

RIGENERA

3D Printing directly from shreded plastics

PRODUCT INFO

RIGENERA: FROM WASTE TO NEW PRODUCTS

In 2019, WASP launched the RIGENERA project with the goal of creating a circular recycling system for plastic materials, focusing on how to reuse large 3D-printed parts. This project aims to overcome a common challenge in recycling: many shredded plastic materials are not suitable for standard extruders, which are designed to use industrial pellets. The challenge is even greater when dealing with large parts, which are difficult to process.

After years of research, WASP has developed a system capable of printing directly from shredded plastic. This system is compatible with all extruders in the WASP pellet line.

HOW DOES IT WORK?

The RIGENERA process addresses this issue through several steps. First, large plastic pieces are cut into fragments of about 10–20 cm using a special chainsaw, similar to those used in construction. These fragments are then shredded in a specific device that processes recycled plastic, reducing it to sizes suitable for 3D printing.In some cases, the material is also dehumidified to ensure better print quality.

Unlike traditional extruders, which work only with pellets and can be damaged if metal enters them, the Rigenera extruders are redesigned to accept shredded plastic in various shapes and sizes. Additionally, they are equipped with magnetic filters to remove metallic impurities, ensuring a continuous and safe flow throughout the entire process.

A key aspect of the project is its compatibility with existing WASP machines. The extruders in WASP's pellet line are backward compatible with RIGENERA. This allows the machines to be updated and brought back into full operation, promoting a more sustainable production cycle and reducing waste.







