

June 7, 2019

Why the 3ntr Printing Platform?

Here is a list of printer strengths for your consideration:

1) 3 Nozzles

- a. True multi-material printing. Two different build materials and one support material printing in the same build.
- b. Two different build materials and one support material printing two different parts in the same build
- c. Two spools of the same material printing with one support material enabling a very long print with no material switchover (our customers routinely print very large parts in 4 or more day builds)
- d. Redundancy.
- e. You can decide to go with Tungsten nozzles (for filled and unfilled materials) and be able to print with all materials without having to change any nozzles when a material change is needed.

2) Liquid Cooling System for Printhead

- a. Provides constant temperature in the nozzle enabling a consistent material flow giving better layer adhesion and surface.
- b. Allows for high temperature nozzles
- c. Rapid nozzle heat up and cool down

3) High Performance Ceramic Heaters

- a. Sustained high performance heating
- b. Rapid heat up and cool down

4) Filtration

- a. Integrated HEPA and charcoal filtration removing unhealthy fumes and particulates from the air. This is a solution to what could become a health problem that exists with all FDM/FFF type printers. 3ntr is one of the very few with a standard equipment solution. More studies are surfacing regularly reinforcing how important this is.

5) Ultem Coated, Carbon Fiber printbed

- a. Very low maintenance with strong bonding during build and self-release after just a few minutes of cooling. You need to see it to understand how well it works!
- b. Magnetic printbed placement for easy release and reset. Level from the factory with no additional leveling needed
- c. Simple cleaning with isopropyl alcohol

6) Precision

- a. Combination of hardware and software providing the highest level of precision that FDM/FFF can offer
 - i. Adaptive Z allows precision fixed Z printers just can't accomplish
 - ii. Z overlapping and best in class tool paths make parts measurably stronger than most FDM/FFF printers.

7) Material Feeders

- a. Low maintenance, easy to remove and service
- b. Easy material changes
- c. 1.75mm and 2.85mm filament size available as well as the ability to mix

8) Materials Management System (MMS)

- a. When our printer is integrated with our MMS you can
 - i. Track material usage in real time
 - ii. Keep your materials dry
 - iii. Enable already easy material changes to be even easier (up to six ready to go spools of material)
 - iv. Store additional materials while not in use
 - v. Use the wireless tablet provided with the MMS to manage prints from any location within the same LAN.

9) Forget the printer for a moment

- a. You have a wide range of build and support material options with profiles provided for our certified off the shelf materials
- b. You can select your own materials and tune them if you choose without impacting the warranty
- c. Material choices will enable you to address a range of market needs. You can address these needs without having to acquire a specialty printer.

10) Last but not least

- a. We believe there are three things that help to determine the right acquisition decision. They are all critical.
 - i. The materials...open, custom, many, tuned, collaboration
 - ii. The printer
 - iii. The people. This means good communication, good service, proactive education, passion, and goes from the first contact with one another and continues for years.