



DXC Extruder

Supports Creality K1 / K1 Max / K1C



1. Product Overview

- Product Name: DXC Extruder
- Brand Name: D3vil Design x Phaetus x Creality

2. Product Specification

- Product Size: 40.1*23.2*56.6mm
- Product Weight: 60g
- Filament Compatibility: including but not limited to PLA, ABS, PETG, TPU, PP, PC, PA, PEEK and PEI, also compatible with typical composite fibre filaments such as PLA-CF, ABS-CF, PETG-CF and PA-CF/GF
- Gear ratio: 6.25:1

3. Product Features

1.Helical Gear and U-Shaped Wheel Engagement

The helical gear system progressively engages filament through spiral teeth, with multiple teeth simultaneously gripping. This reduces filament wear rate by 60% compared to traditional straight-cut gears and minimizes deformation marks caused by gear engagement.

2.Dual-Gear Precision Engagement

The synchronized dual-gear system doubles contact area, effectively preventing filament slippage and ensuring continuous stable feeding. The dual-drive structure enhances precision control over filament advancement, reducing vertical fine artifacts (VFA), zebra banding, and layer lines for superior print accuracy.

3.Adaptive Pressure Rocking Arm

It automatically adjusts pressure for filaments of varying hardness. This ensures stable pressure output, ideal for multi-material switching and reliable extrusion across different filament types.

4.Open Cooling Architecture

Enhanced airflow design improves internal heat dissipation, reduces thermal creep risks, and prevents high-temperature clogs. Additionally, the open structure allows for easy inspection and access to the filament path without disassembly.

5.Patented RNC Ultra-Wear-Resistant Coated Gears

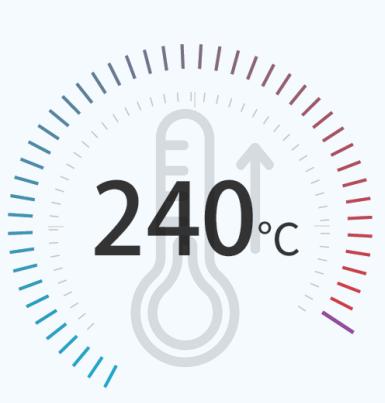
- Dramatically enhanced wear resistance
- 3x extended service life
- Specially optimized for long-duration printing with abrasive or high-performance materials
- Compatible with CF-based filaments without premature wear

6.Smart Filament Break Detection

Positioned close to the extruder to significantly reduce filament waste during changeovers and runout events, improving efficiency and minimizing mess.

4. Installation and assembly

Installation steps:



1. Heat up the nozzle to 240 degrees, after reaching the temperature, toggle the handle above the extruder to the right to remove the filaments, cool down and disconnect the power.



2. Unscrew the left and right M3 bolts on both sides of the protective casing, remove the front protective casing with force from the top of the front, and then remove the rear protective casing as shown in the picture.

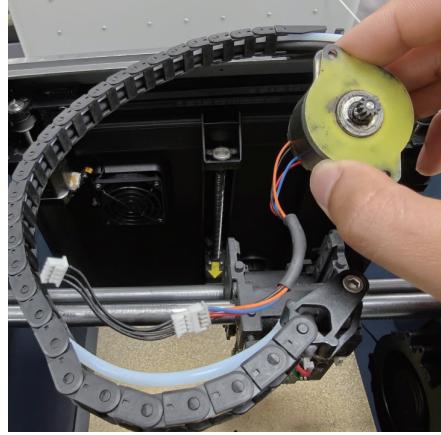


3. Remove the 36 motor wire terminal.



4. Remove the extrusion kit after loosening the three M3*6 socket head cap screws on the left and right side

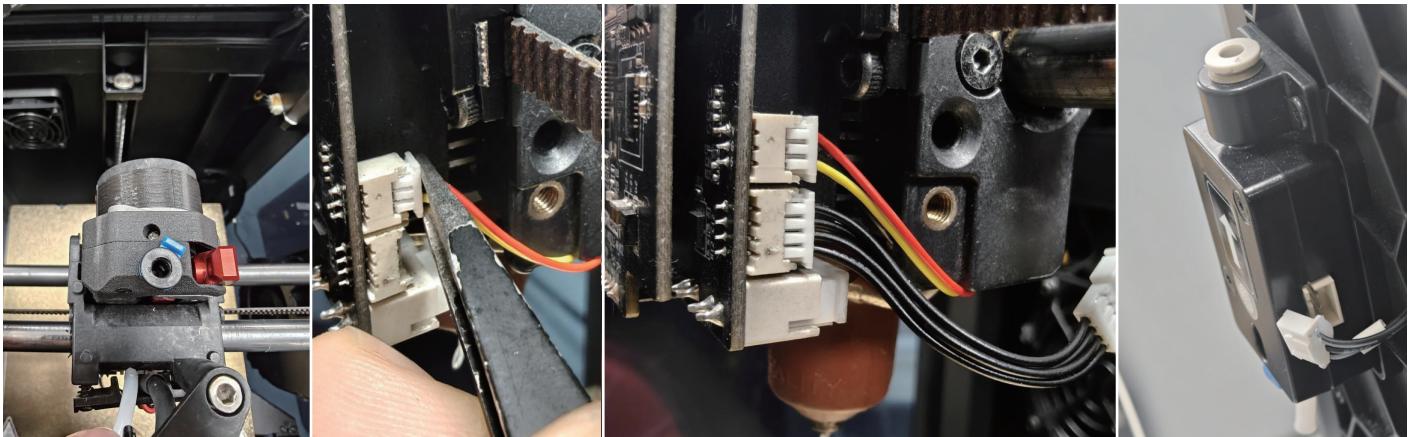
5. Remove the two M3 socket head cap screws that hold the extruder to the 36 motor and remove the stock extrusion kit.



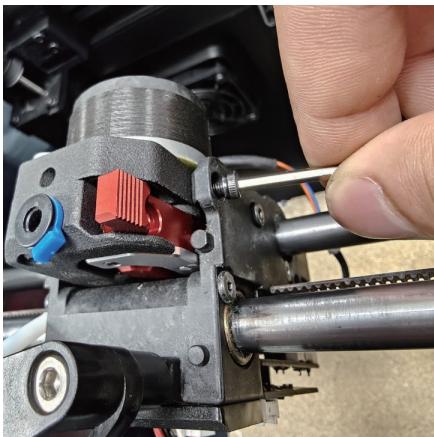
6. Connect the motor wire to the male-to-female motor extension cable included with the product. (Pay attention to the direction of the terminals do not force insert)



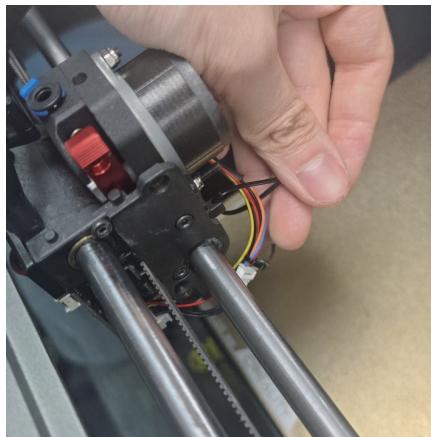
7. After the DXC extruder and the 36 motor are installed in place, tighten the two round head bolts M3*20 and M3*9 at the upper left and lower right corners (note that the direction of the motor cable is diagonally to the lower left according to step 6 as shown in the figure) During the installation process, please avoid bending the cable of the material breakage sensor to prevent damage.



8. After the extruder is inserted into the groove fit, reinsert the proximity break sensor and motor cable into the tool head board. At the same time, remove the cable of the material cut-off sensor behind the original factory printer.



9. Use the included M3x4 socket head cap screw to secure the upper-right position, and tighten the remaining two screws with the stock M3x6 bolts.



10. Route the material break sensor and motor cables: Secure both cables by threading black zip ties through the boss holes at the rear of the extruder and tightening them firmly.



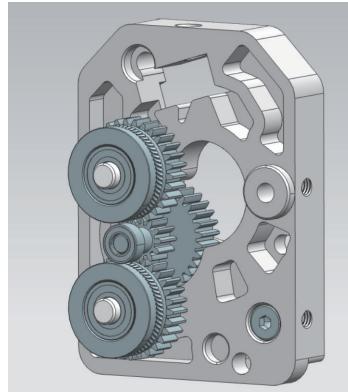
11. Reinstall the front protective housing removed in step 2 back in, then tighten the left and right M3 bolts that were previously removed on both sides.

12. Power on the printer, perform a self-test, and verify the operational status of the extruder and material break sensor.

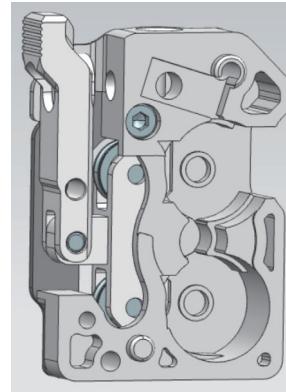
Assembly Steps:



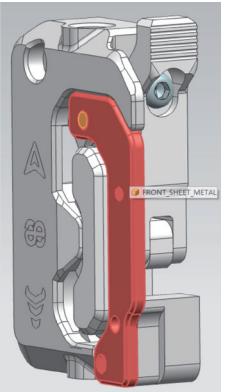
1. M3x9 Install a 3x6x2.5 bearing into the injection-molded backplate, and pre-embed an M3x9 round head screw.

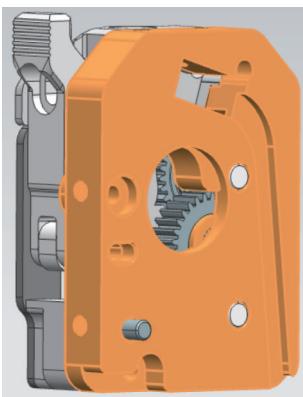


2. Install the press-fit drive gear and two pre-pressed meshing gears. Ensure two bearings are inserted into both the top and bottom of each meshing gear, and pre-press a bearing onto the drive gear.

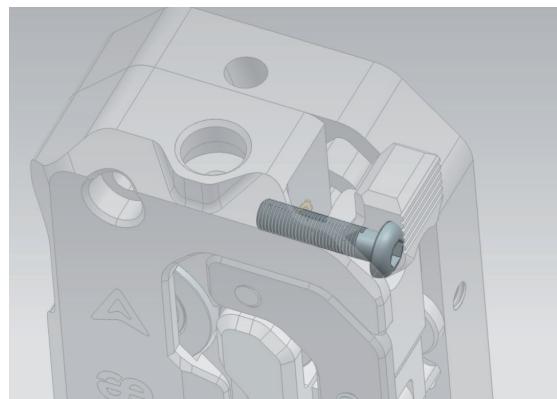


3. Install the pressure rocking arm onto the front injection-molded part. Secure the front injection-molded part to the metal front cover plate using an M3x9 round head screw, thereby constraining the pressure rocking arm.

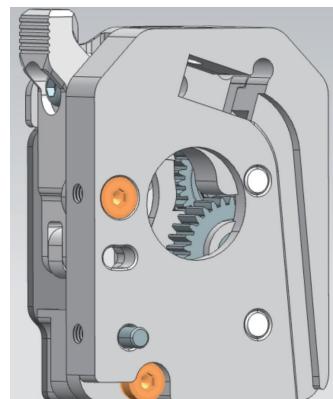




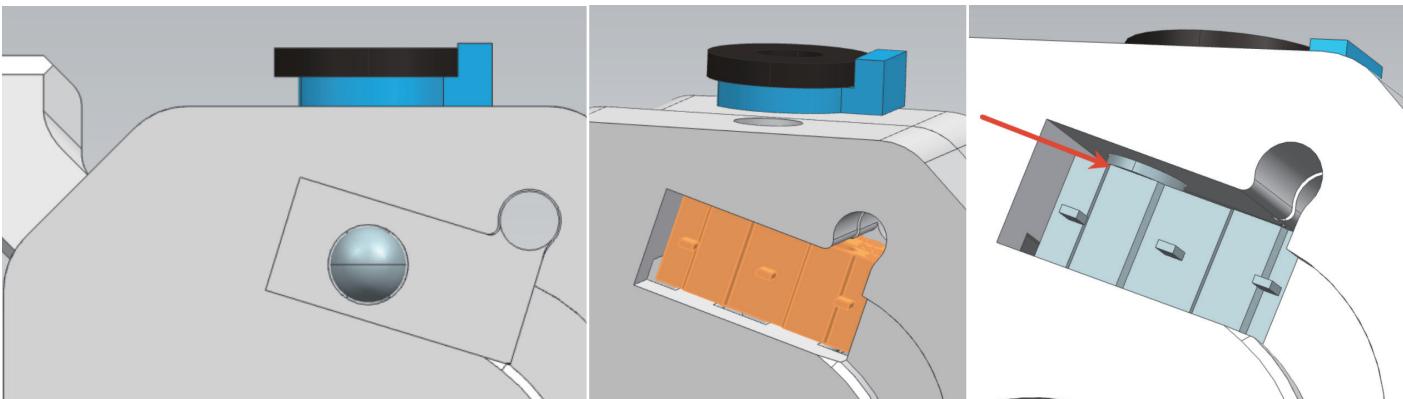
4. Install the rear cover.



5. Install the pressure rocking arm with the spring on the side, and secure it by tightening the M3x12 round head screw until slight resistance is felt.

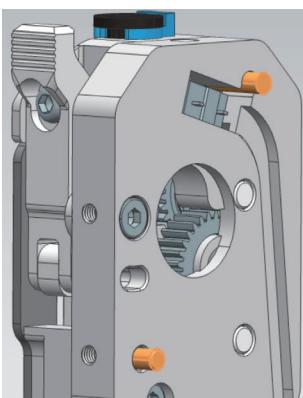


6. Locking (upper tapping bolt M2.5x3x15 shaft through the shaft of the pressure rocking arm) (lower round head screw M3x16)

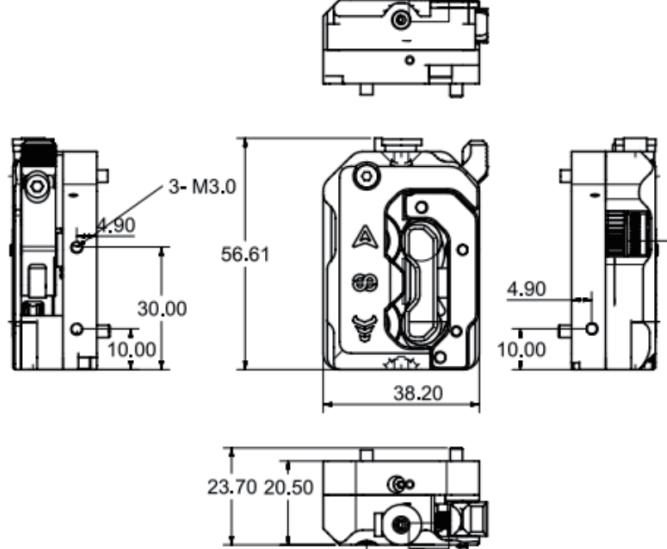
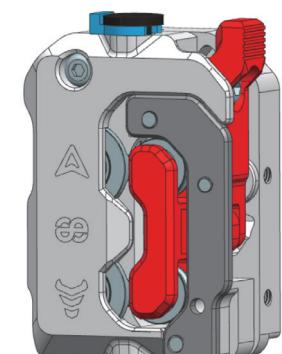


7. Install the material break sensor

① Insert the 4mm steel ball and micro switch. Secure the micro switch with an M2x10 self-tapping screw installed from top to bottom.
(After tightening, ensure the end face of the screw head presses firmly against the micro switch, and that the switch remains stable with no movement when pulled.)



8. Install the motor using the M3x20 socket head cap screw and the M3x9 round head screw pre-embedded in Step 3.



5. Material Break Sensor Wire Sequence and Precautions

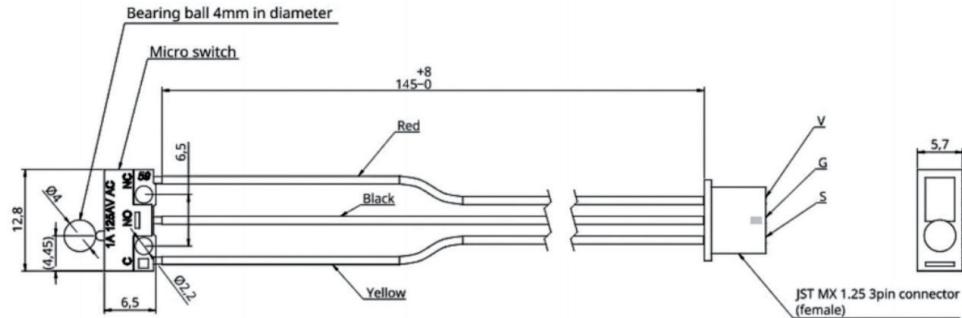
1. Material Break Sensor Wire Sequence:

Connector cable wiring sequence layout

VCC power: Red

IO Signal: Yellow

GND: Black



2. Safety Precautions: Safety Matters to be Aware of During Operation

- Do not stress the cable when picking up the motor, which may lead to cable breakage and circuit abnormality.
- Composite filaments such as CF/GF are brittle and easy to break, and it is recommended to use Teflon tubes to guide in and out of the filaments at the upper and lower ends.

6. Packing List (Parts and Accessories)

Including:

DXC Extruder*1

DXC Extruder Extension Cable*1

H2 Hey Key*1

M3*4 Button Head Screw*1

7. Contact Information

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