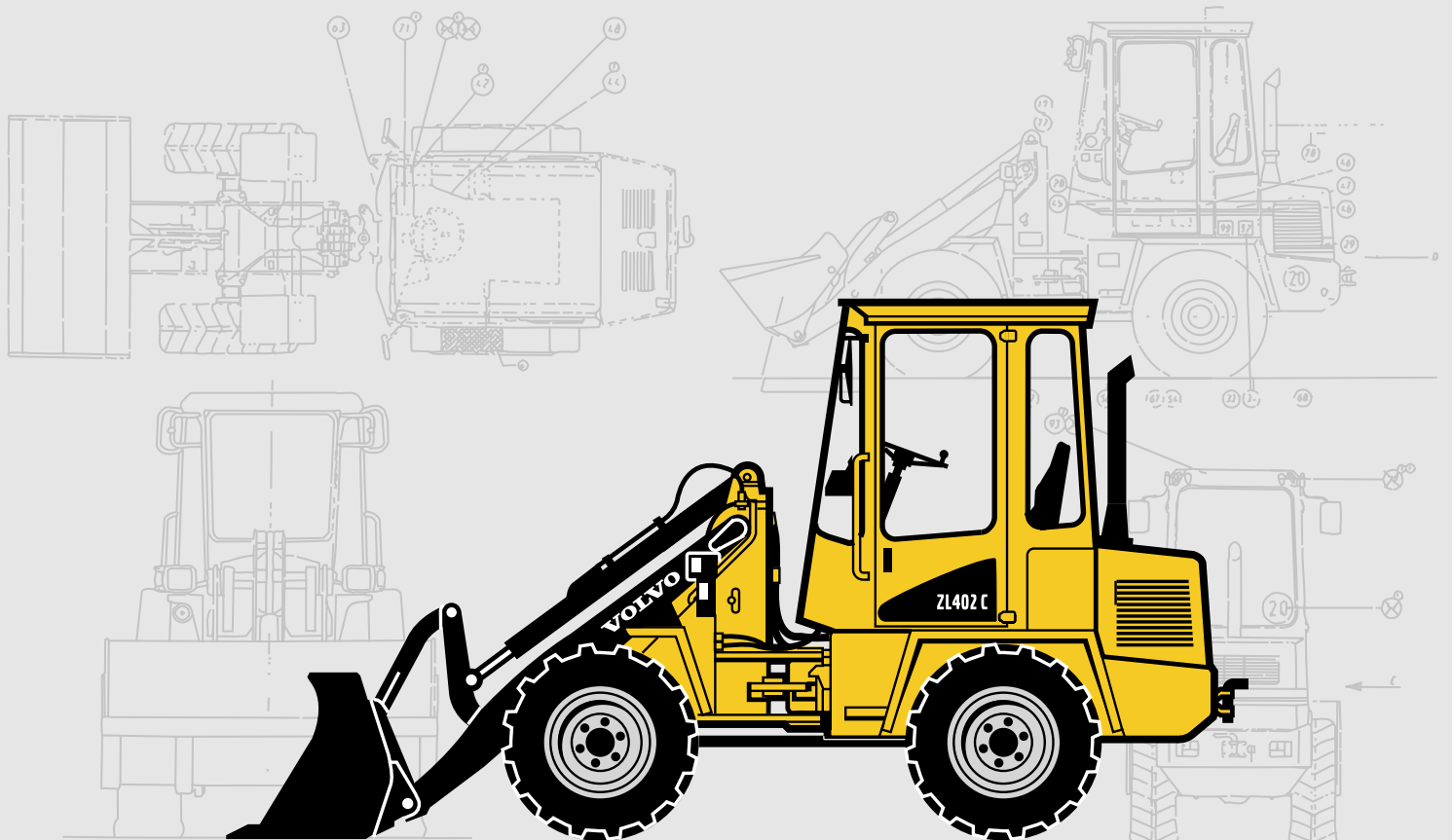


## VOLVO COMPACT WHEEL LOADER

# ZL402C



- **Gross Power:**  
SAE J1995 28/38 kW/hp  
**Net Power:**  
SAE J1349 27/37 kW/hp
- **Operating Weight:**  
3,4 - 3,5 t
- **Bucket Capacities:**  
0,5 - 1,0 m<sup>3</sup>
- **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 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:**
  - Audio-visual warning system for monitoring operating systems
  - Multi-function lever.

# VOLVO



## ENGINE

**Engine:** Deutz in-line 3-cylinder, 4 stroke, direct injection diesel engine, oil/air cooled.

### Air cleaning:

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

Engine .....	F 3 L 1011F
Gross power @ .....	2300 r/min
SAE J1995 .....	28 kW
SAE J1995 .....	38 hp
Net power @ .....	2300 r/min
SAE J1349 - DIN ISO 1585 .....	27 kW
SAE J1349 - DIN ISO 1585 .....	37 hp
Max. torque @ .....	1800 r/min
SAE J1349 netto .....	114 Nm
DIN ISO 1585 .....	114 Nm
Cubic capacity .....	2,05 l
Bore .....	91 mm
Stroke .....	105 mm



## ELECTRICAL SYSTEM

Rated voltage .....	12 V
Battery voltage .....	12 V
Battery capacity .....	74 Ah
Alternator rating .....	840/60 W/A
Starter motor output .....	2,2 kW



## DRIVETRAIN

**Transmission:** hydrostatic transmission, full power shift under load, both when changing direction (forward and reverse) and between ranges. Maximum drawbar force can be achieved in all ranges. Inch/brake pedal for variable machine speed control and power transfer to bucket hydraulics at constant engine rpm. Multi-function lever for change of direction, differential lock and use of the control valve.

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

**Differential locks:** 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. ....	230 mm
Track .....	1340 mm
Angle of oscillation .....	±10°
Tires: Size .....	10.5-18
Rim .....	9 x 18

<b>Speed, max.:</b>	<b>Standard</b>
1st range forward/reverse .....	8,0 km/h
2nd range forward/reverse .....	20,0 km/h



## SERVICE FILL CAPACITIES

Engine .....	6,0 l
Fuel tank .....	42,0 l
Front axle, total .....	5,5 l
Rear axle, incl. drop-box .....	8,0 l
Hydraulic tank, incl. hydraulic system .....	60,0 l



## 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.

**Hydraulic control valve:** double acting control valve with 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 a 10 µm filtration in the return-line. Suction filter for the drive assembly with a 10 µm filtration. The filters can be replaced without emptying the tank.

**Hydraulic pump:** gear type-pump

Hydraulic pump	
Flow .....	32 l/min
@ engine rpm .....	2300 r/min
Relief valve pressure .....	21 MPa



## STEERING

Hydrostatic steering. Central articulating-ocillating joint with damping effect.

**Steering pump:** gear-type pump

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

Steering	
Angle of articulation .....	±40°
Steering pump	
Flow .....	12 l/min
@ engine rpm .....	2300 r/min
Relief valve pressure .....	18 MPa



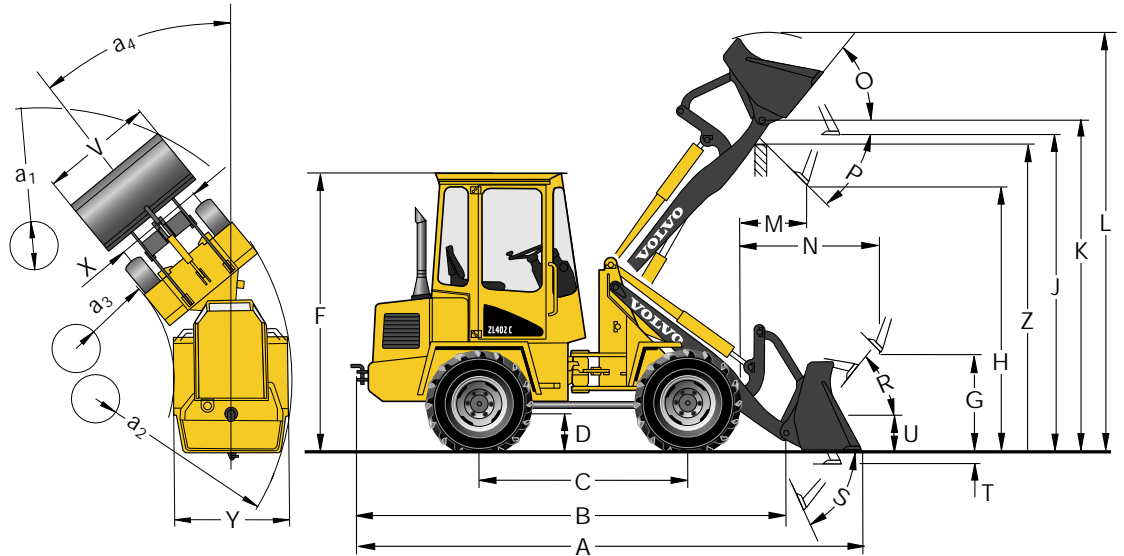
## LINKAGE

Linkage system:	Parallel
Lift cylinders .....	1
Tilt cylinders .....	1
Lift time (loaded) .....	6,0 s
Lowering time (empty) .....	5,0 s
Dump time .....	2,5 s
Crowd time .....	1,2 s

## DIMENSIONS • PARALLEL LINKAGE

ZL402C with parallel-linkage, Z-attachment carrier and 10.5-18 tires.

B	3790	mm
C	1850	mm
D	305	mm
F	2490	mm
G	910	mm
J	2835	mm
K	2980	mm
O	50	°
P	45	°
R	55	°
S	65	°
U	145	mm
X	1340	mm
Y	1610	mm
Z	2770	mm
a <sub>2</sub>	3375	mm
a <sub>3</sub>	1740	mm
a <sub>4</sub>	±40	°



## OPERATING DATA • PARALLEL LINKAGE

Data according to bucket type		General Purpose		Light Material		4-in-1	High-Tip
ZL402C with parallel-linkage, Z-attachment carrier and 10.5-18 tires							
Capacity heaped	m <sup>3</sup>	0,5	0,6	0,8	1,0	0,5	1,0
Material density	kg/m <sup>3</sup>	2100	1800	1300	900	1800	900
Static tipping load, straight (ISO / DIS)	kg	2500	2500	2390	2300	2240	2160
Static tipping load, full turn 40° (ISO / DIS)	kg	2220	2220	2120	2040	1980	1920
Hydraulic lifting capacity, max.	kN	31,0	31,0	29,5	28,5	28,0	26,6
Breakout force	kN	33,0	33,0	26,4	22,7	32,0	-
A Total length	mm	4490	4540	4640	4760	4550	4845
L Lift height, max.	mm	3790	3840	3920	4020	3730	4330
V Bucket width	mm	1650	1650	1800	1800	1650	1800
a <sub>1</sub> Clearance circle	mm	7300	7300	7500	7600	7350	7650
T Digging depth	mm	70	70	70	70	105	80
H Dump height	mm	2410	2410	2280	2190	2350	3070
M Reach at max. height	mm	630	630	700	780	570	950
N Reach, max.	mm	1320	1320	1390	1480	1270	1700
Operating weight	kg	3400	3400	3430	3460	3580	3590

Data with Loading Fork		Standard version	with additional counterweight 230 kg	ZL402C - Possible machine variations	
				Linkage/attach. carrier	Standard
Tipping load, full turn (ISO / DIS)	kg	1640	1880	parallel / Z	●
Payload according to EN 474-3, 60/80%	kg	980/1300	1100/1500	Z bar / Z	—
Payload 80%, transport position, 40° full turn	kg	1550	1800		

## STANDARD EQUIPMENT

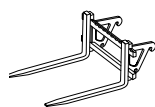
<p><b>Engine</b> Diesel engine, direct fuel injection Extra fuel filter Cold start aid Dry-type air filter</p> <p><b>Electrical System</b> Alternator 60 A</p> <p><b>Lighting:</b> Main head lights (halogen) full/dipped/asymmetrical Parking lights Rear lights Brake lights Direction indicators Hazard warning lights Reversing lights Cab lighting</p> <p><b>Instrumentation &amp; controls:</b> Multi-function lever 12 Volt accessories socket Horn Hazard warning switch Safety start</p> <p><i>Gauges:</i> Hour meter Drive system oil temperature Fuel level indicator</p> <p><i>Indicator lamps for:</i> Direction indicator</p>	<p>Parking brake Main beam Pre-heater Battery charging Differential locks Hazard warning flashers Direction (forward/reverse)</p> <p><i>Central audio-visual alarm for:</i> Engine temperature Engine oil pressure Drive system oil temperature Air filter restriction Parking brake</p> <p><b>Drivetrain</b> Hydrostatic drive Operator-selected 100% differential locks</p> <p>Tires 10.5-18</p> <p><b>Hydraulic System</b> Gear-type pump Control valve three-spool system 3rd hydraulic circuit</p> <p><b>Service and Maintenance</b> Tool kit Wheel nut wrench</p> <p><b>Cab, Exterior</b> Removable ROPS-cab with flexible mountings</p>	<p>Walk-through cab Lockable doors Tinted safety glass (windscreen) Windscreen wiper (front/rear) Windscreen washer (front/rear) Sliding window in the left door Door stops External rear view mirrors (right/left)</p> <p><b>Cab, Interior</b> 4-way adjustable operator's seat Seat belt Sunvisor Heater with air-filter and defroster Cab ventilation Storage box in the cab Tool box</p> <p><b>Working Equipment</b> Bucket level indicator Hydraulic quick-change attachment carrier</p> <p><b>Carriage Body</b> Fenders and mudguards, (front/rear) Lockable engine hood Lockable fuel tank cap Vertical exhaust Towing device</p>	<p><b>International Standards for Machines and Production</b></p> <p><i>Quality:</i> DIN/ISO 9001</p> <p><i>Safety:</i> CE - Criteron Machine guide-lines 98/37/EC ROPS ISO 3471 FOPS ISO 3449 Tipping load / Payload: ISO/DIS 14397-1 EMV (Electromagnetic Compatibility) 89/336/EEC plus supplement</p> <p><i>Environment:</i> DIN/ISO 14001 Sound insulation: 86/622/EEC, amendment 95/27/EC</p>
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## OPTIONAL EQUIPMENT

<p><b>Engine</b> Pre-heater Dual filter with oil bath</p> <p><b>Hydraulics</b> Additional hydraulics for 3rd hydraulic circuit 4th hydraulic circuit Initial filling of biodegradable hydraulic oil</p>	<p>Hydraulic pump 52 l/min</p> <p><b>Cab, Exterior</b> ROPS-Bar (rigid/folding) Protective roof for ROPS-Bar Sliding window in the right door Hinge-out skylight Working lights (front/rear)</p>	<p><b>Cab, Interior</b> Handthrottle Hand control inch valve Heating independant of engine Radio</p> <p><b>Working Equipment</b> Boom suspension system Extended lift arms</p>	<p><b>Safety</b> FOPS plate for cabin Protective guards for: Main head lights Working lights Rear lights Rotating beacon Audible reverse alarm Counterweight</p>
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## ATTACHMENTS

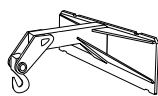
A small selection of the most popular attachments.  
Further buckets and attachments available on request.



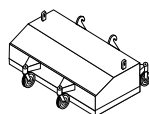
Loading Fork



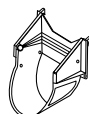
4-in-1 Bucket



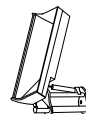
Material Handling Arm



Sweeper



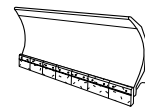
Tree Transplanting Bucket



Side-Tip Bucket



Hay/Manure Fork



Snow Plow

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.

# VOLVO

Volvo Construction  
Equipment

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