ideaMaker 5.0.5 Beta Release Notes

Introduction

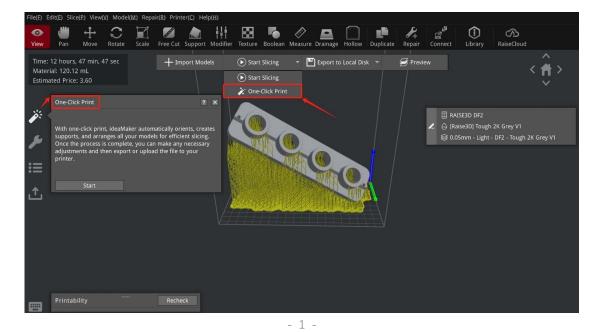
This new version primarily adds support for resin 3D printers, including several key features for resin printing and some new features for filament printing.

- This version of ideaMaker, the 5.0 version, is released in Beta this time, covering the features of ideaMaker 4.3 and ideaMaker 4.4.
- Supports upgrading from ideaMaker 4.3/4.4 versions to ideaMaker 5.0. During the upgrade, users can choose which of their user data they wish to migrate to the new version.
- Users are allowed to have ideaMaker 4.3/4.4 and ideaMaker 5.0 installed simultaneously.
- During the installation process, the configuration of ideaMaker 4.3/4.4 will be fully copied into the configuration directory of version 5.0, without affecting the use of ideaMaker 4.3/4.4, thus enhancing user experience.

DLP New Features

1. One-Click Print

With One-Click Print, ideaMaker automatically creates supports and orients and arranges the models for efficient slicing. Once the process is complete, you can make any necessary adjustments and then export or upload the file to your printer.



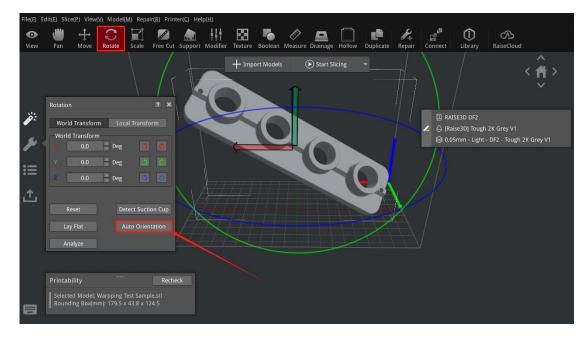
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2. New Features for Resin Printing

2.1 Model Preparation

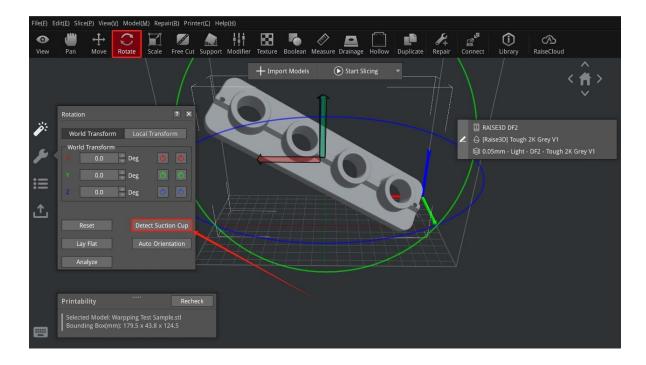
2.1.1 Auto Orientation

Click "Auto Orientation" to automatically select an angle for the selected model to improve the printing stability, and try to avoid some details on the model facing the printing platform that may affect the surface smoothness of the model.



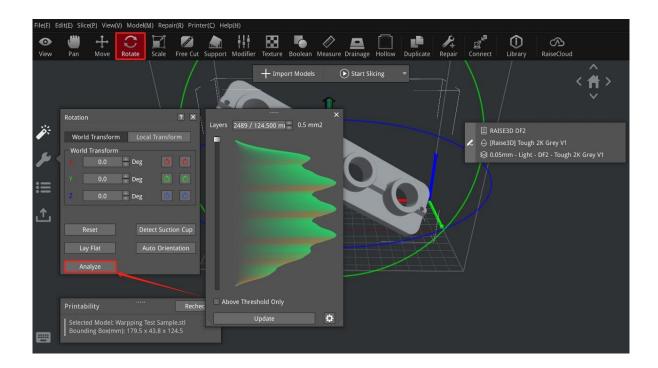
2.1.2 Detect Suction Cup

Click "Detect Suction Cup" to check suction cups for the selected model.



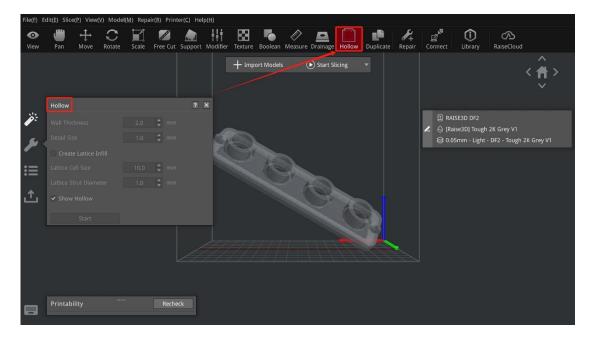
2.1.3 Cross-sectional Area Analyze

Click "Analyze" to check for any sharp changes of model cross-sectional area (the red area represents the rate of change of cross-sectional area on the model that exceeds the threshold value).



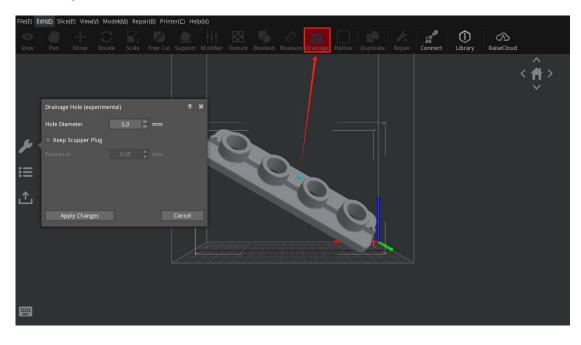
2.1.4 Hollow

Hollow out the selected model.



2.1.5 Drainage

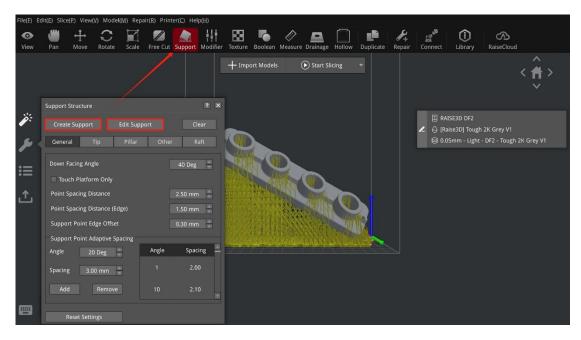
Add drainage holes to the models.



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2.2 Add Supports

Supports can be auto-generated or added manually.



2.3 Printability Check

- Outside Printable Area: Check to see if the model is outside the printing boundaries
- Mesh Errors: Non-Manifold Edges, Face Orientation Error
- Light Curing Errors (these need to be detected before appearing): Suction Cup, XY Spacing, Empty Layer, Bottom Flatness

Printability		Recheck
Empty Layer		
Empty layers will	cause printing to fai	I.
Bottom Flatness		
Uneven bottom o failure.	f the model will cau	se printing
Outside Printabl	e Area	
Outside the printa print incompletely	able area may cause / or fail to print.	the model t
XY Spacing		
	s enough space bet nterference during p	
Suction Cup		
	easily cause separati Iral defects during p	
Mesh Errors		
Selected Model: 0 Non-Manifold Edg		
Error Orientation		
Selected Model: 0	829v4.stl	
Bounding Box(mn	n): 28.0 x 36.5 x 60.0	

2.4 Border Offset

Optimized resin shrinkage control for high design-to-part consistency.

Template: 0.05mm - Light - DF2 - Tough 2K Grey V1	🔍 Type he	re to search (Ctrl + F)	
	General	Other	
Base Layer Middle Layer Normal La Base Layers	General		0.0500 mm 100.49 % 100.49 % 1 3.00 Offset 2.00 -0.015 3.00 0.000 4.0 -0.011
Border Offset	-0.053 mm		
? Restore			Cancel OK

2.5 Inner Outline Subsection Offset

It is used to modify the distance between the inner outline and the outer outline of a model, in order to better control the structure and surface quality of the model during printing.

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Template: 0.05mm - Light - DF2 - Tough 2K Grey V1	Q. Type he	ere to search (Ctrl + F)	
	General	Other	
Base Layer Middle Layer Normal Base Layers LED Power Mode Contour Exposure Time Filling Exposure Time Support Exposure Time Exposure Time Compensation		General Layer Height Scale X Scale Y Edge Blur Level I Regional Exposure	0.0500 \$ mm 100.49 % 100.49 %
Upper Point Wait Time Before Exposure Wait Time After Exposure Wait Time Slow Lift Distance Slow Lift Speed Rapid Lift Distance Rapid Lift Speed Rapid Drop Speed	2.00 sec 15.00 sec 2.50 mm 0.5 mm/s 8.00 mm 5.0 mm/s	Inner Outline Subsection Offset Diameter 3.0 mm Offset 0.000 mm Add Remove	Diameter Offset 2.0 -0.015 3.0 0.000 4.0 -0.011
Slow Drop Distance Slow Drop Speed Border Offset Restore Save As	2.00 mm 0.5 mm -0.053 mm		Cancel OK

2.6 Edge Blur Level

It is used to adjust the blur level and smoothness of the printed model edges to balance print quality.

Template: 0.05mm - Light - DF2 - Tough 2K Grey V1		्र Type here to search (Ctrl + F)						
		General	Other					
Base Layer Middle Layer Normal L	ayer		General					
Base Layers			Layer Height) 🗘 mm			
LED Power Mode			Scale X	100.49	9 🚔 %			
Contour Exposure Time	3.00	sec	Scale Y	100.49	9 🚔 %			
Filling Exposure Time	17.00	🚔 sec	Edge Blur Level					
Support Exposure Time	17.00	sec	Regional Exposure					
Exposure Time Compensation	0	%						
Upper Point Wait Time	2.00	sec	Inner Outline Subsection Offset					
Before Exposure Wait Time	15.00	sec	Diameter 3.0 🚔 mm	Diameter	Offset			
After Exposure Wait Time	2.50	sec	Offset 0.000 mm	2.0	-0.015			
Slow Lift Distance	2.00	mm	Unset 0.000 min					
Slow Lift Speed	0.5	🚆 mm/s	Add Remove	3.0	0.000			
Rapid Lift Distance	8.00	mm		4.0	-0.011			
Rapid Lift Speed	5.0	mm/s			×			
Rapid Drop Speed	5.0	mm/s						
Slow Drop Distance	2.00	mm						
Slow Drop Speed	0.5	🚔 mm/s						
Border Offset	-0.053	🚔 mm						
? Restore Save As				Cancel	ОК			
		- 8	-					

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2.7 Post-processing Parameter Settings

Automatically calculates parameters during slicing and inputs the results into the slicing file, for use with Raise3D washing and curing machines.

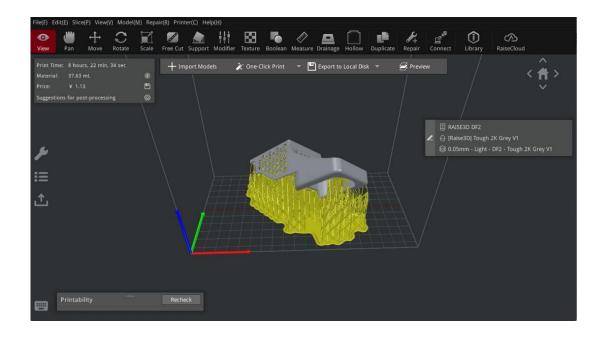
Template: 0.05mm - Light - DF2 - Tough 2K Grey V1	Type here to search (Ctrl + F)
	General Other
Washing and Curing	UV Curing Time Control List
Drying Time 5	min Thickness 20.0 mm Thickness Time
Heat Curing Temperature 60	°C Time 10 min 0.1 40
Washing Time Control List	Add 1.0 40
Ratio 12.0 Ratio Time	1.0 40
Time 10 min 1.0 10	Remove 5.0 40
Add 2.0 10	Heat Curing Time Control List
Remove 3.0 10	Thickness 20.0 mm Thickness Time
Washing Drying Time Control List	Time 60 min 0.1 0
Ratio 12.0 Ratio Time	Add 1.0 0
Time 20 min 0.5 10	Remove 5.0 0
Add 1.0 10	
Remove 2.0 10	
? Restore 👻 Save As	Cancel OK

3. Wash&Cure Workflow 2.0

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- Removed the one-click print interface icon on the left side.
 - After slicing is completed, the main interface layout is adjusted as follows:
 - Modified the slice result preview in the upper-left corner to the new panel style: Slice Result Panel.



The original slice report dialog is not displayed by default. You can control whether the dialog is displayed in Preferences -> Interface -> Show Legacy Slice Report Dialog, with the default setting being not displayed.

File(E) Edit(E) Slice(P) View(V) Model(M	() Repair(0) Preferences	×
O Image: Height of the second s	General Interface Files Shortcuts Confirm and Tips Network Update Scale Customize Font Settings(*)	t Library RaiseCloud
Print Time: 8 hours, 22 min, 34 sec Material: 37.58 mL Price: ¥ 1.13 Suggestions for post-processing	Customize Point Settings(*) Droid Sans Fallback Point Size(*) 10 Behaviors	< [^] ⁺ ⁺
≯ ∺≡ ≏	 Display slice preview after slicing automatically Show legacy slice report dialog Allow moving models in View and Rotate Mode Default Action after importing models or projects Display "Project" Panel Appearance Color Theme: (*) Dark Theme 	RAISE3D DF2 [Raise3D] Tough 2K Grey V1 D.05mm - Light - DF2 - Tough 2K Grey V1
Printability	(*) Take effect after restart ideaMaker. (*) Take effect after restart ideaMaker. (*) Take effect after restart ideaMaker. (*) Cancel	

Slice Result Panel

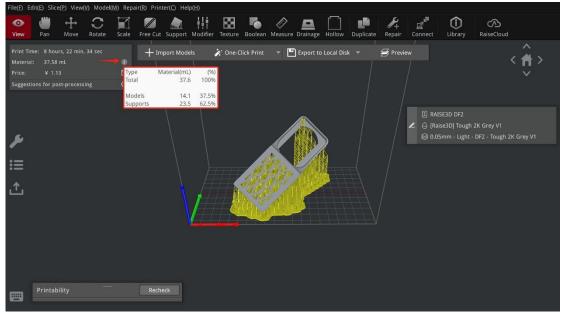
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The Slice Result Panel only displays three lines of information: Print Time, Material, and Price, as well as suggestions for post-processing.

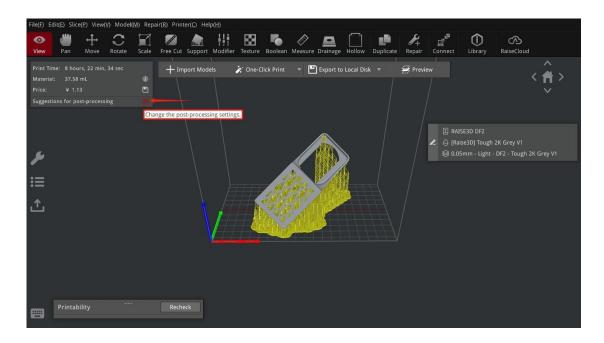
View Pan Move Rotate Scale I Print Time: 8 hours, 22 min, 34 sec Material: 37.58 mL Price: ¥ 1.13	Free Cut Support Modifier Text	tture Boolean Measure Drainage H	Hollow Duplicate Repair Connec ocal Disk V Breview	t Library RaiseCloud
Material: 37.58 mL 🕧	🕂 Import Models 🗼 O	Dne-Click Print 🔻 💾 Export to L	ocal Disk 🔻 🕖 Preview	
Suggestions for post-processing				<合>> 、
Support Structure Create Support Edit Support General Tp Pillar Down Facing Angle Touch Platform Only Point Spacing Distance Point Spacing Distance (Edge) Support Point Edge Offset Support Point Edge Offset Support Point Adaptive Spacing Angle 20 Deg Spacing 3.00 mm Add Remove Reset Settings	Clear Clear Other Raft 40 Deg		🖊 ÖI	KAISE3D DF2 Raise3DJ Tough 2K Grey V1 .05mm - Light - DF2 - Tough 2K Grey V1

DLP display model and support for respective material usage (preview of external dlpcode not displayed in interface)

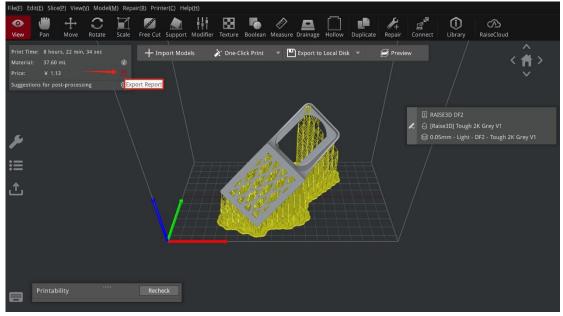


• DLP display washing post-curing settings

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Export slicing results report button provided on the right side of the price information (preview of external gcode, dlpcode not displayed in interface)



Slice Result Panel -> Washing and Curing Settings Dialog

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By default, after slicing, the automatically generated washing and curing parameter values are displayed (Automatic). This is for display purposes only and cannot be edited or modified by the user.

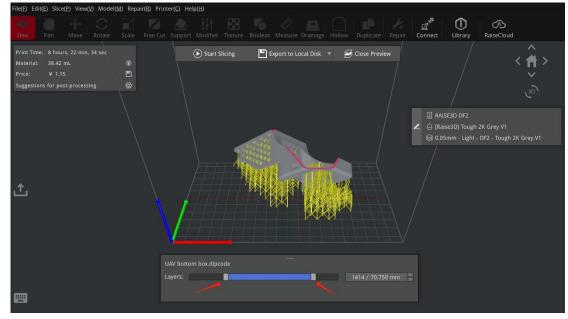
File(E) Edit(E) Slice(P) View(V) Model(M) F	Repair(<u>R</u>) Printer(<u>C</u>) Help(<u>H</u>)						
O Image: Weight of the second s		ifier Texture Boolean M	Measure Drainage H	lollow Dupli	Connect	Library Raise	
Print Time: 8 hours, 22 min, 34 sec Materia: 37.60 mL Price: ¥ 1.13 Suggestions for post-processing ©	Himport Models	One-Click Print Coessing Settings ic ng Time ng Time tring Time uring Time uring Time uring Time uring Time uring Time	Export to Le	10 mi 10 mi 5 mi 60 °C 0 mi	w I RAIS C Q [Rai:	563D DF2 se3D] Tough 2K Grey mm - Light - DF2 - To	< 1 > > > > > > > > > > > > > > > > > >
Printability	Recheck						

- Users can add or delete custom washing and curing profiles.
- Slice Result Panel -> Export Slicing Result Report

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4. Support editing interface and optimize GCode preview scrollbar.

• DLP editing support, allowing simultaneous bottom and top layer preview control.



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 Scie(E)
 Scie(E)
- 5. Manual slicing now includes Suction Cup, displayed in the printability check panel.

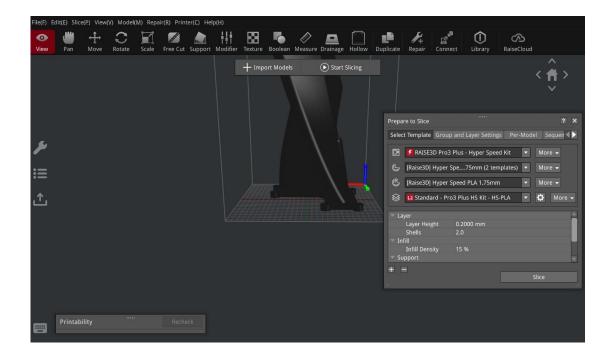
- 6. Automatic scaling of DLP models adjusted to the maximum dimension rules:
- For DF2 printers, the "Auto Fit to Build Volume" function automatically adjusts to the following dimensions as the maximum:
 - 200.018 mm
 - 112.098 mm

7. User version opens up DLP slicing template parameter adjustments:

- In the ideaMaker User version, in comparison to version 5.0.4, the following adjustments have been made to the DLP slicing template settings dialog:
 - Temperature Tab opened
 - GCode Tab opened
 - Layer Tab:
 - Exposure Time Compensation are not opened
 - Regional Exposure are not opened

New Features and Improvements for FFF

1. Optimization of the interaction between the main interface and the "Prepare to Slice" panel.

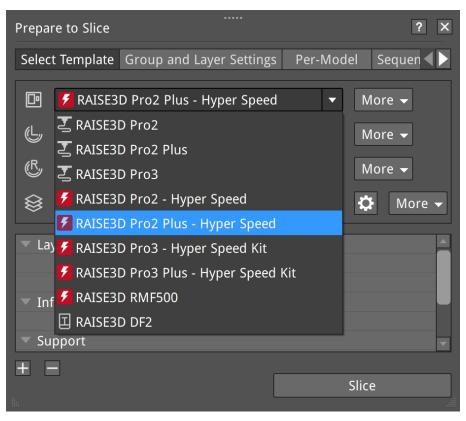


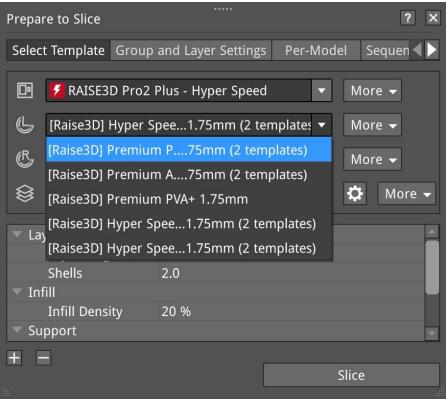
• The "Prepare to Slice" panel is located on the right side of the main interface. After clicking the close button in the top right corner of the panel, simplified panel information will be displayed.

File(E) E	dit(E) Slice	(P) View(V) Model(I	M) Repa	ir(<u>R)</u> Printe	r(C) Hel	p(H)												
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•••	Printabi	lity																	

- Prepare to Slice
 - Printer list and material list only show the printers and materials that the user needs to show.
 - Users can freely add or remove official printers and custom printers.

• Users can add or delete official materials and custom materials, facilitating the management of commonly used printers and materials.





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• New Printer Management Feature: Added a "More" menu page, which includes printer-related functions such as Add, Duplicate, Delete, Import, Export, and Edit Settings.

Prepare to Slice			? ×							
Select Template Group	Sequen < 🕨									
📴 🔰 RAISE3D Pro2 F	RAISE3D Pro2 Plus - Hyper Speed									
🕒 [Raise3D] Hyper Sp	(└」 [Raise3D] Hyper Spee1.75mm (2 templates ▼ Add									
(Raise3D] Hyper Sp	beed PLA 1.75mm		Duplicate							
	Delete									
	Standard - Pro2 Plus HS - HS-PLA									
🔍 Layer			Export							
Layer Height Shells	0.2000 mm 2.0		Edit Settings							
▼ Infill		5								
Infill Density	20 %									
Support			-							
H		SI	ice							

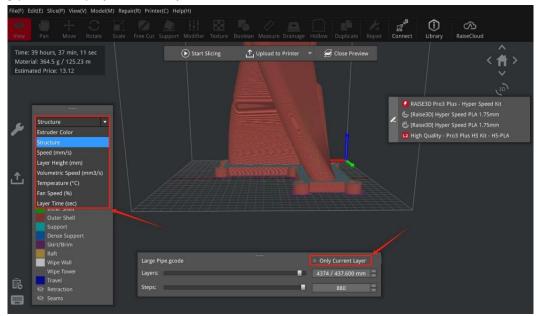
• New Material Management Feature: Added a "More" menu page, which includes material-related functions such as Add, Duplicate, Delete, Import, Export, and Edit Settings.

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Prepare to Slice		?	×							
Select Template Group	and Layer Settings	Per-Mo	del Se	quen ┥						
📴 🗲 RAISE3D Pro2 F	🗲 RAISE3D Pro2 Plus - Hyper Speed 🔹 More 👻									
(L [Raise3D] Hyper Sp	[Raise3D] Hyper Spee1.75mm (2 templates 🔻 More 👻									
(Raise3D] Hyper Sp										
😣 💶 Standard - Pro2	Standard - Pro2 Plus HS - HS-PLA									
			Delet	Delete						
🔻 Layer			Impo	rt from	Loca	al Disk				
Layer Height	0.2000 mm				2000					
Shells	2.0		Expor	rt						
▼ Infill			Edit C	ottinge						
Infill Density	Infill Density 20 % Edit Settir									
Support										
	ſ	Slice								
	L									

2. GCode Preview Optimization

- Slicing preview displays Temperature, Fan Speed, Layer Time
- Slicing preview displays current layer GCode



Slicing preview adds more distinctive colors.

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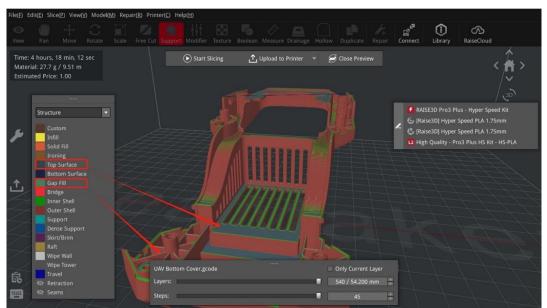
Displays top surface, bottom surface, gap filling, and solid fill with different colors in GCode

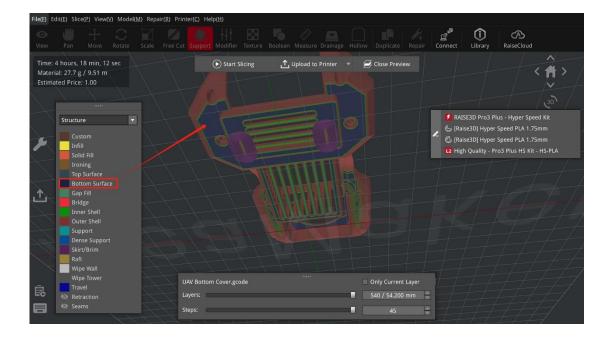
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preview.

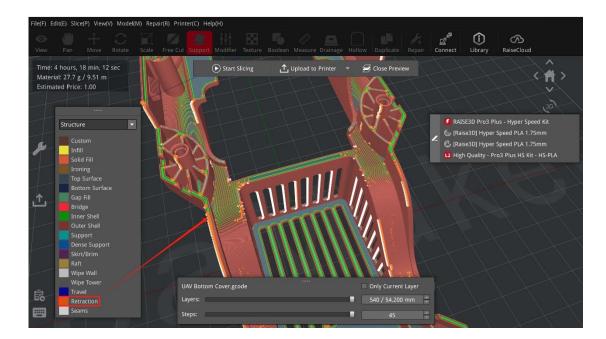
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Three different feature colors for top surface, bottom surface, and gap filling added.





Optimization of the display of "Retraction" in GCode preview



3. ideaMaker Natively Supports Klipper Firmware

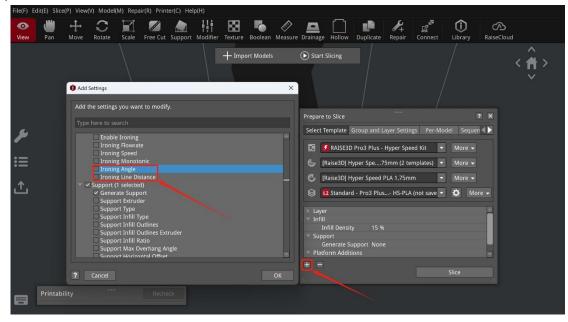
• Printer Settings -> Added Klipper option in Firmware Type.

Printer Type: RAISE3D Pro3 Plus	- Hyper Speed Kit	
Technology: FFF (Fused Filamer		
	General Advanced	Firmware Left Extruder Right Extruder
Printer Settings		Extruders
Printer Type Abbreviation:	R3D_PRO3P_HSKIT	Extruder Count: 2
Left Nozzle Diameter:	0.40 🚔 mm	Convertial Deletion
Right Nozzle Diameter:	0.40 mm	Sequential Printing Gantry Height: 70.00 mm
Build Width:	300.00 🚽 mm	Allow Custom Printing Priority in Sequential Printing
Build Depth:	300.00 🚔 mm	✓ Validate Printing Priority before Slicing
Build Height:	605.00 🚔 mm	GCode Export
✓ Use Heated Bed		Default Action: Upload to Printer
✓ Enable Fan Speed Control (Use P	WM-Controllable Fans)	
Distance From Border of Build Plate	: 0.00 mm	
Build Plate Shape:	Rectangle 🔻	
Bed origin at the center		
Firmware:	RepRapFirmware Marlin Raise3D Pro2 RepRapFirmware Klipper	

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4. Added Slicing Settings for Ironing Line Distance and Ironing Angle.

- Ironing Angle: The angle between the Ironing fill line and the solid fill line.
- Ironing Line Distance: The spacing between adjacent Ironing infill lines, with a default value of 0mm, is equivalent to automatic calculation.

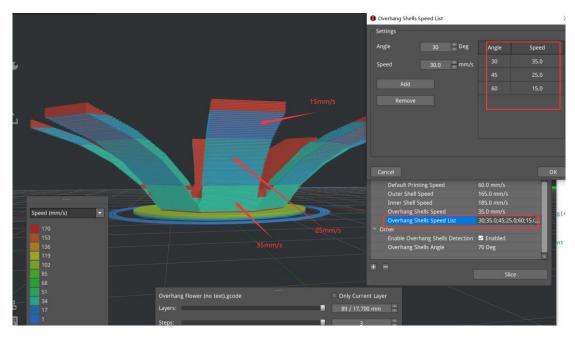


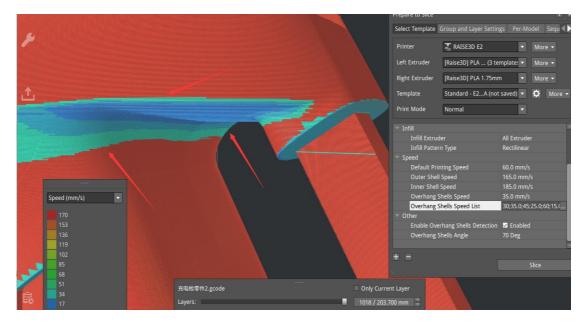
5. Built-in Templates for Non-0.4 Nozzle Official Materials with Official Printers

File(F) E	dit(E) Slic	e(P) Viewi	(V) Model(M) Repa	ir(R) Printer(C) Help(H)													
O View	Pan	↔ Move	Rotate	اللہ Scale		port Modifie	Texture	Boolean	Measure	Drainage	Hollow	Duplicate	∦ Repair	Conne	a ect i	(i) Library	RaiseClou		
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					👻 🔁 RA	d Filament Fab JSE3D Pro3												~	
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×	🔲 Slice	Active Mo	dels Only			0.4mm Nozzle 0.6mm Nozzle									Plus - H	yper Spee	d Kit 🔻	More •	
	> 🖓 Li	arge Pipe.				0.8mm Nozzle 1.0mm Nozzle								s	pee1.7	75mm (2 t	emplates 🔻	More ·	
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6. Added Slice Setting "Overhang Shell Speed List"

- 21 www.raise3d.com • Dynamically adjusts and uses different overhang shell speeds according to the overhang angle of different areas of the model.





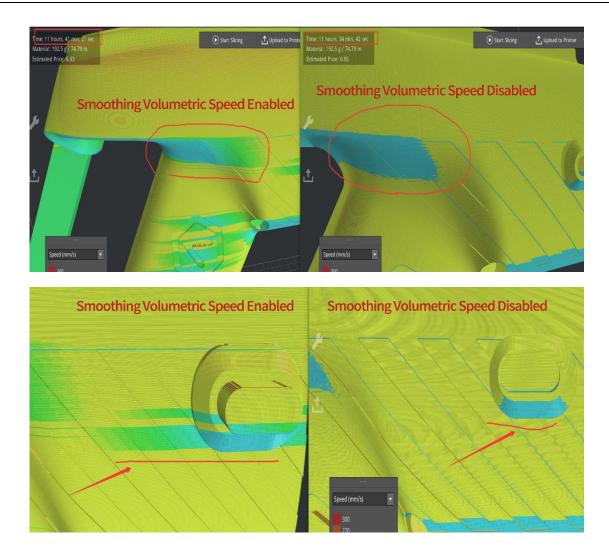
7. Added Slice Setting "Smoothing Volumetric Speed"

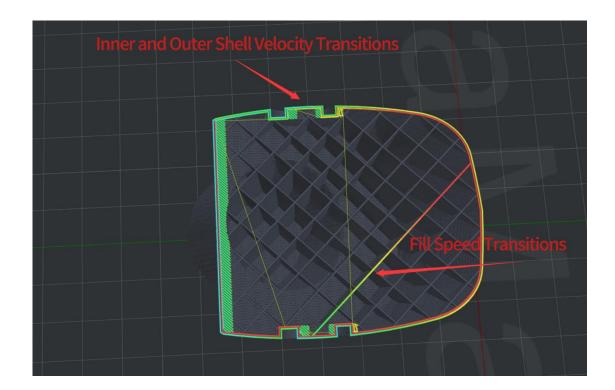
• When the difference in flow rate between different model features is too large, the printing speed is gradually decreased or increased to regulate the transition between different flow rates.

File(E) Eo	dit(E) Slice	e(P) View	⊻) Model(M) Repa	ir(<u>R</u>) Prin	ter(<u>C</u>) Hel	р(<u>Н</u>)												
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⊁ ∷		ns: Active Mo Irge Pipe.				2 × + = = ÷		+ Impa	ort Models		€ Start S	licing	Select C C S S Oth	 RAISE3 (Raise3D) (Raise3D) High Q Enable Sm Smoothin, Smoothin, Tenable Ov Overhang 	3D Pro3 Plus Hyper Spe Hyper Speec Quality - Pro3 noothing Volu g Volumetric	s Detection	d Kit nplates) n K (not sav d hold 1 ent Length 3 3	More - More - More - More - Disabled .00 mm3/:	ore 🗸
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• Effect Comparison

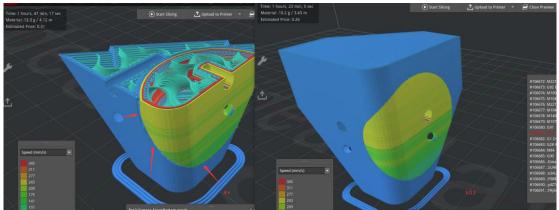
ed Price: 0.11		
	#12737: G1 F1500 E1292.9284	
	#12738: G1 F18000 X159.400 Y140.600 E1293.3974	
	#12739: G1 X159.400 Y159.400 E1293.8664	
	#12740: G1 X140.600 Y159.400 E1294.3353	
	#12740: G1 X140.600 Y155.600 E1294.4301	
	#12742: G1 F17000 X140.600 Y152.600 E1294.5050	
	#12743: G1 F16000 X140.600 Y149.600 E1294.5798	
	#12744: G1 F15000 X140.600 Y146.600 E1294.6546	
	#12745: G1 F14000 X140.600 Y143.600 E1294.7295	
	#12747: G1 F2400 E1293.8043	Long the second s
	#12748: G0 F12000 X140.200 Y140.200	
	#12751: G1 F1500 E1294.8043	
	#12752: G1 F12000 X159.800 Y140.200 E1295.2932	
	#12753: G1 X159.800 Y159.800 E1295.7822	
	#12754: G1 X140.200 Y159.800 E1296.2711	
	#12755: G1 X140.200 Y140.200 E1296.7600	
	2756: G0 F3600 X140.400 Y140.200	
Speed (mm/s)	×	
200		
300		Alling
270		
240		
210		
180		
150		

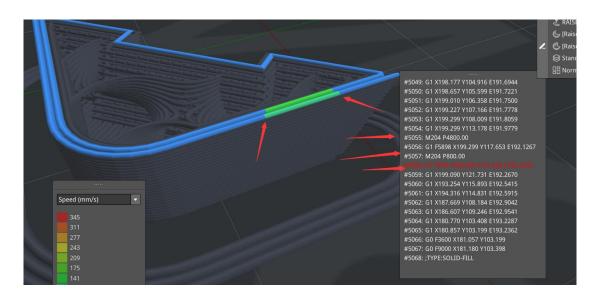


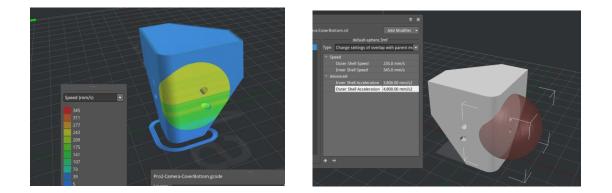


8. Modifying Outer and Inner Shell Velocities, Accelerations, and Jerks Without Generating Independent Shells

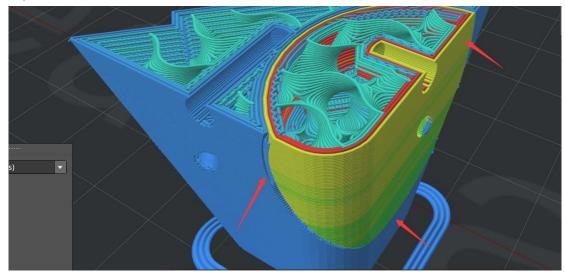
- In the new version, when adding different outer shell velocities, inner shell velocities, outer shell accelerations, inner shell accelerations, outer shell jerks, and inner shell jerks in the modifier, multiple separate shells are no longer generated. Instead, the values of velocity, acceleration, and jerk in the G-code path are varied within the same shell.
- This not only significantly improves surface quality but also greatly reduces printing time. For example, in the images below, the estimated time has been reduced by 20% in the new version compared to the old version.







• In comparison to the old version, multiple separate shells were generated, significantly impacting surface quality.

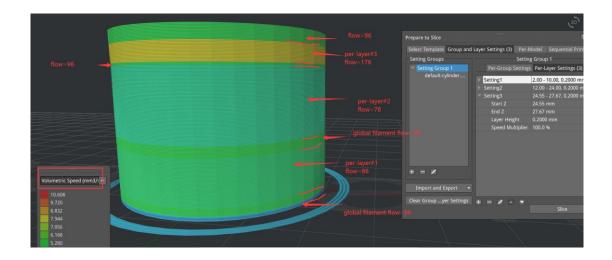




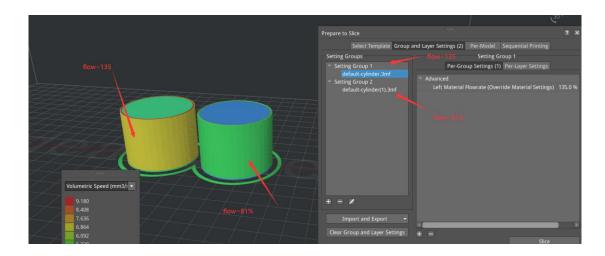
9. The "Per-Layer" and "Per-Group" Settings Allow for Increased Override Filament Flow.

• Examples of Per-Layer

🌔 Edit - "Setti	ng3"	×		
Name:	Setting3		Prepare to Slice	
			Select Template Group and Layer Settings (3)	Per-Model Sequ
Advance	Height d Material Flowrate (Override Material Settings)	1 overr Advan	s ngs you want to modify. ced (1 selected) t Material Flowrate (Override Material Settings) ht Material Flowrate (Override Material Settings)	×
Add Se ? Cance				

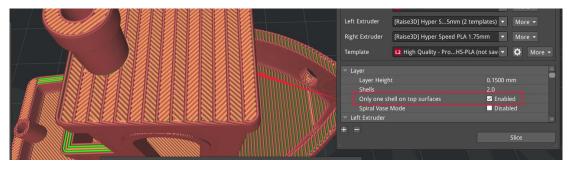


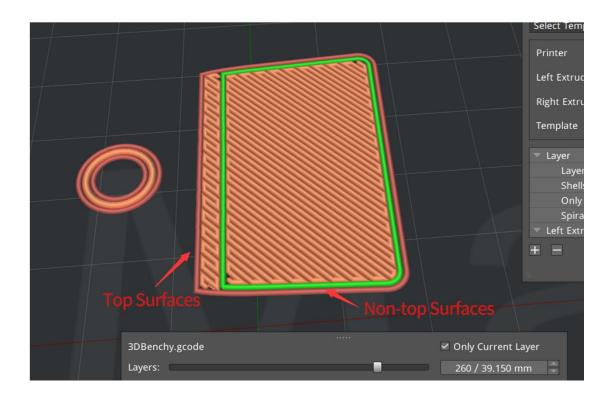
• Examples of Per-Group

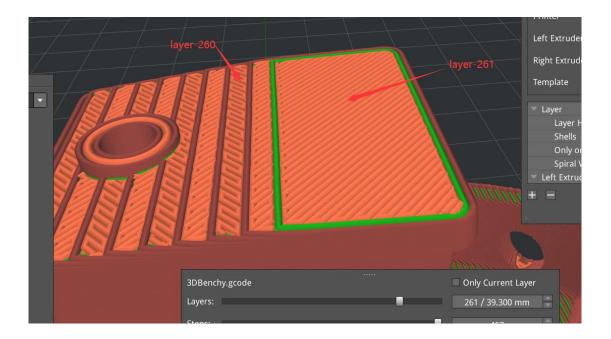


10. New Slicing Setting: Model Top Surface Uses Only One Shell

- Once enabled, all top surfaces of the model will use only one shell, while non-top surfaces will continue to use the shell settings from the original slicing template.
- If both top and non-top surfaces meeting the criteria are present on the same layer, the top surface area will use one shell, while the non-top surface area will use the original number of shells specified in the slicing template.

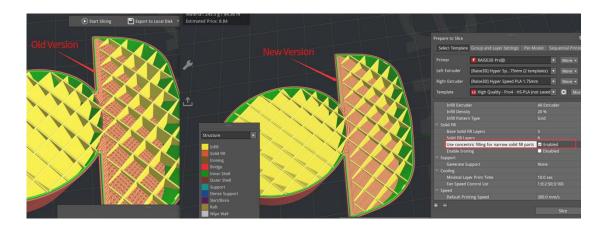




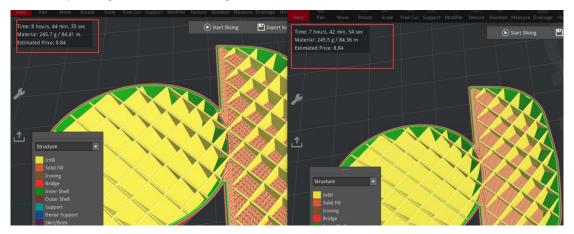


11. Using Concentric Fill Pattern for Narrow Solid Infills

• Previously, narrow areas of solid infill were printed using solid fill patterns such as lines or rectilinear. However, this often resulted in frequent nozzle movements, affecting print quality and increasing printing time. In the new version, narrow areas of solid infill are printed using concentric circles.



• Time Comparison: For models with a significant amount of internal solid infills, the new feature can significantly reduce printing time and minimize frequent nozzle shaking. The image below shows an 11% reduction in printing time after enabling the new feature.



• This only applies to the internal solid infill of the model, without modifying bottom surface, top surface, or bridging structures.

12. Added Two New Placeholders to Handle Custom Start G-code for Single Nozzle Scenarios.

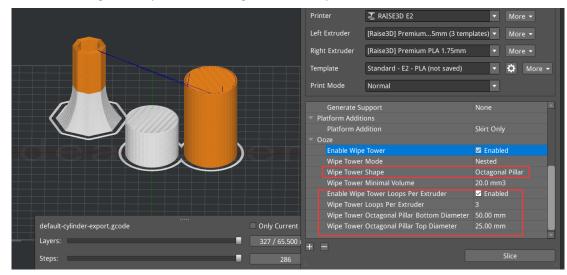
13. Removed the Limit on Texture XY Offset, Extending It to 5mm.

14. Added a New Wipe Tower Type - Octagonal Pillar.

- Added a new Wipe Tower type Octagonal Pillar.
 - The Wipe Tower Shape in the Advanced Settings dialog has been updated to include the new

Octagonal Pillar option.

- Added settings for Wipe Tower Octagonal Pillar Bottom Diameter
- Added settings for Wipe Tower Octagonal Pillar Top Diameter.



- Added Wipe Tower Loops Per Extruder option, which enforces the number of loops per extruder for the Wipe Tower (wall thickness).
 - Added settings to enable Wipe Tower Loops Per Extruder.
 - Added settings to configure Wipe Tower Loops Per Extruder.

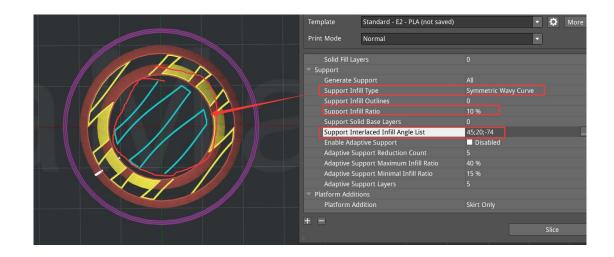
15. Added a New Model Internal Infill and Support Infill Type - Symmetric Wavy Curve.

• Added a new model internal infill - Symmetric Wavy Curve.

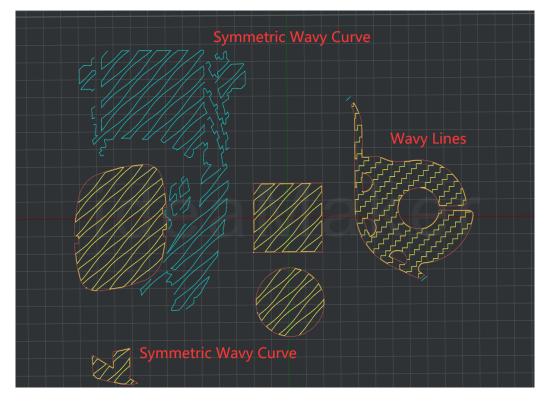
Right Extruder	[Raise3D] Premium PLA 1.75	mm	▼ More ▼
Template	Standard - E2 - PLA (not sav	ed)	🔹 🛱 More 👻
Print Mode	Normal		
🔻 Layer			
Layer Heigh Shells		0.2000 mm	
	in Optimal Order	1.0	
Shells Dire			
🔻 Infill			
Infill Extruc	der	All Extruder	
Infill Densi		10 %	
Infill Patter	rn Туре	Symmetric Wavy Cu	Jrve
Infill Offset		0.00 mm	
Infill Offset		0.00 mm	
Infill Angle	List	45;0;120	
Enable Ada	ptive Infill	Disabled	
🔻 Solid Fill			
Base Solid	Fill Layers		100

Added a new support infill type - Symmetric Wavy Curve.

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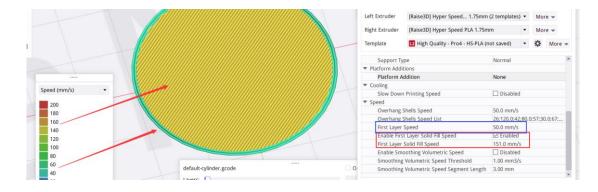
• Opened up a new model internal infill type - Wavy Lines.



16. Added Pressure Advance Setting

Advanced	
Enable Pressure Advance (Left Extruder)	Disabled
Enable Pressure Advance (Right Extruder)	Disabled
Pressure Advance (Left Extruder)	0.00
Pressure Advance (Right Extruder)	0.00
▼ Ooze	
Enable Wipe Tower	✓ Enabled
Wipe Tower Mode	Nested
Wipe Tower Shape	Octagonal Pillar
+ =	

17. Added Slicing Parameter: First Layer Solid Fill Speed

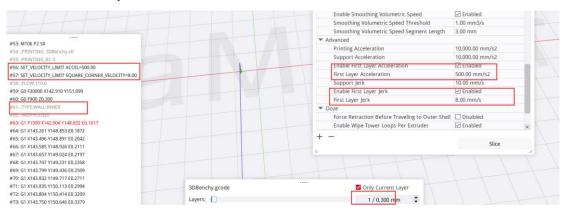


oling	Temperat	ture • Sp	peed Advanced	1 (Doze	Oth	er	Sp	ecial	GCod
Over	hang Shells	5								
Over	hang Shell	s Speed				50.	.0	-	mm/s	
Ove	erhang She	lls Speed I	.ist	n	^					
Ang	gle	30	Deg		Ang	gle		Sp	beed	_
Spe	ed	30.0	🗘 mm/s		26	5		12	20.0	
	Add				42	2		8	0.0	
	Add		Remove		57	7		3	0.0	*
First	Layer									
	Layer Spee	ed				50.	.0	•	mm/s	;
C	🖊 First Lay	er Solid Fil	l Speed		C	15	1	*	mm/s	;
Slow	Down Firs	t Few Laye	ers		[3		•		
Trave										
X/Y A	xis Mover	nent Speed	I			300	0.0	•	mm/s	
Z Axi	s Moveme	nt Speed				15.	.0	*	mm/s	
Raft	X/Y Axis M	ovement S	peed			300	0.0	•	mm/s	;
Sr	noothing V	olumetric	Speed							
	-		eed Threshold						1 mr	

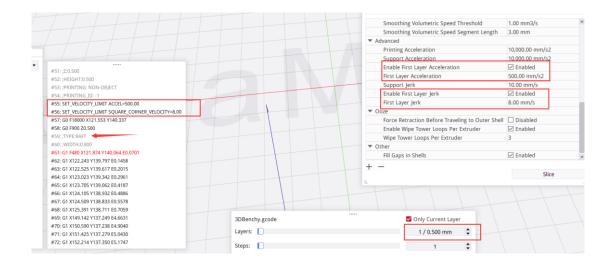
18. New Slicing Options

•

- First Layer Acceleration, First Layer Jerk
 - Once enabled, all features in the first layer contacting the build platform will uniformly use this acceleration and jerk.



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• Support Acceleration, Support Jerk

.

Control the acceleration and jerk for supports and thick supports.

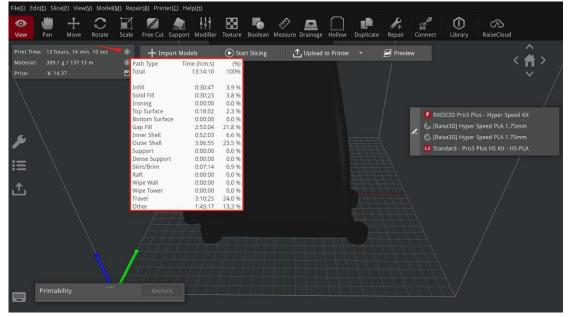
	Smoothing Volumetric Speed Inreshold	1.00 mm3/s
	Smoothing Volumetric Speed Segment Length	3.00 mm
	Advanced	
	Printing Acceleration	10.000.00 mm/s2
	Support Acceleration	2,500.00 mm/s2
3995: ;PRINTING_ID: -1	Enable First Layer Acceleration	Enabled
3996: G1 F2400 E266,7530 3997: G0 F30000 X164,854 Y146,195	First Layer Acceleration	500.00 mm/s2
997: G0 F30000 X164.834 Y146.195	Support Jerk	7.50 mm/s
999: SET_VELOCITY_LIMIT SQUARE_CORNER_VELOCITY=7.50	Enable First Layer Jerk	Enabled
1000: :TYPE-SUPPORT	First Layer Jerk	8.00 mm/s
001: ;WIDTH:0.400	▼ Ooze	
002: G1 F1500 E267.7530	Force Retraction Before Traveling to Outer Shell	Disabled
003: G1 F17085 X163.340 Y147.708 E267.8242	Enable Wipe Tower Loops Per Extruder	Enabled
004: G1 X163.700 Y148.231 E267.8453	Wipe Tower Loops Per Extruder	3
05: G1 X164.080 Y148.853 E267.8695	▼ Other	
06: G1 X166.267 Y146.666 E267.9724	Fill Gaps in Shells	🗹 Enabled 🗸
07: G1 X167.039 Y146.924 E267.9995	+ -	
08: G1 X167.242 Y147.127 E268.0090		Slice
009: G1 X167,580 Y147.238 E268.0209 000: G1 X164.379 Y150.439 E268.1714	1. I I I I I I I I I I I I I I I I I I I	
010: G1 X164.3/9 Y150.439 E268.1714 011: G1 X164.343 Y150.601 E268.1769		
11. 01.104.345 1150.001 £208.1703		

19. Added Slicing Parameter: Skirt Layers

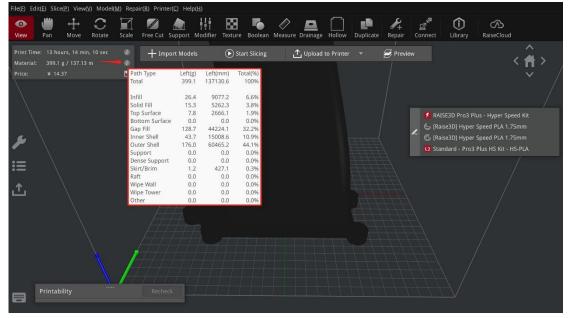
n 🖱 Skirt Only	~		
		Skirt and Brim	
		Skirt/Brim Extruder	Left Extruder <
	5.00 븆 mm	Skirt/Brim Speed	15.0 🖨 mm/s
odel	0.30 🖨 mm	Skirt/Brim Minimal Length	0.00 🚔 mm
ft	0.00 🌻 mm	Skirt Loop Lines	2
		Skirt Offset Distance	3.00 🚽 mm
Raft Structure		Skirt Layers	1
Layer Middle Lay	er Surface Layer	Skirt - Print Outer Shell Before Inner She	ell in the First Layer

20. Slice Result Panel

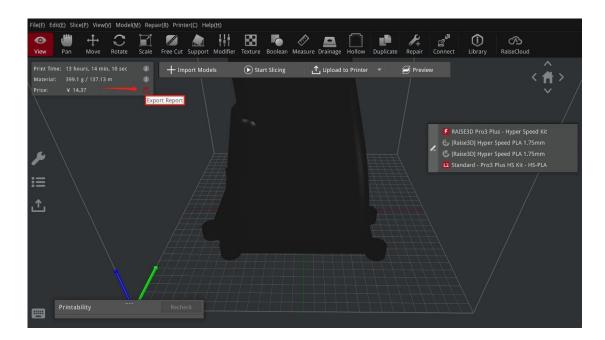
• FFF display printing time for each Path Type (preview of external gcode not displayed in interface)



• FFF display material usage for each Path Type (preview of external gcode not displayed in interface)

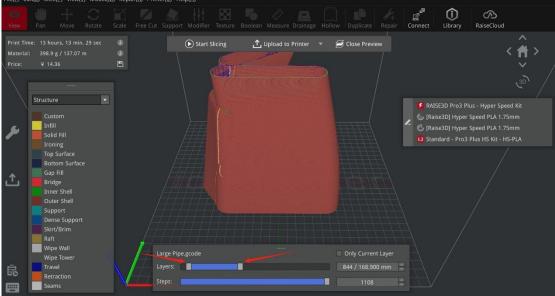


• Export slicing results report button provided on the right side of the price information (preview of external gcode, dlpcode not displayed in interface)



21. Support editing interface and optimized GCode preview scrollbar.





22. Added the new parameter: Infill Minimal Area

• For infill regions with an area smaller than the specified value, ideaMaker will replace those infill regions with Solid Fill for printing. When used in conjunction with "use concentric filling for narrow solid fill parts," it can reduce vibrations during the printing process. This can also reduce printing time for certain model

structures.

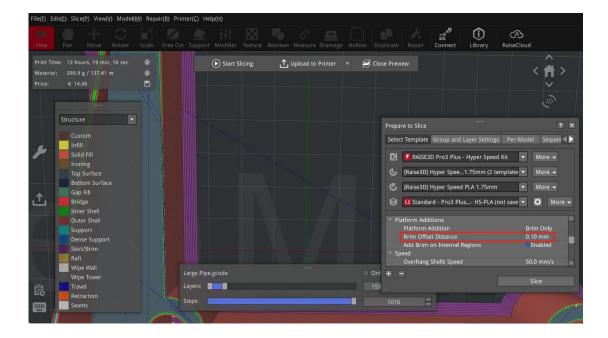
Advanced Settings				×
Template: Standard - Pro3 Plus HS Kit - HS-PLA	🔍 тур	e here to search (Ctrl + F)		
Layer Extruder Infill Solid Fill Suppo	ort Platform Additions Co	oling Temperature Speed Advanced Ooze Ot	ther Special	GCode
Infill		Infill		
Infill Extruder	All Extruder	Infill Minimal Width	0.00	mm
Infill Density	15 🚔 %	Infill Minimal Area	0.00	mm2
Infill Overlap	30 %	Adaptive Infill		
Infill Flowrate	100.0 %	Adaptive Infill Reduction Count		A
Infill Pattern Type	Grid 🔹			
Fill Gaps in 100% Concentric Infill				
Connect Infill Lines Endpoints				GCode
✓ Use Lines Pattern in High Density Grid Infill Pa	ittern			
Infill Extrusion Width Percentage	90 🚔 %			🗘 mm
Infill Offset X	0.00 — mm	Infill Angle		
Infill Offset Y	0.00 🚔 mm	Angle 0 Deg	45 135	
Combine Infill Layers	1	Add Infill Angle		
Infill Outline Shells	0	Remove Infill Angle		
Fill Gaps in Infill Outline Shells				
✓ Print Solid Fill in 100% Infill				
? Restore Save As			Cancel	ОК

23. Added the slicing parameter: Brim Offset Distance

• Functionality: Controls the distance between the Brim and the first layer of the model, making it easier to remove the Brim from the model. Recommended values are between 0.05 to 0.1mm.

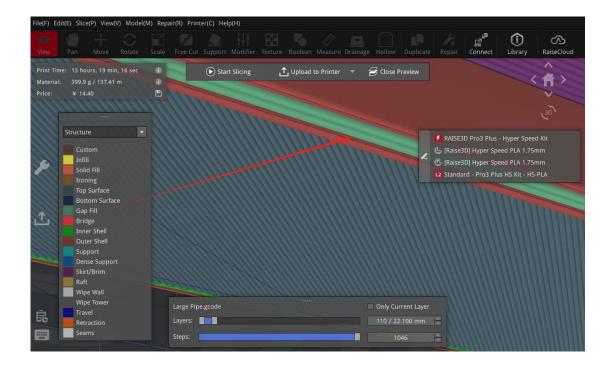
In previous versions, the gap between the Brim and the model was 0mm, often resulting in difficulty removing the Brim completely from the model.

Advanced Settings			
nplate: Standard - Pro3 Plus HS k	(it - HS-PLA	Type here to search (Ctrl + F)	
Layer Extruder Infill S	olid Fill Support Platform Add	tions Cooling Temperature Speed Advance	d Ooze Other Special GCode
Platform Addition Brim	Only		
Raft		Skirt and Brim	
		Skirt/Brim Extruder	Left Extruder
		Skirt/Brim Speed	15.0 🚔 mm/s
	0.30 🗘 mm	Skirt/Brim Minimal Length	0.00 🚔 mm
	0.00 🔶 mm		
			3.00 🌩 mm
Keep Holes in Raft Structure			
First Layer Middl	le Layer Surface Layer	Brim Loop Lines	8
		Brim Offset Distance	ට 0.10 🖨 mm
	8.0 🌻 mm/s	Brim - Print Outer Shell Before Inner She	ell in the First Layer
	200 🌲 %	🕤 🗹 Add Brim on Internal Regions	
		 Raft Override Maximum Shells Overlap Percentage 	50 %
		First Layer Extrusion Width Percentag Enable First Layer Solid Fill Extrusion ' Enable First Layer Shells	
Restore 👻 Sav	ve As		Cancel OK

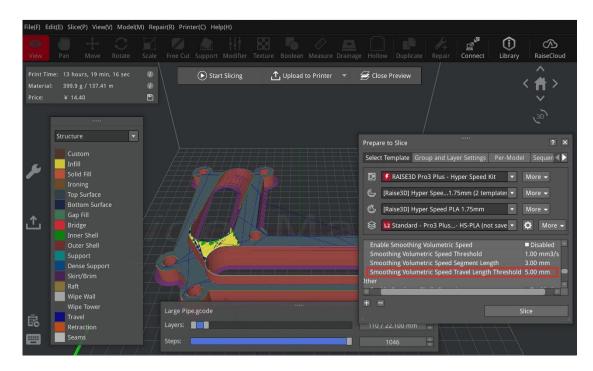


24. Improvement in GapFilling strategy to reduce vibration

• For wider gaps where a single GapFilling line cannot fill the area, use two GapFilling lines with smaller line widths to fill the gap.



25. Open Slicing Parameter: Smoothing Volumetric Speed Travel Length Threshold Option

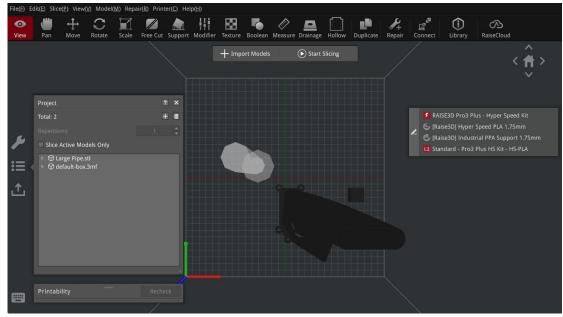


26. Slice template and some functional parameter modifications:

- In all slicing templates for the RMF500, slice settings, PET CF Support RMF500 material override settings, and Park Position coordinates are uniformly modified to (50, 0).
- For FFF printer models, when selecting slice templates, the Standard template is prioritized whenever possible (DLP printer model rules remain unchanged, still prioritizing the Light template).
- In ideaMaker's DF2 firmware settings, the maximum Z-axis speed in old versions was 350mm/min, in the new version it is modified to 300mm/min.
- The default wall thickness for hollows has been modified to 3.0 mm.

27. Display Wipe Tower Before Slicing:

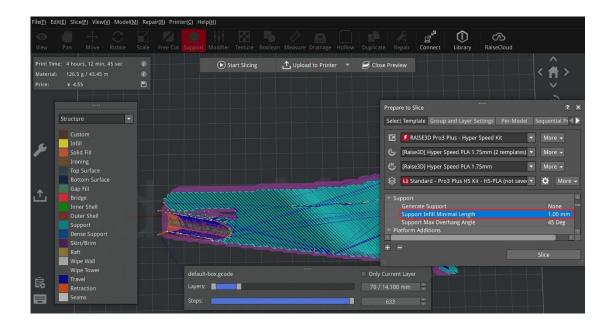
• Based on the nozzle usage status on the current platform, changes in the position and dimensions of the model, settings of the slicing template, and settings of layer grouping, the estimated position of the Wipe Tower is displayed in real-time.



28. Open slicing parameter option: Gap Filling Minimal Length

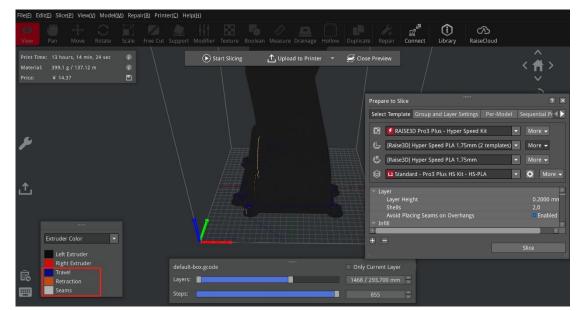
29. New slicing parameter: Minimum Support Fill Length

• Functionality: Deletes supports with fill length below the threshold value.



30. Adjustments to GCode preview:

• In Extruders mode, users can also choose to enable/disable the display of Travel, Retraction, and Seams.



New Printer Model

Resin Printers

1. RAISE3D DF2

FFF Printers

1. RAISE3D RMF500

2. No distinction between high-speed mode and normal mode. Change the models under the original high-speed mode to the following models.

- RAISE3D Pro2 Hyper Speed
- RAISE3D Pro2 Plus Hyper Speed
- RAISE3D Pro3 Hyper Speed Kit
- RAISE3D Pro3 Plus Hyper Speed Kit

3. Adjustments to RMF500 Printer Parameters

 Adjustment of RMF500 printer settings: Left Extruder -> Customize Extruder Printable Region -> X Size modified to 535mm.

New Material

Resin

- [Raise3D] Touch 2K Grey V1
- [Raise3D] High Detail Apricot V1
- [Raise3D] Standard White V1
- [Raise3D] Rigid 3K Grey V1

Filament

- New materials for RAISE3D Pro3 Hyper Speed Kit and RAISE3D Pro3 Plus Hyper Speed Kit
 - Raise3D Hyper Core PPA CF25 1.75mm
 - Raise3D Hyper Core PPA GF25 1.75mm
 - Raise3D Hyper Core ABS CF15 1.75mm
- New support materials

- Raise3D Industrial PPA Support 1.75mm
- Raise3D Industrial PET Support 1.75mm
- Raise3D Premium PVA+ 1.75mm

Slicing Template Updates

1. DLP

- In DF2 Standard White, a new speed-optimized template has been added. The template selection list for Standard White material is sorted as Light/Heavy/Speed, with Light selected by default.
- For the three slicing templates in DF2 Standard White resin, the UV curing time control list and the thermal curing time control list have been uniformly adjusted to 30 minutes.

2. FFF

- Updated the dual-color estimation optimization parameters in the slicing templates for Pro3 High Speed materials.
 - ASA, PC, PETG
 - Hyper Speed ABS, Hyper Speed ABS V2
 - Hyper Core PPA CF25, PPA GF25、ABS CF15

Other Features and Improvements

1. Support for Importing STEP/IGES Files.

2. Added Simplification function.

• Model simplification feature to reduce the number of triangles in the model.

ideaMaker 5.0.5 Beta Release Notes

	ic	leaMaker	File	Edit Slice	View	Model	Repair	Printer	Help			
	۲					View			ŵжV			
		dille	1	2		Pan			-27 ℃ N			
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3. Added "Measure" Function

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	Measure					? X			
	Unit		millimeters ·	- mm		•			
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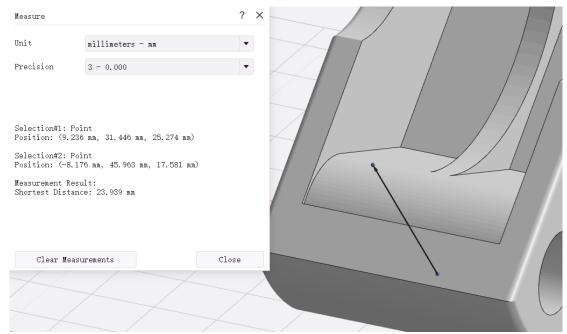
Supported Measurement Features

	Point	Line	Circle	Arc	Plane
Point	Yes	Yes	Yes	Yes	Yes
Line	Yes	Yes	Yes	Yes	Yes
Circle	Yes	Yes	Yes	No	Yes
Arc	Yes	Yes	No	No	Yes
Plane	Yes	Yes	Yes	Yes	Yes

Example:

• Point - Point

www.raise3d.com

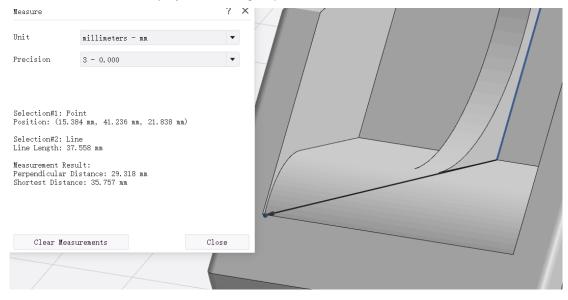


Shortest distance from point to point

• Point – Line

•

Shortest distance from point to line, perpendicular distance from point to line (only the shortest distance indicator is displayed in the figure).



• Point – Arc

•

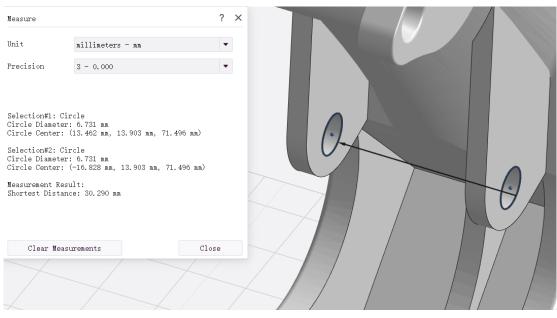
Shortest distance from the point to the arc.

Neasure		? ×		
Unit	nillineters - nn	•		
Precision	3 - 0.000	•		
Selection#2: A Arc Diameter: Arc Angle: 110	222 nn, 42.034 nn, 21.119 nn) rc 37.880 nn .748 Deg .748 Deg .6.080 nn, 19.091 nn, 58.288 nn sult: nce: 42.007 nn	Close		

• Circle – Circle

•

Shortest distance between circles.



• Circle – Plane

•

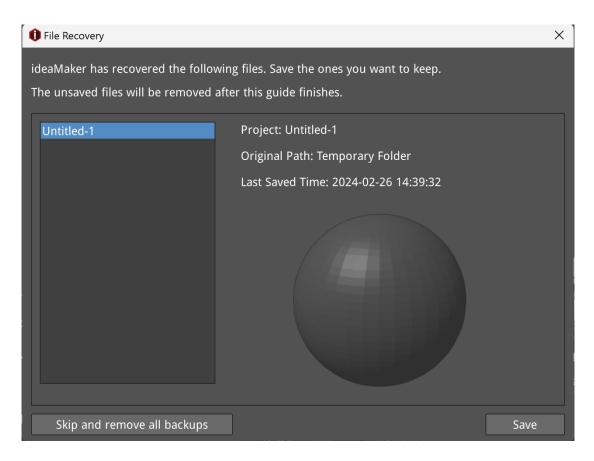
Shortest distance from a circle to a plane.

P							
Unit	millimeters	– mm	•		$ \longrightarrow $		
Precision	3 - 0.000		-				
Circle Di Circle Ce		3.903 mm, 71.496 mm)	_		0		
Selection Area: 534	#2: Plane .630 mm^2			47			6
	nt Result: Distance: 29.613 mm					Y	
				$\angle \square$			
Clea	r Measurements	Clo	se				
F		H					K
	\square						-
			1	A			

- Arc Plane
 - Shortest distance from an arc to a plane.

Selection#1: Arc Arc Diameter: 37.881 mm Arc Angle: 114.703 Deg Arc Center: (16.080 mm, 19.091 mm, 58.288 mm) Selection#2: Plane Area: 484.545 mm ² 2 Measurement Result: Shortest Distance: 24.470 mm	
Clear Measurements Clos	

4. Automatic Backup and Recovery Support for Software Crashes



5. Material Settings Now Include a Material Color Attribute.

O Material Settings - (Raise3D) High Detail Apricot V1 Technology: Resin Constal
Material Settings Material Settings Material Type: High Detail Apricot V1 Material Type Abbreviation: RESIN-HD-APRICOT Brand: Raise3D Display Name: [Raise3D] High Detail Apricot V1 Density: 1.14 g/mL Price: 30.00 V/L Color: Verify ID: 4 Notes Reset

6. User-defined Slicing Templates Support Rollback of Slicing Settings.

7. Manually Select Models Already Placed on The Build Platform as Modifiers.

• Left panel of model list -> Select the model to be converted to a modifier -> Right-click menu -> Change to Modifier.

		Project	? ×	
	Project ? ×	Total: 2	+ 🔟 🔪	
	Total: 2 十 回	Repetitions:		
1	Repetitions:	Slice Active Models Only	Change to Modifier	×
:=	Interactive models only Image: Solid processing of the solid procesing of the so	 Modifier - Bottom Bottom 	Current Model: Modifier - Bottom	
⊥	Duplicate Export		Modifier Type: Change settings of overlap with parent model Choose Parent Model:	•
	Rename Change to Modifier		Bottom 👻	
			Cancel	ок

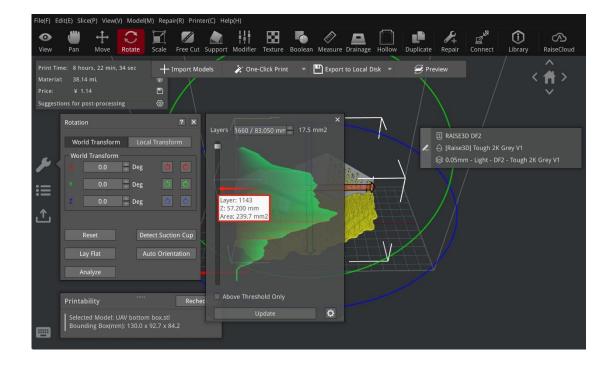
8. Imported 3MF file models maintain their absolute positions without offsetting overall.

 After disabling the option in Preferences -> Files -> Automatically position imported models, imported 3MF files are not globally offset and remain in their original positions as designed in the modeling software.

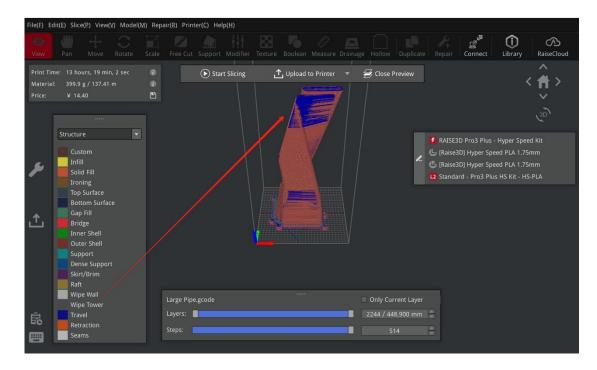
General	Interface	Files	Shortcuts	Confirm and Tips	Network	Update
STL Import						
Weld Verti	ces					
Welding Thre	shold:		🗘 mm			
Import optio	ns are only app	lied to newly ir	mported mod	els.		
Models						
🗹 Place mod	lels on platform	after rotating	, scaling, and	mirroring		
Automatic	ally position im	ported models				
Model Spacir	ng when arrangi	ing or position	ing models	4.00	🜩 mm	
Automatic	ally position the	e new models a	after duplicati	ng or copying		
Clear Grou	up and Layer Se	ttings before l	oading a new	project		
Maximum Di	plicate Copies:			5		

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9. Optimization of cross-sectional area scrollbar: When hovering the cursor over any position on the scrollbar, it displays the corresponding layer, Z-axis height, and cross-sectional area at that position. Clicking on the cursor position directly jumps the scrollbar to the indicated location.



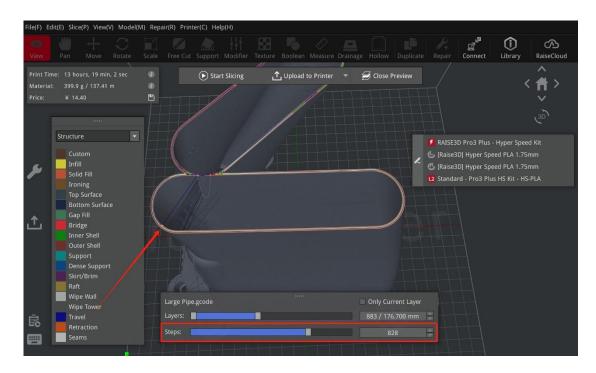
10. Shows travel on all layers under GCode preview.



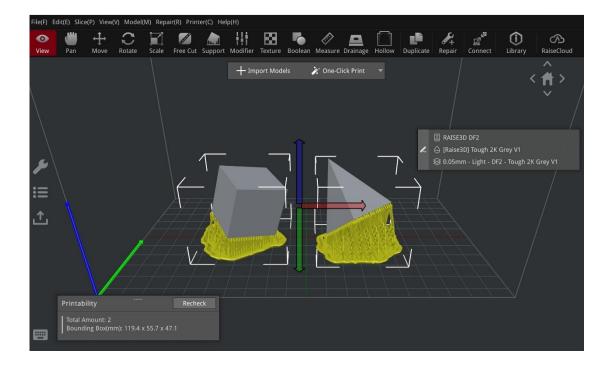


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11. When viewing the current layer steps, the travel for other layers turns dark gray, while only the travel for the current layer is displayed in blue.



12. The bounding box lines become bold when the model is selected, distinguishing them from the edges of the model itself.



13. In the DLP slicing settings advanced dialog, the Start Gcode control has been expanded to display more area.

14. In the advanced settings dialog for slicing templates, the two options under the Infill Tab have been moved to a new location.

Layer Extruder Infill Solid Fill Suppo	ort Platform Additions	Cooling Temperature Speed Advanced Ooze 0	Other Special GCode
infill		Infill	
Infill Extruder	All Extruder	Infill Minimal Width	0.00 🚔 mm
Infill Density	15 🚔 %	Infill Minimal Area	0.00 — mm2
Infill Overlap	30 🚔 %		
Infill Flowrate	100.0 🚔 %	Adaptive Infill Adaptive Infill Reduction Count	
Infill Pattern Type	Grid		
Connect Infill Lines Endpoints			0.80 🔶 mm
Use Lines Pattern in High Density Grid Infill	Pattern		
Infill Extrusion Width Percentage	90 🚔 %		
Infill Offset X	0.00 🖨 mm	Infill Angle	45
Infill Offset Y	0.00 🖨 mm	Angle 0 Deg	45 135
Combine Infill Layers	1	Add Infill Angle	
Infill Outline Shells	0	Remove Infill Angle	
✓ Fill Gaps in Infill Outline Shells			
🗹 Print Solid Fill in 100% Infill 🦯			

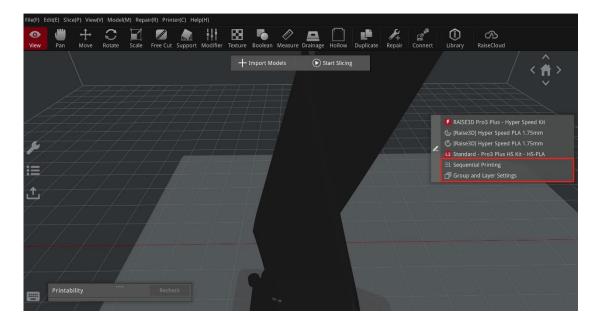
15. The Hollow and Drainage functions no longer check whether the current printer is a resin-based (DLP) printer. Regardless of whether the selected printer is FFF or DLP, both functions can be used. (Note: During FFF slicing, the Lattice Infill structure within the Hollow function will not be processed. Therefore, Lattice Infill will not appear in the GCode results after FFF slicing.)

16. In RMF500 remote control, the Home Tab provides access to set the build plate temperature.



17. Prepare Slice Simplified Panel adds status display for sequential printing and group and layer

settings.



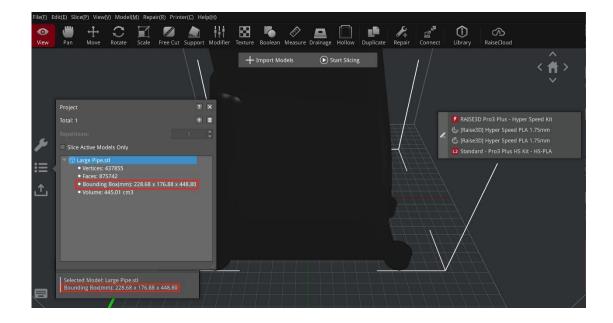
18. Scaling Issue with Importing Small-Sized Models:

• If the dimensions of the imported model are equal to or less than 0.1mm, the user is prompted to confirm whether the model was created using "meters" as the unit, and scale it accordingly using "millimeters."

File(F) Edit(E) Slice(P) View(V) Model(M) Repair(R) Printer(C) Help(H)																		
() View															Connect	() Library	RaiseCloud	
						ideaMaker Model's size too small and maybe in inches measuremer want to scale to millimeters? Sizzling Amur-Gogo.stl No							× Du fes					
			A															

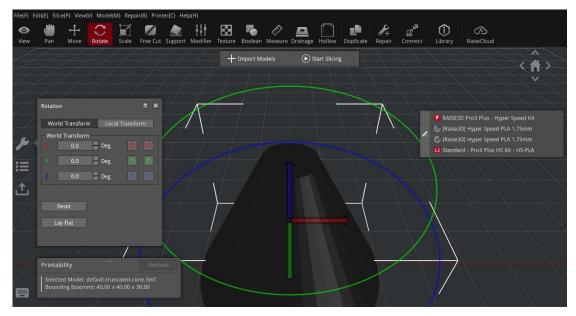
• Displays the bounding box dimensions of models in the model list and printable surface panel with two decimal places.

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19. Adjustments to Rotation Controls:

- Regardless of whether the main interface is enlarged or reduced, the following controls should maintain their size on the interface to facilitate selection by the cursor:
 - Rotation controls
 - Rotate plane controls in the cutting function



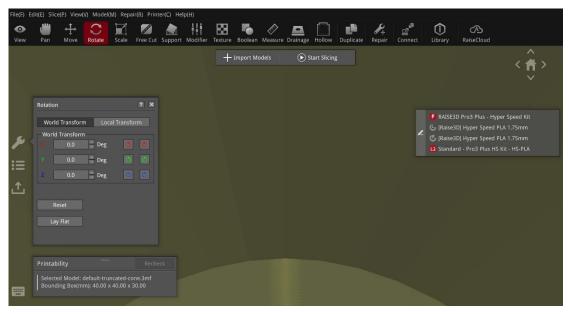
- When the viewing angle is close to the model, the following will no longer be displayed:
 - Rotation controls

•

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Rotate plane controls in the cutting function

•



20. After slicing a model printed with the right nozzle, the new model will inherit the nozzle settings from the original model.

