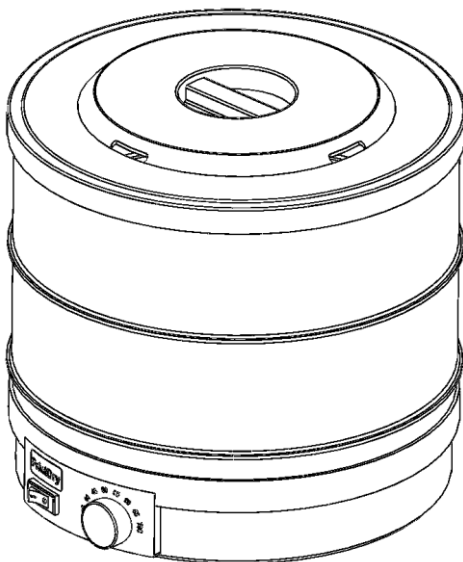


PrintDry™ Filament Dryer

Instruction Manual



MODEL: FD1603

POWER SUPPLY: 110-120VAC, 60Hz or 220-240VAC, 50Hz

POWER CONSUMPTION: 250W

BEFORE OPERATING THE FILAMENT DRYER, PLEASE READ, UNDERSTAND AND FOLLOW THESE INSTRUCTIONS. BE SURE TO SAVE THIS BOOKLET FOR FUTURE REFERENCE.

Version: 2017-03

1. IMPORTANT SAFEGUARDS

When using an electrical device, basic safety precautions should always be followed, including the following:

- Read all instructions before using the PrintDry filament dryer (hereinafter referred as the "dryer").
- Always use a heat resistant surface.
- **DO NOT** touch hot surfaces.
- To protect against electrical hazards, **DO NOT** immerse cord, plugs, or the dryer in water or any other liquid. **DO NOT** switch the dryer ON if surfaces are wet.
- Do not allow children to use this dryer, close supervision is necessary when the dryer is used near children.
- Unplug from outlet when not in use and before cleaning. Allow to cool before putting on or taking off parts.
- **DO NOT** operate the dryer with a damaged cord or plug or after the dryer malfunctions, or has been damaged in any manner. Return the dryer to the manufacturer for examination, repair or adjustment. See Warranty section.
- The use of accessories/attachments not recommended may cause hazards.
- **DO NOT** use outdoors.
- **DO NOT** let cord hang over edge of table or counter, or touch hot surfaces.
- **DO NOT** place on or near a hot gas or electric burner, or in a heated oven.
- **DO NOT** block the air vents.
- **DO NOT** use for other purposes other than the intended use.
- To disconnect, turn the power switch to 'OFF', then unplug from the wall outlet.
- **DO NOT** pour liquids into the dryer.
- **DO NOT** operate near combustible or pressurized spray cans.
- **DO NOT** use the dryer for longer than 40 continuous hours. After a maximum of 40 hours in use, turn OFF the dryer, unplug and allow it to cool.

- Leave minimum 30mm (1.25") open space all around the exterior of dryer.
- The use of unauthorized accessories may cause injuries.
- Store the dryer in a dry and clean place. Do not drop, knock, or shake the dryer. Rough handling can break the internal circuit board and diminish product performance.
- Do not open the dryer base as this may cause damage or malfunction. There is no user-serviceable part inside the dryer base.
- Failure to use and maintain the dryer in accordance with the instructions outlined in this manual will void the warranty.

2. INTRODUCTION

Thank you for choosing PrintDry filament dryer.

PrintDry filament dryer offers an easy and quick way to remove moisture from filaments for better quality of 3D printing. It works with both 1.75mm and 3mm filaments of any material. Please visit our website at **www.printdry.com** for additional information.

POLARIZED PLUG

The dryer has a polarized plug (one blade is wider than the other). To reduce the risk of electric shock, this plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician. Do not modify the plug in anyway.

DESCRIPTION OF PARTS

- 1 Vented see-through top lid
- 2 Metal tray plate
- 3 Filament passing holes
- 4 Two cylindrical trays
- 5 Centering piece
- 6 Filament feeder
- 7 On/Off switch
- 8 Temperature control knob
- 9 Dryer base unit

Accessories (not shown):

spool clips, desiccant packs

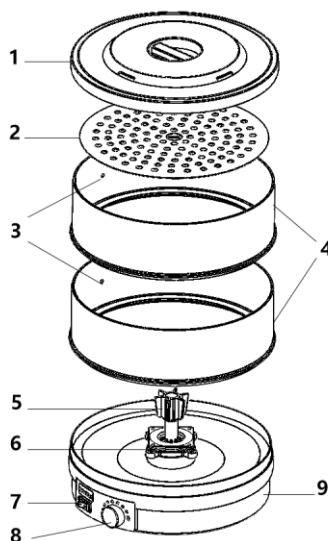


Fig. 1 PrintDry Filament Dryer

BEFORE FIRST USE

- Unpack and remove all parts and packaging materials from the carton.
- **DO NOT** plug in the power cord before reading the instructions.
- Wipe the base with a slightly damp cloth. **NEVER IMMERSE THE BASE IN WATER OR ANY OTHER LIQUID.**

HOW TO USE

PrintDry filament dryer offers two functions – Dry and Feed+Dry:

➤ Dry

- 1 Before using the dryer read this Instruction Booklet.
- 2 Put a filament spool on the feeder and lock it with the centering piece.
- 3 Use 1 cylindrical tray and the lid if drying 1 spool only.
- 4 Use 2 cylindrical trays, the metal tray plate and the lid if drying multiple spools.
- 5 Place the dryer base unit on a flat, smooth heat-proof surface. Plug into wall outlet, press ON/OFF switch to 'I' (On) and select the appropriate temperature for the filament as indicated in this manual.

- 6 When drying is completed, remove filament spools and store them in air-tight containers or plastic bags with desiccants packs together.
- 7 Press the On/Off Switch to the 'O' (Off) and unplug from the wall outlet.
- 8 Follow the instructions in the 'Care and Maintenance' section.

➤ **Feed + Dry**

- 1 Follow steps 1, 2, 3 or 1, 2, 4 in the previous section.
- 2 Pass the filament through the hole in the lower cylindrical tray and feed it into your 3D printer, it is very important to adjust the dryer's position for a smooth feeding.
- 3 Follow steps 5-8 in the previous section.

RECOMMENDED DRYING TIME

No.	Materials	Dryer Temp	Drying Time
1	PLA	45°C	> 4 h
2	ABS	60°C	> 2 h
3	PETG	70°C	> 2 h
4	Nylon	70°C	> 12 h
5	Desiccants	70°C	> 3 h

These recommendations are made under the following conditions.

*Ambient RH:50% *Ambient Temp:22°C *500g filament spool *Original filament

Actual drying time for a filament may vary under different conditions. If a filament has been in storage for a long time, it is very likely it already absorbed a lot of moisture and it takes much longer (at least double the time listed above) to dry a moist filament. In addition to drying the filament prior to 3D printing, drying the filament while printing is always recommended.

FILAMENT STORAGE

In order to protect the filament from absorbing moisture, always store filaments in air-tight containers or re-sealable bags with some desiccant packs inside.

HELPFUL HINTS

- It is recommended to put four spool clips evenly on the filament spool, as shown below, to avoid the filament from becoming loose, falling off the spool and getting stuck in the feeder. This is especially important for a new full spool.
- For more efficient drying, it is recommended to use a D-spool.
- To feed a multiple-extruder printer, an upper-deck feeder is recommended.

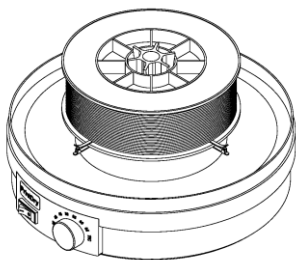


Fig.2 Spool clips

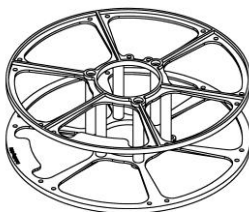


Fig.3 D-spool

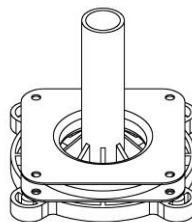


Fig.4 Upper-deck Feeder

CARE AND MAINTENANCE

- Press the switch to the OFF position.
- Unplug from wall outlet.
- If needed, wash the base with a soft, slightly damp cloth or sponge.
- DO NOT allow water or any other liquid to get into the Base.
- Make sure the Trays and Lid are completely dry before replacing them on the Base and storing.
- Any other servicing should be performed by an authorized service representative.

3. SPECIFICATIONS

Model	FD1603
Power Supply	110-120VAC, 50Hz or 220-240VAC, 60Hz, 250 Watts
Dryer Temp. Range	35-70°C (95-160°F) *
Weight	3.8 Kg (8.5 lbs)
Dimensions	37(W) x 37(L) x 36(H) cm (15x15x15")
Max. Drying Time	40 Hours (Continuously)
Spool Dimensions	Outside Diameter 100-250mm (4-10")
	Height 25-125mm (1-5")
	Mount Hole Diameter 19-58mm (3/4-2.3")
	Max. Weight 1 Kg (2.2 lbs)

* Please note the temperature inside a dryer varies due to following factors: (1) ambient temperature; (2) location inside a dryer; (3) how many filament spools and desiccant pouches are in the dryer. Higher ambient temperature means higher temperature inside a dryer. The temperature in the lower chamber is about 8C higher than the upper chamber. The temperature inside a dryer is higher when drying multiple filament spools and a lot of desiccant pouches.

4. WARRANTY

PrintDry filament dryer is warranted to be free from defect in material and workmanship for a period of ONE year under normal use after its original purchase date. This warranty extends only to the original retail purchaser. If the device should become defective within the warranty period, please contact us for repair or replacement. We reserve the right to replace a defective product with the most comparable product currently available. The entire liability for any defective product shall in no event exceed the purchase price for the defective product.

The warranty DOES NOT cover products damaged by the following:

- Misuse, accident, abuse or alteration
- Serviced by unauthorized persons
- Use with unauthorized accessories
- Damage occurs in shipping
- Connect to incorrect current and voltage
- Any other conditions beyond our control

TO THE EXTENT PERMITTED BY LAW, PRINTDRY SHALL NOT BE RESPONSIBLE FOR ANY DIRECT OR INDIRECT DAMAGES RESULTING FROM THE USE OR MISUSE OF THE DEVICE INCLUDING ANY GENERAL, INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES. ALL IMPLIED REPRESENTATIONS, WARRANTIES OR CONDITIONS INCLUDING BUT NOT LIMITED TO ANY IMPLIED REPRESENTATIONS, WARRANTIES OR CONDITIONS OF FITNESS AND MERCHANTABILITY ARE LIMITED IN DURATION TO ONE YEAR FROM THE DATE OF ORIGINAL PURCHASE.

This warranty gives you specific legal rights, and you may also have other rights that vary depending on your state, province or other jurisdiction. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above limitations and exclusions may not apply to you. This warranty does not include the cost of returning shipping.

5. CUSTOMER SUPPORT

For product updates and more information about PrintDry filament dryers, please visit us at: **www.printdry.com** or email us: **info@printdry.com**