# Installation instructions

Filament feed wheel gear inner diameter: OMG-V2 black type Diameter: 8.8mm OMG-V2 S silver type Diameter: 8mm
The wire feed wheel gear is arc-shaped. The pressing pressure is different-it will change the diameter of the gear. The short-distance feeding filament and the long-distance feeding, the filament material-softness and hardness, the current change of the stepper motor, etc. Need to be calibrated.
Motor step value mm/s E-step
The step angle of the motor is 0.9 1.8 degrees, the stepping motor drives 16 32 64 subdivision, the gear reduction ratio is 1:3. The diameter of the filament feeding wheel is 8. Different influences on step value E-step

Parameters can be calculated by Repetier-Host software or other calculation tools
https://blog.prusaprinters.org/calculator_3416/

Extruder step correction
Set the feeding or returning length: 10mm-20mm is recommended, you can click the feeding 2 or more times in a row, and then measure the average length.
Direct extrusion (short-distance extrusion of filament) After some motherboards need to heat the print head, the feeding starts to work. Measurement calibration recommendation-measure after the extruder is separated from the hot end.
Do not use nozzles for measurement.

Re-flash the firmware and squeeze out the measuring filament again. It can be repeated many times until it is accurate.

# Installation instructions

Suggest:
1.8 step angle 16 subdivision OMG V2-S 385 E-step
0.9 step angle 16 subdivision OMG V2-S 745 E-step

Withdrawal tolerance detection: Click on the feeding and returning repeatedly to check the distance and position of the filament.

Retraction Speed: Recommended 50-100mm/s Distance: Long-distance feeding filament 6mm, direct extrusion 4mm (recommended value)

Example reference

The diameter of the wire feeding gear is 11mm, so the circumference of the gear one revolution is 3.14*11=34.54mm 3.14*8=25.12

1/16 drive subdivision motor drive. Stepping motor with a step angle of 1.8°, the stepping motor needs 3200 pulse signals for one revolution, and the wire feed wheel moves the filament length 25.12mm.

Moving the filament 1mm requires 3200/25.12=127.39 pulse signals.

Because the gear ratio of the reducer is 1:3, the actual movement of 1mm requires 127.39*3=382.17 E-step

# Installation instructions

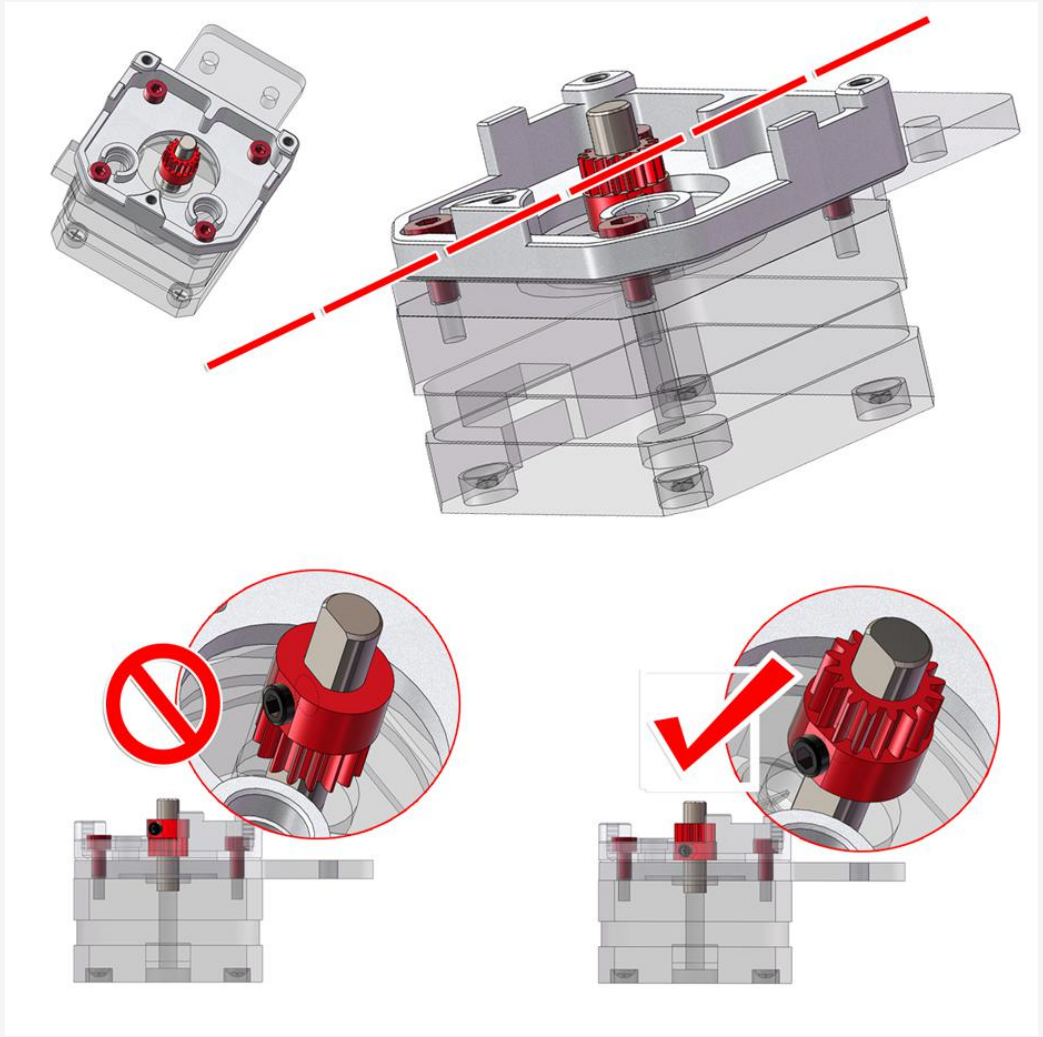
Questions and answers:
Gear clearance: Motor gear 1 drives 2 gears, and proper clearance is required for engagement to ensure flexible rotation. The design and production tolerance is 0.1mm (2 gear tolerance gap).
Influence-because of 1:3 deceleration, this tolerance only has a certain effect on the withdrawal: 0.03mm:
Adjust the installation position of the motor: reduce or cancel the tolerance effect. It is not recommended to be too tight: it will produce resistance to the motor. Cause lost steps.
Test method: The motor is not energized, and the big gear is pushed by hand-there is no obvious shaking.

Gear up and down clearance: each large gear is fixed by 2 bearings, and the vertical axis direction has a tolerance of +-0.5, which is normal: this has no effect on the printing accuracy, and it is enough to ensure smooth rotation. Too tight or too loose can be adjusted by spacers or tightening screws.

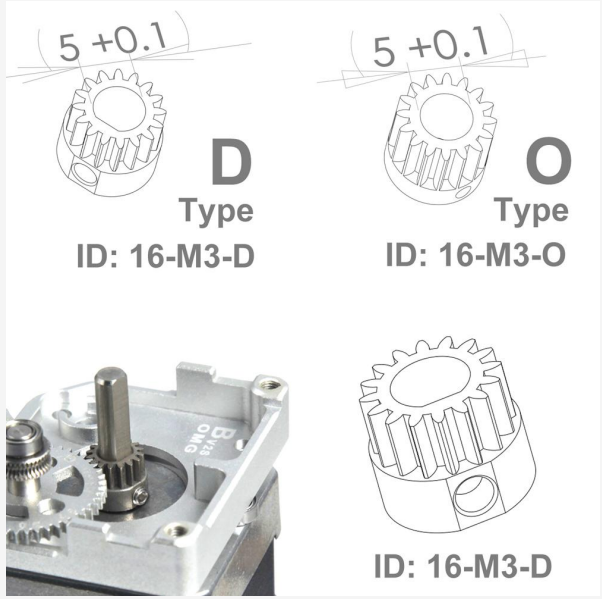
Abnormal noise of extruder:
In the absence of a filament: the driving gear will contact the press-fit bearing, and it will be eliminated after the filament is inserted.
Normal printing speed 100mm/s, extruder noise is lower than 40 minutes
Adjust the motor parameters to reduce the feeding and withdrawal speed.

For more questions, please leave a message
MY3DTECH@163.COM
MY3D team

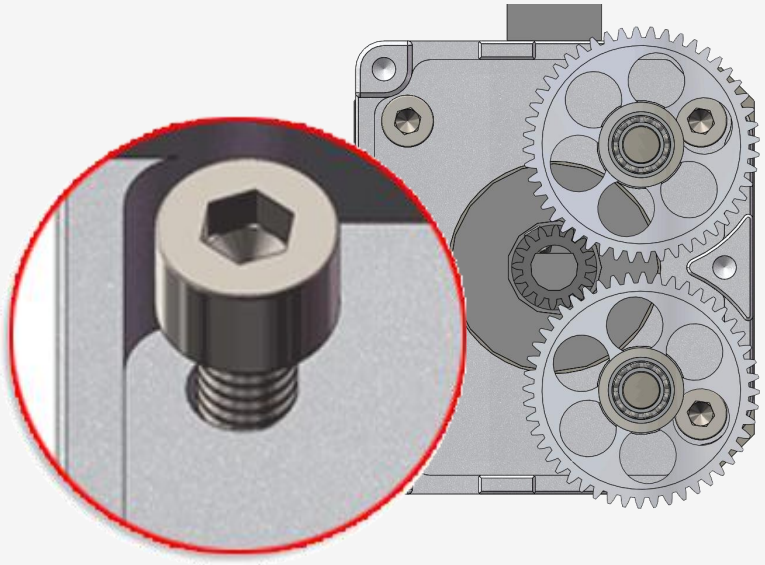
# Installation instructions

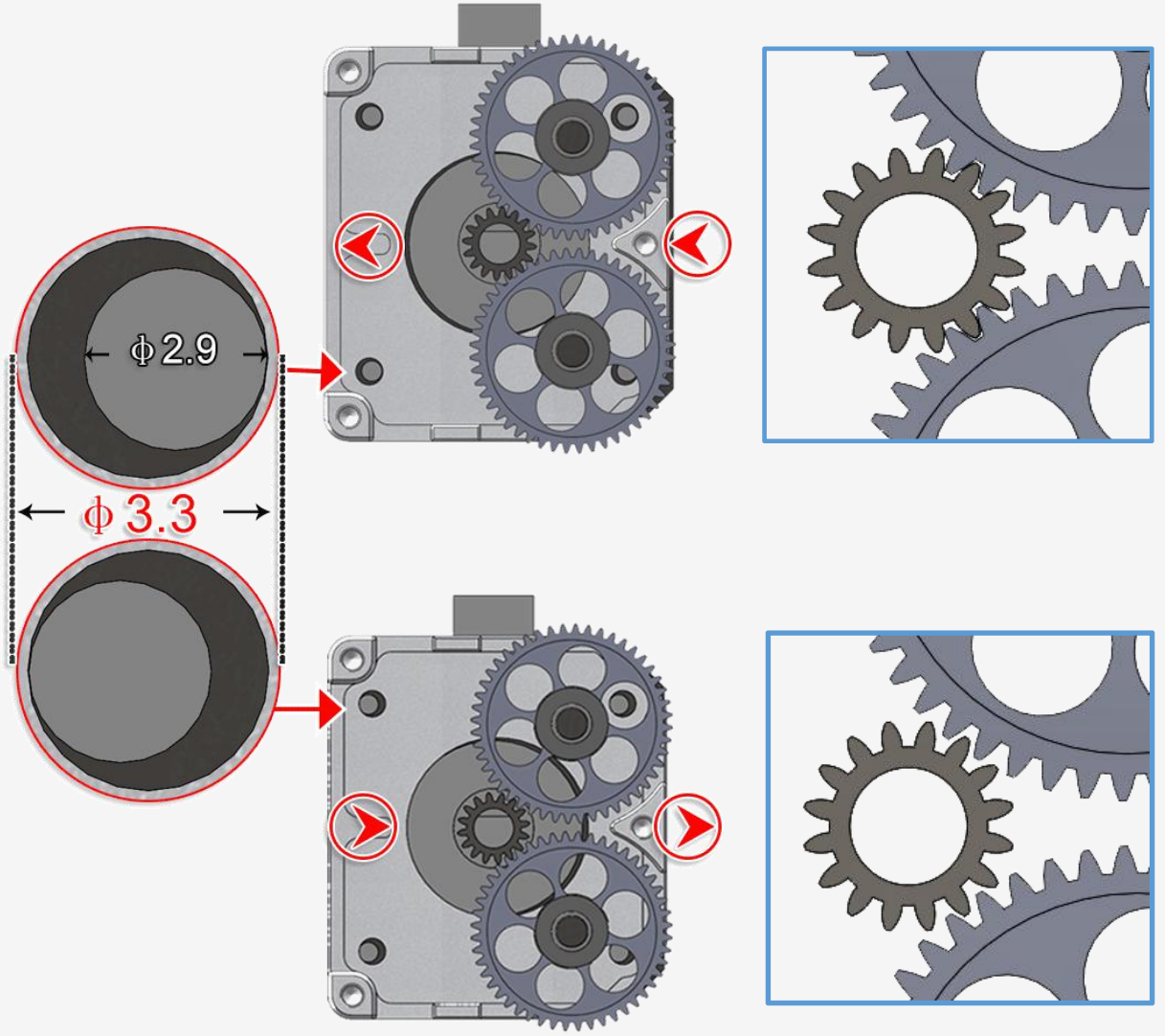






# Gear Bite Position

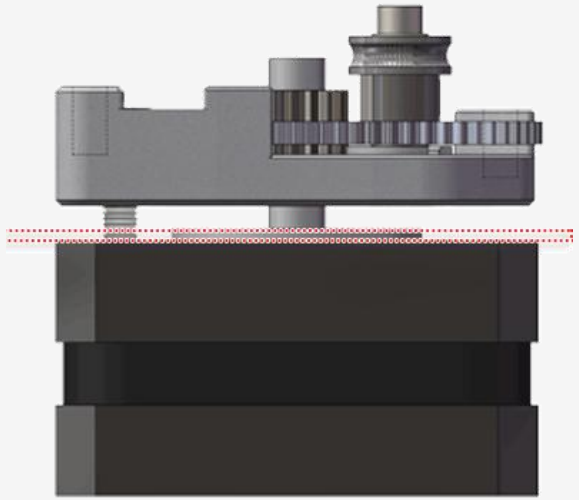


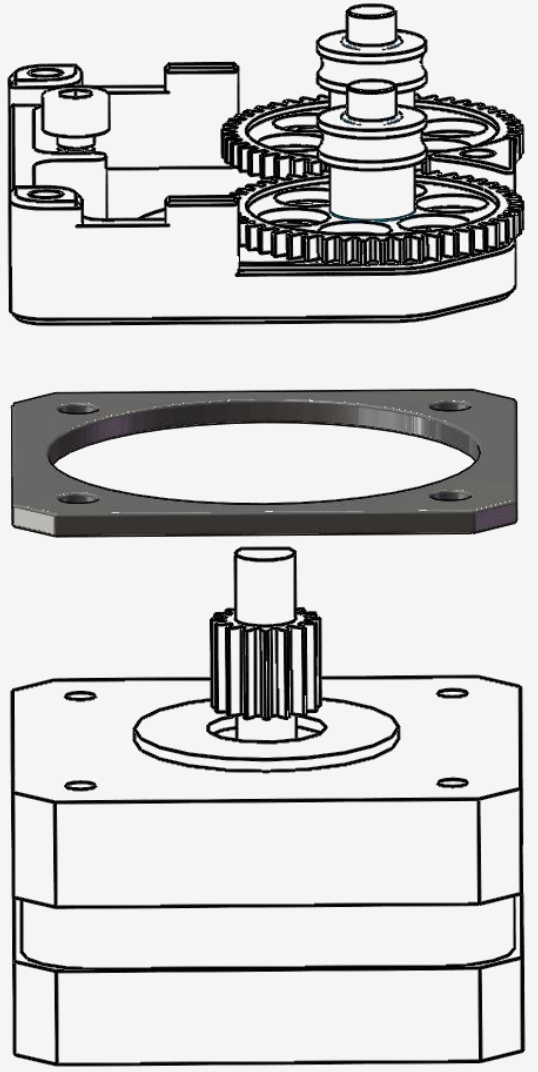



1/ Adjust the gear clearance first.

2/ Then tighten the M3 screws

# 42 Step MOTO  Position





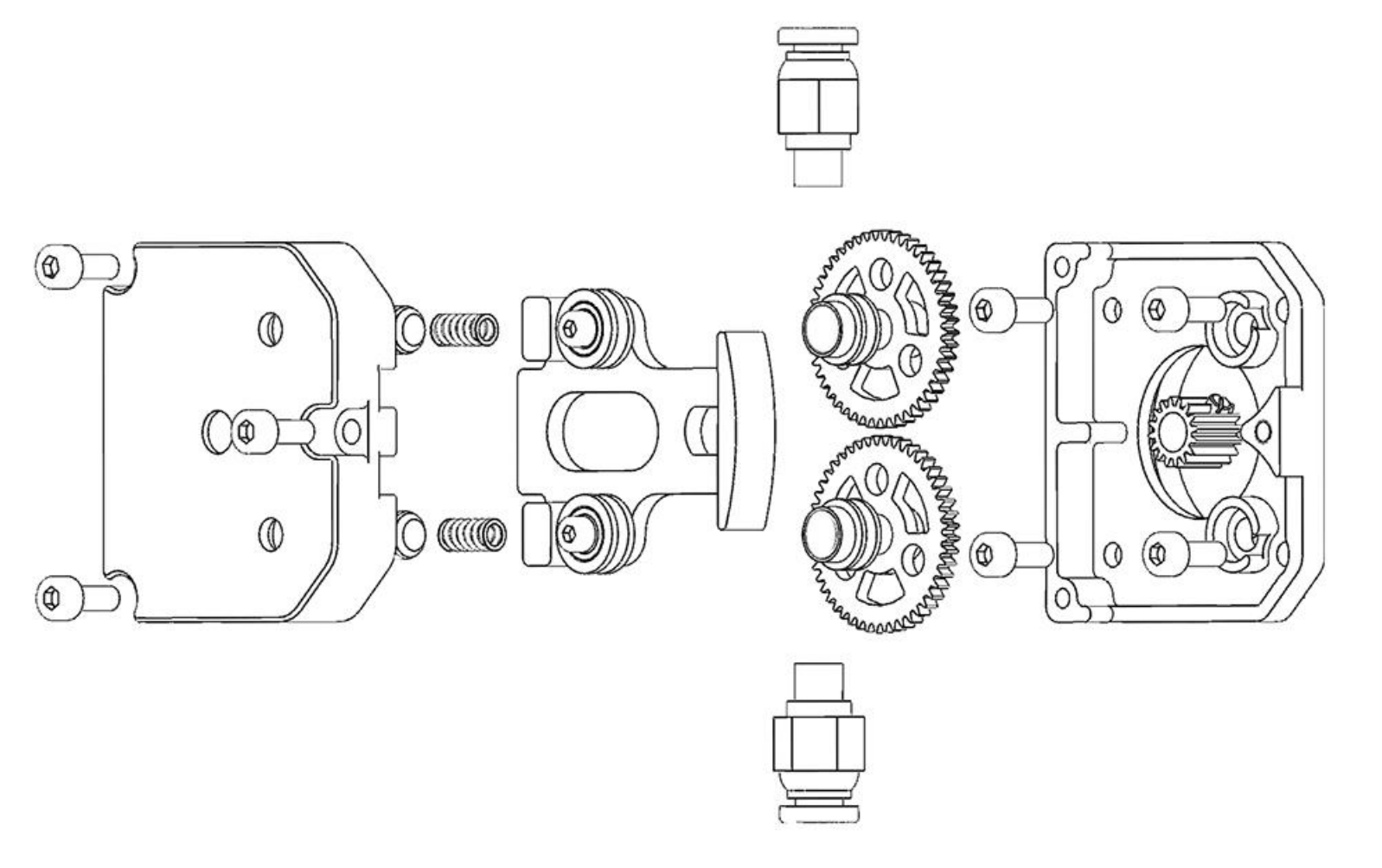
ID: E-A02

STL 3D printing file download

https://github.com/my3dltd/OMG-V2-S/blob/main/E-A02.STL

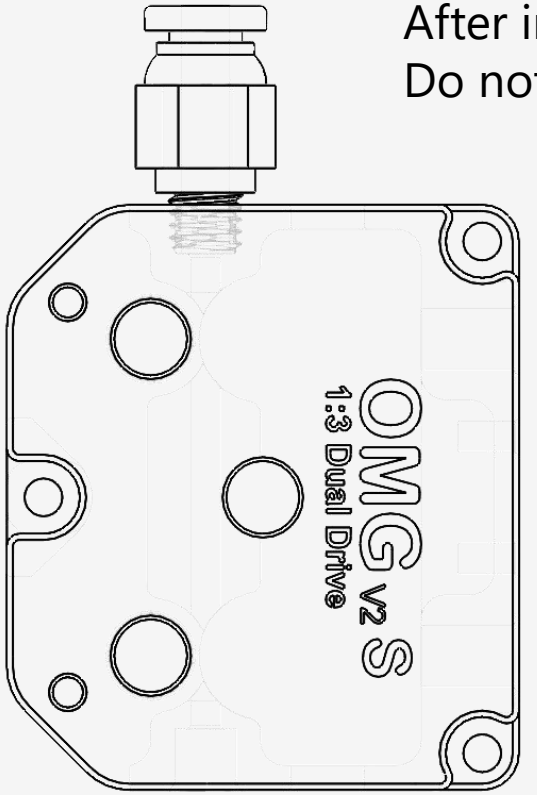
Direct extrusion stepper motor adaptation
Need to increase the height of the motor and the extruder:
avoid the middle motor higher than the cylinder

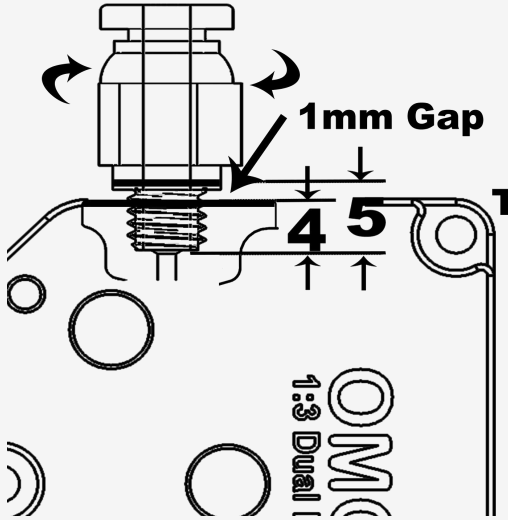
# Installation instructions



# Connector installation

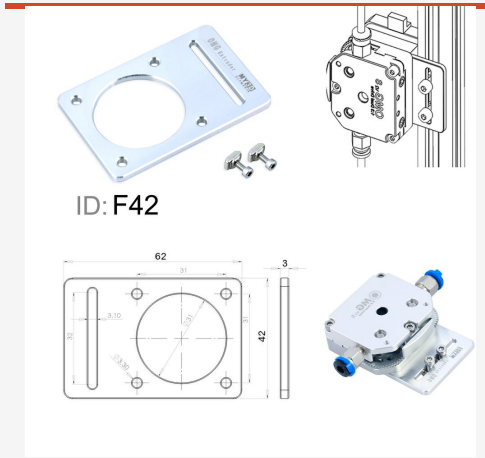
Tighten the screw of the pneumatic connector by hand OK
Prohibit the use of tools
After installation, there is a 1mm gap distance is normal
Do not use tools with strong torque-cause breakage

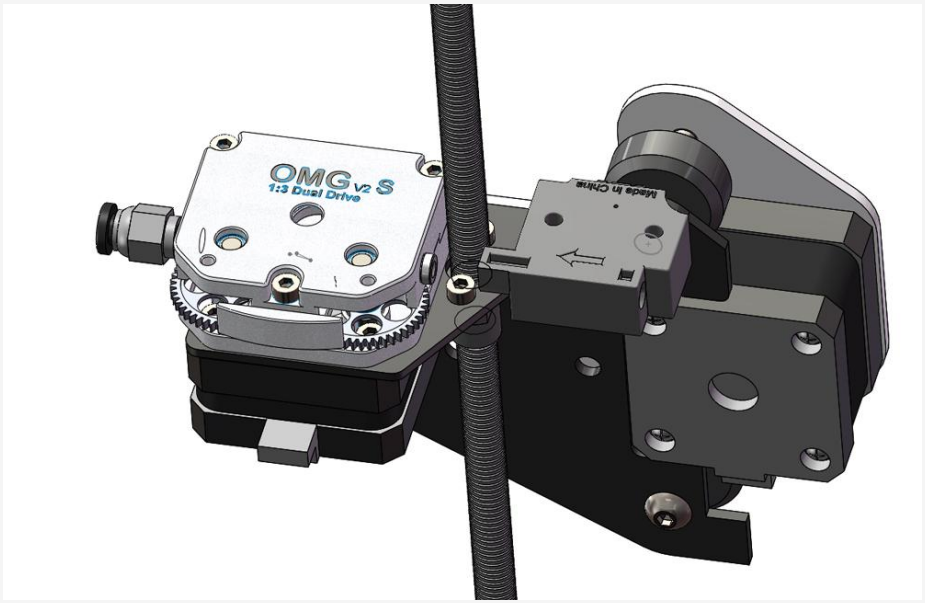


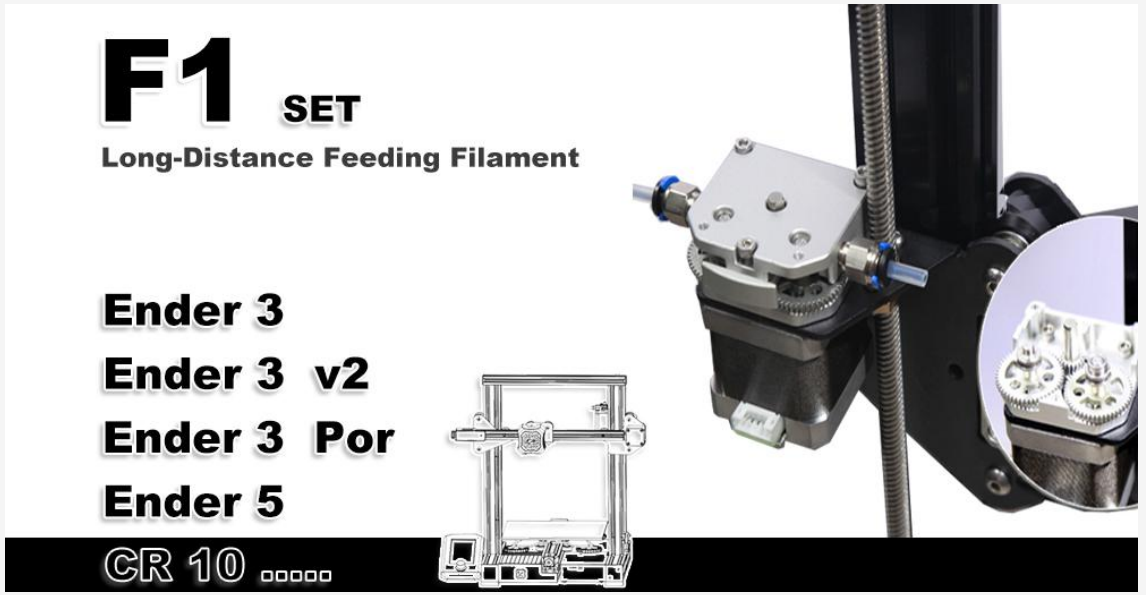





# Far distance Filament Feeding



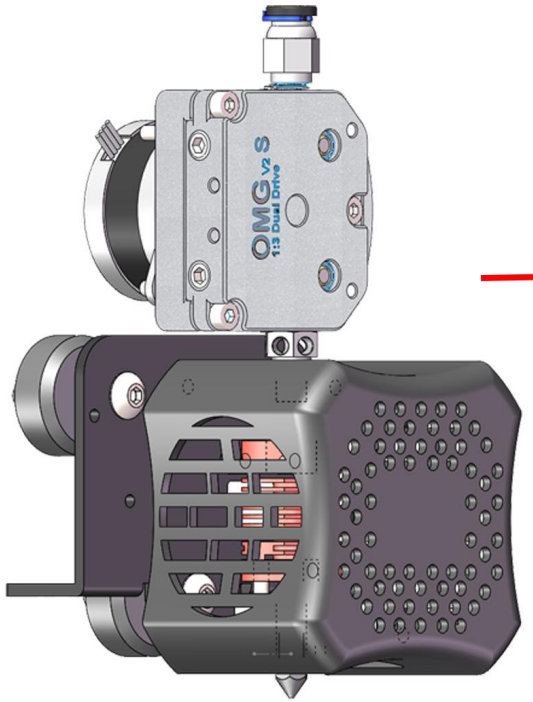



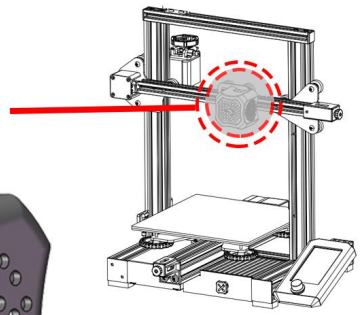
# Direct extruder D1

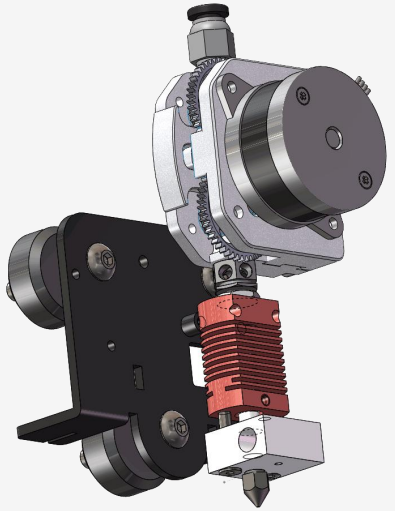
MY 3D

D 1
Direct extrusion

**CR 10 Ender**
**3 5 V2 Pro**

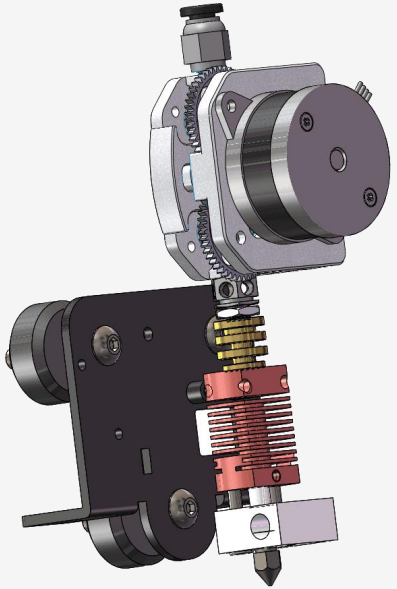






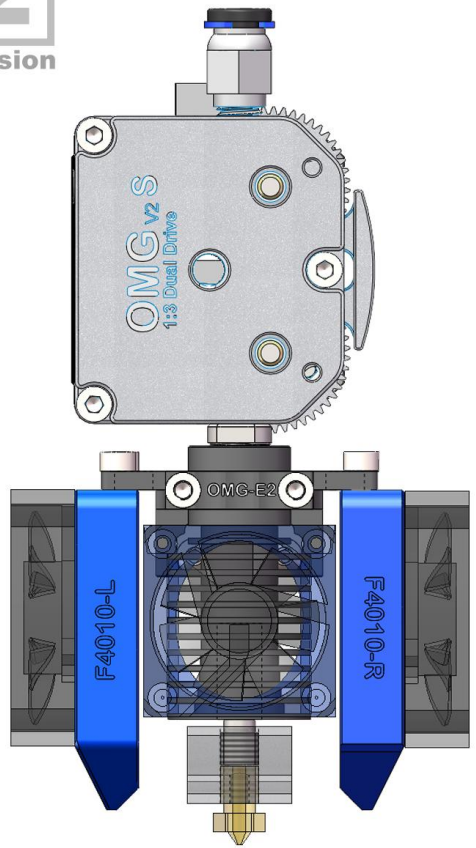
**Ender 3 5 Pro**
**CR 10...**

**Ender 3 V2**

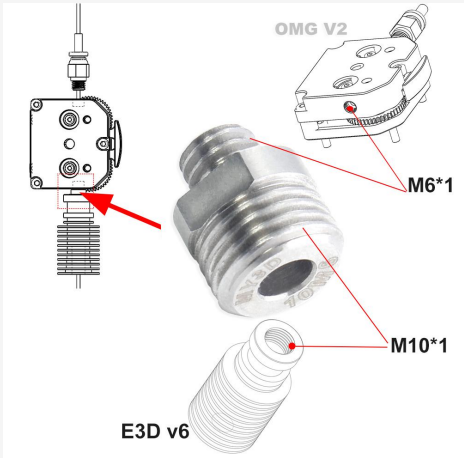


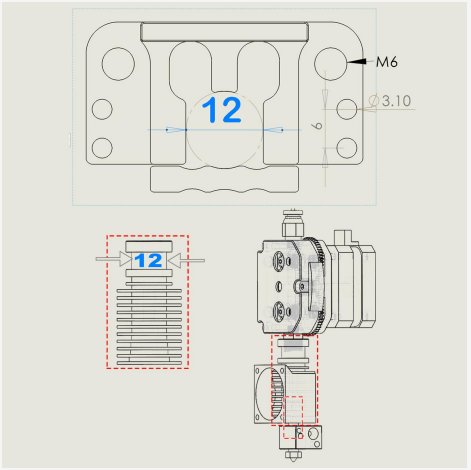
# Direct Extruder D2

D2
Direct extrusion

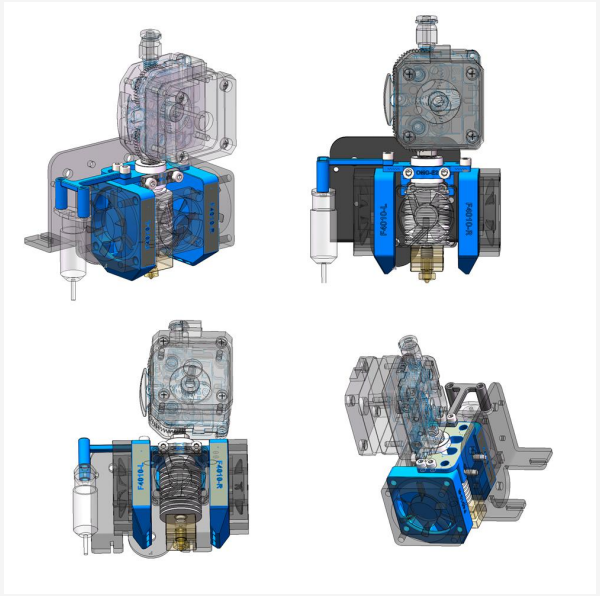


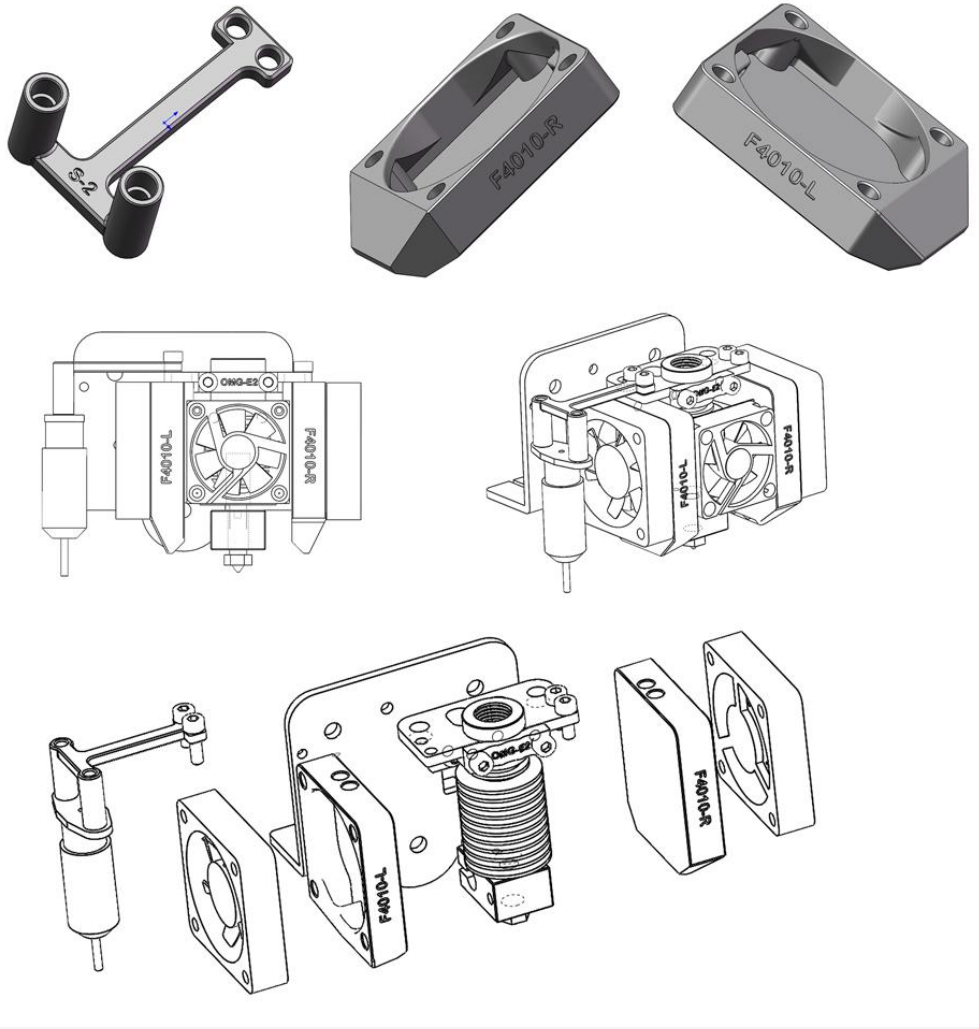

E3D V6


# Direct extruder for E3D V6  D2






Printable STL file download link

F4010-**L**.STL

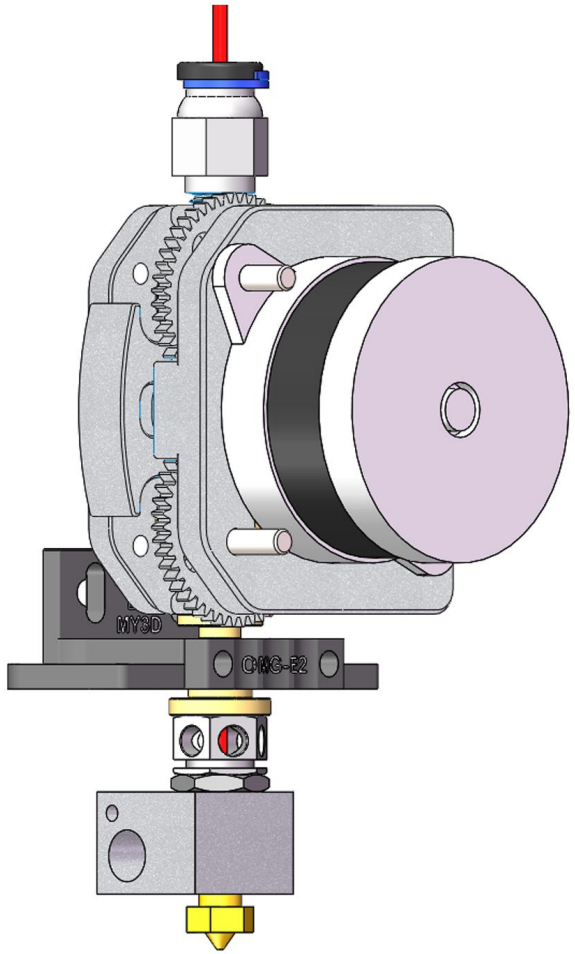
https://github.com/my3dltd/OMG-V2-S/blob/main/F4010-L.STL

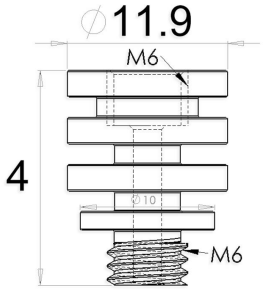
F4010-**R**.STL

https://github.com/my3dltd/OMG-V2-S/blob/main/F4010-R.STL

# Direct Extruder D3

D3
Direct extrusion

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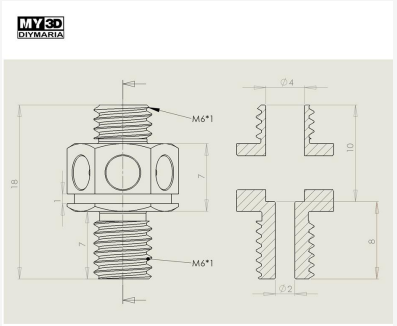




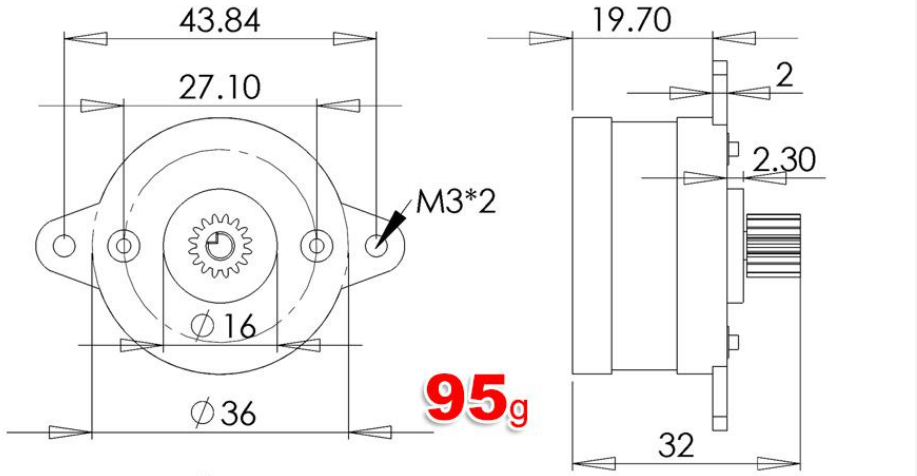
ID: M6A
GRADE5 TC4

ASPINA Japan

ID: SST36C1080 24V DC IN Step angle 0.9

https://jp.aspina-group.com/ja/products/motors/cat01/001/

MY 3D





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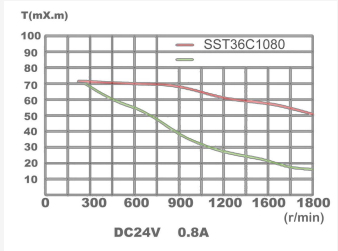
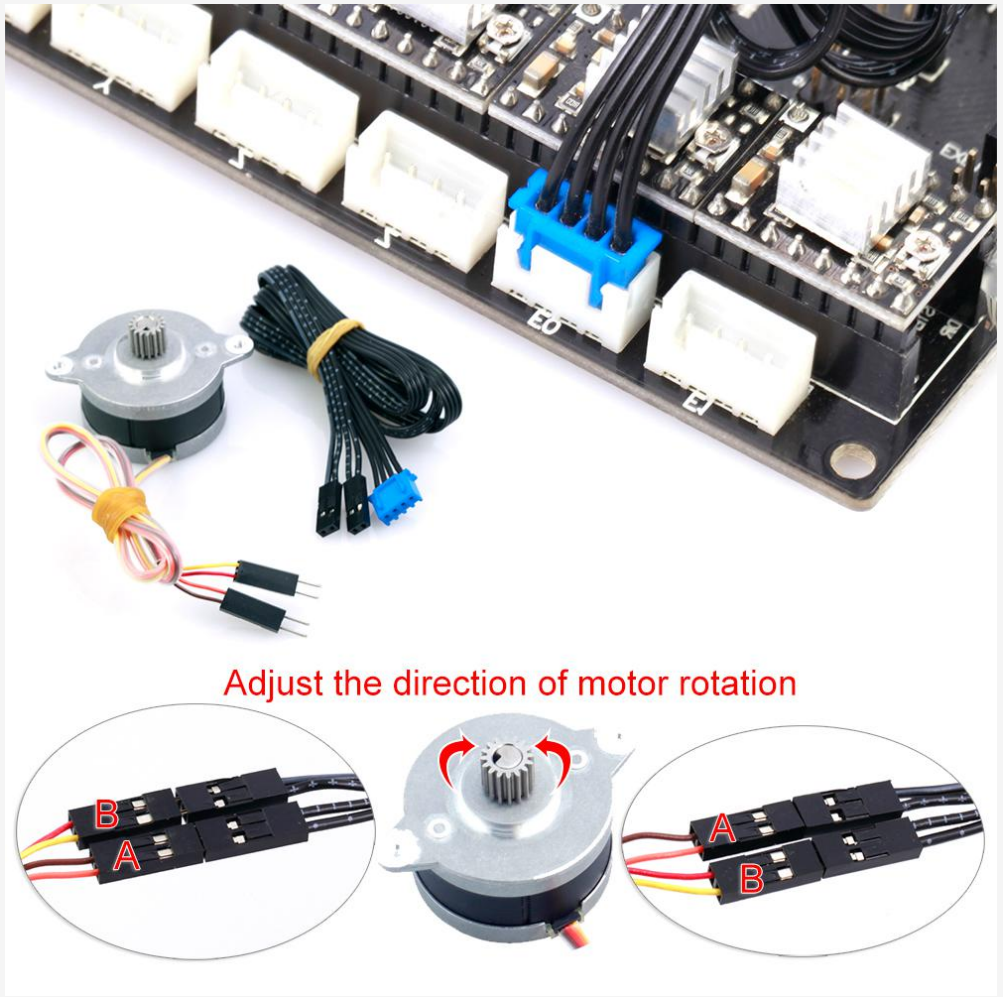
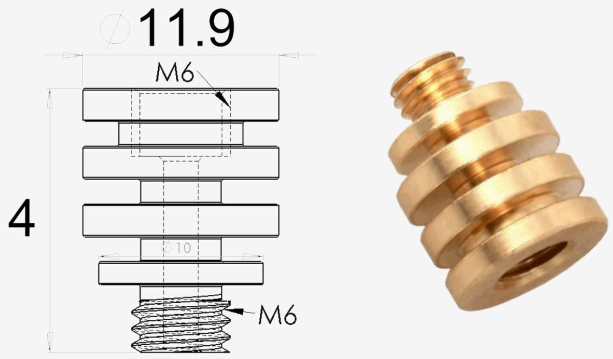


# Adapter parts

https://diymaria.es.aliexpress.com/store/group/OMG-V2-S-extrusora/2092087_516816446.html

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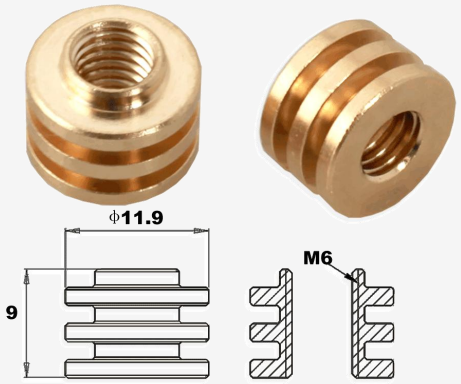


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