

# LCA/Carbon footprint

## VOLVO ELECTRIC EXCAVATORS

In this document, the LCA/ Carbon footprint results for Volvo Electric Excavators are presented.

In the table below, carbon dioxide emissions from *cradle to gate* (raw materials processing, component manufacturing and machine assembly) for each excavator can be found.

Cradle to gate	Emissions [kg CO <sub>2</sub> -eq per machine]				
Model [Analysis year]	EC230 Electric [2023]	[202x]	[202x]	[202x]	[202x]
Scope 3 upstream	106 700				
Scope 1 & 2	1 530				
<b>Total:</b>	<b>108 230</b>				

In the table below, cradle to grave (all steps from extraction of raw materials to recycling and end of life) emissions per hour used for the same electric excavator models are summarized. The use-phase of the electric excavators is calculated based on the average electricity mix for EU and for the renewable mix.

Cradle to grave	Emissions [kg CO <sub>2</sub> -eq per operating hour]				
Model [Analysis year]	ECR230 Electric [2023]	ECR230 Electric [2023]	[202x]	[202x]	[202x]
Charging electricity mix (kgCO <sub>2</sub> e/MWh)	EU-Grid mix 290	Renewable 20			
Manufacturing	6,2	6,2			
Use (incl. outbound & service)	14,7	2,3			
End of Life	0,3	0,3			
<b>Total:</b>	<b>21,2</b>	<b>8,8</b>			

Please note that the use phase calculations are based on average use scenarios for several machine applications. To obtain a site-specific carbon footprint, specific studies on the site are required.

### Comparing life cycle assessment results

There is currently no agreed industry standard methodology for construction equipment LCAs and assessments can be performed in various ways. Methodology choices, such as system boundaries and input data, can differ and influence the results. Therefore, LCAs conducted by different OEMs with different methodologies are not comparable.

### For more information

The methodology behind these calculations is presented in the document “*Methodology for Volvo CE’s LCA/carbon footprint calculations*” that can be obtained on our website [www.volvoce.com/global](http://www.volvoce.com/global). For other information, please contact your Volvo CE representative, who will put you in contact with the Volvo CE LCA team.