TRAK® MACHINE TOOLS

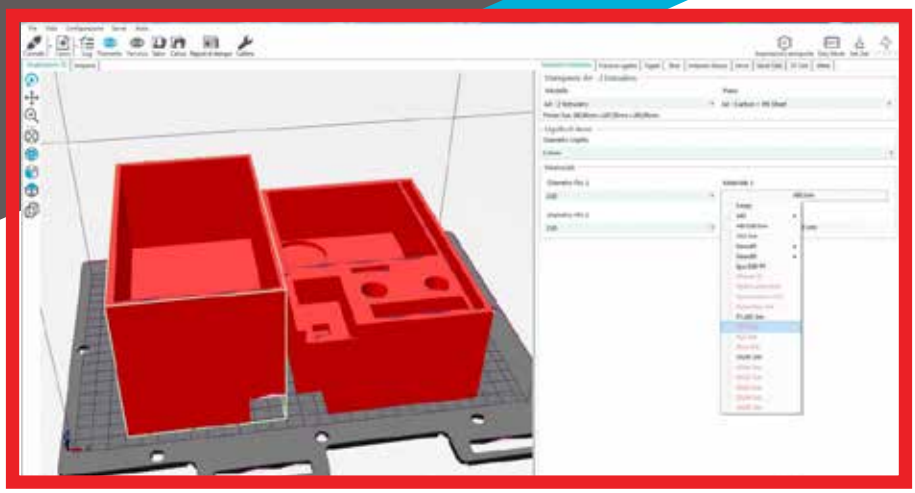
SOUTHWESTERN INDUSTRIES, INC.

3ntr

Industrial 3D Printers

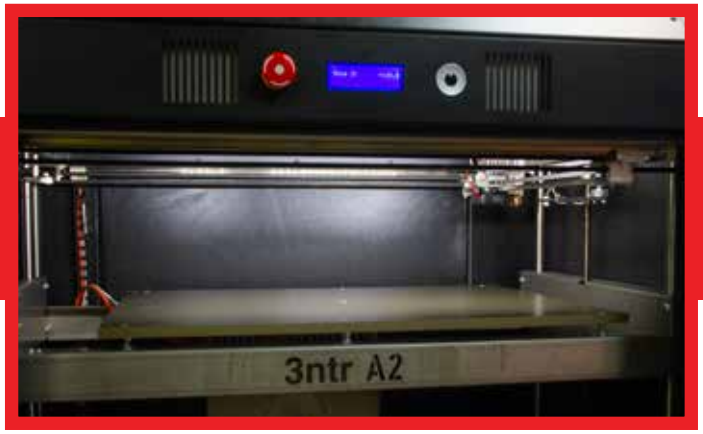
- High quality, functional parts.
- Low cost per part.
- Accurate, repeatable process.

Reliable Results



Smart Slicer Interface - SSI

- SSI is the software developed by 3ntr that is automatically so every user is always working with the most recent production parameters
- Easy to use and reliable in industrial applications
- SSI is an intelligent control panel that makes the most of our printers; a single program to place, prepare and print



Build Chamber

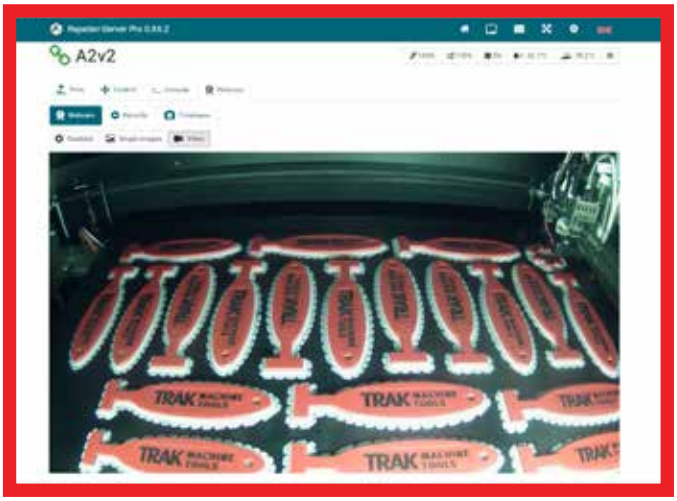
- Generous capacity for parts up to 23.6” x 11.8” x 19.6”
- Individually controlled heating elements to achieve optimal accuracy and finish from the material you use
- HEPA filtered air flow to limit contamination

Build Plate

- Reusable bed for thousands of prints with minimal maintenance
- Removable build plate utilizes magnetic locators for precise positioning
- High tech carbon construction with ultem coating that holds parts firm while printing, but allows of easy release once cooled

Three Extruders

- Prints up to three polymers at the same time
- Two extruders for build material allows combinations of materials on a single build
- One for support material
- Liquid cooling at each extruder for precise temperature control



Integrated Camera & Web Monitoring

- Through a print server the printers can be networked to manage them locally or remotely, making them compliant with the Industry 4.0 decree
- Monitor the build process from another location
- Make remote adjustments through the web interface

Combine Materials for Lower Cost

The part shown here was made with a combination of two different build materials. For the internal shaft, IGUS Iglidur is used for self-lubricating and hardness. To minimize the part expense, the body is made of ASA.

ABS & ASA

You will love the results you get when printing these standards of the industry. We offer formulations in different colors especially made for 3D Printers.

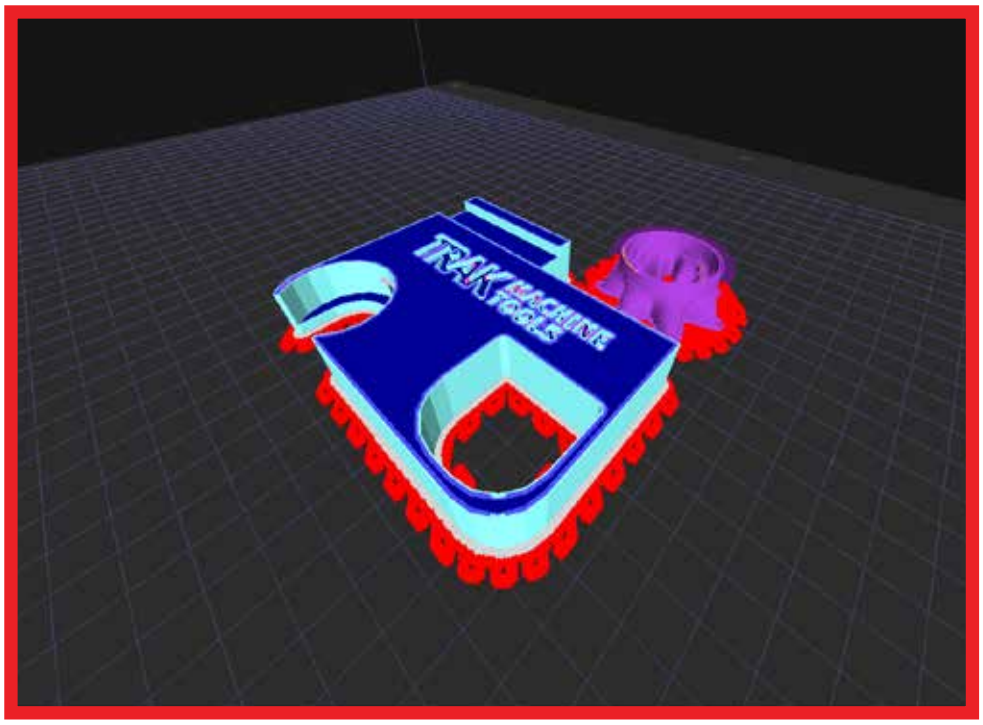
Open Materials

Materials development is the new technology frontier in 3D Printing

Many of the world's top chemical engineers are racing to develop the thermoplastics of tomorrow. But many new, innovative materials already exist. With the **Open Materials** platform, you are free to explore and develop superior solutions.

Powerful, Flexible User Interface

KISSlicer is powerful software that prepares STL files for optimized printing. The user interface enables you to select preloaded settings or to adjust dozens of variables yourself.



- **Adaptive Layer Control -** enables you to optimize layers
- **Preload -** precise control of how the printer extrudes filament
- **Expert Mode -** enables you to precisely set variables for your own unique configurations
- **Fractional Number of Loops -** improves bonding between loops and infill
- **Lock Paths -** lets you configure different styles for different parts on a single print
- **Wizards -** guides the processes of setting up Profiles and Tuning the material flow

...and dozens more innovative features!

Design For Additive (like never before)

Your imagination gets a boost from the multi-material capability of 3ntr printers. The part to the left is the result of combining formerly separate parts to achieve a single design, integrating a hose and filter housing.

Support Material

With the 3ntr, you can have a different support material and build material. Choices include break-away and soluble material that complement the build material. Your part finishes and delicate features will come out beautifully.

Large & Complex

This part requires the precision of an Industrial Grade 3D Printer. Complex parts often use soluble support material to preserve the precision of the delicate features.

Rubber-like Materials

The controlled build chamber and powerful software enables you to make soft, flexible components.

Multiple Colors

You can print in two colors simultaneously.

Specifications

Dimensional Data	A2	A4
Printer Dimensions	940 x 715 x 1125 mm 37 x 32 x 44.3”	528 x 515 x 615 mm 20.7 x 20.2 x 24.2”
Printer Weight	110 kg | 242 lbs.	43 kg | 94 lbs.
Shipping Dimensions	1041 x 831 x 1321 mm 41 x 32.7 x 52”	681 x 620 x 920 mm 26.8 x 24.4 x 36.2”
Shipping Weight	226 kg | 498 lbs.	69 kg | 152 lbs.

Electro / Mechanical Data	A2	A4
Ambient Operating Temperature	16-32° C | 61-90° F	
Storage Operating Temperature	5-40° C | 41-104° F	
AC Input	220/230 Vac - 15A	110/120 - 15A
Connectivity	USB, Micro SD, LAN	
Steel Cabinet / Frame Construction	2mm (.08”) Powder Coated	

Printing Specifications	A2	A4
Printer Technology	Fused Filament Fabrication	
Number of Extruders	3	
Build Volume - W x D x H[1]	600 x 300 x 500 mm 23.6 x 11.8 x 19.6”	295 x 155 x 200 mm 11.6 x 6.1 x 7.8”
Positioning Precision - X-Y	11 Microns | .000433”	
Positioning Precision - Z	40 Microns | .0002”	
Positioning Precision - Extruders	.9 Microns	
Filament Diameter	2.85 mm +/- .1 mm	
Standard Nozzle Diameter[2]	.4 mm | .01575”	
Maximum Extruder Temperature[3]	430° C | 806° F	
Maximum Heated Bed Temperature[4]	110°C or 230°F (110v) | 130°C or 266° F (220v)	
Maximum Heated Chamber Temperature [5]	80°C or 176°F (110v) | 90°C or 194°F (220v)	
Minimum Layer Thickness	50 Microns | .00197” (.3mm nozzle)	

[1] A4 depth (D) is 39 mm (1.54”) less with three nozzles installed, A2 is 35 mm (1.38”) less

[2] Available nozzles: .3 mm, .4 mm, .6 mm, .8 mm & .4 mm hardened anti-abrasion

[3] Standard / Optional maximum nozzle temperature: 430° C on 2 of 3 nozzles

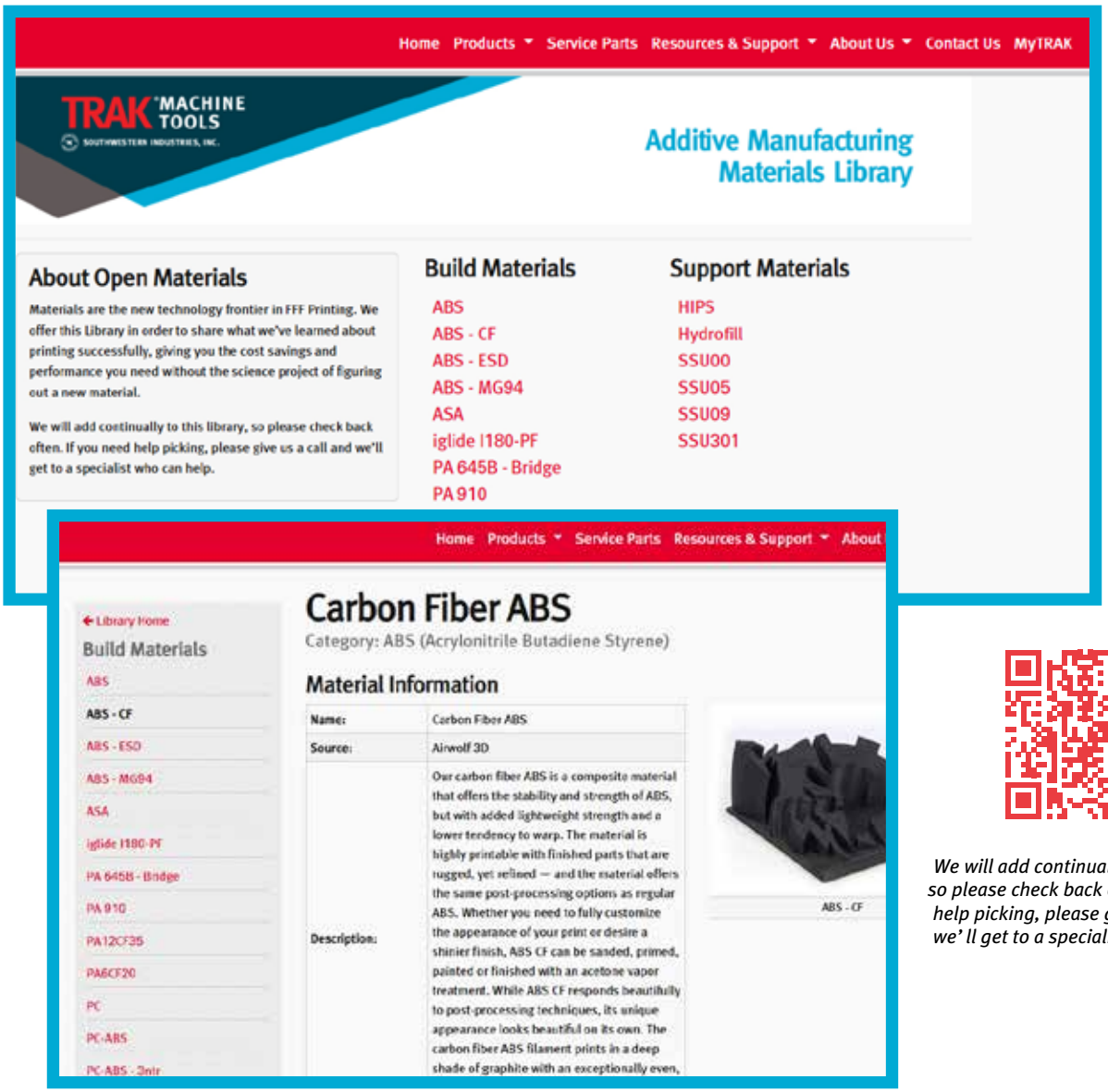
[4] Measured at the heater on the aluminum print base

[5] In conjunction with heated bed at maximum temperature

All specifications are subject to change due to ongoing research and product development.

Materials Library

Materials are the new technology frontier in FFF Printing. We offer this Library in order to share what we've learned about printing successfully, giving you the cost savings and performance you need without the science project of figuring out a new material. www.trakmt.com/materials



We will add continually to this library, so please check back often. If you need help picking, please give us a call and we' ll get to a specialist who can help.

Request a Sample Part Today!

About the manufacturer

3ntr is a 50 year old manufacturing business with deep roots in Oleggio, a traditional apparel manufacturing district outside of Milan, Italy. The inventor of the core technology, Davide Ardizzoia, draws on his long experience in engineering material flow through highly-automated equipment. Because of its innovative design the, 3ntr printer appeared on the cover of the Italian version of Wired Magazine shortly after being introduced to the European market. In five years of sales, the Model A2 and A4 have been embraced by industry-leaders such as Airbus, Louis Vuitton, and Crocs.

About Plural AM

Plural AM is the exclusive 3ntr provider in North America and our strategic partner in serving customers needs in 3D Printing consulting for new materials and advanced projects. Plural AM founders background in high-end CAD systems and manufacturing enable expert advice on cost effective rapid prototyping and functional low volume parts manufacturing. For the last five years, Plural AM has experts in the design, materials and processes crucial to successful Additive Manufacturing with 3ntr printers while developing new capabilities. They put that expertise to work with us to assure that our customers get the very most from their investment in a 3D Printer.

About TRAK Machine Tools

Our long involvement with providing technology-driven tools to machine shops dates back to the first introduction of the Trav-A-Dial in the 1960s. Since its introduction in the 1980s, our ProtoTRAK CNC has become the industry standard in controls for small lot milling. In the process, we have developed Sales, Service and Technical Support resources unsurpassed in our industry – with a strong presence in R&D and Engineering.
We are applying our excellence in support to assure that our customers have the best possible outcome from their purchase of a 3D Printer.

Introducing the

TRAK VMC2

Support your Printing with a real machine tool.

- Designed for second operations.
- Easy to learn and use.
- Strong and rigid construction.
- Portable for moving to the job.

TRAK MACHINE TOOLS
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