



Two-way ratchet stubby screwdriver

 **Luke's 3D**

[VIEW IN BROWSER](#)

updated 15. 2. 2024 | published 15. 2. 2024

Summary

More clicky goodness

[Hobby & Makers](#) > [Tools](#)

Tags: [hexagonal](#) [diy](#) [magnet](#) [bit](#) [storage](#) [hex](#) [screw](#)
[drive](#) [precision](#) [screwdriver](#) [bits](#) [work](#) [reverse](#) [ratchet](#)
[ratcheting](#) [stubby](#) [bitsholder](#) [litt](#) [precisionscrewdriver](#)
[bitholders](#) [twoway](#) [bitdriver](#)

Having a big success with my [Ratchet toothpaste tube squeezer](#) I though I'd dip my toes in something more complex. And what else should I tinker with if not with Ratchet screwdrivers.

So I did. And it was a challenge, let me tell you. Therefore I am quite proud to give you this short description:

- two-way ratcheting mechanism
- uses standard 4x28 mm hex bits
- magnetic shaft - uses one 5 x 2 mm magnet
- no supports needed
- ergonomic handle
- storage for 6 bits inside the body of the screwdriver

You can choose between ratchet of single spoke, two spokes or 4 spokes. I think single spoke is enough but the higher torque you need the higher number of spokes recommended. Equally more spokes means more torque needed to make the ratchet ratchet, I hope it makes sense.

Printing instructions

The only advice is to use **brim on Main body and Bit stopper** and to **use PETG**. Other than that everything is pre-oriented and no supports are required, 2 perimeters at 15% infill should be fine.

Assembly

1. Assembly starts with Ratchet top and Ratchet bottom parts. The ratchet bottom part has two notches that align with ratchet top part. Push the two into each other connecting the two.
2. Take the Ratchet pusher part and slide it over the ratchet top. Make sure it spins freely on the ratchet part.
3. Grab the Ratchet reverser so the wedges are on top and bottom, pinch it and place it around the reverser making it aligned with the grooves on the sides of the reverser. The Ratchet reverser should rotate around Ratchet pusher freely once in place.
4. Main body time. You might have noticed the two semicircles in the Main body and Ratchet pusher. Align these two and gently drop the ratchet into the body of the screwdriver. You will need to play with the position of Ratchet reverser to get it in.
5. Now take the shaft and insert a 5 mm magnet in shaft cavity. It should be press fit, if its too loose use a dab of superglue to hold it in.
6. Insert the shaft into the ratchet mechanism.
7. Screw the Top cover on the top. The mechanism is now complete. Test the ratchet direction, it should change once you rotate the Ratchet reverser. You should feel distinct bump signaling the ratchet is in the end position.
8. Okay, let's move onto bit storage. Take Bit holder and place Bit stopper around it.
9. Screw on Bit bottom plunger
10. Push this subassembly into the Main body and screw in the "collar" Bit stopper.

Done!

You can lube the ratchet mechanism a bit to get smoother operation.

I also included .STEP file if you want to remix my design, remove the logo, etc., I am looking forward to your makes and remixes!

If you like this project press the like button, have a look at my other [projects](#) or have a look at my [exclusive models](#) and support me by joining my club!

Cheers!

Luke

Model files



Multiple prepared parts

7 files



two-way-ratchet-stubby-screwdriver-all-parts-single... .3mf



two-way-ratchet-stubby-screwdriver-all-parts-2-spoke .3mf



two-way-ratchet-stubby-screwdriver-all-parts-4-spoke .3mf



two-way-ratchet-stubby-screwdriver-accent-color-par... .3mf



two-way-ratchet-stubby-screwdriver-parts-in-main-co... .3mf



two-way-ratchet-stubby-screwdriver-parts-in-main-co... .3mf



two-way-ratchet-stubby-screwdriver-parts-in-main-co... .3mf



Ratchets

6 files



two-way-ratchet-stubby-screwdriver-ratchet-top-sing... .3mf



two-way-ratchet-stubby-screwdriver-ratchet-bottom-s... .3mf



two-way-ratchet-stubby-screwdriver-ratchet-top-2-sp... .3mf



two-way-ratchet-stubby-screwdriver-ratchet-bottom-2... .3mf



two-way-ratchet-stubby-screwdriver-ratchet-top-4-sp... .3mf



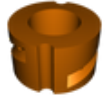
two-way-ratchet-stubby-screwdriver-ratchet-bottom-4... .3mf



two-way-ratchet-stubby-screwdriver-bit-bottom-plung... .3mf



two-way-ratchet-stubby-screwdriver-bit-stopper.3mf



two-way-ratchet-stubby-screwdriver-ratchet-pusher.3mf



two-way-ratchet-stubby-screwdriver-ratchet-reverser.3mf



two-way-ratchet-stubby-screwdriver-main-body.3mf



two-way-ratchet-stubby-screwdriver-shaft.3mf



two-way-ratchet-stubby-screwdriver-bit-holder.3mf



two-way-ratchet-stubby-screwdriver-top-cover.3mf



ratchet-screwdriver.step

License

This work is licensed under a
[Creative Commons \(4.0 International License\)](https://creativecommons.org/licenses/by-nc/4.0/)



Attribution-NonCommercial

- ✗ | Sharing without ATTRIBUTION
- ✓ | Remix Culture allowed
- ✗ | Commercial Use
- ✗ | Free Cultural Works
- ✗ | Meets Open Definition