

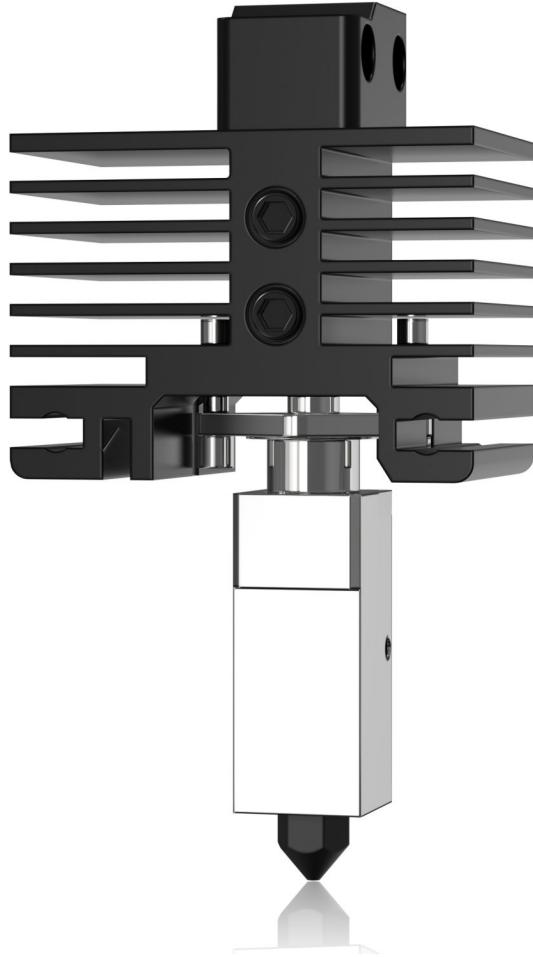
Moddefine 3D

Moddefine 3D, we are enthusiasts dedicated on modifying materials, structures and designs to make premium 3D printing parts with top performance, just like race car modification. M2 is our first upgrade hotend compatible with P1 serials printers, your 3D printing experience will be significantly improved with M2.

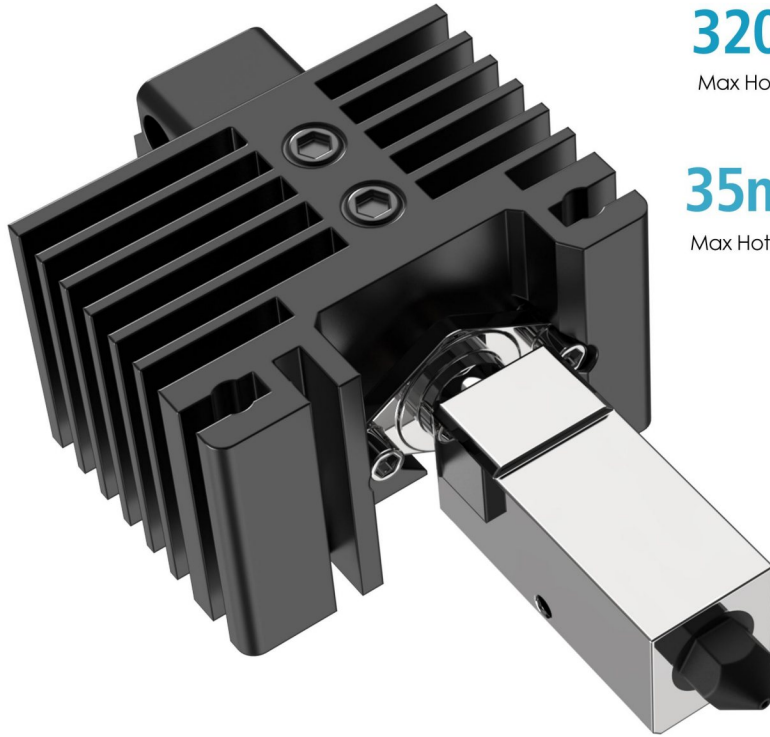
Modefine 3D

Upgrade High- Performance Hotend compatible P1 serials of 3D printers

All-Metal / bending resistance and cracking resistance / Better heat conduction and dissipation



Stronger Performance



320°C

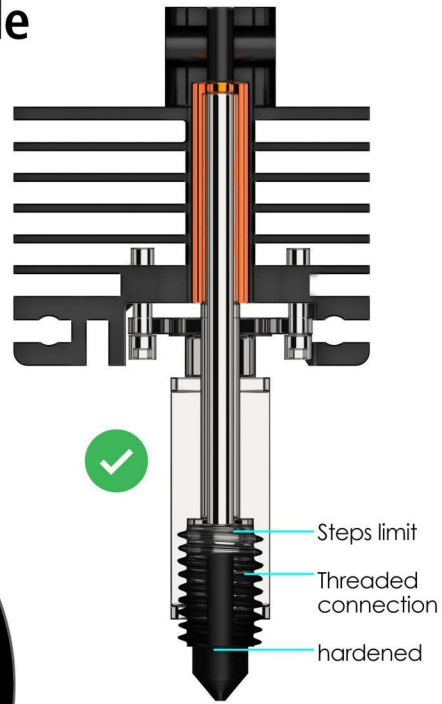
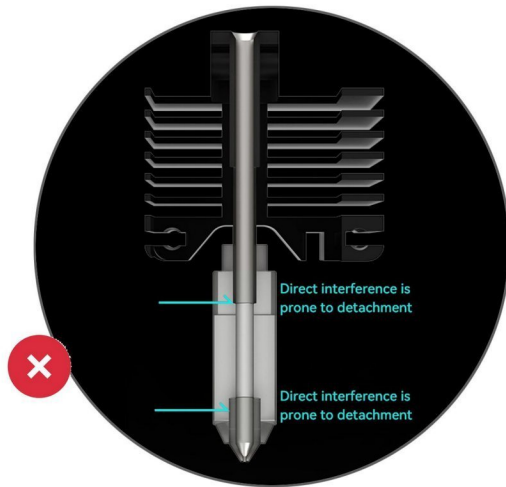
Max Hotend Temperature

35mm³/S

Max Hotend Flow

Throat tube and nozzle structure upgrade

There is a step limit on the bottom of throat tube, which can prevent throat tube drop off.



Heating block and nozzle connected with screw thread, nozzle keep touching with bottom steps of throat tube, fixed the nozzle loose issue and reduce material leakage.

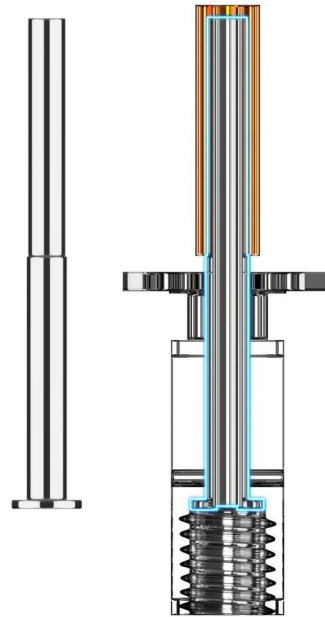


Nozzle structure upgrade

Heating block and nozzle connected with screw thread, nozzle keep touching with bottom steps of throat tube, fixed the nozzle loose issue and reduce material leakage.

Throat tube and heating block was designed as interference fit.

The heating block fit added limit step, which can fix loose and material leakage issue



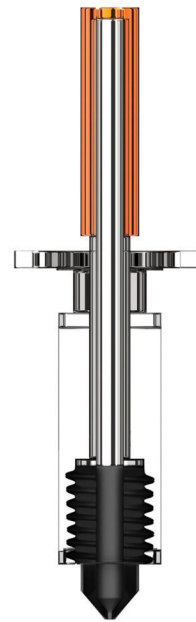


Nozzle Material Upgrade

The nozzle is made from quench hardened steel SKD11 (hardness HRC60+), can heat to 550°C, much more wear-resistant.

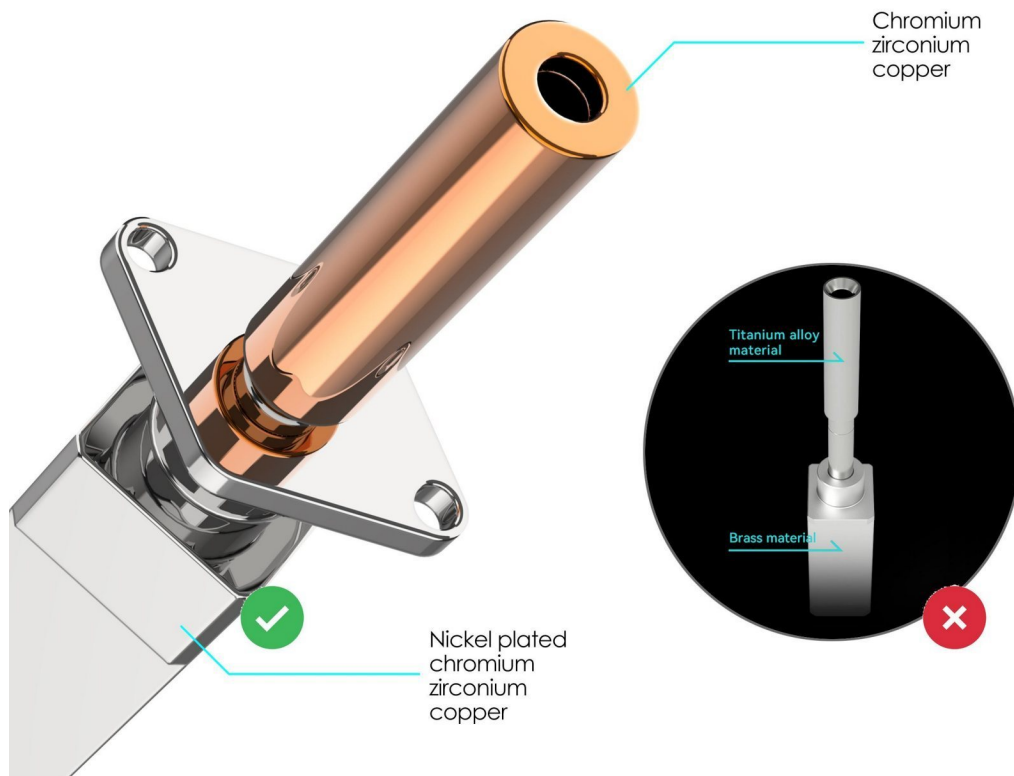
Throat tube and Nozzle interior wall roughness Ra 0.4

Reduce jam issue and improve printing quality.



Faster heat conduction and better heat dissipation

Heating block and titanium alloy tube upgraded with nickel plated chromium zirconium copper, makes heat conduction faster and better heat dissipation.



Titanium alloy screw fixation Upgrade

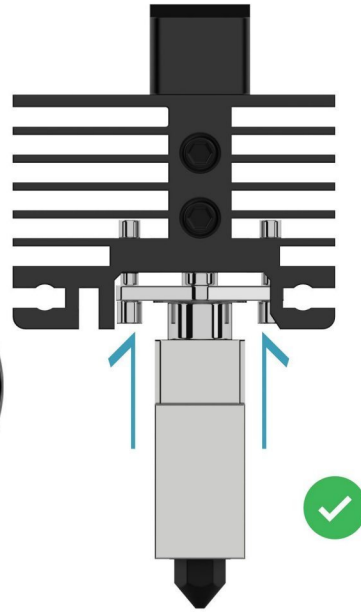
The heating block is connected with the radiator by two titanium alloy screws to avoid bending and cracking the throat tube during high-speed printing.



Official version
Easy to bend and crack



Upgrade version
Not easy to bend and crack

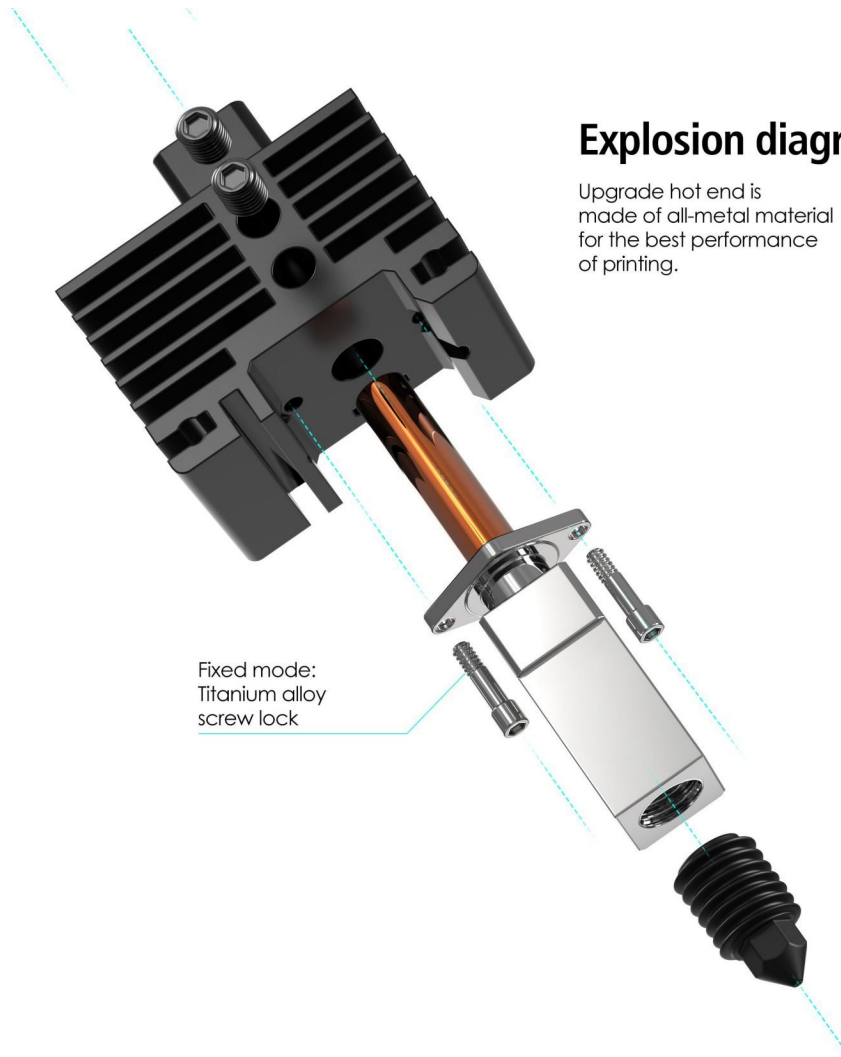


Top screw holds the throat tube

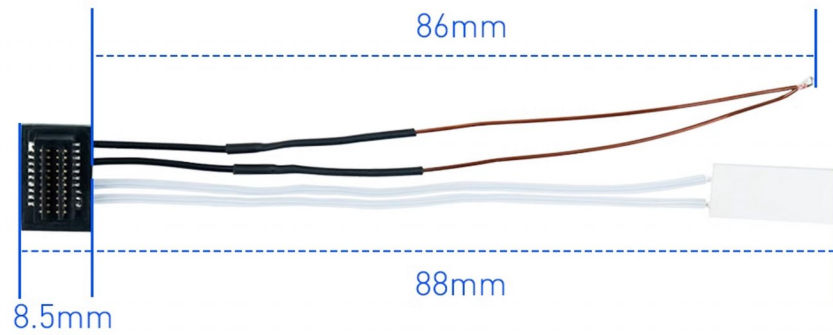
The radiator and the heat break are fixed by the top wire, the connection is stable, and can be removed and replaced to reduce the use cost.

Explosion diagram

Upgrade hot end is made of all-metal material for the best performance of printing.



Thermistor and Ceramic Heater



Technical parameters of ceramic heating element

Line length: 88mm
power: 48W
Heating element size: W6.6mm*L15mm*D1.3mm

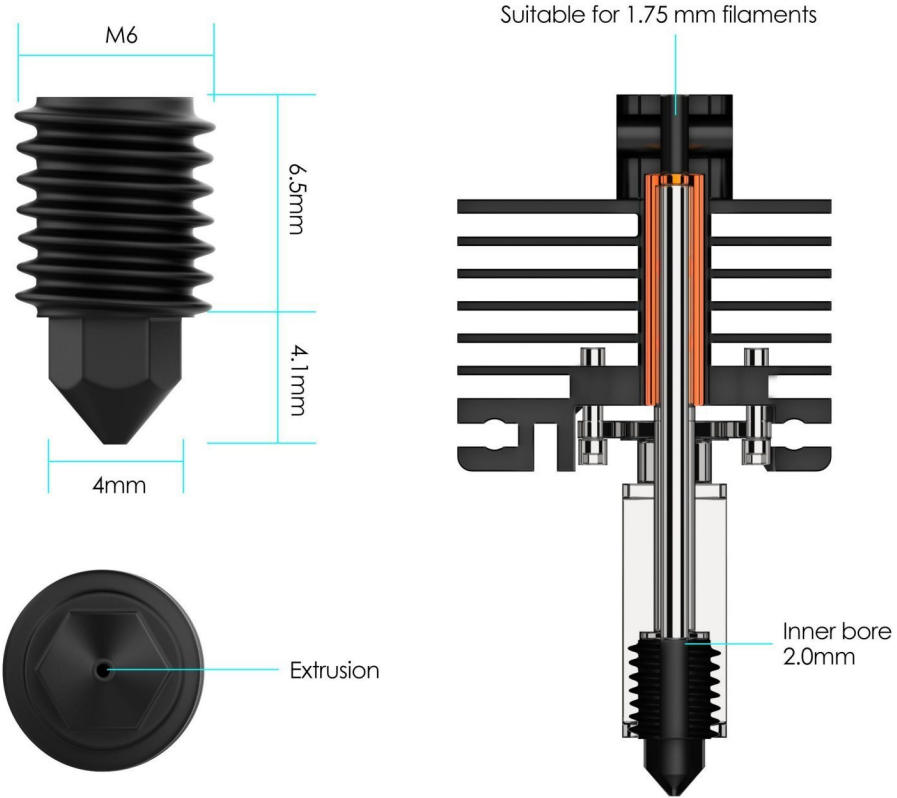
Technical parameters of thermistor

Line length: 86mm
Terminal socket: 8.5mm*13mm
Operation temperature: -10-300°C

Total length: 96.5mm
Overall materials: plastic, metal, ceramic, glass
Net weight: 2g

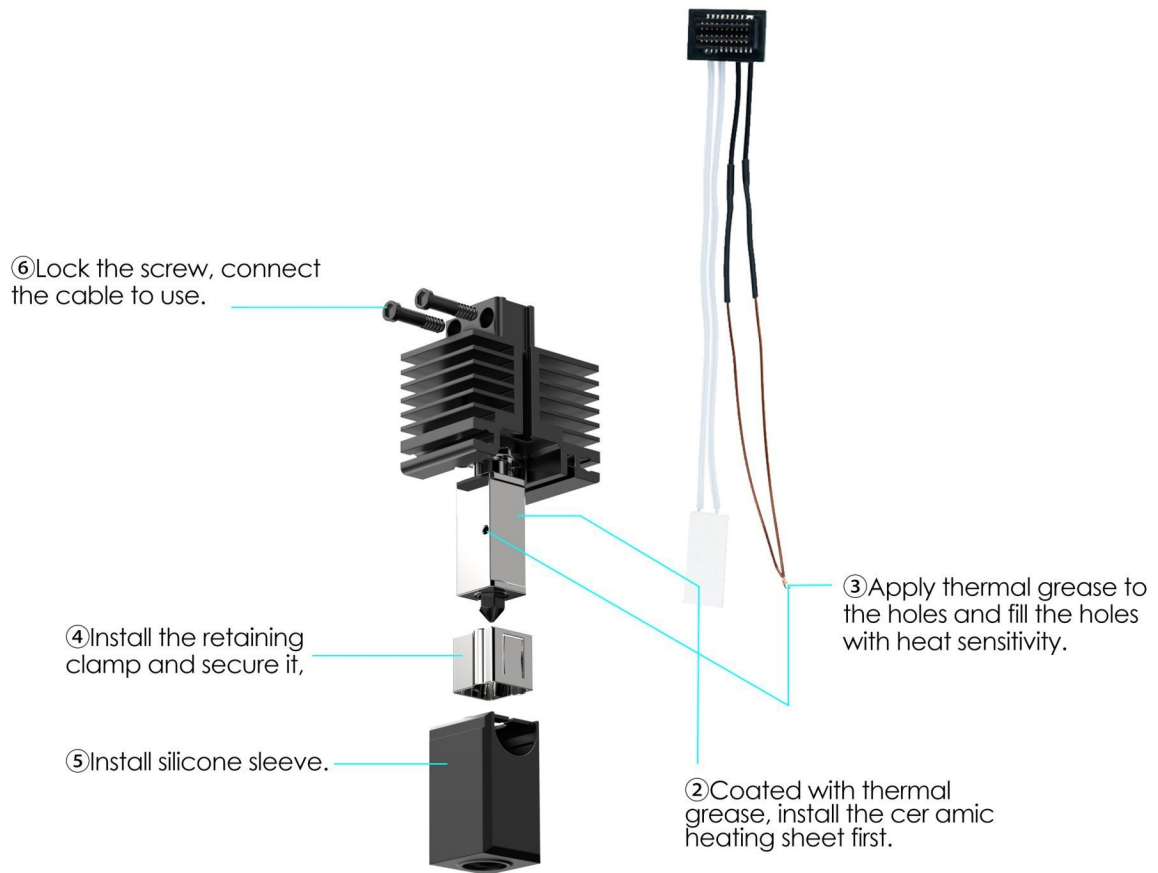


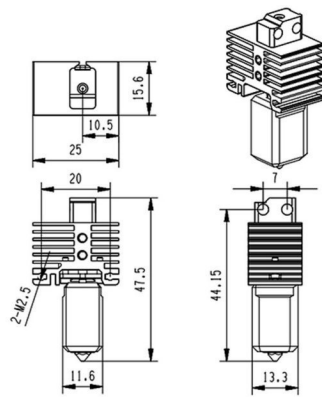
Hardened steel nozzle size



Detailed steps to install on the printer

① First remove the hot end of the original machine, remove the ceramic heating sheet, thermal sensitivity, fixing clip and silicone sleeve.





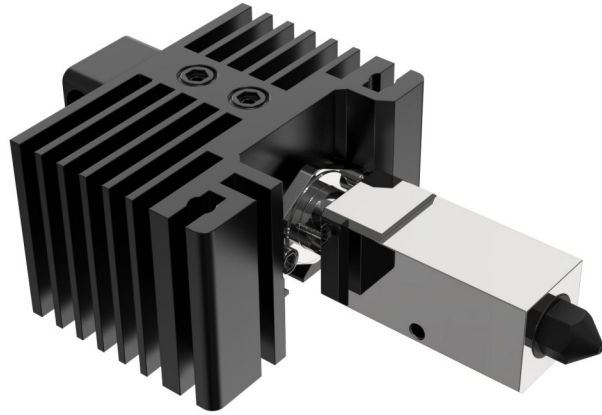
Dimensional drawing

The Modefine upgraded hotend is designed for Bambu printer models.

Specification parameter

| NO | Specification item | Specification definition |
|----|---|---|
| 1 | Net product weight | 18.2 g |
| 2 | Radiator material | Aluminium alloy |
| 3 | Throat tube material | Chromium-zirconium copper clad titanium alloy |
| 4 | Heating block material | Nickel chromium-zirconium plated copper |
| 5 | Nozzle material | Hardened steel SKD11, quenched, heating 550°C |
| 6 | Throat tube wall thickness 0.25mm, Throat tube insulation distance 1.2mm, Throat tube wall roughness Ra0.4, standard nozzle diameter 0.4mm. | |

Attachment list



Upgrade hot end *1pcs, 4mm Open end wrench *1pcs,
Thermal grease *1pcs, 1.5 Hex handle *1pcs,
Spare top screws *2pcs, Fixing clip *1pcs,
Silicone sleeve *1pcs.

