3D Printing Can be Found in the Streets and Alleys of Germany

Raise3D Case Study
https://www.raise3d.com/case/3d-printing-can-be-foundain-the-streets-and-alleys-of-germany

High-end industries, such as aerospace and automobile manufacturing, already make extensive use of 3D printing. This additive technology is finding more applications in other areas, such as beverage vending machines. Bettidrink is an environmentally-friendly start-up in Germany that manufactures and sells sustainable beverage supply solutions called Betti. Bettidrink's RnD team applied 3D printing technology to mass-produce customized parts. The company partnered with Raise3D to improve printing efficiency and the quality of the fabricated parts.

Time-consuming traditional manufacturing VS FFF 3D printing technology

Bettidrink has long recognized that it is not cost-effective to manually construct a complex and irregular model using traditional production methods. Traditional production methods like subtractive manufacturing costs a great quantity of material and time. In addition, post-processing a mold is difficult, leading to increased material costs and production difficulties. Bettidrink RnD team invested in 3D printers for parts production. Because they found 3D printers can produce assembly-free and complex structures, and also signifies a reduction of production processes and costs while facilitating unlimited design iterations.

Other 3D printers cannot meet Bettidrink’s technical and production needs

Trays printed by Raise3D Pro2 printers.

In the beginning, Bettidrink encountered issues with the original 3D printers the RnD team purchased. First, the printers had a build volume that was not sufficient to accommodate the entire tray parts they designed. Second, these 3D printers did not support 0.8mm nozzles, a size required to print this particular type of tray. Thirdly, these printers could not provide high-precision and highly smooth surface parts. Fourth, the printers did not support high-performance printing materials, such as PETG, and lacked advanced printing parameters and an ecosystem. All these issues led Bettidrink to find a more efficient and convenient 3D printer.

Raise3D meets the strategic needs of Bettidrink

Bettidrink uses Pro2 Printer to greatly reduce the costs and enhance the product's iterative design phase.

Bettidrink partnered with Raise3D Pro2 printer, which has a larger build volume, higher printing accuracy, a more stable internal structure, and a more supporting more varied 3D printing solutions. The Raise3D Pro2 3D printer provides a larger build size of 305×305×605 mm, which can fully meet the needs of Bettidrink to print larger trays. The printing accuracy of the Pro2 printer is within +/- 0.100 mm. This dual-extruder 3D printer is also equipped with a unique motion control system, meaning it can print complex structures flexibly and accurately. The Pro2 supports a range of nozzles, namely 0.2/ 0.6/ 0.4/ 0.8/ 1.0 mm diameters, so Bettidrink's R&D team can replace the nozzles according to the projects' needs.

The Pro2 dual-extruder 3D printer supports a variety of environmentally friendly thermoplastic filaments. It is also compatible with filaments from other manufacturers. Bettidrink successfully used the Pro2 to print Extrudr's PETG filaments. Raise3D launched the Open Filament Program (OFP) and has tested a variety of PETG filaments that are robust, and compliant with RoHS and Reach standards.

Consistency, reliability and efficiency of the Raise3D Pro2 printer

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The Bettidrink R&D team was surprised by the consistency, reliability, and efficiency of the Pro2 printer. Raise3D provides users with a coherent printing ecosystem from model slicing to printing. One Bettidrink engineer said, "There was no waiting time or time which goes to waste during the whole order process – it was simply sliced and printed on its own printer." The Pro2 printer reduces the time it takes to print and the cost of materials. The entire model production takes only 10-11 hours. Raise3D helps Bettidrink break the obstacles they previously encountered in the process of model development and production.

Raise3D allows for a much less limited product iteration process

Bettidrink engineers admired the unlimited product iteration achieved after using the Pro2 printer. They stated, "Design revisions are always possible and there are no limitations for further development of the part." The various thermoplastics filaments that Raise3D Pro2 can 3D-print are sufficient to meet their different needs. The RnD team of Bettidrink also uses various high-performance and highly adaptable composite filaments provided by the OFP project launched by Raise3D. The specially-developed slicing program, ideaMaker, also provides slicing parameters suitable for a variety of filaments, and the best model printing parameters can be obtained without any kind of manual adjustment.
In the future, Bettidrink will continue to use Raise3D Pro2 printers for iterative development and mass production of parts. Bettidrink will use vending machines that use Raise3D printed parts to promote 3D printing technology on the streets of Germany.

Connect with Raise3D

Do you have a great 3D printing success story and think it would be cool to be featured on www.raise3d.com, we would love to learn more! Write to us at inquiry@raise3d.com

For more information about Raise3D printers and services, browse our website, or schedule a demo with one of our 3D printing experts.