

# Technical specification

Technology	FDM / FFF
Printing volume (XYZ)	600 × 500 × 750 mm
Filament	1,75 mm (2,8 mm, 3 mm according to the extruder)
Filament holder	2x on the top, 2x filament box, max. weight 2x 5 kg, box up to 3 kg (depends on the spool dimensions)
Extruder	dual, replacable
Movement accuracy (XYZE)	12,5 µm / 12,5 µm / 5 µm / 24,3 µm 0,0125 mm / 0,0125 mm / 0,005 mm / 0,0243 mm
Max. feed rate (XYZE)	200 mm/s / 200 mm/s / 10 mm/s / 100 mm/s
Feed XYZ	linear rails
Move XYZ	high precision ball screw
Print surface	Buildtak / PEI, replacable, magnetically attached
Max. nozzle temperature	470 °C
Max. heatbed temperature	160 °C
Chamber heating	yes, actively heated up to 60 °C
Power	2500 W
Power supply	230 V AC 50 Hz
Connectivity	SD card, USB
Layer height	from 50 µm to depends on the nozzle
Nozzles	installed 2x 0,4 mm, M6, hard nickel coated tool steel
Nozzle copatibility	all nozzles V6 with M6 thread according to the heating cube
Filament feeding	bondtech gears
Material to print	all FDM / FFF filaments (2021 - 105 materials)
Display	touch 7"
Filament sensor	yes + filament stop detection
Safety	hotend temperature monitoring, chamber temperature, extruder, electronics
Calibration	automatic, automatic heatbend alignment
Compensation	yes - automatic
Lighting	yes, LED - 2700 lm
Other accessories (can be purchased)	Raspberry PI remote access, possibility to connect: mouse, keyboard, touchscreen, HD camcorder to RPI
Dimensions	1020 × 1030 × 1484 mm (1600 mm with filament holder)
Weight	225 kg
Multifunctionality	3D printing, laser engraving, we are preparing laser measurement and more

## Safety

Proton XE-750 contains security features that meet safety standards to protect the users and equipment. The printer automatically shuts off if any dangerous event occurs. Thermal sensors monitor the temperature of the extruder assembly, the hotends, the temperature in the chamber and also the temperature of the electronic parts. The electronics have their own efficient cooling.



**INAT s.r.o.**

Cesta na Hohenau 2/5  
908 71 Moravský Svätý Ján

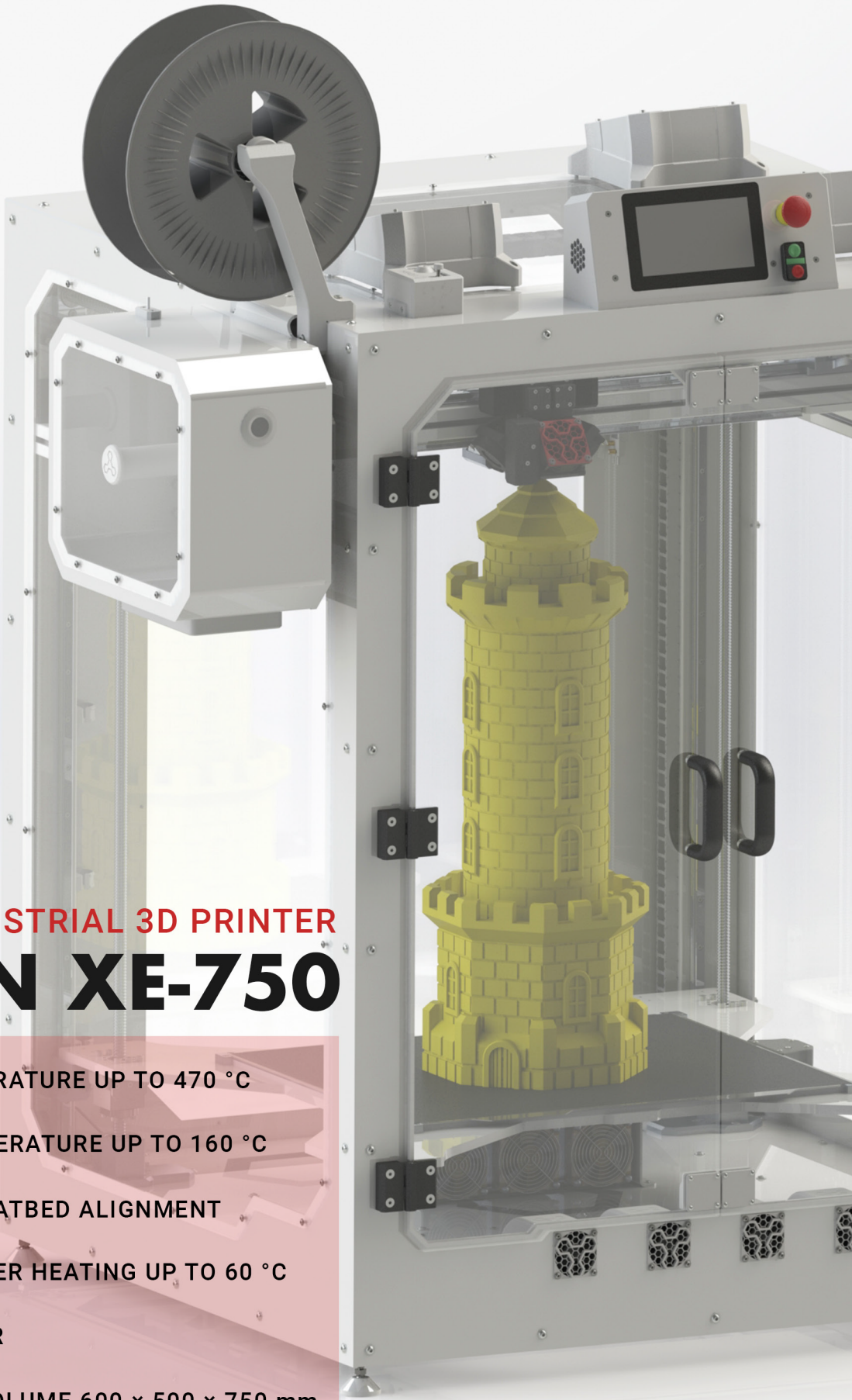
www.3dinat.sk | fb.com/3dinat  
+421 915 731 792 | info@3dinat.sk



WWW.3DINAT.SK

## INNOVATIVE INDUSTRIAL 3D PRINTER PROTON XE-750

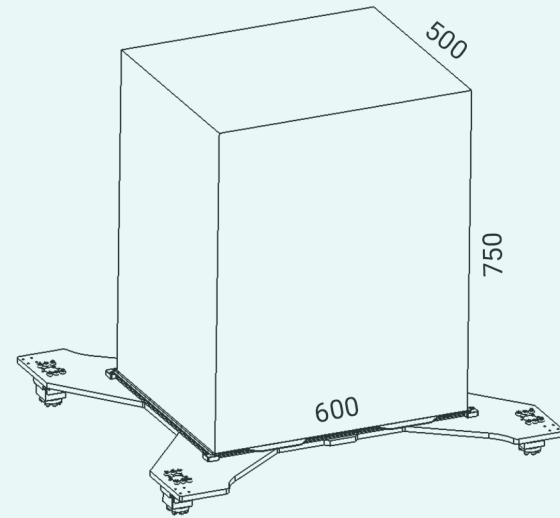
- ⊕ NOZZLE TEMPERATURE UP TO 470 °C
- ⊕ HEATBED TEMPERATURE UP TO 160 °C
- ⊕ AUTOMATIC HEATBED ALIGNMENT
- ⊕ ACTIVE CHAMBER HEATING UP TO 60 °C
- ⊕ DUAL EXTRUDER
- ⊕ 3D PRINTING VOLUME 600 × 500 × 750 mm
- ⊕ SAFETY FEATURES





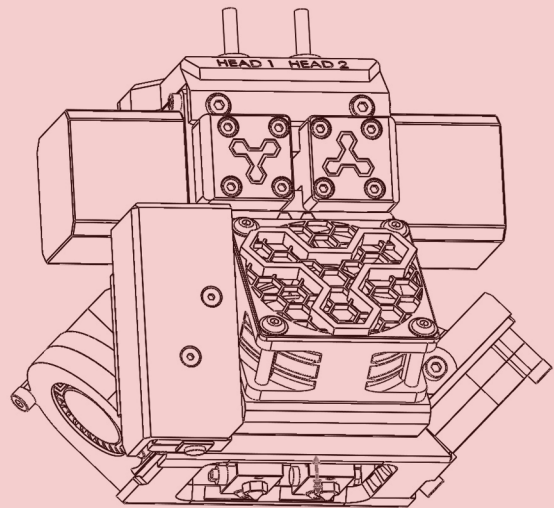
## Printing space

The Proton XE-750 offers a print volume of **600 × 500 × 750 mm**, which makes it possible to print large objects for prototypes, architecture, art and others. The user has the option of choosing a nozzle and extruder technology for precise printing and fine details or high-speed printing for fast object creation in full volume. The 3D printer can also handle very small and detailed objects only a few millimeters in size. The accuracy of the Z axis is 1 µm, the X axis - 10 µm and the Y axis 10 µm.



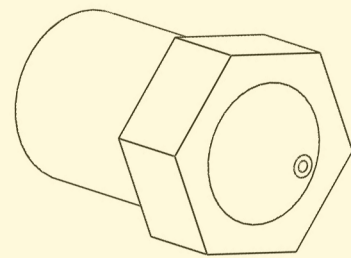
## Extruder

The basic assembly of the 3D printer contains a precisely tuned **double extruder**. All nozzles can be **heated up to 470 °C**, which allows the printing of high-temperature plastics and high temperature support material. It is also possible to print a combination of materials and thus improve the resulting mechanical and thermal properties of the part. In addition, a multicolored object can be printed. The range of applicability is from basic materials (PLA, PETG ...) to technical plastics (PC, PA, PEEK ...). It is also possible to print special composite materials such as plastics with carbon, glass or Kevlar fibers. This is made possible by a special hard nickel coated nozzle.



## Nozzle

The nozzles are made of **tool steel with hard nickel coating**, which ensures a long nozzle life even when abrasive materials are used. Due to its properties, the nickel coating prevents bonding with the filament, because some plastics are characterized by high adhesion to metals, such as PEEK.

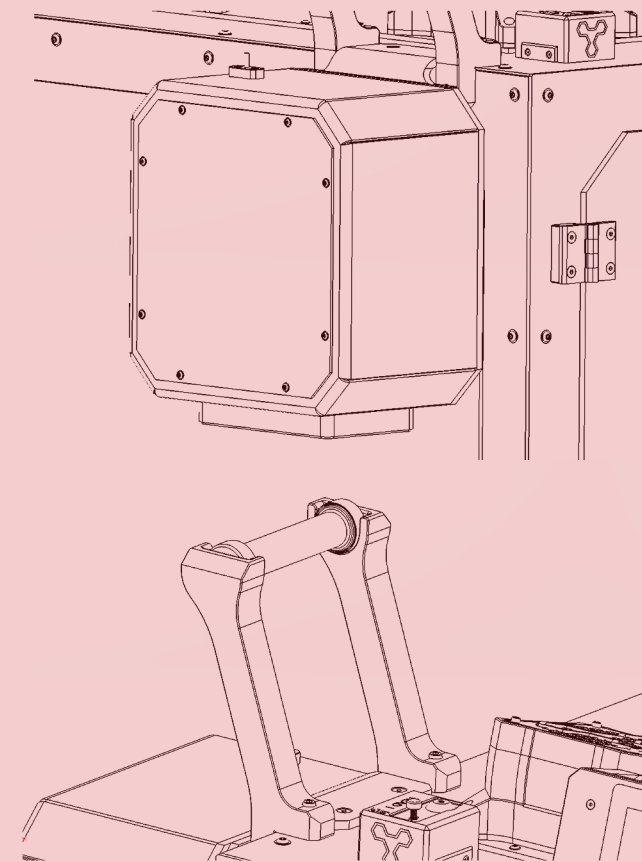


## Heatbed

The 600 × 500 mm heatbed maintains a temperature **from 25 °C to 160 °C continuously over the entire surface** until the end of even the most time-consuming print project. The 3D printer is supplied with two printing plates. One printing plate with a BuildTak surface up to 125 °C and the other with a PEI surface up to 160 °C. The heatbed is held magnetically with additional stops in the corners. The heatbed has fully automatic calibration and **automatic alignment** using four independent motors.

## Filament

**Filament can be placed in four places:** two filament holders on top of the 3D printer (each can carry a 5 kg spool) and two filament boxes that protect the filament from moisture. A spool of up to 3 kg can be placed inside the filament box. All filament boxes contain moisture and temperature sensors.



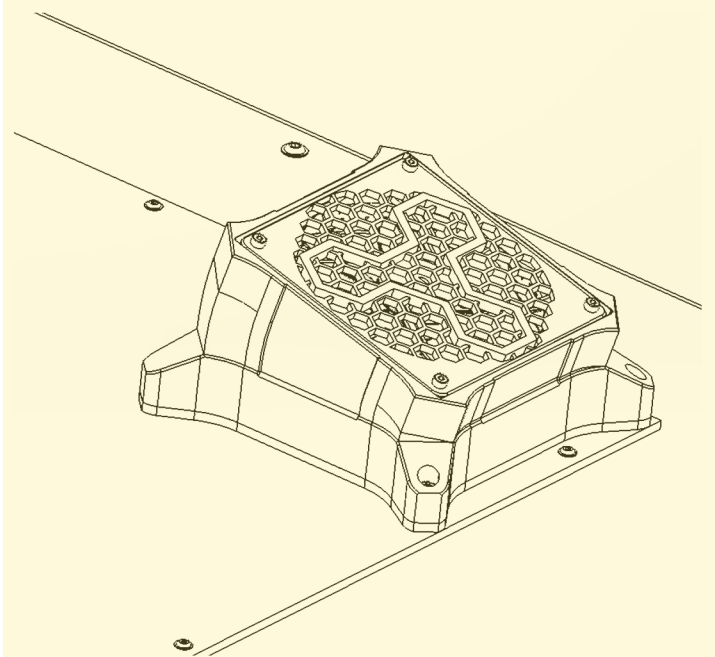
## Multifunctionality

Soon, we plan to bring out a **swappable laser head for metal, wood, plastics engraving** and wood cutting up to 15 mm thickness. The heads can be replaced using four screws and two connectors, while the replacement will not take more than 5 minutes.

It is also possible to use these extruders:

- extruder with one nozzle
- extruder with two nozzles

In the 3D printer chamber there are grooves into which additional lighting can be clamped, a camcorder on an arm, a 3D scanner and thus use the printing space and the heatbed for 3D scanning etc.



## Chamber and filtration

The 3D printer chamber is **actively heated, up to 60 °C**. The temperature is regulated thanks to the active ventilation on the top of the 3D printer. **The air is filtered by HEPA filters along with active carbon**, as some melting plastics produce toxic and dangerous gases. The interior of the chamber is illuminated with optimal light intensity.

