

VOLVO WHEEL LOADER

L45F



VERSATILE PERFORMANCE

Volvo L45F compact wheeled loaders are the first choice for versatile performance. Matching a high power to weight ratio with the Volvo patent TP linkage system, L45F loaders are ideal for applications that include re-handling, pallet work and loading. For versatility and economy with no compromise in performance, Volvo L45F loaders are the ideal choice.

Economical performance.

Powered by a Tier III compliant 4.8 litre Volvo D5D engine, Volvo L45F loaders offer a perfect balance between power and economy. In applications where there is a demand for performance, the high torque 98 hp engine delivers the power for high productivity. The engine operates quietly and efficiently with low levels of fuel use.

Versatile TP linkage

The Volvo patented TP torque parallel linkage system matches high roll back angle with parallel lift throughout the lifting range. Offering industry leading visibility over pallet loads matched to fast bucket tip and crowd, the TP linkage helps to ensure the L45F one of the most versatile loaders in its class.

Clean, quiet and economical

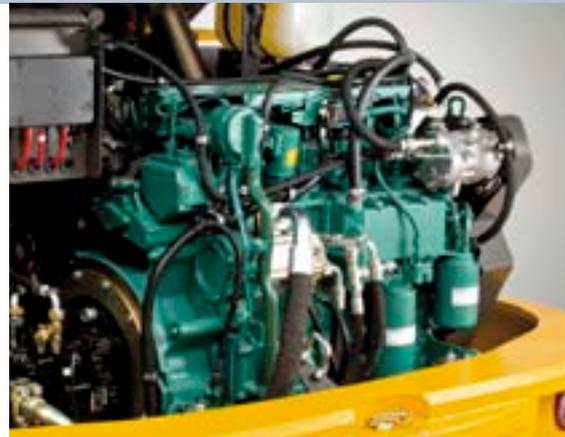
By mounting the engine behind the rear axle, its weight is used to counterbalance the front loader. Transverse mounting makes service access straightforward, reducing the time it takes to carry out daily checks and routine maintenance.

Stability over tough terrain

Designed to operate in difficult terrain, Volvo wheeled loaders have good ground clearance and oscillating rear axles for sure-footed stability. 100% operator selectable locking differentials are fitted in both axles to optimise traction.

Advanced cooling package

Designed to ensure optimum efficiency in all environments, the cooling package is cooled by a thermostatically controlled hydraulic fan. Linked to the engine ECU, the speed of the fan is automatically adjusted to ensure a consistent cooling temperature is maintained in extreme heat or cold.



- Tier III Volvo D5D engine for power and economy.



- Open attachment brackets for high visibility.



- Versatility without compromise.



- All the advantages of traditional Z-bar and parallel linkage in one design.
- TP linkage optimises breakout force.



HIGH OUTPUT EFFICIENCY

Volvo L45F loaders match versatility with high performing efficiency. Smooth hydrostatic drive and load sensing hydraulics deliver a perfect balance of power and productivity. 100% operator selectable locking differentials ensure traction is optimised in the toughest of conditions.

Dedicated pumps optimise output

A load-sensing hydraulic pump lies at the heart of the L45F. Unlike a fixed gear pump, which delivers the same volume of oil regardless of load, the load-sensing pump only delivers the volume of oil to do the job. This helps conserve fuel, saves unnecessary pump wear and reduces hydraulic oil temperatures.

A separate pump takes care of the power steering. This ensures full steering power is retained when working at full capacity.

Increased productivity through higher speed and faster transport

The optional equipment "High travel speed" allows vehicle speeds up to 40 km/h. This is a distinct advantage when the machine is constantly driven between work sites, used for delivery of materials on the site and when operated in relatively long load-and-carry applications.

Genuine four-wheel drive

In extreme conditions, optimum performance can only be guaranteed when full power is available to all four wheels. To achieve this, positive locking differentials are fitted to both the front and rear axles. When the operator selects differential lock, all four wheels get equal power and can generate equal traction.

Hydrostatic efficiency

Volvo has invested a great deal of design effort in the hydrostatic transmission of the L45F. Priorities include smooth speed progression for delicate work such as pallet stacking through to high power transfer in demanding conditions.

Fitted with a two-speed selector to allow a high transport speed to be achieved, the transmission has overload protection to prevent overheating and overloading the engine.

The combined brake and inching pedal adds a further level of control. Light pressure on the brake pedal slows the loader using the transmission.

Additional pedal pressure applies the rear axle brakes. This can be used to hold the loader when operating the loader on an incline.



- 100% operator selectable differential locks provide maximum traction.



- Smooth and efficient hydrostatic drive.



- Separate working and steering hydraulic pumps.



- Volvo style quick attach bracket fit existing and new attachments.



- Wide attachment choice to suit specific needs.
- High bucket.
- High travel speed (option) provides faster machine for higher productivity.



VOLVO CARE CAB RIGHT FOR EVERY OPERATOR

Operator safety and comfort are taken care of in the Volvo care cab. Designed to offer extremely high levels of operator protection, the cab matches this to high levels of comfort and excellent all-round visibility.

Comfort and productivity

Settle into the cab of the Volvo L45F, and it is clear that a great deal of effort has gone into its design. From the range of seat and steering adjustments through to the ergonomic layout of the controls, it shows that the operator has been put high on the priority list.

All-round visibility is excellent, the fully glazed doors and slim cab pillars making it easy to see to the sides. The view over the loader arms is excellent too, with an industry leading view of pallet loads.

Mounted on damped viscous mounts, the cab offers low noise and vibration levels. This helps ensure comfort on the longest of working days.

The heating and ventilation system is designed to provide rapid de-misting, with vents for directing filtered heating or cooled air directly where it is needed.

A fully automatic air conditioning system is standard.

Multi-function joystick

Light and easy to operate, the multi-function joystick offers straightforward control of the loader. A separate lever is used to operate hydraulic functions and a locking position allows continuous hydraulic flow for attachments like a sweeper.

The joystick has buttons to select various functions and also allow for fast shuttle between forward and reverse. Differential locks and gear speed are also selected from this single control.

All the information you need

The main dashboard provides clear and easy to understand information.

The main LCD display will list main running information, such as engine speed, with submenus to list service data.

Fuel level plus hydraulic oil and engine temperatures are shown on easy to read analogue gauges.

The programable Volvo Contrinsic keypad can be used to display service data.



- Deluxe high back seat for optimum comfort.



- Single lever control with integrated 3rd function (option).



- Excellent all-round visibility.



- Dashboard shows all the information you need.
- 4- lever control (option) enables easy, comfortable, fingertip control, thanks to the low lever force, and also provides the possibility to use an hydraulic attachment that needs two hydraulic functions.
- Ergonomic control layout.



- Spacious cab offers comfort and visibility.

VOLVO FEATURES THAT PUT YOU AHEAD

See more, do more

- Extra bright cab work lights provide extra illumination on low light.

Transverse engine

- Mounted behind the rear axle to optimise balance, the engine has excellent service access.

Full cab filtration

- With the windows closed, the operator can breathe filtered air. Allows safe operation in dusty conditions.

100% locking differentials

- Both front and rear axles have fully locking differentials.

Lubricated-for-life rear axle bearings

- Promote higher uptime and longer service life

Brilliant stability

- Oscillating rear axle and robust central pivot deliver brilliant stability.



Volvo care cab

- Safe, quiet and comfortable, the cab offers excellent all-round visibility.

High roll back angle

- TP linkage delivers a high roll back angle for reduced cycle times.

New or existing attachments

- A choice of Z or Volvo style attachment brackets allows the fitting of new or existing attachments.

Faster machine

- High travel speed (option) increases productivity and reduces cycle times.



TP Torque Parallel linkage

- Excellent breakout force from ground level to the top of the lifting range, and everywhere in between; plus the benefit of parallel movements.

HARD WORK MADE EASY

Making it easy to carry out routine maintenance checks is a key design feature of the Volvo L45F. Raise the rear engine hood and see just how easy it is to reach all routine service items. Note how the Air conditioning condenser can be folded out for easy cleaning. Even refuelling is simple, thanks to the large filler neck. No need for funnels and spouts when filling from a can either.

Safety first

Access to the cab or canopy is via wide steps with easy to reach grab handles for added security.

Long service intervals

Service intervals are established following extensive field testing. In normal operating conditions, key engine service intervals are 500 hours, axles 1000 hours and hydraulic oil and filters 1500 hours.

All grease points are clearly marked and easy to access. Within a few minutes, the loader can be checked and ready for a hard day's work.

Built to last

All Volvo Compact Equipment has to pass stringent durability tests. Wear and tear is also considered including all electrics and wiring that exceed standards.

Protection from theft and vandalism

Locks are fitted to the engine hood, fuel cap, battery box, cab doors, inside storage compartment and filter cover. Optional anti-theft protection is available.

Reversible cooling fan

A fully automatic reversible cooling fan can be specified. This is recommended in applications where air drawn into the radiator is liable to debris contamination. In action, the reversible fan will slow to a stop and then reverse. This will cause debris caught on the main engine hood screen to be blown clear, the system also clears debris drawn into the cooling pack.

Volvo cares about the environment

More than 95% of the machine's weight can be recycled.

The fuel tank cap seals tightly to prevent fuel leakage in the event of the machine tipping over.

To facilitate draining and to reduce the risk of spilling engine and hydraulic oils, there are special hoses supplied with each machine.

The hydraulic tank, as well as the front and rear axles, has a protective valve in the breather filter, minimizing leakage in the event of the machine tipping over.

An environmental declaration is supplied with each machine from the factory.



- Safe and easy cab access.



- Reversible fan for adverse conditions.



- Dual element filters offer full protection.



- Volvo genuine parts protect your investment.
- Easy service access.



SPECIFICATIONS

Engine

Volvo in-line 4-cylinder, 4 stroke, direct injection diesel engine with turbocharging, water cooled. EPA Tier 3 / EU STage IIIA compliant. Air cleaning:

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

Engine	D5DCAE3
Gross power @	2200 r/min
SAEJ1995	74.9 kW - 100 hp
Net power @	2200 r/min
SAEJ1349 - DIN ISO 1585	73 kW - 98 hp
Max. torque @	1600 r/min
SAEJ1349 net - DIN ISO 1585	409 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 transfer to bucket hydraulics at constant engine rpm. Multi-function joystick for change of direction, differential lock and use of the servo-control.

Oscillation at wheel, max.	360 mm
Track	1750 mm
Angle of oscillation	±12°

Tyres

Size	15.5-25
Rim	12 x 25 ET15

Differential hydraulically actuated 100% differential locks in both axles.

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

Braking system

Service brake: reliable, dual braking system, wet disc brakes (low speed : in rear axle, high-speed : in both axles), hydraulically actuated via pump accumulator.

1. Wear-free, hydrostatic inching brake / 2. Service brake, actuated via "inch/brake pedal". First stage of pedal application actuates the inching function, the last third of pedal application applies the service 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)	5.3 s
Lowering time (empty)	3.2 s
Dump time	1.1 s

Noise levels**

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

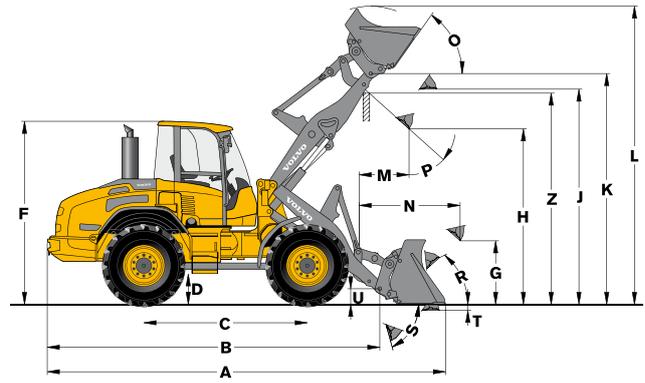
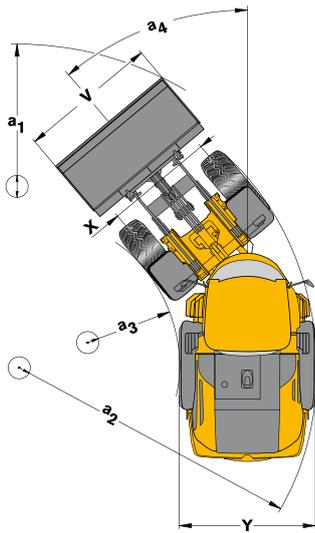
Sound power level (LWA) around the machine	102 dB(A)
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(Measurement according to 2000/14/EC with applicable appendices and measuring method according to ISO 6395)

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.

**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.



Data according to bucket type		Gen. Purpose		Light material		4-in-1	High-Tip
L45F with TP-Linkage, TPV attachment bracket (welded version) and 15.5-25 tires							
Capacity heaped	m ³	1.4	1.5	1.8	2.0	1.2	2
Material density	kg/m ³	1800	1700	1400	1200	1900	1000
Static tipping load, straight (ISO 14397)	kg	5970	5930	5780	5670	5650	4950
Static tipping load, full turn 40° (ISO 14397)	kg	5290	5250	5120	5020	5000	4370
Hydraulic lifting capacity, max.	kN	70	69.4	67.5	66	66.5	57.5
Breakout force	kN	62	59.7	53	48	66	-
A Total length	mm	6350	6385	6505	6615	6295	6955
L Lift height, max.	mm	4740	4790	4810	4940	4815	5695
V Bucket width	mm	2250	2250	2250	2250	2250	2250
a ₁ Clearance circle	mm	10300	10320	10390	10460	10305	10675
T Digging depth	mm	85	85	85	85	120	95
H Dump height, 45°	mm	2800	2780	2690	2610	2790	4230
M Reach at max. height	mm	930	945	1025	1100	815	1490
N Reach, max.	mm	1750	1770	1850	1925	1640	2670
Operating weight	kg	8630	8650	8660	8690	8850	9090

L45F with TP-linkage, TPV attachment bracket and 15.5-25 tires	
B	5320 mm
C	2650 mm
D	395 mm
F	2950 mm
G	1000 mm
J	3430 mm
K	3685 mm
O	55 °
P	45 °
R	45 °
S	75 °
U	255 mm
X	1750 mm
Y	2150 mm
Z	3445 mm
a ₂	4745 mm
a ₃	2555 mm
a ₄	40 °

Data according to bucket type		Gen. Purpose		Light material		4-in-1	High-Tip
L45F with TP-Linkage, TPZ attachment bracket and 15.5-25 tires							
Capacity heaped	m ³	1.4	1.6	1.8	2.0	1,3	2
Material density	kg/m ³	1900	1600	1400	1300	1900	1100
Static tipping load, straight (ISO 14397)	kg	6220	6120	6020	5890	6050	5260
Static tipping load, full turn 40° (ISO 14397)	kg	5500	5420	5330	5210	5350	4650
Hydraulic lifting capacity, max.	kN	74	72.5	71.3	69.5	72	62
Breakout force	kN	66	60.5	55.5	50	65	-
A Total length	mm	6260	6335	6415	6525	6270	6825
L Lift height, max.	mm	4680	4750	4820	4890	4730	5610
V Bucket width	mm	2250	2250	2250	2250	2250	2250
a ₁ Clearance circle	mm	10125	10165	10210	10275	10165	10590
T Digging depth	mm	90	90	90	90	45	80
H Dump height, 45°	mm	2875	2815	2755	2675	2865	4140
M Reach at max. height	mm	860	900	955	1030	850	1370
N Reach, max.	mm	1685	1725	1780	1855	1670	2540
Operating weight	kg	8580	8620	8610	8640	8830	9030

L45F with TP-linkage, TPZ attachment bracket and 15.5-25 tires	
B	5325 mm
C	2650 mm
D	395 mm
F	2950 mm
G	1000 mm
J	3430 mm
K	3685 mm
O	55 °
P	45 °
R	45 °
S	75 °
U	255 mm
X	1750 mm
Y	2150 mm
Z	3360 mm
a ₂	4745 mm
a ₃	2555 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	4420	4670
Payload according to EN 474-3, 60/80%	kg	2650 / 3530	2800 / 3730
Payload 80%, transport position, 40° full turn	kg	4000	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 (option)
Activation of multi-function joystick for directional change
Digital LED display activated by dual function keys for:
Entry and retrieval of operating information

Drivetrain

Hydrostatic drive
Operator-selected 100% differential locks in both axles.
Tyres 15.5-25

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, Interior

4-way adjustable operator's seat
Adjustable steering column
Seat belt
Sunvisor
Left armrest
Heater with air-filter and defroster (front/rear)
Cab ventilation
Airconditioner
Storage box in the cab
Rear view mirrors (left/right)
Cup holder
Coat hook
Emergency hammer

Working Equipment

Automatic bucket leveller
Hydraulic quick-change attachment bracket

Carriage Body

Fenders (front/rear)
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 - Criterion
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 intake (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
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

Volvo Construction Equipment is different. Our machines are designed, built and supported in a different way. That difference comes from an engineering heritage of over 180 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.

Not all products are 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

Volvo Construction Equipment
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