

# Zettelmeyer ZL 302



## **Allrounder - Loading in the smallest Space**

- **High-performance, low environmental impact 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 parallel loader linkage** for excellent loading-fork lifting ability
- **Operator-selected 100% differential locks** on both axles to give optimum traction
- **Standard mechanical 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 22/30 kW/hp  
**Net Power:**  
SAE J1349 21/28 kW/hp
- **Operating Weight:**  
1,9 t (4190 lb)
- **Bucket Capacities:**  
0,3 - 0,5 m<sup>3</sup> (0,4 - 0,7 yd<sup>3</sup>)

**Zettelmeyer**



## ENGINE

**Engine:** in-line 4-cylinder, 4 stroke, indirect injection diesel engine, water cooled.

**Two-stage air cleaning:**

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

Make		KHD		
Type		F4 M 1008		
Gross power @	3000	r/min	(50	r/s)
SAE J1995	22	kW	(30	hp)
Net power @	3000	r/min	(50	r/s)
SAE J1349	21	kW	(28	hp)
DIN 70020 / 6271	21	kW	(28	hp)
Max. torque @	1850	r/min	(31	r/s)
SAE J1349 netto	76	Nm	(56	lbf/ft)
DIN 70020 / 6271	76	Nm	(56	lbf/ft)
No. cylinders	4			
Cubic capacity	1,22	l	(74,5	in <sup>3</sup> )
Bore	72	mm	(2,8	in)
Stroke	75	mm	(3,0	in)

## Electrical System

Rated voltage	12	V		
Battery voltage	12	V		
Battery capacity	74	Ah		
Alternator rating	910/65	W/A		
Starter motor output	1,6	kW	(2,2	hp)



## DRIVETRAIN

**Transmission:** hydrostatic transmission, full power shift under load, when changing direction (forward/reverse). Maximum pushing force can be achieved in both ranges.  
Inch/brake pedal for variable machine speed control.

**Axles:** all-wheel drive by two rigid 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.	175 [125*]	mm	(6,9	[4,9]	in)
Track*	1010 [726*]	mm	(39,8	[28,6]	in)
Angle of oscillation	± 10	°			

Standard tires	Size	10.0/75-15.3
	Rim	9 x 15.3

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

\* alterable due to invertible wheels      \* wheels inverted



## SERVICE FILL CAPACITIES

Engine	4,3	l	(1,1	US gal)
Fuel tank	38,0	l	(10	US gal)
Front axle, total	5,0	l	(1,3	US gal)
Rear axle, incl. drop-box	6,0	l	(1,6	US gal)
Hydraulic tank,				
incl. hydraulic system	28,0	l	(7,4	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, if ordered with hydraulic QC:  
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. Pressure filter for the drivetrain with 10 µm filtration. The filters can be replaced without emptying the tank.

Lifting frame: Parallel loader linkage  
1 Lifting cylinder  
1 Tilt cylinder

Hydraulic pump (with priority valve for steering)				
Flow	21	l/min	(5,5	US gal/ min)
@ engine rpm	3000	r/min	(50	r/s)
Relief valve pressure	21	MPa	(2900	psi)

Lift time (loaded)	6,0	sec.
Lowering time (empty)	3,0	sec.
Dump time	2,5	sec.
Crowd time	1,5	sec.



## STEERING

Central hydrostatic, articulating-oscillating joint

**Steering pump:** gear-type pump with priority valve.

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

Steering				
Angle of articulation	± 40	°		
Steering pump				
Flow	21	l/min	(5,5	US gal/min)
@ engine rpm	3000	r/min	(50	r/s)
Relief valve pressure	17	MPa	(2466	psi)



## Power packed into a Mini-Form

Here it is! Your multi-purpose mini-loader for work in buildings, tunnels and drainage networks. Its restricted measurements enable it to pass, without problems, through narrow spaces which bar conventional small loaders, so quickly arriving on the job with your required attachment. Despite its compact construction, the ZL 302 is a true Allrounder.

Select from a wide range of attachments! With integral 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, in agriculture, horticulture, landscaping or in industry, maximising use of your investment, and, irrespective of summer or winter -

## It's always Zettelmeyer Season!



## A ZL 302 fits through every Gap!

With its small dimensions and tight turning circle, the ZL 302 is specially suited for narrow construction sites, particularly inside buildings.

The machine can also be delivered without a cab, eg with a ROPS-bar or a ROPS-canopy. The whole width of the machine can be reduced to just 980 mm (3' 3") by inverting the wheel-rims and removing the fenders, so enabling passage through almost every usual doorway.

With 100 % differential locks and high ground clearance, the ZL 302 makes easy work of heavy ground conditions. On sensitive ground, the machine can steer without damaging the surface due to its conventional differentials.

## Your versatile Assistant for Transport Purposes

You will appreciate the ZL 302's parallel linkage particularly when working with loads on a loading fork or with a telescopic lifting-arm. Parallel lifting of attachments keeps the load stable in every loading position.



## Extra Comfort for Increased Operator Performance

A suitable ergonomic environment is of paramount importance for good operator performance. The ZL 302 has a clearly designed cab interior.

### 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 pedal for inching and braking
- Single lever control for working hydraulics and differential locks

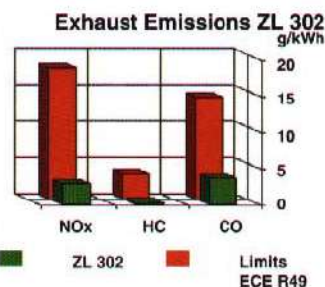
## The Power Source: Environmentally-friendly Performance

The ZL 302 is equipped with the latest series Deutz 1008 engine. The result leaves nothing to be desired: high performance, economical fuel consumption along with low acoustic and low exhaust emissions.

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.

## 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 stays constantly high. The hydrostatic drive serves as the main braking system - a further advantage, as this brake is virtually wear-free.

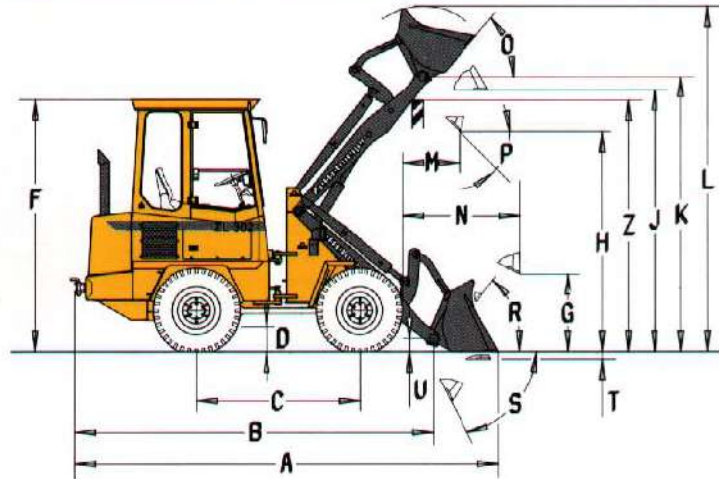
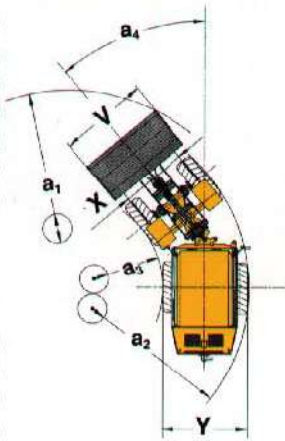


Exhaust emissions of the ZL 302 are considerably lower than those required by ECE R49 limits

**DIMENSIONS\***



- B 3340 mm (10' 11" ft in)
- C 1500 mm (4' 11" ft in)
- D 230 mm (0' 9" ft in)
- F 2310 mm (7' 7" ft in)
- G 715 mm (2' 4" ft in)
- J 2390 mm (7' 10" ft in)
- K 2540 mm (8' 4" ft in)
- O 50 °
- P 45 °
- R 54 °
- S 63 °
- U 150 mm (0' 6" ft in)
- X 1010 mm (3' 4" ft in)
- Y 1290 mm (4' 3" ft in)
- Z 2320 mm (7' 7" ft in)
- a<sub>2</sub> 2780 mm (9' 1" ft in)
- a<sub>3</sub> 1420 mm (4' 8" ft in)
- a<sub>4</sub> ± 40 °



\*measured with bucket 0,3 m<sup>3</sup> (0,4 yd<sup>3</sup>), width 1350 mm (4' 5"), standard quick-change mounting and 10.0/75-15.3 tires



**OPERATING DATA**

Bucket Type (quick-change mounting standard equipment) Edge: straight (G) with / without (+ / -) teeth	General Purpose Bucket		Light Material Bucket		4-in-1 Bucket	
	G +/-		G -		G +	
Capacity heaped	m <sup>3</sup> (yd <sup>3</sup> )	0,3 (0,4)	0,3 (0,4)	0,4 (0,5)	0,5 (0,7)	0,28 (0,4)
Material density	kg/m <sup>3</sup> (lb/yd <sup>3</sup> )	1700 (2850)	1600 (2700)	1200 (2000)	900 (1500)	1500 (2550)
Static tipping load, straight (ISO)	kg (lb)	1300 (2870)	1270 (2800)	1250 (2760)	1190 (2620)	1140 (2510)
Static tipping load, full turn (40° ISO)	kg (lb)	1030 (2270)	990 (2180)	970 (2140)	920 (2028)	860 (1900)
Hydraulic lifting capacity, max.	kN (lbf)	17,5 (3930)	17,1 (3840)	17,1 (3840)	16,7 (3750)	15,8 (3550)
Breakout force	kN (lbf)	19,5 (4380)	16,2 (3640)	16,2 (3640)	13,9 (3130)	20,4 (4590)
A Total length	mm (ft in)	3940 (12' 11")	4040 (13' 3")	4040 (13' 3")	4140 (13' 7")	3890 (12' 9")
L Lift height, max.	mm (ft in)	3180 (10' 5")	3250 (10' 8")	3250 (10' 8")	3340 (10' 11")	3190 (10' 6")
V Bucket width	mm (ft in)	1350 (4' 5")	980 (3' 3")	1350 (4' 5")	1350 (4' 5")	1350 (4' 5")
a <sub>1</sub> Clearance circle	mm (ft in)	6000 (19' 8")	5720 (18' 9")	6060 (19' 10")	6120 (20' 1")	5960 (19' 7")
T Digging depth	mm (ft in)	70 (0' 3")	70 (0' 3")	70 (0' 3")	70 (0' 3")	80 (0' 3")
H Dump height	mm (ft in)	2010 (6' 7")	1940 (6' 4")	1940 (6' 4")	1870 (6' 2")	2040 (6' 8")
M Reach at max. height	mm (ft in)	460 (1' 6")	530 (1' 9")	530 (1' 9")	600 (1' 11,5")	430 (1' 5")
N Reach, max.	mm (ft in)	1060 (3' 6")	1130 (3' 8")	1130 (3' 8")	1200 (3' 11")	1030 (3' 5")
Operating weight	kg (lb)	1900 (4190)	1900 (4190)	1920 (4230)	1940 (4280)	2050 (4520)
<b>Loading Fork, centre of gravity 400 mm (1 ft 4 in)</b>				<b>with additional counter-weight 100 kg (220 lb)</b>		
Tipping load, full turn acc. to ISO 8313	kg (lb)	820 (1810)		890 (1960)		
Payload acc. to EN 474-3, 80%	kg (lb)	650 (1430)		700 (1540)		
Payload acc. to EN 474-3, 60%	kg (lb)	490 (1080)		530 (1170)		

**STANDARD EQUIPMENT**

**Cab, Exterior**

Removable ROPS-cab

Lockable door

Tinted safety glass (windscreen)  
Windscreen wiper (front and rear)  
Windscreen washers (front and rear)  
Lockable windows for ventilation  
External rear view mirrors (right and left)

**Cab, Interior**

4-way adjustable driver's seat  
Seat belt

Sunvisor  
Heater with air-filter and defroster  
Cab ventilation  
Cab lighting  
Storage box in the cab

**Instrument Panel**

with symbols:  
Instrument lighting  
12 V power socket  
Horn  
Safety start

Gauges:  
Hour meter  
Drive system oil temperature

Indicator lamps for:  
Direction indicator  
Parking brake  
Main beam  
Pre-heater  
Battery charging  
Differential locks  
Hazard warning flashers  
Fuel

Central audio-visual alarm for:  
Engine temperature  
Engine oil pressure  
Drive system oil temperature  
Air filter restriction  
Parking brake

**Exterior Lighting**

Main head lights (Halogen):  
full/dipped/asymmetrical  
Parking lights  
Rear lights  
Brake lights  
Direction indicators  
Hazard warning lights

**Powertrain**

Diesel engine with indirect fuel injection  
Cold start aid  
Two-stage air filter

Alternator 65 A

Hydrostatic drive  
Operator-selected 100% differential locks

Tires 10.0/75-15.3

**Hydraulic System**

Gear-type pump  
Control valve three-spool system

**Working Equipment**

Single lever control  
Mechanical quick-change attachment carrier

**Carriage Body**

Fenders and mudguards, front and rear  
Lockable engine hood  
Vertical exhaust  
Towing device

Complete system in accordance with German road traffic regulations  
Sound insulation acc. to EU-guidelines  
Safety standards according to EC-directive 89/392/EEC  
CE Certification

**OPTIONAL EQUIPMENT**

**Cab**

ROPS-Canopy  
ROPS-Bar (folding)

Handthrottle  
Hand control inch valve  
Radio

**Safety**

FOPS plate  
Protective guards for  
Main head lights  
Working lights  
Rear lights  
Rotating beacon (yellow)  
Audible reverse alarm  
Counterweight

**Powertrain**

Extra fuel filter

**Service and Maintenance**

Wheel nut wrench

**Working Equipment**

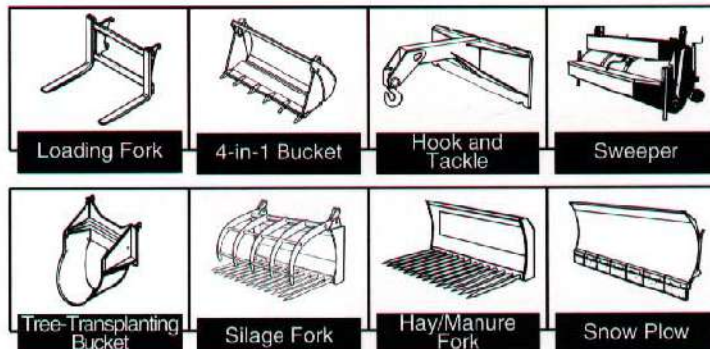
Working lights (front and rear)  
ZLS load stabilizer  
Extended lift arms  
Hydraulic quick-change attachment carrier  
Extra hydraulics, front and rear  
Additional hydraulics for attachment carrier  
4th hydraulic circuit

**ATTACHMENTS**

**Buckets**

of various sizes  
0,3 - 0,5 m<sup>3</sup> (0,4 - 0,7 yd<sup>3</sup>)  
with or without teeth

Wide range of bucket types, e.g.  
Light material bucket (with or 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**

- 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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**Zettelmeyer GmbH**

Max-Planck-Straße 1 • D-54329 Konz-Könen  
Postfach 13 40 • D-54323 Konz  
Germany