

VOLVO COMPACT WHEEL LOADER

L45B



- **Gross Power:**
SAE J1995 81/110 kW/hp
Net Power:
SAE J1349 73/99 kW/hp
- **Operating Weight:**
8,3 - 8,5 t
- **Bucket Capacities:**
1,3 - 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 quick-change coupling:** Various tried-and-tested attachments for a wide range of applications.
- **Purpose designed cab comfort:**
 - Electronic Information System.
 - Multi-function lever.

VOLVO

A wheel loader of the compact class from Volvo

Compact wheel loader L45B



First-class operator comfort

Mount your new Volvo loader and start into a successful work day. Your compact machine from Volvo makes it easy for you. Its spacious, comfortable cabin is entirely designed for precise and fatigue free work: excellent air conditioning, adjustable operator's seat and individually adjustable steering column. Clearly arranged dash board with supporting electronics (Electronic Information System).

Innovative Design

The new Volvo wheel loaders are something to be proud of. Their unmistakable rounded silhouette is pointing the way for a completely new generation of construction equipment. The attractive appearance is combined with function: Rounded rear section and 3-D-panorama cabin with extremely narrow frame parts enable an all-round view which has never before been achieved - for additional safety at work. With their compact dimensions and the selectable 100% differential lock these machines can easily cope with difficult terrain.



Uncompromising performance

Well-proven technology, high quality components and a well thought-out design: engine and central maintenance points in a service-friendly transverse arrangement. Powerful TP loader linkage with excellent lifting capacities and breakout forces. Durable hydrostatic travel drive for constant power. Strong diesel engines with high power reserves. Exemplary environmental features: excellent fuel economy, operation with low exhaust and reduced noise emissions.



1 Membrane key pad with symbols and integrated LEDs

- Entry and retrieval of basic operating data
- Functional keys for various operating functions
- Anti-theft function via numeric code

3 6-digit LED-display

- Indication of operating data

2 Colour-coded LED-illuminated symbols

- as controls
- as warning symbols combined with acoustic signal

4 Analog LED-information

- Fuel level
- Engine temperature
- Drive system oil temperature



TP loader-linkage - combined loader linkage with tried-and-tested advantages: parallelity throughout the lifting range and controlled dumping even from the highest lifting positions.



Non stop operation

Don't forget your breaks. Otherwise it may easily happen that your are on the go around the clock. Because there is always something to do for a real Volvo allrounder: in the morning with a bucket, at noon with the loading fork, in the afternoon with the road sweeper. Or with another one of the more than 60 attachments, with which you can convert your compact Volvo to your individual needs. With hardly any loss of time, because the hydraulic quick change system is standard on all machines.





ENGINE

Engine: Deutz in-line 4-cylinder, 4 stroke, direct injection diesel engine with turbocharging, water cooled.

Air cleaning:

1. Pre cleaner with ejector
2. Paper filter with indicator in cab
3. Safety filter

Engine	BF4M 1013E
Gross power @	2100 r/min
SAE J1995	81 kW
SAE J1995	110 hp
Net power @	2100 r/min
SAE J1349 - DIN ISO 1585	73 kW
SAE J1349 - DIN ISO 1585	99 hp
Max. torque @	1400 r/min
SAE J1349 netto	420 Nm
DIN ISO 1585	420 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 74 Ah
Alternator rating	1540/55 W/A
Starter motor output	4,0 kW



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 servo-control.

Axles: all-wheel drive by two rigid planetary 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.	310 mm
Track	1760 mm
Angle of oscillation	±10°
Tires: Size	15.5-25
Rim	12 x 25

Speed, max.:	Standard	High Speed
1st range forward/reverse	6,0 km/h	6,0 km/h
2nd range forward/reverse	20,0 km/h	17,0 km/h
3rd range forward/reverse		35,0 km/h



SERVICE FILL CAPACITIES

Engine	14,0 l
Fuel tank	130,0 l
Front axle, total	7,9 l
Rear axle, incl. drop-box	9,9 l
Hydraulic tank, incl. hydraulic system	120,0 l



BRAKING SYSTEM

Service brake: reliable, dual braking system, disc brake hydraulically actuated via pump accumulator, acting upon all four wheels.

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.
3. High speed version: Inch/brake pedal and additional pedal both acting on the oil immersed multi-disk brake.

Parking brake: central disc brake, acting upon all four wheels.



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
Preparation for operating hydraulic attachments with this function is available as an option.

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.

Hydraulic pump: axial piston pump

Hydraulic pump	
Flow	106 l/min
@ engine rpm	2100 r/min
Relief valve pressure	25 MPa



STEERING

Load sensing hydrostatic steering. Central articulating-ocillating joint with damping effect.

Steering pump: gear-type pump controlled by priority valve.

Steering cylinder: 2 double-acting steering cylinders

Steering	
Angle of articulation	±40°
Steering pump	
Flow	43,5 l/min
@ engine rpm	2100 r/min
Relief valve pressure	17 MPa



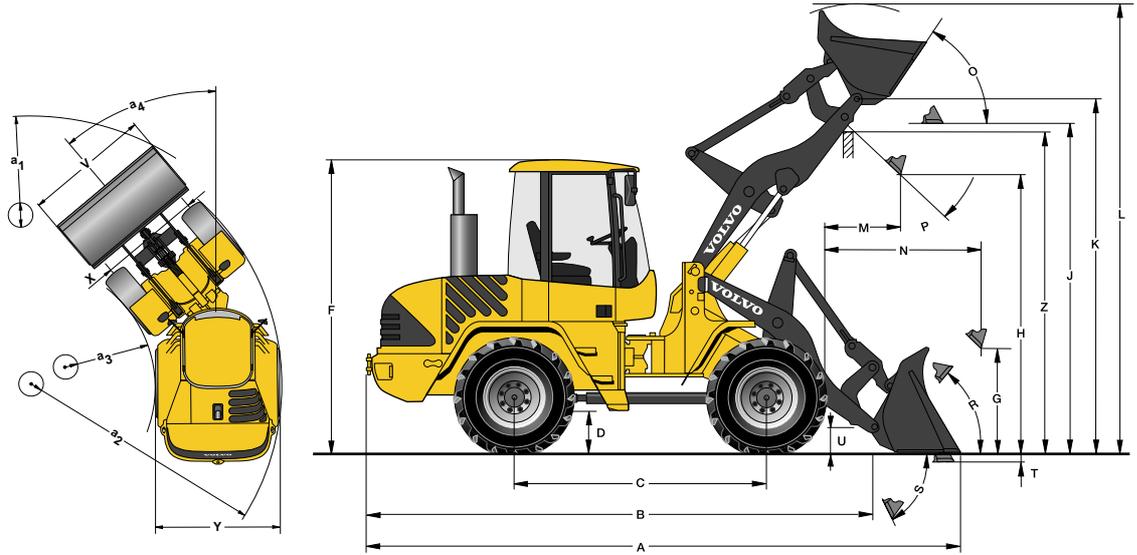
LINKAGE

Linkage system:	TP
Lift cylinders	2
Tilt cylinders	1

Lift time (loaded)	6,0 s
Lowering time (empty)	5,0 s
Dump time	1,5 s
Crowd time	1,8 s

DIMENSIONS • TPZ-LINKAGE

L45B with TP-linkage, Z-attachment carrier and 15.5-25 tires		
B	5000	mm
C	2450	mm
D	410	mm
F	2930	mm
G	1030	mm
J	3395	mm
K	3650	mm
O	57	°
P	45	°
R	50	°
S	68	°
U	255	mm
X	1760	mm
Y	2160	mm
Z	3330	mm
a ₂	4520	mm
a ₃	2270	mm
a ₄	±40	°



OPERATING DATA • TPZ-LINKAGE

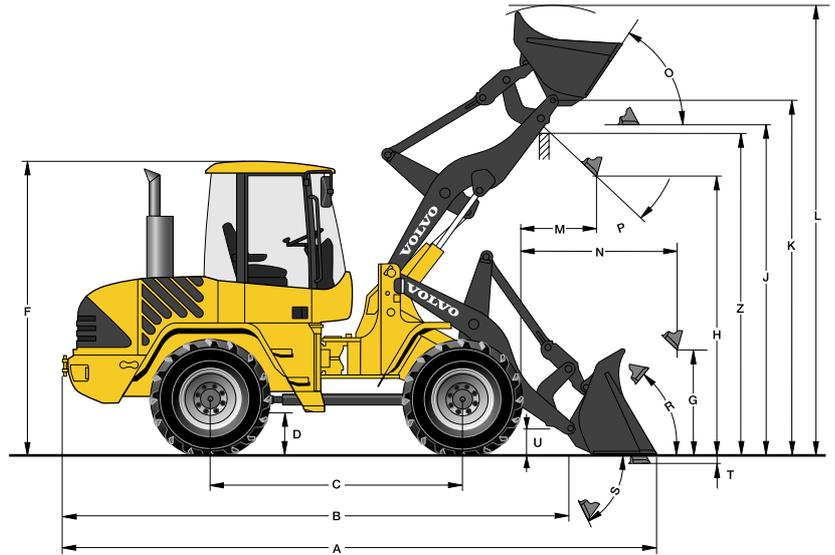
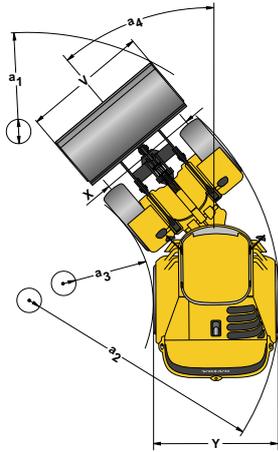
Data according to bucket type		General Purpose		Light Material		4-in-1	High-Tip
L45B with TP-linkage, Z-attachment carrier and 15.5-25 tires							
Capacity heaped	m ³	1,4	1,6	2,0	2,5	1,3	2,3
Material density	kg/m ³	1900	1600	1300	900	1900	1000
Static tipping load, straight (ISO / DIS)	kg	6250	6100	5900	5750	5800	5250
Static tipping load, full turn 40° (ISO / DIS)	kg	5500	5400	5250	5100	5100	4650
Hydraulic lifting capacity, max.	kN	77,0	75,5	73,5	71,5	72,5	64,5
Breakout force	kN	69,0	63,0	49,5	43,5	60,5	-
A Total length	mm	5935	6010	6200	6350	6050	6500
L Lift height, max.	mm	4645	4725	4840	5050	4560	5710
V Bucket width	mm	2250	2250	2250	2250	2250	2250
a ₁ Clearance circle	mm	9720	9760	9880	9980	9780	10080
T Digging depth	mm	200	200	195	195	190	195
H Dump height	mm	2840	2780	2645	2535	2735	4110
M Reach at max. height	mm	820	860	990	1085	860	1330
N Reach, max.	mm	1635	1675	1805	1900	1675	2490
Operating weight	kg	8310	8360	8340	8440	8510	8810

Data with Loading Fork		L45B - Possible machine variations		
		Linkage/attach. carrier	Standard	High speed
Centre of gravity 500 mm				
Tipping load, full turn (ISO / DIS)	kg		●	●
Payload according to EN 474-3, 60/80%	kg		●	●
Payload 80%, transport position, 40° full turn	kg			

DIMENSIONS • TPV-LINKAGE

L45B with TP-linkage,
V-attachment carrier
and 15.5-25 tires

B	5000	mm
C	2450	mm
D	410	mm
F	2930	mm
G	970	mm
J	3395	mm
K	3650	mm
O	57	°
P	45	°
R	50	°
S	68	°
U	255	mm
X	1760	mm
Y	2160	mm
Z	3400	mm
a ₂	4520	mm
a ₃	2270	mm
a ₄	±40	°



OPERATING DATA • TPV-LINKAGE

Data according to bucket type		General Purpose		Light Material		4-in-1	High-Tip
L45B with TP-linkage, V-attachment carrier and 15.5-25 tires							
Capacity heaped	m ³	1,4	1,6	2,0	2,5	1,2	2,3
Material density	kg/m ³	1800	1600	1200	900	1900	900
Static tipping load, straight (ISO / DIS)	kg	5900	5800	5650	5500	5500	4900
Static tipping load, full turn 40° (ISO / DIS)	kg	5250	5150	5000	4850	4850	4350
Hydraulic lifting capacity, max.	kN	72,6	71,2	69,5	67,5	67,5	60,0
Breakout force	kN	62,0	57,3	48,1	42,8	53,5	-
A Total length	mm	6030	6100	6290	6440	6180	6630
L Lift height, max.	mm	4700	4770	4900	5110	4620	6170
V Bucket width	mm	2250	2250	2250	2250	2250	2250
a ₁ Clearance circle	mm	9770	9820	9940	10040	9860	10100
T Digging depth	mm	200	200	190	190	195	210
H Dump height	mm	2780	2720	2580	2470	2640	4190
M Reach at max. height	mm	895	935	1060	1160	940	1430
N Reach, max.	mm	1710	1750	1875	1975	1760	2620
Operating weight	kg	8400	8450	8430	8520	8620	8910

Data with Loading Fork		L45B - Possible machine variations		
		Linkage/attach. carrier	Standard	High speed
Centre of gravity 500 mm				
Tipping load, full turn (ISO / DIS)	kg		●	●
Payload according to EN 474-3, 60/80%	kg		●	●
Payload 80%, transport position, 40° full turn	kg			

Quality Counts



Robust

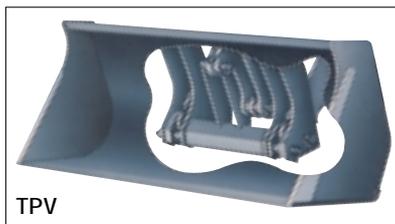
- Tried-and-tested components from well-known manufacturers
- Patented Volvo-loader linkage system
- Sealed bearings on the lifting frame
- Cables and hoses fed through the central articulating oscillating joint for safety and protection
- Engine hood made of tough impact resistant PMMA

Easy to handle

- Compact dimensions
- Articulating oscillating joint and high ground clearance
- 100 % operator-selectable differential lock on both axles
- Hydrostatic transmission with automatic drive facility



TPZ



TPV

Highly efficient

- TP-loader linkage with high restraining forces for safe and controlled manoeuvring in high working positions
- High breakout force and excellent lifting capacity
- Powerful low-emission engine

Economical

- Extraordinary performance in relation to machine size
- More than 60 attachments available
- Hydraulic quick change coupler
- 2 types of attachment carrier (TPZ, TPV)
- Fuelsaving load sensing hydraulics

Safe

- ROPS/FOPS-cabin
- 3-D panorama cabin and rounded machine contours for excellent all-round view
- Utmost stability due to balanced axle load distribution
- Anti-theft function via numeric code (option)



STANDARD EQUIPMENT

Engine

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

Electrical System

Alternator 55 A

Lighting:

Main head lights (halogen)
full/dipped/asymmetrical
Working lights (2 front/1 rear)
Parking lights
Rear lights
Brake lights
Direction indicators
Hazard warning lights
Reversing lights
Cab lighting

Instrumentation & controls:

Multi-function lever
24 Volt accessories socket
Horn
Hazard warning switch
Safety start

Electronic

Information System:

Analog LED-information for:

Fuel level
Engine temperature
Drive system oil temperature
LED-illuminated symbols (colour-coded) for:
Direction (forward/reverse)
Indicators (left/right)
Pre-heater

Main beam
Differential locks
Boom arm 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 arm suspension system on/off (option)
Locking and activation of Volvo -attachment carrier (option)
Activation of multi-function lever for directional change
Digital LED display activated by dual function keys for:
Entry and retrieval of operating and service information
Anti-theft function control

Drivetrain

Hydrostatic drive
Operator-selected 100% differential locks

Tires 15.5-25

Hydraulic System

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

Service and Maintenance

Tool kit
Wheel nut wrench

Cab, Exterior

ROPS/FOPS-cab with flexible mountings
Walk-through cab
Lockable doors
All-round tinted safety glass
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 operator's seat
Adjustable steering column
Seat belt
Sunvisor
Heater with air-filter and defroster (front/rear)
Cab ventilation
Preparation for an optional air-conditioner
Storage box in the cab

Working Equipment

Automatic bucket leveller
Hydraulic quick-change attachment carrier

Carriage Body

Fenders and mudguards, (front/rear)
Lockable engine hood
Lockable fuel-tank cap
Vertical exhaust
Towing device
Lifting eyes

International Standards for Machines and Production

Quality:
DIN/ISO 9001
Safety:
CE - Criterion
Machine guide-lines 98/37/EC
ROPS ISO 3471
FOPS ISO 3449
Operating weight
ISO 7131
Tipping load / Payload:
ISO/DIS 14397-1
EMV (Electromagnetic Compatibility)
89/336/EEC plus supplement
Environment:
DIN/ISO 14001
Sound insulation:
86/622/EEC, amendment
95/27/EC

OPTIONAL EQUIPMENT

Engine

Pre-heater

Hydraulics

Additional hydraulics for
3rd hydraulic circuit
4th hydraulic circuit

Cab

Handthrottle
Hand control inch valve
Airconditioner
Radio

Working Equipment

Boom arm suspension system
Attachment carrier TPV

Environment

Initial filling of biodegradable hydraulic oil
Low-noise kit

Safety

Anti-theft system
Protective guards for:
Main head lights
Working lights
Rear lights
Rotating beacon
Audible reverse alarm

ATTACHMENTS

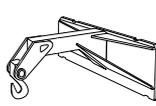
A small selection of the most popular attachments.
Further buckets and attachments available on request.



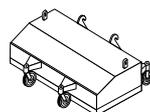
Loading Fork



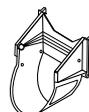
4-in-1 Bucket



Material Handling Arm



Sweeper



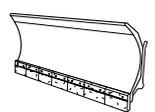
Tree Transplanting Bucket



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

Volvo Construction
Equipment

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