

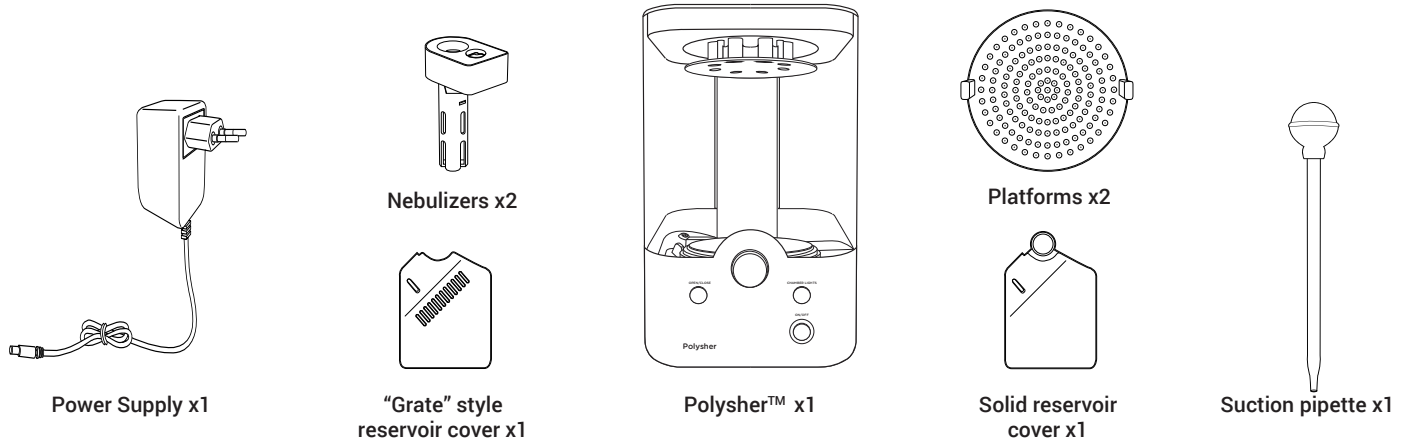
POLYSHER™

Operation Manual

Thank you for purchasing the Polysher™ from Polymaker! With the Polysher™ and PolySmooth™ (purchased separately) you are ready to transcend the quality of your 3D prints!

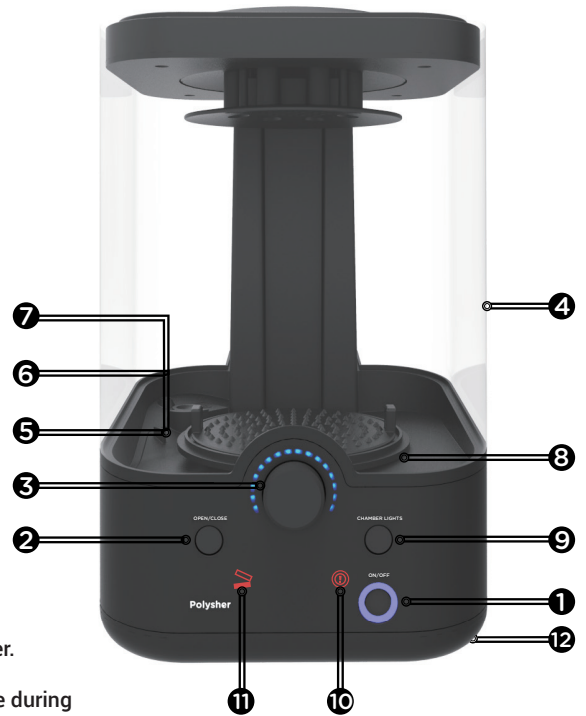
PACKAGE CONTENTS

Your Polysher™ package should contain the following:



ESSENTIAL PARTS OF THE POLYSHER™

- 1 ON/OFF:** Press the button to power on the Polysher™. Long press to turn off the Polysher™.
- 2 OPEN/CLOSE:** Push the button once to raise the platform of the Polysher™. Press again to lower the platform. Press again during the movement to stop the action.
- 3 Control Dial:** Twist the dial clockwise to start a polishing cycle. Dial clicks in 5 minute increments displayed by the lights above. Twist left to decrease the time or all the way to stop the polishing cycle. Press dial in during a polishing cycle then twist left or right to change the nebulizer light color.
- 4 Chamber Casing:** Provides an air tight enclosure around the Polysher™ while giving visibility to your part.
- 5 Nebulizer:** The nebulizer cartridge is where liquid alcohol from the reservoir is turned into a fine aerosol that polishes your printed part. Inside the cartridge is a micromachined metal disc that vibrates hundreds of thousands of times per second. A sponge wick conducts the liquid solvent to the disc. The nebulizer unit can be removed by gently pulling up. To insert a replacement nebulizer, align the pins and gently press down.
- 6 Reservoir:** Collects and stores alcohol feeding the wicking sponge and nebulizer.
- 7 Reservoir Cover:** Your Polysher™ comes with two reservoir covers. One for use during operation with slots ("grate" style) to allow alcohol to flow through. The other is for use during storage to minimize alcohol evaporation.
- 8 Turn Table/Platform:** Holds your PolySmooth™ part during polishing. Turn Table rises up with platform to give access to polished parts. To remove the platform, use the handles on either side.
- 9 Chamber Lights:** Press once to turn on the chamber lighting. Press again to turn off the chamber lighting. Chamber lights take 1-2 seconds to fully dim, press the button during this time to set current illumination.
- 10 Nebulizer Warning Light:** Indicates a malfunction with the nebulizer, this could mean: not enough alcohol in the reservoir, a bad connection between the nebulizer and port, or a broken nebulizer that needs replacing. A polishing cycle cannot be started while this light is on. See the Troubleshooting section of this User Manual for instructions on how to correct these conditions.
- 11 Chamber Seal Warning Light:** Indicates an air leak in the chamber. Readjust the chamber casing to ensure that it sits properly on the Polysher™. A polishing cycle cannot be started while this light is on.
- 12 DC Power In:** The port for the DC power cable is located on the back of the Polysher™.



SETTING UP YOUR POLYSHER™

- 1 Attach the Power Cable**
Ensure to place the Polysher™ on a stable and flat surface. The power supply unit comes with several different plugs. Please choose the one suited to your country/region. Attach the power cable to the power port, which is on the lower back of the Polysher™.



- 2 Power On the Polysher™**
Press the On/Off button on the front panel of the Polysher™. A greeting tone should sound, the timer display should flash briefly, and the blue ring around the On/Off button should illuminate.



- 3 Open the Polysher™**
Press the Open/Close button. The lift mechanism should rise to its fully-open position and stop.



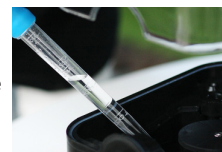
- 4 Open the Transparent Casing**
Lift up the transparent casing and hook it on the fan brim as shown on the picture.



- 5 Install the Nebulizer**
Install a Nebulizer by firmly pressing it down into the socket. Make sure the connection is satisfactory.



- 6 Fill the Reservoir**
Fill the reservoir with alcohol to the top edge. Isopropyl alcohol with concentrations of 70% or above can be used; concentrations of 90% or more are recommended.



- 7 Install the Reservoir Cover**
Place the "grate" cover over the reservoir.



- 8 Install the Platform**
Place the platform on the raised platform tray when the Polysher™ is fully open. You can then push the open/close button to lower the platform into the Polysher™.



OPERATING YOUR POLYSHER™

- 1 Place a PolySmooth™ print on the platform**
To ensure even polishing, place the part in the center of the platform.



- 2 Press the OPEN/CLOSE button**
The lift mechanism will lower the part into the chamber and seal the top of the chamber. The Chamber Seal warning light should turn off when the lift mechanism reaches its lower closed position. If it doesn't, check to see that the casing is properly seated.



- 3 Run the polishing cycle**
Rotate the control knob clockwise to the desired polishing time. A stream of solvent mist will come from the nebulizer and the part will begin rotating on the platform. In a few minutes the mist should fill the entire chamber. You can adjust the polishing time any time during the polishing cycle (remember that each illuminated segment represents 5 minutes). The optimal time depends on the concentration of alcohol used, ambient temperature, the size of your part, the condition of your nebulizer, etc. Generally speaking 20-40 minutes is a good starting range. You can turn the chamber lighting on and off by pressing the Chamber Light button. The color of the mist lighting can also be adjusted by pressing the control knob and then rotating it until you see the desired color.



- 4 Open the chamber**
Once the clearing cycle has completed, you can press the Open/Close button to raise the lift mechanism and your smoothed part.



- 5 Dry the part**
You can now remove the platform from the Polysher™. Do not touch the part yet as the surface may be sticky and you may leave finger marks on the part. The part should be left to dry for about an hour before gentle handling. You can use the other platform to polish another part, if needed. The part will slowly harden after a couple of weeks, to speed up the process you can use a fan.



- 6 Install the Reservoir Cover**
If you do not plan to use your Polysher™ again in the near future, we recommend exchanging the grate cover with the solid cover to inhibit solvent evaporation, avoid vapor buildup in the chamber, and prevent the nebulizer sponge from drying out.



MAINTENANCE & TROUBLESHOOTING

- 1 What shall I do if the Nebulizer Warning Light is on?**
Check the nebulizer unit to see if it is installed properly. Make sure the nebulizer is fully seated in its socket.

- 2 What shall I do if the mist volume is abnormally low?**
If the mist volume is observed to be low, or not reaching the full height, check the reservoir to see if it is running low or empty, and refill it if necessary.

- 3 Draining the reservoir**
A 30 mL pipette is provided for removing alcohol from the reservoir. Avoid any heat source, open flames or sparks when draining the reservoir. The alcohol, unless contaminated, can be repeatedly used for polishing.

- 4 Removing the casing**
The Polysher™ can be operated without the need to remove the casing. However, if it is needed to fully remove the casing, follow the instructions below:
-Raise the platform to the upmost position;
-Lift the casing all the way up, gently flex the thin section outward and pull it off the machine;
-To put the casing back on, flex the thin section the same way and slide it through the moving post. Make sure it seats exactly on the rubber seal of the base.