

V O L V O



Volvo Electric Compact Wheel Loaders 5.1 - 5.3 t

# L25 ELECTRIC

Volvo Construction Equipment



# Welcome to our world

Welcome to a world of industry leading machinery. A world where imagination, hard work and technological innovation will lead the way towards developing a future which is cleaner, smarter, and more connected. A world supported by the enduring values of the Volvo Group. A world of stability, sustainability and innovation. A world which we put our customers at the heart of.

Welcome to the world of Volvo Construction Equipment – we think you're going to like it here.

## Small machines, big results

With decades of experience in the design and manufacture of compact excavators and wheel loaders, our range of compact machinery is designed with customer success in mind. Built from the same DNA as large Volvo machinery, our compact range sets the standard for efficiency performance and uptime – complemented by an extensive range of Volvo attachments for maximum versatility.

Building on our proud history, the Volvo Concept Lab continues to create cutting-edge ideas and innovative concepts – such as our award-winning electric compact machines – to ensure we offer our customers machines which deliver big results long into the future.



## Solutions for you

Our industry leading machines are just the start of your relationship with Volvo. As your partner, we have developed an extensive range of additional solutions to help you improve uptime, boost productivity and reduce costs.

### Designed for your business

Structured across nine blocks, our portfolio of products and services are designed to complement your machine's performance and boost your profitability. Simply put, we offer some of the best guarantees, warranties and technological solutions in the industry today.

### There when you need us

Whether you're buying new or used, our global network of dealers and technicians offer around-the-clock support, including machine monitoring and world-class parts availability. It's the basis of everything offered by Volvo Services, so you can be confident we've got you covered right from the start.



**Fuel Efficiency Services**



**Productivity Services**



**Safety Services**



**Financial Services**



**Uptime Services**



**Rental Services**



**Volvo Attachments**



**Genuine Volvo Parts**



**New Life Services**

# BUILDING TOMORROW





# WORK ANYTIME, ANYWHERE

Not only does the L25 Electric benefit communities as a whole, it also creates new commercial opportunities for your business, particularly when working in environmentally sensitive areas. The low noise level means the machine can operate anytime, anywhere – even at night in populated areas. Zero emissions also mean there is no need for costly fume extraction systems when working indoors.



*"With the batteries acting as a counterweight, the L25 Electric can really lift a lot for a compact machine. It's biggest advantage though, is that it's low emission, silent and has minimal vibration. Our operators enjoy working with it."*

**Silvan Eberhard,**  
Head of Logistics, at Eberhard (Switzerland)

# Open up new opportunities

At Volvo we recognize that a sustainable business is a successful business, and we are delighted to introduce the Volvo L25 Electric, the first in a new range of electric compact wheel loaders. The L25 Electric combines the proven Volvo compact wheel loader platform with battery power, providing all the performance you need along with zero-tailpipe emissions and an incredibly low noise level.



## **A new level of wellness**

Operators will experience the world-class cab for which Volvo is renowned, including wide entry, superior visibility and comfort levels, further enhanced thanks to a dramatic reduction in noise, vibration and heat, and no exhaust fumes. This all contributes towards a quieter and cleaner jobsite, improving communication and working conditions for all personnel.

## **As versatile as ever**

Unlock the full potential of your L25 Electric and take on a wide variety of jobs with an extensive range of available Volvo Attachments. Versatility is also supported by the integrated Volvo Attachment Bracket which enables quick and easy attachment changes from the comfort of the cab.



### Proven performance

The Volvo L25 Electric delivers all the performance you would expect from a wheel loader in this size class, but with less noise and zero-emissions. The compact machine delivers outstanding lifting and breakout forces, maximum traction as well as unrivalled off-road capability and stability.



### Tailor it your way

On top of the ergonomic and intuitive controls, operators benefit from a range of customizable working modes to adapt the behavior of the machine according to the ground conditions, attachment being used and their personal preferences.

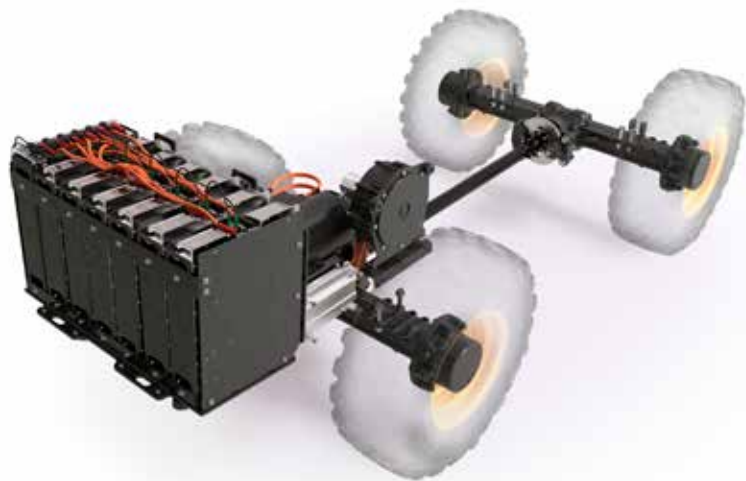


See how easy adjusting traction force, auxiliary hydraulic flow as well as sensitivity of the joystick and accelerator pedal is.



# A FULL DAY'S WORK

The L25 Electric can deliver up to 6 hours of active work per charge depending on the environment and task at hand. To find out if an electric Volvo machine is the right fit for your activities, just talk to your dealer, who can help you calculate operating time and the optimum charging solution based on your operation.



## **The best battery technology**

The best machines deserve the best power solutions, which is precisely what you can expect in the L25 Electric, equipped with a lithium-ion 48v battery. Simply put, this is the best technology for the job with a capacity of 40kW. What's more, the battery is designed to deliver up to 2500 full charge cycles, accounting for the full life expectancy of the machine.

## **Supercharged efficiency**

The fully electric driveline of the L25 Electric has an energy recovery function which keeps energy losses to a minimum, ensuring the highest levels of efficiency without any compromise on performance. Further energy savings are secured thanks to full LED lighting and auto-shutoff function on the electric motors.

# Uptime you can count on

Enter the brave new world of electric machinery with complete confidence thanks to a range of solutions and services from Volvo. Count on the best battery technology, reduced servicing, fast-charging solutions and impressive warranties to give you complete peace of mind that your electric machine will deliver all the performance and uptime which your operation demands.



## EMMA: your uptime partner

Stay ahead of charging requirements and ensure your Volvo electric machine is ready for action with our Electric Machine Management Application. 'EMMA' is a web application providing insight into your machine, including charging status, battery level and geographic location. Simply access the application on any internet-connected device to gain valuable information to help you manage the charging process more efficiently and maximize machine uptime.



◀ Here is how a day out  
with EMMA looks like

### **Charge from 0 to 100% overnight**

The Volvo L25 Electric comes as standard with an integrated on-board charger compatible with standard protocols used on wall boxes and charging stations\*. It supplies a 3kW power output to the batteries, allowing the machine to charge from 0 to 100% overnight. It also comes with the necessary charging cable, plug and adapters to charge from a wall socket or wallbox. \*Where local legislation allows.

### **Charge from 0 to 100% in 2 hours**

When projects and applications demand faster charging, a range of optional fast off board chargers are available for both indoor and outdoor use. These will charge your L25 Electric from 0 to 100% in up to 2 hours and double your net operating time.



### **30% less maintenance**

Give your uptime a boost and reduce maintenance requirements by 30% thanks to the fully electrified machine, powered by two maintenance-free and water-cooled motors. What's more, the electric motors stop when the machine is not working or moving, eliminating unnecessary wear and idle operating hours.

### **5 years premium support**

In addition to the first-class back-up and support from your Volvo dealer, the L25 Electric comes complete with 2-year free servicing and a 2-year full machine warranty. Furthermore, by signing up for a maintenance agreement after year 2, the battery and electronic components are covered free of charge against defects for an additional 3 years.

# Electrifying performance

## Open up new opportunities

- Perfect fit for noise sensitive areas
- Ability to work out of standard hours
- Zero-tailpipe emissions: work indoors and in low-carbon areas
- Enhanced working conditions



◀ Explore the machine in our walkaround video



## A new level of wellness

- Low vibration, low noise levels, no exhaust fumes
- Wide 3-point cab access
- Best all-round visibility
- Intuitive interface, Electro-hydraulic controls

## 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 recovery function and auto-shutoff function
- Choice of charging solutions | 0-100% in up to 2 hours
- 2-year free servicing, 2-year full machine warranty

## The best battery technology

- Lithium-Ion 48V battery – 40kW capacity
- Comes with 3kW on-board charger and necessary charging cable, plug and adapters
- Fast charging possibilities – From 0 to 100% in up to 2 hours (off board charger)
- Can be charged at any point in time
- Theft protected fixed battery
- Designed to deliver up to 2500 full charge cycles

## 30% less maintenance

- Maintenance-free electric motors, featuring auto shutdown to save wear and energy
- No hydrostatic drive = reduced hydraulic oil use by half
- Easy ground level access to lubrication and maintenance points

## Work anytime, anywhere

- Access tight areas thanks to compact design
- Wide range of Volvo Attachments
- Attachment bracket with integrated third hydraulic function
- Customizable settings including traction force and joystick/accelerator pedal sensitivity

## Proven performance

- High lifting and breakout forces, excellent parallel movement, superior roll-back and dump angle
- Rigid planetary axles with 100% differential locks: maximum traction and minimal tire wear
- Articulating-oscillating joint: best off-road capability and stability

# A commitment to electric

At Volvo Construction Equipment we are committed to building the world we want to live in, for everyone. A world where progress is made in a sustainable, efficient and peaceful way. The L25 Electric is just one part of this and joins an ever-growing portfolio of Volvo electric machines, trucks and buses – helping to raise the bar for our industry when it comes to electric solutions.

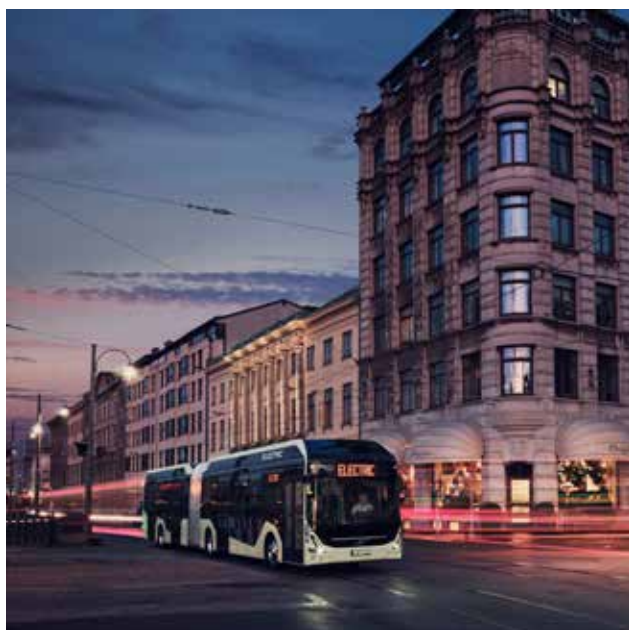
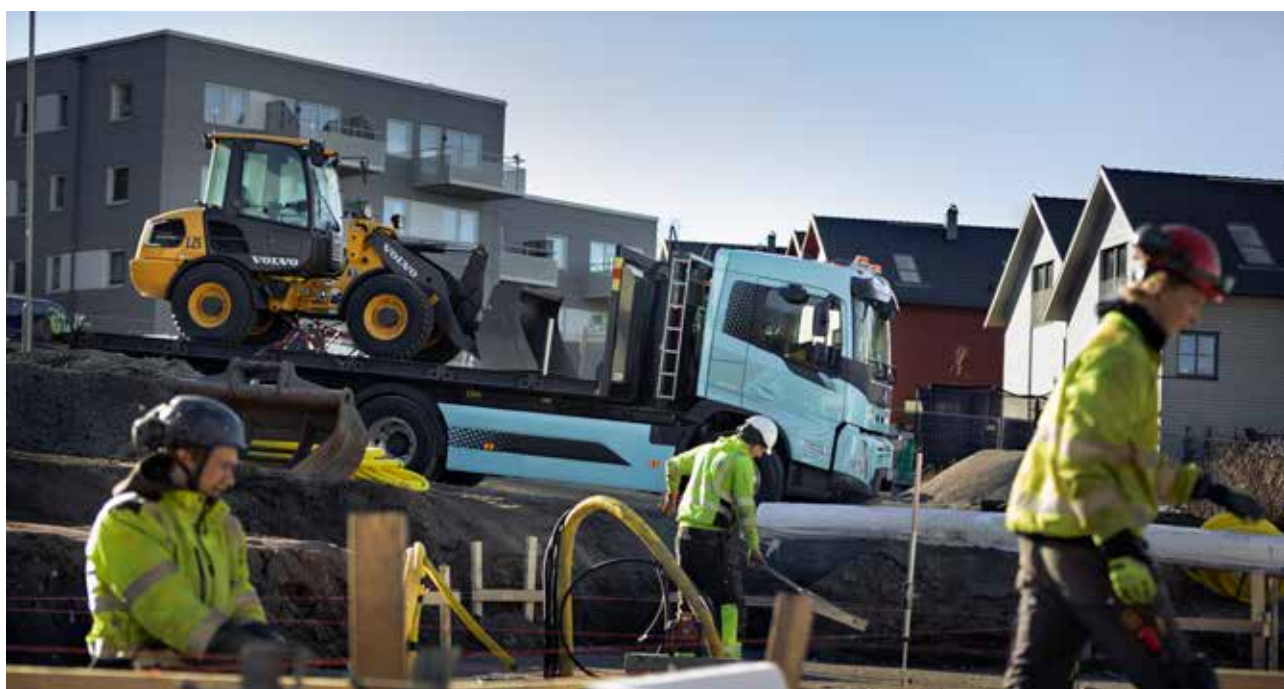




*"The L25 Electric is an important milestone in our journey to introduce more electric mobility at AWB Cologne and is certainly fulfilling our expectations. We are managing well with the electric power – even in the cold. Capacity, handling and shovel size – everything fits. So far, there have been no aspects that would make us question our decision. It was definitely the right choice."*

**Dr. Bert Schröer,**

Head of Mobility and Sustainability at AWB Cologne (Germany)



**JOIN THE ELECTRIC  
REVOLUTION**



Are you ready to take  
your business to new places?  
**Reserve your Volvo electric  
construction machine online!**

# Volvo L25 Electric in detail

## Electrical System

Battery type	Lithium-ion
Battery Voltage	V 48
Battery capacity (full package)	kWh 40
	Ah 900
Indicative runtime	hours Up to 8
On board charging time (0-100%) 230 VAC 6A	hours ~ 25
On board charging time (0-100%) 230 VAC 8A	hours ~ 18.5
On board charging time (0-100%) 230 VAC 10A	hours ~ 14.5
On board charging time (0-100%) 230 VAC 13A	hours ~ 11.5
On board charging time (0-100%) 230 VAC 16A	hours ~ 11.5
Off board charging time (0-100%) 400 VAC 16A – 9.6kW	hours ~ 3.5
Off board charging time (0-100%) 400 VAC 32A – 17.3kW	hours ~ 2
Auxiliary Battery Voltage	V 12
Auxiliary Battery capacity	Ah 52

## Electrical motor

Driveline Motor type	Induction motor
Driveline Motor power (peak)	kW 36
Working Hydraulics Motor type	Permanent magnet
Working Hydraulics Motor power (peak)	kW 32

## Linkage

Z-bar linkage providing high breakout force to the bucket and also parallel movement to the fork frame thanks to Volvo's specific kinematics.		
Linkage system		Z
Lift cylinders		2
Tilt cylinders		1
Lift time (loaded)	s	6
Lowering time (empty)	s	4
Dump time	s	1.5

## Tires

Size	335/80 R18
Rim	11 x 18

## Brake system

Dry disc brake system for service and parking brake: reliable braking system, acting upon all four wheels.

## Hydraulic system

Thermal controlled oil circuit with integrated cooling system. Electric-Hydraulic control valve: double acting control valve with three spool system. Flow independent and fully controllable via joystick		
Working pressure max	MPa	23
Flow	l/min	55
3rd Hydraulic circuit pressure max	MPa	17.5
3rd Hydraulic circuit flow	l/min	55

## Drivetrain

Angle of oscillation	± °	10
Oscillation at wheel, max.	mm	245
Track	mm	1 402
Travel speed, forward/reverse	km/h	16

## Steering System

Hydrostatic steering. Central articulating-oscillating joint. Steering pump: gear-type with priority valve		
Steering cylinders		1
Working pressure	MPa	19
Maximum flow	l/min	55
Max articulation	± °	38

## Service Refill

Hydraulic tank	l	37
Transmission oil	l	0.6
Front axle oil	l	5.5
Rear axle oil	l	5.5

## Cab

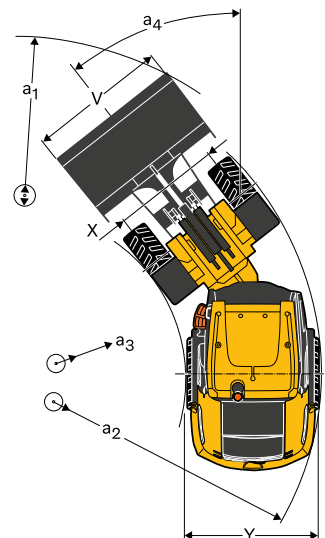
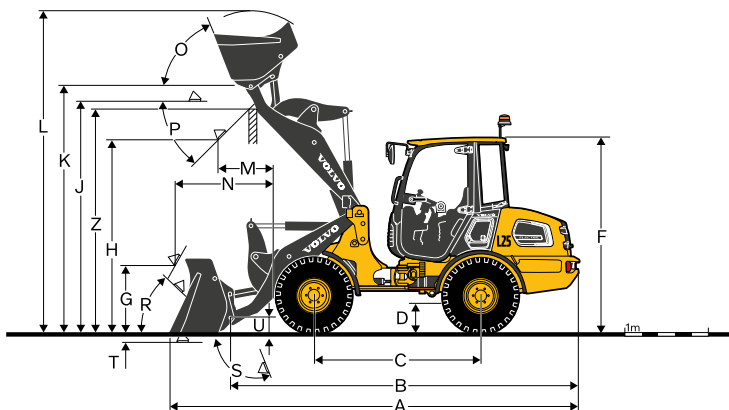
Instrumentation: All important information is located in the operator's field of vision.

## Sound Level

Sound pressure level in cab according to ISO 6396:		
L <sub>pA</sub>	dB	72
External sound level according to ISO 6395 and EU Noise Directive 2000/14/EC		
L <sub>WA</sub>	dB	88



# Specifications



Bucket type	General Purpose				Light Material		4 in 1	
<b>L25 Electric with z-bar linkage and 335/80R18 tyres</b>								
Capacity heaped	m <sup>3</sup>	0.9	1.0	1.2	0.8			
Material density	kg/m <sup>3</sup>	1 800	1 600	1 300	1 900			
Static tipping load, straight (ISO 14397)	kg	3 750	3 700	3 600	3 450			
Static tipping load, full turn 38° (ISO 14397)	kg	3 350	3 300	3 250	3 100			
Hydraulic lifting capacity, max.	kN	55	54.2	52.8	51.5			
Breakout force	kN	54.5	47.5	42	51.5			
A Total length	mm	5 445	5 375	5 480	5 480			
L Lift height, max.	mm	4 125	4 170	4 260	4 080			
V Bucket width	mm	1 800	1 800	1 800	1 800			
a <sub>1</sub> Clearance circle	mm	8 875	8 780	8 840	8 895			
T Digging depth	mm	100	100	100	105			
H Dump height, 45°	mm	2 495	2 425	2 355	2 470			
M Reach at max. height	mm	750	825	905	775			
N Reach, max.	mm	1 525	1 600	1 675	1 545			
Operating weight	kg	5 080	5 080	5 120	5 260			

## DIMENSIONS

### L25 Electric with z-bar linkage and 335/80 R18 tyres

B	mm	4 470
C	mm	2 125
D	mm	310
F	mm	2 480
G	mm	850
J	mm	2 970
K	mm	3 170
O	°	70
P	°	45
R	°	50
S	°	96
U	mm	200
X	mm	1 410
Y	mm	1 740
Z	mm	2 880
a <sub>3</sub>	mm	3 935
a <sub>2</sub>	mm	2 155
a <sub>4</sub>	°	±38

## Data with loading fork

### Centre of gravity 500 mm



Tipping load, full turn (ISO / DIS)	kg	2 500
Payload according to EN 474-3, 60/80%	kg	1 500/2 000
Payload 80%, transport position, 38° full turn	kg	2 400

# Equipment

## STANDARD EQUIPMENT

### Drivetrain

- Full electric drive
- Operator-selected 100% differential locks in both axles

### Electric / Electronic control system

- Maintenance free 48V battery - protected and embedded in the machine structure
- On-board charger with Type 2 socket
- Standard charging cable with 3 plugs (domestic - white, CEE plug blue and red (for 230VAC 16A 1 phase)
- Maintenance free 12V auxiliary battery
- High quality connectors
- Protected battery cut-off switch
- In-cab 12V power socket
- Full LED Lights - Travel light equipment (Main Head Lights, Parking-, Rear-, Brake-, Hazard warning lights and direction indicators)
- Full LED Lights - Working lights (2front and 2rear)

### Hydraulic system

- Gear-type pump
- Electric-Hydraulic control valve three-spool system
- 3rd hydraulic circuit
- Hydraulic couplings for 3rd hydraulic circuit

### Instrumentation & controls

- Single lever including 3rd function - Electroproportional
- 12 Volt accessories socket
- Signal horn
- Hazard warning switch
- Jogwheel for menu navigation
- 5 inch multicolor display
- Digital information on 5 inch display
- Battery state of charge (SOC)
- Operating hours
- Differential locks
- Battery charging
- Indicators (left/right)
- Main beam head lamp
- Direction (forward/reverse)
- Hydraulic oil temperature
- Hydraulic oil filter
- Parking brake
- Jog-Dial for menu navigation and machine controls
- Preset Work modes for different applications
- Cruise control

### Safety

- Rotating beacon (foldable)
- Audible reverse alarm
- Anti-theft system



## STANDARD EQUIPMENT

### Cab, Exterior

- ROPS/FOPS-cab with flexible mountings
- Adjustable steering column
- DAB Radio preparation
- Lockable door
- All-round tinted safety glass
- Windscreen wiper (front/rear)
- Windscreen washer (front/rear)
- Openable window on the right side
- Door stops
- External rear view mirrors (right/left)
- 4-way adjustable operator's seat
- Orange seat belt
- Sunvisor
- Heater with air-filter and defroster (front/rear)
- Cab ventilation
- Storage box in cab

### Working Equipment

- Hydraulic Z-Attachment bracket
- 7 pin electrical socket on boom (Sweeper preparation)
- Bucket level indicator

### Carriage Body

- Fenders (front/rear)
- Lockable engine hood
- Towing device
- Lifting eyes
- Tying down eyes

### 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
- ROPS ISO 3471
- FOPS ISO 3449
- Noise Emission Directive 2000/14/EC
- EMC 2014/30/EC
- Tipping load / Payload: ISO 14397-1
- 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

Fast charging machine preparation with weather protected socket
Off Board Fast charger IP21 200A – 9.6kW Indoor
Off Board Fast charger IP21 360A – 17.3kW Indoor
Off Board Fast charger IP54 360A – 17.3kW Outdoor

### Hydraulic system

4th hydraulic circuit switched from 3rd function
BIO degradable hydraulic oil
3rd function oil return line via filter
Leakage line direct to hydraulic tank

### Instrumentation & controls

Boom Suspension System
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### Safety

Audible reverse alarm 92dB (white noise)
Safety valves on lift and tilt cylinders (hose rupture valves)
Safety brace
Rotating beacon (magnetic)

### Cab, Exterior

Heated rear view mirrors
Air suspended and heated operator's seat
DAB Radio with Bluetooth/USB and AUX connection
Additional document box

### Carriage Body

Headlight protection
Rearlight protection
Worklight protection

## OPTIONAL EQUIPMENT

### Wheel/Tires

335/80R18
340/80R18
365/70R18
405/70R18

### Other

Slow Moving Vehicle (SMV) warning triangle
Preparation for license plate front and/or rear
Special colour painting

### Attachments

General Purpose bucket
Multi-Purpose bucket
Grading bucket
Light Material bucket
Side-Tip bucket
Material Handling Arm
Forks with mechanical tines movements
Customer-Built Attachments

## SELECTION OF VOLVO OPTIONAL EQUIPMENT

### Fast charging preparation



### Boom Suspension System



### Biodegradable hydraulic oil



### 4th hydraulic circuit



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.

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