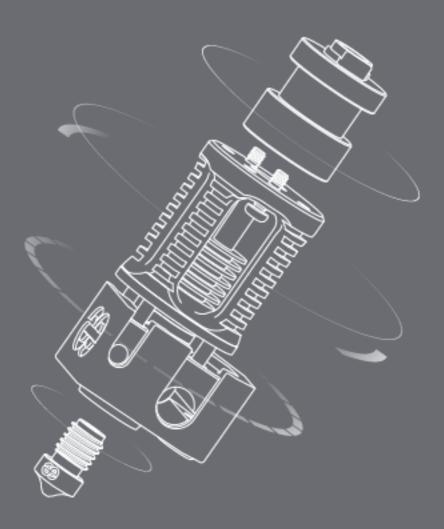


# Dragon Hotend ST Instructions



Please read and keep this manual carefully before using our products properly

# **Product Appearance**

#### **Born For Enthusiasts**



Thank you for buying Phaetus' Dragon ST Hotend.

### **Product Features**

Well-designed compact structure Superior thermal isolation of heatbreak

Reinforced rigid structure High temperature resistance

# Compatible Filaments

Compatible with all filaments, including: PLA, ABS, PETG, TPU, PP, PC, Nylon, PEEK, PEI, and composite materials containing abrasive additives such as carbon fiber, steel, wood, boron carbide, tungsten and phosphorescent pigment

# **Specifications**

Product Name: Dragon ST

Product Size: 62.2mm\*26mm\*22.3mm

Nozzle Diameter: Can be matched arbitrarily

Color: Blue / Black

Product Net Weight: 50g

#### Parts & Accessories



M2.5 x 8 Screw \*4pcs (for Voron VO)

M1.4 x 12 Screw \*2pcs

H1.27 / H1.5 / H2.0 Hexagon bar \*1pcs

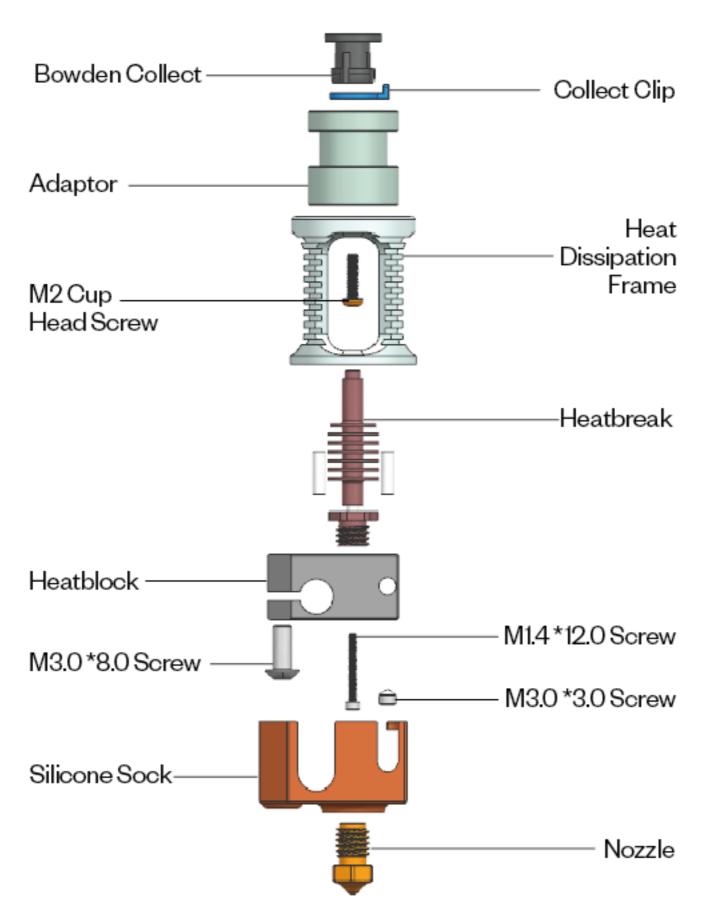
H8.0 Open - ended wrench \*1pcs

Heat conducting silicone grease \*1pcs

Brass sleeve \*1pcs

Collect clip \*1pcs

# **Product Exploded View**



## **Product Exploded View**

- Heatbreak with an ultra-thin wall thickness as thin as 0.1mm, realizing an excellent thermal insulation.
- Increased rigid support structure guarantee the heatbreak remaining intact under the impact of external force.
- Integral frame rigid structure makes nozzle replacement more convenient without grasping the heatblock
- The inner hole roughness of nozzle and heatbreak RaO.4, which allow a more smooth movement of filament, resulting a higher resolution prints.
- Standard hotend and high flow hotend have the same overall dimension, which realize a zero barrier for interchangeability.
- The hotend is mainly composed of copper alloy material which has the advantage of faster heating and better heat dissipation.
- Standard all metal kit, with overall high temperature resistance up to 500 °C.

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# Phætus®

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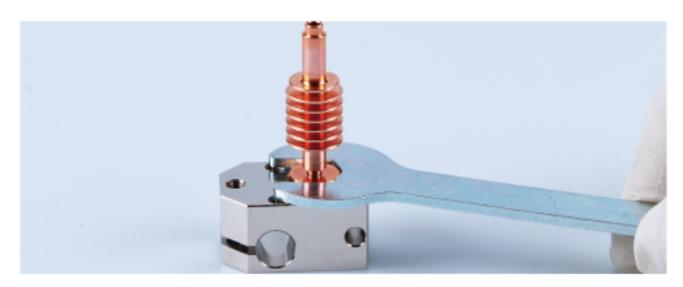
This user guide helps you get started using Dragon Hotend And discover all the amazing things it can do on a 3D printer

# **Assembly Steps**

1. Embed the M2.0\*6 hex socket screw from the inner 2 holes of the heat dissipation frame, align with the 2 threaded holes of the adaptor, and tighten them with a 2.0 hexgon bar.

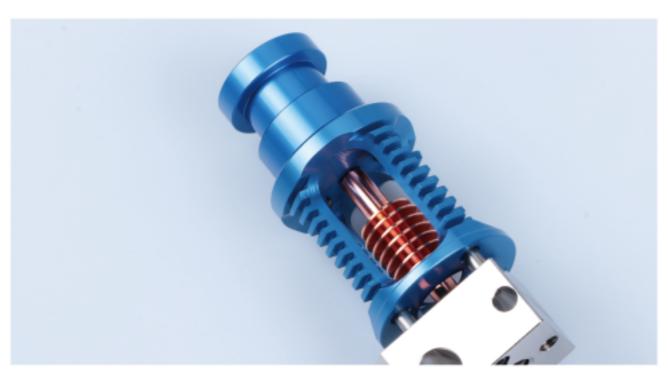


2. Screw the heatbreak into side A of the heatblock with the 7.8mm open – ended wrench using strength about 4.5nm.



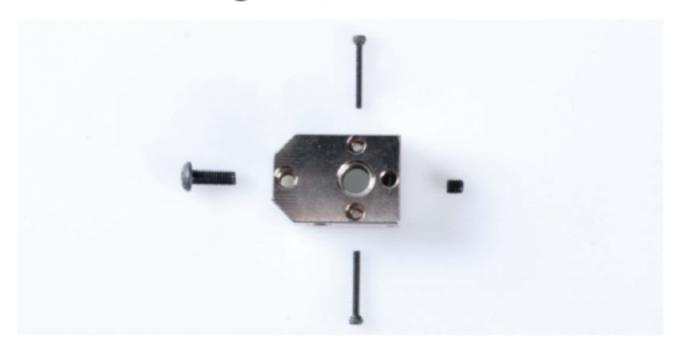
3. Carefully align the 4 supporting tubes of the heatsink with the 4 holes on the side A of the heatblock, press them tightly. Meanwhile, please note that the top of the heatbreak should be completely close to the holes on the top of the heatsink. If not properly aligned, heatbreak could be damaged during hot – tightening.





4. Screw the 3 screws as shown in the figure below into the corresponding screw holes with the appropriate hexagon bar on side B of the heatblock (4 holes).

Attention: Excessive tightening of the M1.4\*12 screw may damage the thread, or lead to screw fracture and hex nut sliding teeth, etc.





5. Cover the heatblock with the silicone sock. Insert the bowden collect into the top of the adaptor, then insert the collect clip between the bowden collect and the adaptor to fix the bowden collect.



6. If you are using glass ball type thermocouple, put the thermocouple into the brass sleeve in the attachment first (the brass sleeve is shown in the figure below), and the port should be sealed with the heat conducting silicone grease carried in the attachment, and then put it into the heatblock and lock them with the head screw.





# **Hot - Tightening**

- 1. Hot tightening is the last mechanical step before Dragon Hotend is ready! It is essential for the sealing of the nozzle and heatbreak to ensure that molten filaments do not leak out of the hotend during use.
- 2. Using the printer's control software (or LCD screen) to set the hotend's temperature to 285°C. Wait one minute after its temperature reaches 285°C to equalize the temperature of all components.
- 3. Gently tighten the nozzle while fixing the heatblock with a wrench, and finally tighten the nozzle with a smaller 7.0mm wrench. This will keep the nozzle close to the heatbreak and ensure that the hotend does not leak.
- 4. The tightening torque of the hot nozzle is about 2.5nm, which is about the pressure applied by one finger on the small wrench.

ATTENTION: Do not touch the hotend directly with your hands during heating and within a period of time after heating.



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