Leveling Guide

a.　b.　c.

1. Click the "Leveling" on the main interface, and then the machine will auto home first. After the machine stops, click "Auto Z-axis Alignment" and the whole X-axis will ascend to the top and then descend to zero again.
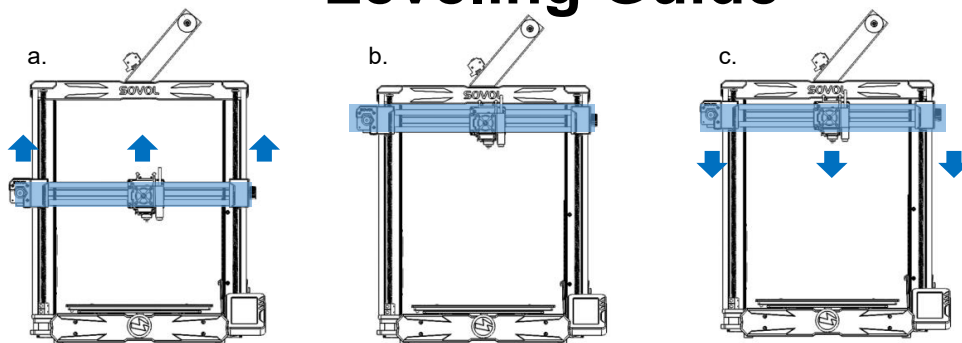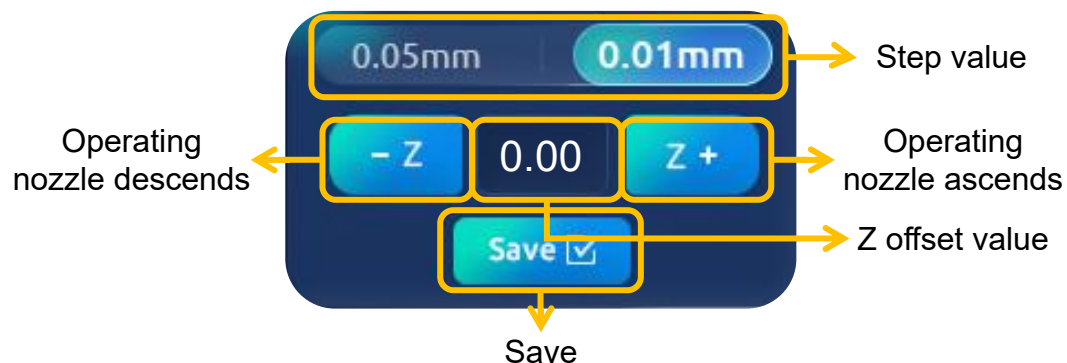
💡 It is quite normal, if noise produces after the machine hits the top. Please wait patiently until it goes down.

💡 This step is not required for leveling per time but required when the whole X-axis is not horizontal enough.

- 0.05mm | 0.01mm → Step value
- Operating nozzle descends ← - Z
- 0.00
- Z + → Operating nozzle ascends
- → Z offset value
- Save ☑
- Save

2. After the machine stops, adjust the offset value of Z axis in order to adjust the distance between nozzle and hot bed.
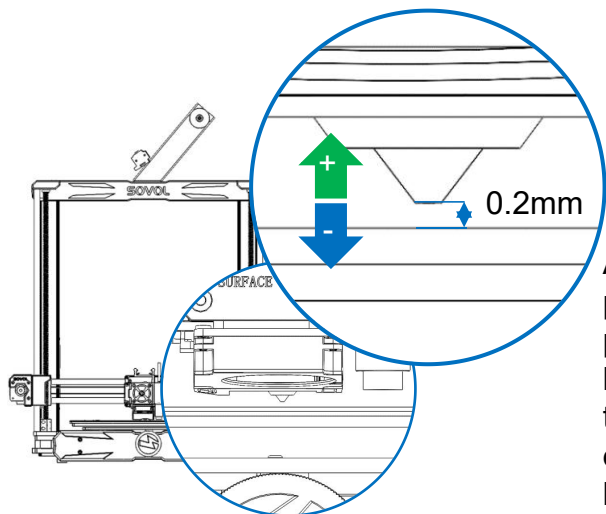
0.2mm

💡 Remember to click "Save" after finishing adjusting offset value of Z axis.

About 0.2mm，like the thickness of a piece of A4 paper. When you drag the paper between the nozzle and the hotbed, if the nozzle can scratch on the paper slightly, that means the distance between the nozzle and the hotbed is suitable.
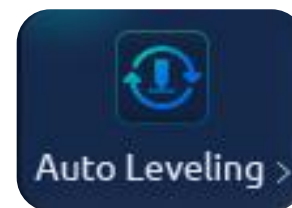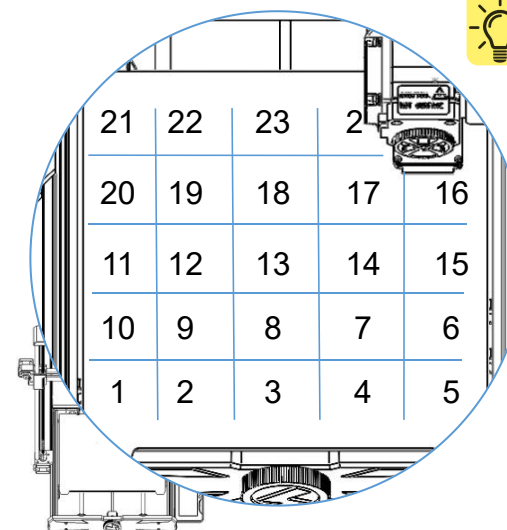
3. Click the "Auto Leveling" after finishing adjustment, and the machine will start 25-point detection.

Auto Leveling >

💡 After clicking "Auto Leveling", the nozzle will rise to 120℃ and the hot bed will rise to 60℃. Please wait patiently and avoid scalding.

21	22	23	2	
20	19	18	17	16
11	12	13	14	15
10	9	8	7	6
1	2	3	4	5

💡 Remember to click "Save Settings" after detecting.

💡 The leveling data will be automatically applied in the following printings per time.

Tips

We are using a bi-metal throat, so setting the retraction distance too high may cause clogging.

In our tests, a retraction distance of **0.5mm** was the most suitable. The following are the retraction parameters in Sovol Cura and Prusaslicer.
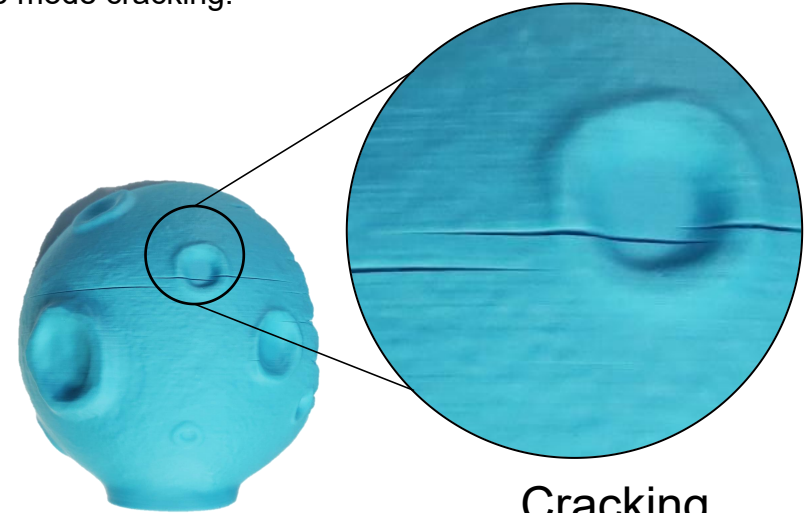
bi-metal throat

When printing ABS or other high temperature filament, we suggest to print in the enclosure to avoid the mode cracking.

Cracking

20% fan speed can help improve print quality slightly, when printing most of high-temperature filament. If the printing effect is not as good as expected after setting fan speed to 20%, do not turn on the fan.

Before opening   After opening

Travel

Setting	Value	Unit
Enable Retraction	✓	
Retract at Layer Change	✓	
Retraction Distance	0.5	mm
Retraction Speed	30.0	mm/s
Retraction Retract Speed	30.0	mm/s
Retraction Prime Speed	30.0	mm/s
Retraction Extra Prime Amount	0.0	mm³
Retraction Minimum Travel	1.5	mm
Maximum Retraction Count	10	
Minimum Extrusion Distance Window	0.5	mm
Combing Mode	Off	
Retract Before Outer Wall	✓	
Layer Start X	0.0	mm
Layer Start Y	0.0	mm
Z Hop When Retracted		

Retraction

Setting	Value	Unit
Length:	0.5	mm (zero to disable)
Lift Z:	0	mm
Only lift Z:	Above Z: 0 mm	Below Z: 0 mm
Retraction Speed:	30	mm/s
Deretraction Speed:	30	mm/s
Extra length on restart:	0	mm
Minimum travel after retraction:	0.5	mm
Retract on layer change:	☑	
Wipe while retracting:	☐	
Retract amount before wipe:	0	%