

Voron0 Double PSU - High Voltage motors

d djeZo888

[VIEW IN BROWSER](#)

updated 9. 12. 2023 | published 9. 12. 2023

Summary

Enables you to install two power supply units (PSUs) under the deck. Skirts modified for fan installation.

[3D Printers](#) > [Voron Parts & Upgrades](#)

Tags: [psu](#) [dual](#) [double](#) [voltage](#) [voron](#) [high](#)
[powersupplyunit](#) [highvoltage](#) [48v](#) [v0](#) [voron0](#) [v02](#)
[v02r1](#) [doublepsu](#) [dualpsu](#)

When you try high voltage steppers, you never want to do 24V again!

This mod allows you to install two PSUs (24V and 48V/55V) under the deck and allows you to also apply [my belted Z mod](#).

BOM:

- 1x [LOF225 24V PSU](#)
- 1x [LOF225 48V PSU](#) or [LOF225 55V PSU](#) (if you plan to power with high voltage only X/Y, then it is enough [LOF120 48V PSU](#) - no fan is required)
- 2x [12V Fan 4015 with at least 13CFM](#) (haven't tested it, but you may get away with [good enough 4010](#) so it doesn't stick out so much by the sides) Beware: fans are always on if you connect them directly to

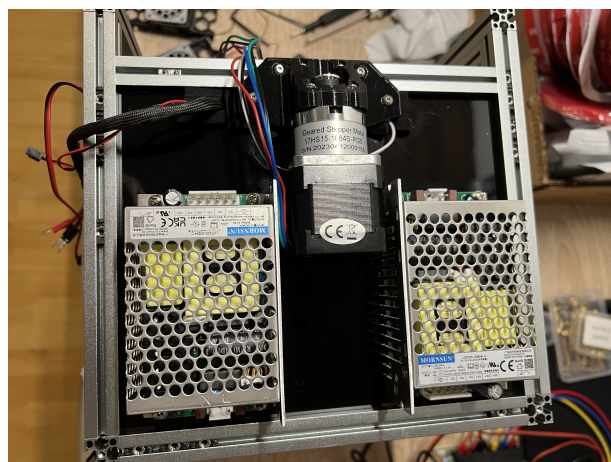
the PSU; if you wish to rather control them, there is **alternative great 24V fan with about 15CFM; another good 12V 4010 fan**

- 8x Standard Voron Heatinserts
- 8x M3x20 BHCS
- 2x JST-PH 2.0mm header housing and corresponding terminals (if connecting fans to PSUs, otherwise probably JST-XH 2.54mm)
- 2x 6-pin and 2x 3-pin **JST-VH 3.96mm header housing** and corresponding **terminals** (when going for LOF120 high voltage PSU, you will need 4-pin instead of 6-pin housing)
- Cables of your choice for power input to PSU and PSU to motherboard connections
- Some WAGO connectors to split the cables
- VHB tape

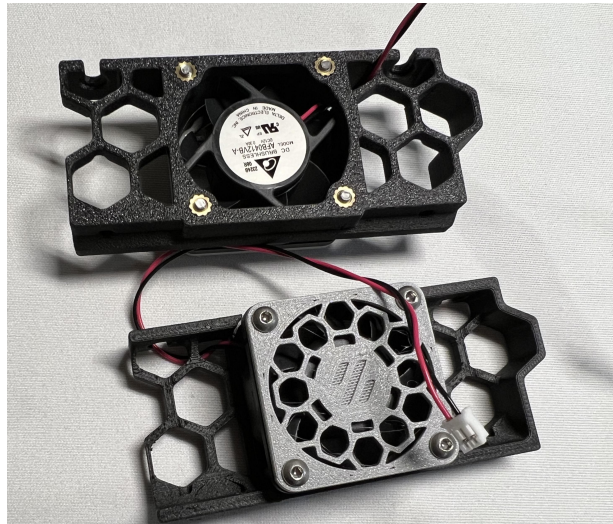
Assembly instructions



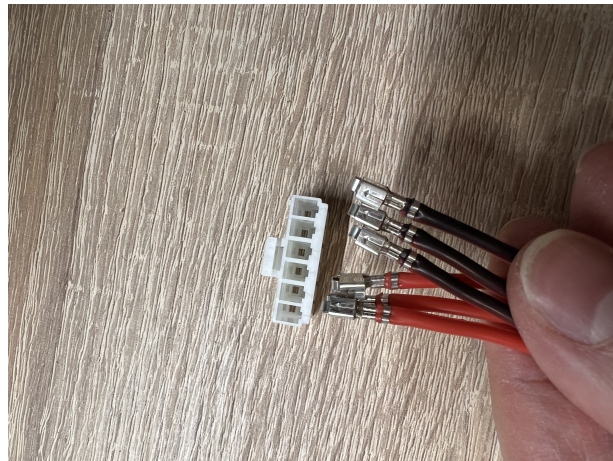
Use VHB to tape down both PSUs as visible in the picture. Do not use too much tape - it is going to be harder to remove PSU later if you wish so. Mind the orientation of PSUs - **check documentation** regarding position of the fans.



If connecting fans to PSU: put JST PH connectors on fan cables - for polarity, refer to the previously mentioned documentation.



Assemble power cables - you can use standard popular crimpers to crimp JST-VH terminals.



Install both fans into previously printed skirt models.

Assemble as per official Voron 0.2 documentation.

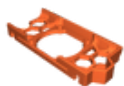


Regarding ground wire: these PSUs do not have explicit connector with ground, but do have screw-in holes on metal chassis - use these to connect both PSUs to the ground wire.

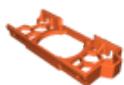
Bottom panel

Either manually grind off some material from bottom panel or print and use fixed one.

Model files



v0doublepsu-sideskirtright-a-fan.stl



v0doublepsu-sideskirtleft-b-fan.stl



av0doublepsu-fan-grill_x2.stl

☐ Print two instances



optionalv0doublepsu-bottompanel.stl

☐ Either print it or grind off some material from existing panel

License ©



This work is licensed under a
[Creative Commons \(International License\)](#)

Public Domain

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