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R&R® 3D Model Resin Equipment Settings

3D Printer Settings

R&R 3D model resins are compatible with DLP and LCD 3D printers. Every 3D printer, model resin, and 3D model differs, so to achieve the best quality print, you may need to adjust settings in your slicer software. This customization ensures that your printer is optimized for R&R's model resins, meeting the specific requirements for your print. For best results, follow the settings provided in this document. Always refer to the 3D printer manufacturer's instructions during operation.

Curing Unit Settings

For best results, use the settings in this document to cure your dental model produced with R&R's model resins. Be sure to follow the curing unit manufacturer's instructions during operation.



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Voco GmbH	



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R&R® 3D Model Resin Equipment Compatibility

• Compatible	R&R 3D Model S	tandard™ resin	R&R 3D Mode	el Elite™ resin
\circ Not Yet Compatible	Beige	Gray	Beige	Gray
🛆 ACKURETTA				
SOL 3D printer	•	•	•	•
Curie™ curing unit	•	•	•	•
ASIGA				
Max 3D printer	•	•	•	•
Max 2 3D printer	•	•	•	•
Max X 3D printer	•	•	•	•
Ultra 3D printer	•	•	•	•
PRO 4K 3D printer	•	•	•	•
PRO 4K XL 3D printer	•	•	•	•
All other Asiga 3D printers	•	•	•	•
Flash® Curve curing unit	•	•	•	•
ANYCUBIC				
Photon Mono 4K 3D printer	•	•	•	•
ELEGOO				
Saturn 2 8K 3D printer	•	•	•	•
🕖 phrozen				
Sonic Mini 4K 3D printer	0	0	•	•
Sonic Mini 8K 3D printer	•	•	•	•
Sonic Mighty 4K 3D printer	•	•	0	0
🛞 SHINING 3D				
AccuFab-L4K 3D printer	•	•	•	•
VOCO				
Otoflash curing unit	•	•	•	•



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Ackuretta SOL

Manufacturer Ackuretta

Compatibility R&R 3D Model Standard[™] resin R&R 3D Model Elite[™] resin Slicing Software Alpha Al V5.1.1

Layer Height 50µm/0.05 mm 100µm/0.1 mm 150µm/0.15 mm

Uploading Files

Ransom & Randolph's 3D model resins are compatible with the Ackuretta slicing software (Alpha Al version V5.1.1). Please ensure your software is up to date to the latest version.

Printing a Model

- 1. Open the Alpha Al slicing software.
- 2. Select the appropriate printer (Ackuretta SOL), brand (Ransom & Randolph) & relevant resin material's name.

for the 50µm/0.05mm layer is 2.2 seconds, increase the time to 2.4 or 2.5 seconds).

- 3. Make the necessary changes found in the Printer Settings below.
- 4. Follow the printer manufacturer's instructions during operations. For more information, visit ackuretta.com. Note: If your printer has been in use for an extended period, it is possible that the light intensity may have reduced. If you experience failures, increase the layer curing time by 10 to 15% over the normal curing time (Example: If the curing time)

Printer Settings

R&R 3D Model Standard Resin

Layer Thickness	0.07 mm	Scaling Ratio						
Illumination	2.10 seconds	X	1.00442					
Adjustment	0.0 seconds	Y	1.00533					
Base Adjustment	0.0 seconds	Z	1.01391					

R&R 3D Model Elite Resin

Layer Thickness	0.07 mm	Scaling Ratio						
Illumination	2.60 seconds	X	1.00692					
Adjustment	0.0 seconds	Y	1.00503					
Base Adjustment	0.0 seconds	Z	1.01762					



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Photon Mono 4K

Manufacturer Anycubic

Compatibility R&R 3D Model Standard[™] resin R&R 3D Model Elite[™] resin Slicing Software Photon Workshop V2.2.16

Layer Height 50µm/0.05 mm

Uploading Files

Ransom & Randolph's 3D model resins are compatible with the Anycubic slicing software (Photon Workshop V2.2.16). Please ensure your software is up to date to the latest version.

Printing a Model

- 1. Open the Photon Workshop slicing software.
- 2. Select the appropriate printer (Photon Mono 4K), brand (Ransom & Randolph) & the relevant resin material's name.
- 3. Make the necessary changes found in the Printer Settings below.
- 4. Follow the printer manufacturer's instructions during operations. For more information, visit www.anycubic.com.

Printer Settings

- 1. Make the following changes under the "Slice Parameter" tab in the Machine & Resin Settings:
 - Normal Exposure Time(s): Change to 3.200



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Max

Manufacturer Asiga

Compatibility R&R 3D Model Standard[™] resin R&R 3D Model Elite[™] resin Slicing Software Composer V 2.0

Layer Height 50µm/0.05 mm 100µm/0.1 mm 150µm/0.15 mm

Uploading Files

Ransom & Randolph's 3D model resins are validated in the Asiga slicing software (Composer V 2.0). Please ensure your software is up to date to the latest version. To access the corresponding file, please follow the directions below.

- 1. Visit Asiga's official website at asiga.com.
- 2. Click "Materials" in the home page ribbon.
- 3. Choose "Open Material Library"
- 4. Choose "Explore Open Material Library"
- 5. Scroll through the list of vendors to find "Ransom & Randolph"

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	Download Material Profiles	visit – ransom-randolph.com	
	BCCO RESIMMORESD	+	

- 6. Download the .ini file to your computer.
- 7. Import the .ini file into the Asiga composer software (check for latest version of software).

Printing a Model

- 1. Open the Composer slicing software.
- 2. Import the validated files into the Asiga composer software.
- 3. Follow the printer manufacturer's instructions during operations. For more information, visit asiga.com.



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Max 2

Manufacturer Asiga

Compatibility R&R 3D Model Standard[™] resin R&R 3D Model Elite[™] resin Slicing Software Composer V 2.0

Layer Height 50µm/0.05 mm 100µm/0.1 mm 150µm/0.15 mm

Uploading Files

Ransom & Randolph's 3D model resins are validated in the Asiga slicing software (Composer V 2.0). Please ensure your software is up to date to the latest version. To access the corresponding file, please follow the directions below.

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- 2. Click "Materials" in the home page ribbon.
- 3. Choose "Open Material Library"
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- 5. Scroll through the list of vendors to find "Ransom & Randolph"

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	List of available material profiles:								
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	DOO REDWYDHIS30				+				

- 6. Download the .ini file to your computer.
- 7. Import the .ini file into the Asiga composer software (check for latest version of software).

Printing a Model

- 1. Open the Composer slicing software.
- 2. Import the validated files into the Asiga composer software.
- 3. Follow the printer manufacturer's instructions during operations. For more information, visit asiga.com.



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Max X

Manufacturer Asiga

Compatibility R&R 3D Model Standard[™] resin R&R 3D Model Elite[™] resin Slicing Software Composer V 2.0

Layer Height 50µm/0.05 mm 100µm/0.1 mm 150µm/0.15 mm

Uploading Files

Ransom & Randolph's 3D model resins are validated in the Asiga slicing software (Composer V 2.0). Please ensure your software is up to date to the latest version. To access the corresponding file, please follow the directions below.

- 1. Visit Asiga's official website at asiga.com.
- 2. Click "Materials" in the home page ribbon.
- 3. Choose "Open Material Library"
- 4. Choose "Explore Open Material Library"
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	List of available material profiles:								
	RR 3D Model Elite								
	Download Material Profiles			visit – <u>ransom</u>	-randolph.com				
	DOO REDWYDHIS30				+				

- 6. Download the .ini file to your computer.
- 7. Import the .ini file into the Asiga composer software (check for latest version of software).

Printing a Model

- 1. Open the Composer slicing software.
- 2. Import the validated files into the Asiga composer software.
- 3. Follow the printer manufacturer's instructions during operations. For more information, visit asiga.com.



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Ultra

Manufacturer Asiga

Compatibility R&R 3D Model Standard[™] resin R&R 3D Model Elite[™] resin Slicing Software Composer V 2.0

Layer Height 50µm/0.05 mm 100µm/0.1 mm 150µm/0.15 mm

Uploading Files

Ransom & Randolph's 3D model resins are validated in the Asiga slicing software (Composer V 2.0). Please ensure your software is up to date to the latest version. To access the corresponding file, please follow the directions below.

- 1. Visit Asiga's official website at asiga.com.
- 2. Click "Materials" in the home page ribbon.
- 3. Choose "Open Material Library"
- 4. Choose "Explore Open Material Library"
- 5. Scroll through the list of vendors to find "Ransom & Randolph"

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	List of available material profiles:								
	RR 3D Model Elite								
	Download Material Profiles			visit – <u>ransom</u>	-randolph.com				
	COO REDINVOVIES30				+				

- 6. Download the .ini file to your computer.
- 7. Import the .ini file into the Asiga composer software (check for latest version of software).

Printing a Model

- 1. Open the Composer slicing software.
- 2. Import the validated files into the Asiga composer software.
- 3. Follow the printer manufacturer's instructions during operations. For more information, visit asiga.com.



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PRO 4K

Manufacturer Asiga

Compatibility R&R 3D Model Standard[™] resin R&R 3D Model Elite[™] resin Slicing Software Composer V 2.0

Layer Height 50um/0.05 mm

100µm/0.1 mm 150µm/0.15 mm

Uploading Files

Ransom & Randolph's 3D model resins are validated in the Asiga slicing software (Composer V 2.0). Please ensure your software is up to date to the latest version. To access the corresponding file, please follow the directions below.

- 1. Visit Asiga's official website at asiga.com.
- 2. Click "Materials" in the home page ribbon.
- 3. Choose "Open Material Library"
- 4. Choose "Explore Open Material Library"
- 5. Scroll through the list of vendors to find "Ransom & Randolph"

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- 6. Download the .ini file to your computer.
- 7. Import the .ini file into the Asiga composer software (check for latest version of software).

Printing a Model

- 1. Open the Composer slicing software.
- 2. Import the validated files into the Asiga composer software.
- 3. Follow the printer manufacturer's instructions during operations. For more information, visit asiga.com.



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PRO 4K XL

Manufacturer Asiga

Compatibility R&R 3D Model Standard[™] resin R&R 3D Model Elite[™] resin Slicing Software Composer V 2.0

Layer Height 50um/0.05 mm

100µm/0.1 mm 150µm/0.15 mm

Uploading Files

Ransom & Randolph's 3D model resins are validated in the Asiga slicing software (Composer V 2.0). Please ensure your software is up to date to the latest version. To access the corresponding file, please follow the directions below.

- 1. Visit Asiga's official website at asiga.com.
- 2. Click "Materials" in the home page ribbon.
- 3. Choose "Open Material Library"
- 4. Choose "Explore Open Material Library"
- 5. Scroll through the list of vendors to find "Ransom & Randolph"

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- 6. Download the .ini file to your computer.
- 7. Import the .ini file into the Asiga composer software (check for latest version of software).

Printing a Model

- 1. Open the Composer slicing software.
- 2. Import the validated files into the Asiga composer software.
- 3. Follow the printer manufacturer's instructions during operations. For more information, visit asiga.com.



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Saturn 2

Manufacturer Elegoo

Compatibility R&R 3D Model Standard[™] resin R&R 3D Model Elite[™] resin Slicing Software Chitubox V1.9.6

Layer Height 50µm/0.05 mm

Uploading Files

Ransom & Randolph's 3D model resins are compatible with the Elegoo slicing software (Chitubox V1.9.6). Please ensure your software is up to date to the latest version.

Printing a Model

- 1. Open the Chitubox slicing software.
- 2. Select the appropriate printer (Saturn 2), brand (Ransom & Randolph) & the relevant resin material's name.
- 3. Make the necessary changes found in the Printer Settings below.
- 4. Follow the printer manufacturer's instructions during operations. For more information, visit elegoo.com.

Printer Settings

- 1. Make the following changes under the "Print" settings:
 - Exposure Time: Change to 5.500 s





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Sonic Mini 4K

Manufacturer Phrozen

Compatibility R&R 3D Model Elite™ resin Slicing Software Chitubox V1.9.6

Layer Height 50µm/0.05 mm

Uploading Files

Ransom & Randolph's 3D model resins are compatible with the Phrozen slicing software (Chitubox V1.9.6). Please ensure your software is up to date to the latest version.

Printing a Model

- 1. Open the Chitubox slicing software.
- 2. Select the appropriate printer (Phrozen Sonic Mini 4K), brand (Ransom & Randolph) & the relevant resin material's name.
- 3. Make the necessary changes found in the Printer Settings below.
- 4. Follow the printer manufacturer's instructions during operations. For more information, visit phrozen3d.com.

Printer Settings

- 1. Make the following changes under the "Print" settings:
 - Exposure Time: Change to 5.500 s





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Sonic Mini 8K

Manufacturer Phrozen

Compatibility R&R 3D Model Standard[™] resin R&R 3D Model Elite[™] resin Slicing Software Chitubox V1.9.6

Layer Height 50µm/0.05 mm

Uploading Files

Ransom & Randolph's 3D model resins are compatible with the Phrozen slicing software (Chitubox V1.9.6). Please ensure your software is up to date to the latest version.

Printing a Model

- 1. Open the Chitubox slicing software.
- 2. Select the appropriate printer (Sonic Mini 8K), brand (Ransom & Randolph) & the relevant resin material's name.
- 3. Make the necessary changes found in the Printer Settings below.
- 4. Follow the printer manufacturer's instructions during operations. For more information, visit phrozen3d.com.

Printer Settings

- 1. Make the following changes under the "Print" settings:
 - Exposure Time: Change to 4.500 s





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Sonic Mighty 4K

Manufacturer Phrozen

Compatibility R&R 3D Model Standard[™] resin Slicing Software Chitubox V1.9.6

Layer Height 50µm/0.05 mm

Uploading Files

Ransom & Randolph's 3D model resins are compatible with the Phrozen slicing software (Chitubox V1.9.6). Please ensure your software is up to date to the latest version.

Printing a Model

- 1. Open the Chitubox slicing software.
- Select the appropriate printer (Phrozen Sonic Mighty 4K), brand (Ransom & Randolph) & the relevant resin material's name (50μm/0.05 mm).
- 3. Make the necessary setting changes found in the Printer Settings below.
- 4. Follow the printer manufacturer's instructions during operations. For more information, visit phrozen3d.com.

Printer Settings

- 1. Make the following changes under the "Print" settings:
 - Exposure Time: Change to 4.500 s



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Sonic Mighty 4K

Manufacturer Phrozen

Compatibility R&R 3D Model Standard[™] resin Slicing Software Chitubox V1.9.6

Layer Height 100µm/0.1 mm

Uploading Files

Ransom & Randolph's 3D model resins are compatible with the Phrozen slicing software (Chitubox V1.9.6). Please ensure your software is up to date to the latest version.

Printing a Model

- 1. Open the Chitubox slicing software.
- Select the appropriate printer (Phrozen Sonic Mighty 4K), brand (Ransom & Randolph) & the relevant resin material's name (100µm/0.1 mm).
- 3. Make the necessary setting changes found in the Printer Settings below.
- 4. Follow the printer manufacturer's instructions during operations. For more information, visit phrozen3d.com.

Printer Settings

- 1. Make the following changes under the "Print" settings:
 - Exposure Time: Change to 6.700 s



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AccuFab-L4K

Manufacturer Shining 3D

Compatibility R&R 3D Model Standard™ resin R&R 3D Model Elite™ resin Slicing Software Accuware V 3.1.8.35

Layer Height 50µm/0.05 mm 100µm/0.1 mm

Uploading Files

Ransom & Randolph's 3D model resins are compatible with the Shining 3D slicing software (Accuware V 3.1.8.35). Please ensure your software is up to date to the latest version.

Printing a Model

- 1. Open the Accuware slicing software.
- 2. Select the appropriate printer (AccuFab-L4K), brand (Ransom & Randolph) & the relevant resin material's name from the drop-down menu. The material name will depend on the layer height desired.
 - Layer Height: 50µm/0.05 mm: "[Shining 3D]0.05"
 - Layer Height: 100µm/0.1 mm: "[Shining 3D]0.1"
- 3. Make the necessary changes found in the Printer Settings below.
- 4. Follow the printer manufacturer's instructions during operations. For more information, visit shining3ddental.com.

Printer Settings

Layer Height: 50µm/0.05 mm

- 1. Select the material name "[Shining 3D]0.05" from the drop-down menu.
- 2. Make the following changes under the "General Layer" settings column:
 - Fill Exposure Time (s): Change from 3.60 to 4.00
 - Boundary Exposure Time (s): Change from 3.60 to 4.00
 - Slow Return Speed on Z-axis (mm/min): Change from 90 to 72

Layer Height: 100µm/0.1 mm

- 1. Select the material name "[Shining 3D]0.1" from the drop-down menu.
- 2. Make the following changes under the "General Layer" settings column:
 - Fill Exposure Time (s): Change from 4.60 to 5.10
 - Boundary Exposure Time (s): Change from 4.60 to 5.10
 - Slow Return Speed on Z-axis (mm/min): Change from 90 to 72



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R&R® 3D Model Resin Curing Unit Settings



Curie[™] curing unit

Manufacturer

Ackuretta

Curing Instructions

Compatibility

Compatibility

R&R 3D Model Standard[™] resin

R&R 3D Model Elite[™] resin

R&R 3D Model Standard[™] resin R&R 3D Model Elite[™] resin

- 1. Customize the curing parameters to the following:
 - High-power flashing system
 - 10 minutes
- 2. Follow the printer manufacturer's instructions during operations. For more information, visit ackuretta.com.



Flash® Curve curing unit

Manufacturer

Asiga

Curing Instructions

- 1. Customize the curing parameters to the following:
 - Low-power flashing system
 - 30 minutes
- 2. Follow the printer manufacturer's instructions during operations. For more information, visit asiga.com.



fin

OtoFlash UV curing unit

Manufacturer VOCO GmbH **Compatibility** R&R 3D Model Standard[™] resin R&R 3D Model Elite[™] resin

Curing Instructions

- 1. Customize the curing parameters to the following:
 - 2,000 flashes each side
- 2. Follow the printer manufacturer's instructions during operations. For more information, visit voco.dental.



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