Hey! This thing is still a Work in Progress. Files, instructions, and other stuff might change!

DIY Dremel CNC #1 design and parts (Arduino, aluminum profiles, 3D printed parts)

by NikodemBartnik Jul 15, 2018

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Summary
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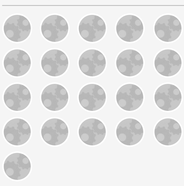

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Summary

DIY CNC machine is a very popular project on the internet, a lot of people made different versions but I want to show you how I made my own CNC machine with a Dremel as a spindle. Personally, I think that CNC machine is kind of an upgrade of a 3D printer, you can create stronger parts made out of wood or metal but it also has some limitations (that's a topic for another video). To learn more check out my video about this:
https://youtu.be/TXEHunJmjcg
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That's just the first part, there will be more so make sure to subscribe!
Also keep in mind that this is work in progress so I may change some models or something in the design. If you have any questions feel free to ask me!
Below you can find parts that I will use to build this machine.

Ender 3 3D printer for $159: https://goo.gl/cVitRn

What we will need, amount in ():
-Dremel tool
-Aluminium Profiles 20x20x600mm (5)
-12mm rod (about 2 meters)
-500mm long trapezoidal lead screw 8mm (2): https://goo.gl/7oGeV8
-300mm long trapezoidal lead screw 8mm (2): https://goo.gl/qh1jEH
-12mm linear bearing (12): https://goo.gl/v6P5DC
-5 to 8mm coupler (5): https://goo.gl/as5cJ2
-T nut (50): https://goo.gl/gtL3Z8
-Screws: https://goo.gl/2USpv5

-Arduino+CNC shield+stepper drivers: https://goo.gl/CXwEkG
-Power supply: https://goo.gl/r9vfmF
-Stepper motors (4): https://goo.gl/LS9UAd
-Relay: https://goo.gl/mgPM9M
-Limit switches: https://goo.gl/Xc2964
-AC IEC socket with switch: https://goo.gl/9NJkKh

In the first part of my DIY Dremel CNC, I will show you how my design looks like (if you have any idea on how to make it better or you see some problems please let me know :)) I will also show you all the parts that I will use in next parts of this short series. In the next two or three videos, we will assemble this machine and hopefully mill some stuff.

I always wanted to have one of those fancy CNC machines that can mill metals. It's cool and it gives you so many possibilities for next projects! I already have few ideas for projects with a CNC machine :)

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Printer Brand:

Creality

Printer:

CR-10 Mini

Rafts:

No

Supports:

Yes

Resolution:

0.25mm

Infill:

40% - 70%

Notes:

For some of the parts, you need to use supports. Keep infill high to make it stronger you can also use more perimeters. Layer height: 0.25mm to print it faster and make it stronger too.

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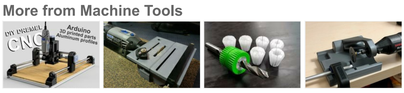

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