

BL61



- **Gross Power:**
SAE: 64 kW / 86 HP
- **Net Power:**
EEC 80/1269: 62 kW / 83 H
- **Operating Weight:**
8496 kg
- **Bucket Capacities:**
Loader: 1000 l
Backhoe: 200 l
- **Maximum Digging depth:**
4300 - 5370 mm
- **VOLVO exclusive "Self-Levelling" linkage,** single cylinder offers an impressive digging force and excellent visibility.
- **Backhoe boom is of a curved design** for easy loading.
- **Backhoe cylinders are cushioned** to eliminate jolting.
- **Rigid hydraulic lines** are cleanly routed inside the boom.
- **Hydraulic circuit is open centre, load sensing,** for optimum power using.
- **Control valve is "Flow Sharing"** for simultaneously performing functions.
- **Excellent serviceability at the ground level** via a fully rear-tilting bonnet.
- **Service points are grouped together** and easily accessible.

VOLVO

SPECIFICATIONS

Engine

Low emission, turbocharged 4-cylinder, liquid-cooled Volvo diesel engine with 40% torque rise.

Model	Volvo D4D
Net power	62 kW (83 hp)
Gross power	64 kW (86 hp)
Displacement	4.04 l (244 cu. in.)
Compression ratio	19:1
Rated speed	2,200 rpm

Electrical system

Weatherproof connections.
Standard 12-Volt, 690 CCA battery with dual battery option.
Standard 95 amp alternator.

Drivetrain

Foot operated differential lock allows 100% full lock on rear axle. Final reduction in wheel hubs by a three pinion outboard planetary drive.

Travel speed

Maximum speed, forward/reverse

1	6.1 km/h (3.8 mph)
2	9.7 km/h (6.0 mph)
3	20.8 km/h (12.9 mph)
4	38.3 km/h (23.8 mph)

Brakes

Multi-plate, oil-immersed, servo power-assisted, self-adjusting inboard disc brakes with four wheel drive automatically engaged in third and fourth gear. (4WD only).
Independent, interlocking, twin serrated brake pedals. Parking brake engaged by a mechanical lever.

Steering

Hydrostatic steering with protected double acting single cylinder behind the front axle with remote grease fitting for axle pivot pin.

2WD Turns lock to lock	4.1
4WD Turns lock to lock	3.75
2WD Steering angle	56°
4WD Steering angle	55°

4WD Turning circle: Between walls

Without brakes	10.69 m (35 ft 1 in)
-----------------------	----------------------

4WD Loader turning circle: Between curbs

Without brakes	8.38 m (27 ft 6 in)
-----------------------	---------------------

2WD Turning circle: Between walls

With brakes	9.45 m (31 ft)
Without brakes	10.67 m (35 ft)

2WD Loader turning circle: Between curbs

With brakes	6.29 m (20 ft 6 in)
Without brakes	7.81 m (25 ft 6 in)

Hydraulic system

Open-centre, flow-sharing with gear type pump powering the digging elements and attachments.

Max flow	116 l/min (30.6 gal/min)
Working pressure	
Excavator	250 bar (3,625 psi)
Loader	220 bar (3,190 psi)
System capacity	110 l (29 gal)

Weight

4WD cab machine with general-purpose loader bucket, 610 mm heavy-duty backhoe bucket, standard 105 kg cast iron front bumper, 75 kg operator, full fuel tank and extendible dipper.

Operating weight	8496 kg (18,730 lb)
-------------------------	---------------------

Transmission

Completely sealed W300 diameter torque converter mounted to engine flywheel with a flexplate. Powershuttle gear box with four forward and four reverse fully synchronized gears. Electro-hydraulic forward/reverse switch on steering column.

Capacities

Cooling system	19 l (20 qt)
Fuel tank	120 l (126.8 qt)
Engine oil (w/filter)	14 l (14.8 qt)

Rear axle

Differential oil capacity	14 l (14.8 qt)
----------------------------------	----------------

Front axle (4WD)

Differential oil capacity	6.5 l (6.9 qt)
----------------------------------	----------------

Hydraulic reservoir	51 l (53.9 qt)
----------------------------	----------------

Hydraulic system	110 l (116.2 qt)
-------------------------	------------------

Backhoe performance

High performance backhoe is closed box welded, narrow and curved and includes a hydraulic boom lock and manual swing locking pin. Cast iron swing post. Cushioned swing, boom and dipper cylinders.

Extendible dipper increases the reach by 990 mm. Manually and externally adjustable nylatron extendible dipper wear pads.

Standard dipper

Bucket width	610 mm (24 in)
Bucket capacity	0.21 m ³ (7.4 cu ft)
Bucket digging force (SAE J1179)	53 kN (11864 lbf)
Dipper digging force (SAE J1179)	32.6 kN (7329 lbf)
Bucket rotation	194°

Extendible Dipper

Bucket width	610 mm (24 in)
Bucket capacity	0.21m ³ (7.4 cu ft)
Bucket digging force (SAE J1179)	53 kN (11,864 lbf)
Dipper digging force (SAE J1179)	
Ret.	32 kN (7194 lbf)
Ext.	23.9 kN (5374 lbf)
Bucket rotation	194°

Loader performance

Low-effort, levers control all loader functions. Loader features a single cylinder and is self-levelling, with float and return-to-dig. Loader is box weld constructed with large diameter torque tube and friction welded dual lift cylinders. Optional Boom Suspension System (ride control), 1.0 m³ (1.3 cu yd), 2350 mm (92.5 in) wide, General Purpose or Multi-Purpose buckets with optional teeth and reversible bolt-on cutting edges. Integral safety strut. Weekly (50-hour) greasing intervals.

Lift capacity at full height

(with General Purpose bucket)	2530 kg (5578 lbf)
--------------------------------------	--------------------

Bucket breakout force	41.8 kN (9397 lbf)
------------------------------	--------------------

Loader arm breakout force	41.2 kN (9,262 lbf)
----------------------------------	---------------------

Cycle Times:

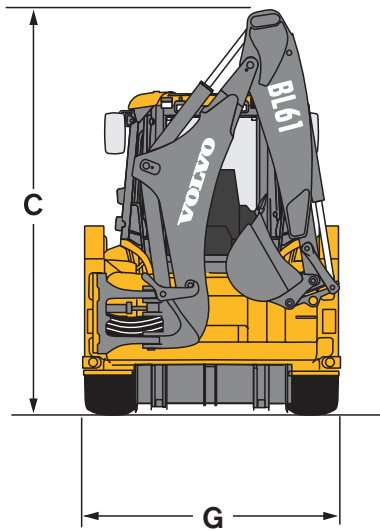
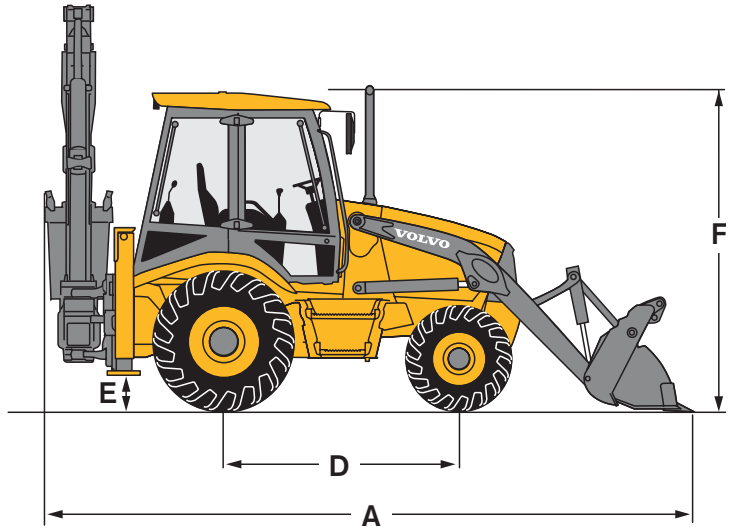
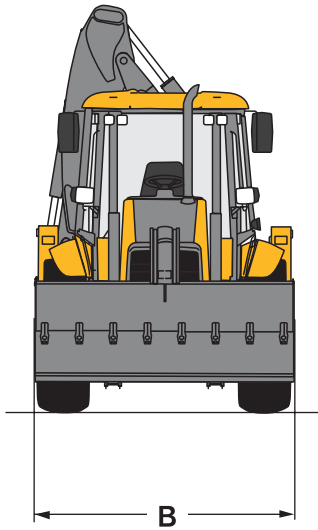
Raise to full height	4.3 sec
Dump time	1.8 sec
Curl time	1.9 sec
Lower	3.0 sec

Tyres

Rear tyres	Standard tyres 16.9 x 28
	10 bolt configuration

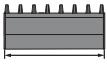



2WD Front	10.5/80 x 18
	8 bolt configuration





4WD Front	12.5/80 x 18
	8 bolt configuration

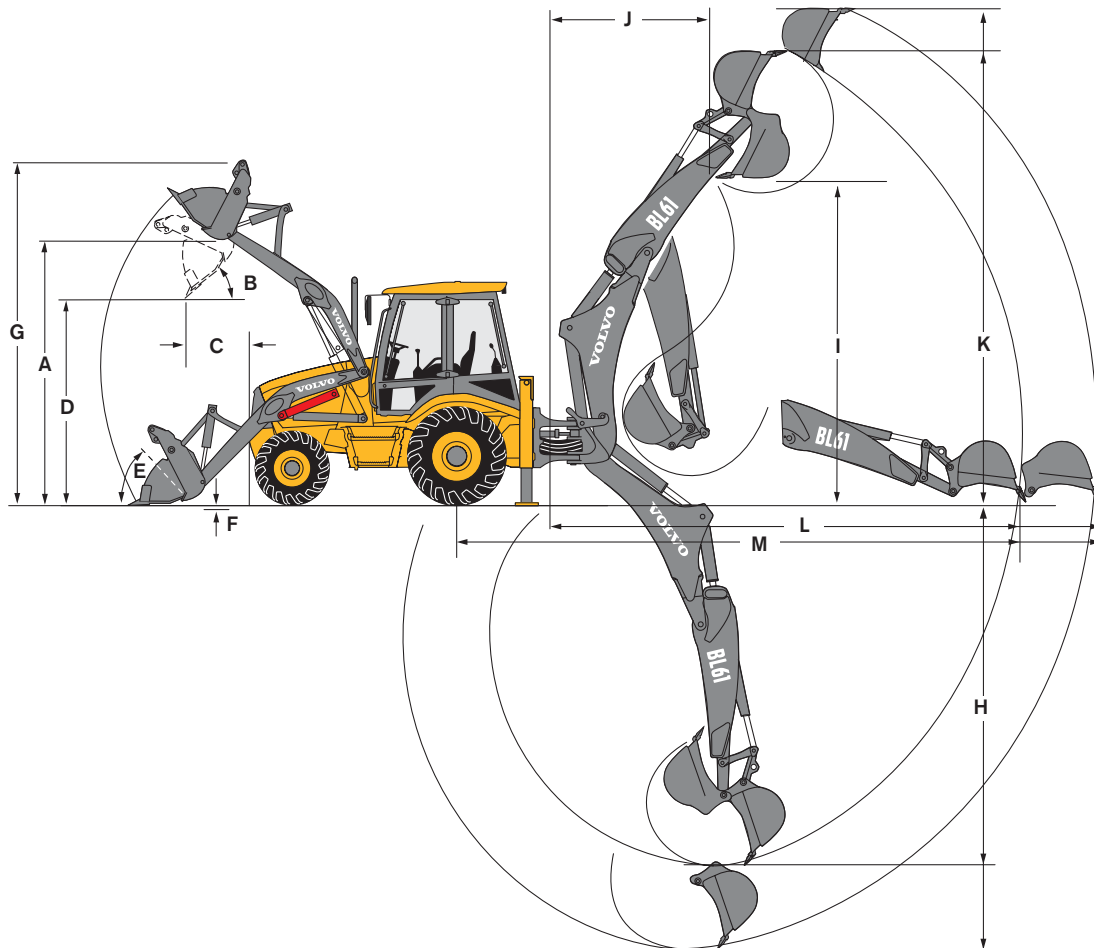


Dimensions - Transport Position

A - Overall length	5800 mm (19 ft 0.4 in)
B - Overall width	2470 mm (8 ft 1.2 in)
C - Overall height	3730 mm (12 ft 2.9 in)
D - Wheelbase 4wd	2150 mm (7 ft 0.6 in)
E - Ground clearance - frame	340 mm (1 ft 1.4 in)
F - Height to top of ROPS (cab)	2917 mm (9 ft 6.8 in)
G - Stabilisers Width	2335 mm (7 ft 7.9 in)

Backhoe buckets	 Width	 Weight	 Capacity	 Teeth nbr.
Standard bucket	2350 mm	500 kg	1000 l	8
4 in 1 bucket	2350 mm	790 kg	1000 l	8

Backhoe buckets	 Width	 Weight	 Capacity	 Teeth nbr.
Standard bucket	305 mm	94 kg	80 l	3
	400 mm	111 kg	112 l	3
	450 mm	117 kg	130 l	3
	610 mm	127 kg	190 l	3
	910 mm	162 kg	310 l	5
Grading bucket	1200 mm	135 kg	160 l	-
	1500 mm	158 kg	210 l	-



Loader dimensions

A - Height to hinge pin,	3485 mm
B - Dump angle	45°
C - Dump reach	895 mm
D - Dump height	2630 mm
E - Rollback at ground	40°
F - Dig depth below grade	159 mm
G - Height to upper edge of bucket	4434 mm
Max. grading angle	> 120°

Backhoe dimensions

Standard dipper

H - SAE dig depth	4300 mm
Dig depth - 610 mm flat bottom	4244 mm
I - Loading height	3980 mm
J - Loading reach	2220 mm
K - Operating height	5530 mm
L - Reach from swing post	5860 mm
M - Reach from rear axle	7320 mm
Sideshift offset from centreline	590 mm
Side wall clearance	190 mm

Extendible dipper dimensions

H - SAE dig depth	Ret - 4300 mm	Ext - 5370 mm
Dig Depth - 610 mm flat bottom	Ret - 4244 mm	Ext - 5314 mm
I - Loading height	Ret - 4030 mm	Ext - 4800 mm
J - Loading reach	Ret - 2220 mm	Ext - 2540 mm
K - Operating height	Ret - 5830 mm	Ext - 6650 mm
L - Reach from swing post	Ret - 5910 mm	Ext - 6880 mm
M - Reach from rear axle	Ret - 7320 mm	Ext - 8290 mm

STANDARD EQUIPMENT

Engine

Volvo D4D turbocharged diesel engine (62 kW).
Ground line fuel fill with 120 litre capacity.
Front grill.

Electrical System

Battery, 690 CCA.
Alternator 95 Amp.

Service and Maintenance

Tool box - external.
External battery box.

Hydraulic System

Hydraulic oil cooler.
Fixed flow system with gear pump.
"Flow Sharing" System.

Lighting

Hazard flasher/direction indicators.
Light, working (2 front, 2 rear).
Front headlights.

Instrumentation & controls

Gauges:

- Coolant temperature
- Fuel level
- Tachometer
- Hour recorder

Headliner.

Warning and control lamps:

- Preheating element engine
- High coolant temperature engine
- Low oil pressure engine,
- Air filter engine,
- High oil temperature transmission,
- Service indicator
- Battery charging
- Hydraulic oil filter
- High hydraulic oil temperature
- Low hydraulic oil temperature
- Warning and control lamps.

Power socket (2).

Horn.

Warning buzzer.

Throttles, hand and foot.

Driveline

Four wheel drive.
Oil immersed disc brakes.
Differential lock.
Fast reversing shuttle, all gears.
Torque convertor.
Four-speed syncromesh transmission.
Transmission de-clutch on loader lever.
Tyres.

Cab, Exterior

Left/right side doors with locks.
4 side opening windows with partial & full hold open.
One-piece opening rear window.
Front windscreen - laminated.
Mirrors external (2).
All tinted glass.

Cab, Interior

Interior light.
Drink holder.
Ignition switch.
Front and rear windscreen wipers.
Front and rear windscreen washer.
Floor mat.
Deluxe suspended seat with or without arm rests (option).
Defroster.
Seat belt, retractable.
Power steering.
Heater.

Working Equipment

Backhoe, side-shift, excavator - two lever control.
Hydraulic boom transport lock.
Sideshift, locking.
Swing transport lock.
Loader, self-levelling with return-to-dig and transmission disconnect switch on loader lever.

OPTIONAL EQUIPMENT

Cab

Air Conditioning.
Radio.
Speedometer.
Sun visor.
Wide seat belt.
Tilt steering wheel.
Interior mirror.

Working Equipment

Boom suspension system.
Steering wheel knob.

Extendible dipper.
Stabiliser street pads.
Lifting eye backhoe.
Tool kit.

Hydraulics

Hammer hydraulic circuit.
Hammer rigid line.
Hand held hydraulic.
Hydraulic tank strainer.

Lighting

Additional working lights (2 front, 2 rear).

Electrical System

Speedometer;
Battery, additional.

Safety

Hydraulic oil tank lockable cap.
Rotating beacon.
Boom and dipper safety valves.
Loader safety valve.
Overload indicator.
Front fenders.
Vandal guard.
Anti-theft key board.
Back up alarm.

ATTACHMENTS

Cutting edge, bolt on.
Tooth, bolt on.

Front loader buckets.
Backhoe buckets.
Volvo hammer HB 440.

Mechanical attachment bracket.
Hydraulic attachment bracket.
Forks kit.



Volvo Construction Equipment is different. It's designed, built and supported in a different way. That difference comes from our 170-year engineering heritage. A heritage of thinking first about the people who actually use the machines. About how to help them be safer, more comfortable, more productive. About the environment we all share. The result of that thinking is a growing range of machines and a global support network dedicated to helping you do more. People around the world are proud to use Volvo. And we're proud of what makes Volvo different – **More care. Built In.**



All products are not available in all markets. Under our policy of continuous 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

Construction Equipment
www.volvoce.com

Ref No. 21 1 432 1148
Printed in PDF
Volvo, Belley

English
2004.08
BHL