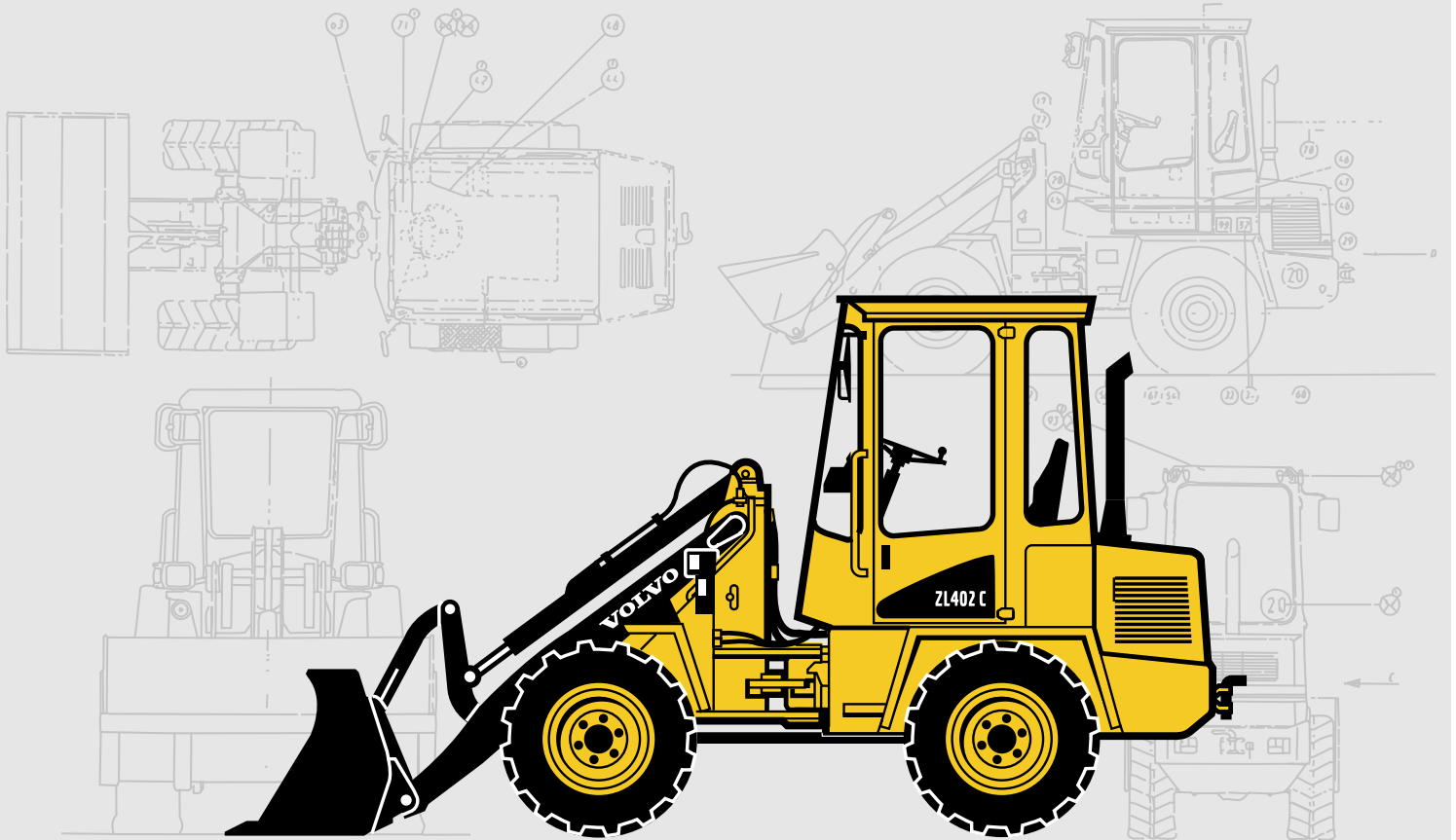


VOLVO COMPACT WHEEL LOADER

ZL402C



- **Gross Power:**
SAE J1995 28/38 kW/hp
Net Power:
SAE J1349 27/37 kW/hp
- **Operating Weight:**
3.4 - 3.5 t
7,500 - 7,630 lb
- **Bucket Capacities:**
0.5 - 1.0 m³
0.7 - 1.3 yd³
- **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 attachment bracket:** 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 1011 F	
Gross power @	2,300 r/min	38.3 r/s
SAE J1995	28 kW	38 hp
SAE J1995	38 hp	38 hp
Net power @	2,300 r/min	38.3 r/s
SAE J1349 - DIN ISO 1585.....	27 kW	37 hp
SAE J1349 - DIN ISO 1585.....	37 hp	37 hp
Max. torque @	1,800 r/min	30 r/s
SAE J1349 netto.....	114 Nm	84 lbf ft
DIN ISO 1585.....	114 Nm	84 lbf ft
Cubic capacity	2.05 l	125 in³
Bore.....	91 mm	3.6 in
Stroke.....	105 mm	4.1 n



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	3.0 hp



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	9" in
Track	1,760 mm	5'9" ft in
Angle of oscillation.....	±10°	
Tires: Size.....	10.5-18	
Rim	9 x 18	

Speed:

	Standard	
1st range forward/reverse.....	0-8 km/h	
	0-5 mph	
2nd range forward/reverse	0-20 km/h	
	0-12 mph	



SERVICE FILL CAPACITIES

Engine.....	6.0 l	1.6 US gal
Fuel tank	42.0 l	11.1 US gal
Front axle, total.....	5.5 l	1.5 US gal
Rear axle,		
incl. drop-box	8.0 l	2.1 US gal
Hydraulic tank, incl. hydraulic system	60.0 l	16.0 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 actuates 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.

Single lever control for

1. Lifting function
2. Tilting function

Additional lever for

1. Hydraulic attachment bracket
Unlock, neutral, lock
2. 3rd function hydraulics.

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	8.5 US gpm
@ engine rpm.....	2,300 r/min	38.3 r/s
Relief valve pressure	21 MPa	3,045 psi



STEERING

Hydrostatic steering. Central articulating 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	3.2 US gpm
@ engine rpm.....	2,300 r/min	38.3 r/s
Relief valve pressure.....	18 MPa	2,610 psi



LINKAGE

Lifting frame:

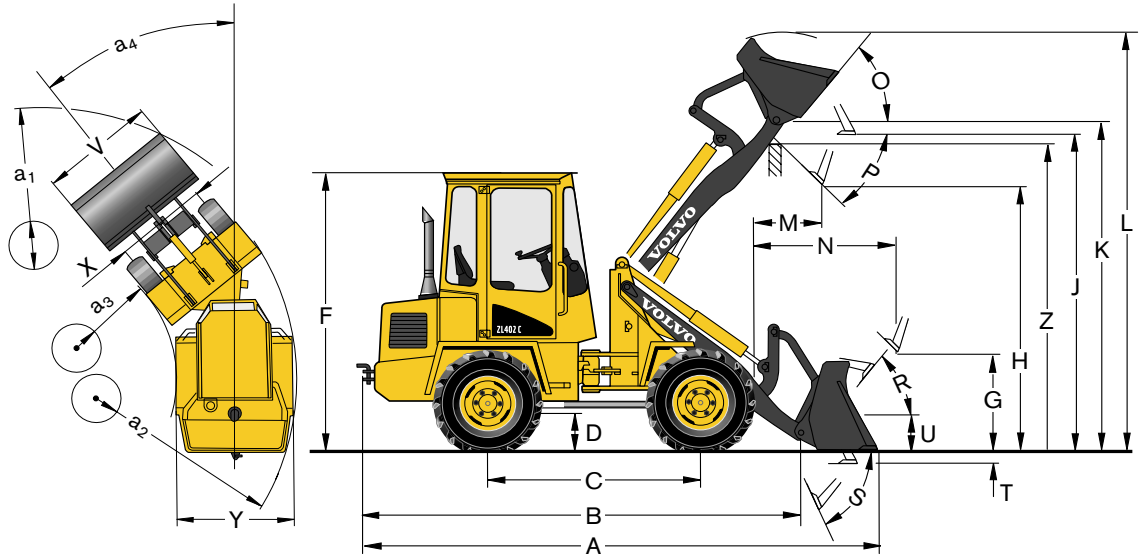
Lift cylinders.....	Parallel
Tilt cylinder	1

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 bracket and 10.5-18 tires.

B	3,790 mm	12' 5"
C	1,850 mm	6' 1"
D	305 mm	1' 0"
F	2,490 mm	8' 2"
G	910 mm	3' 0"
J	2,835 mm	9' 4"
K	2,980 mm	9' 9"
O	50 °	
P	45 °	
R	55 °	
S	65 °	
U	145 mm	6"
X	1,340 mm	4' 5"
Y	1,610 mm	5' 3"
Z	2,770 mm	9' 1"
a ₂	3,875 mm	12' 9"
a ₃	1,740 mm	5' 9"
a ₄	±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 bracket and 10.5-18 tires (Data for further bucket types and sizes on request)		+					
Capacity heaped	m ³	0.5	0.6	0.8	1.0	0.5	1.0
	yd ³	0.7	0.8	1.0	1.3	0.7	1.3
Material density	kg/m ³	2,100	1,800	1,300	900	1,800	900
	lb/yd ³	3,539	3,033	2,191	1,517	3,033	1,517
Static tipping load, straight (ISO / DIS)	kg	2,500	2,500	2,390	2,300	2,240	2,160
	lb	5,512	5,512	5,269	5,071	4,938	4,762
Static tipping load, full turn 40° (ISO / DIS)	kg	2,220	2,220	2,120	2,040	1,980	1,920
	lb	4,894	4,894	4,674	4,497	4,365	4,233
Hydraulic lifting capacity, max.	kN	31.0	31.0	29.5	28.5	28.0	26.6
	lbf	6,969	6,969	6,632	6,407	6,295	5,980
Breakout force	kN	33.0	33.0	26.4	22.7	32.0	-
	lbf	7,419	7,419	5,935	5,103	7,194	-
A Total length	mm	4,490	4,540	4,640	4,760	4,550	4,845
	ft in	14'9"	14'11"	15'3"	15'7"	14'11"	15'11"
L Lift height, max.	mm	3,790	3,840	3,920	4,020	3,730	4,330
	ft in	12'5"	12'7"	12'10"	13'2"	12'3"	14'2"
V Bucket width	mm	1,650	1,650	1,800	1,800	1,650	1,800
	ft in	5'5"	5'5"	5'11"	5'11"	5'5"	5'11"
a ₁ Clearance circle	mm	7,300	7,300	7,500	7,600	7,350	7,650
	ft in	23'11"	23'11"	24'7"	24'11"	24'1"	25'1"
T Digging depth	mm	70	70	70	70	105	80
	ft in	0'3"	0'3"	0'3"	0'3"	0'4"	0'3"
H Dump height	mm	2,410	2,410	2,280	2,190	2,350	3,070
	ft in	7'11"	7'11"	7'6"	7'2"	7'9"	10'1"
M Reach at max. height	mm	630	630	700	780	570	950
	ft in	2'1"	2'1"	2'4"	2'7"	1'10"	3'1"
N Reach, max.	mm	1,320	1,320	1,390	1,480	1,270	1,700
	ft in	4'4"	4'4"	4'7"	4'10"	4'2"	5'7"
Operating weight	kg	3,400	3,400	3,430	3,460	3,580	3,590
	lb	7,500	7,500	7,560	7,630	7,890	7,915

Data with loading fork	Standard version	with additional counterweight 230 kg 507 lbs	ZL402C - Possible machine variations	
			Linkage/attach. bracket	Standard
Centre of gravity 500 mm 20"			parallel / Z	●
Tipping load, full turn (ISO / DIS)	kg	1,640	1,880	
	lb	3,615	4,145	
Payload acc. to EN 474-3, 60/80%	kg	980/1,300	1,100/1,500	
	lb	2,160/2,865	3,310/2,425	
Payload 80%, transport position, 40° full turn	kg	1,550	1,800	
	lb	3,420	3,970	

STANDARD EQUIPMENT

Engine

Diesel engine, direct fuel injection
Extra fuel filter
Cold start aid
Dry-type air filter

Electrical System

Alternator 60 A

Lighting:

Main head lights (halogen) full/dipped/asymmetrical
Parking lights
Rear lights
Brake lights
Direction indicators
Hazard warning lights
Reversing lights
Cab lighting

Instrumentation & controls:

Multi-function lever
12 Volt socket
Horn
Audible reverse alarm
Hazard warning switch
Safety start

Gauges:

Hour meter
Drive system oil temperature
Fuel level indicator

Indicator lamps for:

Direction indicator
Parking brake
Main beam
Pre-heater
Battery charging
Differential locks
Hazard warning flashers
Direction (forward/reverse)

Central audio-visual alarm for:

Engine temperature
Engine oil pressure
Drive system oil temperature
Air filter restriction
Parking brake

Drivetrain

Hydrostatic drive
Operator-selected 100% differential locks

Tires 10.5-18

Hydraulic System

Gear-type pump
Control valve three-spool system
3rd hydraulic circuit

Service and Maintenance

Tool kit
Wheel nut wrench

Cab, Exterior

Removable ROPS-cab with flexible mountings
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)

Cab, Interior

4-way adjustable all weather operator's seat
Seat belt
Sunvisor
Heater with air-filter and defroster
Cab ventilation
Storage box in the cab
Tool box
Rubber floor mat

Working Equipment

Bucket level indicator
Hydraulic quick-change attachment bracket

Carriage Body

Fenders (front/rear)
Mudflaps, (front)
Lockable engine hood

Lockable fuel tank cap
Vertical exhaust
Towing device

International Standards for Machines and Production

Quality:
DIN/ISO 9001

Safety:
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

Environment:
DIN/ISO 14001
Sound insulation:
86/622/EEC II, amendment
95/27/EC

OPTIONAL EQUIPMENT

Engine

Pre-heater
Dual filter with oil bath

Hydraulics

Option 3rd hydraulics can be incorporated into joy stick lever
4th hydraulic circuit
hydraulic oil

Hydraulic pump 52 l/min (14 US gpm)

Cab, Exterior

ROPS Canopy
ROPS-Bar (rigid/folding)
Protective roof for ROPS-Bar
Sliding window in the right door
Hinge-out skylight
Working lights (front/rear)

Cab, Interior

Handthrottle
Hand control inch valve
Heating independant of engine
Radio

Working Equipment

Boom suspension system
Extended lift arms

Safety

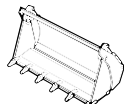
FOPS plate for cabin
Protective guards for:
Main head lights,
Working lights, Rear lights
Rotating beacon
Visual reverse alarm
Counterweight

ATTACHMENTS

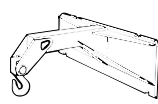
A small selection of the most popular attachments. Further buckets and attachments available on request.



Loading Fork



4-in-1 Bucket



Hook and Tackle



Sweeper



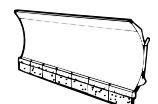
Tree Transplanting Bucket



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

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