

LCA/Carbon footprint

VOLVO EXCAVATORS

In this document, the LCA/ Carbon footprint results for Volvo 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 CO2-eq per machine]					
Model [Analysis year]	xx [20xx]	EC130 [2025]	EC140 [2024]	ECR145 [2025]	EC160 [2024]	ECR235 [2025]
Scope 3 upstream		51 900	54 000	56 900	65 500	91 300
Scope 1 & 2		450	550	940	1 190	1 540
Total:		52 350	54 550	57 840	66 590	92 840

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 excavator models are summarized.

Cradle to grave	Emissions [kg CO2-eq per operating hour]					
Model [Analysis year]	xx [20xx]	EC130 [2025]	EC140 [2024]	ECR145 [2025]	EC160 [2024]	ECR235 [2025]
Manufacturing		4,0	3,8	6,1	7,7	8,8
Use (incl. outbound & service)		23,1	26,5	24,9	27,1	40,2
End of Life (* see note)		0,05*	0,06*	0,09*	0,13*	0,12*
Total:		27,2	30,4	31,1	34,9	49,1

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.

(* Analyses from 2024 has a new End of Life calculation method Circular Footprint Formula (CFF))

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. For other information, please contact your Volvo CE representative, who will put you in contact with the Volvo CE LCA team.