

VOLVO WHEEL LOADER

L50F



• **Gross Power :**
SAE J1995 = 87 kW/ 117 hp

• **Net Power :**
SAE J1349 = 85 kW/ 115 hp

• **Operating Weight :**
9.4 - 9.9 t

• **Bucket Capacities :**
1.4 - 2.5 m³

• **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.

• **Strong TP-loader linkage, perfect** for loading fork applications: high breakout and lift forces combine with optimum parallelity of the attachment.

• **Operator-selected 100% differential lock** on both axles to give optimum traction.

• **Standard hydraulic quickchange coupling:** Various tried-and-tested attachments for a wide range of applications.

• **Purpose designed cab comfort.**

• **Multi-function joystick.**

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SPECIFICATIONS

Engine

Volvo in-line 4-cylinder, 4 stroke, direct injection water cooled, turbocharged diesel engine. EPA Tier 3 / EU Stage IIIA compliant.

Air cleaning: 1. Paper filter with indicator in cab / 2. Safety filter.

Engine	D5DCBE3
Gross power @	2200 r/min
SAE1995	87 kW - 117 hp
Net power @	2200 r/min
SAE1349 - DIN ISO 1585	85 kW - 115 hp
Max. torque @	1600 r/min
SAE1349 net - DIN ISO 1585	478 Nm
Cubic capacity	4.76 l
Bore	108 mm
Stroke	130 mm

Electrical system

Rated voltage	24 V
Battery voltage	2 x 12 V
Battery capacity	2 x 90 Ah
Alternator rating	1540/55 W/A
Starter motor output	4.0 kW

Drivetrain

Hydrostatic driveline for 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. Multi-function joystick for change of direction (FWD-REV.), differential lock and use of the hydraulic functions.

Oscillation at wheel, max.	360 mm
Track	1730 mm
Angle of oscillation	±12°

Tyres

Size	17.5-25
Rim	14 x 25 ET25

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

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

Speed, max.:	Standard	High travel speed*
1st range forward/reverse	0-5 km/h	0-5 km/h
2nd range forward/reverse	0-20 km/h	0-17 km/h
3rd range forward/reverse		0-40 km/h

* Optional equipment

Service fill capacities

Engine	14 l
Fuel tank	160 l
Front axle, total	18 l
Rear axle, incl. drop-box	18.7 l
Hydraulic tank, incl.	90 l

**NOTE! Uncertainties in given noise values (e.g. uncertainty in production and measuring instruments) are calculated in accordance with ISO 6395:2008 for the sound power level around the machine and ISO 6396:2008 for the sound pressure level at the operator position.

Braking system

Service brake: reliable, dual braking system, disc brake hydraulically actuated via pump accumulator.

1. Wear-free, hydrostatic inching brake / 2. 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: central disc brake.

Hydraulic system

Load sensing hydraulic system with self-controlling power distribution. Thermostatically controlled oil circuit with integrated cooling system. Hydraulic control valve: Servo-controlled, double acting control valve three spool system, with primary and secondary pressure valves.

1. Lifting function / 2. Tilting function / 3. Additional function for hydraulic QC, Unlock, neutral, lock.

Hydraulic oil filter: Combined suction and return-filtration cartridge with a 10 µm filter. The filter can be replaced without emptying the hydraulic oil tank.

Axial piston pump

Flow	132 l/min
@ engine rpm	2200 r/min
Relief valve pressure	26 MPa

Steering

Load sensing hydrostatic steering. Steering pump: gear-type pump. Steering cylinder: 2 double-acting steering cylinders.

Steering:

Angle of articulation	±40°
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Steering pump:

Flow	64 l/min
@ engine rpm	2200 r/min
Relief valve pressure	22 MPa

Linkage

Linkage system	TP
Lift cylinders	2
Tilt cylinders	1
Lift time (loaded)	6.4 s
Lowering time (empty)	3.9 s
Dump time	1.6 s

Noise levels**

Sound pressure level (LpA) at operator position	70 dB(A)
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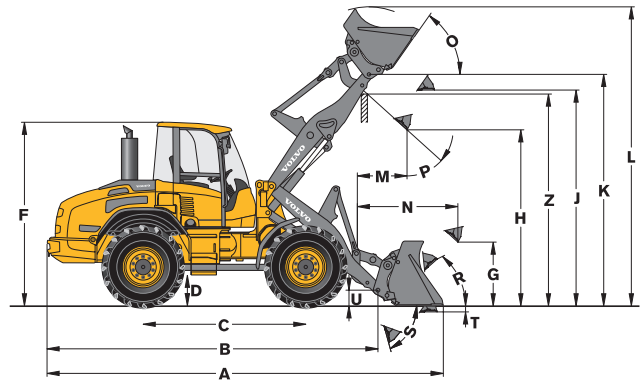
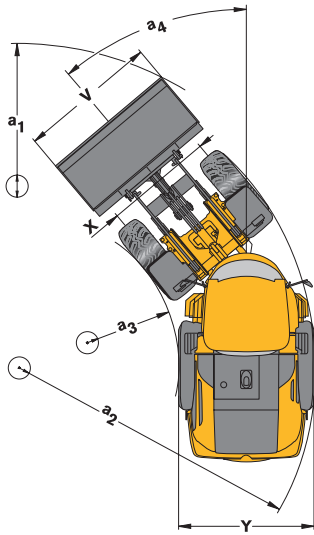
(Measurement according to ISO 6396)

Sound power level (LWA) around the machine	102 dB(A)
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(Measurement according to 2000/14/EC with applicable appendices and measuring method according to ISO 6395)

Whole body vibrations

Emission of whole-body vibration values and its uncertainties during operating conditions in different applications, when the machine is used as intended, is according to information in ISO/CEN Technical Report ISO/TR25398.



Data according to bucket type		Gen. Purpose		Light material		4-in-1		High-Tip	
L50F with TP-linkage, TPV attachment bracket (cast version) and 17.5-25 tires									
Capacity heaped	m ³	1.5	1.6	1.8	2.0	1.4	2.3		
Material density	kg/m ³	1900	1700	1500	1300	1900	1000		
Static tipping load, straight (ISO 14397)	kg	6560	6510	6400	6290	6080	5550		
Static tipping load, full turn 40° (ISO14397)	kg	5810	5750	5670	5570	5390	4910		
Hydraulic lifting capacity, max.	kN	86.5	86	84.5	83	81.5	73		
Breakout force	kN	72	69	64	58	65	-		
A Total length	mm	6460	6495	6580	6690	6560	7030		
L Lift height, max.	mm	4880	4900	4980	5235	4905	5915		
V Bucket width	mm	2250	2250	2250	2250	2250	2250		
a ₁ Clearance circle	mm	10360	10385	10435	10505	10475	10740		
T Digging depth	mm	95	95	95	95	130	105		
H Dump height, 45°	mm	2865	2845	2775	2695	2745	4330		
M Reach at max. height	mm	965	1000	1040	1115	965	1505		
N Reach, max.	mm	1810	1830	1890	1970	1810	2710		
Operating weight	kg	9410	9430	9420	9450	9670	9890		

L50F with TP-linkage, TPV attachment bracket and 17.5-25 tires	
B	5380 mm
C	2650 mm
D	435 mm
F	2980 mm
G	1000 mm
J	3525 mm
K	3780 mm
O	54 °
P	45 °
R	44 °
S	76 °
U	255 mm
X	1730 mm
Y	2190 mm
Z	3535 mm
a ₂	4760 mm
a ₃	2540 mm
a ₄	40 °

Data according to bucket type		Gen. Purpose		Light material		4-in-1		High-Tip	
L50F with TP-linkage, TPZ attachment bracket and 17.5-25 tires									
Capacity heaped	m ³	1.6	1.8	2	2.5	1.4	2.3		
Material density	kg/m ³	1800	1600	1400	1100	1900	1100		
Static tipping load, straight (ISO 14397)	kg	6840	6730	6600	6540	6770	5960		
Static tipping load, full turn 40° (ISO 14397)	kg	6050	5960	5840	5790	6000	5280		
Hydraulic lifting capacity, max.	kN	90	88.5	86.5	85	88.5	78		
Breakout force	kN	74	68	61	53	71	-		
A Total length	mm	6400	6480	6590	6740	6430	6890		
L Lift height, max.	mm	4840	4900	4915	5170	4825	6200		
V Bucket width	mm	2250	2250	2250	2250	2250	2250		
a ₁ Clearance circle	mm	10325	10370	10440	10530	10355	10635		
T Digging depth	mm	100	100	100	95	60	95		
H Dump height, 45°	mm	2900	2845	2770	2660	2890	4230		
M Reach at max. height	mm	880	930	1005	1100	890	1350		
N Reach, max.	mm	1725	1775	1850	1950	1740	2540		
Operating weight	kg	9330	9370	9350	9400	9570	9780		

L50F with TP-linkage, TPZ attachment bracket and 17.5-25 tires	
B	5385 mm
C	2650 mm
D	435 mm
F	2980 mm
G	1000 mm
J	3525 mm
K	3780 mm
O	55 °
P	45 °
R	45 °
S	75 °
U	255 mm
X	1730 mm
Y	2190 mm
Z	3455 mm
a ₂	4760 mm
a ₃	2540 mm
a ₄	40 °

Data with Loading Fork	TPV attachment bracket	TPZ attachment bracket
Center of gravity 500 mm		
Tipping load, full turn (ISO 14397)	kg	4810
Payload according to EN 474-3, 60/80%	kg	2880 / 3640
Payload 80%, transport position, 40° full turn	kg	4000

SPECIFICATIONS

STANDARD EQUIPMENT

Engine

Diesel engine, direct fuel injection
Extra fuel filter
Cold start aid
Dry-type air filter
Preparation for pre-cleaner
Filtration screens on air inlets

Electrical system

Alternator 55 A

Lighting

Main head lights (halogen) upper/dipped/asymmetrical
Working lights (2 front/2 rear)
Parking lights
Rear lights
Brake lights
Direction indicators
Hazard warning lights
Reversing lights
Cab lighting

Instrumentation & controls

Multi-function joystick
24 Volt accessories socket
Forward horn
Hazard warning switch
Safety start

Electronic Information System

Analog information for:
Fuel level
Engine temperature
Drive system oil temperature
LED-illuminated symbols (colour-coded) for:
Direction (forward/reverse)
Indicators (left/right)
Pre-heater (option)
Main beam head lamp
Differential locks
Boom suspension system (option)
Loading fork operation (option)

LED-illuminated symbols (red) with acoustic signal for:
Parking brake
Air filter restriction
Drive system oil temperature
Engine temperature
Engine oil pressure
Battery charging
Return filter
Touch pad with symbols and integrated LEDs for:
Parking lights
Working lights (front/rear)
Windscreen wiper (rear)
Rotating beacon (option)
Boom suspension system on/off (option)
Locking and activation of Volvo-attachment bracket
Activation of multi-function joystick for directional change
Digital LED display activated by dual function keys for:
Entry and retrieval of operating information
Optional anti-theft function control

Drivetrain

Hydrostatic drive
Operator-selected 100% differential locks in both axles.
Tyres 17.5-25

Hydraulic system

Load-Sensing Hydraulics
Axial piston pump
Control valve three-spool system
3rd hydraulic circuit and couplings

Cab, Exterior

ROPS/FOPS-cab with flexible mountings
Lockable door
All-round tinted safety glass
Windscreen wiper (front/rear)
Windscreen washer (front/rear)
Door stops
External rear view mirrors (right/left)

Cab filtration system

Cab, Interior

4-way adjustable operator's seat
Left arm rest
Air conditioner
Heater with air-filter and defroster (front/rear)
Adjustable steering column
Seat belt
Sunvisor
Cab filtration
Hook for coat
Cup holder
Emergency hammer
Storage box in the cab
Rear view mirrors (left/right)

Working Equipment

Automatic bucket leveller
Hydraulic quick-change attachment bracket

Carriage Body

Fenders (front/rear)
Fender extensions (optional)
Lockable engine hood
Lockable fuel-tank cap
Vertical exhaust
Towing device
Lifting eyes
Tying down eyes

International Standards for Machines and Production

Quality: DIN/ISO 9001
Safety: CE - Criteron
Machine guide-lines 2006/42/EC
ROPS ISO 3471
FOPS ISO 3449
Operating weight ISO 7131
Tipping load / Payload: ISO 14397-1
EMC (Electromagnetic Compatibility) 89/336/EEC plus supplement
Environment: DIN/ISO 14001
Sound regulation: 2000/14/EC

OPTIONAL EQUIPMENT

Engine Equipment

Pre-heater
Pre cleaner air filter (Turbo II)
High travel speed
Alternator 80 A
Tropical kit
Air pre-cleaner, oil-bath type
Reversible fan (three mode selectable)

Hydraulics

Hydraulic couplings for
4th hydraulic circuit
Single lever with integrated 3rd function
3-lever control
4-lever control

Cab

Handthrottle
Hand control inch valve
Radio
Radio CD
Additional transport lights
Air suspension operator's seat
Heated air suspension operator's seat
Noise insulation
Sliding window in cab door

Working Equipment

Boom suspension system
Long boom

Environment

Biodegradable hydraulic oil

Safety

Anti-theft system
Headlights protection
Rear lights protection
Rotating beacon
Audible reverse alarm
Engine hood protection
Windshield guard, front
Windshield guard, rear
Belly guards, front/rear
Working light guards, front/rear
Xenon working lights, front/rear
Xenon working lights, front



Volvo Construction Equipment is different. It's designed, built and supported in a different way. That difference comes from an engineering heritage of over 175 years. 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.**



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