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Your questions answered

L90 ELECTRIC

Volvo Construction Equipment

L90 ELECTRIC

Volvo CE are proud to offer the first 15-ton electric wheel loader, the L90 Electric. With a run time of 4-5 hours in medium duty applications, the durable and versatile L90 Electric is suitable for a large range of applications and can be fully charged in 70 minutes.

01 What is the runtime of the L90 Electric from fully charged?

The two water-cooled battery packs enable a runtime of 4-5 hours in medium duty applications.

02 How long does it take to fully charge the L90 Electric?

When fast charging is required, DC charging power of up to 150 kW can be used to fully recharge in 70 minutes. Using the integrated 22 kW AC charger, a full recharge takes 6-7 hours.

03 What are the main features and benefits of the L90 Electric?

- Being electric, the L90 Electric is emission free, and supports companies in their ambitions to implement fossil free operation.
- The L90 Electric offers the same power and performance as the conventional L90H. It is very comfortable, easy to operate with less noise and vibration, more instantaneous response and smoother operation.
- A zero-emission, quiet power source that positively affects operator comfort, and can work in low emission zones, indoors and in noise restricted areas.
- No exhaust fumes and near silent operation opens up new opportunities for operation indoors or in areas with emission or noise restrictions.
- The L90 Electric can operate 4-5 hours in medium duty applications.
- A variety of charging options are available, and the L90 Electric can be fully charged in approximately 70 minutes.
- The L90 Electric offers a new Volvo designed and developed transmission. The premium transmission is part of an entire powertrain which has been built to the rigorous standards of quality, durability and reliability which Volvo is known for. This ensures seamless integration of components, resulting in optimal energy efficiency and unmatched strength and reliable performance.
- Offers two systems for thermal control:
 - Active cooling and heating of the battery packs.
 - Passive cooling of electric motors, transmission and hydraulic oil. This secures optimal efficiency, performance and maximizes the lifespan of components.

- Offers the unique Volvo TP Linkage, providing excellent parallel movement and even breakout force throughout the whole tilting motion and lifting range.
- Offers energy recovery function on deceleration, with settings which can be personalized for each operator. This maximizes operability and efficiency.
- Offers dedicated maintenance free electric motors for propulsion (1 motor) and hydraulics (1 motor) thus enabling full available power to both systems. This makes it easier to operate, enabling operators to reach optimal performance faster.
- Same or better power and performance as conventional equivalent, providing a quicker response and shorter cycle times.
- Offers all the benefits of the conventional L90H such as the Load Assist suite of apps (On-Board Weighing, Operator Coaching and Tire Pressure Monitoring System) and the same options and attachments you have grown to expect, together with the same level of operator comfort in the premium Volvo cab.
- For more information on the benefits of electric machines, please see here <https://www.volvoce.com/europe/en/electric-construction/benefits/>

04

What charging solutions are available for L90 Electric?

Volvo currently offers four charging solutions for the L90 Electric:

- o Using 22 kW AC charging cable for AC overnight charging- fully charge in 6-7 hours.
 - o Using 40 kW DC portable charger for DC overnight charging- fully charge in 4.5 hours.
 - o With a 150 kW DC – fully recharge in 70 minutes.
- Note: this solution requires installation by certified electrician

o Power Unit for power peak shaving: – fully recharge in 70 minutes. This solution allows fast charging of large electric machines on sites with no or limited grid connection. Input is up to 65kW AC (32A,63A or 125A) and output is up to 240 kW DC.

Note: the L90 Electric is limited to 150 kW.

For more information on the charging solutions available please refer to <https://www.volvoce.com/europe/en/electric-construction/charging-large-construction-equipment/>

05

What kind of connectors are needed to charge the L90 Electric using on-board charger?

AC-charging, up to 22 kW, can be connected via 32 A CEE connector.

07

Is there any difference in performance between the L90 Electric and the equivalent diesel model?

The L90 Electric offers the same performance as the conventional L90H. Additionally, the operator environment is the same, if you can operate a conventional L90H you can operate an L90 Electric.

06

When will the L90 Electric be commercially available?

The L90 Electric will be available to selected customers in selected markets in 2026. The target markets include Sweden, Germany, Norway and the Netherlands.

08

What are the optimal applications for the L90 Electric?

The optimal applications for the L90 Electric include industrial material handling such as log handling or in sawmills, light aggregate handling within Quarry & Aggregates and waste and recycling. The zero emission L90 Electric can operate in applications where diesel machines are not suitable such as material handling indoors, waste handling or urban construction sites within low emission zones or with noise restrictions.

09

Where can I get more information on the L90 Electric?

More information on the L90 Electric can be found <https://www.volvoce.com/europe/en/products/electric-machines/l90-electric/>

10

What batteries are used in the L90 Electric?

The L90 Electric uses a water-cooled lithium battery pack with a voltage of 600 V.

11

Is the L90 Electric available in the digital calculators on [volvoce.com](https://www.volvoce.com)/ Net Operating Tool Calculator (NOTC)?

The L90 Electric is not available at this time.

12

What are the differences between the L90 and L120 Electric

	L90 Electric	L120 Electric
Battery technology	2 water cooled lithium-ion batteries	8 water cooled lithium-ion batteries
Total battery capacity	180 kWh	282 kWh
Operating weight	14.5 – 17.3 tons	19-20 tons
Runtime (in medium-duty applications)	4-5 hours in medium duty applications	5-9 hours
Counterweight	Uses newly developed recyclable counterweight	Uses battery as counterweight
Has on-board charger	Yes	No
Placement of charging port	Entrance step on side of machine	At the rear of the machine
Applications	While applications are similar L90 Electric is more suited to industrial handling	While applications are similar L120 Electric is more suited to production/ bucket handling.

13

How can I stay connected to my machine to check charging status etc?

The L90 Electric offers the digital tool, My Equipment, developed to connect operators to their machines, whether on site or remotely. My Equipment offers the following features:

- Check the charging status of electric machines.
- Find relevant machine information such as machine hours, location and energy consumption.
- Get notified if there is a disruption in charging.

14

Where can I find more information on My Equipment?

More information can be found here: <https://www.volvoce.com/europe/en/volvo-services/uptime-services/my-equipment/>
* live from June 2024

V O L V O