



CUSTOMER
STORY

Paris Hybrid

3D printed components for a
greener mobility



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The dump truck and it's integrated hybrid drive train.

ETH students of the Paris Hybrid project are integrating a new hybrid drive train that will improve our road traffic ecologically. To support this low-emission mobility project, Sintratec sponsored 3D printed nylon components to the students.

The Hybrid Drivetrain

Paris Hybrid is a focus project for bachelor students in engineering from ETH Zurich. Each year 8 to 10 students participate in such projects with the goal to develop something innovative, yet market oriented at the same time. In 2021 the project of Paris Hybrid is to implement a new hybrid drivetrain into a dumper. A hybrid drive train is necessary to reduce the CO2 emissions. There is much pollution in construction vehicles, especially in commercial vehicles and climate change measures are not implemented fast enough.

Ecological Aspect

The students at Paris Hybrid try to reduce the fuel consumption and increase efficiency of construction vehicles overall. They try to operate the combustion engine at the most efficient point. In the end, the goal is to bring the carbon footprint much more down. Stephan Eugster adds: «Construction vehicles can't be only electric because they have a heavy payload and still are very dynamic. Therefore, it is better to use a hybrid engine.»

The SLS Parts

The SLS parts are used as a connection between the radiator to the hose. The Paris Hybrid team did not have enough space to use conventional connectors, so the only solution was to 3D print them. Stephan Eugster emphasizes: «The Sintratec SLS technology fulfils all the requirements for the complex geometries of the parts – in their durability, texture and freedom of form. Additionally, low costs and fast manufacturing for prototyping.» The parts were laser sintered on the Sintratec S2 System.



The four SLS parts that are build in the truck.



The assembled SLS part on the hybrid powertrain.