

DRYWISE



IT'S TIME TO
UNLOCK
YOUR
ENGINEERING
MATERIALS

DRYWISE
AS YOU PRINT

A SMARTER WAY TO DRY FILAMENTS

Removes excess humidity from the filament before and during 3D printing.

Key Features



Fast - an in-line design dries only the section of filament that is 3D printed, reducing the amount of work needed.



Intelligent - smart sensors help to dry filament to the best 3D printing condition, avoiding any damage to the filament.



User friendly - a user friendly UI guides the user all the way. Exchangeable and rechargeable desiccant cartridge will eliminate down time.



Safe - Smart sensors detect idle moments and switch off heaters to ensure safety.



Upgradable - the list of certified filaments with calibrated drying settings is constantly growing.



Versatile - Drywise only dries the filament passing through it during printing. The filament spool is not housed in the device. This gives you the possibility to use any spool format with Drywise.



**STOP
WASTING
TIME.
ON-DEMAND
AND INLINE
DRYING
LETS YOU
FOCUS ON
PRODUCTION.**

EASY TO USE



1 Feed the filament through



2 Perform a short pre-dry cycle



3 Load to 3D printer

4 Keep drying while printing



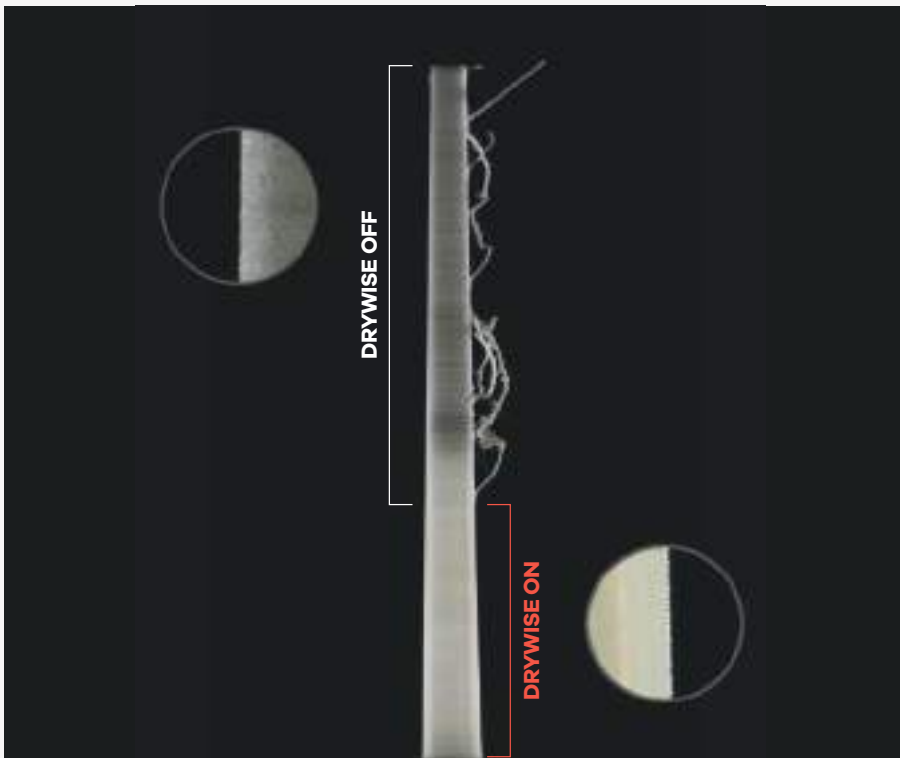
Device	Active In-line filament dryer
Technology	Fused filament fabrication filament pre-processing
Interface	4,3" capacitive touch panel. Guiding LED lights
Filament path	Guided input and output filament path
Filament Diameter	2.85mm or 1.75mm
Compatible materials	drywise.co/materials
Dimensions	(inc. Desiccant container 590*500*145) (23"x20" x6")
Net Weight / Shipping Weight	10.5kg (23lbs) / 12kg (26,5lbs)

WHY IS FILAMENT DRYING IMPORTANT?



- ▶ Hygroscopic FDM filaments tend to absorb significant amounts of moisture from the environment over the course of a few days. Some materials cannot be printed out of the box due to high moisture levels already present in the material.
- ▶ The presence of moisture in filaments can cause visible artefacts during printing, including: poor surface finish, stringing and oozing.
- ▶ Moisture in filaments can potentially cause print failure and potentially affect the mechanical properties of the printed part.
- ▶ As a result moisture sensitive materials need to be dried prior to printing, however without special storage or pre-treatment the print quality can still degrade noticeably, especially during the course of a longer print.

EXPERIENCE ACTIVE DRYING IN REAL TIME.



Drying in-line provides near instant results.

Novamid ID 1030 / Addigy® F1030 (2.85) at 2.8% w/w humidity. Filament was hydrated using an enclosed chamber circulating air at a constant RH of 75% at 23°C. Printed on Ultimaker S3, Print duration, ca. 10 hours

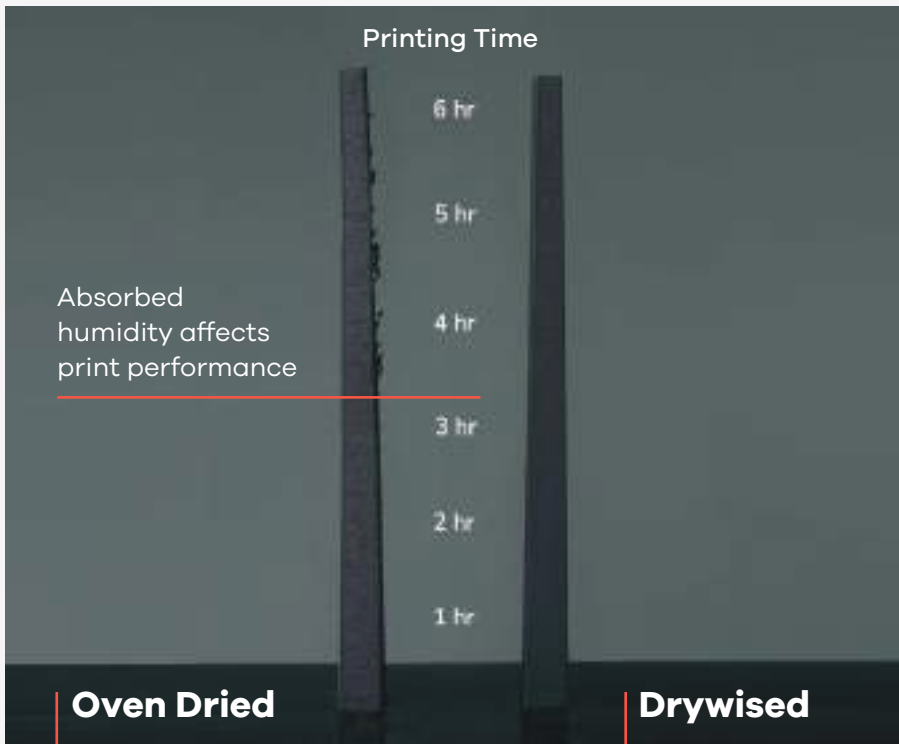
EQUIPPED FOR FUTURE IMPROVEMENTS.

Drywise filament dryer, is compatible with a number of materials. The list of tested and approved materials is always growing and for an updated list kindly check our website at drywise.co/materials.

The Pre-Heater (sold separately) expands the material processing capabilities of the Drywise dryer. Carbon fibre, glass fibre reinforced nylons and some other specific materials e.g PAHT require this add-on to work.



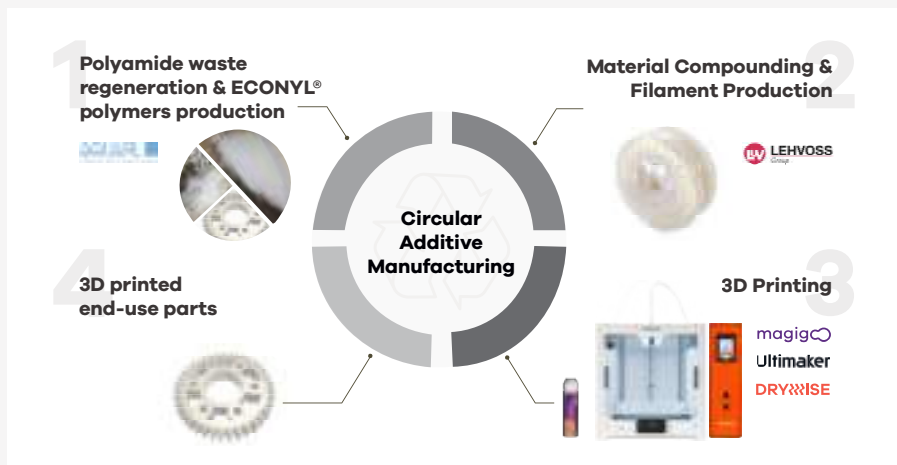
LONG PRINTS HAVE NEVER BEEN MORE CONSISTENT



Oven-dried filament (60 hr, 80 °C) quickly absorbs humidity from the environment, negatively affecting print performance.

2% Hydrated filament printed using Drywise.

ENABLING SUSTAINABLE MATERIALS.



This truly circular additive manufacturing solution is enabled thanks to the collaboration between LEHVOSS Group, Aquafil, Drywise, Ultimaker and Magigoo (Drywise and Magigoo are brands of Thought3D).

This new circular material is composed of 80% Polyamide 6 material, chemically recycled by Aquafil, and 20% Polyamides from renewable sources with almost no additives. Lack of additives make the material 100% chemically recyclable again. The lack of additives however, means that water uptake in the filament cannot be tuned as it is usually done on the LUVOCOM 3F product range. Lack of additives for thermal stabilization also mean that the material cannot go through multiple drying cycles as otherwise material degradation will occur.

Drywise is the only filament dryer on the market which enables this material. With its active in-line filament drying architecture, Drywise ensures consistently dried filament and eliminates multiple drying cycles and material degradation. Drywise requires minimal user input and a very short setup time to initiate printing.

WHAT OTHERS SAY ABOUT DRYWISE

Ultimaker

"I am very impressed at how easy Drywise makes it to create engineering parts with materials that are hygroscopic. Typically, these materials are difficult to print, require extensive drying prior to printing, and in some cases even degrade on the time scale that printing a part takes, so they have to be stored in anhydrous circumstances during printing. All this is a hassle. With Drywise, it has become as simple as loading the filament, and after the pre-heat pre-dry cycle, just start printing with a guaranteed top conditioned filament. Therefore, it's no surprise that I would wholeheartedly recommend using Drywise for any hygroscopic filament, such as many polyamides / nylons. Drywise has been certified as a third party hardware to work well with Ultimaker 3D printers."

Bart van As

Product Manager Print
Process & Materials



"Drywise provides an excellent on-demand solution to the elimination of moisture absorption in 3D printing filament, which can have such a detrimental effect on those higher strength parts intended for demanding applications. When the material being used has been adversely affected by moisture absorption the in-line filament drying carried out during printing is capable of delivering a successful part without the need for any lengthy material pre-conditioning."

Steve Cox, 3D

Technologies
Consultant



"The project for launching new circular PA6 material had hit a roadblock. The material was ready but due to its very high moisture sensitivity and the lack of technology enabling direct in-line drying, it had to be placed on hold. Drywise is the solution we were waiting for to enable this material, allowing it to be reliably 3D printed every time and finally unlocking the circular economy to Additive Manufacturing."

Dr. Thiago Medeiros Araujo

LUVOCOM 3F Global
Product Manager



DRYWISE

Drywise is a registered trademark of Thought3D

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Patent pending,
Designed and produced
by Thought3D, Malta