader-linkage**

with two lifting cylinders:

- High breakout force and lifting capacity in bucket applications
- Excellent fork-lift capacity

- **100% differential lock can be engaged** in both axles to give optimum traction.

- **Standard hydraulic quick-change coupling:**

Various tried-and-tested attachments for a wide range of applications

- **Purpose designed cab comfort** for extra performance.

Audio-visual warning system for monitoring operating systems

- **Gross Power:**  
SAE J1995 36 / 48 kW / hp
- **Operating Weight:**  
4,2 t (9250 lb)
- **Bucket Capacities:**  
0,7 - 1,3 m<sup>3</sup> (0,9 - 1,7 yd<sup>3</sup>)

## **Zettelmeyer**

## ZL 502 Series B



### ENGINE

**Engine:** in-line 4-cylinder, 4 stroke, direct injection diesel engine, oil/air cooled.

#### Two-stage air cleaning:

1. Paper filter with indicator in cab
2. Safety filter

Make	KHD			
Type	F4 L 1011 F			
Gross power @	2800	r/min	(46,7	r/s)
SAE J1995	36	kW	(48	hp)
Net power @	2800	r/min	(46,7	r/s)
SAE J1349	35	kW	(47	hp)
DIN 70020 / 6271	35	kW	(47	hp)
Max. torque @	1800	r/min	(30	r/s)
SAE J1349 netto	129	Nm	(95	lbf/ft)
DIN 70020 / 6271	129	Nm	(95	lbf/ft)
No. cylinders	4			
Cubic capacity	2,73	l	(167	in <sup>3</sup> )
Bore	91	mm	(3,6	in)
Stroke	105	mm	(4,1	in)

### Electrical System

Rated voltage	12	V		
Battery voltage	12	V		
Battery capacity	88	Ah		
Alternator rating	840/60	W/A		
Starter motor output	2,2	kW	(3,0	hp)



### DRIVETRAIN

**Transmission:** hydrostatic transmission, full power shift under load, both when changing direction (forward/reverse) and between first and second range. Maximum pushing force can be achieved in both ranges.

Inch/brake pedal for variable machine speed control.

**Axles:** all-wheel drive by two rigid portal axles.

**Differential lock:** hydraulically actuated 100% differential locks in both axles.

**Frame:** solid front and rear frames, robot-welded. Center articulating-oscillating joint for optimum manoeuvrability and traction.

Oscillation at wheel, max.	250	mm	(10"	in)
Track	1382	mm	(54"	in)
Angle of oscillation	± 10	°		

Standard tires	Size	12.5-18		
	Rim	11 x 18		

Speed, max.:				
1st range,				
forward/reverse	10,0	km/h	(6,2	mile/h)
2nd range,				
forward/reverse	20,0	km/h	(12,4	mile/h)



### SERVICE FILL CAPACITIES

Engine	10,5	l	(2,8	US gal)
Fuel tank	60,0	l	(15,9	US gal)
Front axle, total	10,0	l	(2,6	US gal)
Rear axle, incl. drop-box	11,0	l	(2,9	US gal)
Hydraulic tank, incl. hydraulic system	60,0	l	(15,9	US gal)



### BRAKING SYSTEM

**Service brake:** reliable dual braking system, acting upon all four wheels.

1. Wear-free, hydrostatic inching brake.
2. Central friction brake, actuated via "inch/brake pedal".  
First stage of pedal application actuates the inching facility, the last third of pedal application applies the central friction brake.

**Parking brake:** central drum brake, acting upon all four wheels.



### HYDRAULIC SYSTEM

Thermostatically controlled oil circuit with integrated cooling system and electrically switched fan.

**Hydraulic control valve:** double-acting control valve with three-spool system, with primary and secondary pressure valves.

1. Lifting function
2. Tilting function
3. Optional additional function for hydraulic QC:  
lock, neutral, unlock  
Preparation for operating hydraulic attachments with this function is available as an option.

**Hydraulic oil filter:** main stream filter cartridge with 10 µm filtration in the return-line. Suction filter for the drive assembly with 10 µm filtration. The filters can be replaced without emptying the tank.

Lifting frame: Z-bar linkage  
2 Lift cylinders  
1 Tilt cylinder

Hydraulic pump				
Flow	45	l/min	(11,9	US gal/min)
@ engine rpm	2800	r/min	(46,7	r/s)
Relief valve pressure	22	MPa	(3191	psi)

Lift time (loaded)	6,0	sec.
Lowering time (empty)	3,0	sec.
Dump time	1,0	sec.
Crowd time	1,0	sec.



### STEERING

Hydraulic steering. Central articulating-oscillating joint with damping effect.

**Steering pump:** gear-type pump.

**Steering cylinder:** 1 double-acting steering cylinder.

Steering				
Angle of articulation	± 39	°		
Steering pump				
Flow	22	l/min	(5,8	US gal/min)
@ engine rpm	2800	r/min	(46,7	r/s)
Relief valve pressure	15	MPa	(2176	psi)





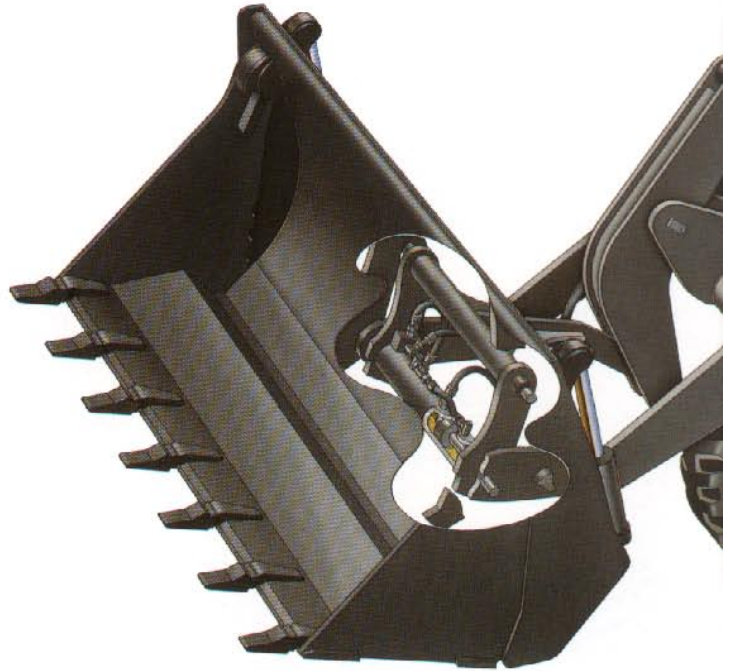
## An Allrounder from Zettelmeyer: as Versatile as your Requirements!

The ZL 502 Series B is not just a top-performer of classic earth-moving tasks - it has much more to offer than a mere wheel loader! Select from a wide range of special attachments! With quick-coupler, the machine is equipped for your job within seconds - all controlled from the operator's seat.

Expensive idle times are eliminated on construction sites, farms, gardening, landscaping or municipal jobs maximising use of your investment, and, irrespective of summer or winter -



## It's always Zettelmeyer Season!



## ZL 502 Series B - Goes Through Anything!

The strong portal axles make the machine highly manoeuvrable and mobile in extremely difficult terrain. With 100% differential locks and portal axles front and rear, the ZL 502 Series B makes easy work of heavy ground conditions.

Slanted engine cover gives superb visibility, and the low maintenance articulating-oscillating joint ensures excellent manoeuvrability in tight quarters and on uneven terrain



## The Lift-arm System adds Power to Digging Cycles!

In every application, you can take advantage of the tried-and-tested Z-bar loader linkage. It shows extraordinary breakout force at the face, and excellent lifting force with a loading fork. The curvature of the lift arm is designed to cater for larger trucks both in dump height and reach for symmetrical loading.



## Additional Comfort for Increased Operator Performance

A suitable ergonomic environment is of paramount importance for good operator performance. The ZL 502 Series B has a clearly designed cab interior, with allround soundproofing and additional comfort. The low front windscreen, without disturbing side frames, guarantees a panoramic view over the working area.

### Operator Comfort...

- Spacious, detachable cab
- Reliable heating and ventilation system
- 4-way adjustable operator's seat

### ...for smooth Working Cycles

- Clearly designed dashboard
- Audio-visual warning system
- Single lever control for working hydraulics and differential locks
- Single pedal for inching and braking



## Hydrostatic Drive - Power you can rely on!

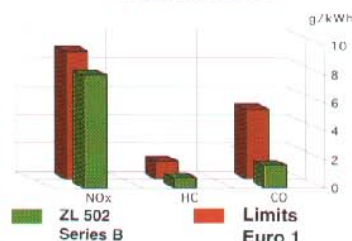
Hydrostatic drive maintains a constant drawbar pull even when the working hydraulics are at maximum pressure. The automatic drive allows the operator to concentrate fully on the job. Gears can be shifted under full load in work, cycles remain smooth and productivity remains constantly high. The hydrostatic drive serves as the main braking system - a further advantage, as this brake is virtually wear-free.

## The Power Source: environmentally-friendly Performance

The ZL 502 Series B is equipped with the latest series Deutz 1011 engine. The result leaves nothing to be desired: high performance, economical fuel consumption and low exhaust emissions, with excellent performance values.

Transverse engine allows easy access to major components. Daily maintenance and servicing are made simple by eye-level check points. Resultant time-savings leave you with cash-in-hand.

Exhaust Emissions  
ZL 502 Series B



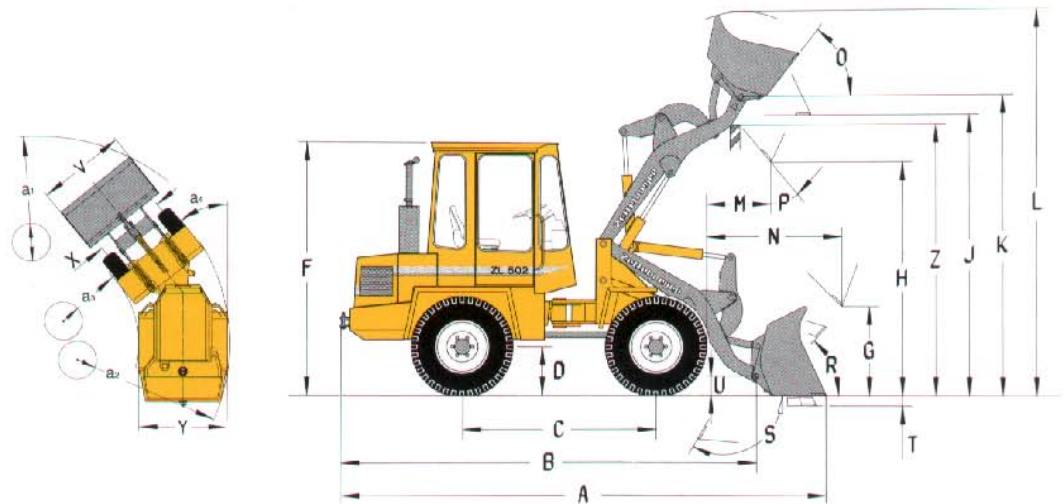
Exhaust emissions of the ZL502 Series B are considerably lower than those required by Euro 1.



# ZL 502 Series B

## DIMENSIONS\*

B	4270 mm	(14' 0" ft in)
C	2000 mm	(6' 7" ft in)
D	450 mm	(1' 6" ft in)
F	2585 mm	(8' 6" ft in)
G	920 mm	(3' 0" ft in)
J	2940 mm	(9' 8" ft in)
K	3090 mm	(10' 2" ft in)
O	53 °	
P	45 °	
R	50 °	
S	143 °	
U	150 mm	(0' 6" ft in)
X	1382 mm	(4' 6" ft in)
Y	1730 mm	(5' 8" ft in)
Z	2850 mm	(9' 4" ft in)
a <sub>2</sub>	3750 mm	(12' 4" ft in)
a <sub>3</sub>	1980 mm	(6' 6" ft in)
a <sub>4</sub>	± 39 °	



\*measured with bucket 0,7 m<sup>3</sup> (0,9 yd<sup>3</sup>), standard quick-change mounting and 12.5-18 tires

## OPERATING DATA

Bucket Type	General Purpose Bucket		Light Material Bucket		4-in-1 Bucket	High-Tip Bucket	
	R	R	R	R	R	R	
Mounting R (quick-change mounting standard equipment)							
Edge: straight (G) with / without (+ / -) teeth	G +/-	G	G	G	G +	G -	
Capacity heaped	m <sup>3</sup> (yd <sup>3</sup> )	0,7 (0,9)	0,8 (1,0)	1,1 (1,4)	1,3 (1,7)	0,7 (0,9)	1,2 (1,6)
Material density	kg/m <sup>3</sup> (lb/yd <sup>3</sup> )	1800 (3050)	1600 (2700)	1100 (1850)	900 (1500)	1600 (2700)	800 (1350)
Static tipping load, straight (ISO)	kg (lb)	3120 (6880)	3050 (6720)	2950 (6500)	2850 (6280)	2800 (6170)	2630 (5800)
Static tipping load, full turn (39° ISO)	kg (lb)	2600 (5730)	2560 (5640)	2450 (5400)	2350 (5180)	2300 (5070)	2100 (4630)
Hydraulic lifting capacity, max.	kN (lbf)	31,3 (7040)	30,0 (6740)	29,0 (6520)	28,5 (6410)	28,0 (6300)	26,0 (5850)
Breakout force	kN (lbf)	38,5 (8660)	38,0 (8540)	28,5 (6410)	27,0 (6070)	35,0 (7870)	- (-)
A Total length	mm (ft in)	4990 (16' 4")	5030 (16' 6")	5235 (17' 2")	5285 (17' 4")	5240 (17' 2")	5430 (17' 10")
L Lift height	mm (ft in)	3920 (12' 10")	3970 (13' 0")	4110 (13' 6")	4110 (13' 6")	3960 (13' 0")	4630 (15' 2")
V Bucket width	mm (ft in)	1750 (5' 9")	1750 (5' 9")	1900 (6' 3")	1900 (6' 3")	1750 (6' 3")	1900 (6' 3")
a <sub>1</sub> Clearance circle	mm (ft in)	8130 (26' 8")	8180 (26' 10")	8400 (27' 6")	8480 (27' 10")	8200 (26' 11")	8980 (29' 6")
T Digging depth, max.	mm (ft in)	90 (0' 4")	140 (0' 6")	140 (0' 6")	140 (0' 6")	140 (0' 6")	140 (0' 6")
H Dump height	mm (ft in)	2500 (8' 2")	2440 (8' 0")	2290 (7' 6")	2260 (7' 5")	2330 (7' 8")	3530 (11' 7")
M Reach at max. height	mm (ft in)	790 (2' 7")	740 (2' 5")	890 (2' 11")	920 (3' 0")	790 (2' 7")	1150 (3' 9")
N Reach, max.	mm (ft in)	1465 (4' 10")	1420 (4' 8")	1570 (5' 2")	1600 (5' 3")	1470 (4' 10")	2105 (6' 11")
Operating weight	kg (lb)	4200 (9250)	4210 (9300)	4260 (9400)	4280 (9450)	4370 (9650)	4535 (10000)



**STANDARD EQUIPMENT**

<p><b>Cab, Exterior</b> Removable ROPS-cab with flexible mountings</p> <p>Walk-through cab Lockable doors</p> <p>Tinted safety glass (front and rear) Windscreen wiper (front and rear) Windscreen washer (front and rear) Sliding window in the left door Door stops External rear view mirrors (right and left)</p> <p><b>Cab, Interior</b> 4-way adjustable driver's seat Seat belt</p> <p>Sunvisor Heater with air-filter and defroster Cab ventilation Cab lighting Storage box in the cab Tool box</p>	<p><b>Instrument Panel</b> with symbols: Instrument lighting 12 V power socket Horn Safety start</p> <p>Gauges: Fuel gauge Hour meter Drive system oil temperature</p> <p>Indicator lamps for: Direction indicator Parking brake Main beam Pre-heater Battery charging Differential locks Hazard warning flashers</p> <p>Central audio-visual alarm for: Engine temperature Engine oil pressure Drive system oil temperature Air filter restriction Parking brake</p>	<p><b>Exterior Lighting</b> Main head lights (Halogen): full/dipped/asymmetrical Parking lights Rear lights Brake lights Direction indicators Hazard warning lights Reversing lights</p> <p><b>Powertrain</b> Diesel engine with direct fuel injection Cold start aid Two-stage dry-type air filter</p> <p>Alternator 60 A</p> <p>Additional 100% differential lock</p> <p>Tires 12.5-18</p> <p>Control valve three-spool system Third hydraulic circuit</p> <p><b>Service and Maintenance</b> Tool kit</p>	<p><b>Working Equipment</b> Single lever control Bucket level indicator Hydraulic quick-change attachment carrier</p> <p><b>Carriage Body</b> Fenders and mudguards, front and rear Lockable engine hood Lockable fuel-tank cap Vertical exhaust Towing device</p> <p>Complete system in accordance with German road traffic regulations Sound insulation acc. to EC-guidelines Safety standards according to EC-directive 89/392/EEC CE Certification</p>
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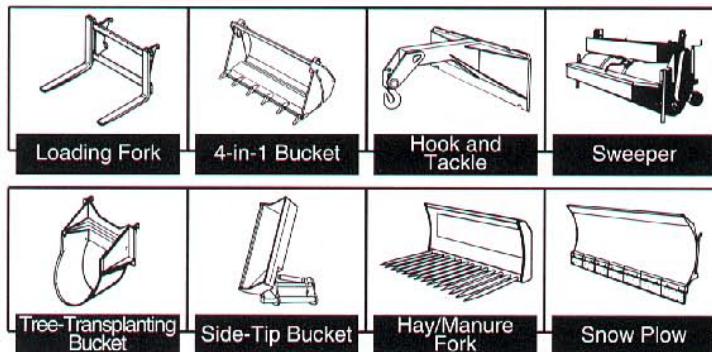
**OPTIONAL EQUIPMENT**

<p><b>Cab</b> Handthrottle Hand control inch valve Heating independent of engine Radio</p> <p>Sliding window in the right door</p>	<p><b>Safety</b> FOPS plate Protective guards for Main head lights Working lights Rear lights Rotating beacon (yellow) Audible reverse alarm Counterweight</p>	<p><b>Powertrain</b> Pre-heater Catalytic converter Extra fuel filter Pre-cleaner with ejector Two-stage filter (oil bath)</p> <p><b>Service and Maintenance</b> Wheel nut wrench</p>	<p><b>Working Equipment</b> Working lights (front and rear) ZLS load stabilizer Extended lift arms</p> <p>Extra hydraulics, rear Additional hydraulics for attachment carrier 4th hydraulic circuit</p>
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**ATTACHMENTS**

**Buckets**  
of various sizes  
0,7 - 1,3 m<sup>3</sup> (0,9 - 1,7 yd<sup>3</sup>)  
with or without teeth

Wide range of bucket types, eg  
Light material bucket (with or without teeth)  
High-tip bucket (without teeth)  
Side-tip bucket (without teeth)  
4-in-1 bucket (with teeth)  
Brick bucket (with teeth)  
Horticultural bucket  
Bolt-on cutting edge



Further buckets and attachments available on request

**Selection of Attachments, eg for**

Timber industry:  
Log grapple  
Loading fork with log grapple

Road building/industry:  
Loading fork  
Hook and tackle

Municipal application:  
Sweeper  
Angle dozer blade  
Snow plow

Horticulture and agriculture:  
Hay/Manure fork  
Front scarifier

*Under our policy of continuous product improvement, we reserve the right to change specifications and design without prior notice.*

*The illustrations do not necessarily show the standard version of the machine.*

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