# Customizable LEGO compatible Text Bricks

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VIEW IN BROWSER

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## Summary

This is a customizer for creating LEGO® compatible rectangular bricks with text engraved on the sides.

Toys & Games > Building Toys

Tags: customizable lego openscad thingiverse legocompatible

### Customizable LEGO compatible Text Bricks

This is a customizer for creating LEGO® compatible rectangular bricks with text engraved on the sides (all 4 sides). You can of course also use it to create bricks without any text. It can create bricks as small as 1x1x1 (plate height) or as large as 48x48x18 (6 normal bricks high).

There is also a key fob remix of this thing.

## Getting A Good Fit

All dimensions are accurate, but the customizer has a tolerance parameter so the dimensions can be adjusted to your printer/filament so that they have a perfect fit with one another and with real LEGO® blocks. Real LEGO® blocks have a horizontal play of 0.2 mm so that they can be connected to one another. So a 4x2 brick is 31.8x15.8 mm and a 6x2 brick is 47.8x15.8 mm, for example. The tolerance is in addition to the required 0.2 mm play and is subtracted from both sides of all walls so that a tolerance of 0.05 would make the previously mentioned bricks 31.7x15.7 mm and 47.7x15.7 mm. If your printed bricks are too tight you'll probably want to set this to a non-zero value to loosen the fit. For complete control over the fit, the customizer also has a section that allows you to override each of the LEGO dimensions individually.

The customizer, by default, creates LEGO-sized bricks only. The large nameplate brick in the photos was scaled up in the slicer to 200% and then printed. I had adjusted the text depth parameter in the customizer to half the default so that when it was scaled up it was at the desired depth of 0.8 mm. This depth is recommended so that there are no extreme overhangs.

Note that since creating the bricks in the photographs I have added a parameter to specify the spacing between letters and by default they will be spaced a little farther apart than on the bricks in the photos.

## Using the Customizer

This download includes a .SCAD file to create customized 3D printable models. By setting some simple parameters from drop-down boxes and sliders you can easily create your own customized model.

You will have to first install OpenSCAD (free software) on your own computer to process the .SCAD file and present the customizer parameters. Download OpenSCAD and get started. For further details on running the customizer see DrLex's instructions on How to Run Customizer on Your Own Computer.

### Setting Fonts in the Customizer

You can use any font available on your system. The OpenSCAD "Help=>Font List" menu item shows what fonts are available. If you specify a font that is not available it will use the OpenSCAD default font, which is Liberation Sans. Most of the fonts listed in the drop-down selection for this thing can be downloaded from the Google Fonts repository.

The default font is available at: https://fonts.google.com/specimen/Roboto

To make a font available to OpenSCAD you have three options:

- Install the font to the system. The procedure for installing system fonts is dependent on what operating system and what version you are using (Ubuntu Linux 16.01, Ubuntu Linux 20.04, Windows 7, Windows 10, Mac OS 9, Mac OS X, etc. ). If you don't know how to install a font on your system then search the web for instructions.
- Add the font file to your fonts folder, creating the folder if it doesn't already exist. On Linux this would be something like "/home/YOURUSERNAME/.fonts" and on Windows 10 it would be something like "C:/Users/YOURUSERNAME/.fonts".
- Add the font to the folder that contains the OpenSCAD file that you want to use the fonts. You will also have to add to the OpenSCAD file the 'use <fontname.ttf>' command substituting the filename of the font for "fontname.ttf".

Close OpenSCAD if it was open while you were making the font available and then relaunch it after you have installed/added the font.

For additional details, see the Using Fonts and Styles section on the following page:
https://en.m.wikibooks.org/wiki/OpenSCAD_User_Manual/Text

#### Alternative to Installing OpenSCAD on Your Computer

This model is also published on the Thingiverse web site and the Thingiverse online customizer may be used to create your personalized models.
Beware that the Thingiverse web site has been an unstable disaster since March 2020 and they weren't even processing their customizer jobs for over 2 years (July 10, 2020 to August 4, 2022). If you try to use it and your job is still sitting in the queue after several minutes, that probably means they stopped creating the customizer models again and your job is never going to be processed. It might be only a temporary stoppage so you could hope for the best and try again later.

## Printing Recommendations

If a brick will be connected to other bricks you don't want it to have an elephant's foot. I usually have the initial layer horizontal expansion parameter in Cura set to -0.2 mm to prevent elephant's feet..

For the best looking brick, you'll want the top surface of the brick part of the model to be a single continuous print from one corner to the other instead of going around the areas where the studs will be added in later

layers. To accomplish this in Cura, set the Skin Expand Distance to 2.4 or larger.

## This remix is based on

**Customizable LEGO compatible Text Bricks**
by Lyl3

## Model files

**legotextbricks-customizableany.stl**

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**legotextbrick-v2p1.scad**

Find source .stl files on Thingiverse.com

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