Product Carbon Footprint

ThinkCentre M90a Gen 5

Machine Types: 12SH,12SK,12SL,12SM,12SN

Device Type: All-in-One

Report Date 11/30/2023

Lenovo values our commitment to the environment. As part of that commitment, Lenovo performs a streamlined product lifecycle analysis in accordance with the IEC TR 62921 standard. This analysis allows the customer to estimate the carbon footprint of their product. The carbon footprint is the total green-house gases emitted by the product over its lifespan reported as global warming potential for 100-year time horizon (GWP-100) in units of CO_2 equivalents

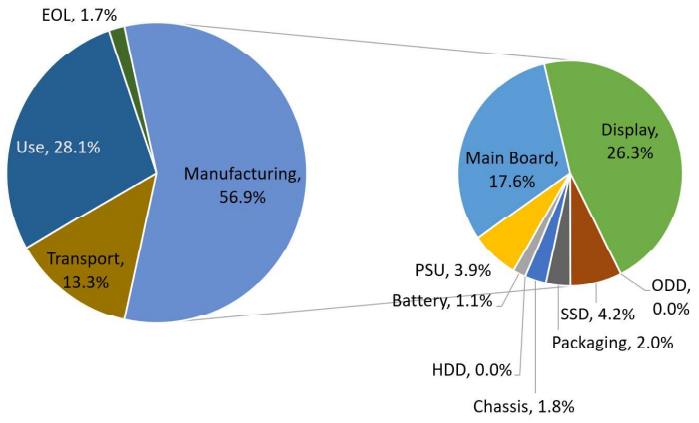
Estimated carbon footprint of the: **ThinkCentre M90a Gen 5**

430 kg CO_2e ± 135 kg CO_2e

This estimate uses the assumptions from the table below (Based on EU use location. U.S. estimates below):

Product Weight (kg)	**8.13**	**Product Screen Size (inches)**	**24.0**	**Assembly Location**	**CN**
Product Lifetime (years)	**4**	**Yearly Typical Energy Use (kWh)**	**61.1**	**Use Location**	**EU**

Below is a breakout of the carbon emissions of this product by both lifecycle stage (raw material extraction through product end-of-life) and greenhouse gases resulting from the manufacture of major components:



This pie chart shows the percentage contribution of the mean value for each element (Production, Transport, Use, and End-of-Life) of the analysis for the full life cycle CO2e impacts of the product.

Product Carbon Footprinting (PCF) is calculated using PAIA, a globally-accepted methodology to streamline the PCF process. The PAIA tool conforms with IEC 62921 and produces a reasonable estimate of Greenhouse Gases resulting from the product's lifecycle; Manufacturing (from raw material extraction to production and packaging), Transport (From manufacturing site to use location), Use (typical energy use over the life of the product), and End-of-life. Communicating these GHG levels through quantitative estimates can result in a level of uncertainty. This uncertainty is largely due to data sourcing, modeling assumptions, and also to different characterization factors used to translate the environmental emissions into environmental impacts. Lenovo addresses that uncertainty by reporting not only the mean GHG number, but the standard deviation and 5th/95th percentile values. Due to this uncertainty, it is not useful to compare the PCF result between products or across manufacturers. Lenovo also reports both the EU and US totals for transparency. For more detailed information, go to www.lenovo.com/pcf_strategy.

Mean (EU):	**430**	**5th Percentile (EU):**	**208**	**Mean (US):**	**431**
Standard Deviation (EU):	**135**	**95th Percentile (EU):**	**1094**	**Standard Deviation (US):**	**108**

Lenovo uses PAIA© to calculate product carbon footprint values. This product was assessed using PAIA version: 1.3.2