



# 3D-Printing

To produce gorgeous objects with the 3D printer on the 3rd floor, you need to install a  [slicer](#) on your desktop or laptop. The recommended slicer is [cura](#).<sup>1)</sup>

There is no card reader and no wlan on the printer, either. So files are communicated exclusively via the network.

## Install cura

### Linux:

Cura is probably natively available in the repo of your distro. Alternatively, install the  [ApplImage](#) of the latest release [from github](#).

### MS Windows and MacOS:

Download the installer of the latest release [from github](#).

## Cura plugins

It is recommended to install some plugins in cura: Click on 'Marketplace' on the top right of cura's main window.

- wait about two minutes for cura to assemble the catalogue of plugins
- select:
  1. 'OctoPrintConnection' - necessary to talk to the printer via network
  2. 'Printjob Naming' - to prefix your job file with your name
  3. plugins to import native 3D model files from your favourite CAD suite:
    - 'Inventor integration'
    - 'Solidworks integration'
    - 'Freecad integration'
    - 'Blender integration'
  4. 'Settings Guide' - provides more verbose pop-up help

Configure the printjob naming plugin to put your name in front of the job name:

- cura → Extensions → Custom\_Printjob\_Naming → set\_name\_options
- Prefix: [YourName]
- Enable prefix and postfix: [



]

- Add '\_' between jobname parts: [



- Sanitise jobname parts: [

]



]

## Configure the default printer in cura

1. Settings → Printer → Add\_Printer...
2. click 'Add a non-networked-printer'
3. scroll down to 'Custom'
4. choose 'Custom FFF printer'
5. change the printer name to something more specific. E.g.: 'Leapfrog'
6. click the button 'Add' on the lower right
7. in the dialogue 'Machine Settings', tab 'Printer':
  1. Print Settings (left column)
    - X (width) = **180.0 mm**
    - Y (depth) = **240.0 mm**
    - Z (height) = **160.0 mm**
    - Build plate Shape = Rectangular

- Origin at center: [ ]
- Heated bed: [



]

- Heated build volume: [ ]
- G-code flavor = Marlin
- - Start G-code: (no change, keep the default)

## 2. Printhead Settings

- X min = -66
- Y min = -52
- X max = 66
- Y max = 90
- Gantry height = **2.0 mm**
- Number of extruders = 1
- Apply Extruder offsets to GCode: [



]

- End G-code: (no change, keep the default)

8. In tab 'Extruder 1' of the 'Machine Settings':

- Nozzle size = 0.4 mm
- Compatible material diameter = **1.75 mm**
- Nozzle offset X = 0.0 mm
- Nozzle offset y = 0.0 mm
- Cooling Fan number = 0
- G-Code: no changes, keep the default.

To revisit this dialogue later, go to: Settings → Printer → Manage\_Printers...

## Cura profile

1. download:

cura-settings\_leapfrog\_11april2022c.curaprofile

2. Import the profile to cura:

- settings → printer → manage\_printer..

- choose 'Profiles' in left tab → button 'Import'
- the imported profile should appear under “Custom profiles”
- select the imported profile in the list
- click the button 'activate' to actually use the profile for the next slicing. Alternatively, you can choose the profile from the drop-down menu at the top of the 'Print settings' dialogue.

## Archive of cura profiles

[n/a: Access denied]

<sup>1)</sup>

If you don't like cura, feel free to pioneer an alternative like [Slic3r](#), [PrusaSlicer](#) or [SuperSlicer](#).

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