Zettelmeyer ZL 802 i / ZL 802 Si



Universal Machine with Outstanding Performance Values

- Newly developed TP-loader linkage, perfect for loading fork applications: high breakout and lift forces combine with optimum parallelity of the attachment.
- 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 brake, wear-free and safe.
- Operator-selected 100% differential lock on 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 operations.
 - Gross Power SAE J1995
 ZL 802 i: 58 kW /78 hp
 ZL 802 Si: 62 kW / 84 hp
 Net Power SAE J1349
 ZL802i: 56 kW/ 75 hp
 ZL802Si: 60 kW/ 80 hp
 - Operating Weight
 Volvo QC 7,3 t (16100 lb)
 ZM QC 7,2 t (15900 lb)
 - Bucket Capacities

 1,0 2,0 m3 (1,3-2,6 yd3)



ENGINE

Engine: in-line 4-cylinder, 4-stroke, direct injection diesel engine,

Three-stage air cleaning:

with turbocharging, water cooled.

- 1. Pre-cleaner with ejector
- 2. Dry type air filter with indicator in cab
- 3. Safety filter

Make	KHD		KHD	
Туре	BF 4M 1012 E		BF 4M 1012 E	
Gross power @	2100	r/min	(35	r/s)
SAE J1995	58	kW	(78	hp)
Net power @	2100	r/min	(35	r/s)
SAE J1349	56	kW	(75	hp)
DIN 70020 / 6271	56	kW	(75	hp)
Max. torque	1500	r/min	(25	r/s)
SAE J1349 netto	300	Nm	(221	lbf ft)
DIN 70020 / 6271	300	Nm	(221	lbf ft)
No. cylinders	4		4	
Cubic capacity	3,2	1	(195	in ³)
Bore	94	mm	(3,7	in)
Stroke	115	mm	(4,5	in)

Electrical System

Rated voltage	24	V		
Battery voltage	2 x 12	V		
Battery capacity	2 x 74	Ah		
Alternator rating	1540/55	W/A		
Starter motor output	4,0	kW	(5,4	hp
4 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2				



DRIVETRAIN

Transmission: hydrostatic transmission, full power shift under load, both when changing direction (forward and reverse) and between ranges. Maximum pushing force can be achieved in each range. Inch/brake pedal for variable machine speed control and power transfer to bucket hydraulics at constant engine rpm.

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

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

Frame: solid front and rear frame, robot-welded. Articulating oscillating joint for optimum manoeuvrability and traction.

Oscillation at	wheel, max.	290	mm	(11,4"	in)
Track		1584	mm	(62,4"	in)
Angle of osci	llation	± 10	0		
Tires:	- Size	15.5-25			
	- Rim	12 x 25			
Speed, max.					
1st range, for	ward/reverse	6,5	km/h	(4,0	mile/h)
2nd range, fo	rward/reverse	20,0	km/h	(12,4	mile/h)



SERVICE FILL CAPACITIES

9,0	Ĩ.	(2,4	US gal)
100,0	1	(26,5	US gal)
8.7	1	(2,3	US gal)
11,5	1	(3,0	US gal)
110,0	1	(29,1	US gal)
	100,0 8,7 11,5	100,0 I 8,7 I 11,5 I	100,0 I (26,5 8,7 I (2,3 11,5 I (3,0



BRAKING SYSTEM

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

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

Parking brake: wet inboard mounted multi-disc brakes.



HYDRAULIC SYSTEM

Thermostatically controlled oil circuit with integrated cooling system.

Hydraulic control valve: servo-assisted three spool system, with primary and secondary pressure valves.

- 1. Lifting function
- 2. Tilting function
- Additional function for hydraulic QC

Unlock, neutral, lock

Preparation for operating hydraulic attachments with this function is available as an option.

Hydraulic oil filter: main stream filter cartridge with 10 μ m filtration in the return-line. Suction filter for the drive assembly with a 10 μ m filtration.

The filters can be replaced without emptying the tank.

Lifting frame:

TP linkage

2 Lift cylinders

1 Tilt cylinder

Flow	82	l/min	(21,7 US	gal/min)
@ engine rpm	2100	r/min	(35	r/s)
Relief valve pressure	21	MPa	(3045	psi)
Lift time (loaded)	6,5	s		
Lowering time (empty)	6,0	S		
Dump time	2,0	S		
Crowd time	2.0	S		



STEERING

Hydrostatic steering. Central articulating joint with damping effect.

Steering pump: gear-type pump

Steering cylinder: 2 double acting steering cylinders

Steering				
Angle of articulation	± 40	0		
Steering pump				
Flow	40	I/min	(10,6 US	gal/min)
@ engine rpm	2100	r/min	(35	r/s)
Relief valve pressure	15	MPa	(2176	psi)



ENGINE



BRAKING SYSTEM

with turbocharging, water cooled.

Three-stage air cleaning:

- 1. Pre-cleaner with ejector
- 2. Dry type air filter with indicator in cab
- 3. Safety filter

Make	KHD		KHD	
Type	BF 4M 1012 E		BF 4M 1012 E	
Gross power @	2300	r/min	(38	r/s)
SAE J1995	62	kW	(83	hp)
Net power @	2300	r/min	(38	r/s)
SAE J1349	60	kW	(80	hp)
DIN 70020 / 6271	60	kW	(80	hp)
Max. torque	1500	r/min	(25	r/s)
SAE J1349 netto	300	Nm	(221	lbf ft)
DIN 70020 / 6271	300	Nm	(221	lbf ft)
No. cylinders	4		4	17.
Cubic capacity	3,2	1	(195	in^3)
Bore	94	mm	(3.75	in)
Stroke	115	mm	(4,5	in)
			2000 N. J. S.	

Electrical System

Rated voltage	24	V		
Battery voltage	2 x 12	V		
Battery capacity	2 x 74	Ah		
Alternator rating	1540/55	W/A		
Starter motor output	4,0	kW	(5,4	hp



DRIVETRAIN

Transmission: hydrostatic transmission, full power shift under load, both when changing direction (forward and reverse) and a 10 µm filtration. between ranges. Maximum pushing force can be achieved in The filters can be replaced without emptying the tank. each range. Inch/brake pedal for variable machine speed control and power transfer to bucket hydraulics at constant engine rpm.

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

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

Frame: solid front and rear frame, robot-welded. Articulating oscillating joint for optimum manoeuvrability and traction.

Oscillation	at wheel, max	. 290	mm	(11,4"	in)
Track		1584	mm	(62,4"	in)
Angle of osci	lation	± 10	0		
Tires:	- Size	15.5-25			
	- Rim	12 x 25			
Speed, max.					
1st range, for	ward/reverse	6,5	km/h	(4,0	mile/h)
2nd range, fo	rward/reverse	14,5	km/h	(9,0	mile/h)
3rd range, for	ward/	35,0	km/h	(22,0	mile/h)



The same of the sa				
Engine	9,0	1	(2,4	US gal)
Fuel tank	100,0	1	(26,5	US gal)
Front axle, total	8,7	1	(2,3	US gal)
Rear axle, incl. drop-box	11,5	1	(3,0	US gal)
Hydraulic tank,				
incl. hydraulic system	110,0	I.	(29,0	US gal)

Engine: in-line 4-cylinder, 4-stroke, direct injection diesel engine, Service brake: reliable triple braking system, acting upon all four wheels.

- 1. Wear-free, hydrostatic brake
- 2. Central disc brake, actuated via "inch brake pedal". First stage of pedal applicaton actuates the inching facility, the last third of pedal application applies the central disc brake.
- 3. Wet inboard mounted multi-disc brake with accumulator

Parking brake: wet inboard mounted multi-disc brakes.



HYDRAULIC SYSTEM

Thermostatically controlled oil circuit with integrated cooling system.

Hydraulic control valve: servo-assisted three spool system, with primary and secondary pressure valves.

- 1. Lifting function
- 2. Tilting function
- 3. Additional function for hydraulic QC

Unlock, neutral, lock

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

Lifting frame:

TP linkage

2 Lift cylinders

1 Tilt cylinder

Flow	90	I/min	(23	US gal/min)
@ engine rpm	2300	r/min	(38	r/s)
Relief valve pressure	21	MPa	(3045	psi)
Lift time (loaded)	6,0	s		
Lowering time (empty)	5,5	s		
Dump time	2,0	s		
Crowd time	2,0	s		



STEERING

Hydrostatic steering. Central articulating joint with damping effect.

Steering pump: gear-type pump

Steering cylinder: 2 double acting steering cylinders

± 40	0		
44	I/min	(11	US gal/min)
2300	r/min	(38	r/s
15	MPa	(2176	5 psi
	2300	44 I/min 2300 r/min	44 l/min (11 2300 r/min (38











Multi-Talent with Maximum Performance!

A ZL 802 i/Si achieves maximum performance whether working with a bucket or with another attachment. The newly developed TP-loader linkage makes this possible, unifying the exact parallelity of a parallel loader linkage with the strength of our Z-bar version. The ideal machine for universal applications!

Select from a wide range of attachments! With quick change coupling 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 -



ZL 802 i/Si - Traction in Abundance

The strong portal axles make the machine highly manoeuvrable and mobile even in extremely difficult terrain. For their size the ZL 802 i/Si offer a ground clearance unmatched by others. With standard 100% differential locks in both axles, the ZL 802 i/Si make light work of heavy ground conditions. The design of the ZL 802 i/Si provides additional advantages: the slanted engine cover gives superb visibility, and this, together with the low maintenance articulating-oscillating joint and overall compact dimensions, makes manoeuvering in tight quarters easy.

On long hauls, or when frequent and quick site changes are required, the ZL 802 Si with its additional speed is just the right machine for the job.

The Master of Universal Applications

The TP-loader linkage is ideal for mixed applications. Parallelity in lifting actions is a particular advantage when handling palletized goods with a loading fork or with hook and tackle, as it makes continuous unloading and the precise positioning of the load possible.

Strong restraining forces at higher lifting levels ensure controlled emptying when working with a bucket. Grapple attachments eg, log grapple or 4-in-1 bucket can be opened very wide due to the loader linkage's special design.



Problematic operation is over! The new multi-functional lever for servo-assisted control makes this possible. Simply by the touch of a button, you can select travel direction (forward/reverse), neutral position or differential lock without taking your hand from the lever.

The conventional control lever should you prefer it - remains part of the standard equipment.

Additional Comfort for Increased Operator Performance

A suitable ergonomic environment is of paramount importance for good operator performance. The ZL 802 i/Si has a clearly designed cab interior with allround soundproofing for 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
- Simple operation thanks to multi-functional lever
- Single pedal for inching and braking

The Power Source: Economic, Low Emission

The ZL 802 i/Si is equipped with the latest series Deutz 1012 engine. The result: high performance and economical fuel consumption, along with low acoustic and low exhaust emissions.

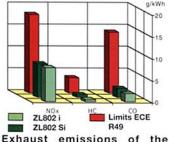
Transverse engine allows easy access to major components. Daily maintenance and servicing are made simple by eye level check points. Reduced maintenance time leaves you with cash-in-hand.



Hydrostatic drive maintains constant drawbar pull even when 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, working cycles remain smooth and productivity constantly high.

Power you can rely on!

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

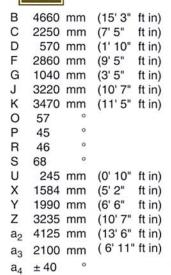


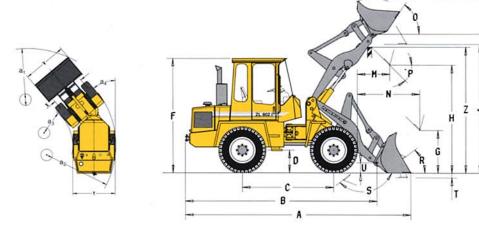
ZL 802i/802 Si are far lower than those required by ECE R49.

ZL802 i / 802 Si Volvo QC

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DIMENSIONS *





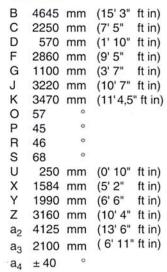
^{*} measured with bucket 1,0 m³ (1,3 yd³), Volvo quick-change mounting and 15.5-25 tires

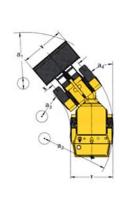
EL		OPERATING DATA							
Bucket Type (quick-change mounting standard equipment) Edge: straight (G) with/without (+/-) teeth		General Purpose Bucket G +/-		Light Material Bucket G -		4-in-1 Bucket G +	High-Tip- Bucket G		
								Capacity, heaped	m ³ (yd ³)
Material density	kg/m ³ (lb/m ³)	1800 (3030)	1400 (2430)	1100 (1850)	800 (1350)	1700 (2860)	1000 (1690)		
Static tipping load, straight (ISO)	kg (lb)	4400 (9700)	4350 (9590)	4200 (9260)	4050 (8930)	4100 (9040)	3900 (8600)		
Static tipping load, full turn (40°ISO)	kg (lb)	3600 (7940)	3510 (7740)	3400 (7500)	3270 (7200)	3300 (7380)	3050 (6020)		
Hydraulic lifting capacity, max.	kN (lbf)	67,0 (15060)	65,5 (14730)	63,5 (14280)	61,3 (13780)	63,0 (14160)	61,0 (13710)		
Breakout force	kN (lbf)	55,5 (12480)	49,0 (11020)	43,5 (9780)	38,3 (8610)	53,5 (12030)	(-)		
A Total length	(ft in)	5600 (18' 4")	5710 (18' 9")	5830 (19' 2")	5970 (19' 7")	5640 (18' 6")	6020 (19' 9")		
L Lift height, max.	mm (ft in)	4430 (14' 6")	4530 (14' 10")	4630 (15' 2")	4730 (15' 6")	4490 (14' 9")	5410 (17' 9")		
V Bucket width	mm (ft in)	2050 (6' 9")	2050 (6' 9")	2050 (6' 9")	2250 (7' 5")	2050 (6' 9")	2050 (6' 9")		
a ₁ Clearance circle	mm (ft in)	9050 (29' 8")	9100 (29' 10")	9200 (30' 2")	9460 (31' 0")	9070 (29' 9")	9330 (30 ⁱ 7")		
T Digging depth, max.	(ft in)	60 (2") 2680	60 (2") 2590	60 (2") 2510	60 (2")	60 (2")	60 (2")		
H Dump height	mm (ft in)	(8' 10") 870	(8' 6")	(8' 3")	2390 (7' 10")	2630 (8' 8")	4140 (13' 7")		
M Reach at max. height	(ft in)	(2' 10") 1600	930 (3' 1") 1680	1020 (3' 4") 1770	1110 (3' 8") 1860	880 (2' 11") 1625	1200 (3' 11") 2320		
N Reach, max.	mm (ft in) kg	(5' 3") 7300	(5' 6") 7320	(5' 10") 7360	(6' 1") 7430	(5' 4") 7460	(7' 7") 7580		
Operating weight	(lb)	(16100)	(16150)	(16250)	(16400)	(16450)	(16700)		
Loading Fork, centre of gravity 500 m	m (1' 6")								
Tipping load, full turn acc. to ISO 8313	kg (lb)	3010 (6640)			Man-2	Tu Tu			
Payload acc. to EN 474-3, 80%	kg (lb)	2400 (5290)							
Payload acc. to EN 474-3, 60%	kg (lb)	1800 (3970)							

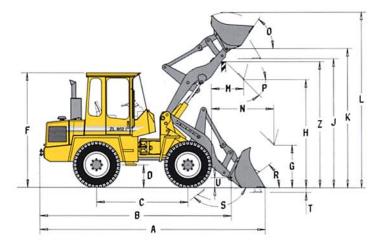
ZL 802 i/ 802Si Zettelmeyer QC

ZL 802 I/ 8025I

DIMENSIONS *







* measured with bucket 1,0 m³ (1,3 yd³), Zettelmeyer quick-change mounting and 15.5-25 tires

		OPE	RATING	DATA			
Bucket Type (quick-change mounting standard equipment) Edge: straight (G) with/without (+/-) teeth		General Purpose Bucket G +/-		Light Material Bucket G -		4-in-1 Bucket G +	High-Tip- Bucket G
Material density	kg/m ³ (lb/m ³)	(1,3) 1800 (3030)	(1,6) 1400 (2360)	(2,0) 1100 (1850)	(2,6) 800 (1350)	(1,2) 1700 (2860)	(2,0) 1000 (1690)
Static tipping load, straight (ISO)	kg (lb)	4370 (9630)	4280 (9440)	4180 (9210)	4030 (8890)	4090 (9020)	3750 (8270)
Static tipping load, full turn (40° ISO)	kg (lb)	3600 (7940)	3500 (7720)	3400 (7500)	3280 (7230)	3340 (7360)	3050 (6720)
Hydraulic lifting capacity, max.	kN (lb)	70,0 (15730)	68,0 (15290)	66,5 (14950)	64,0 (14390)	65,0 (14610)	53,5 (12030)
Breakout force	kN (lbf)	63,0 (14160)	54,5 (12250)	48,0 (10790)	43,0 (9670)	60,5 (13600)	(-)
A Total length	mm (ft in)	5475 (18' 0")	5585 (18' 4")	5705 (18' 9")	5845 (19' 2")	5480 (18' 0")	5865 (19' 3")
L Lift height, max.	mm (ft in)	4375 (14' 4")	4410 (14' 6")	4545 (14' 11")	4640 (15' 3")	4410 (14' 6")	5290 (17' 4")
V Bucket width	mm (ft in)	2050 (6' 9")	2050 (6' 9")	2050 (6' 9")	2250 (7' 5")	2050 (6' 9")	2050 (6' 9")
a ₁ Clearance circle	mm (ft in)	8960 (29' 5")	9020 (29' 7")	9100 (29' 10")	9370 (30' 9")	9050 (29' 8")	9200 (30' 2")
T Digging depth, max.	(ft in)	60 (2") 2740	60 (2") 2660	60 (2") 2570	60 (2") 2470	50 (1,9")	60 (2")
H Dump height	mm (ft in)	(9' 0") 775	(8' 9") 840	(8' 5") 920	(8' 1") 1015	2730 (8' 11") 755	4030 (13' 3") 1130
M Reach at max. height	(ft in)	(2' 7") 1520	(2' 9") 1580	(3' 0") 1660	(3' 4") 1755	(2' 6") 1500	(3' 8") 2190
N Reach, max.	(ft in)	(5' 0") 7200	(5' 2") 7240	(5' 5") 7270	(5' 9") 7340	(4' 11") 7370	(7' 2") 7490
Operating weight	kg (lb)	(15900)	(16000)	(16000)	(16200)	(16250)	(16500)
Loading Fork, centre of gravity 500 mm	(1' 6")						
Tipping load, full turn acc. to ISO 8313	kg (lb)	3085 (6800)					
Payload acc. to EN 474-3, 80%	kg (lb)	2450 (5400)					
Payload acc. to EN 474-3, 60%	kg (lb)	1850 (4080)					

STANDARD EQUIPMENT

Cab, Exterior

Removable ROPS/FOPS cab with flexible mountings

Lockable doors

Tinted safety glass, windscreen Windscreen wiper, front and rear Windscreen washer, front and rear

Sliding windows in the left door Door stops

External rear view mirrors, right and left

Cab, Interior

Tool box in the cab

4-way adjustable driver's seat Seat belt

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

Walk-through cab

Instrument Panel

with symbols:

Instrument lighting 24 V power socket Horn Safety start

Gauges:

Engine temperature Fuel gauge Hour meter Drive system oil temperature

802 Si: Tachometer

Indicator lamps for: Direction indicator Parking brake Main beam Pre-heater Battery charging Differential locks Hazard warning flashers 802 Si: Brake fluid pressure

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 direct fuel injection

Cold start aid

Dry-type three-stage air filter Pre-cleaner with ejector

Alternator 55 A

Hydrostatic drive Operator-selected 100% differential lock

Tires 15.5-25

Hydraulic System

Gear-type pumps Control valve three spool system Third hydraulic circuit

Service and Maintenance Tool kit

Working Equipment

Working lights (front) Multi-functional lever Automatic bucket leveller Hydraulic quick-change attachment carrier

Carriage Body

Fenders and mudguards, front/rear Lockable engine hood Lockable fuel-tank cap Vertical exhaust Towing device

Complete system in accordance with German road traffic regulations

Sound insulation acc. to EUguidelines

Safety standards according to EU-directive 89/392/EEC





OPTIONAL EQUIPMENT

Cab

ROPS-Bar ROPS-Canopy

Handthrottle Hand control inch valve Heating independent of engine Radio

Sliding window in the right door

Safety

Protective guards for Main head lights Working lights Rear lights Rotating beacon Audible reverse alarm

Powertrain

Pre-heater Catalytic converter Extra fuel filter Two-stage air filter (oil bath)

Service and Maintenance

Wheel nut wrench

Working Equipment

Working lights (rear) ZLS-Load Stabilizer Extended lift arms

Extra hydraulics, rear Additional hydraulics for attachment carrier 4th hydraulic circuit

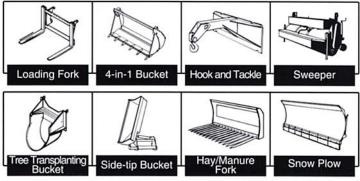


ATTACHMENTS

Buckets

of various sizes 1,0 - 2,0 m3 (1,3 - 2,6 yd3) with or without teeth.

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



Further buckets and attachments available on request.

Zettelmeyer GmbH

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

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.

Ref. No. Zettelmeyer K. 29023831 Volvo Parts 21 3 430 5101 Printed in Germany 3.96 **ENGLISCH**