

Ender 3 BMG E3D V6 - Mosquito Direct Drive Extruder BLTouch Lightweight Mount



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Summary

Ender 3 BMG E3D V6 Direct Drive Extruder Lightweight Mount Updates:
2021-03-27 (v13) - Split fan shroud mounting arm...

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Ender 3 BMG E3D V6 Direct Drive Extruder Lightweight Mount

Updates:

- 2021-07-24 - The endstop filament runout sensor combo is redesigned with a better reverse bowden and wire path. (Ender 3 Limit Switch Bracket DD Sensor v9)

- 2021-03-27 (v13) - Split fan shroud mounting arm from main body to facilitate fan shroud replacement and nozzle changes. Requires a M3 10mm-15mm screw.
- 2020-12-31 - Redesigned fan shroud and zip tie mounts. I removed the gantry clip because it provided no benefit to stability or wiring. Fan shroud mount should now only require supports on the extreme end with the screw hole. I have included a screen shot of how I have support blockers configured in my slicer.
- NB. The previous versions had a mistake in the fan shroud position.
- 2020-12-29 - Added support for Slice Engineering Mosquito hotend. The back plate was thickened, the fan shroud was lowered 0.5mm. The hotend wiring and filament runout sensor was relocated to the front of the gantry.
- 2020-10-23 - Added .step file

Parts:

- (4) M3 x 6 mm Screw
- (1) M3 x 8 mm Screw
- (1) M3 x 10 mm Screw
- (1) M3 x 20 mm Screw
- (1) M3 Washer
- (1) PTFE Tube
- (n) Zip Ties
- Genuine E3D V6 Full - Direct - 24V - Hotend
- BMG (or clone) Left Handed Dual Drive Extruder
- Short Body Nema 17 Bipolar Stepper Motor
- Blower Fan 24V 5015
- 2.0mm Straight Single Row Breakaway Male Pin Header
- 2.0mm JST-PH JST Connector Kit

Optional:

- Polyethylene Spiral Wire Wrap Tube PC Manage Cable 6mm
- BLTouch v3.1
- Smart Filament Sensor 1.75mm

Notes:

Depending on your setup, you may lose 10mm of Y build volume.

- Z Probe Position: X = -37.0, Y = 18.5
- Receiving screw holes are sized to be tapped using an appropriate M3 bit, but will hold a M3 screw if filed or drilled out to the right size.

- The fan shroud is a modified part from the Prusa i3 MK3S, and can be substituted with the original Prusa part (with appropriate Square M3 Nut).
- When using the Mosquito Groovemount adapter, the upper and lower parts are split to allow for printing without supports.

Preparation:

Print part with the large flat side down, and with support for the various external screw holes.

Assembly:

Guide coming soon... (hopefully...)

Firmware updates:

Thermistor to V6 cartridge style (#5)

- E-Steps to 415
- Home Y to -10

Additional information:

This is a good opportunity to ensure that the printer is square and adjusted properly.

V slot rollers should be held tight, but loose enough to roll in place when moved by hand.

Z screw and nut should be adjusted properly to where the nut is secure but allows some horizontal movement.

Slicer settings:

Retraction: 0.8mm

- Lift Z: 0.6mm
- Retraction speed: 35mm/s
- Minimum travel after retraction: 1mm
- Maximum acceleration E: 1500mm/s²

Category: 3D Printer Parts

Model files



Ender_3_BMG_DD_Assembly_v13.f3z

8 files



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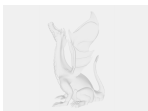
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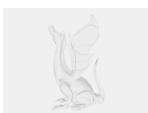
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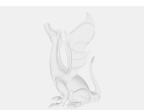
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mosquito_groovemount_lower.stl



mosquito_groovemount.step



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ender_3_bmg_dd_extruder_mount_rev2.step



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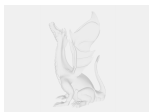
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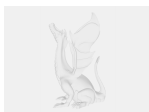
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ender_3_limit_switch_bracket_dd.stl



ender-3-limit-switch-bracket-dd-sensor-v9.f3d



ender-3-limit-switch-bracket-dd-sensor-v9.stl

[Find source .stl files on Thingiverse.com](#)

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