

Lift Off Hinges for Voron Trident or V2

BadMouth

VIEW IN BROWSER

updated 25. 1. 2024 | published 25. 1. 2024

Summary

Hinges used to attach a single piece of 1/8" acrylic as a front door. The door can also be lifted off completely.

3D Printers > Voron Parts & Upgrades

Tags: hinges trident voron 2020hinges voronv2

THERE IS NO STEP FILE BECAUSE IT WAS MADE IN TINKERCAD.

EDIT: Added more sizes for different thickness of acrylic and foam gaskets. I have not tested these other sizes.

I wanted a full front door without the extra visual weight of a frame made of extrusion.

These are designed for 1/8" acrylic and 1mm foam tape. If you have a different thickness acrylic or 3mm foam tape, the frame mount will need extended.

These hinges are styled to match the profile of the stock panel retention clips. I am hacking stuff together in Tinkercad, so parts of the original Voron panel retention clips and hinges were used in creating these.

I plan to make matching latches in the future, but for now am using these panel latches:

https://www.printables.com/model/172368-voron-24-filament-latch-or-any-2020-extrusion

Hardware required (for set of two hinges):

(2) M3x12 socket head screw

(2) M3 T-nuts (roll or slide-in preferred)

(4) M5x12 button head screw

(4) M5 Nuts

(2) 50mm long 5mm diameter rod (if you make one 45mm instead, the door will be easier to reinstall because you can get the taller one on first instead of having to align both simultaneously)

(2) strips of VHB tape or thin rubber (to even out any pressure points when tightening hinges)

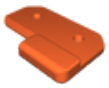
Instructions:

These are just hinges and you probably don't need instructions, but just in case here are some. The instructions might not be perfect.

1. Insert 5mm rod into the frame side bases. The fit will not be very snug. The screw holding the base to the frame will tighten against the rod later, making it tight.
2. Attach the bases to the frame using M3 screws and t-nuts. Leave them loose enough that the base can still slide to be re-positioned Positioning is up to you.
3. Temporarily attach the acrylic sheet to the front of the printer using panel clips or some other means. This is just to get the alignment correct. If the acrylic is bowed, put the convex side inward so it is flattened when the sides are secured.
4. Slide the door side of the hinges onto the bases and adjust to a position of your liking.
5. Tighten the bases to the frame.
6. Mark door side mounting hole position on the acrylic by whatever means you like. Do not press hard on the acrylic when doing so.
7. Watch a tutorial on drilling acrylic if you have not done so before.
8. Remove the acrylic and drill the mounting holes.
9. Ensure that the hinges and retainers are flat and smooth. We do not want any pressure points cracking the acrylic.
10. Align the hinges with the holes in the acrylic and insert the M5 screws
11. Trim the rubber or VHB tape to the size of the retainer including cutting out holes for the mounting screws. If using VHB tape apply it

to the retainer, but do not peel the backing from the side that will be facing the acrylic.
12. Insert the M5 nuts into the retainers.
13. FINGER TIGHTEN the M5 screws to the retainers, securing the acrylic between them.
14. Test fit the door on the printer to make sure that the retainer has clearance and alignment is good. If not using VHB tape, this and the next step can be skipped.
15. Remove one retainer, peel the backing off the VHB and then reattach to the acrylic
16. Secure the M5 screws to the retainer. Careful not to overtighten.
17. Repeat steps 15 & 16 for the other hinge.

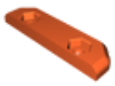
Model files



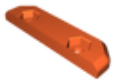
lohinge_door_side.stl



lohinge_frame_side.stl



lohinge_retainer.stl



lohinge_retainer_extra_clearance.stl



4mm_lohinge_frame_side.stl



5mm_lohinge_frame_side.stl



6mm_lohinge_frame_side.stl



7mm_lohinge_frame_side.stl



8mm_lohinge_frame_side.stl

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