ZYYX Labs

ZYYX Pro II

ZYYX Pro II is an exceptionally quiet industrial grade composite 3D printer with a closed design and clean room class air filtering system, perfectly suited for every office, workshop, classroom, or makerspace

Pros

+ Clean and Fume-free
+ Quiet
+ Heated Chamber
+ Easy-to-Use
+ Robust and Reliable

Welcome to the Lab.

ZYYX Pro II

The ZYYX Pro II is an industrial-grade composite 3D printer. It is specifically developed to let professionals rapidly produce customized high-strength composite parts at their desk, for instance functional prototypes and end-use parts such as tools, jigs, and fixtures.

Fume-free
With HEPA and active carbon filters that remove ultrafine particles and odors from the outflow air, the printer is OfficeSafe Ultra™ fume-free

38 dB

Quiet
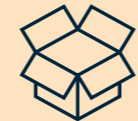The ZYYX Pro II printer is designed with carefully chosen components to be quiet as a Whisper

Desktop
The desktop design allows for instant access, high productivity, and true agile development with a fast 24h Prototype Cycle™

Magnetic Flexibility
The MagFlex™ spring steel build-plate makes removal of the print easy to do by hand by gently bending the plate.

Workhorse
The ZYYX printers are reliable and robust, with previous customers referring to them as the office "Workhorse"

Out-of-the-box
The printers are pre-calibrated and ready for use at delivery, all inclusive.

75 °C

ZYYX Pro II for Professionals
The hardened SwiftTool™ and 75 °C chamber enable use of engineering-grade composite materials to make functional prototypes and high-strength parts

Remote access
The included Ethernet module with optional camera allows you to control and monitor the printer from the next room – or the other side of the planet

Unique Features of the ZYYX Pro II

OfficeSafe Whisper™ – Quiet by Design
While designing ZYYX Pro II we tested dozens of power-supplies. They were all found to be noisy, often due to cooling fans suddenly flipping on and off or small whining fans. So, we decided to do our own cooling solution together with a 500 W passive power-supply. That made a huge difference. The ZYYX Pro II PSU is virtually silent. For filters and cooling we used large fans from Noctua and Arctic, famous for their low-noise design in the gaming PC area. The result is a whisper level 3D printer with a 38 dB(A) sound level while printing with all heating functions active.

OfficeSafe Ultra™ - Clean and Fume-free Air
Workplace health is of highest priority and the ZYYX Pro II is designed as a closed, under-pressured and air-filtered containment to be perfectly safe for the office desktop. Our new filtering system, a Swedish-made combined HEPA H13 and active carbon filter, removes more than 99.95% of the ultrafine particles, volatile organic compounds, and odors that are created in the air from melting polymers. This innovative, 95 mm thick filter of clean-room class is so efficient that it even cleans the air of the room.

ZYYX MagFlex™
The new ZYYX MagFlex™ spring steel build-plates make removal of prints easy to do by hand. The 3D printer bottom glass platform, adapted with steering pins for easy positioning of the build-plate, is covered with a magnetic layer. Due to the steering pins, the build-plate is swiftly positioned accurately on the glass platform and attaches firmly by magnetic force. After printing, the build-plate is lifted from the glass base after which the print is removed from the build-plate by bending the plate. The build-plates are available with three different top layers adopted for different print materials.

ZYYX proTect™
The ZYYX Pro II comes with the proTect™ system that has been developed to maximize filament durability during storage. The moisture sensitive filament is kept in a resealable vacuum bag with a dehumidifier capsule. Vacuum is accomplished with an electrical vacuum pump (included). The dehumidifier capsule changes color if it is exposed to moisture, signaling if extra drying of the filament is needed before use which avoids failed prints and saves time and material. During printing, the filament is taken out of the bag and kept dry inside the heated print chamber.

Robust Design
• All-metal structural design giving stability and quality for prints
• Thick and stable aluminum top plate with linear rails
• Heat insulated cover and see-through service top door
• OLED screen with high contrast and readability

Controlled printing environment
• Heated chamber – provides a consitent printing environment tuned to the chosen material, securing layer adhesion and preventing warp. A heated chamber is necessary for some high-strength engineering grade materials
• Chamber temperature up to 75 °C. Heats chamber to 65 °C in 5-10 minutes.
• Automatic Leveling – auto-calibrates the distance between the print-head plane and build-plate for every print, compensating for any tilting of the build-plate
• Material Monitor – auto-pauses the print during filament run-out or tangling
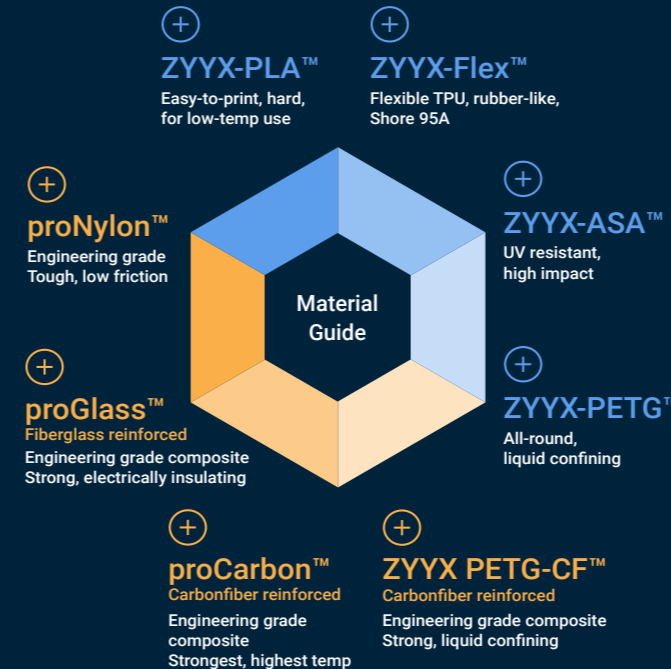
Unique extrusion system
• Dual-sided large gear extruder (Bondtech LGX) with support for high-temp printing
• Supports SwiftTool24™ – quickest system for nozzle change on the market, up to 275 °C (and coming SwiftTool24™ up to 450 °C)

Versatile software use
• Simplify3D, the market leading software, is included
• Open-material system – no limitations, you decide
• CyberSafe – can be used off-grid/stand-alone – no computer/internet needed during printing
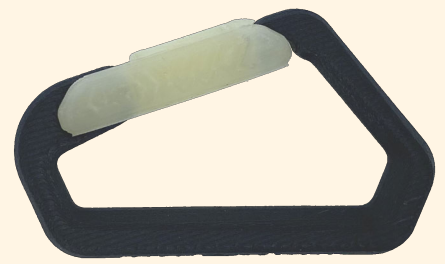• Remote access Ethernet module with optional camera

The Materials

The ZYYX user can choose from a line of carefully selected high-quality polymer materials that comes with plug-and-play profiles.
The ZYYX printers are also compatible with other material brands through their open-material system with all settings available for user tuning.

Material Guide

ZYYX-PLA™
Easy-to-print, hard, for low-temp use

ZYYX-Flex™
Flexible TPU, rubber-like, Shore 95A

proNylon™
Engineering grade
Tough, low friction

ZYYX-ASA™
UV resistant, high impact

proGlass™
Fiberglass reinforced
Engineering grade composite
Strong, electrically insulating

ZYYX-PETG™
All-round, liquid confining

proCarbon™
Carbonfiber reinforced
Engineering grade composite
Strongest, highest temp

ZYYX PETG-CF™
Carbonfiber reinforced
Engineering grade composite
Strong, liquid confining

Print Samples

PLA (top) + proGlass (bottom)
Functional thread between parts

NinjaFlex
Softest TPU on the market

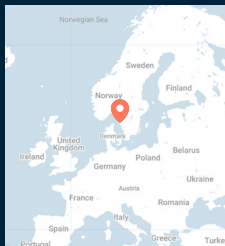**PLA (0.2 SwiftTool)**
SD card shown for size comparison

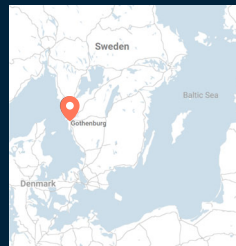**proNylon+proCarbon**
Carabiner tested for 140 kg

ZYYX Pro II Technical Specifications

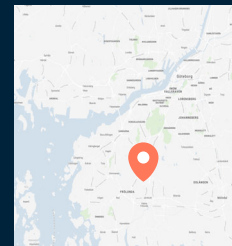|	
Print technology	Fused Filament Fabrication (FFF)
Product weight	25.5 kg
Product size (BWD, mm)	441 x 465 x 457 mm (536 incl. filter)
Build volume	285 x 235 x 210 mm
Printing (extruder) temp.	100 - 275 °C (up to 400 °C soon)
Chamber temperature	Room temp to 75 °C. Heats chamber to 65 °C in 5 minutes
Stepper motor type	1.8° step angle, 1/256 micro stepping using silent Trinamic TMC2209 stepper drivers
Max resolution	50 µm layer thickness, 11 µm XY positioning
Speed	Up to 200 mm/s print speed
Build-plate	MagFlex™ Glass build-plate with removable magnetic spring sheet
Extruder	Dual-sided large gear extruder (Bondtech LGX) with support for high-temp printing
Nozzle system (all mtrls)	SwiftTool24™ Carbon 0.4, 0.6, 1.2 mm
Nozzle (basic mtrls)	SwiftTool24™ Multi 0.2 mm

Filament diameter	1.75 mm
MagFlex™ Pro materials	ZYYX proNylon, proCarbon, proGlass
MagFlex™ Multi-Materials	ZYYX-PLA, ZYYX-Flex, ZYYX PETG, ZYYX PETG-CF, NinjaFlex, many third party filaments
MagFlex™ Perforated materials	ZYYX-ASA, ZYYX-ABS, third party filaments with significant shrinkage
Interfaces	SD Card, USB for firmware updates, Ethernet
Firmware	Custom Sailfish Open Source
Network	Web interface with optional camera
Desktop Software	Simplify3D
Min. computer requirements (for data preparation)	Intel Pentium 4 or higher processor, 4 GB of RAM, Windows 7 or later (32- or 64-bit), MacOS X 10.7 or later, Ubuntu Linux 14.04 LTS or later. OpenGL 2.0 capable system, Internet connection
Recommended computer requirements	Intel Core i7 or better CPU, 8 GB or more of RAM
Supported import file types	STL, X3G, 3MF

Europe

Sweden

Gothenburg

ZYYX Labs

Reseller

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