

Case Study Ultrafuse PET

3D-Printed Parts for Sanitronics





Ultrafuse PET filament was chosen due to its excellent layer adhesion, which allows us to print watertight parts. The printability and consistent quality of the filament make the material perform great on our Raise3D printer. In addition, the delivery performance and support from our local reseller and BASF Forward AM are both of great value to us." states Bob Smit, head of design at Sanitronics

Sanitronics featuring Ultrafuse PET

Parts for self-cleaning custom-made public toilets



The Revolving Toilet by Sanitronics

About Sanitronics

Sanitronics is an innovative company with over 20 years of experience in public toilets. Sanitronics was nominated for the most innovative SME company of 2018. The company produces custom-made, self-cleaning public toilet systems. One of these patented designs is "The Revolving Toilet", which consists of two toilets that rotate and switch after each use. One toilet is being cleaned from the inside and out in the technical room, while the clean one is turned to the toilet area. This way, every visitor can experience a fully clean and dry toilet. The system has been designed around topics such as vandalism, sustainability, comfort, and hygiene.

The requirements

For this Revolving Toilet, custom made drain pipes are required which are developed by using complicated designs with tight tolerances. These drain pipes must be watertight and long-lasting. For the revolving toilet, Sanitronics needs to be able to produce these components in house, for small product series.



Example of a custom drain pipe

Advantages for Sanitronics

- Ability to print watertight parts
- Design freedom: perfect for in house fabrication of small product series
- Continuous development and immediate use of improved parts
- Great printability
- Consistent print quality

The solution

3D printing is the perfect solution for this application. Sanitronics use a Raise3D printer in combination with Ultrafuse PET. This material was chosen because of the excellent layer adhesion, which allows Sanitronics to print watertight parts. By using 3D printed drain pipes, the parts can be constantly developed further and replaced by improved versions. The consistent quality of the filament allows the company to have a reliable in house production.

Thanks to the close collaboration between the customer and BASF and the reseller of Sanitronics, SEEDA 3D Printing Solutions, great applications can be realized. BASF provides support to tailor the print experience and the application.

Guidline for Print Settings

Nozzle temperature	210-230 °C
Bed temperature	75°C
Fan speed	0 % (max. 100 %)
Bed modification	Below 75 °C tape or glue



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