Version 6.0, February 2023

ENVISION ONE RP®

OPERATIONS AND MAINTENANCE GUIDE

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Document Information

Legal Notice

Envision One RP Operations and Maintenance Guide: E1RP-UG-00018-Rev06-EN, February 2023

About This Document

This instruction manual is part of the documentation of your 3D printer. It leads you through the installation, configuration, and working with the Envision One RP software provided together with your printer.

The Envision One RP Software can be used with the next 3D-printers:

- Envision One CLM
- D4K Pro
- Vida cDLM
- P4K
- P4K Advantage
- Perfactory P3/P4
- Einstein Pro XL
- Xtreme 8K

Note: This guide is created for version 1.32.5425 of Envision One RP software. If you have a newer version of software and some information is not covered in this guide, please let us know by contacting Customer Service.

History of Changes

Date	Changes	Version
Jan-2019	Document creation	1.0
Mar-2019	• Changed the Installation Procedure section • Added the Actions Bar subsection • Added the Shortcuts subsection • Updated the Troubleshooting section • Updated the Open a File section • Added the Check for Updates subsection • Added the Printability Issues subsection	1.1
Apr-2019	• Updated the Shortcuts subsection • Added the Build Without Baseplate with Lifted Part subsection	1.2
Apr-2019	• Minor changes in the Open a File section	1.3
May-2019	• Added the Buildstyle Installation section. • Added the License section. • Added the Software Rollback section. • Updated the Send Job File to Printer section	1.4
June-2019	• Added the Automatic Part Orientation section • Changed the Base Selection section • Changed the Hyper Print section • Changed the Activate License section • Changed the Check for Updates section • Changed the Model Cutting section • Added the Cost Calculation section	1.5
July-2019	• Updated the Automatic Part Orientation section	1.6

Date	Changes	Version
	• Updated the Menu List section • Updated the Printability Issues section • Added the Calibrate Printer section	
August-2019	• Updated the Create a New Platform section • Updated the Open a File section • Updated the Print Job Report section • Updated the Printability Issues section • Updated the Calibrate Printer section • Updated the Troubleshooting annex	1.7
September-2019	• Updated the Calibrate Printer section	1.8
December-2019	• Updated the Menu List section • Updated the Installation Procedure section • Updated the Hyper Print section • Updated Cost Calculation section • Added Feedback section	1.9
February-2020	• Updated the Hyper Print section • Updated the Print Menu section • Updated the Feedback section • Added Change Model Size section	1.10
April-2020	• Updated the cover page • Updated Introduction section • Updated Tool Bar subsection • Added Labeling section • Updated Send Job File to Printer section	1.11
June-2020	• Updated the Hyper Print section	1.12
July-2020	• Removed Export Object section • Updated User Guide layout • Updated Open a File section • Updated Modifier Keys section • Updated Labeling section • Updated Orient a Platform section • Updated Automatically Adding Supports section • Updated Manually Adding Supports section • Updated the screenshot in Print Job Report section • Updated all screenshots	2.0
August-2020	• Updated Create a New Project section • Updated Open a File section • Updated Automatic Part Orientation section • Updated Base Selection section	2.1

Date	Changes	Version
	• Updated Automatically Adding Supports section • Updated Advanced Settings for Supports section • Updated Hyper Print section • Updated Send Job File to Printer section • Updated Printability Issues section • Updated Troubleshooting section • Added Channeling section	
September-2020	• Updated Installation Procedure section • Updated Check for Updates section • Updated Create a New Project section • Updated Orient a Platform section • Updated Rescale Model section • Updated Change the Part Orientation section • Updated Labeling section • Updated Placement of a Part section • Updated Automatically Adding Supports section • Updated Print Job Report section • Updated Hyper Print section • Updated Printability Issues section • Updated Troubleshooting section • Updated all screenshots	2.2
October-2020	• Added Delete a Model section • Added Select Several Models section • Added Rename a Model section • Updated Labeling section • Updated Model Duplication section • Updated Shortcuts section • Updated Introduction section • Updated Troubleshooting section	2.3
November-2020	• Updated License section • Updated Troubleshooting section	2.4
December-2020	• Added What's New section • Updated Menu List section • Updated Software Update section • Updated Send Job File to Printer section • Updated Troubleshooting section	2.5
January-2021	• Added Additional Information section • Updated Troubleshooting section	2.6
February-2021	• Updated Troubleshooting section	2.7

Date	Changes	Version
April-2021	• Updated Introduction section • Updated PC Requirements section • Updated Advanced Settings for Supports section • Updated Troubleshooting section	2.8
June-2021	• Updated Introduction section • Updated Hyper Print section • Updated Troubleshooting section	2.9
August-2021	• Updated Tool Bar section • Updated Manually Adding Supports section • Updated Job Info Widget section • Updated screenshots	2.10
October-2021	• Updated Manually Adding Supports section • Updated screenshots	2.11
December-2021	• Added Support Center Update section • Updated Modifier Keys section	2.12
December-2021	• Updated Automatic Placement section • Updated Open a File section	2.13
February-2022	• Updated PC Requirements section • Updated Create a New Project section • Added Automatic Labeling section • Changed Hyper Print to Autopilot section • Changed screenshots	3.0
February-2022	• Added Support Generation Files and Settings section • Added Base Tools section • Updated Manually Adding Supports section • Updated Automatically Adding Supports section • Deleted Advanced Settings for Supports section	3.1
May-2022	• Updated Global Baseplate section • Updated Support Generation Settings section • Updated Manually Adding Supports section	3.2
October-2022	• Updated screenshots • Updated Shortcuts section • Updated Autopilot section • Updated Change Part Orientation section	4.0
November-2022	• Updated PC Requirements section • Updated Autopilot section	5.0
February-2023	• Updated PC Requirements section • Updated Open File section • Updated Create New Project section	6.0

Date	Changes	Version
	• Updated Autopilot section • Updated Send Job File to Printer section • Updated Add Supports Manually section • Updated Calibrate Printer section • Added Check License Details section	

Install Envision One RP® Software

PC Requirements

Operating System	Windows 10 or higher
Working Memory	>= 16 GB RAM
Hard Drive	400 MB Free space
CPU	Multi-core processor e.g. Core i5, >= 3GHz, >= 6MB Cache
Graphics	Dedicated 3D graphics card with >= 1 GB memory and OpenGL 4.3 and higher.

Note: When the build envelope has many models on it, the job generation may take some time. This depends on the hardware configuration of the particular workstation and the amount of RAM memory in disposition.

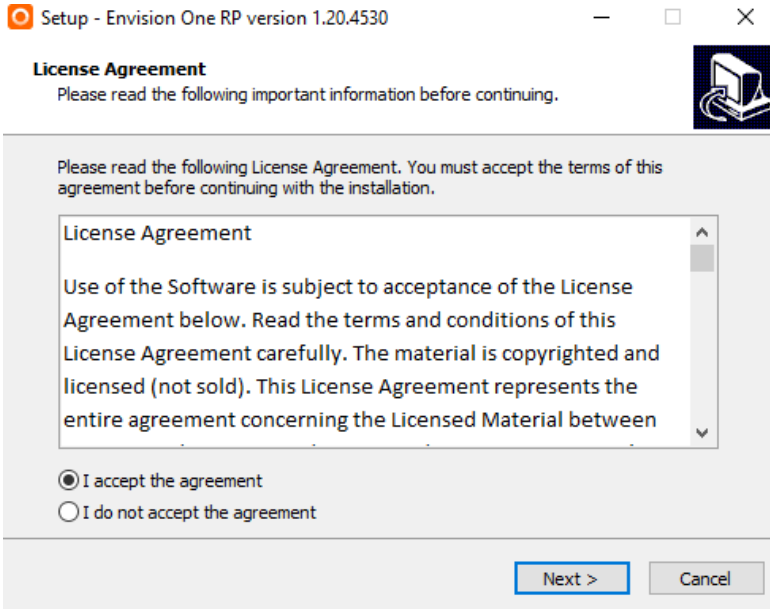
For working with Xtreme 8K printer, the minimum system requirements are the following:

Operating System	Windows 10 or higher
Working Memory	>= 128GB RAM
Hard Drive	400 MB Free space
CPU	Multi Core Processor e.g., Core i5, >= 3GHz, >= 6MB Cache
Graphics	Dedicated 3D graphics card with >= 1 GB memory and OpenGL 4.3 and higher.

Installation Procedure

1. Insert or download the **Envision One RP® Software** installation file.
2. To start the installation, press **Install Envision One RP® Software**.

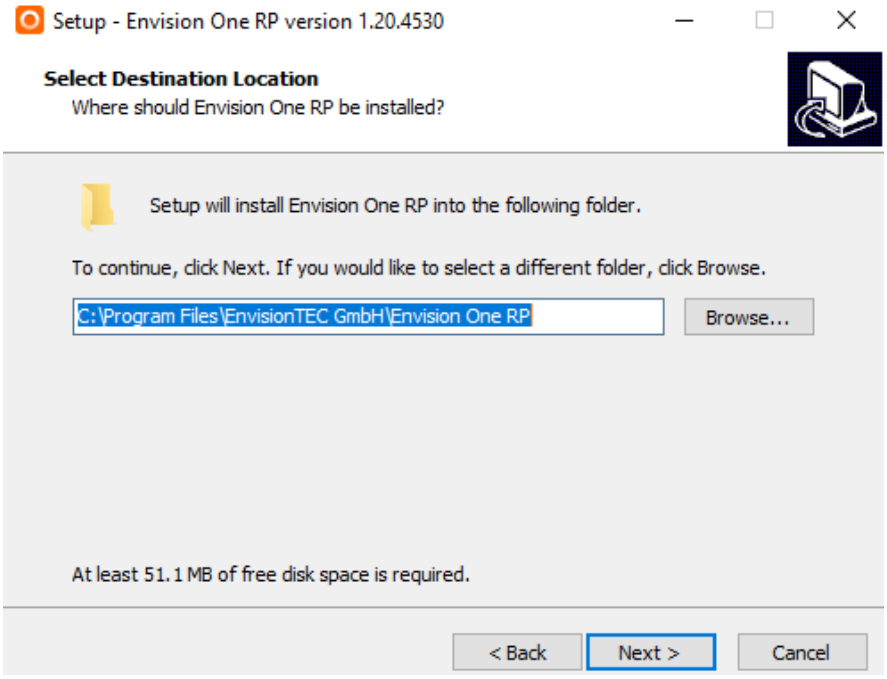
→ The installation wizard displays the license agreements.



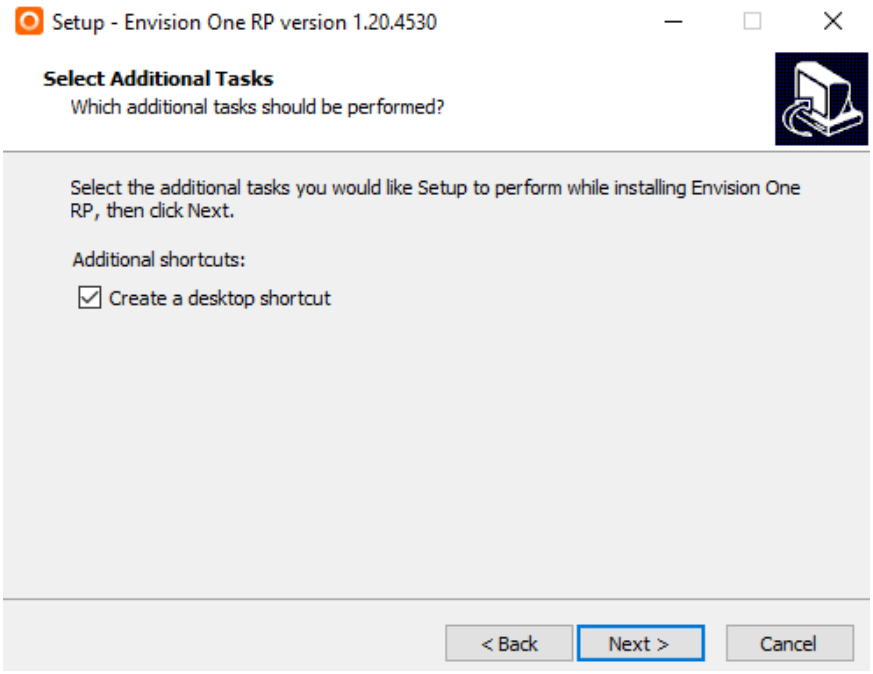
3. Read the license agreements carefully and agree to the terms and conditions by checking the **I accept the agreement** radio button.

Note: If you do not agree to the license agreements, the installation will be canceled.

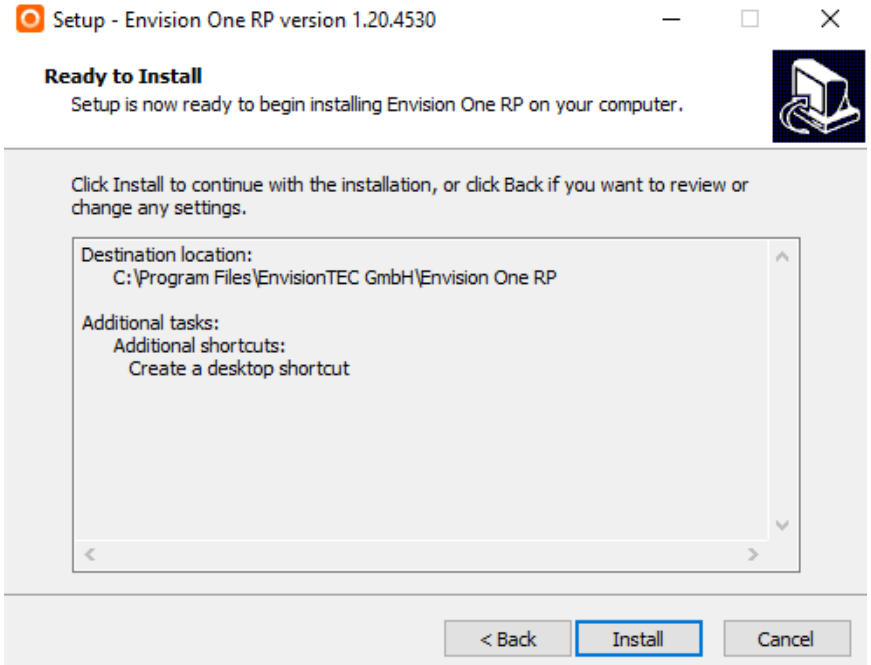
4. Press **Next**.
5. Select a folder to install the Envision One RP® Software to.



6. Press **Next**.
7. Check the **Create a desktop shortcut** checkbox to create a desktop shortcut.

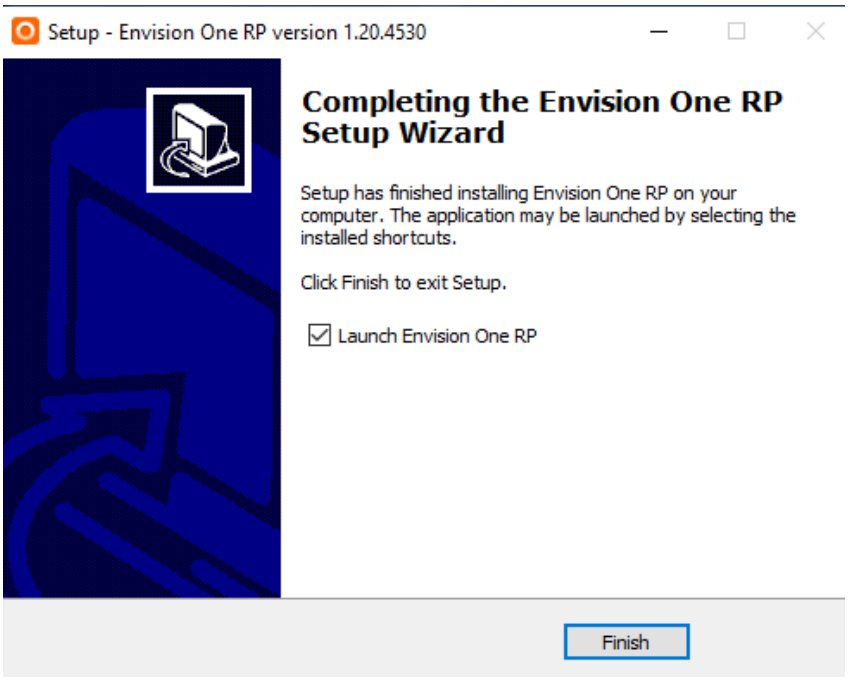


8. Press **Next**.
9. Press **Install** to start the installation procedure.



→ The installation starts. If necessary, any third-party libraries are installed.

10. Check the **Launch Envision One RP** checkbox to start the software when you close the dialog box.

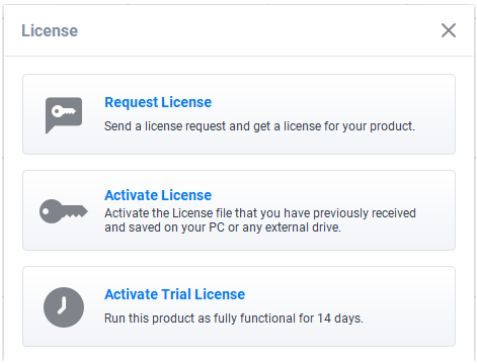


11. Press **Finish** to complete the installation.

License

The **License** dialog box is intended for license validation and allows for activating the standard license or requesting a trial version.

The **License** dialog box pops up on the screen after the initial **Envision One RP Software** installation or update.



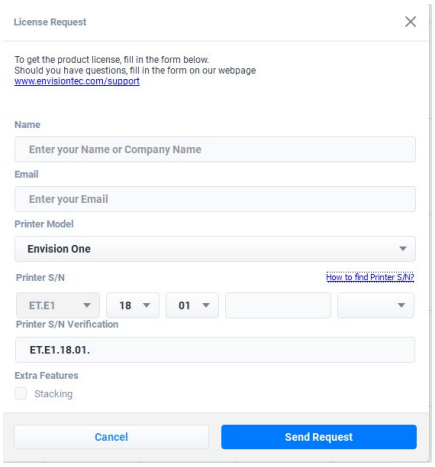
If you shut down the **Envision One RP Software** at this step or simply close the **License** dialog box without choosing any option, the Trial License will be activated automatically.

Activate License

Important: The serial number of your printer would be needed to activate License.

To activate License:

1. Select **Request License** in the **License** dialog box. If you have previously closed the **License** dialog box, press ☰ and select **Activate License**.
   → The following window appears:

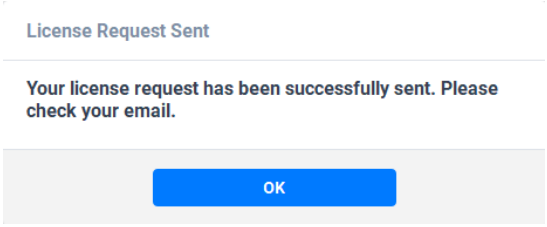


2. Fill in the suggested form.

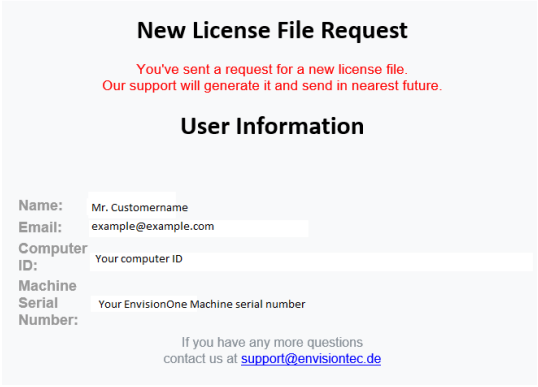
> **Note:** The serial number of the printer is written on the label affixed to the back of the printer. You can also check the printer's S/N by navigating to **Printer Settings > About Printer** on the **Home screen** of the printer. Make sure that the serial number of the printer specified in the **Printer S/N** field matches the serial number on the label affixed to the back of the printer.

3. Press **Send Request**.

   → The following confirmation window pops up.

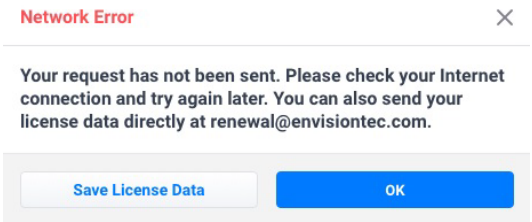


   → The automatic License Request Confirmation is sent to the indicated email address.



   → The License Key is sent to the indicated email address.

If the following error message appears, you can send your license request manually.



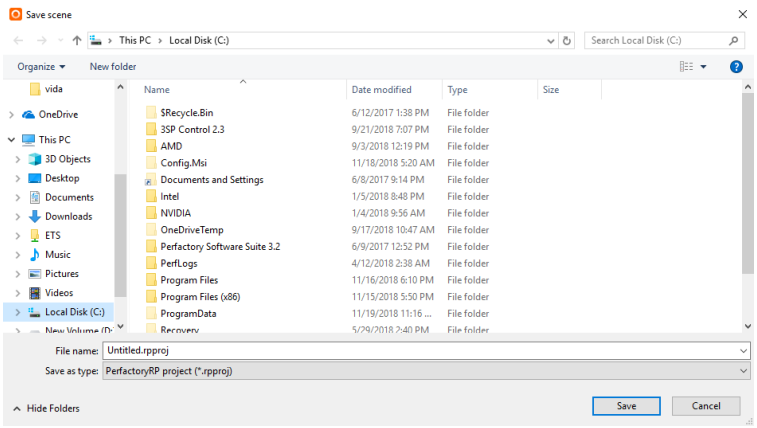
   a. Press **Save License Data** to save the necessary data locally on your PC.

   b. Email the saved file as an attachment at renewal@envisiontec.com.

4. Check your email to find the License Key. The License Key is a file with .lic extenstion.

Note: Check both your inbox and SPAM folders. If you have not received your License Key within 24 hours after submitting the form, contact the Customer Service.

5. Press **Activate License**.
   → The following dialog box appears.



6. Select the previously emailed License Key file and press **Save**.
   → The license is validated.
   → The application is launched.

Note: The activated **Standard License** allows Envision One RP to fully function. The License is valid for 12 months. To check the number of valid days before the License expires, go to **Menu > About**. You will have to request a new License Key after its expiration.

Activate Trial License

To activate a Trial license, proceed as follows:

1. Select **Activate Trial License** in the **License** dialog box.
   → The trial license is activated.
   → A yellow expiration reminder appears in the right upper corner:

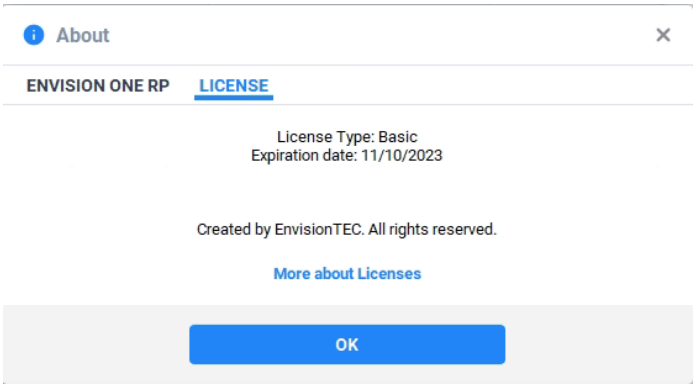
LICENSE - 13 DAYS LEFT

Note: The activated Trial License allows **Envision One RP** to fully function for 14 days. After the Trial License expiration, the Standard License activation is required.

Check License Details

To check the information about the license:

1. Press the icon.
2. Select **About** from the menu.
3. Go to the License tab.
   → The information about your license appears.



Install Buildstyle

Introduction to Buildstyle

A buildstyle is a set of parameters that communicates with a printer how to process the material it is printing. Each material sold by ETEC comes with different buildstyles that accommodate different layer thicknesses and printers. Each buildstyle contains more than two dozen settings that control how the printer processes the material. Projector exposure time and exact projector size are just a few of the critical buildstyle parameters.

The name of the buildstyle is broken down into three pieces of information: printer, material, and layer thickness.

Example:
Printer: Envision One | Material name: E-Model Light | Layer thickness: 100 µm

These features cannot be altered. A new buildstyle must be acquired if a change is needed to these three pieces of information.

Buildstyle Installation

Buildstyles only need to be configured once during the setup process, per operating computer. The following scenarios explain when buildstyles may need to be installed. Some of the scenarios below may occur simultaneously with another scenario from this list.

New Computer setup

If a new computer is being dedicated to 3D printing / model processing, both the Envision One RP software and associated buildstyles must be installed on the computer.

New material purchase

When an existing client adopts a new material / application into their 3D printing workflow, their dealer or ETEC representative will provide a buildstyle for the client to install onto their operating computer(s).

Printer Purchase

New printers are built individually to order. They are manually calibrated and set for the materials on the purchase order. The calibration settings are stored on a USB drive and shipped out with the printer when it's delivered. Buildstyles are included in the calibration process and are unique to your printer.

Support Ticket

When support tickets are opened, the specialist may provide a new or modified buildstyle depending on the nature of the ticket. In this case, buildstyles are generally emailed and must be installed.

Upload Buildstyle

Note: You can find your buildstyle(s) on the USB drive that is shipped together with your printer. Alternatively, you may receive emails with new buildstlyes when you purchase new materials.

To upload a buildstyle:

1. Launch Envision One RP.

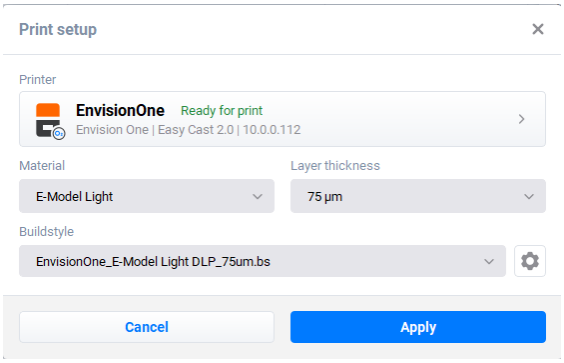
   → The setup window is opened. This window allows to select the printer, material, and layer thickness before importing models into the software (see Create a New Project).

2. Select the required printer, material, and layer thickness and press **Create**.

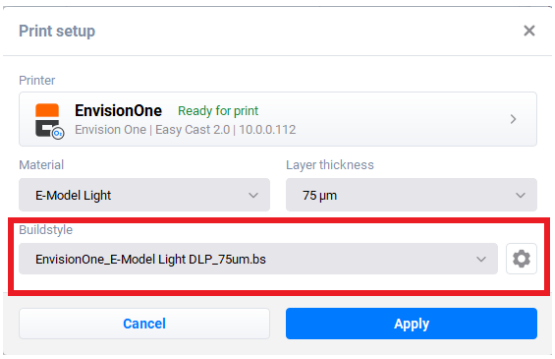
   → A new platform opens.

3. Press **Print Setup** in the right upper corner.

   → The following dialog-box is open.



4. Press the  button and select **Upload New**.



   → The Windows file explorer opens, showing the folders on the printer.

5. Open the folder that contains buildstyles you want to add to Envision One RP.

6. Select the required buildstyle(s) and press **Open**.
   → The selected buildstyle(s) is added to Envision One RP.
7. Press **Apply**.

Backup Procedure

Follow precautions and save a few copies of your buildstyle in isolated locations. Buildstyles are relatively small files, making them easy to store.

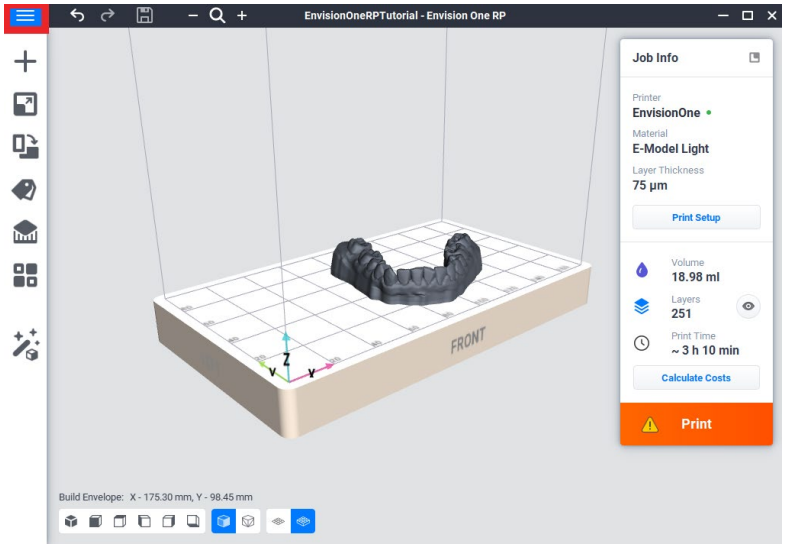
Be prepared in the event of a potential setback by taking the following steps:

1. Cloud backup.
   - Save a copy of the buildstyle as an email attachment to yourself.
   - Send a copy to peers and management as well.
2. Physical backup.
   a. Keep the buildstyles on the USB drive that ships with the printer.
   b. Tape the drive to the back of the Z-axis of the printer for safe keeping.
   c. Do not leave the USB drive stored in one of the USB ports on the printer or in a computer's USB port to protect it in the event of a power surge.

Menu Description

Menu List

Press the icon to open this Menu.



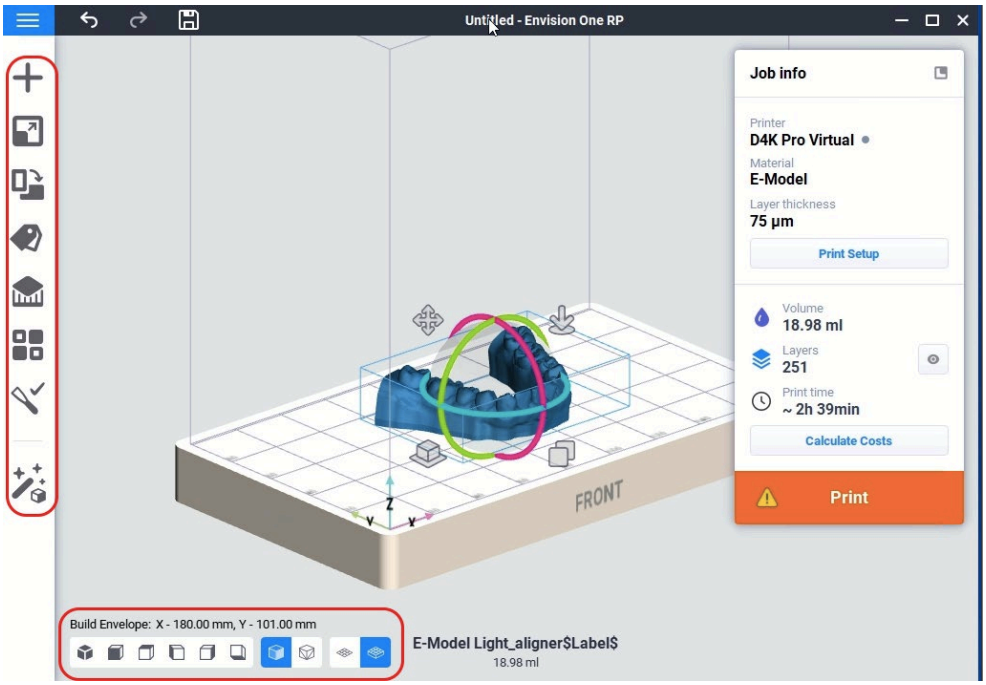
This menu contains all functions to open, save, and create a process.

Command	Description	Icon	Shortcut
New	This command opens a dialog box to create a new project, choose recent files to be opened or watch the software tutorials.	—	—
Open	This command opens a dialog box to load files.		<Ctrl> + <O>
Open Last	This command opens a dialog box to load the last saved files.	—	<Ctrl>+<Shift>+<O>
Save	This command saves the last changes made to the project files.		<Ctrl> + <S>
Save As	This command opens a dialog to save a new project file to a specified folder.		<Ctrl>+<Shift>+<S>

Print Job Report	This command opens a dialog to save your job report.	—	—
Calibrate Printer	This option allows to calibrate your printer to increase its printing precision.	—	—
Preferences	This command opens a dialog to choose the projection type, measurement units, scroll direction, automatic placement, interface language and shortcuts info.	—	—
Help	This command redirects you to the company's website support section.	—	<F1>
What's New?	This command opens a window for checking the latest changes to your Envision One RP version.	—	—
Check for Updates	This command checks for the available software updates.	—	—
Activate License	This command allows to activate Envision One RP License or request a Trial version.	—	—
Feedback	This tool allows for sending your feedback, report a problem or submit a suggestion.	—	—
About	This command opens the dialog box displaying version number and release date of the software.	—	—
Exit	This command shuts down the Envision One RP® Software.	—	<Ctrl> +< Q>

Tool Bar

The toolbar is on the left and bottom side of the screen.



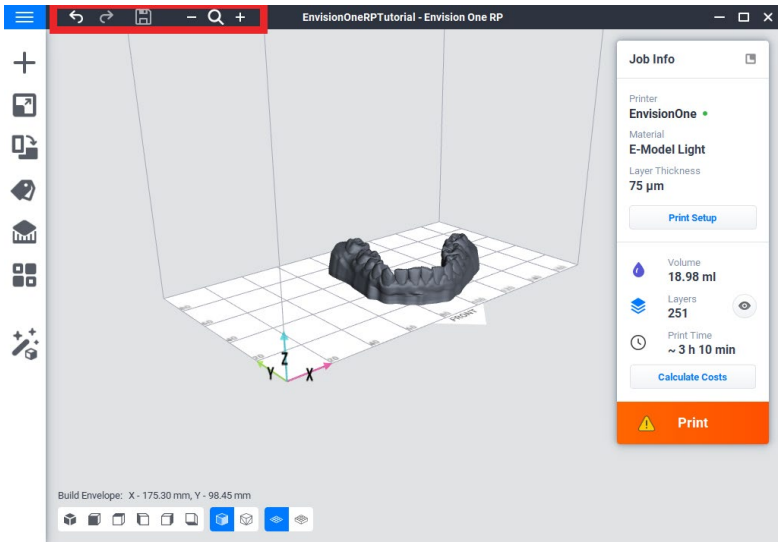
This menu contains some basic editing functions.

Command	Description	Icon	Shortcut
Size	This command shows options for scaling a part.		—
Orientation	This command shows options for a part orientation.		—
Labeling	This command shows options for creating and placing a label onto the surface of a part.		—
Layout	This command shows options for a part positioning and placement.		—
Supports and Base	This tool allows creating supports for a part without using an external program.		—

Autopilot	This tool performs auto placement of parts and generates supports.		<Ctrl> + <P>
Base tools	This tool allows for tuning up the parameters dedicated to working with lower layers of models.		—
Home View	This button allows for aligning the camera view to the home plane.		<Ctrl> + <1>
Front View	This button allows for aligning the camera view to the front plane.		<Ctrl> + <2>
Top View	This button allows for aligning the camera view to the top plane.		<Ctrl> + <3>
Left View	This button allows for aligning the camera view to the left plane.		<Ctrl> + <4>
Right View	This button allows for aligning the camera view to the right plane.		<Ctrl> + <5>
Bottom View	This button allows for aligning the camera view to the bottom plane.		<Ctrl> + <6>
Solid View	View of the 3d model as a solid object		Left click on the icon
Wireframe view	View of the 3d model as a frame that shows what the model consists of (triangles, slices etc.)		Left click on the icon
2D mode	This button allows for enabling the 2D view of the platform.		Left click on the icon
3D mode	This button allows for enabling the 3D view of the platform.		Left click on the icon

Actions Bar

The **Actions Bar** is on top of the screen:



This menu contains the following functions:

Command	Description	Icon	Shortcut
Undo	This command reverses the most recent editing command.		<Ctrl> + <Z>
Redo	This command allows the user to reverse the last Undo.		<Ctrl> + <Y>
Save	This command opens a dialog to save the project files.		<Ctrl> + <S>
Zoom In	This command zooms the build platform in.		<Ctrl> + <=>
Zoom Out	This command zooms the build platform out.		<Ctrl> + <->

Modifier Keys

- **Left click** → selects an object
- **<Shift> + Left-click** → selects more than 1 object
- **Left-click + Hold and drag** → multi-selects objects by selected area
- **Right-click + Hold and drag** → rotates camera view
- **<Shift> + Pan + Hold and drag** → rotates camera view

- **Scroll the mouse wheel** → zooming
- **<Alt> + Pan + Hold and drag** → zooming
- **<Ctrl> + <=>** → zooming the build platform in
- **<Ctrl> + <->** → zooming the build platform out
- **4** → Shrinkage mode
- **Wheel-click + Hold and drag** – shifting the camera view
- **<Shift> + <Up> / <Down> / <Left> / <Right>** – shifting the camera view

Shortcuts

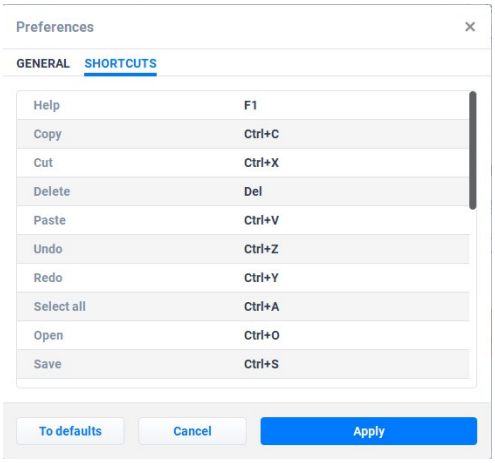
Go to **Menu > Preferences > Shortcuts** to check the list of available shortcuts.

The keyboard shortcuts are predefined but can be changed by the user.

To change the keyboard shortcuts, proceed as follows:

1. Select the desired function.

   → The input field opens.
2. Enter the desired key combination. Make sure that each key is in pointed brackets.
3. Press **Apply** to save changes.



To reset the predefined keyboard shortcuts, press **To Defaults**.

To leave the **Shortcuts** tab, press **Cancel**.

Additional Information

The **Information** button is on the top right corner of each key feature tab: **Size**, **Orientation**, **Labeling**, **Supports & Base**, **Layout**, **Autopilot**, **Base Tools**.

1. Open Envision One RP.
2. Press the **Info** button of the feature you want to know more about.

   → You are redirected to the corresponding page of the ETEC Knowledge Base.

Envision One RP Features

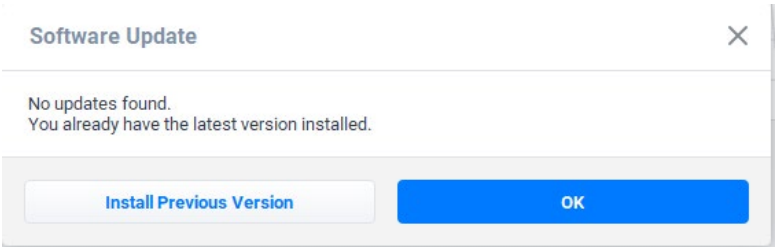
In the following section the features of the Envision One RP® are outlined.

Software Update

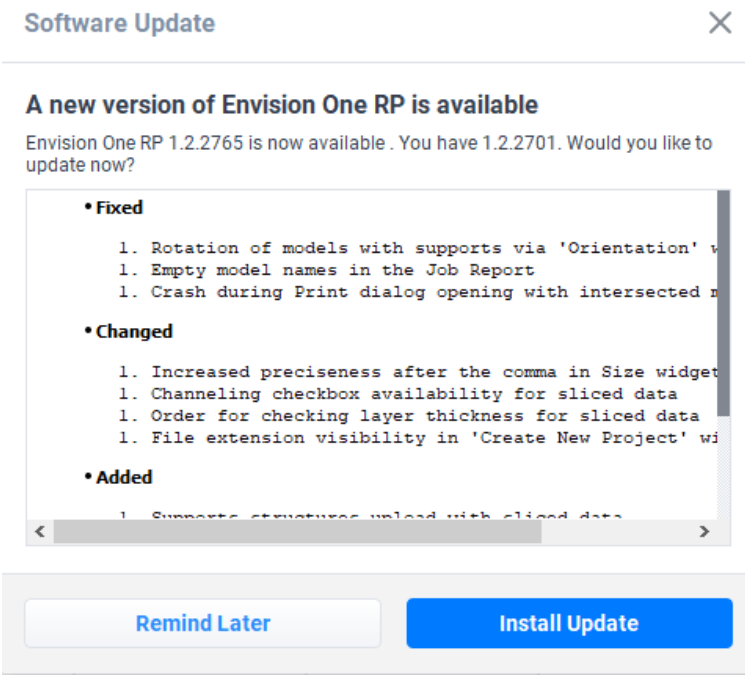
This option allows for checking the available software updates.

Note: If the software update is available, the blue **Update Available** label appears on the top-right part of the application.

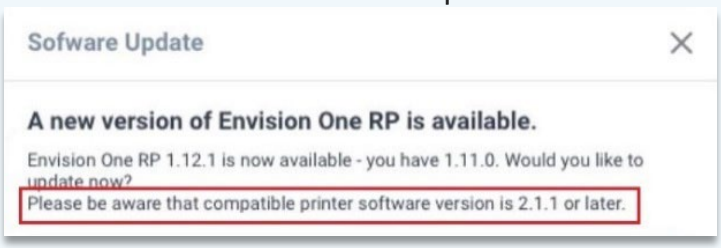
Go to **Menu > Check for Updates.**
If the last version of software is installed on the PC, the following message appears.



If there is an available software update, the following window appears.



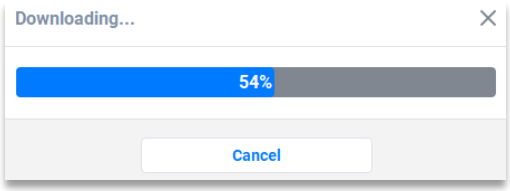
Note: To avoid compatibility issues with job printing, check whether your printer's **Control Software** version is compatible with **Envision One RP** update. The information is indicated in the **Software Update** window.



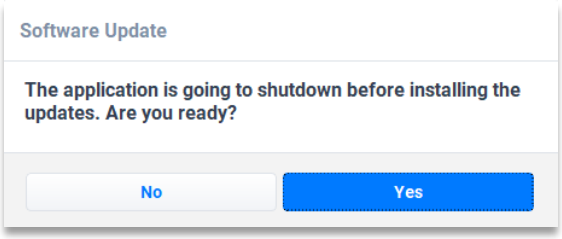
To skip the software update, select **Remind Later**.

To update the software version to the latest one:

1. Press **Install update**.
   → The update is downloaded.



2. Press **Install** to start the installation process.
   → The following window appears.



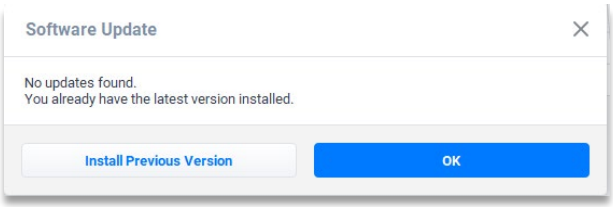
3. Press **Yes** to proceed.
   → The program shuts down.
   → The latest software version is installed.
   → The program is launched.

Software Rollback

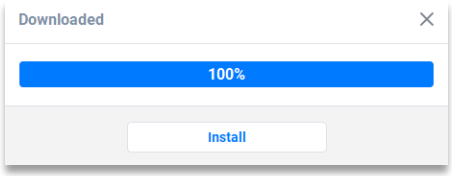
In case you need to downgrade to the previous **Envision One RP** version, follow the steps described below:

1. Select **Menu > Check for Updates**.

→ The following window appears:



2. Press **Install Previous Version**.
   → The previous version is downloaded.
   → The following window appears.



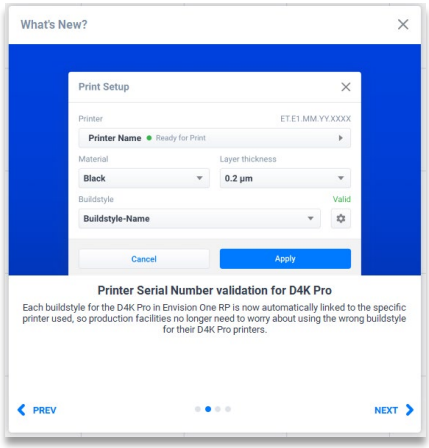
3. Press **Install** to proceed.
   → The program shuts down.
   → The previous software version is installed.
   → The program is launched.

Note: You can downgrade to the previous software version only. Downgrading to any earlier version is not possible.

What's New

This option allows for checking the last feature highlights after updating your Envision One RP version.

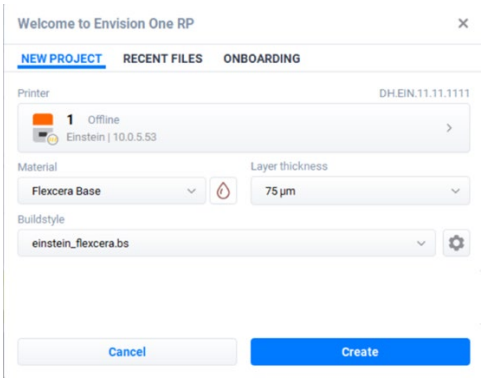
1. Go to **Menu > What's New?**.
   → The following window appears.



2. Use the **PREV** and **NEXT** buttons to switch between screens.
3. To exit the menu, press the **X** button.

Create New Project

1. Go to **Menu > New**.
   → The following window appears.

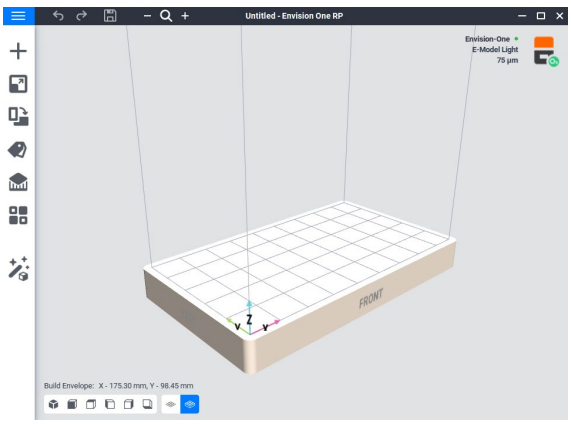


2. Select the required printer, material, layer thickness and buildstyle.

Note: The buildstyles are filtered according to the selected printer, material, and layer thickness.

Note: You can select the color of the dental models next to the **Material** field. It determines the color of the displayed models on the build platform in Envision One RP.

3. Press **Create**.
   → A new project is created.



Note: Before creating a new project, check the **Onboarding** tab that contains instructions on how to get started with Envision One RO, build supports, and send job files for print.

Orient Platform

There are several ways to orient a platform:

- To set the platform view to the front, top, bottom, right or left, solid and wireframe use the corresponding , , , , , , , , button on the toolbar.
- To select a 2D or 3D mode of the platform view, press the or icon respectively.
- To rotate the platform in the required direction:
  - Press and hold the right mouse button.
  - Rotate the platform in the required direction.
  - Release the right mouse button.
- To zoom the platform in, press and hold the **<Ctrl>** key and then press **<=>** as many times as needed to reach the needed zoom grade.
- To zoom the platform out, press and hold the **<Ctrl>** key and then press **<->** as many times as needed to reach the needed zoom grade.

Open File

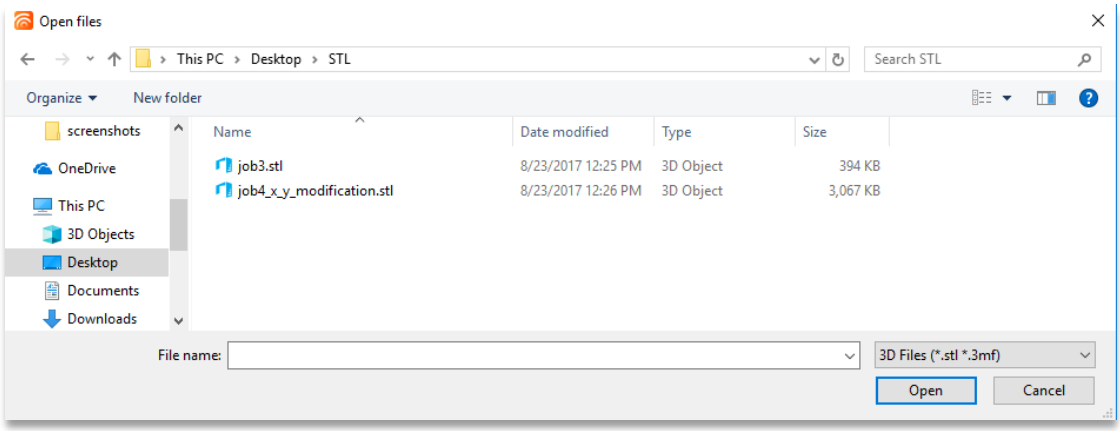
There are several ways to load a file:

- Drag&drop a file directly on the platform in open Envision One RP software.
- Double-click on the *.rpproj* file from any location on your PC to launch Envision One RP automatically.
- Use the main menu.

Note: The supported file formats are: *.stl, *.3mf, *.cli, and *.slc.

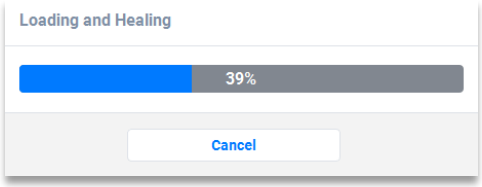
To load a file via the menu:

1. Go to **Menu > Open** or select this item in the menu by pressing the **+** key or the **<Ctrl>+<O>** key combination.
   → A dialog box appears, in which you can select one or more 3D files.



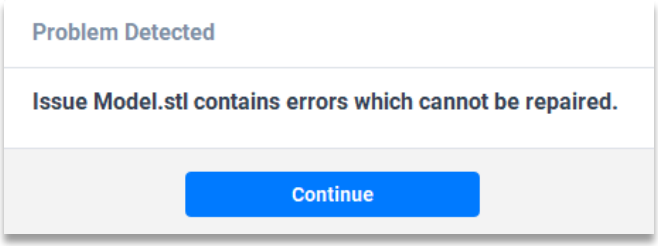
2. Select a file and press **Open**.

→ The selected file is loaded. The status bar indicates the file loading and mesh repair status.



Mesh Repair

When the model is loaded in Envision One RP, the automatic mesh repair is applied by default. Mesh repair automatically searches for any defects on the surface of a 3D model and fixes them. If the detected defect cannot be fixed, the following error notification is shown and the file opens.



If you want to disable automatic mesh repair on the model load, go to **Menu > Preferences** and unselect the **Automatic Mesh Repair** option in the **Preferences** window.

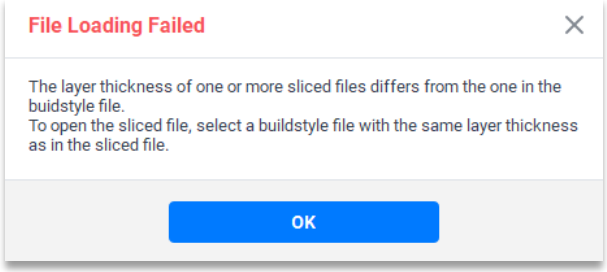
Note: The **Mesh Repair** function is provided as a part of the Envision One RP Standard License delivered along with the ETEC printer. Use the mesh healing function to prepare your job for printing exclusively on your ETEC printer.

Open .slc Files

To open the sliced file, make sure to select the buildstyle file with the same layer thickness as in the sliced file.
→ File opens.

If the layer thickness of one or more sliced files differs from the one in the buidstyle file.

→ The following message appears:



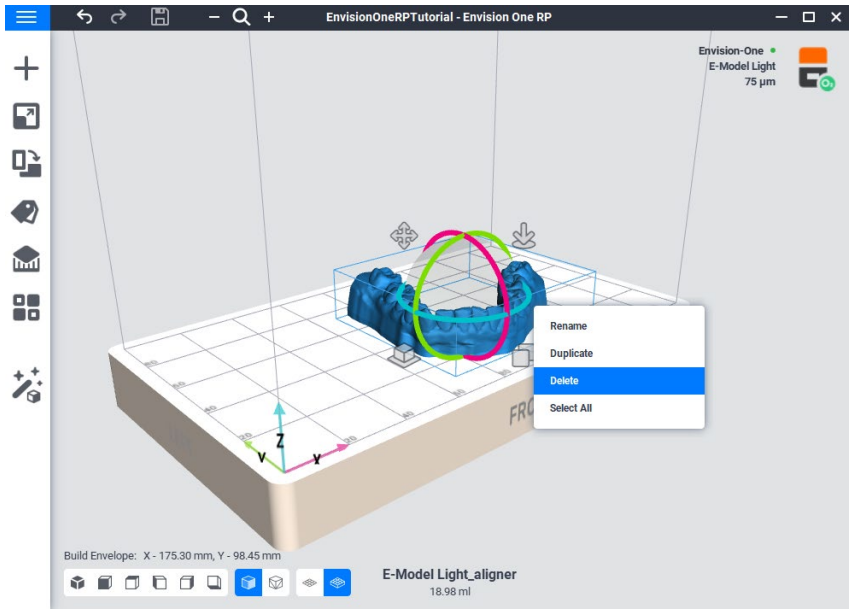
Open .3mf Files

When opening the .3mf files, the models together with the previously selected supports are loaded. Proceed with the already existing supports for the model or create new ones, see Add Supports Manually.

Delete Model

To delete a model from the platform:

1. Right-click on the selected model.
2. Press **Delete**.



→ Your model is deleted.

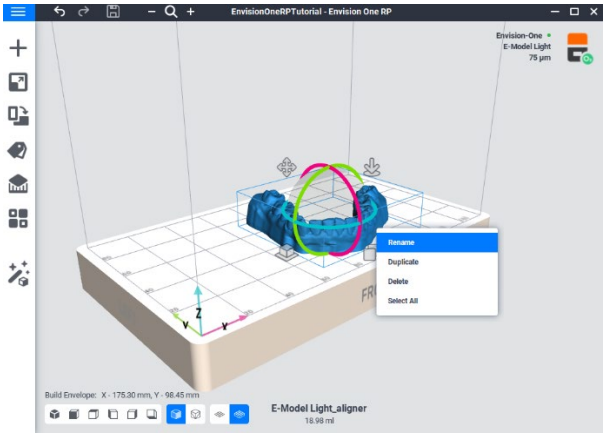
Note: The **Delete** option can be applied to several models by selecting them. You can also delete a model by selecting it and pressing **Del** on the keyboard.

Rename Model

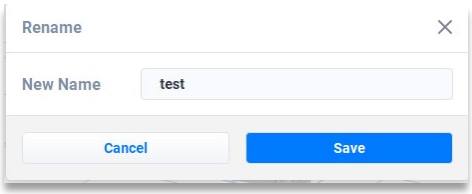
Note: The **Rename** option can be applied to several models by selecting them.

To rename a model:

1. Right-click on the selected model.
   → The following menu appears.



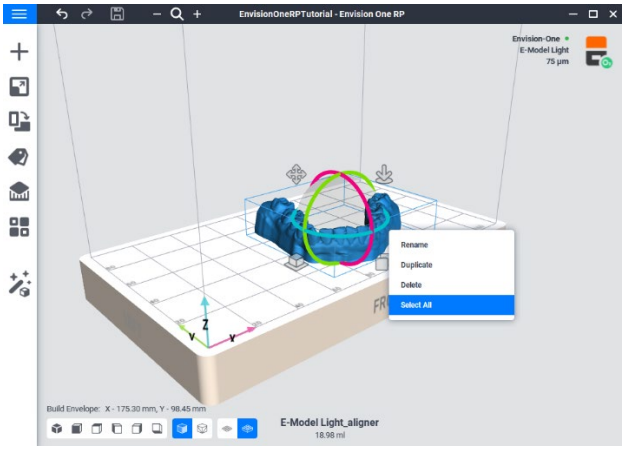
2. Press **Rename**.
3. Enter a new model's name in the **New Name** field and press **Save**.



Select Several Models

If you have more than one model on the platform, you can select all of them:

1. Right-click on the selected model.
   → The following menu appears.
2. Press **Select All**.



→ All models on the platform are selected, so you can proceed working with them.

Change Model Size

You can either change the model size along the X, Y or Z-axis or enlarge/reduce the model size along all the axes proportionally by changing the scale coefficient.

Note: At least one model should be selected on the build platform.

To change the model size:

1. Press the icon.
   → A dialog box with the model's actual dimensions along the X-, Y- and Z-axis is displayed.
2. Use the scroll-wheel on your mouse to set the X-, Y- and Z-dimensions.
   → The model dimensions are changed.

Note: The default measurement unit is mm. To change the measurement unit:
1. Presss the icon.
2. Select **Preferences > Measurement Units > Set Inches** or **Millimeters**.
3. Press **Apply**.
   → The measurement unit is changed.

Rescale Model

By default, the model scale coefficient is set to 1.0.
To rescale the model:

1. Press the icon.
2. Enter the required scale coefficient into the corresponding field or use the scroll-wheel on your mouse set the required scale factor:
   - If the scale coefficient is more than 1, the model size is proportionally enlarged.
   - If the scale coefficient is lower than 1, the model size is proportionally reduced.

   → The scale factor is changed.

   → The model size is proportionally changed along all the axes.

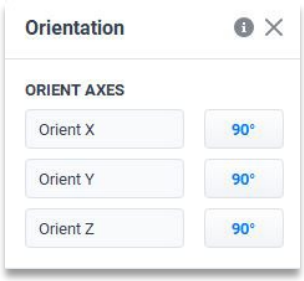
   → The system shows the model size in mm or inches after scaling.

Change Part Orientation

Note: At least one model should be selected on the build platform.

1. Press the icon.

   → A dialog box with a list of axes is displayed.
2. Choose the axis to align the model in the X, Y or Z box.
3. Use a scroll-wheel on your mouse to set the required value of a rotation angle.



Note: The value of one step is 1°.

X/Y/Z Positioning

The X/Y/Z positioning draws a plane over the selected parts. This plane is a transformation marker for an easy X/Y/Z transformation along the build platform.

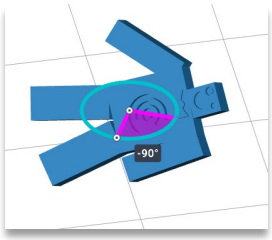
By selecting one of the circular arrows, you can move it in the respective direction only:

- red arrow: along the X axis
- green arrow: along the Y axis
- blue arrow: along the Z axis.

Clicking on the grey plane, the part can be moved in all directions.

To check the rotation angle on GIZMO:

1. Press and hold the X, Y or Z axis and start rotating it.
2. Once you find the required position, release the mouse.



To rotate several models at once:

1. Select the models on the build platform.
2. Press and hold the **Ctrl** key.
3. Start rotating the models in the selected direction. The models will be rotated around a common central point along the axis.

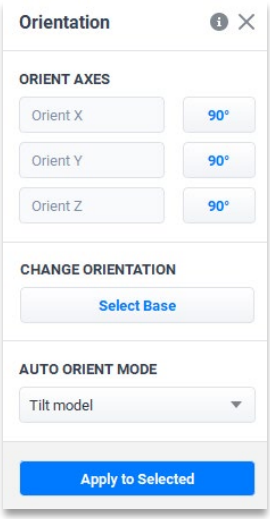
Note: The X/Y/Z positioning circular arrows show the angle value from 0° to 359°. When you rotate the model to 360°, the system automatically switches to 0° and resets a shadow of the angle, and the count starts from 0°.

Automatic Part Orientation

This feature allows for automatic part orientation on the platform.

Note: At least one model should be selected on the build platform.

1. Press the button.
→ The auto-orientation dialog box appears.



2. If there are several parts on the platform, select the part you want to change orientation of.

If no part is selected, the automatic orientation is applied to all the parts.

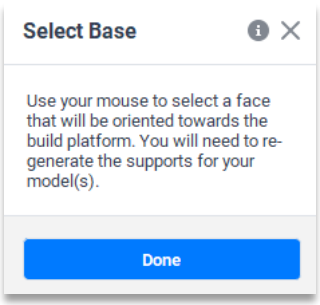
3. Select the automatic orientation mode.
   - **Place on largest flat surface:** The system recognizes the model's largest flat surface and turns this surface towards the platform. This allows to generate the model without supports or to minimize the supports number.
   - **Tilt model:** the system turns the model towards the platform and rotates the model by 15° along the X axis. This allows to generate supports on the safe zone which prevents the model from clinging to the platform.
4. Press **Apply to Selected** correspondingly depending on your actions in step 2.

→ The orientation of the selected models is changed.

Base Selection

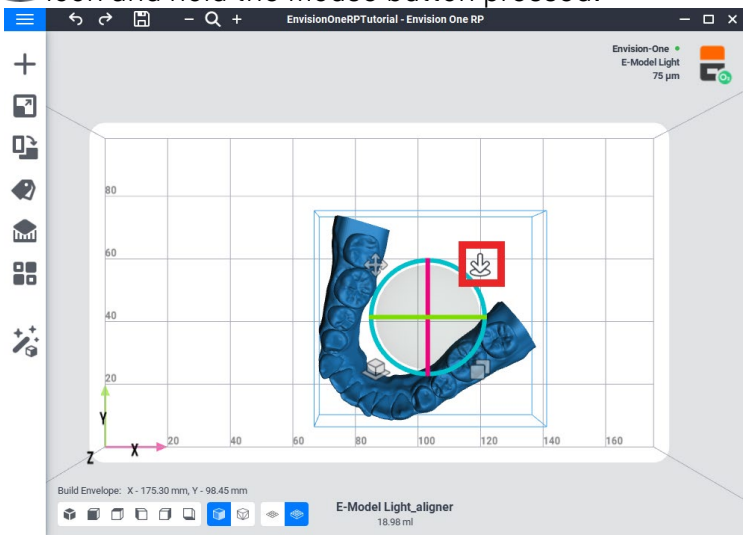
There are two variants to manually select a base for model orientation.

Note: At least one model should be selected on the build platform.

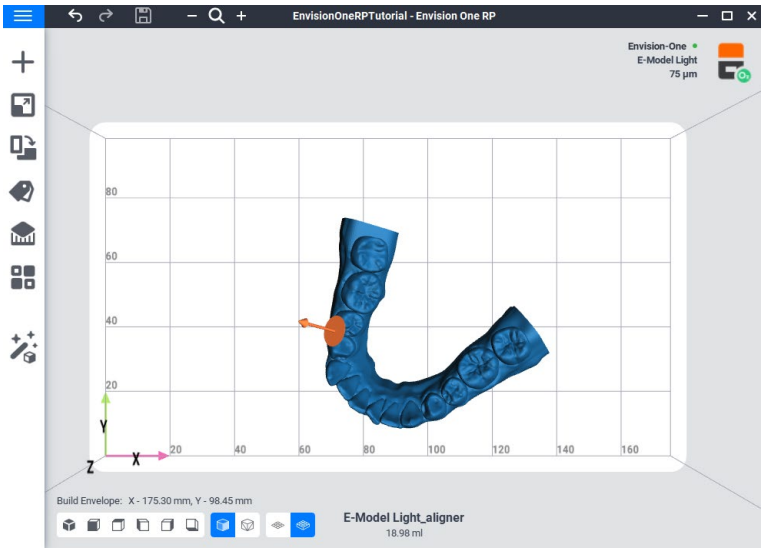


Variant 1:

1. Press the icon and hold the mouse button pressed.



2. Drag the icon to the location you want to select as a new base.

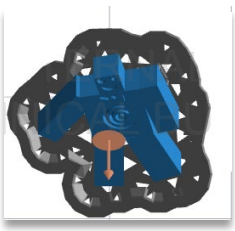


3. Once a new base is selected, release the mouse button.

Variant 2:

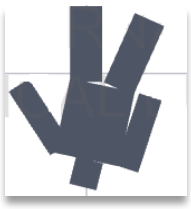
1. Press the button.
2. Press **Select Base**.

   → A new base selection marker appears.



3. Select a new base by clicking the surface that you want to orient toward the build platform.

   → The model orientation is changed:



4. Press **Done**.

Note: After a new base has been selected, you will need to regenerate the supports for the model. For more information, refer to Add Support Automatically or Add Supports Manually sections.

Labeling

This feature allows for engraving a label on the surface of your model. It is possible to place several labels on one model.

Manual Labeling

Note: At least one model should be selected on the build platform.

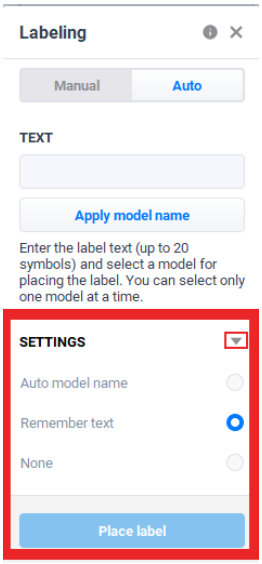
To create a label:

1. Select a model on the platform. You can only select one model at a time. If you have several models on the platform, you will need to create the label for each model one by one.

2. Press the button.

   → A dialog box with labeling features opens.

3. Enter the label text and press **Apply**.



To expand a **Settings** menu, press .

Settings menu consists of the next options:

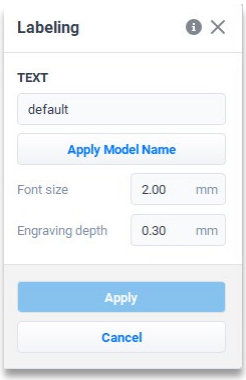
- **Auto model name:** System automatically adds model's name as a label in a text field.
- **Remember text:** System saves the input text and shows it during the session until the user changes the text.
- **None:** None of the options above - system shows an empty text field.

Note: If no model has been selected, the **Apply** button is deactivated.

→ The label is placed onto the selected model.

Note: If you have several models on the platform, the unselected models are hidden until the labeling is completed.

→ The following dialog-box appears:



4. Set the desired font size and engraving depth.
5. Press and hold the scroll-wheel on your mouse to move the platform in the desired direction. Moving the platform allows you to choose the right location for your label.
6. Scroll the wheel on your mouse to zoom your model in and out.
7. Press **Apply**.

   → The label has been created and placed onto the model.

Note: If the label does not properly fit on the surface of the model, you will receive an error message. In this case try the following solutions:

- Reduce the label font size.
- Move the platform to change the label location.

Note: If the selected model has supports, they will be deleted. You will have to regenerate the supports after the label has been placed.

Note: To delete a label, use the **Undo** function by pressing **<Ctrl>+<Z>** or pressing the icon on the Actions Bar.

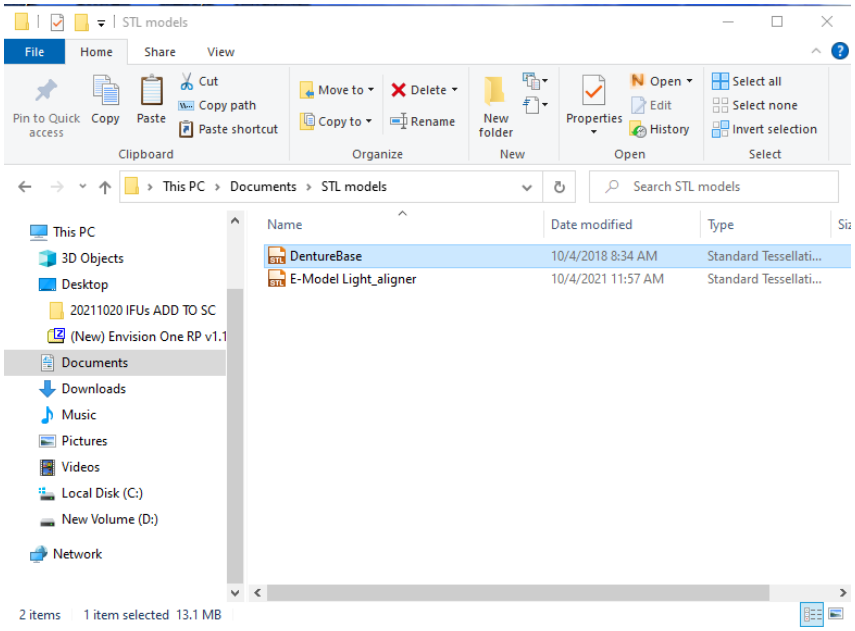
Automatic Labeling

Note: Special license is required to activate the **Auto Labeling** feature.

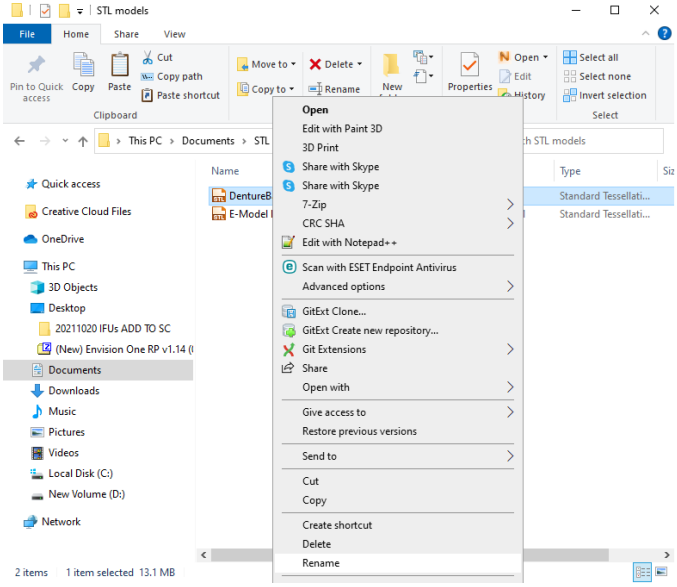
If an STL file name has the label name embedded, the automatic labeling function could be applied for that model.

To add a predefined label to the file name, proceed as follows:

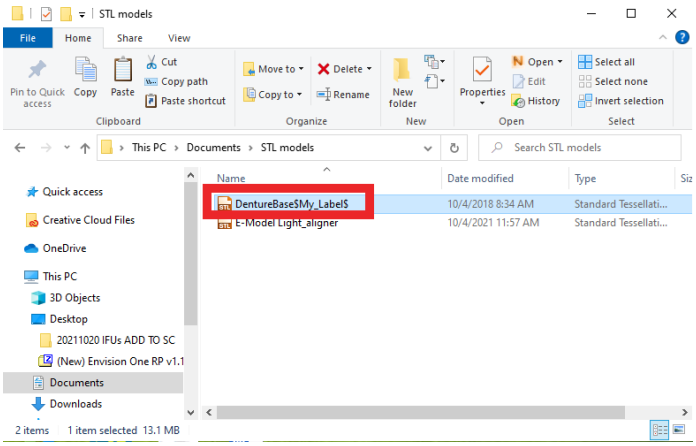
1. Navigate to the required STL file in the Windows Explorer.



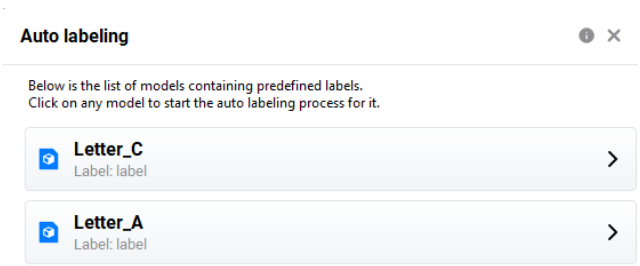
2. Right-click on the file name and select **Rename** from the context menu.



3. At the end of the model's name and before the ".", add "$Label_text$" (without quotes), where Label_text is the name of your label.
→ The resulting file name should look like this: *Model_name$Label_text$.stl*.

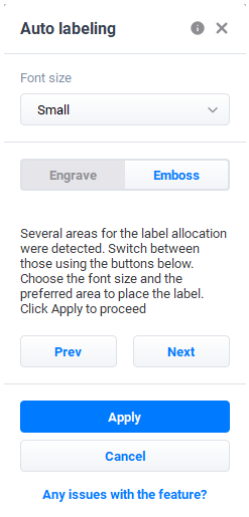


4. Load a model with the predefined label in Envision One RP.
→ The window with the list of models with predefined labels will appear.



5. Select a model by pressing on its name.
→ The system starts searching for the available areas on the model for placing the label.

→ The following window appears if the area(s) for the label placement were found.



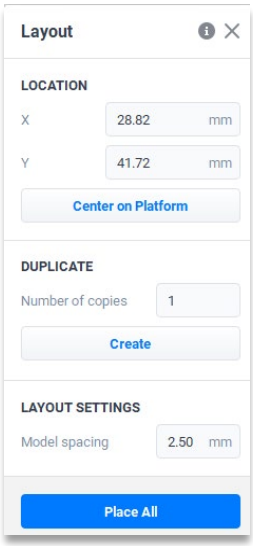
Note: It is possible to skip the automatic labeling upon the model load. To proceed with it later, open the **Labeling** widget by pressing the icon. Then select the **Auto** tab and press **Find and place**. Then proceed starting from Step 4 of this instruction.

6. Select the font size of the label text from the **Font size** drop-down list.
7. Press **Engrave** or **Emboss** to apply the label on the model correspondingly.
8. Use the **Prev** and **Next** buttons to switch between the areas on the model in case the system has found more than one suitable area for the label placement.
9. Press **Apply**.
10. Press **Confirm**.
    → The system starts applying the label on the model.
11. If there are more models with the predefined labels, proceed from Step 4 in this instruction.

Part Placement

Note: At least one model should be selected on the build platform.

Press the button.
→ A dialog box with positioning features opens.
Set the XY positioning in the corresponding boxes. Use the scroll-wheel on your mouse to change the model's location on the platform.



Note: The value of the step os 5 mm.

The following options are available:

- Center in Platform option allows you to nest models in the center of the platform.
- Number of copies option allows you to create a certain number of model copies.
- Model Spacing option allows you to define the spacing value that determines the distance between the parts.

Automatic Placement

This feature is used for an automatic placement (nesting) and levelling of all selected parts in the build platform.

Automatic placement upon the model load

Once 3D models are loaded in Envision One RP, the system automatically arranges them on the build platform.

Note: The automatic placement upon the model load is performed only when the build envelope is empty.

To enable/disable automatic placement upon the model load, proceed as follows:

1. Go to **Menu > Preferences**.
2. Select or deselect the **Autoplacement on model loading** option.

Automatic placement of all models

When there are already several models on the build platform, it is possible to automatically arrange them.

1. Go to **Layout > Place All**.

   → The models will be placed according to their surface contours.

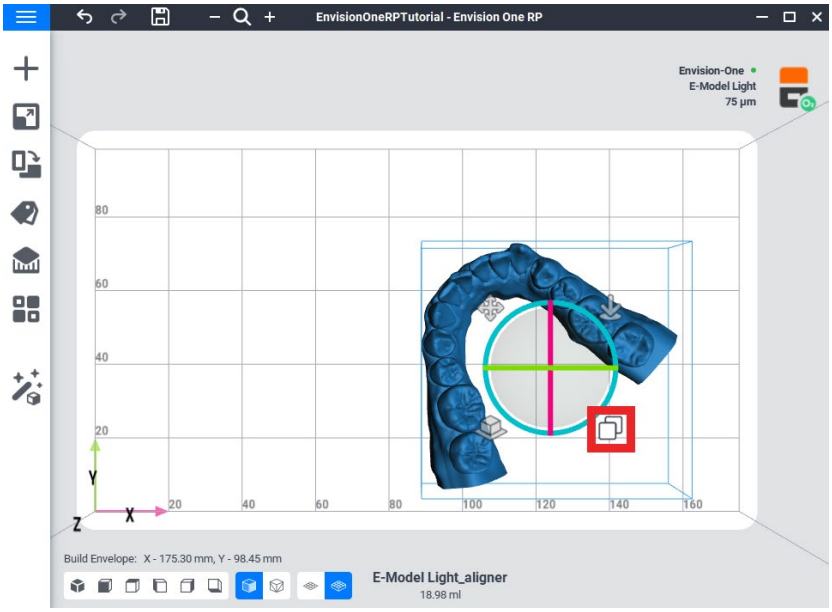
Note: After performing automatic placement, parts may be outside of the build platform. This leads to an error message when generating the job. Therefore, check if any parts are outside the build platform (see Troubleshooting section).

Model Duplication

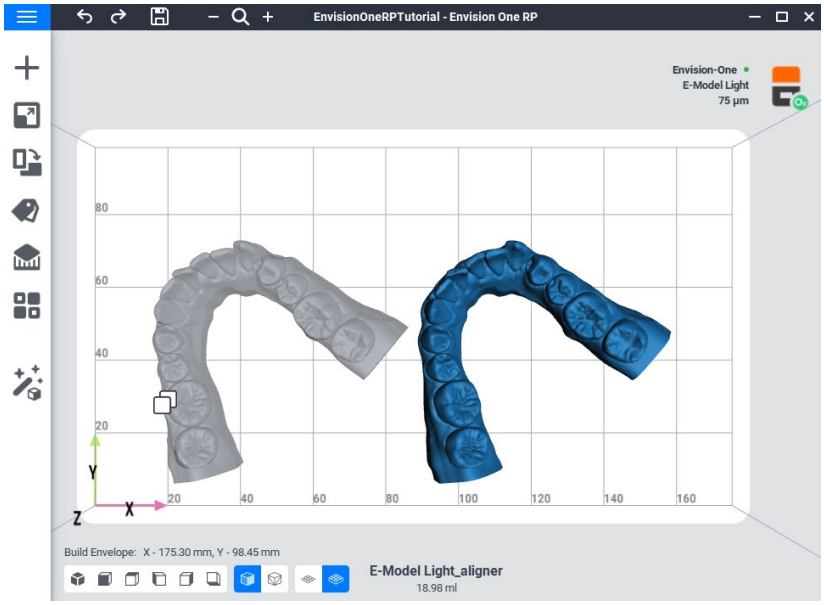
This feature allows you to create copies of the selected model.

Note: At least one model should be selected on the build platform.

1. Press and hold the icon.

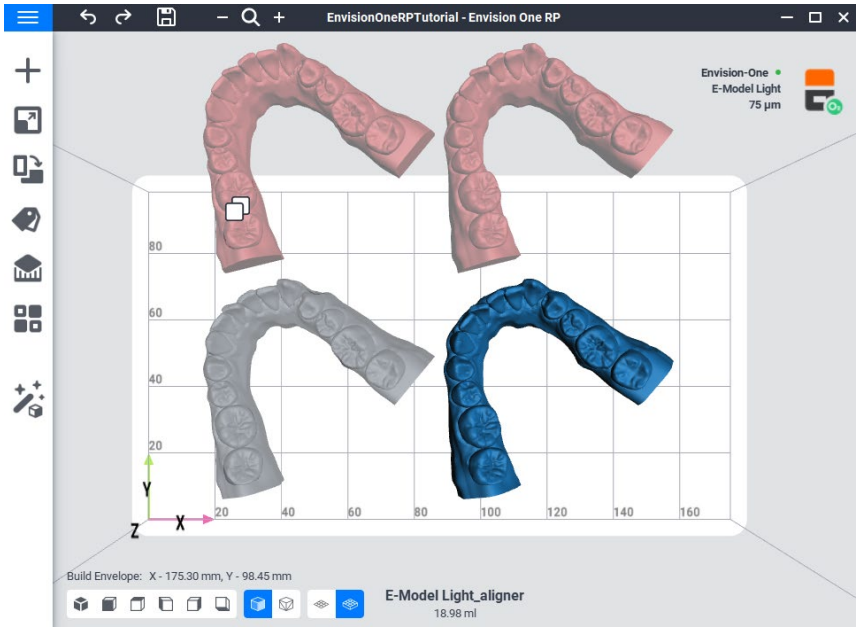


2. Drag the icon to where you want to create duplicates.



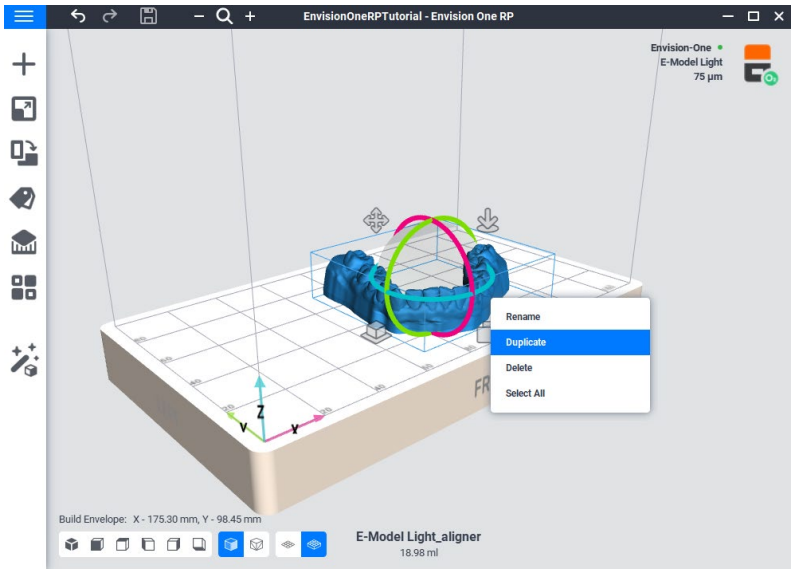
3. Once you are satisfied with the position of the model duplicates, release the mouse button.

Note: If any models are outside the build platform or intersect each other, they are highlighted in red. In the first case the duplicates cannot be created, while in the second case they are created, though their position needs to be adjusted.

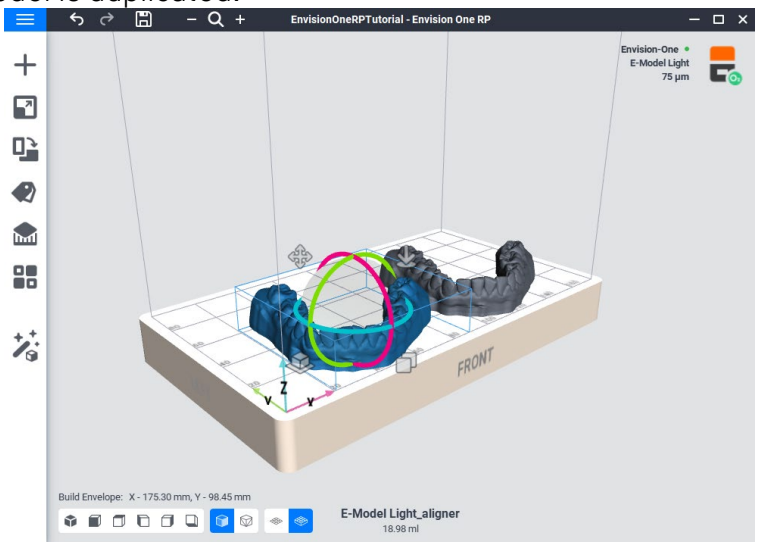


To duplicate a model:

1. Left-click on the selected model.
2. Press **Duplicate**.



→ Your model is duplicated.



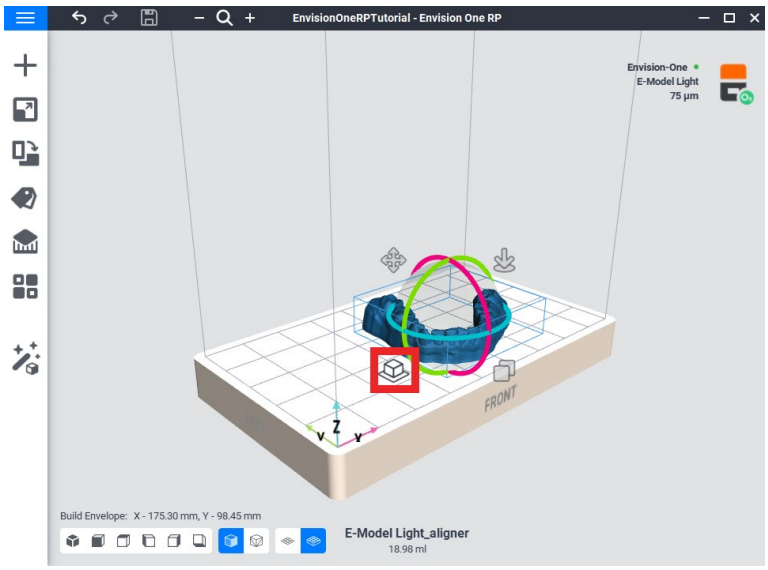
Note: The option can be applied to several models by selecting them.

Model Cutting

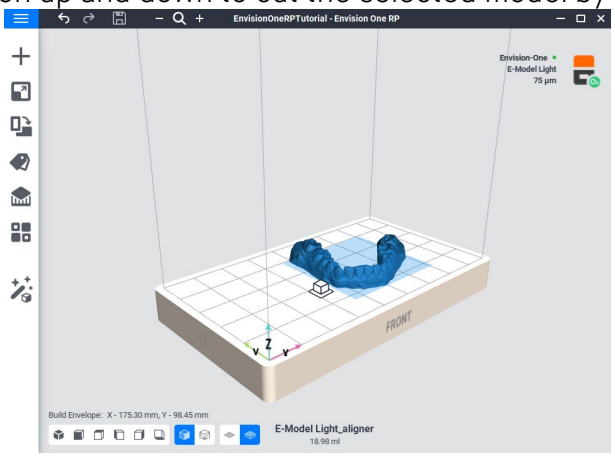
This feature allows for cutting the model by plane, rather than lowering the platform.

Note: At least one 3D model should be selected on the build platform.

1. Press and hold the  icon.



2. Drag the icon up and down to cut the selected model by plane.



3. Release the mouse button.

Note: The supports are automatically deleted after the model is cut.

Note: You can only cut models that consist of more than one layer.

Support Generation Files and Settings

Note: At least one 3D model should be selected on the build platform.

With the Support Generation feature it is possible to create support structures without any additional software. Supports are highly important for ensuring model stability on the platform and correct outcome of the print job. The settings for supports generation are provided in the (*.ini) files.
ETEC uses an innovative approach to the supports' generation process for high quality of printed models. It implies that supports generation files are material-specific. This means that each (*.ini) file contains settings for the specific printing material.

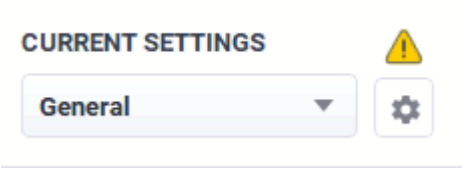
Note: Legacy support structures are no longer supported. To restore your legacy settings, contact Service & Support.

Note: To get access to (*ini) file with the most recent parameters, keep Envision One RP updated. The most recent (*ini) files coming with a newer version of Envision One RP ensure better printing results.

Upload Support Generation Files

To use the material-specific support generation settings, select the appropriate file from the drop-down list or upload a new one.

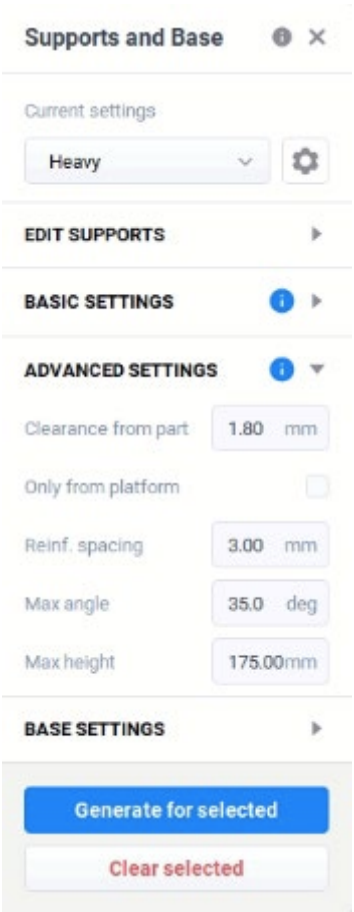
1. Go to the **Support and Base** widget.
2. Press the ⚙ button
3. Press **Upload New**.
4. Select a new file from the file explorer.
5. Press **Open**.



Support Generation Settings

Each support generation file (.ini) contains specific settings for the support structures, depending on which printer, material, and model you want to build.

Some parameters could be changed directly in the **Supports and Base** widget, while others remain predefined in the .ini file. To get more details about support generation parameters, press the ⓘ icon next to the support group name (e.g. BASIC SETTINGS) in the **Supports and Base** widget.



Basic Settings

The parameters in this section allow for indicating the values for basic support generation settings.

Tip thickness

Defines the thickness of the cone tip at the upper and lower end of the support beam.

Support thickness

Defines the thickness of the entire support beam.

Support spacing

This value defines the distance between the support beams.

Flat to platform

When enabled, this option ensures that the model is built without supports and baseplate.

Height from platform

This value defines the height of the support structures.

Advanced Settings
It is recommended to change the advanced parameters only if you have some experience with support settings.

Clearance from part
Determines the distance that each beam must have from the surrounding model surface.

Only from platform
When enabled, this parameter indicates that support structures must attach to the platform only. The model-to-model support structures are not built.

Reinf. Spacing
This defines in what distance to each other the reinforcing cross bars may be built.

Min. Angle
Determines the minimum angle between model and build platform from which supports will be built.

Max. Height
Defines up to which height of the model structure from the build platform supports will be built.

Base Settings
The parameters in this section allow for defining the base type and its parameters.

None
It implies that no base would be created for the model(s) on the platform. This option is automatically set in the **Base Type** drop-down when the **Flat to platform** option is enabled.

Baseplate
This option presumes that a model and its supports are built on the baseplate.

Fence
It presumes that the fences are built between neighbouring support beams to ensure more stability for support structures.

Save Support Generation Settings

After changing any parameters in the **Basic Settings**, **Advanced Settings**, or **Base Settings** sections, it is possible to save those settings.

1. Go to the **Support and Base** widget.
2. Press the button.
3. Press **Save As**.
4. Enter the name for the new file.
5. Press **Save**.

Restore Default Support Generation Settings

After making changes to supports generation parameters in the of the **Supports and Base** widget, it is still possible to restore the default values.

1. Press the button.
2. Press **Restore Defaults**.

Note: The **Restore Defaults** option is disabled in the following cases:
- When the (“ini) file is the default one and no changes were made to it.
- Just after the parameters were restored to default values.
- After the (*ini) file was uploaded or created.

Add Supports Automatically

Note: At least one 3D model should be selected on the build platform.

The system allows for the automatic supports generation in Envision One RP.

1. Go to **Supports and Base** widget.
2. Make the needed changes in the **Basic Settings**, **Advanced Settings**, and **Base Settings** sections.
3. Press **Generate for Selected**.
   → The supports are built.

Build Supports with Baseplate

It is possible to generate supports with a baseplate:

1. Go to **Supports and Base** widget.
2. Select **Baseplate** from the drop-down list in the **Base Settings** section.
3. Set the **Wall Thickness** and **Text Height** parameters for the baseplate.
4. Press **Generate for Selected**.

Build Model on Platform

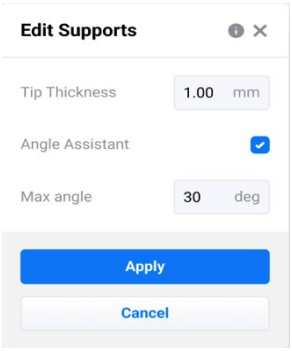
This feature allows the user to print the model directly on the platform.

1. Go to **Supports and Base** widget.
2. Select the **Flat to platform** option in the **Basic Settings** section.
3. Press **Generate for Selected**.

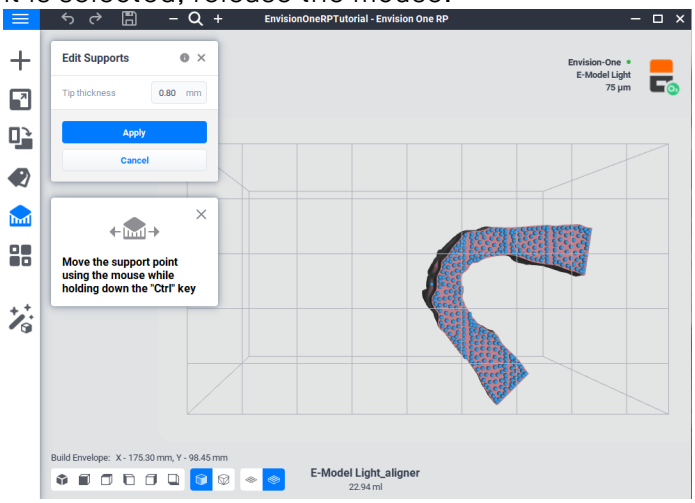
Add Supports Manually

This feature allows to manually add and delete supports.

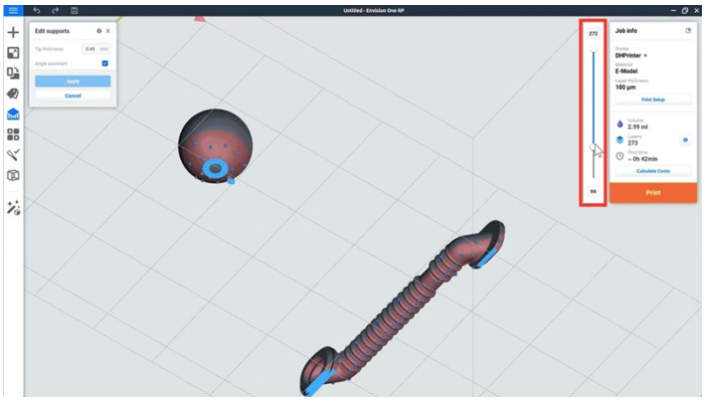
Note: At least one 3D model should be selected on the build platform.



1. Press the icon.
2. Press **Edit Support Points**.
3. To add support points, select the spots on the model. In some cases, it is not possible to add support points on certain parts of the model. If that happens, deselect the **Angle assistant** option in the **Edit Supports** window.
4. To delete the support point, press on it.
5. To change the location of the support point, move the support point using the mouse while holding the **Ctrl** key. Once a new spot for the support point is selected, release the mouse.



6. Edit the tip thickness by indicating the required value in the **Tip thickness** field. The greater the value, the thicker supports would be.
7. To edit supports inside the model, press the icon and select the layer at which supports will be built.

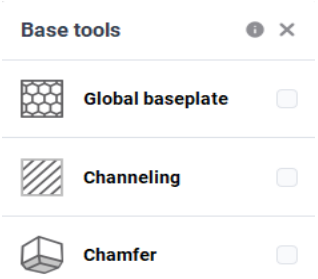


8. After having made the required changes, press **Apply** to save changes or press **Cancel** to exit the **Edit Support Points** feature.

Base Tools

The **Base Tools** widget contains the following options:

- Channeling
- Chamfer
- Global Baseplate



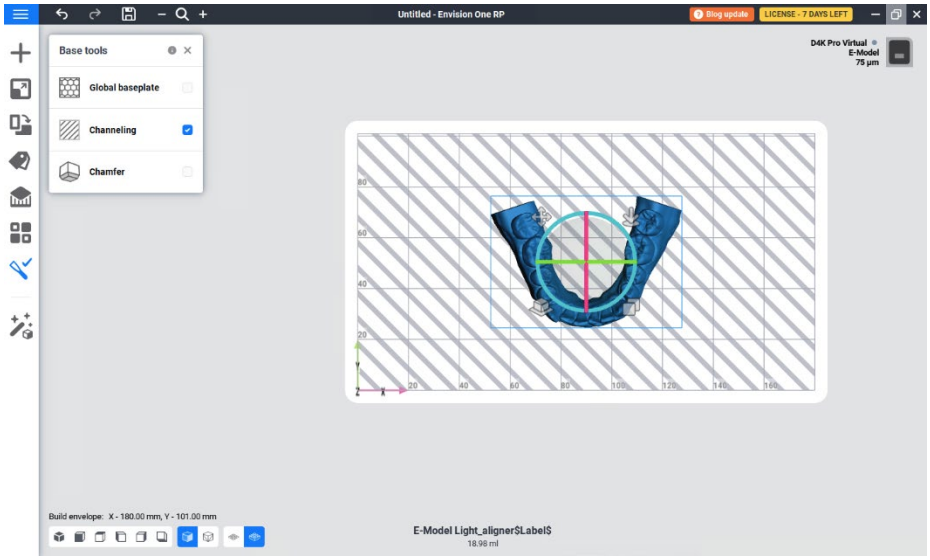
Each of these functions is designed to work with the lower layers of the models.

Channeling

Once this function is enabled, system generates special channels displayed in grey. They serve as a safe zone between a model and the platform. Channeling is helpful when models have no supports or a baseplate to easily detach them from the platform once printed.

To activate this feature, select the **Channeling** feature in the **Base tools** widget.

Note: When **Global Baseplate** is enabled, **Channeling** is deactivated. When **Chamfer** is enabled, **Channeling** can be applied as well.



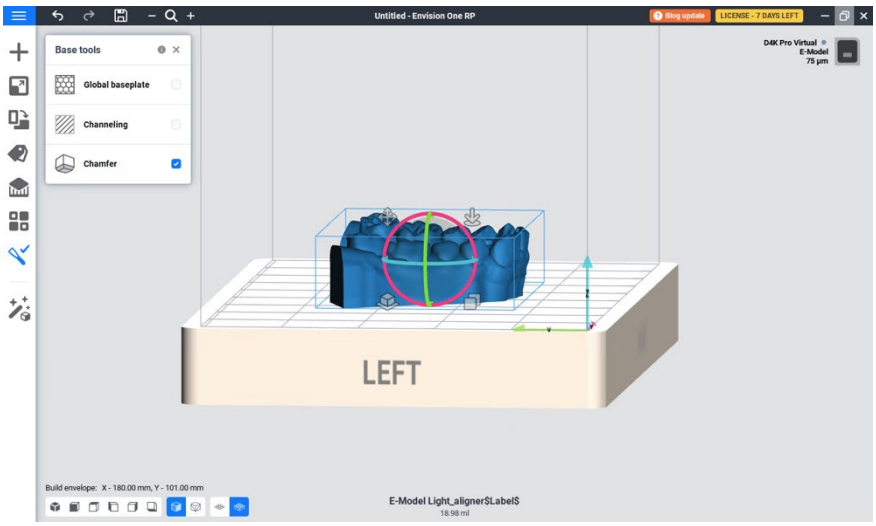
Note: Channeling is applied only to the models without supports.

Chamfer

The **Chamfer** feature bevels the edges of a model. This helps to quickly remove printed models without supports from the platform.

To activate this function, select the **Chamfer** feature in the **Base Tools** widget.

Note: When **Global Baseplate** is enabled, **Chamfer** is deactivated. When **Channeling** is enabled, **Chamfer** can be applied as well.

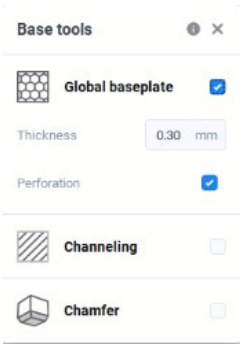


Global Baseplate

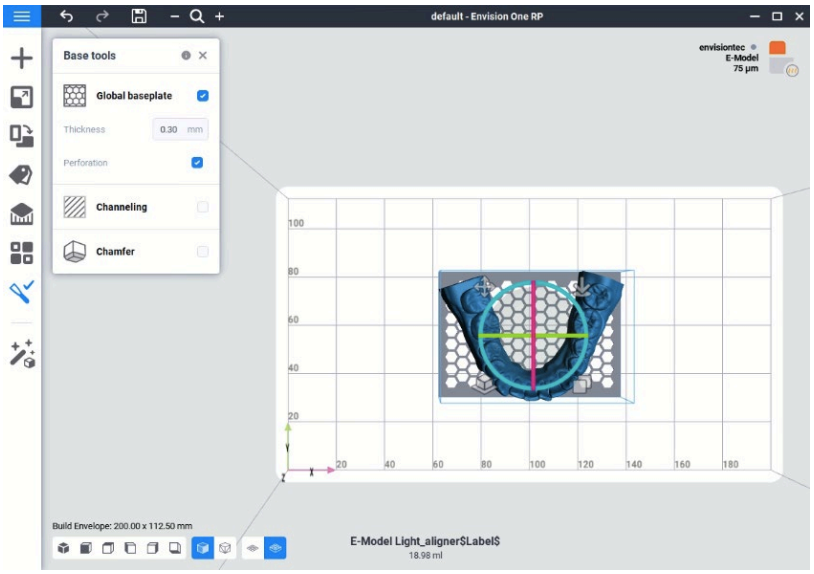
This option creates a single baseplate for all the models on the platform.

To enable this feature, select the **Global baseplate** option in the **Base Tools** widget. Then the system shows two parameters for the baseplate construction:

- **Perforation**. Select this option to construct a solid baseplate,
- **Thickness**. Determines the baseplate thickness.



Note: When **Global Baseplate** is enabled, **Channeling** and **Chamfer** options are deactivated.



Autopilot

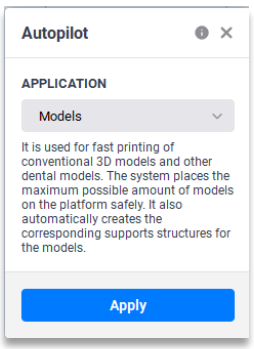
This tool is developed for a quick and easy sending of job files to the printer. The quick printing in **Autopilot** is applied to all the models on the platform.

The **Autopilot** tool contains 3 applications: **Models**, **Night Guards**, and **Restorations**. Each of these applications has several printing modes available.

Note: The system shows the list of compatible printing materials for each Autopilot mode. You need to make sure that the currently selected printing materials matches the requirements of the needed Autopilot mode.

Models Application

The following modes are available under the **Models** application:



- **Basic.** The system performs an automatic model placement and automatic support building. This is a basic solution applicable for printing most models.

- **Dental Models.** Developed for printing dental parts that normally need to be printed without supports. The system automatically turns the largest model's flat surface towards the platform and deletes the support elements if there are any.
- **A-Type Jaws.** Developed for printing many dental models at a time. The system places the models vertically and tilts them to avoid the overhanging parts. The support blocks are added automatically and can be easily removed from the platform after printing due to the specially designed grooves.

Night Guards Application

This application has the only one mode called **Night Guards**. It is dedicated to the fast printing of specific dental models called night guards. The **Night Guards** mode does several actions at once: orients a model, adds supports for it, and places the model with supports on the platform.

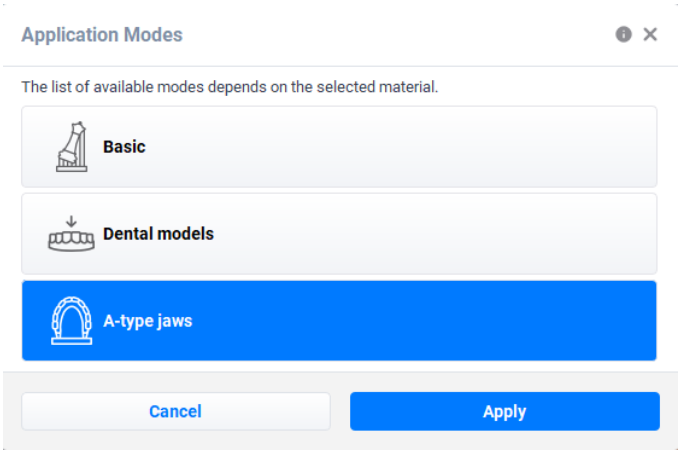
Restorations Application

This application has the only one mode called **Crowns and Bridges**. This mode is designed for preparing and printing such delicate dental models as crowns and bridges. The **Crowns and Bridges** mode does several actions at once: orients a model, adds supports to it, and places the model with supports on the platform.

To prepare a model for print with Autopilot:

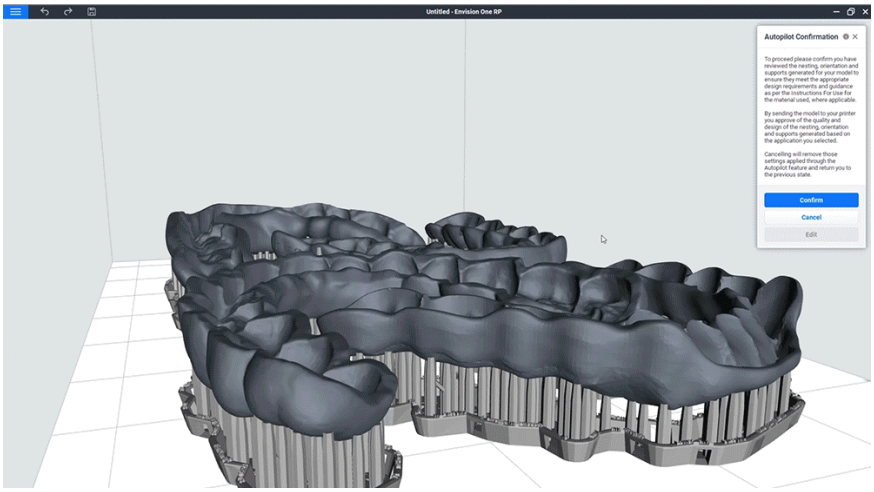
Requirements: At least one open and selected 3D model.

1. Press the icon.
2. Select the **Autopilot** mode and press **Apply**.
   → The window with the modes available in the chosen application appears.

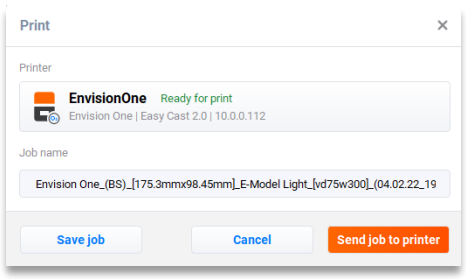


3. For some **Autopilot** modes, the **Autopilot Confirmation** window appears before sending the job file to the printer. Check the orientation of the model and supports generated automatically for it and press **Confirm** in case everything is

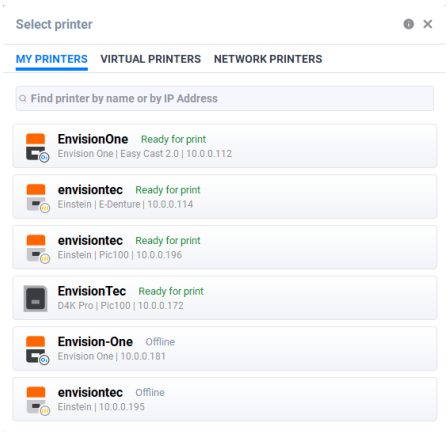
correct. Otherwise, select the model on the platform and press **Edit** to change its positioning or supports.



4. Select the needed mode and press **Apply**.
   → The parts are automatically placed according to the selected mode algorithms.
   → The supports are either generated or deleted depending on the selected mode.



5. Select a printer in the **Printer** field.

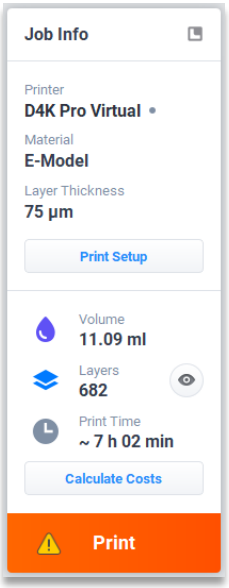


6. Press **Save job** if you want to save the job to your PC.
7. Press **Send Job to Printer**.
   → The job is sent to the selected printer.

To exit **Autopilot**, press **Cancel**.

Printing

Job Info Widget



The **Job Info** widget is located on the right side of the screen. It displays print details and the information about the selected job file.

- **Printer:** The name of the selected printer.
- **Material:** The selected printing material.
- **Layer Thickness:** Thickness of the layer.

These parameters can be changed by selecting **Print Setup**.

- **Layers:** Number of layers. Press the icon to see each layer of the selected model.
- **Print Time:** The required calculated time to build the selected model.
- **Volume:** The required amount of material.
  To hide the **Job Info** widget, press the **Minimize** icon in the top-right corner. To show the full widget again, press the **Maximize** icon.

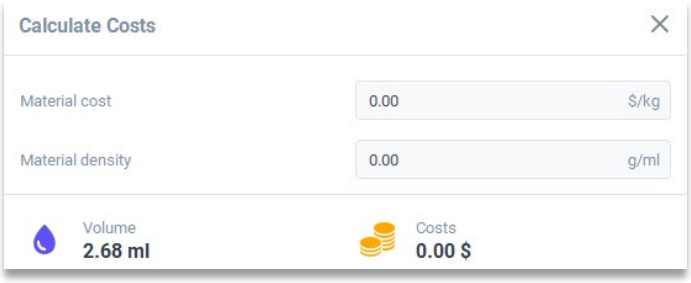
Note: The volume precision is 2 digits after the delimiter. Thus, for small models with a volume less than **0.01 ml**, the exact volume is not shown. In this case the volume is displayed as **>0.01 ml**.

Cost Calculation

This feature allows you to calculate a model printing cost before sending a job file to printer.

To calculate the printing cost:

1. Press **Calculate Cost**.
   → The following dialog box appears.



2. Indicate the density of material you are going to use for printing in g per cm^3 into the **Material density** field.
3. Indicate the cost of material you are going to use for printing in $ per kg into **Material cost** field.
4. Press **Enter**.
   → The printing cost is calculated and displayed.

Note: The calculation of material volume is preliminary. It might differ from the final result shown in printer's Control Software. This calculation is more precise as all the feature are taken into account.

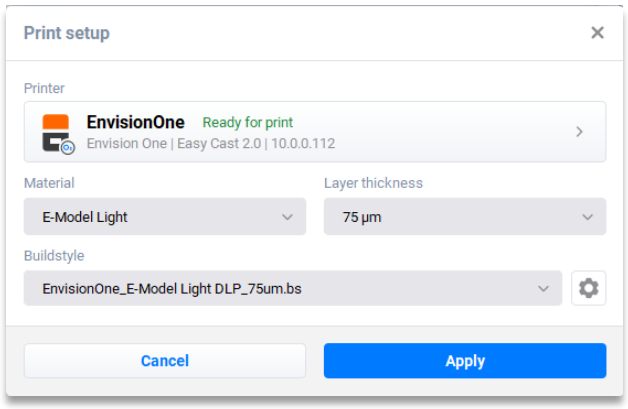
Close the window by pressing ✕ to continue working on your project.

Send Job File to Printer

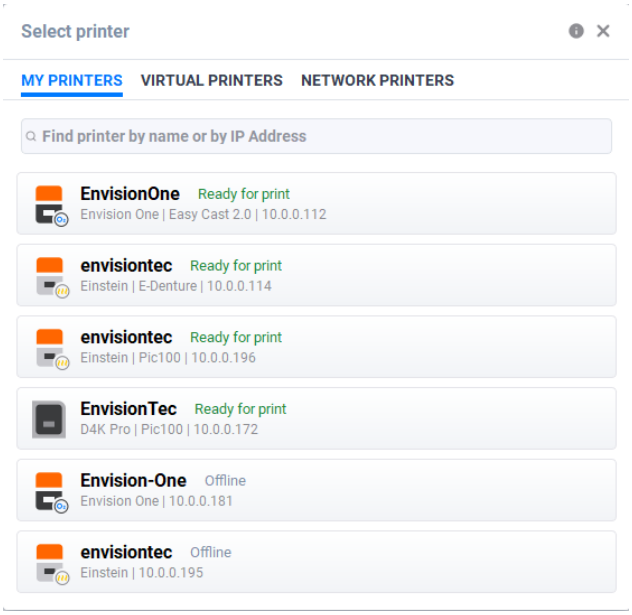
Requirements: At least one open and selected 3D model.

To send a job to the printer:

1. Press **Printer Setup** in the **Job Info** widget.
   → The following window appears.

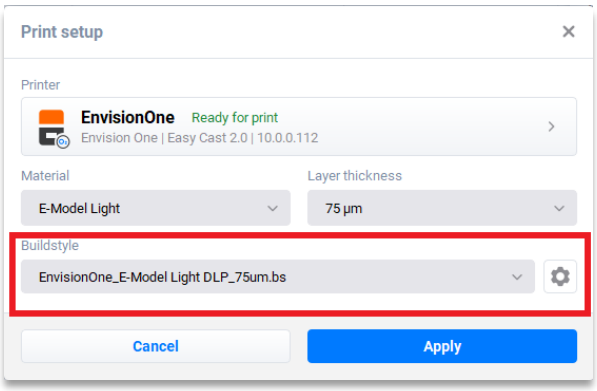


2. In the **Printer** filed, select online printer from the drop-down menu. Find more information about My Printers, Virtual Printers and Network tabs below.



Note: The printers in the network can have the following statuses: **Ready for Print**, **Printing**, **Offline**. You cannot send a job file to a printer with the **Offline** status.

3. In the **Buildstyle** field, select the corresponding buildstyle from the drop-down menu.

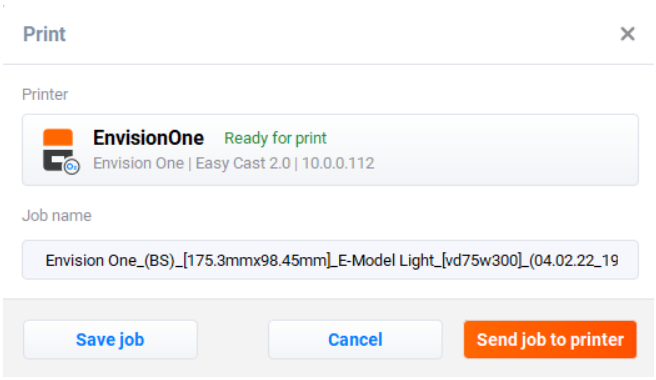


Note: The number of buidstyles available in the drop-down list depends on the selected printer, material, and layer thickness in the corresponding fields above the Buildstyle field.

Note: Make sure that the printer ID specified in the buildstlye matches the printer ID specified in the printer's Control Software.

Note: The Printer S/N validation feature for the D4K printers shows if the selected buildstyle can be used for the chosen printer with the green **Valid** sign.

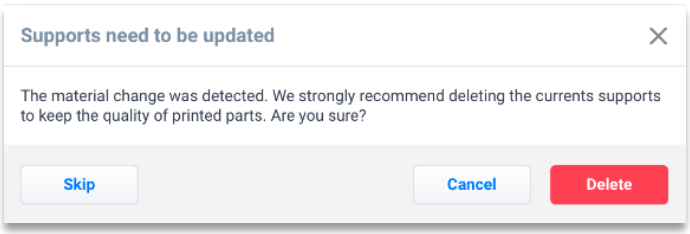
4. Press **Apply**.
5. Prepare a job and press **Print**.
   → System checks the printer S/N in the buildstyle and printer S/N in the CS.
   → If the printer S/Ns match, the **Send Job to Printer** button is active. If the printer S/Ns do not match, the warning message appears, and the **Send Job to Printer** button is disabled.



→ The job is sent to the selected printer.
→ When the printer starts printing, the **Ready for Print** status is changed into **Printing**.
→ The printing time left is shown.

Note: When the build envelope has many models on it, the job generation may take some time. This depends on the hardware configuration of the particular workstation and the amount of RAM memory in disposition.

If the STL files were loaded with previously generated supports and the material was changed in **Print Setup** menu, the following message appears, meaning the supports need to be updated for the newly selected material.



1. Press **Delete** to delete the previously generated supports.
   → The supports are deleted.
2. Generate new supports manually or automatically.

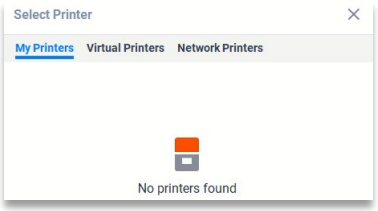
The following options are available as well:

- **Cancel** will get you back to the **Print setup** menu
  → Supports are not deleted; models are left on the scene
- **Skip** will close the pop-up message
  → Supports are not deleted; models are left on the scene.

Note: We strongly recommend deleting the current supports to keep the quality of printer parts.

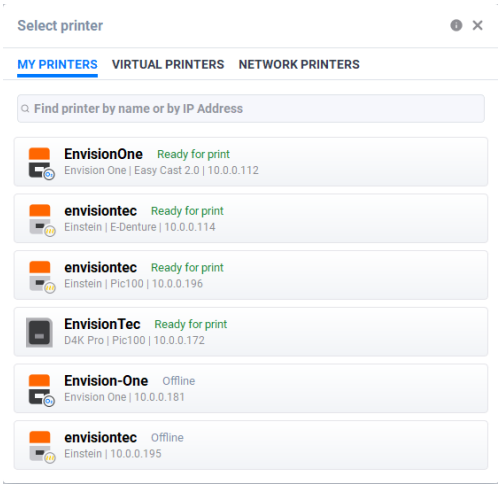
My Printers

The **My Printers** tab is intended for creating your selected printers list and allows you to easily find a necessary printer. Both online and offline printers are visible in this tab
If no printer is added to **My Printers**, the tab looks as follows:



To add a printer to **My Printers** list:

1. Open the **Network** tab.
2. Hover the cursor over the printer you would like to add to **My Printers**.
   → The + icon appears.
3. Press the + icon.
   → The printer is added to **My Printers** tab:

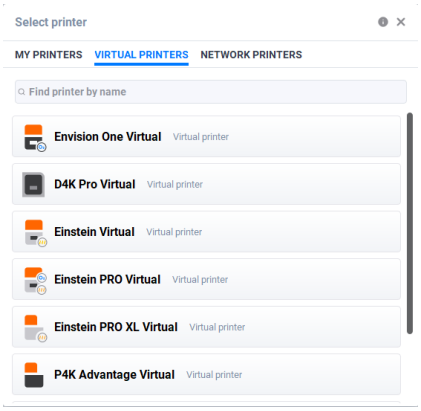


To manage your printers in **My Printers** tab, hover the cursor over the printer:

- To change the printer's name, press the pen icon.
- To delete a printer from **My Printers** tab, press the bin icon.

Virtual Printers

The **Virtual Printers** tab contains virtual printers.
It is necessary to select a printer to generate a job file. In some cases, it might be impossible to select a remote printer. In this case, you can select a virtual printer. Virtual printer allows you to generate a job file and save it locally.



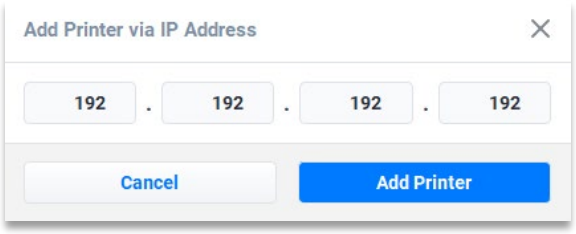
Note:
You cannot send your job file to a virtual printer. You cannot add a virtual printer to **My Printers** tab. You cannot rename or delete a virtual printer.

Note: You should select the virtual printer that corresponds to the model of your printer. Otherwise, the generated job file might be incompatible with your printer.

Network

In the **Network printers** tab, you can find all the online printers in the network.

You can also add an online printer to the printers list via IP address. To do this, select **Add Printer via IP Address > enter the printer's IP address**. Press **Add Printer**.



The printer added via IP address is automatically added to **My Printers** tab.

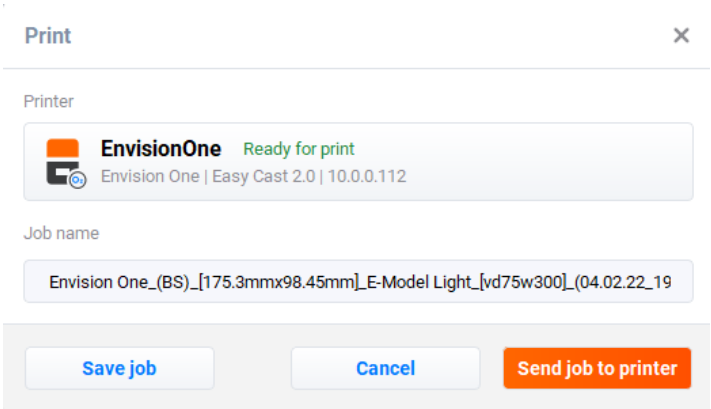
Note: Offline printer cannot be discovered via IP address.

Save Job

Note: At least one open and selected 3D model.

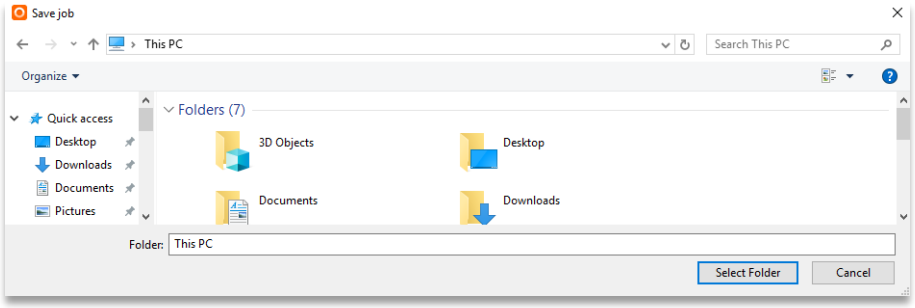
To save job on your printer:

1. Press **Print**.
   → The following window appears:

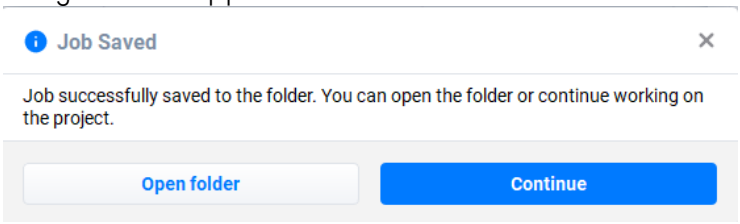


2. Press **Save job**.

→ The following dialog box appears:



3. Open the folder you want to save a job to and press **Select Folder**.
   → The job folder with all the required data is saved to the selected folder.
   → The following window appears.



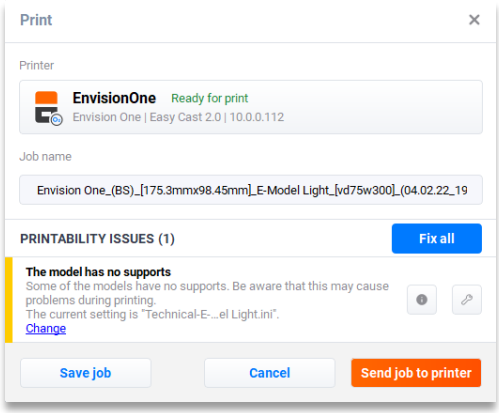
4. Press either **Continue** to work on the project or **Open Folder** to open the Job folder.

Printability Issues

The system automatically checks your models and detects all the problems that might influence printing. The detected printability issues are shown in the Printability issues section when the job is sent to the printer. Some of the issues are described in the Troubleshooting section.

The detected issues are marked either with yellow or red:

- yellow indicates non-critical errors. In this case printing is possible however not recommended.
- red indicates critical errors. When such issue is detected, the Send Job to Printer button is deactivated and the job cannot be sent to printer.



To fix the detected issues, press **Fix** or **Fix All Issues**.

→ The issues are fixed automatically.

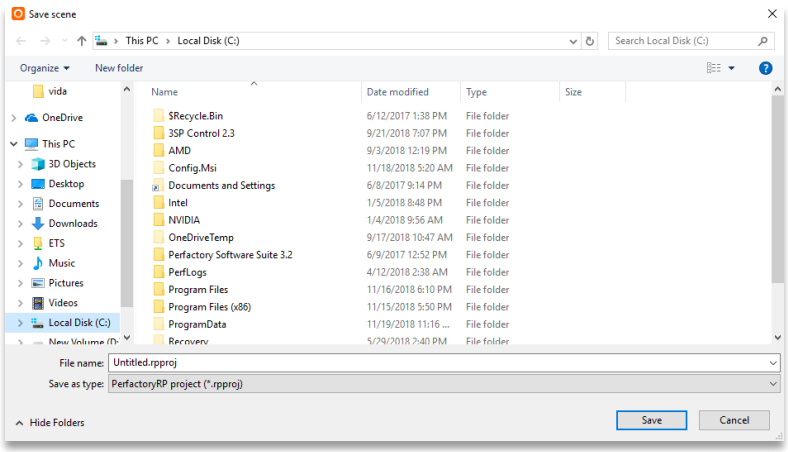
→ The **Send Job to Printer** button is activated.

For more information, see the Troubleshooting section.

Save Scene to File

1. Go to **Menu > Save as**.

→ A dialog box appears.



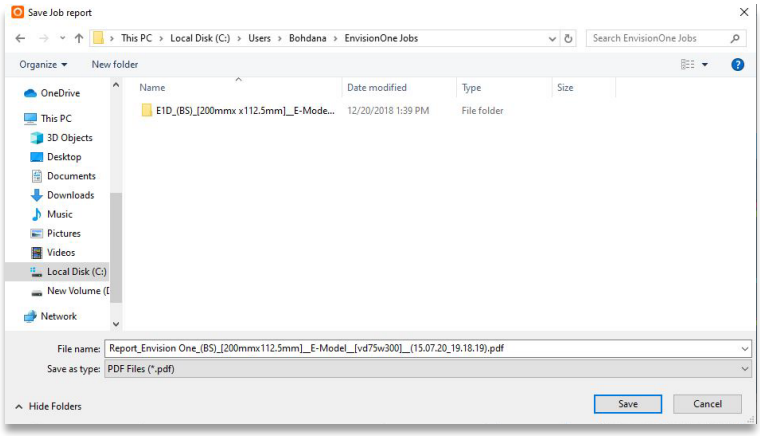
2. Select the desired path and enter the file name.
3. Press **Save**.
   → The scene is saved. The saved scene contains:
   - All models placed on the platform.
   - All platforms.
   - A buildstyle.
   - Support structure.
   - Other technical data required.

Print Job Report

This option allows for saving a job report to the PC.

To print a job report:

1. Go to **Menu > Print Job Report**.
2. In the window that appears, choose the path to save your report.



3. Press **Save**.
   → The PDF file is saved to the path you specified. It contains:
   - FullHD scene screenshot.
   - Channeling geometry, if enabled in the buildstyle. For more information refer to Create a New Platform section.

- Parts list.
- Time estimation.
- Material consumption.
- Layer Thickness.
- Date of generation.

Calibrate Printer

When buildstyle file is selected, the calibration for compensation for the natural shrinkage of the material is possible. It helps to increase the accuracy and precision of your printer.

To calibrate your printer, print the L-shaped job and measure it as described below. These measurements are then used to calculate the shrinkage compensation coefficient which is saved in the buildstyle.

If you use several materials on your printer, you should calibrate your printer anew for each material. This means that the shrinkage compensation coefficient must be calculated for each material and saved in the corresponding buildstyle.

Accordingly, if you have several printers, you should calibrate each printer and save the shrinkage compensation coefficient in the corresponding buildstyle for each printer.

Note: Each material is supplied with a default buildstyle. Pay attention that you should use the default buildstyle to calibrate your printer for the new material.

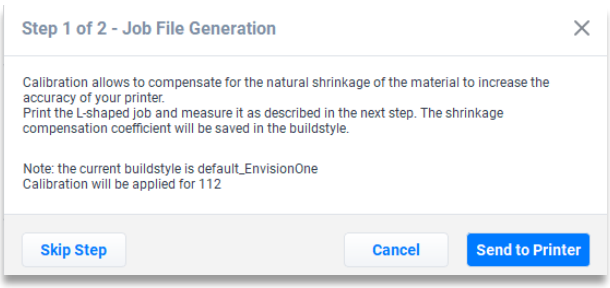
Note: Make sure that the printer ID specified in the buildstyle matches the printer ID specified in the Control Software.

The calibration flow depends on the selected buildstyle file: .bs or .bs2. For more information about buildstyles refer to the Buildstyle Installation section.

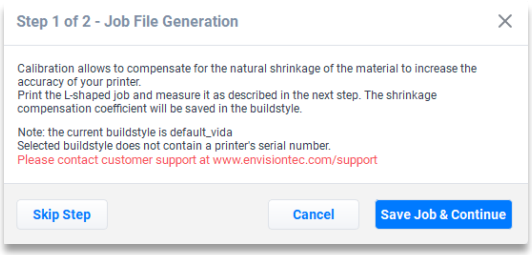
Calibration with .bs Buildstyle

1. Go to **Menu > Calibrate Printer.**
   → System shows 'Step 1' of Shrinkage Compensation calibration with name of selected buildstyle.

- If printer S/N is specified in the selected buildstyle (UniqueID parameter), the calibration will be applied to the printer with the specified S/N.



- If the buildstyle does not contain printer S/N (UniqueID parameter is empty), the system shows message 'Selected buildstyle does not contain a printer's serial number.'

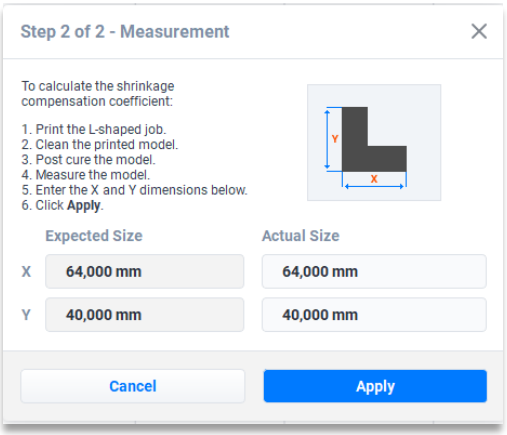


Note: If the L-shaped job has been generated previously for the buildstyle under calibration, press **Skip Step** and move directly to step 3 of this instruction.

2. Press **Save Job & Continue**.
→ The L-shaped job is generated and sent to printer.

Note: If your printer is offline, press **Save Job and Continue** and save the L-shaped job on an external drive. Now you can transfer it to your printer.

→ The following dialog-box appears:

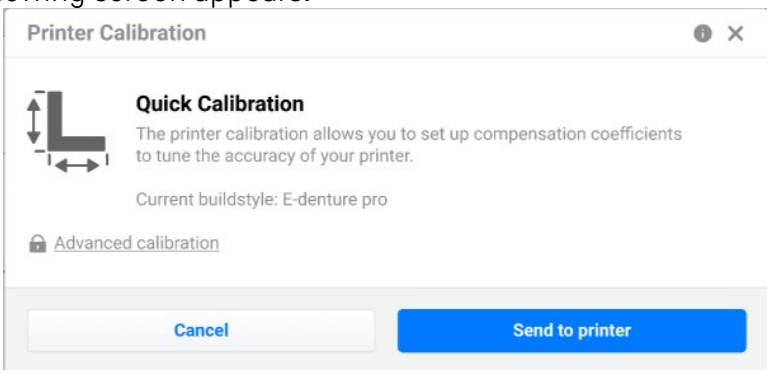


3. Print the L-shaped model and clean it well.

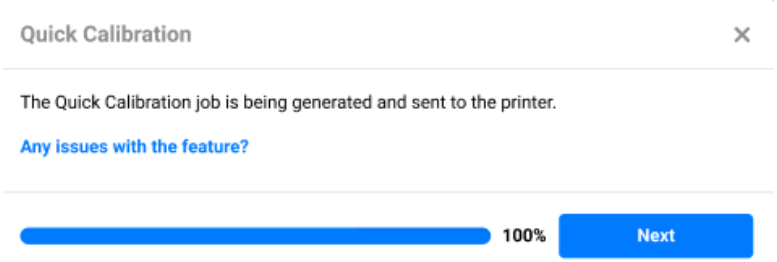
4. Post cure the model as required for the material.
5. Measure the model as shown on the picture.
6. Enter the X and Y dimensions in the field below.
7. Press Apply.
   → The material shrinkage compensation coefficient is calculated and saved in the current buildstyle.

Calibration with .bs2 Buildstyle

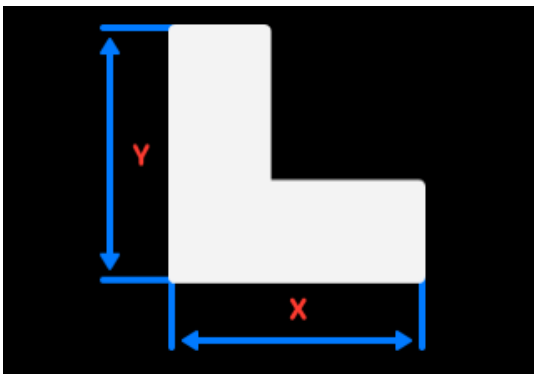
1. Go to Menu > Calibrate Printer.
   → The following screen appears.



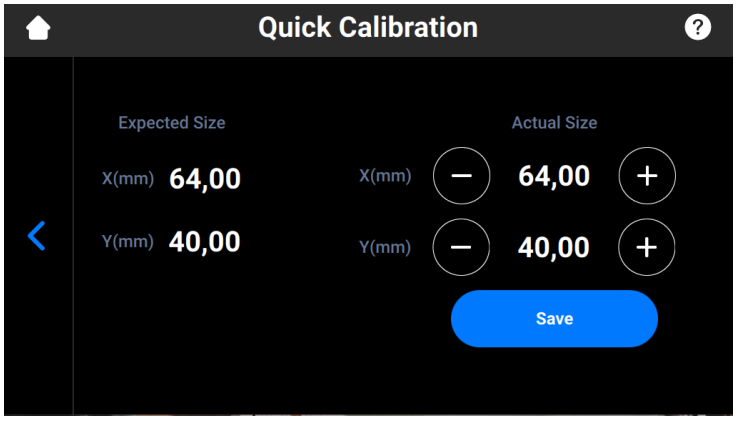
2. Press Send to printer.
   → The L-shaped job is generated and sent to the printer.



3. Once the job is generated and sent to the printer, press Next.
4. Clean the printed L-shaped model.
5. Post-cure the model as required for the material.
6. Measure the model as shown in the picture.



7. Go to the **Quick Calibration** screen on your printer.



8. Indicate the **X** and **Y** values obtained in Step 6.
9. Press **Save**.

Feedback

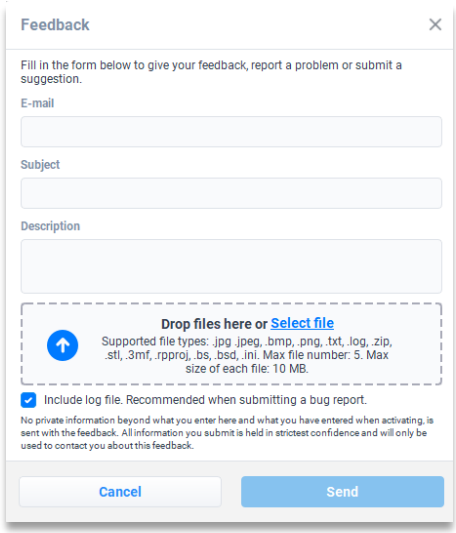
This menu allows to send your feedback, report a problem or submit a suggestion.

Note: To use this option, the internet connection must be established on your computer.

Step by Step

1. Go to **Menu > Feedback**.

   → The following dialog-box appears.



2. Fill in the form. The following fields are mandatory:
   - **E-mail***: Type your contact email address.
   - **Subject***: Type the feedback subject.

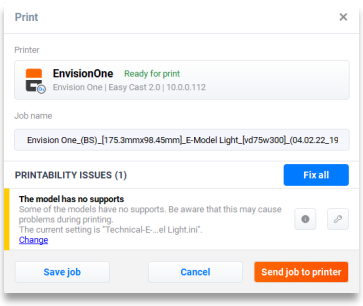
- **Description***: Type the text of your feedback, problem description or enhancement suggestion.

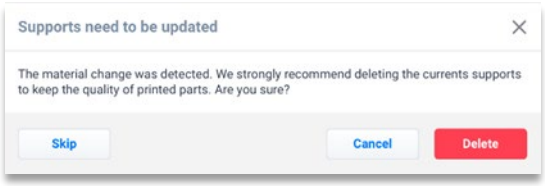
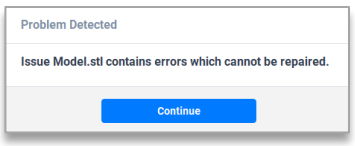
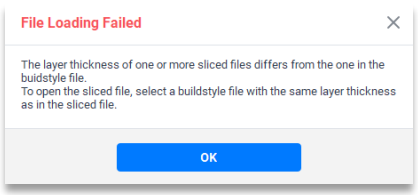
3. Add files if necessary. This field is optional.
You can drop files directly or press **Select** to open your computer's File Manager.
    - Max file number is 5.
    - Max size of each file is 10 MB.
    - The supported file types: .jpg, .jpeg, .bmp, .png, .txt, .log, .zip, .stl, .3mf, .rpproj, .bs, .bsd, .ini.
4. If you are sending a bug report, select the **Include log file** option.
→ The log file is automatically added to your bug report.
5. If you are sending a feedback or want to suggest an enhancement, deselect the **Include log file** option.
6. Press **Send** to submit the form.
7. The Customer Support representative will contact you back using the email you have entered.

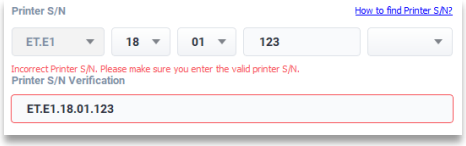
Note: The entered personal information will be held in the strictest confidence and used to contact you exclusively regarding your feedback.

Annex: Troubleshooting

Note:
For each task, the safety warnings contained in this instruction manual must be observed.
In case of any problem not listed in this troubleshooting chapter, contact your customer support.

Issue	Remedy
Error message: Model is set beyond the platform boundaries in the **Printability Issues** menu	If models are outside the build platform, align these models manually. For example: • Reduce the spacing between parts. • Rearrange them in a different order. However, if not all parts fit on the build platform, you must reduce the number of parts by deleting the parts, which do not fit, into the scene.
Models are not at 0 level	Parts are not leveled when they are moved up or down on the Z axis. These parts cannot be built, the following problems are possible: • The parts would float (Z> 0). • The parts would be cut off (Z <0). Press **Fix** to resolve this issue automatically. → A blue bar will show the progress of this process.
Error message: The model has no supports in **Printability Issues** menu	No supports have been generated for the model(s). Press **Fix** to automatically add supports to the model(s). Otherwise, proceed manually: 1. Press the **Change link** in the **Printability Issues** screen.  → You are automatically redirected to the **Supports & Base** tab.

	2. Proceed in the **Supports & Base** tab to either generate supports manually or automatically.
Overlapping	If models intersect each other, they are highlighted in red. This issue can be fixed: • By manually moving such parts away from each other. • By pressing the **Auto Placement All** button (see Automatic placement for details) to resolve the issue automatically.
Error message: Supports need to be updated in **Print Setup** menu	The following issue appears if the **Material** section in **Print Setup** menu is changed. To fix this issue:  1. Press **Delete** to delete the previously generated supports. → The supports are deleted. 2. Generate new supports manually or automatically.
The model disappeared from the scene	Some printability issues detected when opening a file cannot be fixed. In this case the following error message appears during the model loading.  After an attempt to fix such printability issues, the models disappear from the scene. To avoid model destroying, do not fix the detected errors by pressing **Fix** or **Fix All**. However, be aware that printing of models containing errors is not recommended.
Error message: *File Loading Failed* when loading one or more sliced files	The layer thickness of one or more sliced files differs from the one in the buidstyle file. The following message appears: 

	To open the sliced file, select a buildstyle file with the same layer thickness as in the sliced file. If this does not help, contact Service & Support.
Error message: *File Loading Failed* when loading sliced files while models of other formats are on the platform	This error message appears when trying to open models of different file types on the same platform. Create or open a new project, and upload sliced files there to fix the issue.
Warning: No model file is linked to this support element	This warning message appears when loading support files without the corresponding sliced file. For correct printing, load a sliced model file simultaneously with support element file. Consider that the support file name must include the same model name and file extension of the sliced model file. For example, loading a sliced model file *ModelName1.cli* and support file *ModelName1_s.cli* would be correct.
Error message: Unsupported model size	This issue appears when the model is smaller than 0.01 mm (10 microns) at least on one axis.  In this case: 1. Use CAD software for adjusting your 3D model and changing its size parameters if possible. 2. Re-upload the file into Envision One RP.
Error message: *Incorrect S/N*	If the printer's serial number (Printer S/N) is not entered correctly, the following error appears.  Check whether the printer's serial number on the label affixed to the back of the printer matches the one in Printer S/N field, or contact Service & Support.
Error: Job generation failed	This error message appears when trying to upload jobs via FTP to the offline printer. Make sure that the printer is online (check your Internet connection, etc.) to fix the issue.

Error: There is not enough space available to export the object.	This error message appears when trying to export a project to the folder with less than required space. Make sure you export the project to the folder with enough space available in order to fix the issue.
Error: The job cannot be generated as your system has run out of memory.	This error message appears when trying to generate a job and the available system memory is low. Close some applications or upgrade your hardware and try again to fix the issue.
Error: The job cannot be saved to the restricted directory	This error message appears when trying to save a job but there are no permission rights to write to the chosen directory. When such an error occurs, select another directory for saving a job.