



YOUMAGINE

UM2E+ Dry-Filament-Dispenser

By: (Koolman)

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Located at: <http://www.youmagine.com/designs/um2e-dry-filament-dispenser>

Short description:

Moisture reducing filament-dispenser with silica-granulesreservoir for Ultimaker 2 Extended+

Description:

The effect of humidity on filament for 3D printers can cause some serious printing problems... All filament-types are, more or less, hygroscopic, meaning they absorb moisture from the air. This has consequences, often destructively bad, for the quality of the prints... In storing filament you can eliminate moisture-absorption by combining silica-sachets with vacuum-enclosure, giving your print a good start, however, during a generally long printing proces, filament will be exposed to the air... With containers and dryers you can reduce quality problems considerably while printing, but slow moving and exposed filament is insufficient and the energy consumption and fire hazard of a print-dryer left unattended for many hours, is dangerous... After considering different options and combining existing products, i was still experiencing difficulty and it seemed to me that, to gain control over these moisture-related problems, i had to make my own tightly tailored printer-specific solution... So i designed a container with a transit channel that seals filament from the environment as well as possible, but also absorbs ingressing moisture in a reservoir filled with silica-granules, placed in the lid... NO (!) moisture-related problem has occurred since the installation of the filament-dispenser... No layer-separation, no brittle print or blob-forming due to humidity... Combined with a simple drying & storage-protocol, this printer add-on proved to be a problem-discarder... For me, this solution worked effectively, and although the design is specific for the UM2 Ext+, could be improved or is just obsolete, i wanted to share my findings with the community and be helpful in tackling a nasty problem... I Hope the images and files are self-explanatory, if you have any questions let me know... For the dutch version go to: <https://jim-kool.jimdofree.com/actueel/sub-home/03-filament-dispenser/>

If you can, please use the online documentation found at <http://www.youmagine.com/designs/um2e-dry-filament-dispenser> because those may have been updated. Also, there you can interact and provide praise and/or feedback.