

# VOLVO BACKHOE LOADER

## BL71, BL71 PLUS



- **Gross Power:**  
SAE :  
BL71 : 70 kW / 94 HP  
BL71 Plus : 74.5 kW / 100 HP
- **Net Power:**  
EEC 80/1269:  
BL71 : 68 kW / 90 HP  
BL71 Plus : 72 kW / 97 HP
- **Operating Weight:**  
8594 kg
- **Bucket Capacities:**  
Loader : 1000 l  
Backhoe: 190 l
- **SAE Max Digging depth:**  
4280 - 5343 mm

- **VOLVO exclusive "Self-Leveling" linkage**, single cylinder offers an impressive digging force and excellent visibility.
- Loader is controlled by a **hydraulic joystick** for smooth loading.
- **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 closed center, 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.

**MORE CARE. BUILT IN.**



# SPECIFICATIONS

## Engine

Low emission engine, with reduced fuel consumption.

<b>Model</b>	Volvo D4D
<b>Type</b>	Parent bore
<b>N° of cylinder</b>	4
<b>Displacement</b>	4038 cm <sup>3</sup>
<b>Aspiration</b>	Turbo
<b>Compression ratio</b>	19:1
<b>Power (Gross SAE)</b>	BL71: 70kW / 94 hp BL71Plus: 74.5kW / 100 hp
<b>Rated speed</b>	2200 rpm
<b>Max torque</b>	390 Nm @ 1,500 rpm

## Electrical system

<b>Rated volt age</b>	12V
<b>Battery capacity</b>	110 Ah
<b>Alternator rating</b>	95 Amps

## Hydraulic system

Flow sharing system: when the control valve is performing two or more functions simultaneously, flow sharing automatically maintains the pressure and flow for each function.

<b>System</b>	Close center
<b>Type</b>	Load Sensing
<b>Pumps type</b>	Variable flow
<b>Distributor</b>	"Flow Sharing"
<b>Max flow</b>	160 l/min
<b>Working pressure</b>	250 bar
<b>System capacity</b>	130 l

Double regulating piston pump.

## Steering

Orbitrol type steering valve given priority in hydraulic system.

<b>Type</b>	Load sensing hydrostatic
<b>Turns lock to lock</b>	4

Turning radius:

<b>Between walls</b>	5.3 m
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Turning radius:

<b>Curb-curb</b>	4 m
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## Weight

(Standard machine with 4 in 1 loader bucket, 600 mm backhoe bucket, counterweight, operator and full fuel tank, extendible dipper)

<b>Operating weight</b>	8594 kg
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## Brakes

Multi-plate, oil immersed, power assisted, self-adjusting disc brakes with four wheel braking automatically engaged in third and fourth gear.

Total integral braking on the 4 wheels, when 4WD engaged

<b>Type</b>	Oil immersed disc brakes
<b>Number of dics</b>	2 for each wheel
<b>Parking and safety brake</b>	Dedicated disc on axle input shaft

## Drivetrain

<b>Final drive type</b>	External planetaries
<b>Total oscillation angle</b>	16°
<b>Differential locking</b>	1

Front axle

<b>Load rating, Static</b>	24218 kg
<b>Load rating, Dynamic</b>	9687 kg

Rear axle

<b>Load rating, Static</b>	19120 kg
<b>Load rating, Dynamic</b>	7648 kg

## Transmission

Powershuttle gear box with four forward and four reverse fully synchronized gears. Electro-hydraulic forward/reverse switch on the steering column and on the loader joystick.

## Travel speed

Maximum speed, forward/reverse

<b>1</b>	5.8 km/h (3.6 mph)
<b>2</b>	9.3 km/h (5.8 mph)
<b>3</b>	18.8 km/h (11.7 mph)
<b>4</b>	37.6 km/h (23.4 mph)

Optional Powershift transmission with four forward and reverse speeds and a standard kick down shift control for immediate shifting from second to first gear. Automatic mode is activated when fourth gear is engaged.

## Travel speed

Maximum speed, forward/reverse

<b>1</b>	5.9 km/h (3.6 mph)
<b>2</b>	9.7 km/h (6 mph)
<b>3</b>	19.5 km/h (12.1 mph)
<b>4</b>	36.9 km/h (22.9 mph)

## Service fill capacities

<b>Cooling system</b>	19 l
<b>Fuel tank</b>	120 l
<b>Engine oil (w/filter)</b>	14 l

Rear axle

<b>Differential oil capacity</b>	14.5 l
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Front axle (4WD)

<b>Differential oil capacity</b>	6.5 l
<b>Hydraulic reservoir</b>	41 l
<b>Hydraulic system</b>	130 l

## Backhoe performance

The boom is of a curved design for easier truck loading.

Standard dipper

<b>Bucket width</b>	610 mm
<b>Bucket capacity</b>	0.20 m <sup>3</sup>
<b>Bucket digging force</b>	59.1 kN
<b>Dipper digging force</b>	39.6 kN

Extendible Backhoe: performance

<b>Bucket capacity</b>	0.20 m <sup>3</sup>
<b>Bucket digging force</b>	59.1 kN

Dipper digging force

<b>Ret -</b>	39.6 kN
<b>Ext -</b>	28.9 kN

**Bucket rotation** 194°

<b>Swing torque</b>	26 kNm
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## Loader performance

Standard loader is a self-leveling, single cylinder loader type.

Volvo patented system.

<b>Bucket width</b>	2350 mm
<b>Bucket capacity</b>	1.0 m <sup>3</sup>
<b>Lifting capacity at full height</b>	3154 kg
<b>Bucket Breakout force</b>	55.4 kN

Features:

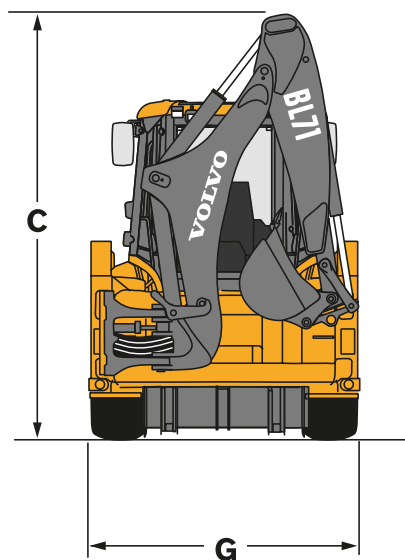
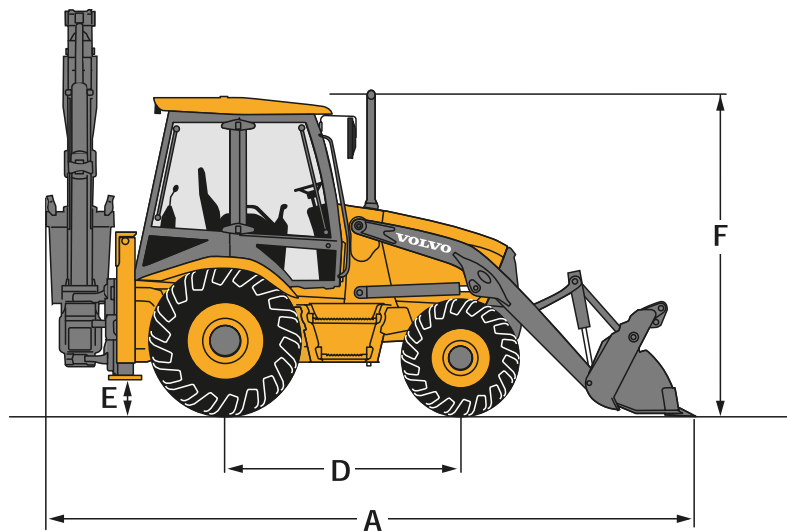
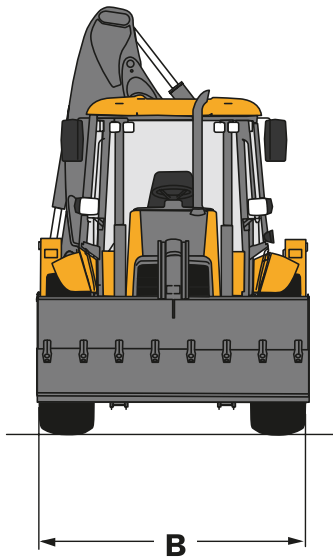
<b>Return-to-dig</b>	Standard
<b>Lube interval (hrs)</b>	> 50
<b>Number of bucket cylinders</b>	1
<b>Boom Suspension System</b>	Optional

## Tyres

Large front tyres give great loading performance.



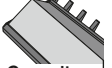

Rear: 18,4 x 26





Front: 16/70 x 20

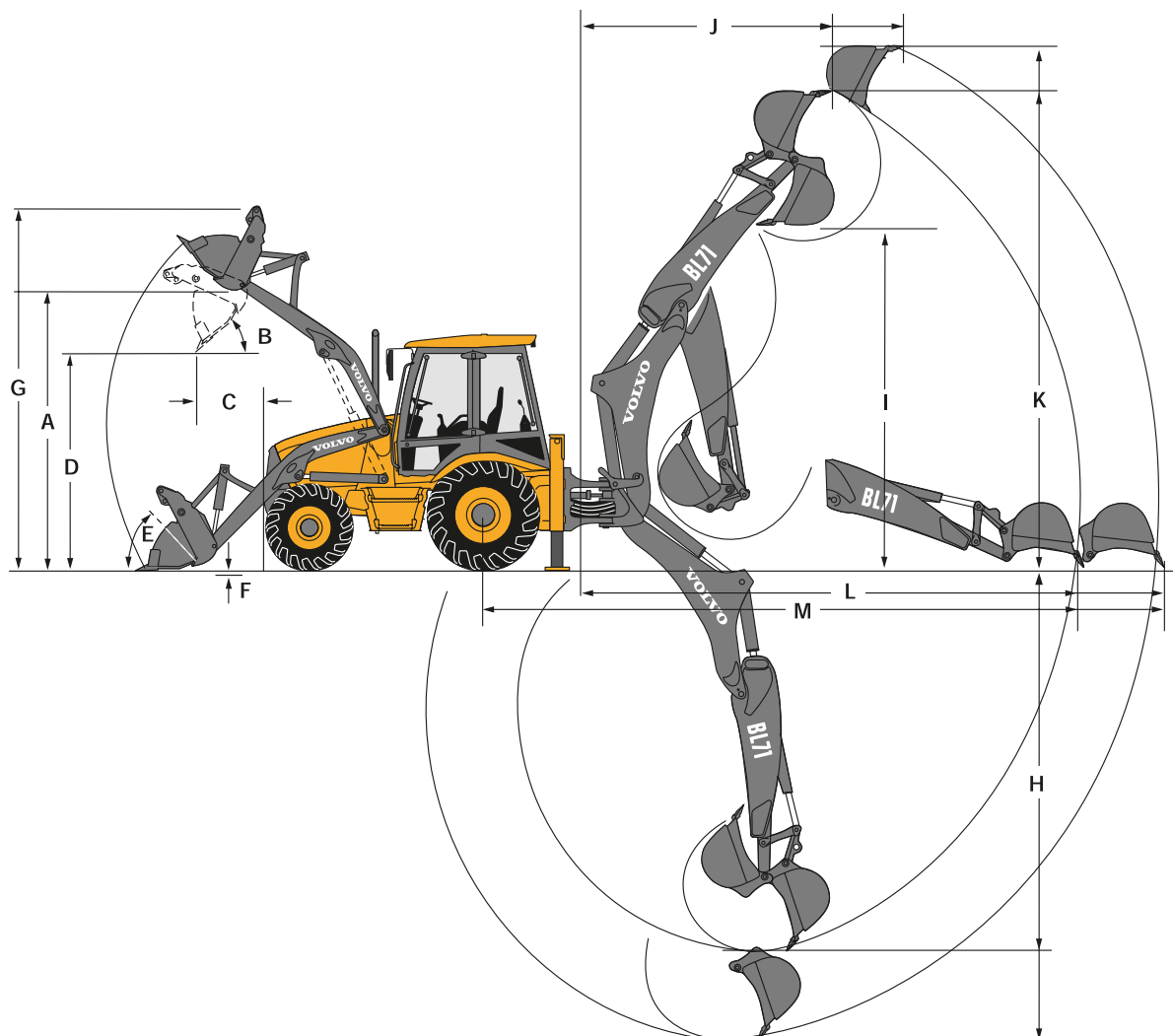


### Dimensions - Transport Position

A - Overall length	5825 mm
B - Overall width	2477 mm
C - Overall height	3706 mm
D - Wheelbase 4wd	2148 mm
E - Stabiliser clearance	370 mm
F - Height to top of ROPS (cab)	2936 mm
G - Stabiliser Width	2300 mm

Backhoe buckets	 Width	 Weight	 Capacity	 Teeth nbr.
Standard bucket	2350 mm	450 kg	1000 l	8
4 in 1 bucket	2350 mm	784 kg	1000 l	8

Backhoe buckets	 Width	 Weight	 Capacity	 Teeth nbr.
Standard bucket	300 mm	90 kg	74 l	3
	400 mm	101 kg	110 l	3
	450 mm	109 kg	128 l	4
	610 mm	126 kg	190 l	4
Grading bucket	910 mm	164 kg	309 l	6
	1215 mm	135 kg	160 l	0
	1515 mm	158 kg	210 l	0



### Loader dimensions

A - Height to hinge pin	3459 mm
B - Dump angle	49°
C - Dump reach @ 45°	836 mm
D - Dump height @ 45°	2716 mm
E - Rollback at ground	44 °
F - Dig depth below grade	156 mm
G - Overall operating height	4468 mm
Max grading angle	117°

### Backhoe dimensions

Standard dipper

H - SAE max digging depth	4280 mm
I - Loading clearance	3899 mm
J - Reach at max height	2886 mm
K - Max operating height	5545 mm
L - Reach from swing post	5806 mm
Sideshift offset from centreline	574 mm

### Extendible dipper dimensions

<b>H - SAE max digging depth</b>	Ret - 4280 mm	Ext - 5343 mm
<b>I - Loading clearance</b>	Ret - 3899 mm	Ext - 4509 mm
<b>J - Reach at max height</b>	Ret - 2886 mm	Ext - 3764 mm
<b>K - Max operating height</b>	Ret - 5545 mm	Ext - 6155 mm
<b>L - Reach from swing post</b>	Ret - 5806 mm	Ext - 6782 mm

## STANDARD EQUIPMENT

### Engine

BL71: Volvo D4D turbocharged diesel engine (70 kW).  
BL71 Plus: Volvo D4D turbocharged diesel engine (74,5 kW).  
Engine fan guard.  
Ground line fuel fill with 120 liter capacity.  
Front grill.  
Tilting cooler.

### Electrical System

Battery, 690 CCA.  
Alternator 95 Amp.

### Service and Maintenance

Tool box - external.  
50-hour greasing intervals.

### Hydraulic System

Hydraulic oil cooler.  
Load sensing, variable flow system with axial piston pump.  
"Flow Sharing" System.

### Lighting

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

## Instrumentation & controls

Gauges:

- Coolant temperature
- Fuel level
- Hour recorder
- Headliner
- Radio ready

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.

Reversing alarm.

Throttles, hand and foot.

### Driveline

Four wheel drive.  
Oil immersed disc brakes.  
Differential lock.  
Fast reversing shuttle, all gears.  
Torque convertor.  
Four-speed synchromesh transmission.  
Neutral transmission button on loader joystick.  
Transmission de-clutch on loader joystick.  
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.  
Seat with fabric or vinyl seat cover with or without arm rests.  
Defroster.  
Seat belt, retractable.  
Tilt steering wheel.  
Power steering.  
Hydrostatic heater.

## Working Equipment

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

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## OPTIONAL EQUIPMENT

### Cab

Air Conditioning.  
Air suspension and heated seat + arm rests.  
Radio.  
Speedometer.  
Sun visor.  
Wide seat belt.

### Driveline

Powershift transmission.  
Front fenders.

## Working Equipment

Excavator Pilot Controls.  
Boom suspension system.  
Extendible dipper.  
Stabiliser street pads.

### Hydraulics

Hammer hydraulic circuit.  
Hammer rigid line.  
Hand held hydraulic.  
Bi-Directional Auxiliary hydraulic circuit.

### Lighting

Additional working lights (2 front, 2 rear).

## Electrical System

Battery, additional.  
Engine pre-heater.

## Safety

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

Special colours.

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## ATTACHMENTS

### Loader

Loader Attachment Bracket (TPV)  
General Purpose bucket.

Multi-Purpose bucket.  
Forks kit for Loader Attachment Bracket.  
Flip-over forks for GP and MP buckets.

### Excavator

Standard and Heavy Duty buckets.  
Mechanical attachment bracket.  
Hydraulic attachment bracket.

Volvo breaker HB 440.



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