Twin Screw Pellet Extruder Nano 2 Intro

1. Overview

Nano 2 is a high-performance compact twin-screw pellet extrusion module designed for desktop 3D printing modification and material research. It uses a counter-rotating intermeshing twin-screw structure to achieve stable, continuous and highly adaptable material feeding, supporting a wide range of materials from standard thermoplastics to highly filled industrial pellets and experimental composites such as PLA, ABS, ceramic-filled and metal-filled compounds. It supports 12V/24V dual power input and a plug-and-play interface for fast integration with mainstream desktop 3D printers.

2. Feature

2.1. **Twin-screw stable feeding structure.** The counter-rotating intermeshing twin-screw design enables continuous and uniform pellet feeding, significantly reducing backflow and slip, and improving long-duration printing stability.

2.2. **High-precision extrusion control**. Equipped with a standard 0.4 mm nozzle, it balances fine detail and stable flow output, making it suitable for high-consistency production of both prototypes and functional parts.

2.3. **Efficient heating and stable melting.** A 230W dual ceramic heating system provides rapid heat-up and maintains a stable molten state, supporting continuous extrusion of highly filled and engineering-grade materials.

2.4. **Rapid integration design.** Supports 12V / 24V power input and a 12-pin quick-connect interface, enabling fast integration with mainstream desktop 3D printers for plug-and-play installation.

2.5. **Active thermal management structure.** Mica insulation combined with active cooling effectively controls heat conduction, preventing premature pellet softening and reducing clogging or flow instability.

3. Comparison with Single-Screw Technology

More stable feeding.

The intermeshing twin-screw design provides forced conveying, ensuring reliable feeding of pellets and composite materials without depending on barrel friction. It maintains stable performance even with low-flowability or irregular particles.

More consistent extrusion output.

Stable conveying pressure and improved mixing performance reduce output fluctuations, resulting in more uniform extrusion and higher printing accuracy.

Wider material compatibility.

Compared with single-screw systems, it handles highly filled, composite, and heterogeneous materials more reliably, maintaining stable processing across a broader material range.

Higher operational stability.

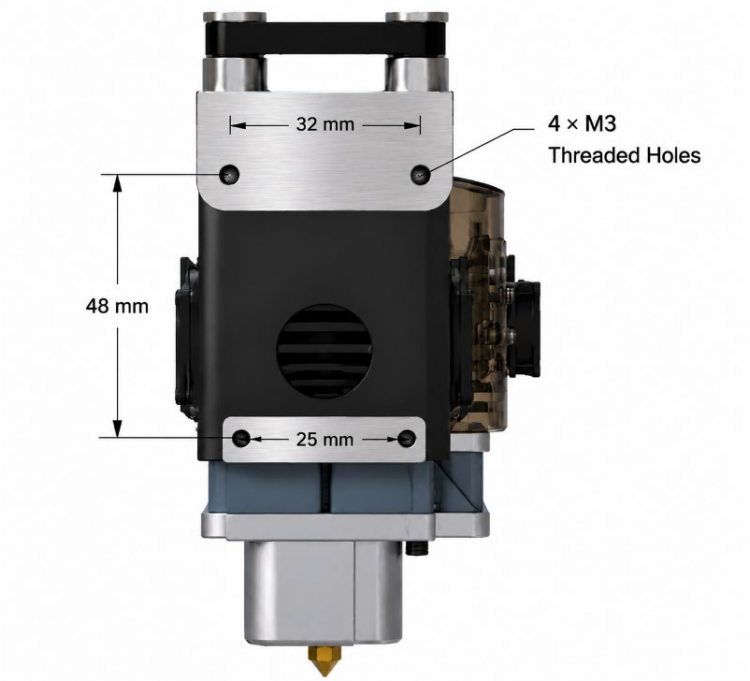
The self-cleaning structure reduces melt zone buildup and clogging risk, enabling longer continuous operation with lower maintenance requirements.

4. Specs

Nozzle	0.4 mm	**Power Supply**	12V / 24V DC
N.W.	700 kg	**Heating Power**	230 W
Interface	12-pin quick connector	**Cooling**	mica insulation + active cooling system
Motor:	1:54 high torque stepper motor	**Materials**	plastic pellets, composite pellets, ceramic or metal polymer compounds

5. Photos

6. Installation Dimensions



7. Warranty

7.1. Warranty is 12 months; within this period, free parts for non-human damage and remote replacement guidance are provided.

7.2. After warranty, parts are offered at cost or purchase channels will be provided.