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Auto Label

User Manual

July 2023

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1 Installation

This chapter describes how to install the "Auto Label" function.

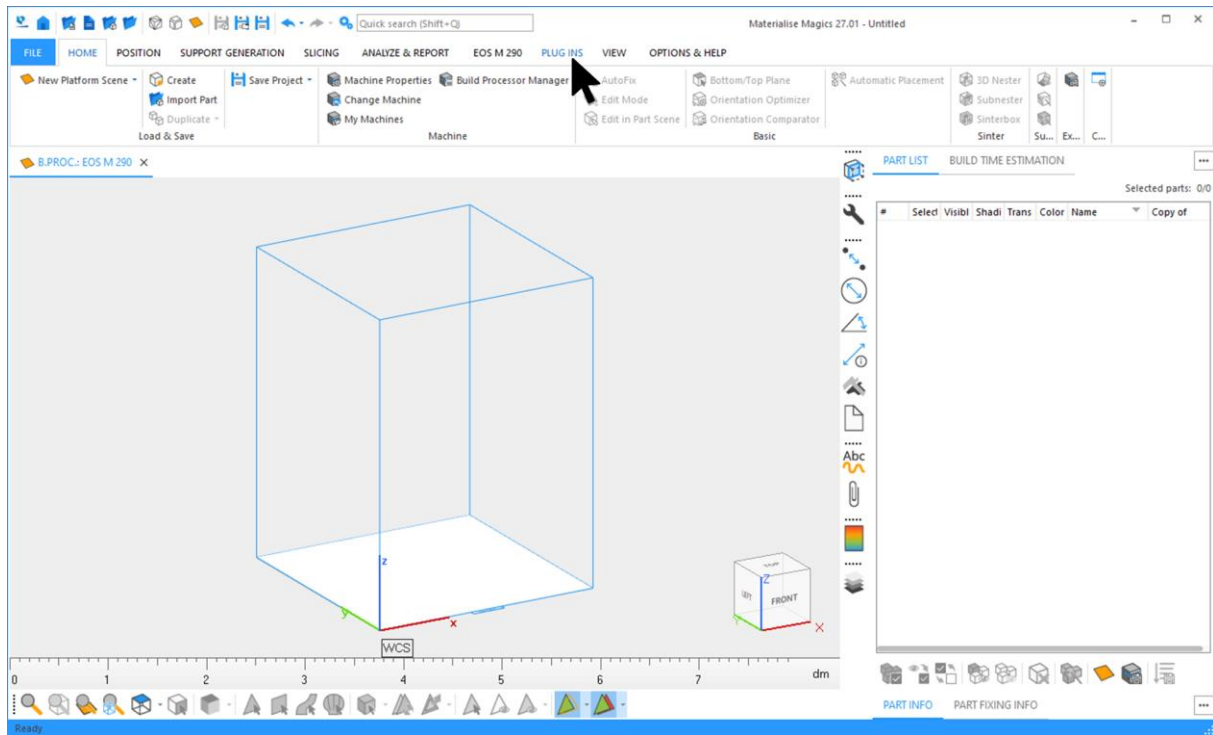
1.1. Minimum System Requirements

The Magics Automation Module must be installed to execute the "Auto Label" function. The Magics Automation Module is a Magics plug-in that is compatible with Magics RP version 25.03 or higher or Magics Print version 25.2 or higher.

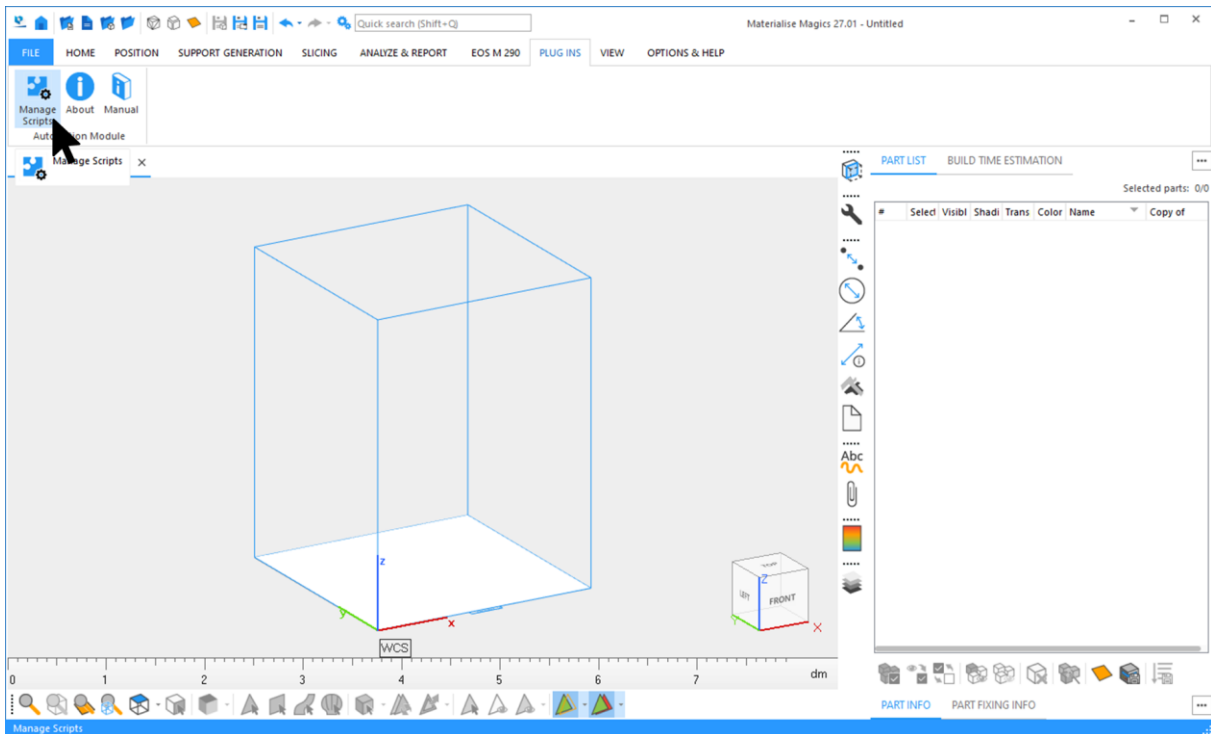
1.2. Installing the "Auto Label" function

To install the "Auto Label" function, start the Magics RP or Magics Print software.

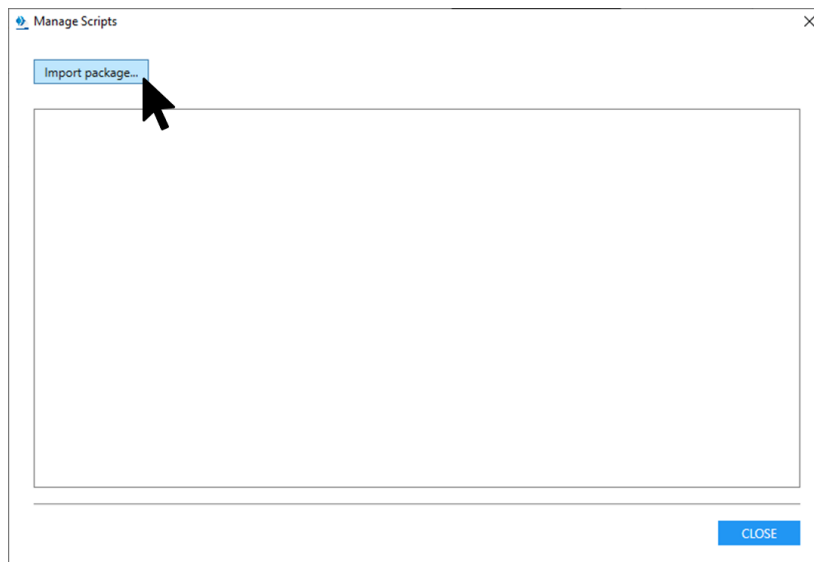
After starting Magics, switch to the "PLUG INS" menu tab”:



To install the wf-package press the button "Manage Scripts":

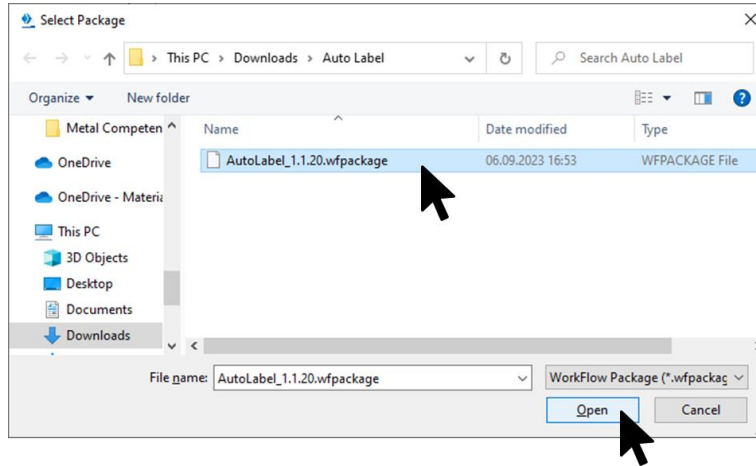


Then press the "Import package..." button in the "Manage Scripts" dialog:

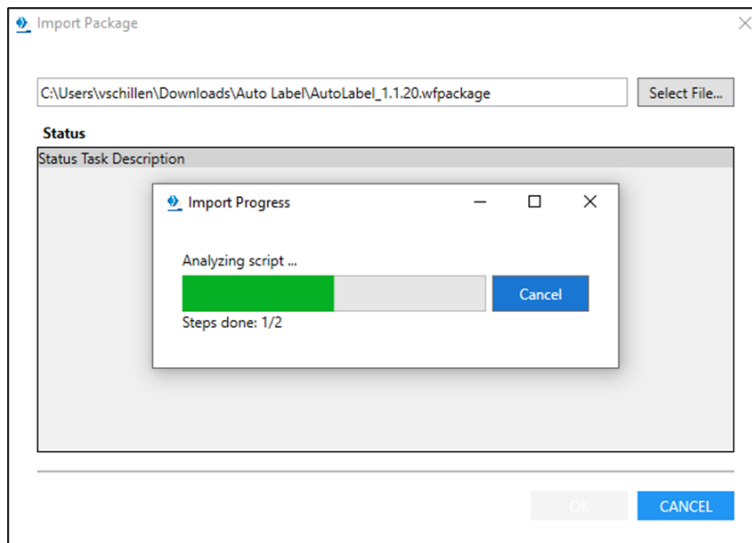




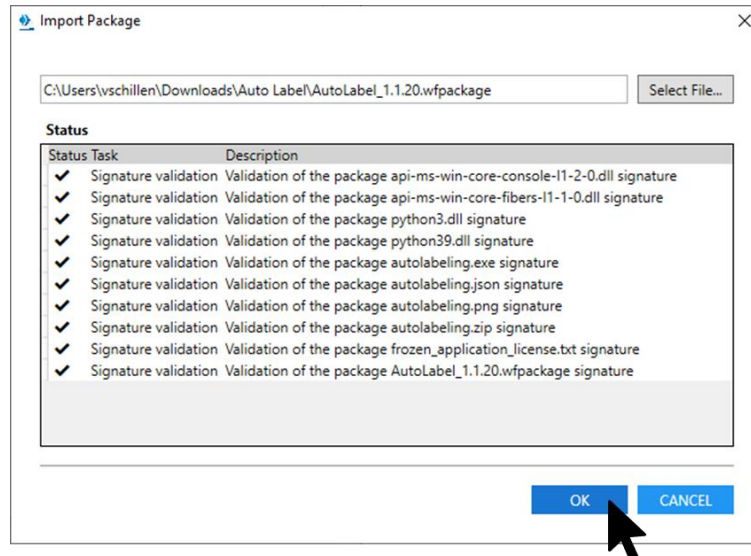
Browse to the location of the wfpackage you want to install, select the package you want to install and press the "Open" button:



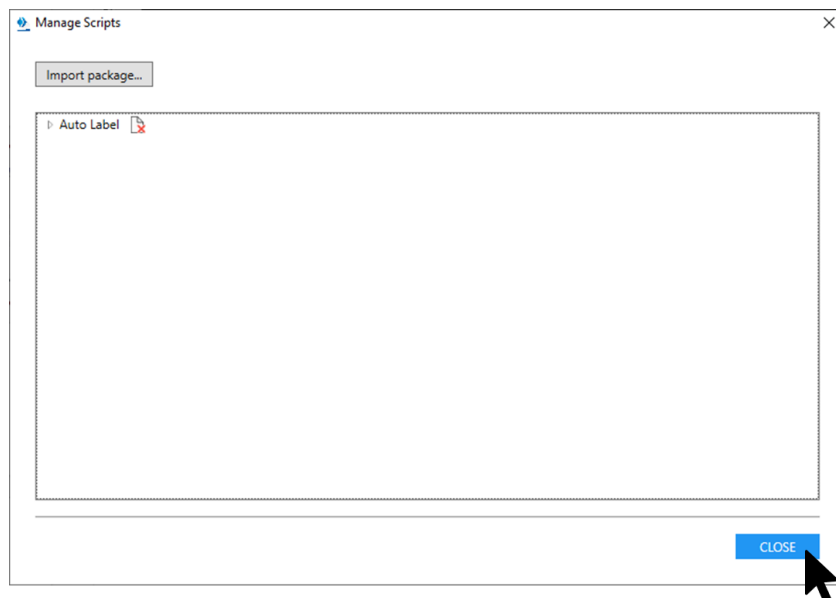
The selected package is now installed and validated:



After the installation is finished, an overview of the validation results is given. Close the dialog by pressing the "OK" button:



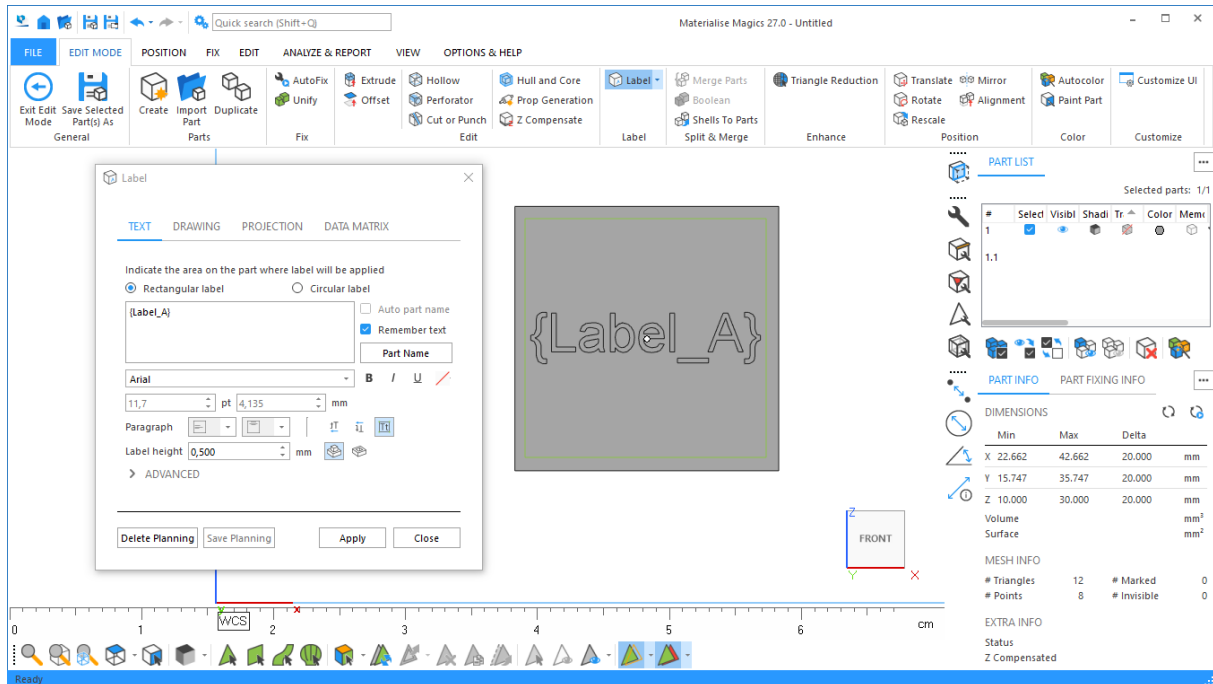
The "Auto Label" function appears in the "Manage Scripts" window. Close the dialog by pressing the "CLOSE" button:



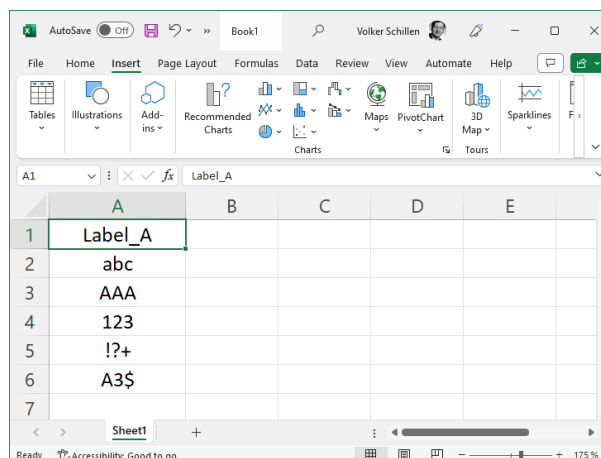
2 The way "Auto Label" works

With "Auto Label", you can apply label content to platforms with parts that have label planning.

A label plan consists of a placeholder at a specified area of a part surface where the label content is to be applied. The size of the area determines the size of the label content to be applied. The placeholder has a text template (e.g. {Label_A}), which is replaced by the label content to be applied by "Auto Label". A label schedule can be created on a part by using the "Label" function. Please refer to the corresponding section in the Magics manual for more detailed information:



The "Auto Label" requires the label content to be applied in the form of a list to be able to provide the label planning of the part on the platform with the corresponding label content. The first entry in the list must correspond to the text template (**without curly brackets!**) of the label planning:



This is used to ensure that the correct label content is used for label planning. A list can be created in Excel and MUST be saved as separate .xlsx. or .csv files. It is not possible to use multiple lists in one Excel file (only the first column or only the first workbook is considered).

This approach makes it possible to process parts on a platform whose label plans have different text templates.

In the labeling process, the list whose first line matches the text template of the label planning is first determined for each part. Starting with the second entry in this list, the label content is now successively taken from the list and applied to the surface of the part.

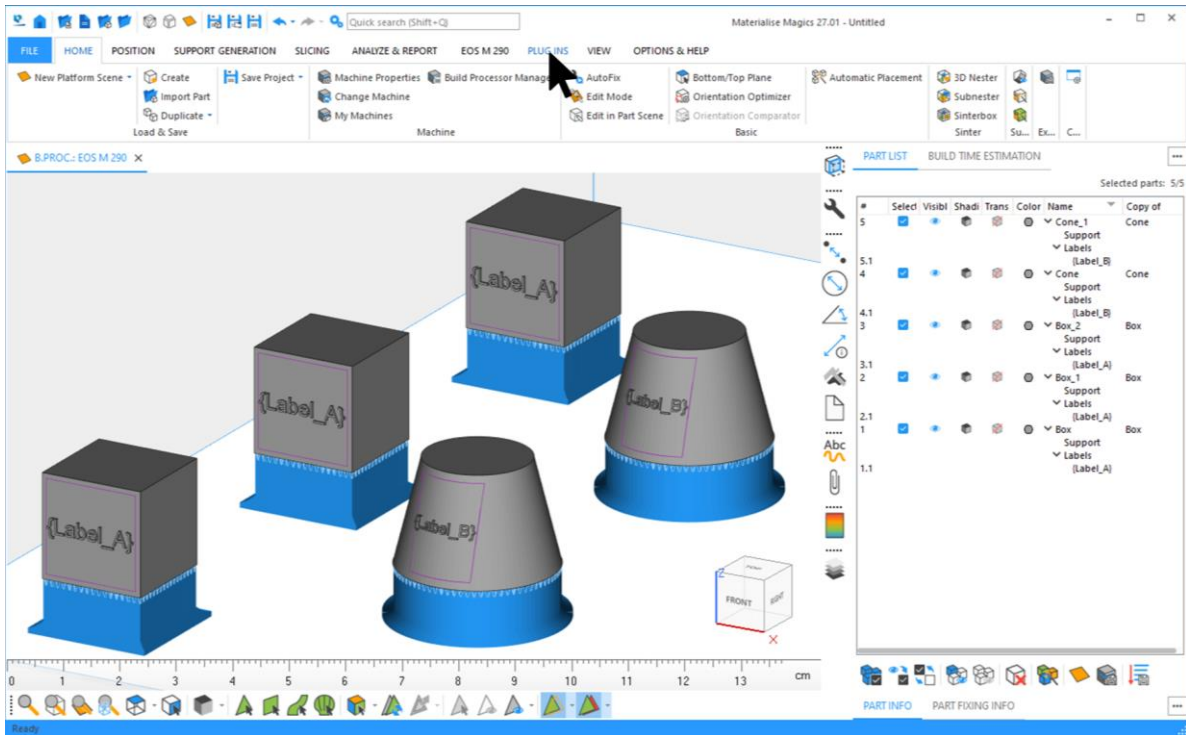
The function "Auto Label" therefore needs information about where these lists are to be found.

3 Execution of the "Auto Label"

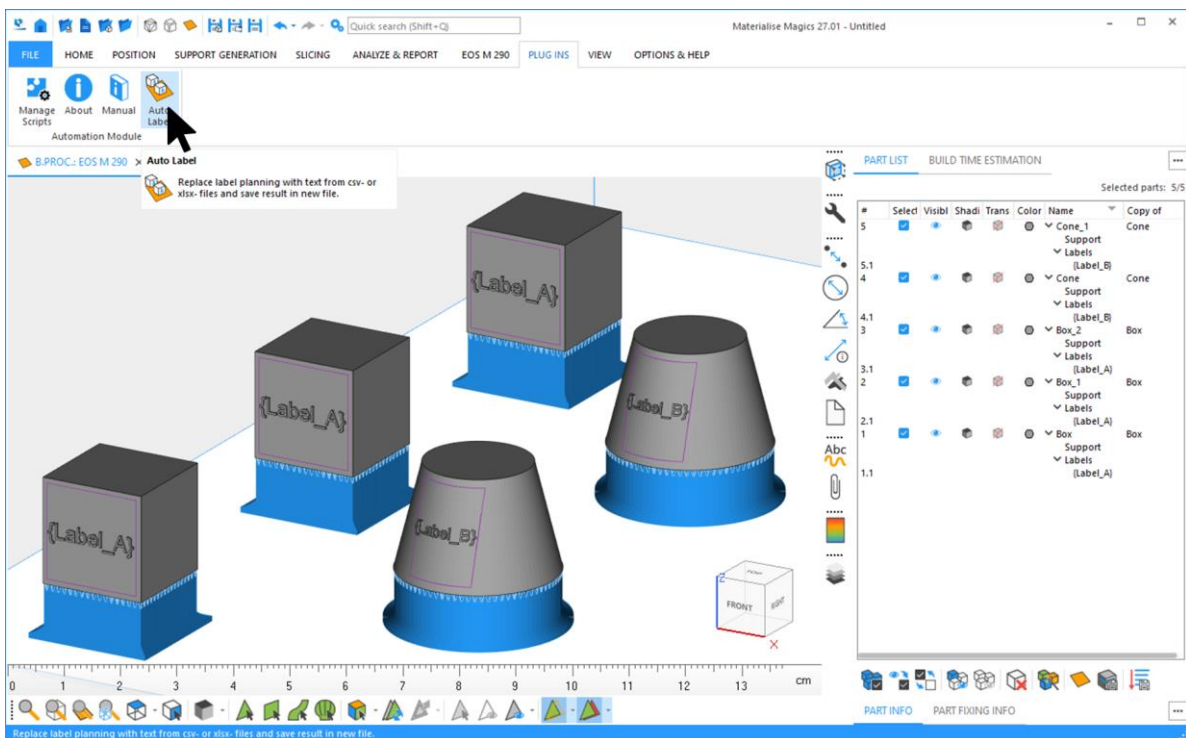
This chapter describes how to use the "Auto label" function.

3.1. Selection of the function "Auto Label"

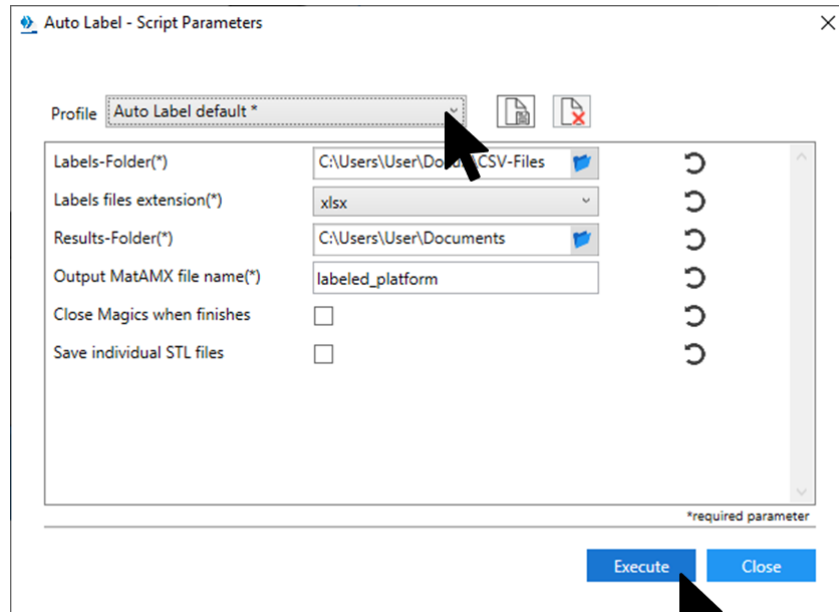
Start Magics and switch to the "PLUG INS" menu tab:



Click on the icon "Auto Label":

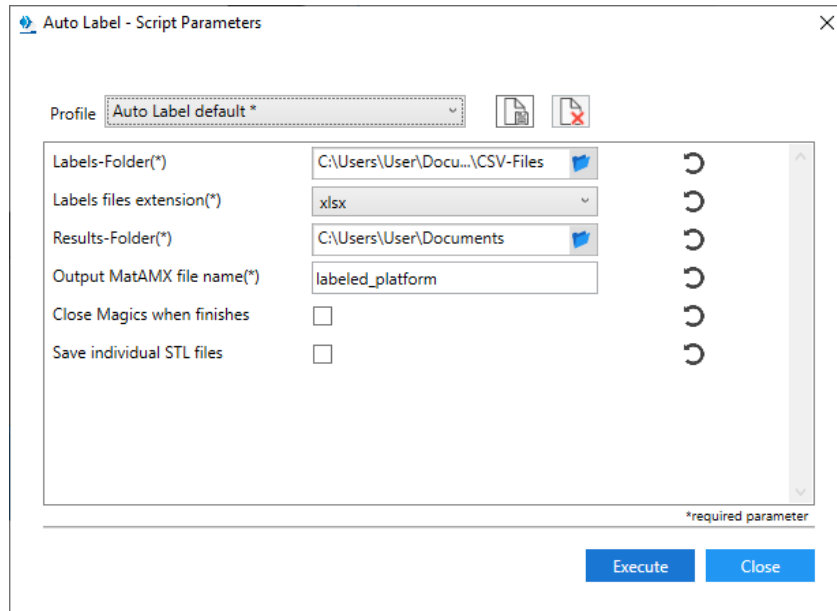


A dialog appears in which a profile can be selected, and parameters can be adjusted. Select the profile to be used and press the "EXECUTE" button to start automatic labeling.



3.2. Editing parameter profiles

To view or change the parameters of a profile, press the "Auto Label" button. In the Script Parameters dialog, you can set the following parameters:



- | | |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Labels-Folder | – Path to the folder where the (Excel) files with the label contents are located. |
| Labels files extension | – Storage format in which the files with the label contents are stored. The file formats ".xlsx" or ".csv" are supported. |
| Results-Folder | – Path to the result folder where the output file with the platform and labeled parts will be saved |
| Output MatAMX file name | – Name of the output file for the platform with the labeled parts |
| Close Magics when finishes | – If this check box is selected, Magics will close after the script has been executed without error messages. The script checks whether the new output file exists. |
| Save individual STL files | – If this check box is activated, individual STL files for each part are saved on the platform. For this purpose, a new STL subfolder is created inside the predefined result folder.

This functionality is intended to avoid having to open complete platforms when, for example, the position of a particular part is needed.

The names of the parts get the label content added as a prefix, which simplifies traceability. |

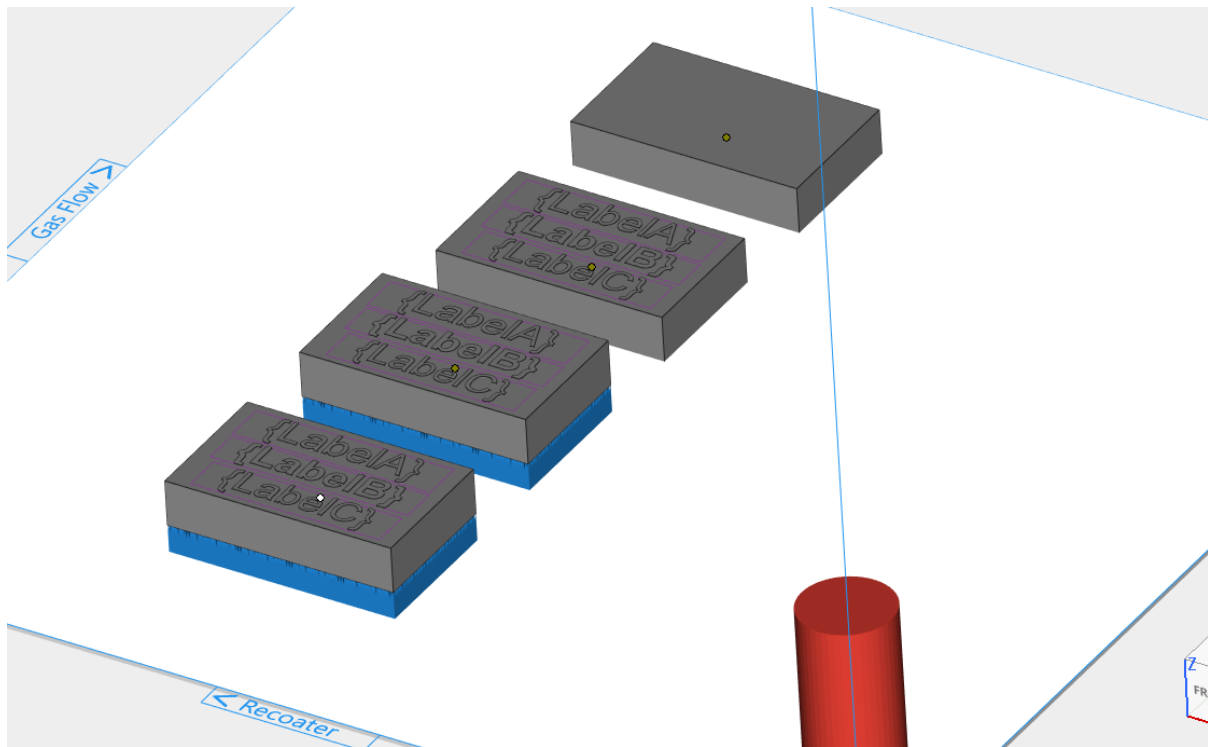
4 Example

This chapter describes how to use the "Auto Label" function by means of an example.

4.1. Demo Platform

On a platform were placed 4 cuboids:

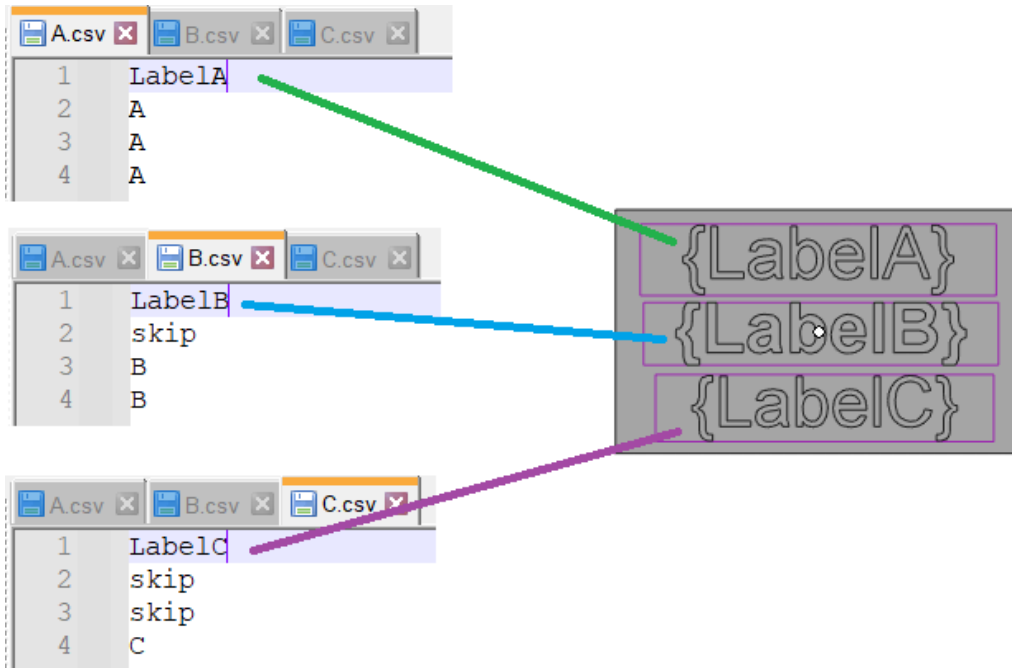
- The three lower 3 cuboids each have three label plannings arranged one above the other on the top surface of the cuboids.
- Each of the three label plannings on a top surface has its own text templates ({LabelA}, {LabelB}, {LabelC}).
- The two lower cuboids also have a support structure.



4.2. csv files with label contents

For the three label plans to be correctly supplied with content, three files must be prepared with corresponding content. In this example, three lists were generated with the Excel software and saved as .csv files.

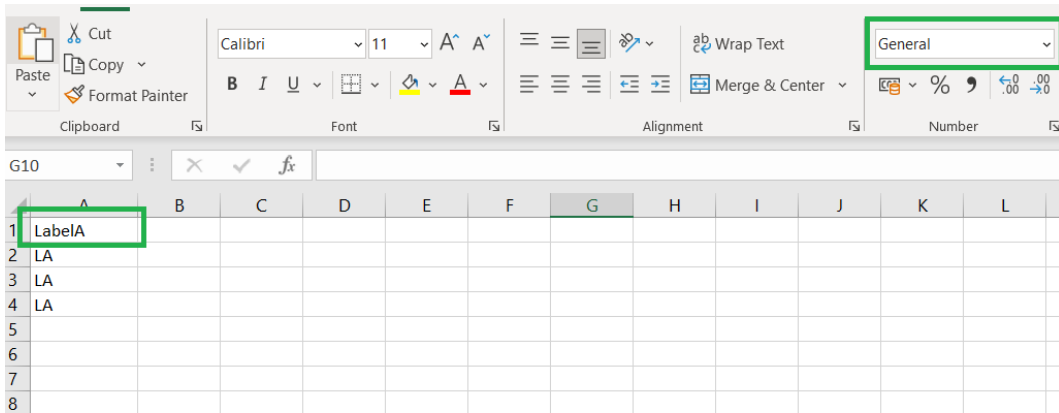
This example also shows the "skip" feature, which prevents the creation of a label content to a part:



4.3. xlsx files with label contents

The approach is the same as for the csv files. The first line must match the text of the text template without curly brackets.

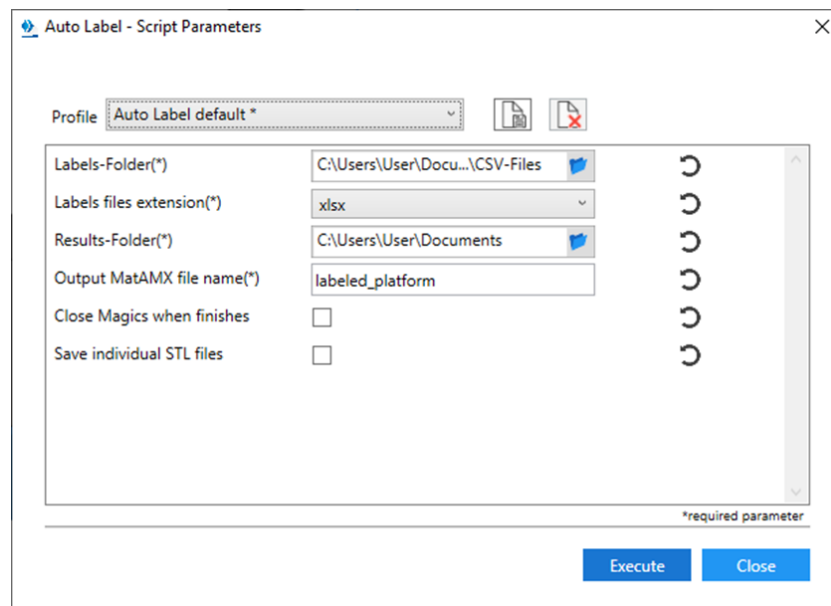
Please note that the supported cell formats are "General", "Text" and "Number". Formulas are not supported:



4.4. Parameter

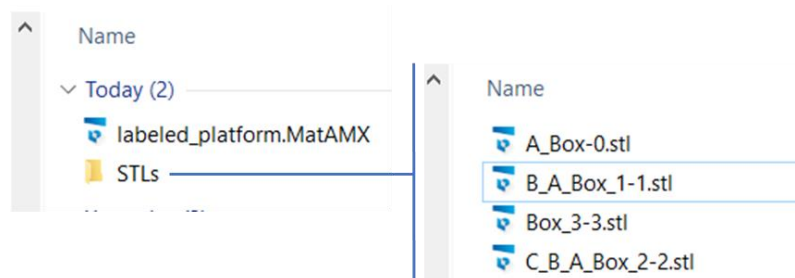
The following settings were made in the "Script Parameters" dialog:

- The label contents to be applied are stored in the folder "Documents".
- The label contents are saved as .csv files (ALL .csv files in the folder "Documents" are used!).
- The result is to be stored in the folder "Documents".
- The labeled platform shall be named "labeled_platform".
- Magics should not be closed after the execution of "Auto Label".
- Each labeled part should also be saved into a separate STL file.



4.5. Results

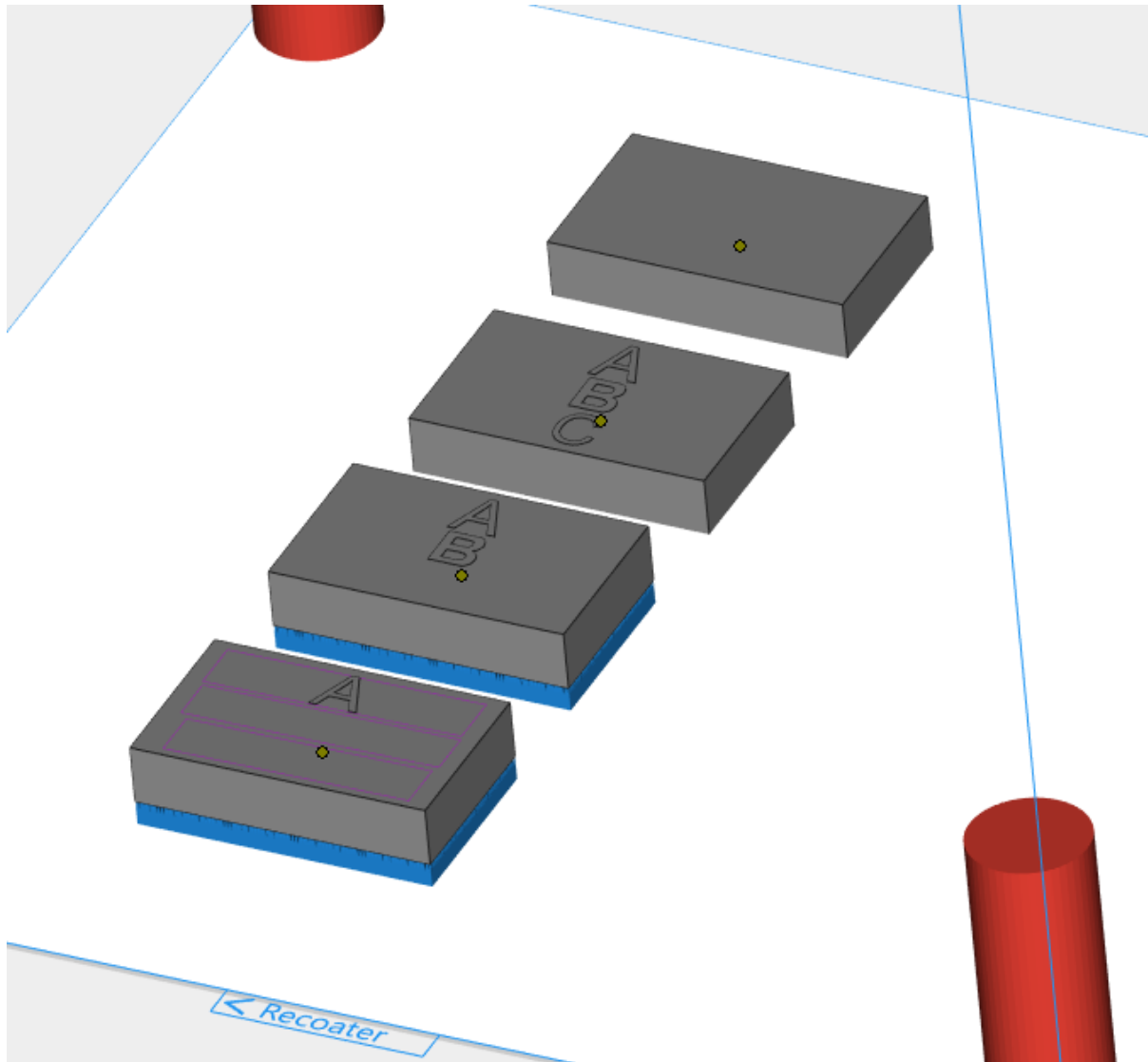
In the folder "Documents" the output file "labeled_platform.matamx" is stored, which contains the platform with the labeled parts. Furthermore, the STL files for each part in the subfolder STLs:



Note that the names of the saved STL files have been changed by adding the text from the applied labels to the part name as a prefix.

4.6. Labeled Platform (matamx output file)

The output file contains the platform with the labeled parts. According to the "Skip" command NO labeling has been applied to some parts.:



Please note that the supports are adopted when the label contents are applied! Make sure that the functionality of the supports is not impaired by the applied label content and the modified part surface.



5 Known Issues

This chapter describes known problems of the "Auto Label" function.

Currently there are no known issues.

6 Contact and Technical Support

We want you to have a smooth user experience when working with the Materialise Magics Automation Module. If you do encounter any error, please always try to save your work, and restart your system first.

In urgent cases you can contact our Technical Support for Maintenance Customers via e-mail.

Contact e-mails:

Worldwide: software.support@materialise.be

Korea: software.support@materialise.co.kr

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Germany: software.support@materialise.de

UK: software.support@materialise.co.uk

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