

OVERVIEW

The THING Pellet Extruder is a cost-effective research tool designed for evaluating a wide range of materials in additive manufacturing applications. Engineered for compatibility with most budget-friendly 3D printers, it combines universality, adaptability, and performance—making it ideal for material research and small to mid-scale FGF printing trials.

Key features include:

- Universal control logic (STEP/DIR motor control, thermistor, 24V fan voltage - all similar to regular FFF extruder connections)
- 12mm screw to accommodate different pellet shapes and sizes
- Twin, symmetrically placed 40x20mm cooling fans (detachable)
- M6 thread nozzle compatibility
- Custom, universal screw design
- Ease of disassembly and cleaning

CHARACTERISTICS

Weight	~1400g
Motor control	Step/Dir (Geared Stepper)
Heater	220V, 200W, SSR controlled
Temperature sensor	100k Thermistor
Max temperature	300°C*
Nozzle thread	M6x6
Nozzle diameter	0.3-3mm**
Throughput, max.	~500g/h***
Screw diameter	12mm
L:D ratio	10:1
CR	2,67:1
Radiator & Cooling Fans	24V, 18,25m³/h each

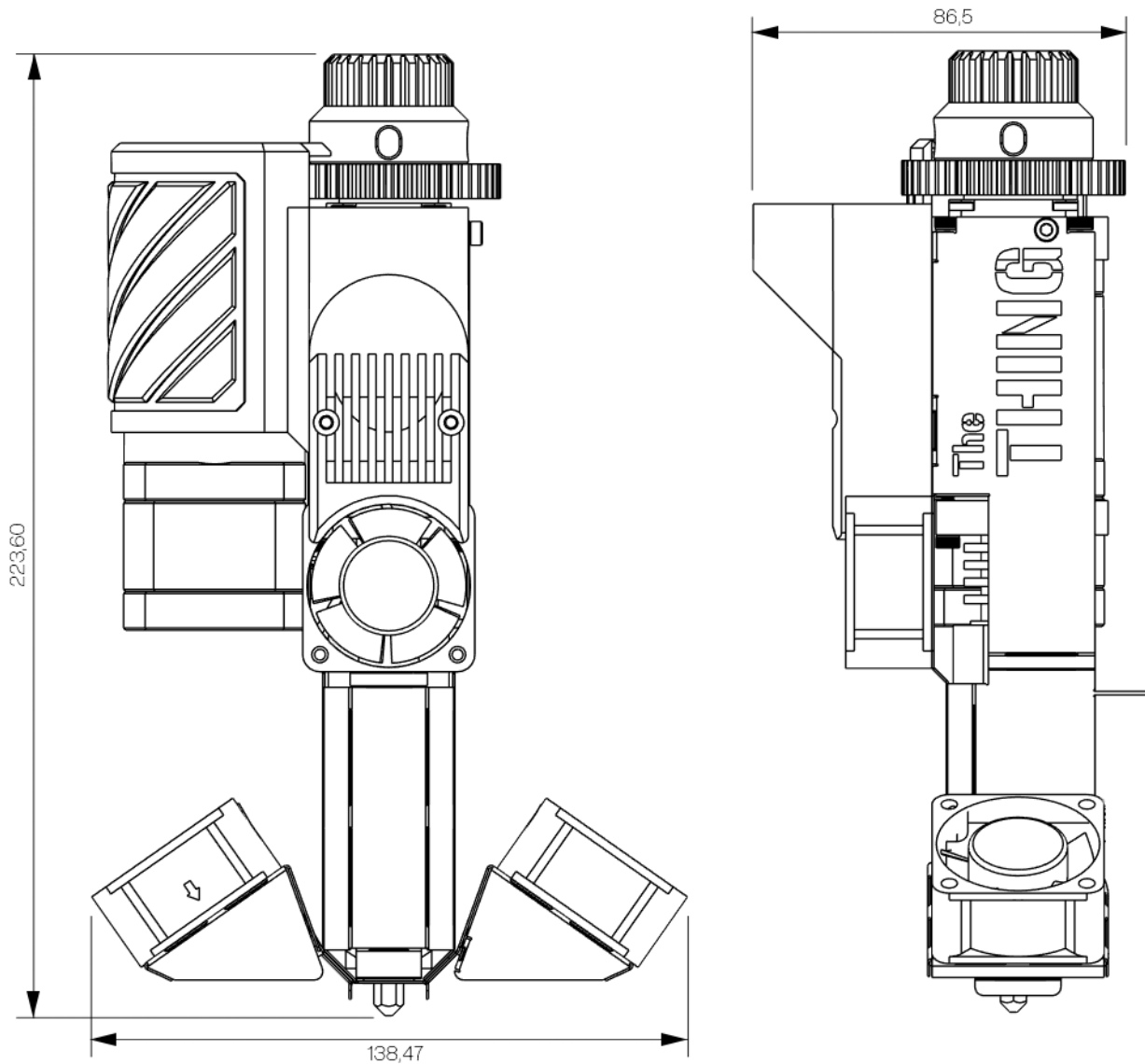
* - can be increased - requires an alternative temperature sensor.

** - A 0.3mm nozzle was successfully tested. At that size, contamination of the pellets with other solids must be avoided to prevent clogging.

*** Throughput depends on material properties — it will vary based on pellet shape, size, polymer properties, and density. The value given was experimentally determined using rPPGF30. Denser materials might result in higher apparent flow rates.



DIMENSIONS



ANCHOR POINTS

M3 threaded mounting holes

Simplified STEP file available for sizing

