

Parametric detachable bin with modular, parametric mounting system

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Summary

Parametric detachable bin with modular, parametric mounting system All I wanted, was a little waste bin to attach to...

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[bin](#) [openscad](#) [system](#) [mountingbracket](#) [configurable](#)

Parametric detachable bin with modular, parametric mounting system

All I wanted, was a little waste bin to attach to my printer table...I found many accessoires for Ikea lack tables here - and none of them was usable for my not-ikea-lack table ;-) I wanted a two part design with mount plates and detachable bin, so that the size of the bin is more ore less independent of the size of the table leg.

And here it is:

There are two types of bins, cornered, and round. There are mounting plates, which can be printed either one by one, or two of them connected, which helps mounting. You can choose between three different mounting

systems: cable ties, metric ISO-bolts or powerstrips. When you choose powerstrips or bolts as mounting option, the plates can of course be mounted on any flat surface, not only on legs of tables ;-) Once you configured the right plate(s) size, you can keep the settings and configure bins of many different sizes, all of them will be attachable to the same plate(s). The mounting plate(s) has to be attached to the table leg (or any flat surface), the detachable bin hangs on the plate(s).

Almost every possible attribute is configurable, so that you can adapt the system exactly to your needs.

Usage:

Print at least one bin and one plate. Attention: the plate uses parameters from the bin section and vice versa, so when using the customizer, first set all the parameters, then render one object after the other and don't mess with the parameters, until the whole set is rendered, otherwise the bin and the base(s) won't fit!

For ease of mounting, I'd recommend to use the connected plates, but if you want to use less filament, you can print only one plate, just keep an eye on the hook vertical thickness, because these two arms will have to carry all of the weight.

I like the round shaped bin more, although it uses a lot more filament to print.

Important: The hooks on the plates have a small piece of support built in, which has to be broken away with pliers after printing. Print the plates at a layer height of 0.2 mm or lower and double check in the slicer, that the supports don't get lost in slicing, otherwise decrease layer height some more. At least with PrusaSlicer when slicing with 0.3 mm, the supports somehow just disappear.

STL-Files

The provided STLs are for the Ikea Lack Table and offer a small bin (49 mm x 100 mm) and a large one (120 mm x 100 mm). The filenames should be more or less self explanatory, you will see, when you open a couple of the files in your slicer. The Set-Files contain a bin and two connected corresponding mounting plates for printing all at once.

The dimensions of the cable tie channels are: 6 mm width, 3 mm Thickness.

Work in progress: I will add more STL-Files, the openscad code needs a cleanup, maybe a partial redesign and there may come more mounting plates, perhaps for round table legs.

And some pictures will come, too, of course.

U P D A T E s:

01.08.2021:

Rounded plates for round table legs are here! Just enter the diameter of the table leg and choose "round" as plate shape. Note: when using round plates, the plate thickness specifies the minimal thickness, depending on width and leg diameter, the plate can get thicker at the edges!

I'm not too happy with the rounded plates though because they have to be printed with supports and can only be mounted with cable ties (yet<').

Don't try to print them with powerstrips or bolts setting, they will not be usable. Also double check the different size and with settings. Beware: the STLs of the rounded plate are for demonstration only, these plates will NOT match with the bins from the other STL files!

Other changes:

Moved the "rounded bin" from 'What-to-render' section to the bin-section as an attribute (bin shape).

Changed wording to english language... ('cornered' to 'square' and 'rounded' to 'round')

02.08.2021

Bugfixes round plates

Bugfix tie channel offset: channel size was increasing, when increasing offset

Print Settings

Printer Brand:

Prusa

Printer:

I3 MK3S

Rafts:

No

Supports:

Only for the plate when using powerstrip mount

Resolution:

200 for plates, bin can be printed with 300

Infill: 15%

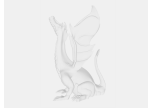
Post-Printing

Break away the small supports from the hooks of the plate(s).

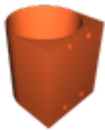
Model files



lack_set_49x10_roundedbin_2connectedplates_cablet.stl



detachablebinsystem.scad



lack_2plates_10x12_roundedbin.stl



lack_plate_m3bolts.stl



lack_2plates_49x10_roundedbin.stl



lack_2plates_49x10_corneredbin.stl



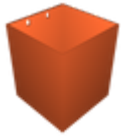
lack_set_49x10_corneredbin_2connectedplates_cable.stl



lack_2connetctedplates_10x12_powerwstrip.stl



lack_2connectedplates_49x10_cabletie.stl



lack_2plates_10x12_corneredbin.stl



lack_plate_cabletie.stl



lack_plate_powerstrip.stl



lack_plate10x12.stl



lack2connectedplates_10x12_m3bolts.stl



lack_set_10x12_roundedbin_2connectedplates_cabletie.stl



lack_2connectedplates_10x12_cabletie.stl



lack_set_10x12_corneredbin_2connectedplates_cable.stl

[Find source .stl files on Thingiverse.com](https://www.thingiverse.com)

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