

Professional Poker Chips 3D printed



Ever since I taught my children to play poker, we love to spend evenings playing

The next step to the candy was the generic chips, just colored plastic pieces and I was asked to try making them with the 3D printer.

I looked at many projects found online but none satisfied me, so I decided to make them by redesigning the form from scratch

It had to have the following characteristics:

1. Being modular, that is, allowing you to always use the same parts to create different values
2. To be totally customizable in colors and writings
3. To be easy to assemble and possibly without the use of glue
4. To be as similar as possible to real casinos, in size and weight
5. To be printable in different parts with colors because I have a printer with only one nozzle and it only prints one color at a time

In particular:

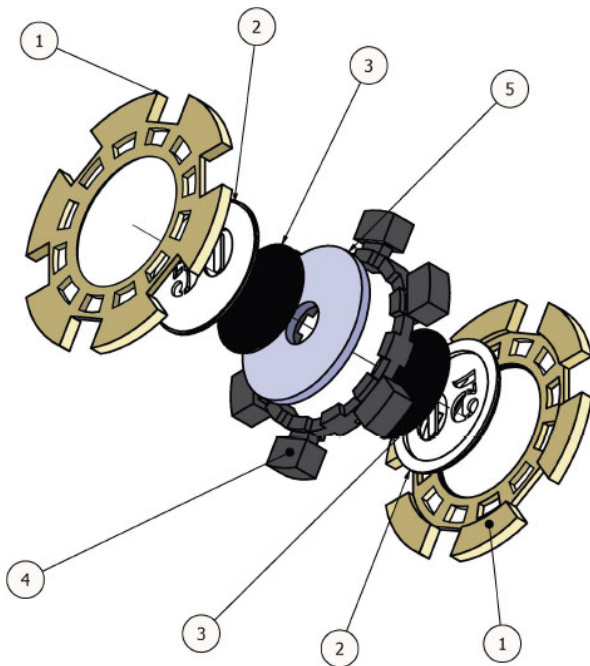
1. Be modular: I created the different parts of the chip so as to print as few different pieces as possible. The complete chip consists of 5 different parts of which 4 are 3D printable. The value of the chip fits into the half chip and then everything fits again in the crown and the same is done on the opposite side.
2. all the single pieces can be printed in different colors, even the background and the font of the chip value can be customized as long as certain conditions are respected (eg the font must be able to be printable without separate parts, I used the font " Stencil ")
3. For the editing I used a feature that is not normally appreciated in FDM prints, that is the signs of the various layers. I did a lot of tests to be able to get the right joints so that they hold up without the need for glue even if it is possible to put a drop of glue on the ends of the two half chips to make them hold better
4. The chips have the same dimensions as those of the casinos and as regards the weight I have foreseen the insertion, when assembling, of an iron washer to obtain the necessary weight. The authentic ones have a weight that can vary between 8 and 10.50 g each. With the iron washer these weigh about 9.2 grams.
5. Being able to print with only one color at a time meant that the chip was made up of many parts each with only one color.

Printing instructions

- Part 1 (Half chips) must be printed with the surface that will be outside the chip on the printing surface
- Part 2 (Value) must be printed with the surface that will be outside the chip on the print bed. You will need a little support to better print the tooth that acts as a seal. Remember to remove this support well even if it almost always remains attached to the print bed
- Part 4 (Corona) must be printed with the various cubes in contact with the printing surface, ie horizontally. The supports will be necessary, also here remember to remove them well otherwise part 1 will not be able to fit well with part 4

Assembly instructions: I followed this sequence:

- I inserted the background of the value in the value and then the whole in the half chip, helping them, if necessary, with an object (plier) to press the parts well in their place, obtaining part A. Part A is made up of parts 1, 2, 3.
Nothing prevents you from using other editing sequences.
- Part A I set it in part 4 (Crown). Here, too, I helped myself to get the various joints in place. In particular, I used a pliers to fit the various cubes of the crown with the external part, you can tighten tightly so nothing happens.
- The maximum size of the washer is 24mm, I used one of 23.80mm and thickness max 1.70mm, I used 1.55mm
- In the part thus obtained I inserted the iron washer and I closed the whole with another part A



PARTS LIST		
PART NUMBER	ELEMENT	QTÀ
1	Half chips	2
2	Value	2
3	Background value	2
4	Corona	1
5	Central iron washer	1

Remarks:

I used a SUNLU PLA + in various colors and I saw that the tolerances of the pieces for each color were different, so on some pieces it is necessary to adjust the joints by hand. Nothing prevents you from redoing the pieces by varying the dimensions of the joints very little, especially in part 1.

That's all.