

# Breath

## INSTRUCTIONS FOR FABRICATION

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# 1. Basic info about BREATH

BREATH is a kit for DIY fermentation of fruit and vegetables. Thanks to its three elements, BREATH guides the user through all the steps of fermentation in an easy and intuitive way, allowing anyone to approach this technique.



The kit consists of the lid, the weight and the salt dispenser, three elements that want to allow a first approach with the world of fermentation. The distinctive feature of this product is its functionality, being composed of simple and essential tools that accompany the user in every step of fermentation in an intuitive way.

## BILL OF MATERIALS

The table below contains all the materials necessary for the reproduction of the product (consumables, electronics, components).

<b>Name and tipology</b>	<b>Link</b>	<b>Quantity</b>	<b>Price</b>
Glass vase	<a href="https://www.ikea.com/it/it/p/eklatan-t-contentitore-con-coperchio-vetro-t-rasparente-bambu-30419058/">https://www.ikea.com/it/it/p/eklatan-t-contentitore-con-coperchio-vetro-t-rasparente-bambu-30419058/</a>	1	€ 7,99
PETG	Any	300 gr	€ 6,00
Silicone SORTA-CLEAR 37	<a href="#">Silicon</a>	200 gr	€ 15,00

## 2. Technology and tools used

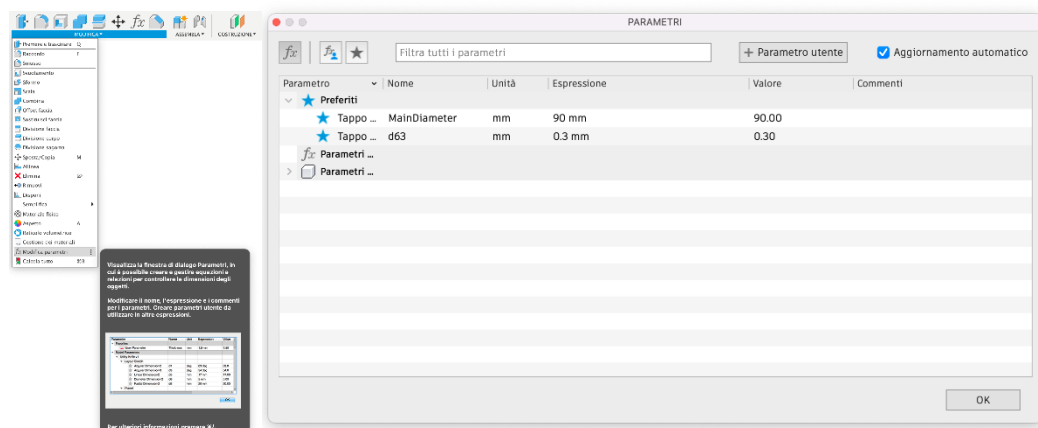
- 3D printing FDM
- Moulding
- Fusion 360

### 3. Step By Step production

### 3.1 Step-by-step production: MAIN LID



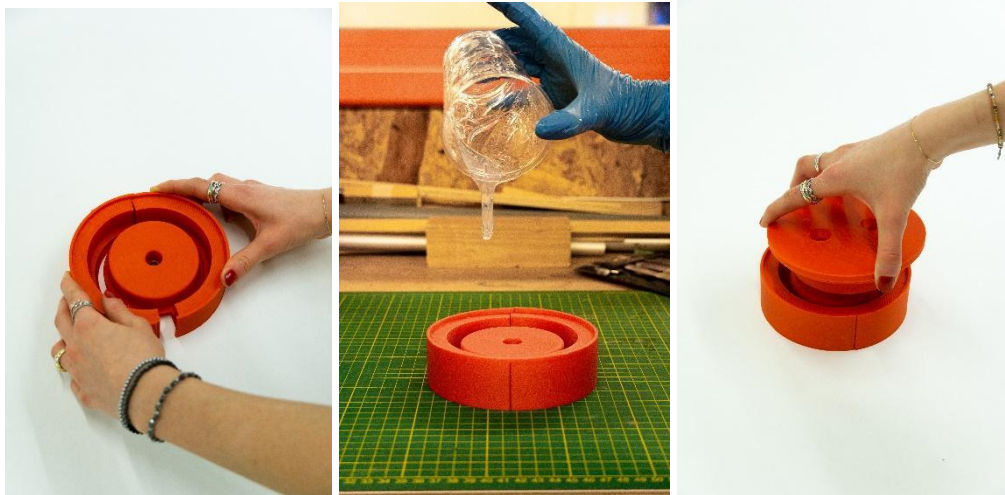
**STEP 1:** Download from the (NAME OF THE FOLDER) the Fusion 360 3D model file "*Mould*". If you are using a jar with different diameter from the one used in our project, you can simply modify its dimensions thanks to the software features (parametric design). You only need to change the measurements marked as important



**STEP 2:** Print all the components separately on a 3D printer of your choice using PLA filament preferably.

**STEP 3:** Once all the component are printed you need to assembly the low half of the mold using tape.

**STEP 4:** Prepare 80gr of silicone: 40gr of 1A + 40gr of 1B. Remove all air bubbles using a vacuum chamber. After that, cast the silicone in the lower mold and close it with te upper one. Let it dry for at least 4 hours (if you use a different brand from the one indicated on the list you should follow its own instructions).



**STEP 5:** Once the silicone is ready, open the mold and remove every excess of material.

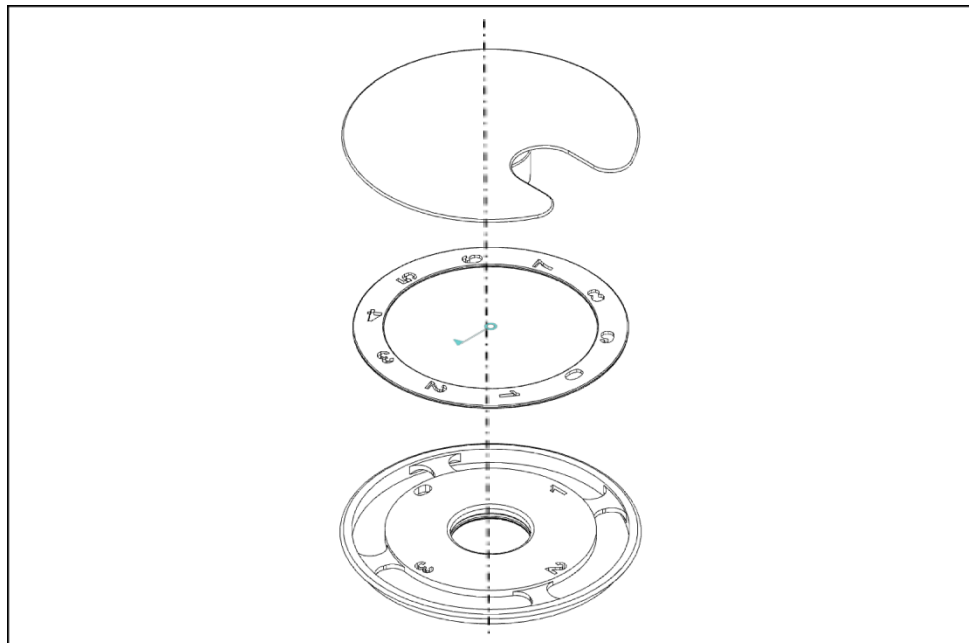


### 3.2 Step-by-step production: LID VALVE



**STEP 1:** Open the Fusion 360 3D model in the following folder: "Cap". Send all the components to the 3D printer once at a time. Use PLA to print them.

**STEP 2:** Put the different parts together following the instructions in the picture below.

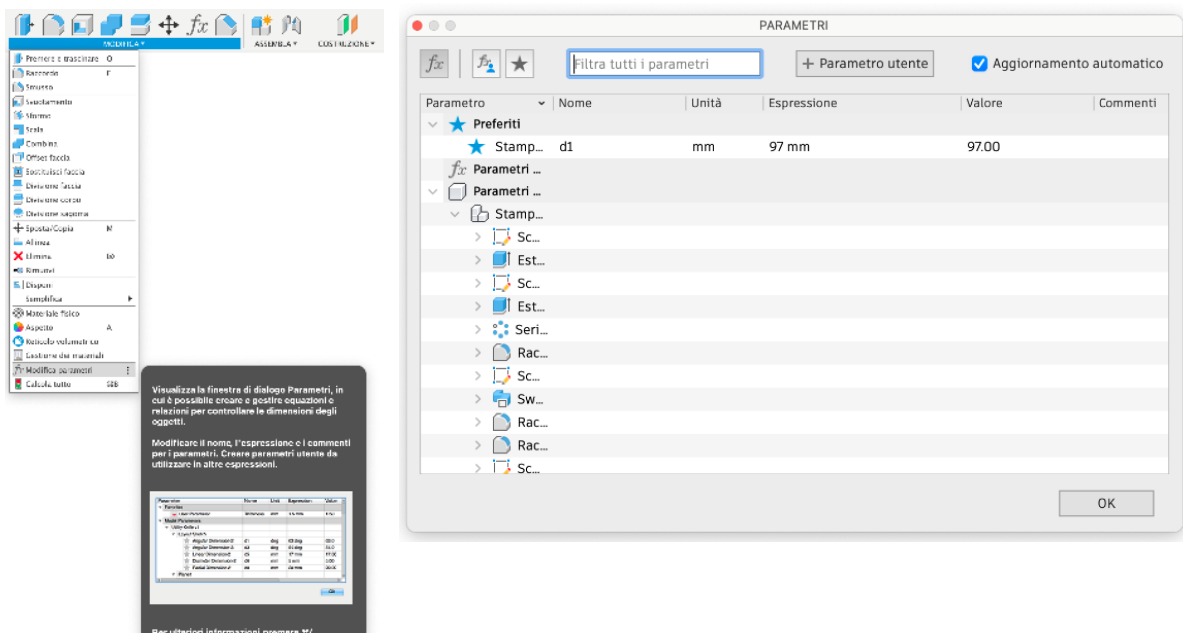




### 3.3 Step-by-step production: SILICON WEIGHT



**STEP 1:** Download the Fusion 360 3D model file in the following folder: "Mould" . If you are using a jar with different diameter from the one used in our project, you can simply modify its dimensions thanks to the software features (parametric design). Be careful, diameter of the weight should be around 2/3 mm bigger than the internal one of the jar.



**STEP 2:** Prepare 40gr of silicone: 20gr of 1A + 20gr of 1B. Remove all air bubbles using a vacuum chamber. After that, cast the silicone in the lower mold and close it with the

upper one. Let it dry for at least 4 hours (if you use a kind of silicone, which is different from the one indicated on the list you should follow its own instructions).



**STEP 3:** Once the silicone is ready, open the mold and remove every excess of material.

### 3.4 Step-by-step production: SALT DISPENSER



**STEP 1:** We also provide a specific spoon to add the salt. You can download the file in the following folder "[Sales dispenser](#)" and 3D print it using PETG filament.

**STEP 2:** The spoon is meant to be stored inside the jar in order to keep all the components of the kit together.



### 3. Credits - BREATH

BREATH is a project publicly released and made available in open source mode according to the Creative Common License (CC-BY) and promoted by Distributed Design Platform with the related documentation.

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### 4. Downloadable files

BREATH files can be download at [Polifactory](https://polifactory.com)