

Product Carbon Footprint Report

Product

CNC Case Study 1

Functional Unit

Description

System Boundary Definition

Cradle-to-Gate (Stage A)

- A1 Raw Material Supply
- A2 Transport to Manufacturer
- A3 Manufacturing & Waste

Cradle-to-Grave (Stages B & C)

- B1-B7 Use Phase
- C1-C4 End of Life

Total Emissions by Part (kg CO₂e)

Part	Emissions (kg CO ₂ e)	Percentage
Part 1	315.49	100.0 %

Part: Part 1

Total Emissions (kg CO₂e)

315.49

Lifecycle Breakdown (A/B/C)

A1-A3 (Cradle-to-Gate)	291.21
B Stage (Use Phase)	24.00
C Stage (End of Life)	0.28

Materials

Material	Weight (kg)
Aluminum	3.68995129

Upstream Transport

Class	Vehicle	Distance (km)	Mass (kg)
HGV Rigid (> 3500kg to 7500kg) (0% Laden)	HGV (Diesel)	59	3.6899512
International with RF	Freight Flights	3700	3.6899512
HGV Rigid (> 3500kg to 7500kg) (0% Laden)	HGV (Diesel)	6	3.6899512

Machining

Brand	Machine	Operating Time (hr)
YCM	TCV 2000A	1
YCM	TCV 2000A	2.5
YCM	TCV 3000A	6
Amada	TECHSTER 84	1
YCM	TCV 2000A	2.5
YCM	TCV 3000A	6
YCM	TV116B	1.5
Amada	TECHSTER 84	23
YCM	TV116B	2
YCM	TV116B	52
YCM	TCV 3000A	1.5