

# DRYWISE

## PRE-HEATER ADD-ON FOR DRYWISE DRYER

On-demand, repeatable and reliable filament drying



## USER MANUAL



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# 1. Introduction

## 1.1. Intended use of Pre-heater for Drywise dryer

The Drywise Pre-Heater add-on is designed and built for use in combination with Drywise Inline Filament Dryer. The Drywise unit is intended to facilitate the printing with hygroscopic materials, from short to very long prints.

When used with the Drywise Inline Filament Dryer, the Drywise Pre-Heater add-on delivers a more flexible, efficient and reliable solution for handling and processing filaments. The Drywise Pre-heater expands the material compatibility offered by Drywise, by pre-treating the filament before it is fed into the Drywise dryer. The attachment is essential for reliable and consistent drying of specific material types prior to drying. These materials include carbon and glass fiber filled materials and other specific material types. Check <https://drywise.co/materials> for the latest list of compatible materials.

## 1.2. General disclaimer

This user manual describes the intended workflow for the Drywise Pre-Heater add-on when used in conjunction with a Drywise Inline Filament Dryer.

Please carefully read and understand the contents of this user manual. Failure to read the manual may lead to personal injury, inferior results or damage to the Drywise Pre-Heater, the Drywise dryer, the 3D Printer and/or its peripherals. Make sure that anyone who uses this device knows and understands the contents of the manual to make the most out of the Drywise Pre-Heater.

The conditions or methods used for assembling, handling, storage, use, maintenance or disposal of the device are beyond Thought3D's control and may be beyond its knowledge. For this and other reasons, Thought3D does not assume responsibility and expressly disclaims liability for loss, injury, damage or expense arising out of or in any way connected with the assembly, handling, storage, use, maintenance or disposal of the product.

The information in this document was obtained from sources which Thought3D believes are reliable. However, the information is provided without any warranty, express or implied, regarding its accuracy.

## 2. Safety

This guide contains warnings and safety notices:



Provides helpful information to do a task or avoid problems.



Warns against situations that may cause material damage or injury if the safety instructions are not followed.

### 2.1. General safety information

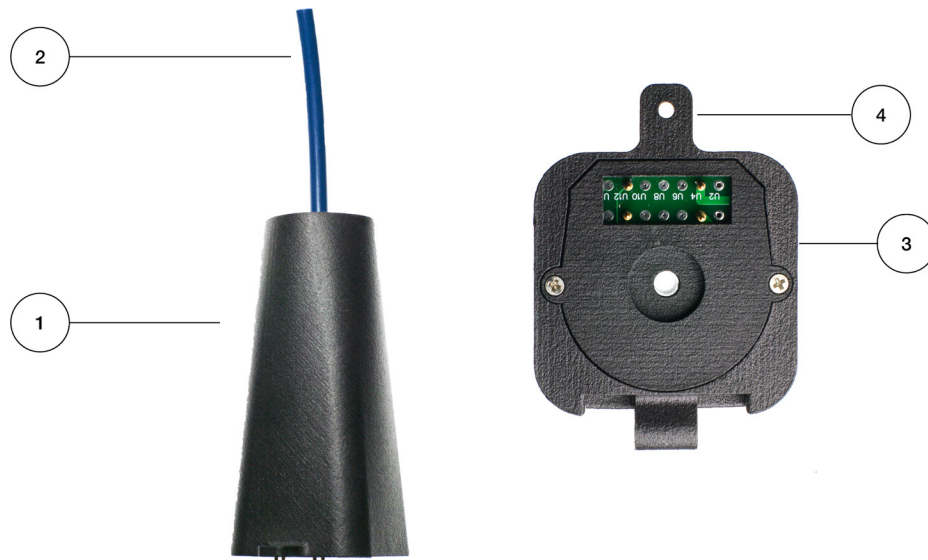
- Read and understand safety measures before use of the Product.
- Use the product for intended purpose only
- Use the product with caution. The internal components of the product generate high temperatures that can cause injury. Do not dismantle and reach inside the product. Allow at least 30 minutes for the product to cool down, before performing any maintenance or modification.
- Do not modify or change any parts of the product unless the change or modification is authorised by the manufacturer or this manual.
- Follow standard electrical safety procedures.
- Follow instructions and safety indicators on the screen of the dryer and/or follow safety warning labels on the product components.
- Install the product to the Drywise drier well. When the device is connected to the 3D printer via filament, the forces of the extruder may pull the device.
- Do not manually pull or push on filament when the product is in operation unless instructed by the dryer user interface.
- This product is not intended for children.
- Thought3D products (including Drywise Pre-Heater) are not intended for use by persons with reduced physical and/or mental capabilities, or lack of experience or knowledge, unless they are supervised or have been given instructions concerning the use of the product by a person responsible for their safety.
- Do not insert any foreign objects other than filament for FDM/FFF 3D printing into the pathway of the filament.

### 2.2. Health and safety

- The product dries third party materials. Please follow the safety procedures of the manufacturers of such materials
- The product operates with the help of third-party 3D printers. Please follow the safety procedures of the manufacturers of such devices.
- Third party materials may release volatile organic compounds (VOCs) and/or ultrafine particles (UFPs). It is recommended that the product is set-up in a well-ventilated area. Please check the safety data sheet of each specific material for information.
- Thought3D Ltd cannot be held responsible for any adverse effects from the use and/or performance of these materials.

### 3. The Drywise Pre-Heater add-on

#### 3.1. Main components



<p>1. Pre-heater add-on</p> <p>2. Filament guiding tube</p>	<p>3. Pogo pins electrical connectors</p> <p>4. Thumbscrew opening</p>
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#### 3.2. Specifications

Properties	
Device	Pre-heater add-on for Drywise Inline Filmanet Dryer
Technology	Fused filament fabrication filament pre-processing (FFF)
Filament Diameter	2.85mm
Compatible Material	<ul style="list-style-type: none"> <li>Nylon materials and reinforced nylon materials from main filament brands</li> <li>Updated list on <a href="https://drywise.co/materials">https://drywise.co/materials</a></li> </ul>
Connectivity	Pogo pins
Physical Dimensions	
Dimensions	(180*120*80mm)
Net Weight	100g
Shipping Weight	around 400g

Electrical Requirements	
Voltage	24 VDC
Power	Max. 20W
Warranty	Twenty four (24) months in EU countries and twelve (12) months outside of EU countries.

## 4. Installation

### 4.1. Unboxing

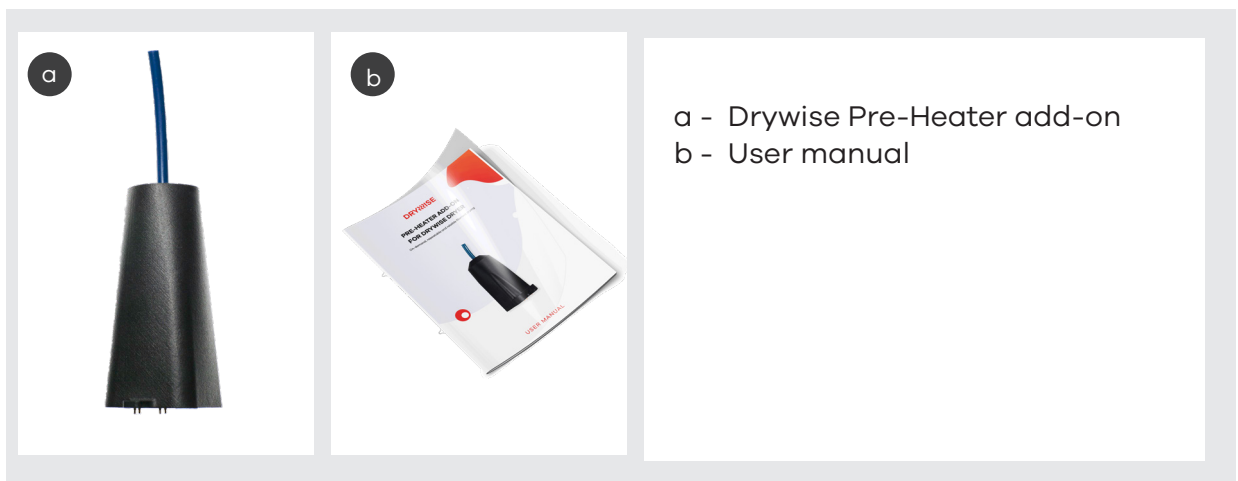


In order to respect the environment, we have opted to use mostly cardboard as our packaging material. Kindly recycle the packaging material or dispose according to local legislation in order to help reduce the environmental footprint.

Place the box on a solid surface facing the right way up. Remove the packaging tape and fold out the cardboard flaps. Take out the manual and any other leaflets. Remove the add-on and proceed to the installation.

Choose a suitable location to place the Drywise inline filament dryer and the Drywise Pre-Heater add-on. Install the Drywise dryer on a flat, stable surface capable of withstanding the weight of the system and on which you can safely operate to install the add-on.

### 4.2. What's in the box





### 4.3. Hardware installation and first interaction

a) Locate the filament input port



b) Remove the thumbscrew and the dowel pin



c) Remove input port cover



d) Place the Pre-Heater add-on in place



e) Re-install the dowel pin, flip close the the Pre-Heater add-on and secure it with the thumbscrew



f) The Drywise Pre-Heater add-on is ready for use.



## 5. Operation

### 5.1. Recommendations

The Drywise Pre-Heater add-on must be installed to pre-condition a number of material types, including but not limited to, reinforced nylons and a sub set of nylon polymers. The add-on ensures that Drywise operates reliably and gives optimum results with these filaments types. All the settings for the add-on are already pre-saved on the Drywise dryer and no additional input is required from the user.

### 5.2. Material compatibility



The Drywise Pre-Heater add-on is compatible with all material types which are approved for drying with the Drywise in-line filament dryer. If the add-on is not required for a specific material type it will be automatically disabled by Drywise. **With specific materials which require the add-on, the Drywise dryer will not function unless the Drywise Pre-Heater is correctly installed and functional.**

The Drywise dryer will automatically set the correct settings based on the filament chosen.

It is essential to install the Drywise Pre-Heater to be able to use Drywise with the following materials:

- Carbon fibre filled nylons
- Glass fibre filled nylons
- Luvocom PAHT resin based filaments
- Other specific materials as instructed by the Drywise UI.

The list of tested and approved materials is always growing. For an updated list kindly check our website at [drywise.co/materials](https://drywise.co/materials).



**DO NOT** insert a different type of material other than that specific filament instructed on the dryer and corresponding to that specific profile. Failure to observe this, could result in damage to the filament and/or the device.

If the filament that you want to use does not have a profile, kindly check online or reach out for help before trying to test with any other profile. Damage caused to the device in this way will not be covered by warranty.

Designed for 2.85mm filament only.

## 5.1. The drying process (normal operation)

Operating the Drywise dryer device with the Drywise Pre-Heater add-on is no different than when operating the device without the add-on installed.

1. Make sure the add-on is securely installed in place on the input port.
2. Select the preferred filament that you want to use.
3. Load the filament in the dryer, inserting the filament in the add-on entry point first.
4. Proceed with the normal drying process and printing routine. Refer to the Drywise inline filament dryer operation manual if in doubt.

If the Drywise Pre-Heater add-on is installed, the Drywise inline filament dryer can be used with it irrespective of the filament. The Drywise dryer will set the correct parameters for the specific filament selected. If a filament needs the Pre-Heater add-on and this is not installed the Drywise dryer will not allow you to choose said material for drying until the add-on is installed.

## 6. Maintenance

### 6.1. Recommendations

The Drywise Pre-Heater add-on does not need any specific or regular preventative maintenance.



When opening the Pre-Heater add-on to replace the o-rings make sure it is reseated correctly in place and that it is secured correctly with the thumbscrew.

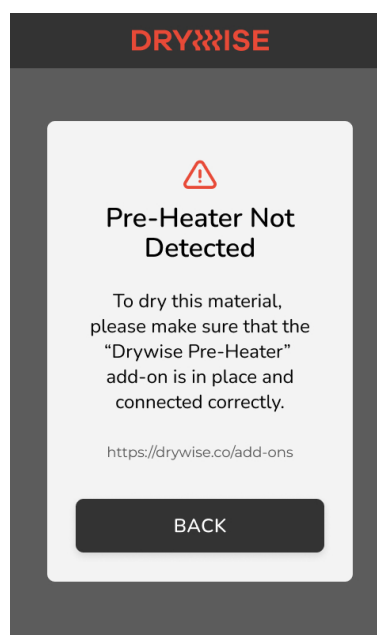
## 7. Warning Message Screens

### 7.1. Pre-Heater not detected

This screen will pop-up when a specific material that requires the add on has been selected for drying and the system senses that:

- The Pre-Heater add-on has not been installed or
- The Pre-Heater is not installed correctly, or
- The Pre-Heater is malfunctioning

If the add-on is installed correctly in place, the thumbscrew holding it is securely tightened but this warning continues to be shown kindly contact support.



## 8. Warranty

### 8.1. General

Thought3D Ltd grants a standard warranty on the Drywise Pre-Heater product ("Product") in the country where the product was purchased. From the date the product is sold and delivered to an end-customer for the first time, as evidenced by the original customer's purchase invoice, Thought3D Ltd warrants the product is free from defects in material, design and workmanship for a period of twenty four (24) months for countries inside the European Union and twelve (12) months for countries outside the European Union.

Only the original purchaser is entitled to claim warranty and the warranty period is limited to his/her lifetime. For a warranty claim to be valid

- (i) notification must be made before the end of the warranty period,
- (ii) conform to any additional stipulations of the warranty, as defined below,
- (iii) must be substantiated with the original customer's purchase invoice,
- (iv) the serial number sticker must still be on the product(s) and
- (v) the product must be returned in the original packaging.

Since customers will only be entitled to make a warranty claim on submission of the original invoice and packaging, we advise that both the invoice and official packaging are kept in a safe place. If the original packaging is not available anymore, Thought3D Ltd reserves the right to accept or reject the return, or apply depreciation of the product.

The customer – provided that they are a natural person who is not acting in the course of their profession or business – may claim the rights to which they are entitled under the warranty without prejudice to their rights or claims in accordance with the law.

### 8.2. Conditions

The Thought3D Ltd warranty is granted under the explicit condition that:

- The Product was sold, delivered and assembled by Thought3D Ltd or a recognized Thought3D Ltd reseller.
- The Product was newly manufactured on the date of purchase and not sold as used, refurbished or manufacturing seconds.
- That the installation and maintenance instructions as described in the manual for the Product, provided by Thought3D Ltd, have been observed.
- If a part of the Product is repaired or replaced during the warranty period, the warranty period still remaining for the entire Product will apply to this part. However, repair and/or replacement will not extend the warranty period.

### 8.3. Notification

Thought3D Ltd deals with this warranty unless stated differently. Therefore, any notification on the basis of this warranty must be made to Thought3D Ltd.

Thought3D Ltd reserves the right to request additional information to assess the cause of the fault. Any warranty claim must first be recognized as justified. If so, Thought3D Ltd is obliged to rectify the defects free of charge according to this warranty.

If the defect cannot be repaired, Thought3D Ltd, within the warranty period, will replace the broken part or the Product free of charge with an identical Product, or, if the Product is no longer manufactured, by a similar replacement of the same value or offer an appropriate refund.

Depending on the country, the warranty may not automatically include costs incurred for shipping defective products for scrutiny and/or repair, nor for shipping costs of replacement or repaired product(s) back to the claimant.

### 8.4. Exclusions

The warranty does not apply to and therefore does not cover:

- Consumable components, such as the o-rings, filament sharpener, desiccant.
- Any defect or damage caused by inappropriate, incorrect or improper use, installation, maintenance, operation and cleaning or normal wear and tear. For correct use, reference is made to the appropriate sections of this user manual.
- Any other event, act, default or omission outside Thought3D Ltd's control
- Failure of the product caused by an accident

In any event, Thought3D Ltd is not liable for indirect or consequential damages, including but not limited to loss of use, loss of profit or revenue. Furthermore, Thought3D Ltd's liability is limited to the purchase value of the product.

### 8.5. Applicable law and competent court

This warranty is exclusively governed by Malta law. Any dispute arising out of or in connection with this warranty will be exclusively submitted to the jurisdiction of the court of Malta. Any dispute shall be held in English.



DRYWISE