PolyBox™

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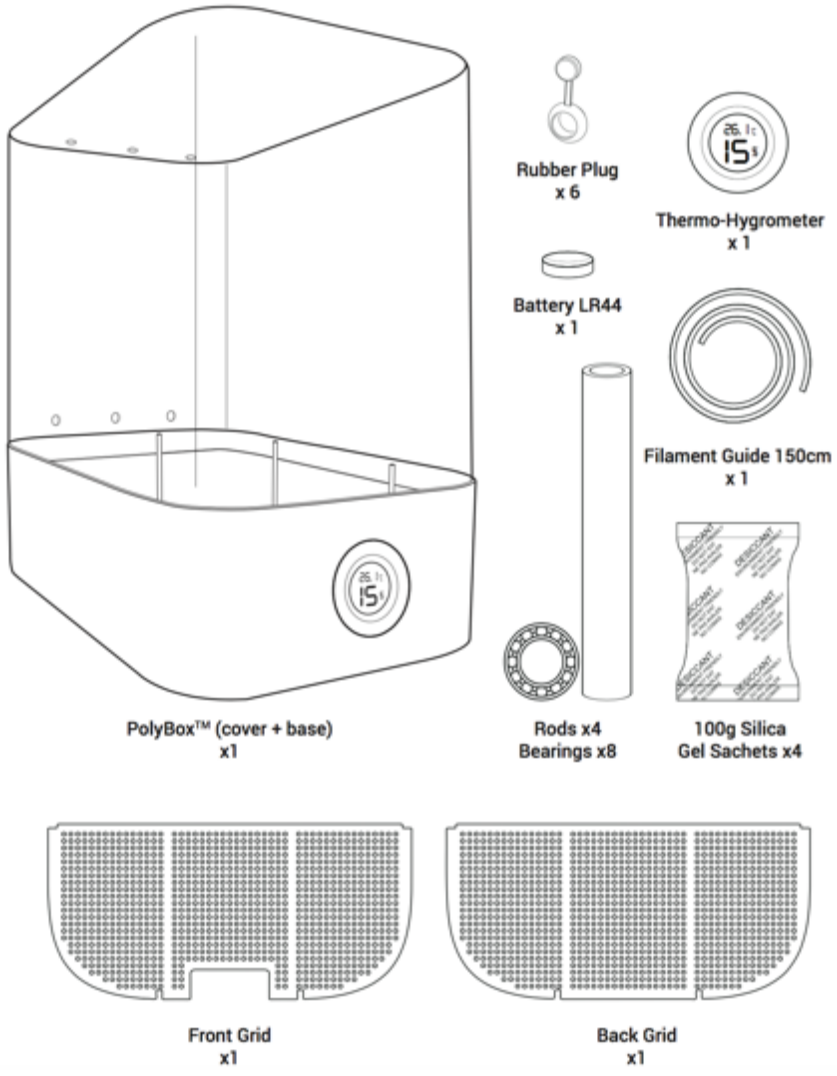
What is the PolyBox™ ?

- PolyBox™ is a dry box which can maintain a humidity level below 15%.
- PolyBox™ can contain up to two 1kg spools or one 3kg spool.
- PolyBox™ comes with high quality rods and ball bearings to ensure that the spools roll freely.
- PolyBox™ features 6 outputs, 3 on the back and 3 on the top to ensure the best fit with all the 3d printers.
- PolyBox™ comes with a long 150cm filament guide to ensure the best printing environment for the filaments from the PolyBox™ to the 3d printer.
- PolyBox™ features an embedded digital hygrometer which allow people to check the humidity level at any time.
- PolyBox™ has been designed to perfectly fit with our first 3d printing accessory: the Polysher™.



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How to use the PolyBox™ ?

- **Install the hygrometer battery**

The provided battery last approximately 3 months (1.5V LR44).

- **Install the rods**

The 4 provided rods allows the PolyBox™ to let two different spools roll independently, one on each side.

- **Install the desiccant sachets**

The PolyBox™ comes with two set of 2*100g desiccant bags. Specific compartments have been designed to place the desiccant bags. The PolyBox™ also comes with grids to cover the desiccants compartments to keep the overall design nice and clean.

- **Install the filament guide**

The 150cm tube can be cut according to your need: distance between the PolyBox™ and the printer, or the use of two different printers.

- **Place the spool**

The PolyBox™ is ready to use. The desiccants bag can be changed when the digital hygrometer displays a humidity above 20%.

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Why the PolyBox™ is needed?

All the 3D printing filaments tend to absorb moisture, however some of them tend to absorb moisture faster than others depending on the material. For example : Nylon, PVA and PolySmooth™ are more hygroscopic than PolyMax™ PLA and PolyFlex™, meaning that they are more sensitive to moisture. Filaments which have absorbed too much moisture can create multiple problem when printing with it:

- **Bad surface quality**

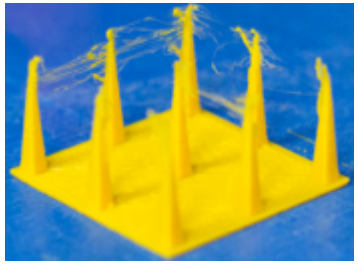
The water that the filament contains will boil in the nozzle and create micro bubbles in the extruded filament, resulting very rough and uneven surfaces.

Left: Dry
Right: With moisture

- **Weak mechanical properties**

These same bubbles will also lower the adhesion between the layers and will significantly reduce the overall mechanical properties of the 3d printed model.

Oozing due to moisture



- **Printer jam**

In some case, moisture absorption can inflates and makes the filament more flexible, these issues can cause the printers to jam.

Inconsistent extrusion

- **Artifacts on the print**

When absorbing moisture, filaments can get more sticky when extruded creating more oozing, inconsistent flaws and all different related issues.

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Where does the PolyBox™ can be used?

PolyBox™ fits perfectly on a desktop thanks to its nice design.

It is very useful in environments where the humidity level exceed 20-30%.

PolyBox™ can be used next to any 3d printers, indeed the location of the different outputs and the long filament guide make it easy to set up with any brand of 3d printers.

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Who can use the PolyBox™ ?

PolyBox™ is a simple and a must-have accessory for 3d printing. It is easy to use and simple to operate. It can be used by any 3d printer users who do not want to remove their spool and put it back in a resalable bag after each printing anymore. The PolyBox™ will allow them to continuously print while keeping their spool in a dry environment.

PolyBox™ can also be used in printer farms. These printers are printing 24/7 and needs a way to correctly store their filaments. PolyBox™ is the solution for printer farms users. One Polybox™ can be linked to each printer to ensure the best output quality.

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When the PolyBox™ will be available?

PolyBox™ will be available in the middle of August.

Individual desiccant bag will also be sold by Polymaker.

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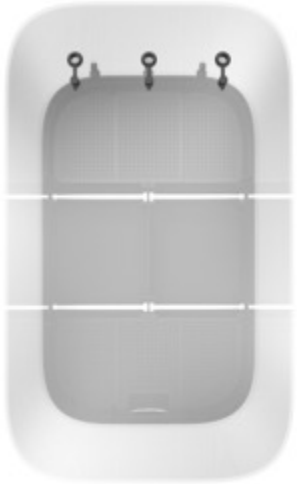
PolyBox™ renders



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PolyBox™

Dry box, humidity <15%

Fit with any 3d printers

Available in August

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Thank you

Innovation Simplified