



## Ender 5 Plus Direct Drive - Phaetus Dragon ST Hot End



Revolver

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### Summary

Ender 5 Plus Direct Drive to suit Phaetus Dragon ST Hot End. Includes Blender 3D working file. This has been tested.

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Tags: [directdrive](#) [crealityender5](#) [ender5plus](#) [pheatus](#)  
[pheatusdragon](#)

I created this simple direct drive out of frustration with the substandard quality of my Creality Ender 5 plus. This is to be used in conjunction with the new hot end, the "Phaetus Dragon ST. I made it so it fits easily using most of the Creality existing hardware on your stock printer. (Not compatible with V6 hot end, due to the supporting backplate)

\*\*\*The Rear Backing plate has been update to provide more space to the bolt head holding the gantry wheel, making the bracket to sit flush with the metal plate.\*\*\*

///NEW: 2 New E3D V6 brackets addon RELEASE! 08/03/23/////

You can use this Direct Drive with E3D V6 Hotend now with the new brackets.

This model has been tested for 6 months on the Ender 5 Plus, this version is working stable and sustaining high-end temperatures. The aim was to make these “STL” files easy to “print and play” so to speak, without the complications of lots of files.

I have also added my working file (Blender 3D)

#Ender5Plus #Ender5Plus\_Direct\_Drive #Pheatatus\_Dragon\_ST

## **Hardware**

Most of the hardware used is M3, M2 & M4

Use **Existing Hardware** for the top extruder bracket

Top Extruder Bracket x 1

Hot End Back-plate x 1

Hot End Front-plate with Fan x 1

LHS Fan Bracket x 1

Fan Duct x 1

BL Touch Bracket x 1 (existing hardware)

M3x30mm x 4 Screws Long

M3 Nuts x 4

M3 Washers x 2

## **Hotend Rear Plate**

2 x M3x12m Existing

2 x M3 Washers (Must use)

## **Bowden Tube**

1 x White Bowden tube

LHS Fan Bracket

1 x M4x6m Screw (Short)

Fan (Existing) Creality Fan)

Fan duct (existing hardware)

## **BL Touch**

1 X BL Touch Bracket (vertical adjustable)

2 x M2 Screws (existing hardware)

2 X M2 Nuts

### **Extras**

Extruder Stepper Motor Extension Cable

### **Installation**

The installation is pretty straightforward. The extruder\*\* bracket uses existing hardware and it all lines up. Use the “white” Bowden tube as I found the hole diameter is bigger and allows the filament to move with less friction. With the Phaetus Dragon hot end, you don’t get heat creep well, at least not extreme enough to create any complications.

The Brackets for the Phaetus Dragon ST Hot End

I redesigned the back plate to provide stability at the nozzle position. We don’t want any movement here especially when the hot end heats up and does day prints.

Front Fan Bracket: I had to shift the fan location upwards to get it out of the way in order to stop it from hitting the metal frame of the 3d printer. Use a heating-iron to push the screws in if you need to. The walls at the bottom of the front fan can come out very thin, which the model might need adjustment. (or just use, blue-tac)

Fan location

Originally the fan was on the right-hand side (RHS) however, it was cumbersome with the heating elements and the fan didn’t have much room and it was hitting the belt clip. Hence, I moved the fan to the left-hand side.

### **Extruder**

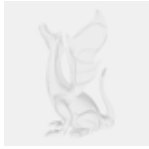
\*You will need an extender cable.

\*\*NOTE: You will need to swap the direction of the extruder rotation. The way I achieved this was by inverting (reversing) the cable pins to the opposite side.

#crealityender5plus #ender3 #ender5plus

Created by [vanguard3d.com.au](http://vanguard3d.com.au)

## This remix is based on



**None**

## Model files



**new-v3-direct-drive-extruder-bracket.stl**

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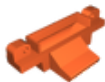
**new-v3-fan-bracket-a.stl**

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**lhs-fan-braket.stl**

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**blower-fan-v3.stl**

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**adj-bl-touch-exp.stl**

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**new-v3-direct-drive.blend**

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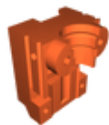
**phaetus-dragon-st-hot-end-model.stl**

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**rear-filament-guide.stl**

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**backing-bracket-updated-b.stl**

☐ Updated for better fitment

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**new-e3d-v6-front-bracket-for-4010-fan.stl**

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**new-e3d-v6-mini-bracket-no-fan.stl**

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

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