

V O L V O



Volvo Electric Compact Wheel Loaders 4.5 - 5.4 t

L25 ELECTRIC

Volvo Construction Equipment

L25 ELECTRIC



Uptime you can count on

- Work a full day – Operating time calculator available (contact your dealer)
- Make the most of every charge: fully electric driveline with energy recuperation and auto-shutoff function
- Choice of charging solutions 10-100% in up to 2 hours
- 2-year free servicing, 2-year full machine warranty, and 5 year extended coverage on battery and electronics



Open up new opportunities

- Perfect fit for noise sensitive areas
- Ability to work out of standard hours
- Zero-tailpipe emissions: work indoors and in emission-restricted zones
- Reduced environmental impact

Electrifying performance



Proven performance

- High lifting and breakout forces, superior roll-back and dump angles for bucket applications
- 100% parallel movements, outstanding lifting height and forward visibility for fork applications
- Rigid planetary axles, with 100% mechanical differential locks on the front and rear axles, offer maximum traction and minimal tire wear
- Articulating-oscillating center joint provides the best off-road capability and stability
- Faster response and instant torque in the driveline. Independent fast and powerful hydraulic movements controlled by joystick movement.



30% less maintenance

- Maintenance-free electric motors, featuring auto shutoff to save wear
- Fully electric driveline reduces hydraulic oil need by half
- Easy ground level access to lubrication and maintenance points



A new level of operator comfort

- Low vibration, low noise levels, no exhaust fumes
- Wide 3-point cab access
- Best all-round visibility
- Intuitive interface, electro-hydraulic controls
- Electric parking brake with auto-hold functionality. Keeps the brakes engaged indefinitely until you press the accelerator, even on flat ground
- Programmable cab heater (Option)
- Air conditioning system (Option)



The best battery and charging technology

- Lithium-Ion 48 V battery – 40 kWh or 56 kWh
- Standard Electric Vehicles (EV) charging protocol
- Charging according automotive standard (IEC 61851/SAE J1772), required to use in conjunction with energy management systems
- Programmable maximum charging level and charging power
- Simplified charging strategy with automatic charge re-start
- Charging status indicated by external coloured LEDs
- On-board charging done via Type 2 automotive standard inlet or dedicated fast charging connector
- Comes standard with up to 4.6 kW on-board charger capacity. Up to 9.2 kW or 13.6 kW on-board charger capacity available as option with charging from 10-100% in 2 hours 15 min.
- Fast charging possibilities, charging from 20-80% in 1 hour 15 min.
- Can be charged at any State Of Charge (SOC)
- With My Equipment App you can track the status of all your electric machines, designed with operator in mind



Work anything, anywhere

- Perfect fit for confined and narrow spaces
- Wide range of Volvo Attachments
- Attachment bracket with integrated third hydraulic function
- Customizable work modes including traction force, joystick and accelerator pedal sensitivity, flow control third hydraulic function
- Maximum speed of 20 km/h

Work anywhere, anytime: open up new opportunities

- Perfect fit for noise sensitive areas
- Ability to work outside standard hours
- Zero-tailpipe emissions: work indoors and in emission restricted zones
- Maximum speed of 20 km/h

Highest level of operator comfort

- Low vibration, relaxed working
- Low noise level inside and outside cab
- Wide door opening for easy getting in and out
- Electric parking brake with auto-hold function
- Efficient and powerful heating & ventilation system
- Programmable cab heater (Option)
- Air conditioning system (Option)

Proven performance

- High lifting and breakout forces, superior roll-back and dump angles for bucket applications
- 100% parallel movements, outstanding lifting height and forward visibility for fork applications
- Rigid planetary axles, with 100% mechanical differential locks on the front and rear axles, offer maximum traction and minimal tire wear
- Volvo attachment brackets: efficient attachment changes
- Articulating-oscillating centre joint provides the best off-road capability and stability
- Optional Z-bar delivers high-breakout force and excellent parallel movement for bucket and forks applications

The best battery technology

- Lithium-ion battery 48 V – 40 kWh (optional 56 kWh)
- Can be charged at any state of charge



Advanced charging technology

- On-board charging capacity depending on customer needs up to 4.6, 9.2 or 13.8 kW
- Fast charging function 20-80% in 1 hour 15 min
- Charging when energy is cheap: charging protocol according automotive standard (IEC 61851/SAE J1772), required to use in conjunction with energy management system for example charge your electric machine when your solar panel system is generating electricity
- Charging status indicated by coloured LEDs
- Programmable maximum charging level and charging power



30% less maintenance

- Maintenance-free electric motors, featuring auto shut-off to save energy and reduce wear
- Fully electric driveline reduces hydraulic oil need by half
- Ground level access to all service points

Useful functionality

- Configure working modes to suit your needs
- Flow rate adjustable proportionally as required in 3rd and 4th hydraulic function
- Proportional independent 4th hydraulic function (Option)
- Lift & tilt speed limiter (Option)
- Socket 8 pin attachment control & Configurable joystick buttons (Options) for maximum flexibility
- Rear view camera (Option)

Volvo L25 Electric in detail

Electrical Motor

Induction motor		
Driveline Motor power (net)	kW	22
Permanent magnet synchronous motor		
Working Hydraulics Motor power (net)	kW	14

Electrical System

Battery type	Lithium-ion	
Battery Voltage	V	48
Battery Capacity	kWh	40
	Ah	900
Indicative runtime	h	Up to 8*

Standard battery capacity 40 kWh / 900 Ah

On board charging time (10-100%):**

Charging capacity with charging cable AC	4.6 kW	~6 h 40 min
Charging capacity with charging cable AC	9.2 kW	~3 h 20 min
Charging capacity with charging cable AC	13.8 kW	~2 h 15 min

Off board fast charging time (20-80%):**

400 VAC, 16A / 9.6kW	~2 h 15 min
400 VAC, 32A / 17.3kW	~1 h 15 min

Optional battery capacity 56 kWh / 1 250 Ah

On board charging time (10-100%)*:

Charging capacity with charging cable AC	4.6 kW	~9 h 20 min
Charging capacity with charging cable AC	9.2 kW	~4 h 40 min
Charging capacity with charging cable AC	13.8 kW	~3 h 10 min

Off board fast charging time (20-80%):**

400 VAC, 16A / 9.6kW	~3 h 10 min
400 VAC, 16A / 17.3kW	~1 h 45 min

Auxiliary Battery

Type	AGM	
Voltage	V	12
Capacity	Ah	50

*Depending on application

**Specifications for charging power and time refer to optimum conditions. The maximum charging capacity depends on the local grid conditions. For detailed information, please visit Charging calculator on www.volvoce.com or contact your local dealer.

Linkage

The parallel linkage system offers 100% parallel lift with the loading fork. The linkage system and the attachment bracket are designed for an excellent visibility to the front attachment, fork tines and fork tines end. The Volvo Attachment Bracket P (parallel) is equipped with long guide pins and an additional sealing ring for protection against dust and mud.

P-Kinematics

Linkage system	P	
Lift cylinders		1
Tilt cylinders		1
Lift time (loaded)	s	6
Lowering time (empty)	s	4
Dump time	s	2.5

Z-Kinematics

Z-bar linkage providing high breakout force to the bucket and also parallel movement to the fork frame thanks to Volvo's specific kinematics.

Z

Lift cylinders	2	
Tilt cylinders	1	
Lift time (loaded)	s	6
Lowering time (empty)	s	4
Dump time	s	1.5

Wheels and Tires

Size	335/80 R18
Rim	11 x 18

Brake System

Central wet disc brake, hydraulic activated service brake and SAHR (spring applied hydraulically released) parking brake.



Hydraulic System

Thermal controlled oil circuit with integrated cooling system. Electric-Hydraulic control valve: double acting control valve with three spool system. Independent flow share function and fully controllable via joystick.

Flow	l/min	55
Working pressure max	MPa	23
3rd Hydraulic circuit flow	l/min	55
3rd Hydraulic circuit pressure max	MPa	17.5

Drivetrain

Angle of oscillation	±°	10
Oscillation at wheel, max.	mm	240
Track	mm	1 410

Travel speed, forward/reverse

1st gear	km/h	8
2nd gear	km/h	20

Steering System

Hydrostatic steering. Central articulating-oscillating joint. Gear pump with priority valve.

Steering cylinders		1
Working pressure	MPa	19
Max articulation	±°	38

Service Refill

Hydraulic tank	l	40.5
Transmission oil	l	0.6
Front axle oil	l	5.4
Rear axle oil	l	5.5

Cab

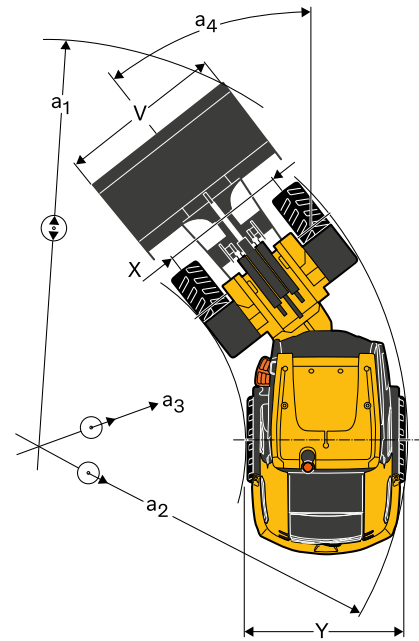
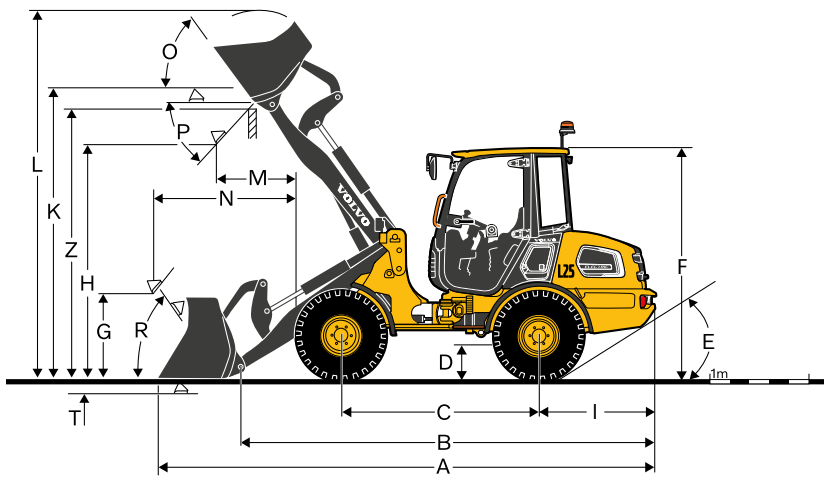
Instrumentation: All important information is located in the operator's field of vision.

Sound Level

Sound level in cab according to ISO 6396		
L _{pA}	dB	72
Sound level in cab, without cab fan		
L _{pA}	dB	62
External sound level according to ISO 6395 and EU Noise Directive 2000/14/EC		
L _{WA}	dB	89



Specifications



Bucket type		General Purpose	Light Material	4 in 1
		55279555	11391063	11391106
				
L25 Electric with P-Kinematics, P-attachment bracket and 335/80R18 tires				
Capacity heaped	m³	0.9	1.2	0.8
Material density	kg/m³	1 900	1 300	2 000
Static tipping load, straight (ISO 14397)	kg	3 814	3 480	3 569
Static tipping load, full turn 38° (ISO 14397)	kg	3 420	3 120	3 200
Hydraulic lifting capacity, max.	kN	41	40	39
Breakout force	kN	37	30	37
A Total length	mm	5 320	5 300	5 320
G Height of the lowest bucket edge	mm	710	710	690
L Lift height, max.	mm	4 175	4 300	4 170
V Bucket width	mm	1 800	1 800	1 800
a:Radius to outer point of machine incl. Bucket	mm	4 270	4 275	4 268
T Digging depth	mm	45	40	70
H Dump height, 45°	mm	2 340	2 340	2 320
M Reach at max. height	mm	810	810	780
N Reach, max.	mm	1 640	1 640	1 610
Operating weight	kg	4 850	4 850	5 000

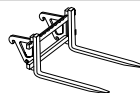
DIMENSIONS

L25 Electric with P-Kinematics, P-attachment and 335/80 R18 tires

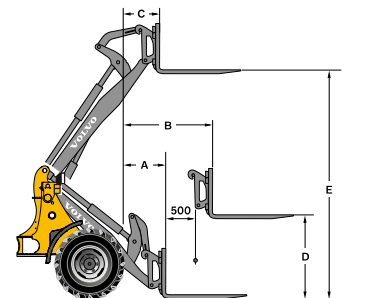
B	mm	4 280
C	mm	2 050
D	mm	290
E	°	31
F	mm	2 480
I	mm	1265
K	mm	3 140
O	°	56
P	°	45
R	°	56
X	mm	1 410
Y	mm	1 740
Z	mm	2 905
a ₂	mm	3 890
a ₃	mm	2 100
a ₄	°	±38

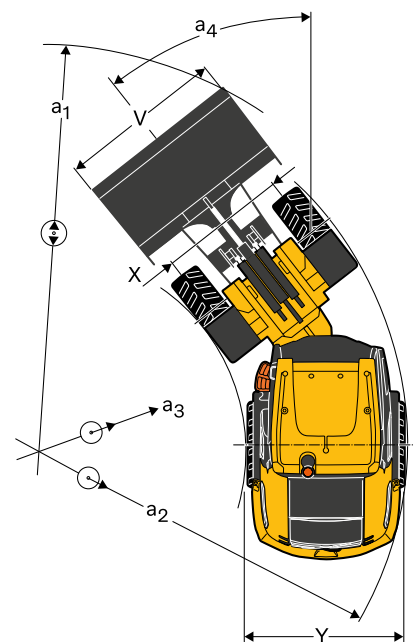
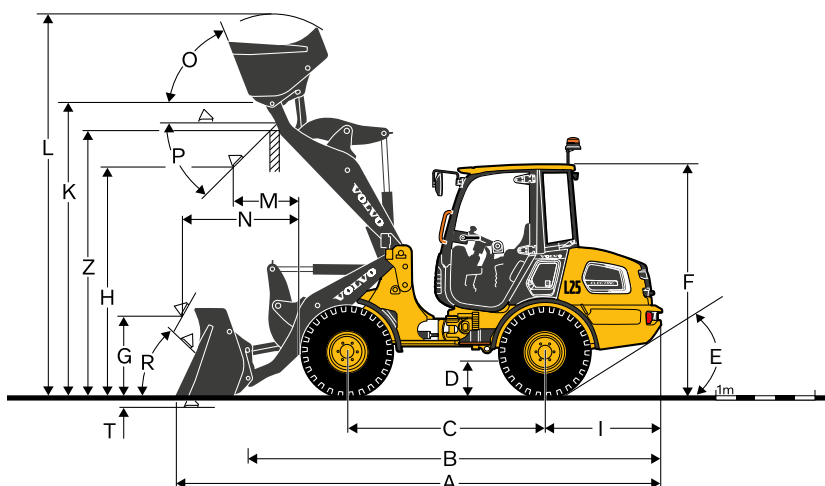
L25 Electric P-Kinematics, P-attachment and 335/80 R18 tires

Data with loading fork frame 1 345 mm (11390275) and tines 1 000 mm (2890382)
Centre of gravity 500 mm



Payload according to EN 474-3, 60/80%	kg	1 575 / 2 100
A	mm	694
B	mm	1 170
C	mm	350
D	mm	1 385
E	mm	3 025





Bucket type		General Purpose	Light Material	4 in 1
		11391030	11391005	11391092
				
L25 Electric with Z-Kinematics, Z-attachment and 335/80R18 tires				
Capacity heaped	m³	0.9	1.2	0.8
Material density	kg/m³	1 800	1 300	1 900
Static tipping load, straight (ISO 14397)	kg	3 599	3 480	3 377
Static tipping load, full turn 38° (ISO 14397)	kg	3 240	3 120	3 040
Hydraulic lifting capacity, max.	kN	55	52.8	51.5
Breakout force	kN	54.5	42	51.5
A Total length	mm	5 445	5 480	5 480
G Height of the lowest bucket edge	mm	848	711	826
L Lift height, max.	mm	4 125	4 260	4 080
V Bucket width	mm	1 800	1 800	1 800
a: Clearance circle	mm	4 438	4 420	4 448
T Digging depth	mm	100	100	105
H Dump height, 45°	mm	2 495	2 355	2 470
M Reach at max. height	mm	750	905	775
N Reach, max.	mm	1 525	1 675	1 545
Operating weight	kg	5 150	5 170	5 350

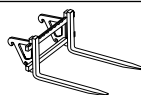
DIMENSIONS

L25 Electric with Z-Kinematics, Z-attachment and 335/80 R18 tires

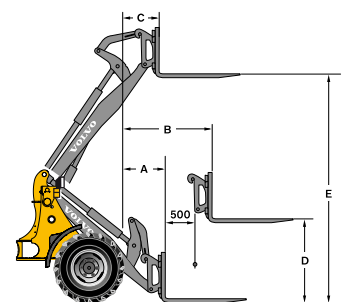
B	mm	4 470
C	mm	2 125
D	mm	310
E	°	31
F	mm	2 480
I	mm	1265
K	mm	3 170
O	°	70
P	°	45
R	°	50
X	mm	1 410
Y	mm	1 740
Z	mm	2 880
a ₂	mm	3 935
a ₃	mm	2 155
a ₄	°	±38

L25 Electric Z-Kinematics, Z-attachment and 335/80 R18 tires

Data with loading fork frame 1 345 mm (2812454) and tines 1 000 mm (2890382)
Centre of gravity 500 mm



Payload according to EN 474-3, 60/80%	kg	1 500 / 2 000
A	mm	848
B	mm	1 248
C	mm	476
D	mm	1 327
E	mm	2 973



Equipment

STANDARD EQUIPMENT
Electric / Electronic control system
Maintenance-free Lithium-ion (NMC) 48 V battery - protected and embedded in the machine structure
5 Pack Battery System - 40 kWh Gross Capacity
4.6 kW On-board charger with country specific charging socket
Charging status for AC and DC indicated by external coloured LEDs
Maintenance-free 12 V auxiliary battery
High quality connectors
Auto shut dow function
Programmable maximum charging level and charging power
Charging acc. automotive standard (IEC 61851/SAE J1772), required to use in conjunction with energy management systems
Protected battery cut-off switch with LOTO functionality
Full LED lights - Travel light equipment (Main Head Lights, Parking-, Rear-, Brake-, Hazard warning lights and direction indicators)
LED lights - Working lights on cab roof 2 000lm (2 front and 2 rear)
Electric powertrain
Full electric drive with energy recuperation
Operator-selected 100 % differential locks in both axles
Electric parking brake with auto hold function
Maintenance free wet brake system
Hydraulic System
Gear-type pump
Electric-Hydraulic control valve three-spool system with flow share function
3rd hydraulic circuit with proportional flow regulation
Hydraulic couplings for 3rd hydraulic circuit
Instrumentation & controls
Single lever including 3rd function - Electroproportional
12 Volt accessories socket
USB charging socket (USB-A + USB-C)
Signal horn
Hazard warning switch
Jogwheel for menu navigation
5 inch multicolor display
Digital information on 5 inch display:
Battery state of charge (SOC)
Working hours
Vehicle speed
Differential locks
Battery charging
Indicators (left/right)
Main beam head lamp
Direction (forward/reverse)
Hydraulic oil temperature
Hydraulic oil filter
Electrically operated parking brake
Jog-Dial for menu navigation and machine controls
Preset Work modes for different applications

STANDARD EQUIPMENT
Safety
Driveline shut off via buckle
Orange handrail on cab
Orange seat belt
Anti-theft system
Cab, interior
Adjustable steering column
4-way adjustable operator's seat, mechanical suspended
2 inch orange seat belt
Sunvisor
Heater with air-filter and defroster (front/rear)
Cab heating & ventilation navigation fully integrated in display
Storage box in cab
Cab, Exterior
ROPS/FOPS-cab
Lockable door
All-round tinted safety glass
Windscreen wiper (front/rear)
Windscreen washer (front/rear)
Openable & lockable window on the right hand side
Door & window stops
External rear view mirrors (right/left)
Working Equipment
Hydraulic P-Attachment bracket
Bucket level indicator
Carriage Body
Fenders (front/rear)
Lockable engine hood
Towing device
Lifting eyes
Tying down eyes
Wheels and tires
335/80R18
Service and Maintenance
Tool kit
Official approval
Quality: DIN/ISO 9001
Environment: DIN/ISO 14001
Safety: CE compliant acc. Machinery Directive 2006/42/EC and EN 474-series
Electromagnetic compatibility (EMC) confirming to European directive 2014/30/EC
Noise Emission Directive: 2000/14/EC
Tipping load / Payload: ISO 14397-1
ROPS conforming to ISO 3471
FOPS conforming to ISO 3449 (Level 2)
ECE R100 (approval of vehicles with regard to specific requirements for the electric power train)
Vehicle Homologation for public road traffic usage according German StVZO-Requirements

OPTIONAL EQUIPMENT
Electric / Electronic control system
7 Pack Battery System - 56 kWh Gross Capacity
On board charger up to 9.2 kW capacity*
On board charger up to 13.8 kW capacity*
Preparation for fast charger
AC-Charging cable
Off Board Fast charger IP54 360A – 17.3 kW Outdoor
Off Board Fast charger IP21 200A – 9.6 kW Indoor
Off Board Fast charger IP21 360A – 17.3 kW Indoor
Hydraulic System
Return line direct to filter*
Leakage line direct to hydraulic tank*
Boom Suspension system*
Safety valves on lift and tilt cylinders (hose rupture valves)*
Combination of Boom Suspension system & Safety valves*
Lift and tilt speed limiter*
BIO degradable hydraulic oil
4th independent proportional hydraulic function with flow control*
Instrumentation & controls
Configurable joystick buttons*
Cruise Control*
Simplified HMI*
Safety
Safety brace
Preparation for LED Rotating beacon (magnetic)
LED Rotating beacon (magnetic)
Foldable LED rotating beacon
3 inch orange seat belt
Audible reverse alarm
Audible reverse alarm 92 dB (white noise)
Audible reverse alarm switchable
Rear view camera*
Wheel chock
Cab, interior
Programmable cab heater*
Air conditioning system
Preparation for DAB radio incl. speakers & antenna*
DAB Radio with Bluetooth/USB and AUX connection*
Extended backrest for mechanical seat
Air suspended and heated operator's seat
Rear view mirror inside cab
Additional document box

OPTIONAL EQUIPMENT
Cab, exterior
Elevated Headlights 300 mm
LED work lights (2 000 lm) on cab roof, 4 front / 4 rear
Daytime running headlights
Enhanced rear view mirrors outside cab
Heated rear view mirrors*
Carriage Body
Full light protection
Headlight protection*
Worklight protection*
Rearlight protection*
Protective wax coating for overseas transport only
Wheels and tires
335/80R18
340/80R18
365/70R18
400/70R18
405/70R18
405/70R18 (L5 tire)
500/45 22.5 (low ground pressure tire)
33x12-20 (solid tire)
Working equipment
Attachment bracket Z
Attachment bracket SSL
Socket front 7 pin (sweeper preparation)*
Socket attachment control 8 pin*
Other
Special colour painting
Slow Moving Vehicle (SMV) warning triangle
Preparation for license plate (520 x 110 mm) front and/or rear with LED lighting*
Preparation for multiline license plate (340 x 245 mm) rear with LED lighting
Attachments
Forks with mechanical tines movements
Fork with hydraulically operated tines positioning
Fork with hydraulically operated tines positioning & side shift
Refuse bucket with clamp
Light Material bucket
Side-Tip bucket
High-Tip bucket
Material Handling Arm
Multi-Purpose bucket
Grading bucket with / without extension
General Purpose bucket
Hay and manure fork
Custom-Built Attachments

*Available as Aftermarket option (AMO) incl. installation instruction

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