

User manual

SmoothBox S1



1. Introduction

This manual describes the commissioning, operation and maintenance of the SmoothBox S1 chemical smoothing chamber. The device is used exclusively for the **surface finishing of 3D-printed parts made of ABS and ASA**.



Figure 1: Smoothbox

Important note:

The use of acetone is only permitted in accordance with the safety data sheet. In addition, the use is exclusively at the user's own risk.

2. Intended Use

- For chemical smoothing of 3D printed parts made of acetone-soluble plastics (ABS, ASA).
- For use in well-ventilated workshops or laboratory environments only.
- Not intended for continuous operation or series production.
- Not suitable for food, medical or cosmetic applications.

3. Safety instructions

3.1 General Security

- To be installed and operated only by technically experienced persons.
- Connect electronics only when de-energized.
- No changes to wiring or software without expertise.

4.2 Chemical safety

- See Safety Data Sheet Acetone
- Use appropriate protective equipment

4.3 Operational safety

- Never leave the device running unattended.
- Use only approved power supplies and components.
- Always operate the chamber completely closed.

5. Preparation

1. Keep the work area free of ignition sources and electrical disturbances.
2. Construction of the system according to assembly instructions
3. Check all self-manufactured parts for dimensional accuracy and tightness.

6. Commissioning

1. Connect the power adapter
2. Test fan function
3. Testing the heating tray
4. Testing Lighting
5. Visual inspection of the seals

8. Operation

8.1 Preparation of the smoothing process

1. Cleaning the workpiece (dust- and grease-free)
2. Define parameters (see Operation)
3. Fill the required amount of acetone into the heating tub.
4. Place the workpiece on the holder (do not come into contact with liquid).
5. Close the chamber.

8.2 Starting the smoothing process

1. Check parameters again
2. Start program
3. Monitor the process

8.3 After the Process

1. After the time has elapsed, open the chamber
2. Remove components and let them dry
3. Remove excess acetone from the tub
4. De-energize the device

9. Operation

Home screen Smooth/Custom/Settings Overview, right side always shows whether light on/off, fan speed and instantaneous temperature

Smooth various predefined modes with preset parameters light/moderate/heavy settings can still be adjusted after selection

Custom parameter sets can be created and saved
by clicking on name can be changed after entering the parameters with "s" save

Settings here you can make general settings for operation

Individual parameters can be adjusted at any time during the smoothing process

By clicking on "Pause" the process can be paused. (Attention: the acetone inside the chamber acts until the lid is opened. So only the program is paused and not the process.

Maintenance & Care

- After each use: wipe the chamber with a dry cloth.
- Check seals regularly for cracks.
- Check the fan for dust and debris.
- Keep electronics enclosures clean and dry.

Recommended maintenance intervals for fair use:

Component	Interval	Action
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Gaskets	3 months	Visual inspection, replace if necessary
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Fans	6 months	Cleaning, running test
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Electronics	12 months	Functional test
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11. Troubleshooting

Problem	Cause	Solution
Fan not running	No voltage / cable loose	Check connection, measure voltage
Irregular smoothing	Too little / too much acetone	Adjust dosage
Steam escapes	Gasket defective or housing warped	Replace gaskets
Electronics not responding	Software error / overheating	Reset

12. Disposal

- Dispose of electronic components via collection points for electronic waste.
- Separate plastic parts according to local plastic recycling.
- Dispose of residual amounts of acetone according to local regulations.
- Recycle packaging materials (cardboard, foils).

13. Disclaimer

The manufacturer of the kit accepts no liability for damage caused by improper assembly, improper operation or incorrect handling of solvents. Operation is solely at the user's own risk.