Hillebrand Gori Carbon Calculator

User guide

This user guide provides an explanation of the Hillebrand Gori Carbon calculator, its functionalities and methodology, and it addresses frequently asked questions.

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What is the Hillebrand Gori carbon calculator and what is it used for?

The Hillebrand Gori carbon calculator is an openly available tool developed and run by Hillebrand Gori to estimate greenhouse gas emissions for transportation of goods by air and sea, and to calculate the potential savings with GoGreen Plus.

The minimum required input information is:

- Cargo Specification
- Origin
- Destination
- Mode of Transport

It can be used to obtain quick and easy estimations of carbon footprints, simulate transport scenarios, compare options and visualize routings.

Hillebrand Gori Carbon calculator leverages EcoTransIT. The emission estimations provided in this tool are in line with all guiding international standards and practices including the GLEC Framework, the GHG Protocol and the ISO 14083.

Please note that the emission estimations provided in this tool do not constitute a binding offer of carbon emissions created if shipments were to be moved by Hillebrand Gori, nor do they replace a detailed carbon reporting of past shipments. If you would like to obtain a detailed overview of carbon emissions created by your shipments at Hillebrand Gori, you can do so by **creating a new report in my.hillebrandgori.com.**

How to use the Hillebrand Gori carbon calculator

The **Hillebrand Gori Carbon calculator** supports both **full container loads (FCL)** and **less-than-container loads (LCL)**, such as shipments consisting of cases or pallets. To specify the load type, users must select one of the following options:

- **Cases/Pallets (LCL)** – for smaller shipments that do not fill an entire container
- **Container (FCL)** – for shipments using a full container

Depending on the selected load type:

- If **Cases/Pallets (LCL)** is chosen, the cargo must be specified by its **weight in kilograms**.
- If **Container (FCL)** is selected, the user must choose between a **20' or 40' container**.
- Additionally, users can indicate whether the container is a **reefer** (temperature-controlled).

These selections ensure that the calculator applies the correct methodology for estimating carbon emissions based on the shipment configuration.

The **Hillebrand Gori Carbon calculator** supports two transport modes: **Air** and **Ocean**. Users can select the desired mode by clicking on the corresponding option in the **Transport Mode** field:

- **Air**
- **Ocean**

To define the origin, destination, and any intermediate locations, users can choose from the following input formats:

- **City names** (in English)
- **IATA codes** (three-letter airport codes, applicable for Air transport)
- **UN/LOCODEs** (five-letter location codes)

As users begin typing in the relevant fields, the calculator will suggest matching options to select from.

Once all required input information is provided, click the **"calculate emissions"** button to generate an overview of the estimated emissions. The results include:

- Transport details
- Carbon emissions (Well-to-Wake, in kg CO_2e WtW)
- Estimated distance
- Emissions per kilometer

A glossary and definitions are available further below for reference.

In addition to emission estimates, the calculator also displays the **potential emission reductions** that could be achieved if the shipment — based on the simulated scenario — were transported using the **Hillebrand Gori GoGreen Plus** service.

More information about GoGreen Plus can be found here: **GoGreen Plus**

How does the Carbon calculator work and which assumptions are taken in the calculation?

The CO_2e estimates provided by the Carbon calculator account for carbon emissions resulting from the usage of fossil fuels to move a shipment according to the specified transport scenario. All calculations are in line with the GHG Protocol, GLEC Framework and the ISO 14083.

The indirect calculation methodology is applied. This involves the transport performance defined as the product of weight carried and distance covered (Ton kilometer, or TKM), and a scenario-specific emission factor (in gCO_2e/TKM).

All calculations are performed by EcoTransIT, a best-in-class external calculation engine which is in line with the relevant transportation industry standards and is updated on a regular basis. Further details about EcoTransIT and its calculation methodology can be found at the EcoTransIT homepage.

Some of the most important assumptions taken include:

- Ocean transport emission calculations are based on Clean Cargo
- Air transport emission calculations are based on the Great Circular Distances between airports
- For FCL transport by Ocean a default load factor of 10 tons per TEU is assumed
- IATA Codes denote airports, UN Locodes denote ocean ports

Glossary and definitions

CO_2e: Carbon Dioxide Equivalent. A metric used to summarize and quantify all greenhouse gases in a single number. Other greenhouse gases are converted into their equivalent global warming impact as CO_2

EcoTransIT: An external calculation engine for calculation of transportation energy use and emissions in line with industry standards

FCL (Full Container Load): Standard shipping container that is loaded with goods from a single shipper

FTL (Full Truck Load): Dedicated truck transport for goods from a single shipper

GHG Protocol: Greenhouse Gas Protocol

GLEC Framework: Global Logistics Emissions Council Framework

IATA Codes: International Air Transport Association Codes for Airports

ISO 14083: Standard for transport greenhouse gas quantification and reporting developed by the International Organization for Standardization

KM: Kilometers

LCL (Less than Container Load): The shipping container is loaded with goods from multiple shippers, i.e., the container is shared

UN Locode: United Nations Code for Trade and Transport Locations

WtW: Well-to-Wake: Sum of well-to-tank and tank-to-wake, i.e., direct and indirect emissions. Consumption here is referred to as primary energy consumption which, besides the end energy consumption, includes all losses from the upstream chain

Frequently Asked Questions (FAQ)

Why do I get the error: server timeout

This error occurs whenever there is a technical issue on estimating the emissions. Most common reason is when the server for the calculation engine is at full capacity or there is any connectivity issue. Please try submitting your scenario a few minutes later.

How are ocean emissions calculated without a weight when fcl?

Ocean emissions are calculated using the Clean Cargo methodology. One of the industry's agreed assumptions is that 1TEU = 10 tons of cargo. The Hillebrand Gori Carbon calculator uses this assumption to convert the cargo in kg to TEU.
Please see more details on Clean Cargo here

What is the difference between TtW and WtW?

TtW accounts for the CO_2e emissions of the combustion of fuel during the transportation itself (or emissions caused by the use of the energy source). WtW accounts for the full Life-Cycle emissions of the fuel, including the emissions caused by the fuel production and provision.

The emission provided by the carbon calculator is different than an estimate received from another tool – why is that?

Carbon emission calculation is highly dependent on the granularity of input data and calculation methodology. The Carbon calculator is a simulation tool, designed to get quick-and-easy estimations of transport scenarios. It works with a minimum amount of input data and complexity. The results can differ from estimations provided by different tools due to differences in input data granularity, assumptions taken during calculation, defaults applied or time of calculation.

What does 'saving potential with GoGreen Plus' mean?

GoGreen Plus is Hillebrand Gori's offer to reduce carbon emission by facilitating a Sustainable Fuel Switch (Sustainable Aviation Fuel or Sustainable Marine Fuel). The CO_2e value provided here indicates how much CO_2e WtW can roughly be reduced if the calculated transport scenario is booked with Hillebrand Gori and making use of GoGreen Plus.