

Product carbon footprint (Fossil emissions)

Average product

Equipment model: DD422i & DD422iE

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Sandvik conducts product-specific fossil GHG emissions calculations for mining and infrastructure equipment, following the core principles of ISO standards for life cycle assessment (LCA) and applicable Product Category Rules (PCR). A document detailing our calculation methodology is available on the Sandvik website¹⁾.

This document provides numerical data on the fossil carbon footprint of various products. It is acknowledged that customer-specific options influence manufacturing emissions, and that operating conditions and usage profiles significantly impact a product's life-cycle duration. The figures represent an average product within a specific application model, with use-phase emissions calculated based on the global average electricity emission factor.

When discussing the fossil carbon footprint of a product, reference is made to the emissions calculated for a single, average piece of mining or infrastructure equipment. The fossil carbon footprint is presented using two different functional units:

1. Cradle-to-Gate phase - reporting manufacturing emissions in kilograms of CO₂e per product.
2. Cradle-to-Grave emissions - covering total life-cycle emissions per hour of product use.

¹⁾ <https://www.rocktechnology.sandvik/en/about-us/sustainability/product-specific-carbon-emission-calculations/>

Manufacturing (Cradle-to-Gate) emissions (kg CO₂e per product)

Model	DD422i	DD422iE
Supply chain & Upstream transportation	71 799	84 171
Factory processes	2 745	2 467
Manufacturing total	74 544	86 638

Including: Raw material extraction, component processing, upstream transportation and Sandvik's own factory processes.

Full lifetime (Cradle-to-Grave) emissions (kg CO₂e per operating hour*)

Model	DD422i	DD422iE
Cradle-to-Gate	3,73 (5,6 %)	4,33 (7,1 %)
Use of sold products & Downstream transportation	59,68 (89,0 %)	52,81 (86,6 %)
Maintenance kits and reborn	3,44 (5,1 %)	3,64 (6,0 %)
End-of-life waste / circularity	0,19 (0,3 %)	0,18 (0,3 %)
Full lifetime total	66,59	60,96

Including: Manufacturing, downstream transportation, use of sold products, maintenance kits and reborn, and end-of-life.

*Operating hour is estimated to be 20 000 hours over the lifetime.

For more information

This document has been compiled to address questions regarding the fossil carbon footprint of Sandvik products. If required, Sandvik can provide more detailed calculations using the customer's specific products and input data. Additional materials are available on the Sandvik website. For further information, please contact your Sandvik representative.

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