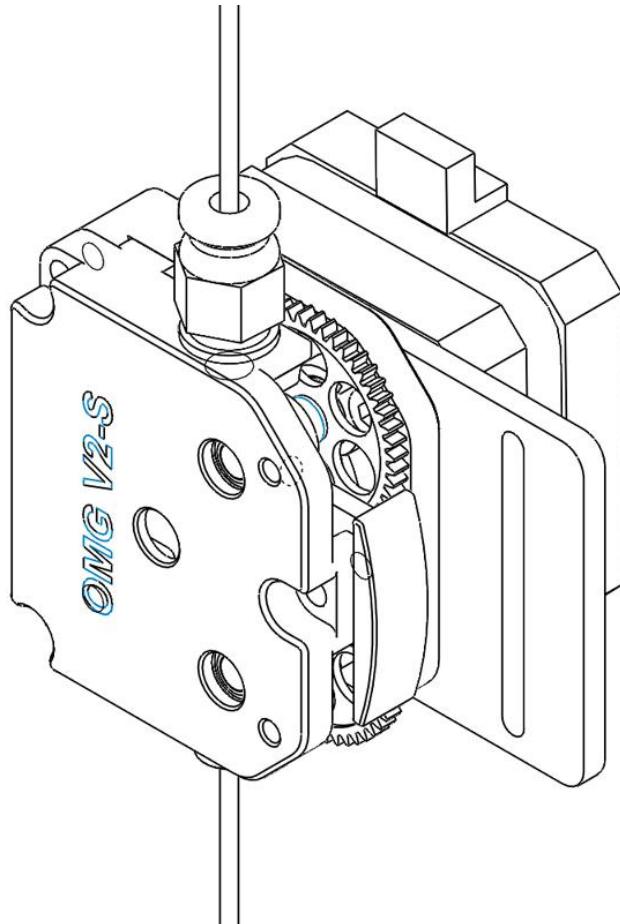


OMG V2-S

3D Printer Extruder User Manual



A

Basic parameters

B

Extrusion work method

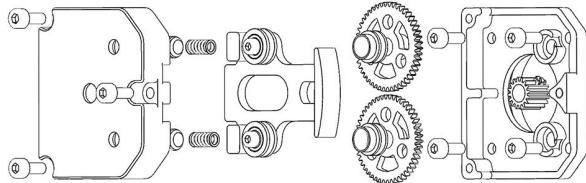
C

Installation steps
Adjustment

Motor step value adjustment
Drive current adjustment setting

MY 3D
DIYMARIA

A



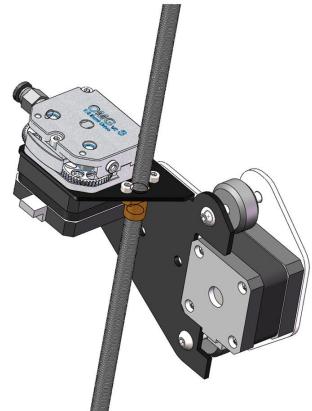
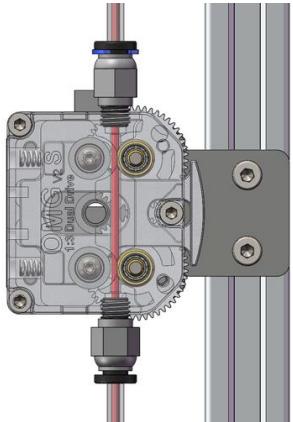
Device parameters

Application:	FDM 3D printer
Way of working	long-distance feeding/direct extruder
Filament materials	PEEK, nylon, PLA, ABS, carbon fiber...
Gear reduction ratio	1:3
Wheel diameter	7.8mm (approximately)
Product Size	19. 5*42*48mm
Weight	64g(Net weight without packaging host weigh)

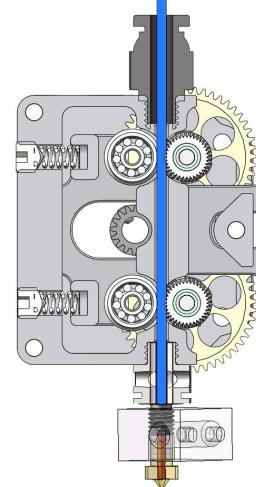
A

2 ways of feeding Extruder installation

Long-distance feeding extruder

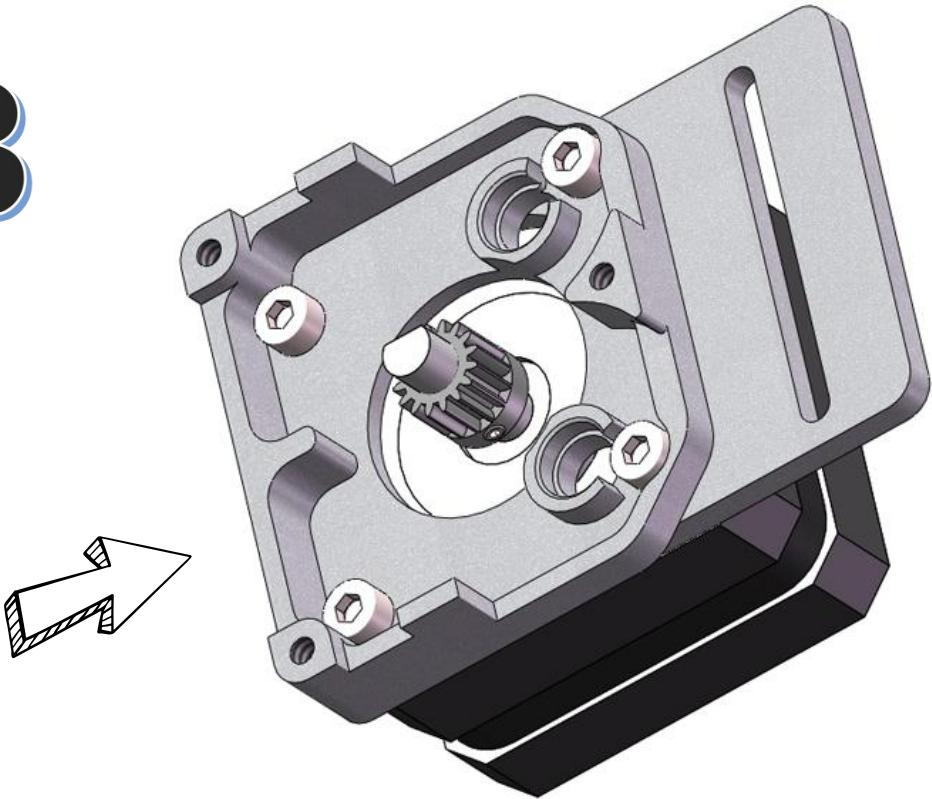
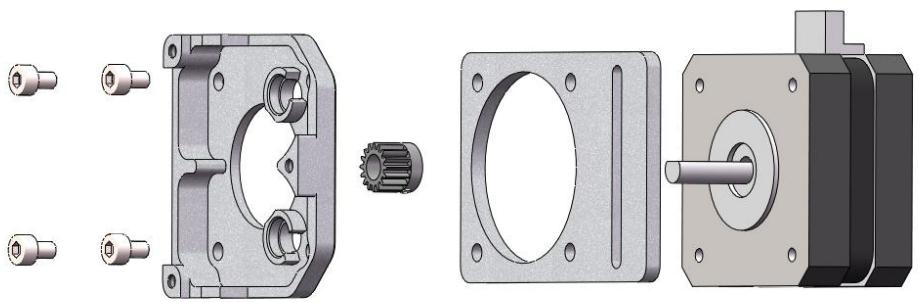


Direct extruder

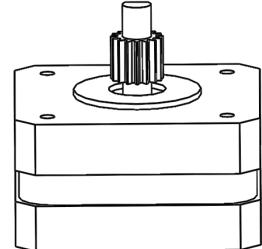
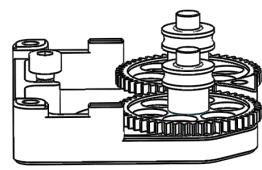
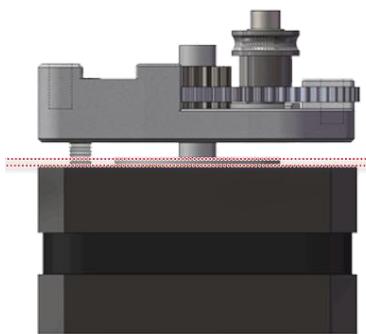
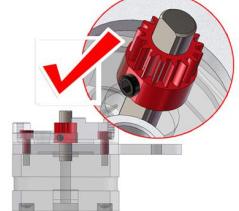
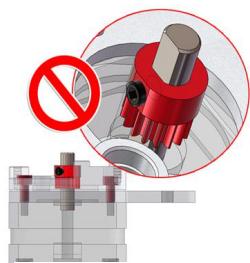
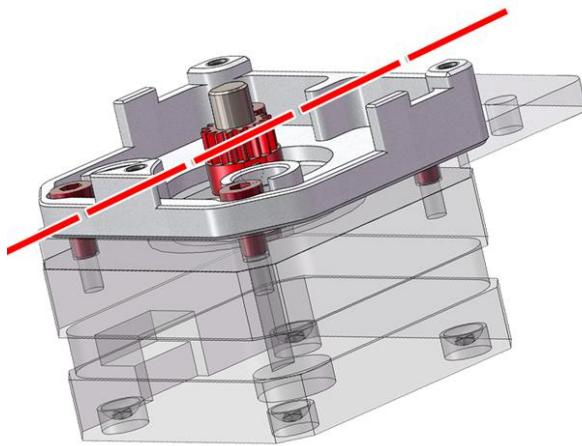


1 step

B

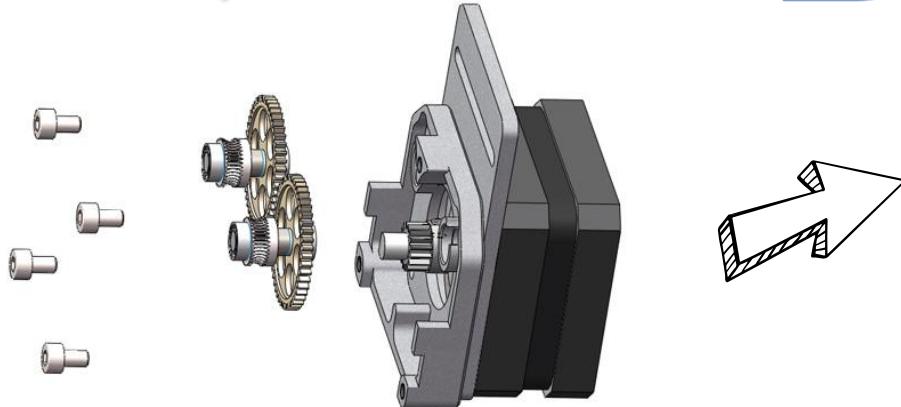


Adjustment



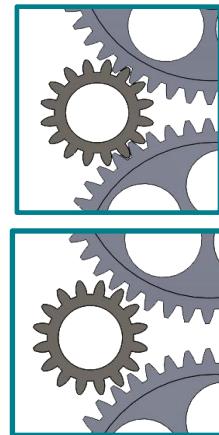
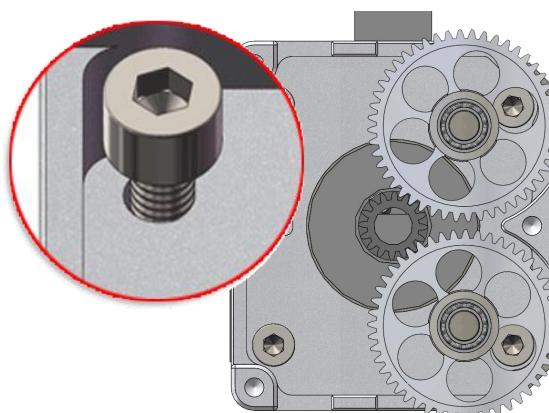
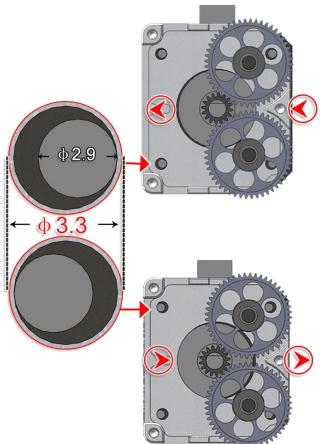
2
step

B



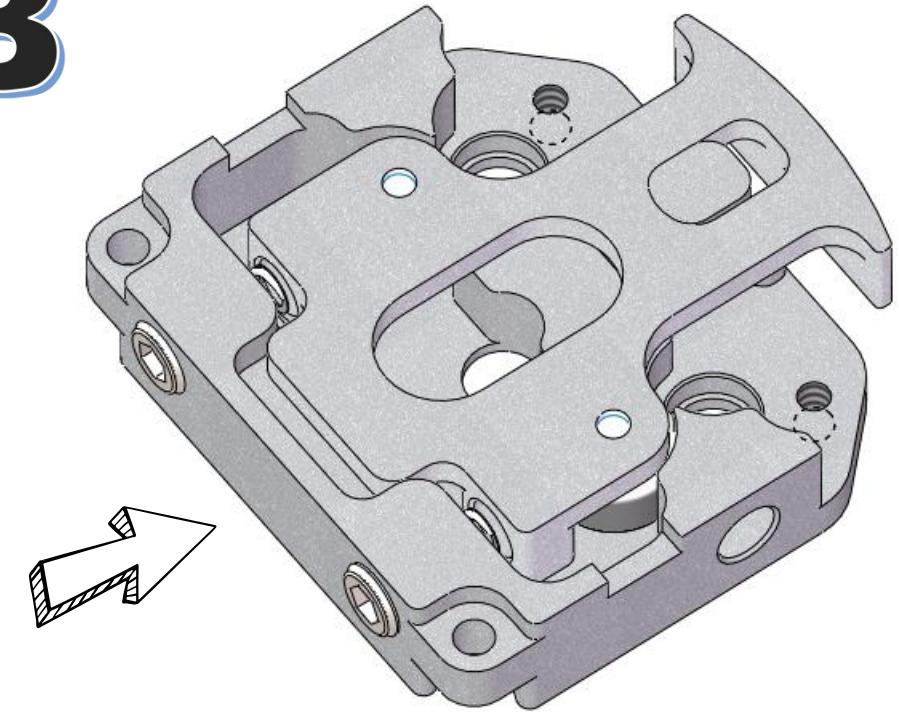
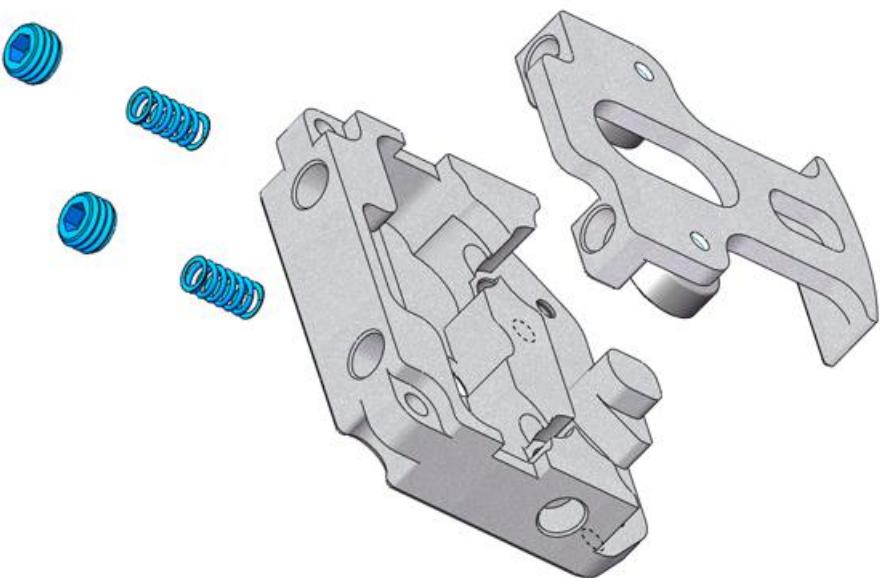
Adjustment

-
- 1/ Adjust the gear clearance first. 2/ Then tighten the M3 screws

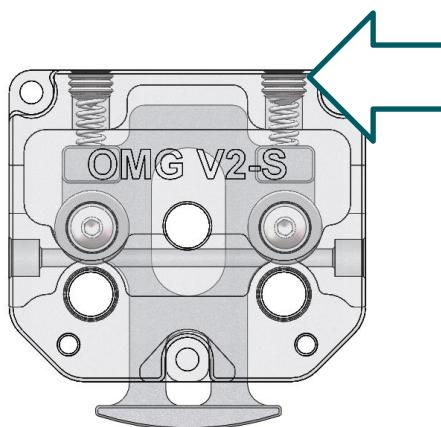
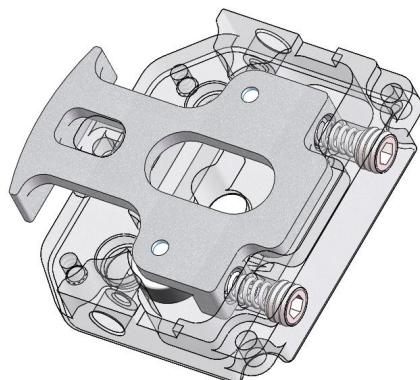


3 step

B

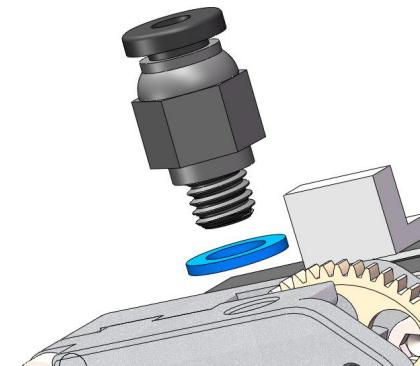
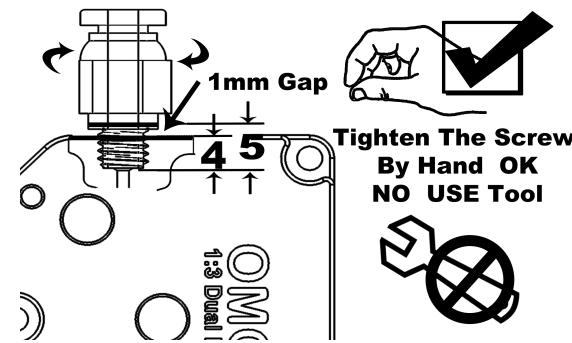
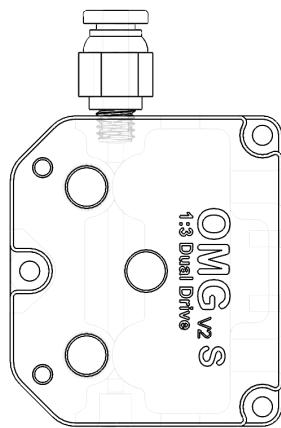
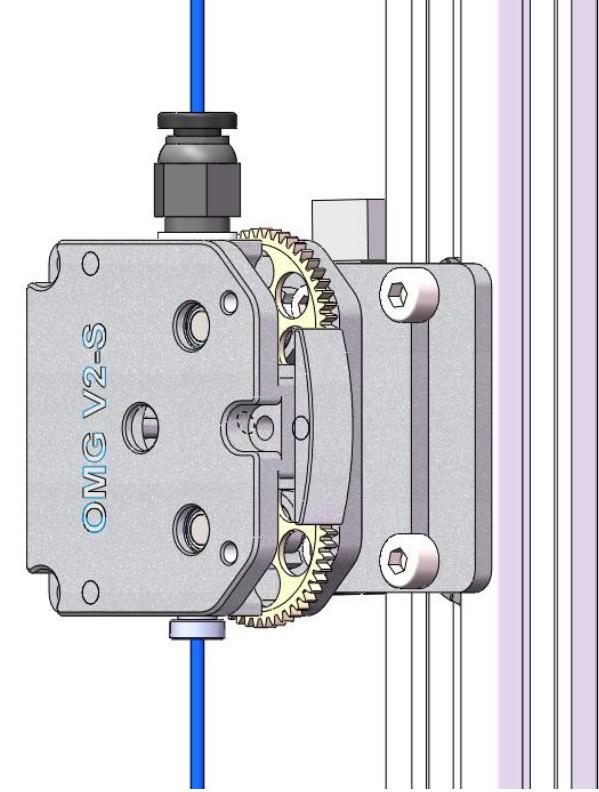
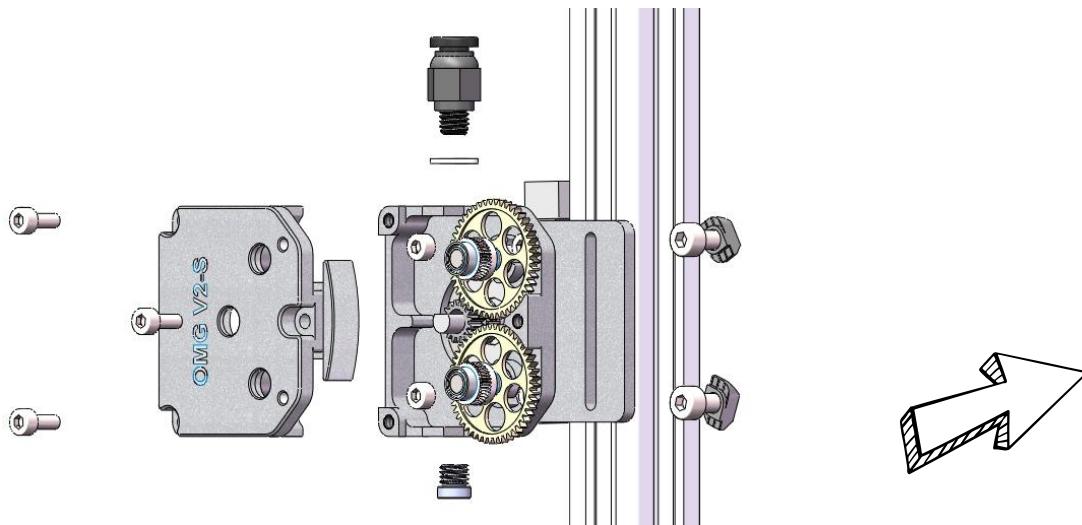


Adjust the spring tension. It is recommended that the tightening screws are flush



4 step

B

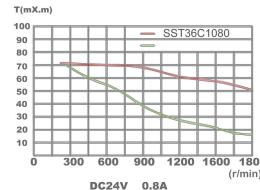




Input Voltage:12- 24v

ASPINA
SHINANO MOTO

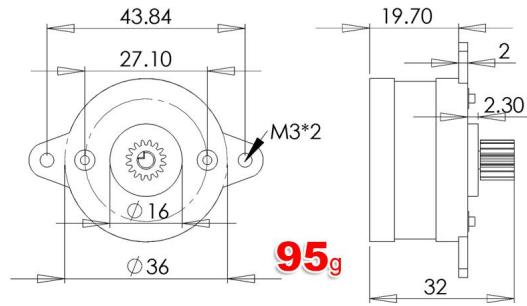
12V Input motor current setting Max 2a
(suggested value **1.6a**)



24v Input motor current setting Max1.2a
(suggested value **0.8a**)

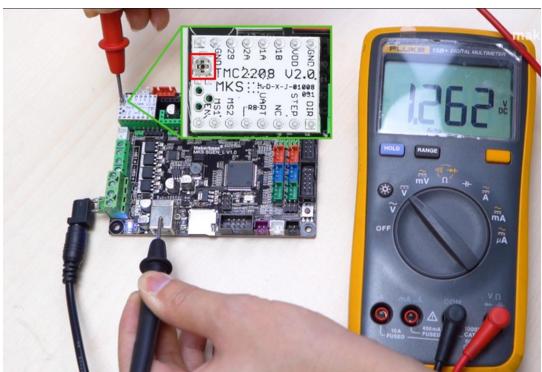


NAMA 14 36mm 0.9°



The MOTO working temperature of the motor **Max 80°C**
If the working environment exceeds 80°C (cooling fan is required)

Stepper motor drive input current can be adjusted appropriately
Need to follow the operating temperature up to 80 degrees Celsius and not exceed the maximum value
Otherwise, the internal circuit of the motor will burn out and cannot work.



Drive current measurement TMC2208

Driver and motherboard integration
need to refresh the firmware to modify the current

#Invert the stepper direction.

>INVERT_E0_DIR 0

#If you modify the rotation direction, you can directly modify it to 0-1 or 1-0

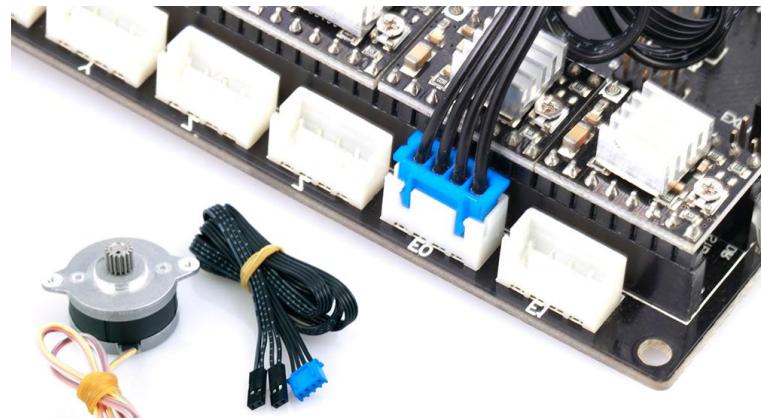


Modification of the rotation direction of the motor:



ID:**SST36C1080-16**

Change the wiring sequence of **AB BA**
Adjust the direction of rotation of the motor



Adjust the direction of motor rotation



Refresh the motherboard firmware

```
#Invert the stepper direction.  
>INVERT_E0_DIR      0  
#If you modify the rotation direction, you can directly modify it to 0-1 or 1-0
```



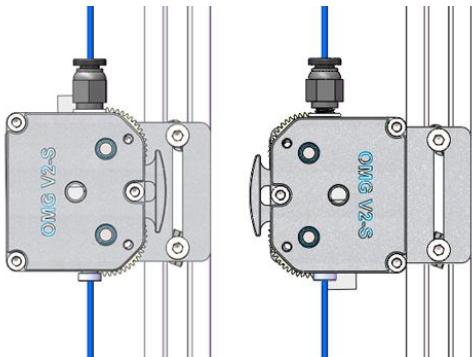
Modification of the rotation direction of the motor: Refresh the motherboard firmware



#Invert the stepper direction.

```
>INVERT_E0_DIR          0
```

#If you modify the rotation direction, you can directly modify it to 0-1 or 1-0



You can also adjust the installation direction of the extruder
Change the direction of filament feeding and discharging



Step Value Modification

42/Stepper motor step approach angle 1.8°
(pulse number)
16 subdivision: **385**



36 stepper motor,
step approach angle 0.9°
16 subdivision
760

Main board firmware modification code:
#Movement setting

>DEFAULT_E_STEPS_PER_UNIT 385

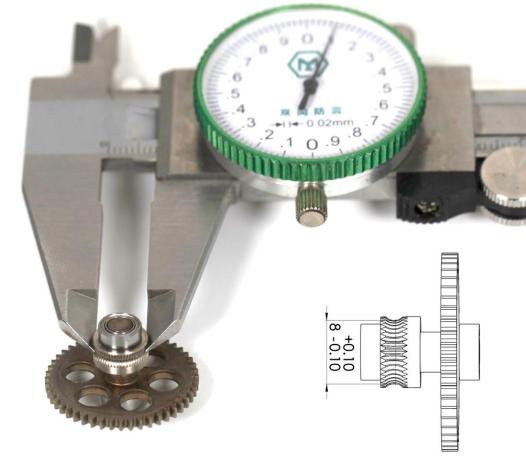
#Default Axis-E Steps Per Unit (steps/mm)
385 is the modifiable step value, usually the original value is 93

Ender 3 V2 extruder step value modification:

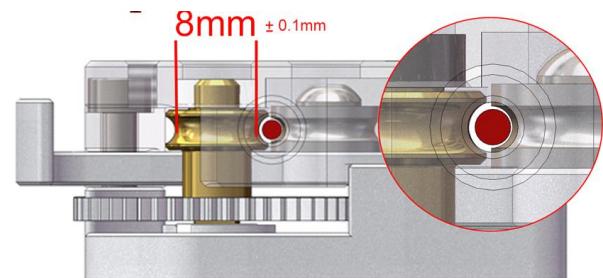
Please write the following code (red) into a notepad, save it to a TF card, as a Gcode format file, Then insert the TF card into the printer and execute printing to modify it (the original value is 93)

M92 E385
M500

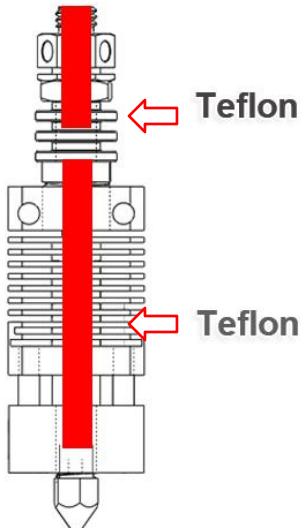
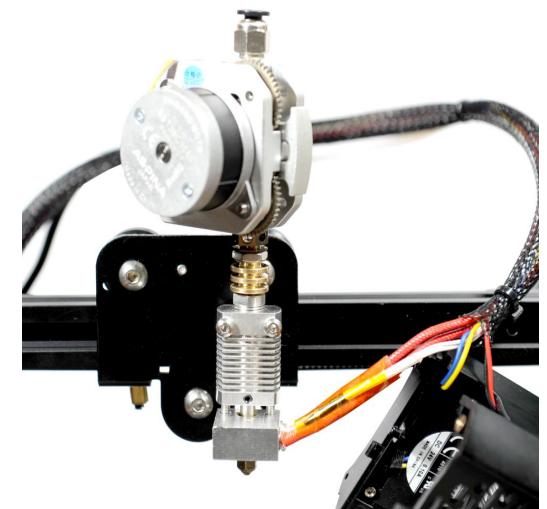
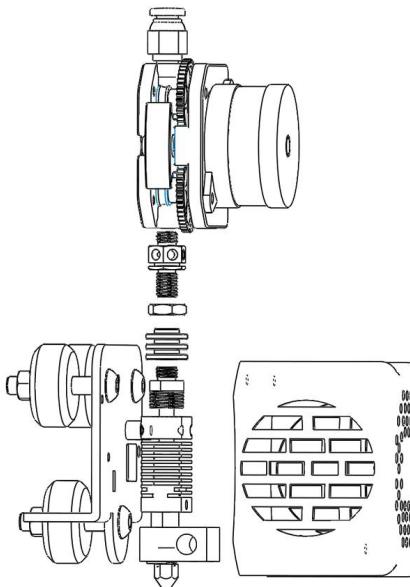
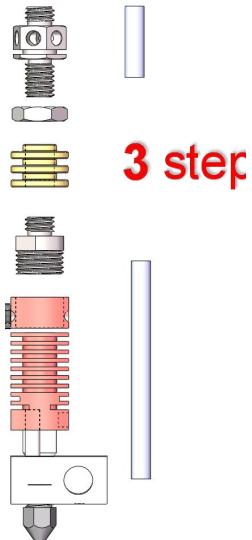
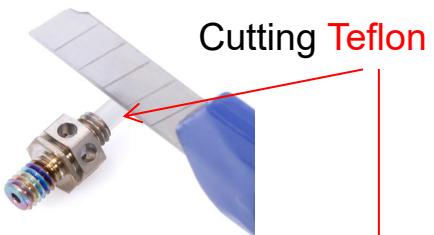
Note 385 can be modified to the step value you need. If 36 stepping motor is used, the value is 760



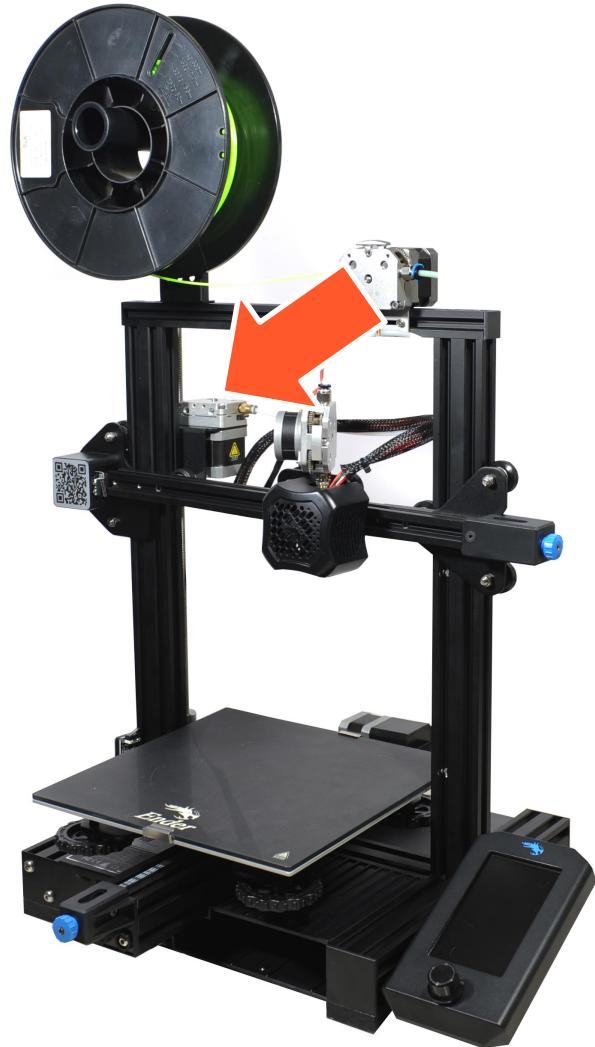
The diameter of the extrusion wheel:
OMG V2 S: 8mm+0.1
OMG V2: 8.8mm +0.1



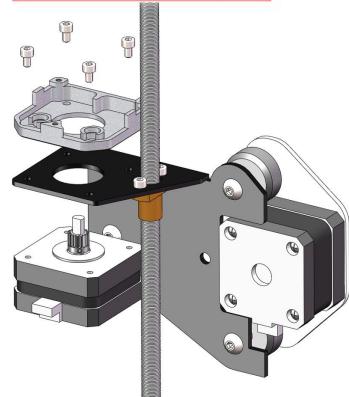
Ender 3 V2 Direct extrusion installation



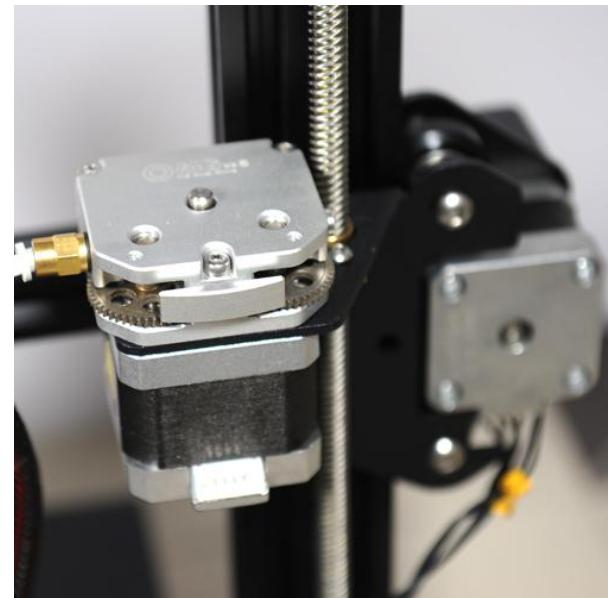
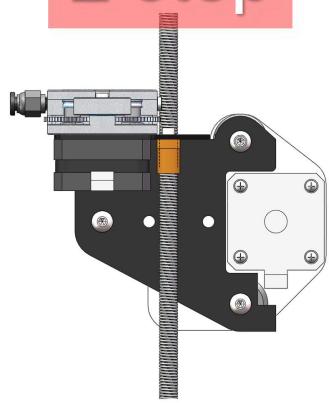
Ender 3 V2 Long distance installation



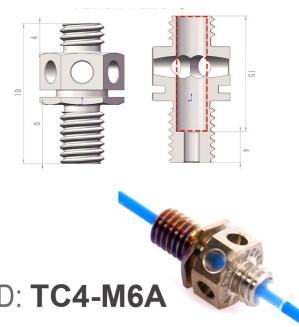
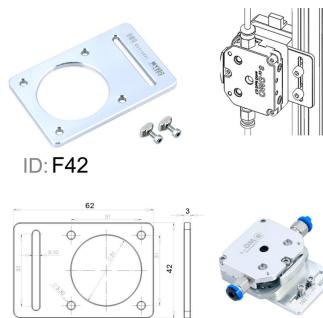
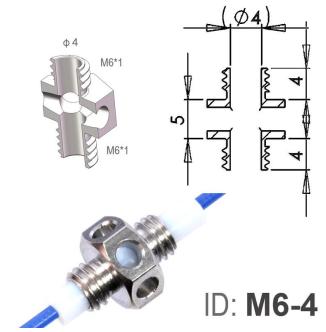
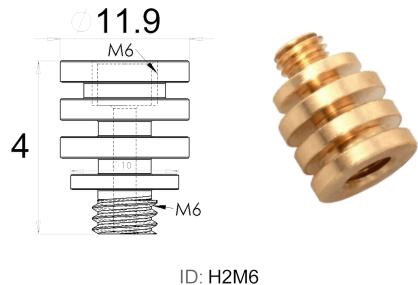
1 step



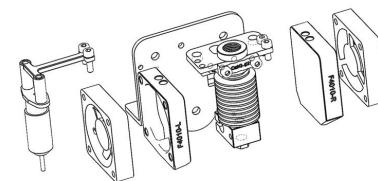
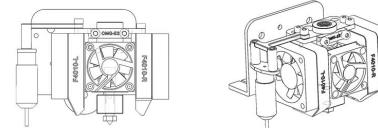
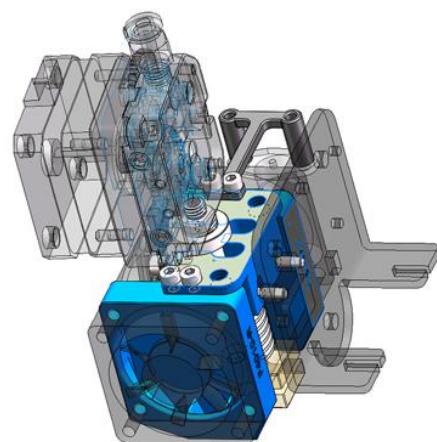
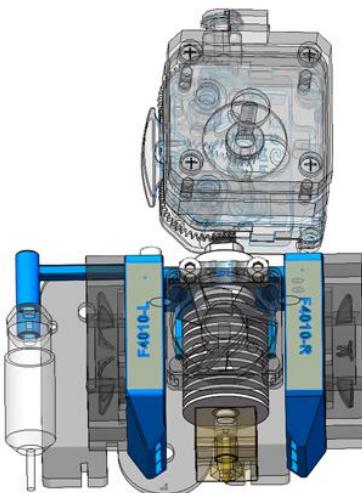
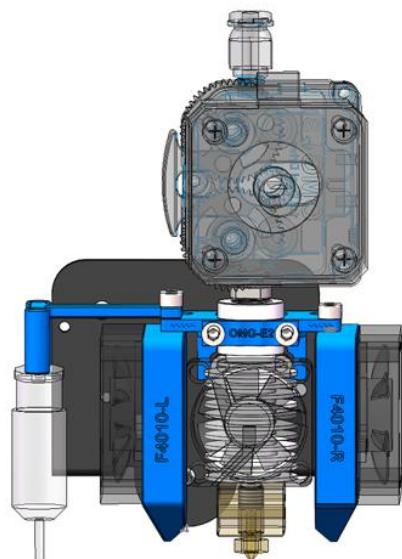
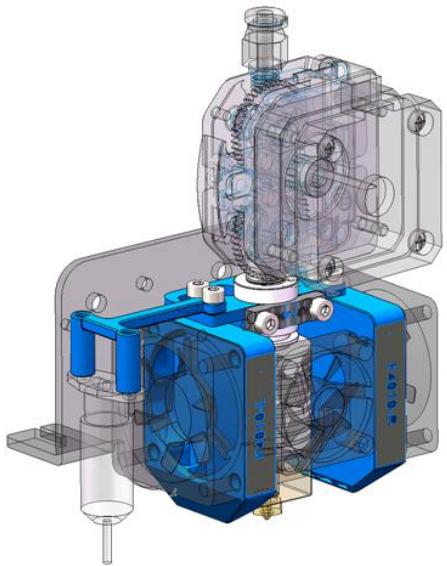
2 step



OMG V2-S adapter extension parts

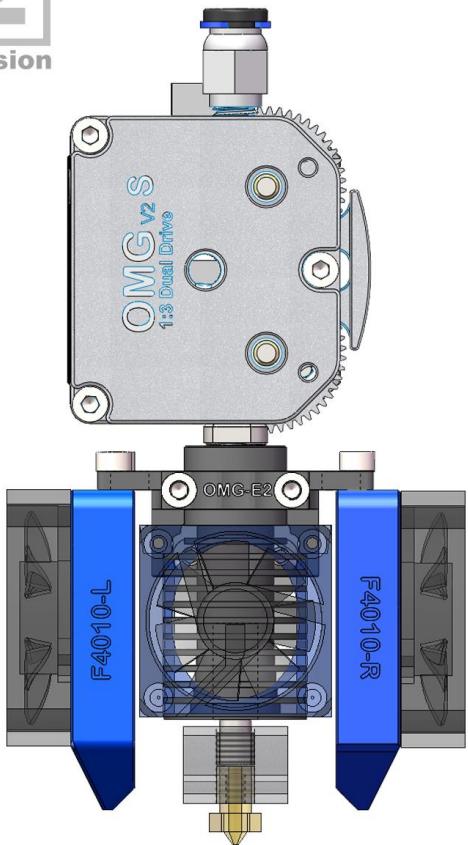


Direct extruder for E3D V6 D2 Installation diagram

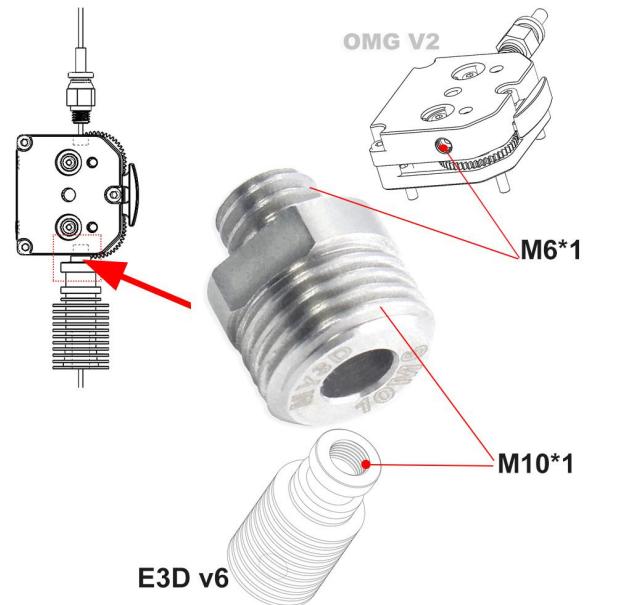


Direct Extruder D2 Installation diagram

D2
Direct extrusion



E3D V6



ID: E-12