

Pestle Rotational Bowden



Alchemical-3D

[VIEW IN BROWSER](#)

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Summary

Rotating X-Gantry mounted bowden system for shortest PTFE possible.

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Pestle Rotational Bowden This extruder mounts on the X-gantry and is capable of rotating. This new mounting location cuts approximately 50% of your bowden length off, and also rotates to further take bend radius out of the PTFE pathing, the end result is a bowden length of -50-60% compared to traditional mounting solutions. Currently working on various brackets to adapt this system to many more printers from Enders to Prusa's devices.

EX: Ender 3 Bowden length will be under 200mm total distance.

For support or to follow the other projects, please join the Discord below or visit the Github. <https://discord.gg/aE49DW2xXe> https://github.com/Alchemical-3D/BETA_Pestle_Rotational_Bowden/blob/main/README.md

Do not forget to share your makes!

PRINT SETTINGS

Materials - ABS/ASA (Note: The parts are designed accounting for shrinkage of ASA & ABS, other filament types may or may not work.)

Layer Height - 0.20

Extrusion Width - Forced 0.4mm

Infil Percentage - 40%+

Infil Type - Grid, Honeycomb, Triangle, or Cubic

Top/Bottom Wall Count - 4

Perimeter Count - 4

B.O.M.

KB-3D and Alchemical-3D have collaborated to create configurable kits to buy everything you need for Pestle. If you do not have or do not want to chase down all of the parts, you can get it all here with a few clicks!

Configurable Kit for **Pestle Bowden** through KB-3D

Note: This is the bare minimum, it is wise to have spare screws/heatsets etc.)

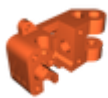
1. QTY - 7 - **M3x5x4 Heatsets** (Be sure to get angled exterior texture, not straight)
2. QTY - 2 - **Thrust Bearing 5mm ID**
3. QTY - 1 - M3x16 SHCS (Socket Head Cap Screw)
4. QTY - 1 - M3x20 SHCS (Socket Head Cap Screw)

5. QTY - 2 - M3x30 SHCS (Socket Head Cap Screw)
6. QTY - 2 - M3x35 SHCS (Socket Head Cap Screw)
7. QTY - 3 - [PC4-M6 Bowden Connector](#)
8. QTY - 1 - [BondTech BMG Extruder Internals Kit](#) (Some clones have the correct components for this build internally)
9. QTY - 1 - [Nema 14 High Temp Stepper Motor](#)

Highly Recommended Items Below

1. QTY - 1 - Threadlocker (Loctite Blue or similar strength, its important to note that threadlockers WILL damage ASA/ABS if they come in contact, take care when applying thread lockers that it only gets on the metal assembly.)

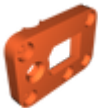
Model files



pestle-parts-main_body.stl



pestle-parts-lever.stl



pestle-parts-top_plate.stl



pestle-parts-motor_plate.stl



pestle-parts-rotation_brace.stl



pestle-parts-2020_extrusion_mount.stl



pestle-parts-3dfused_gantry_mount.stl



pestle-parts-creality-mount.stl

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