



SATURN



THE NEW FACE OF PRODUCTION

ATMAT. WE CREATE A WORLD WHERE CREATIVITY IS THE ONLY LIMIT

The **ATMAT Saturn** printer is an innovative device created for the production of large-size models using incremental technology. The robust and stable construction is accompanied by heavy-duty, industrial components. The implementation of state-of-the-art engineering solutions makes the device a precursor in the field of large-size 3D printing using FFF technology (Fused Filament Fabrication). The granite table with a working area of 1200 x 1000 x 1000 mm has excellent adhesive properties and has additionally been equipped with a heat-insulated heating chamber to make even very demanding printouts possible. The device is equipped with a high-performance double head, extruder support system and filament no-flow sensor. Operation of the device is controlled by our original software, which was created specifically for our printer line-up. The machine has been designed in such a way that all the occupational HSE requirements imposed by applicable directives are met. All these possibilities, enclosed in the metal casing, make **ATMAT Saturn** a professional, heavy-duty machine producing printouts of the highest quality.



S A T U R N

WORKING AREA

The large-format workspace offered by the **ATMAT Saturn** printer is a unique feature as compared to other devices utilising this technology. It allows you to create large format printouts, without compromising on quality. Designing a printer with a **working area of 1200 x 1000 x 1000 mm**, we aimed to create a machine competitive for large-size CNC machines, reducing the costs and production time of specialized tools.



FULFILLED HSE REQUIREMENTS

The dimensions of the device, its advancement and operation in workshop environment require **strict compliance with applicable health and safety rules**. The **ATMAT Saturn** printer has been equipped with health and safety arrangements such as an emergency button or a lockable device design, which makes the machine **safe for operatives and the environment**.

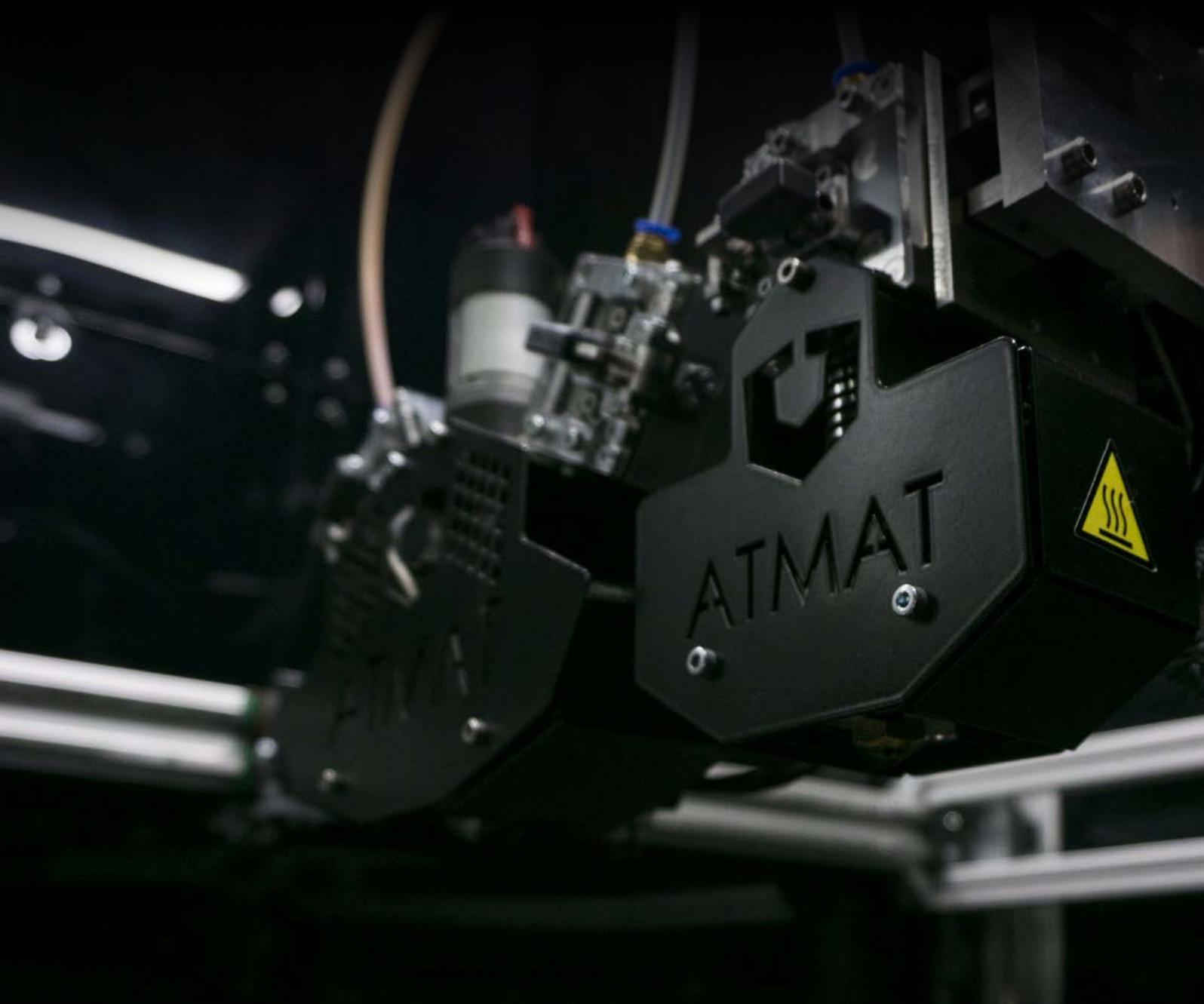


Reset funkcji
bezpieczeństwa
Safety reset



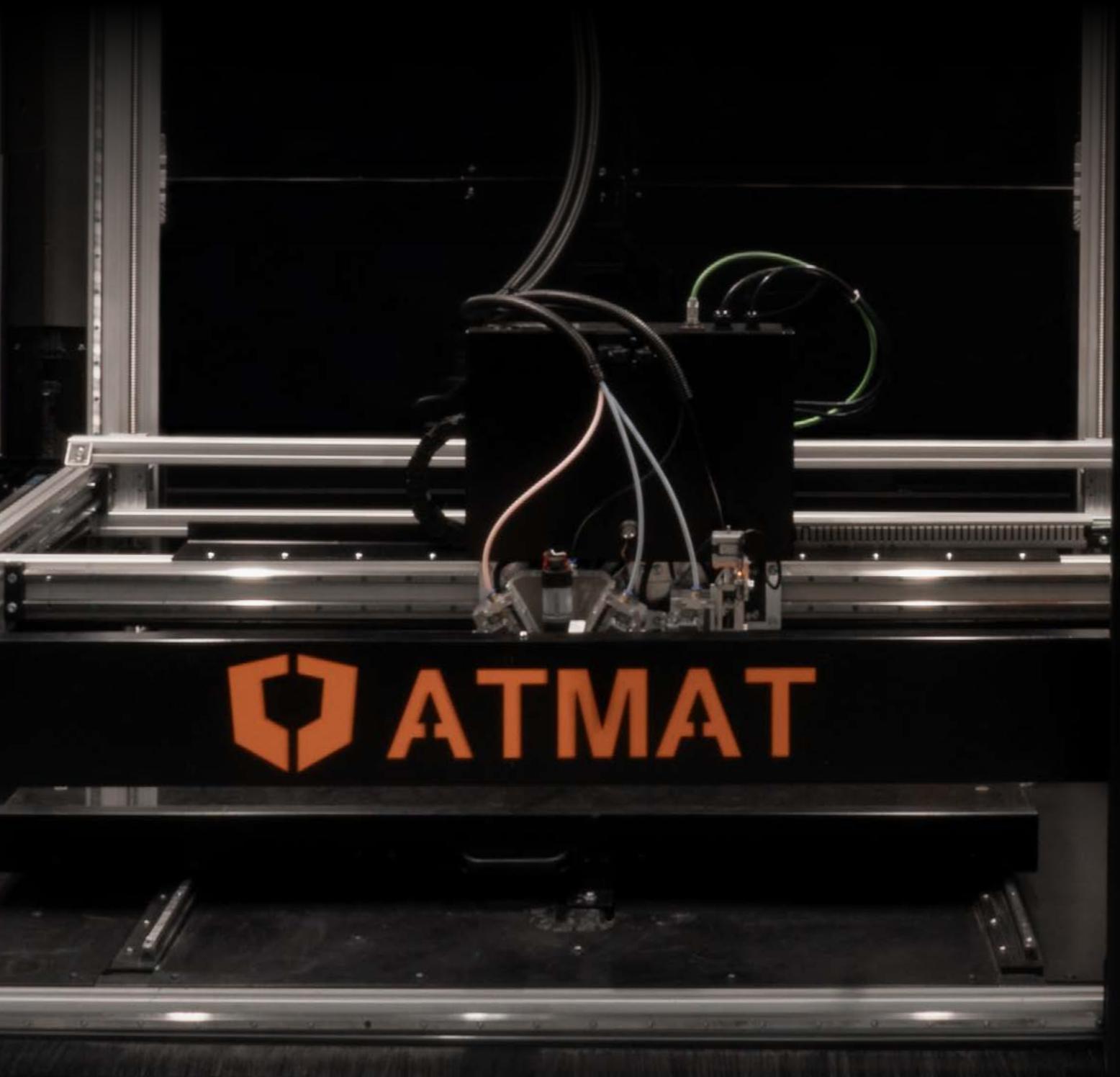
HIGHLY EFFICIENT DOUBLE HEAD AND EXTRUDER SUPPORT

Implementation of high-performance double head with support allowed us to fulfil the key function of the printer, which is **continuous work and high quality of printouts produced**. In designing the heads we tried to supply them with a double and a single extruder and two nozzles, creating eventually 3 extruders with a 2 + 1 arrangement. The head has been designed in such a way as to guarantee the correct feed of the filament when working with small series printouts, as well as high-volume production. In addition, equipping the printer with the height adjustment of the auxiliary head **significantly reduces the occurrence of problems** with printing using two heads at the same time.



AUTOCALIBRATION OF THE WORKING PLATFORM

Autocalibration of the working table in the device makes the printer an intuitive machine, properly equipped with all necessary arrangements to ensure trouble-free cooperation with the user. Using the autocalibration function, we have **eliminated the risk of incorrect settings** of the working table once and for all, thus ensuring the correct start of the critical, first layers of the printout.



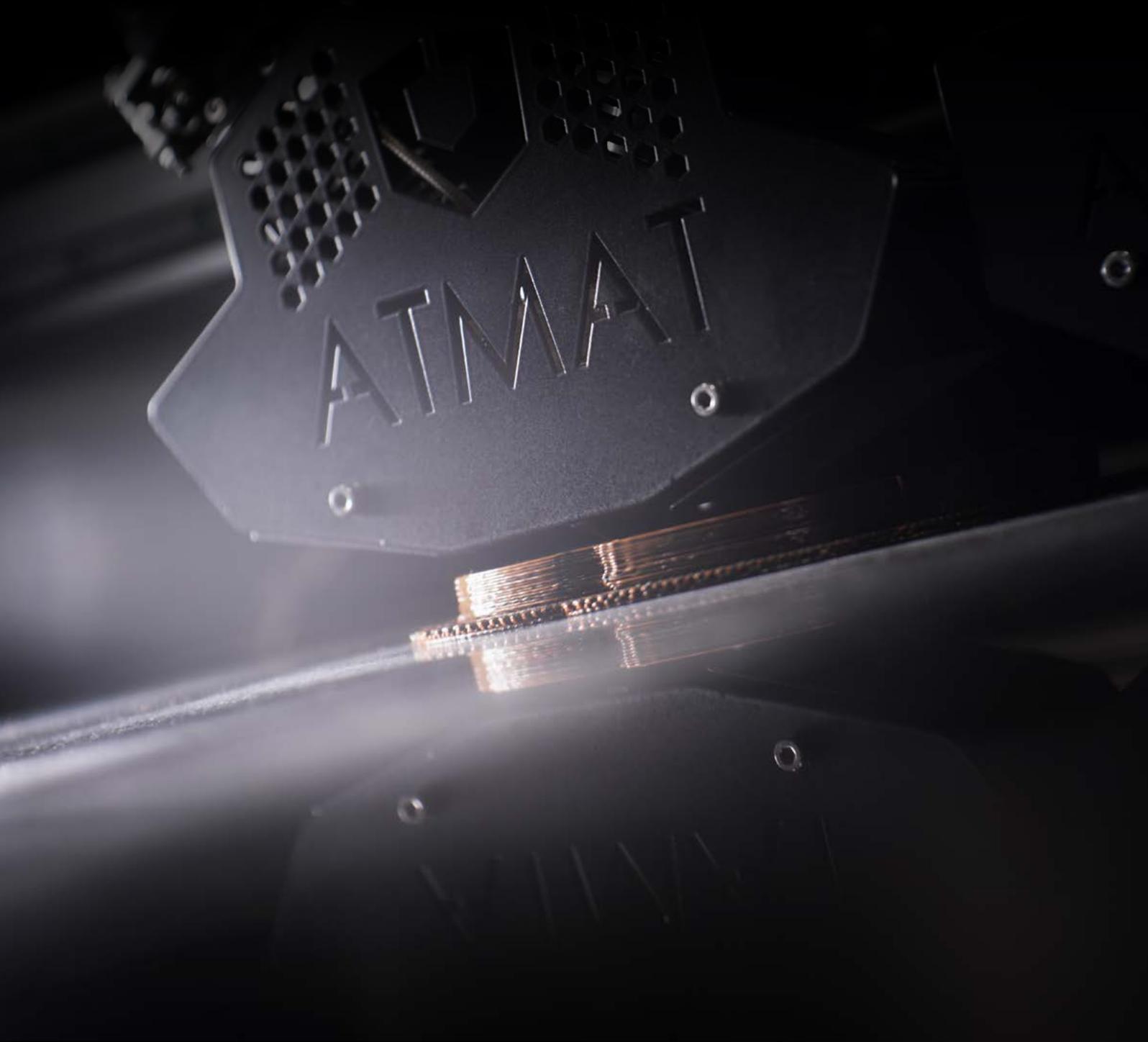
THERMO-INSULATED, HEATED CHAMBER

Maintaining a constant temperature in the working chamber of the printer is a fundamental aspect affecting proper operation of the device. Designing a large-size industrial machine provided the basis for arranging a closed, thermo-insulated and heated working chamber, necessary for printing out of demanding materials used in production of industrial quality components.



GRANITE WORK TABLE WITH 4-ZONE HEATING SYSTEM

A **heated work platform** is now a requirement for printouts made of wide range of available filaments. The table has been equipped with a **4-zone heating system** to reduce energy consumption necessary to heat its large volume body and ensure quick operational readiness. Implementing the granite slab as a working platform was prompted mainly by a very good adhesive properties, so **preparation of work is not a problem anymore.**



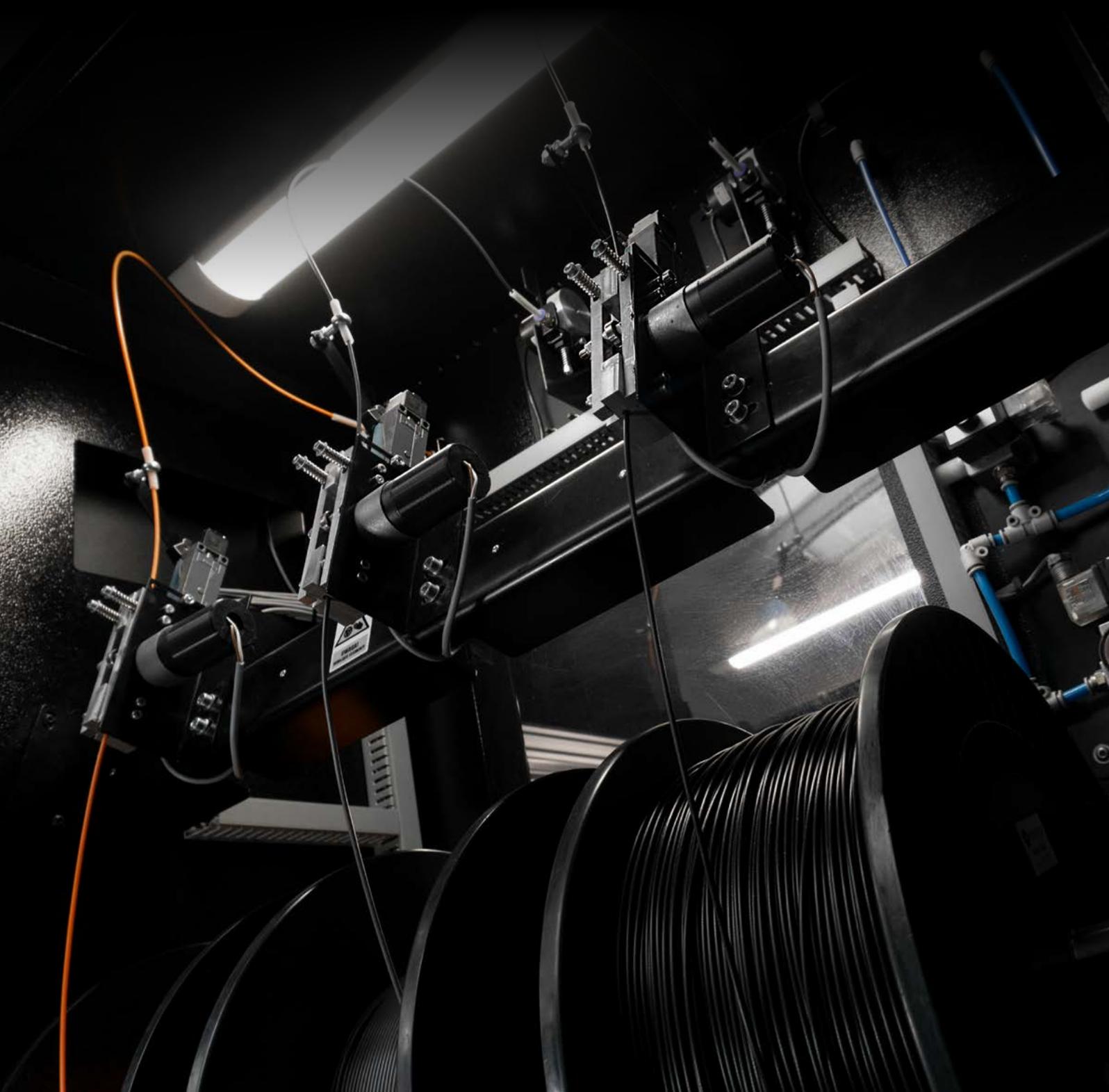
INTELLIGENT SYSTEMS FOR CHECKING THE MACHINE OPERATION

The printer has been equipped with an **intelligent control systems** allowing the user to quickly respond to emerging situations. The device has been equipped with, among others, **filament no-flow sensor**, designed to prevent sudden interruption of printing, and a **filament weight sensor** to monitor the quantity of material needed to print the prepared model. **High reliability** of those intelligent device control systems translates into process stability and excellent print surface quality. What is more, implementation of a compressed air cooling system enabled more efficient cooling using the air from outside the machine.



MACHINE ERGONOMICS

When designing the device, we incorporated a **number of innovative improvements** to facilitate operation of the printer. Integration of control panel with the casing, central door hiding in the printer or installation of all cabinets (including a spacious tool cabinet) on one side of the machine, all the above **accelerate operation of the machine with no quality compromise.**



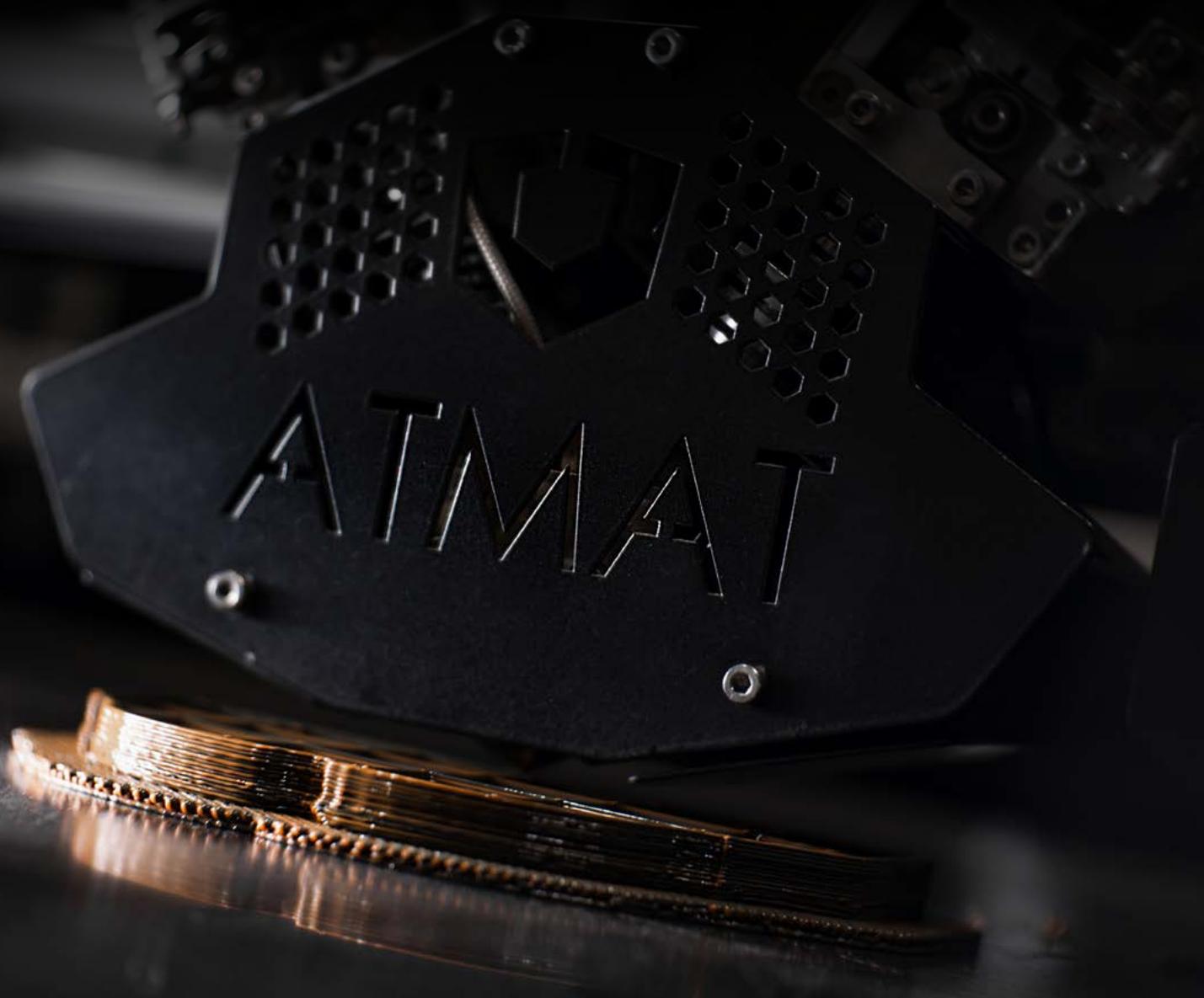
CUSTOMISATION IN ALL RESPECTS

Engineering solutions were selected in such a way as to assure **full freedom in terms of material and print parameters**. The **ATMAT Saturn**, due to its direct type extruder, works with a wide range of filaments available on the market - from typical solutions, such as PLA, PET, ABS, elastic materials to rubber or plastics with admixtures of wood, metals or mineral additives. The **versatility of the printer in terms of model preparing software for printing** is also an indisputable convenience. We have appropriate profiles for both free and commercial slicers.



POLISH PRODUCTION, SUPPORT AND SERVICE

When it comes to our products, we always focus on the **highest quality**, imprinted both on production, sales and after-sales services. Every single device we make is **manufactured in Poland** - all products are designed, tested, produced and stored in Poland. Our qualified specialists - **engineers with extensive experience** - make every effort and do absolutely everything possible to assure products leaving our factory meet the expectations of even the most demanding customers. In addition, we provide **fast and fully professional after-sales service** (during the warranty period and after). We provide assistance in both the initial configuration of equipment and advise on its further operation.



SPECIFICATION

DEVICE OPERATION

print technology	FFF (FDM)
number of heads	2
number of extruders	3
working area	X: 1200 Y: 1000 Z: 1000 mm
layer height	0,2 - 1,5 mm (depending on nozzle diameter)
filament diameter	2,85 mm
nozzle diameter	0,5 - 3 mm
print speed in HQ mode	100 mm/s
positioning accuracy of the X/Y axis	50 µm
filling speed	200 mm/s (depending on nozzle diameter)
positioning accuracy of the Z axis	10 µm

DEVICE

printer dimensions	2600 x 2000 x 2300 mm, 1500 kg
print materials	PLA, PET-G, ABS, TPU, Nylon, PVA
support materials	PVA
extruder	direct
communication	USB
printing environment	closed, heated work chamber
working table	granite slab
max. table temperature	100°C
heated chamber	yes
max. chamber temperature	50°C
max. head temperature	320°C

TECHNICAL SPECIFICATION

power	400 V
max. power consumption	9000 W
average power consumption in operation (for PLA)	1500 W
software package	Simplify 3D, Cura
supported formats	.gcode

USAGE



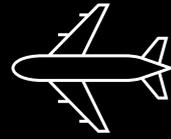
industry



automotive

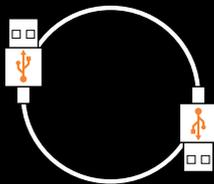
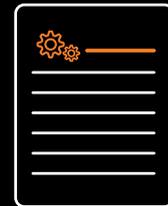
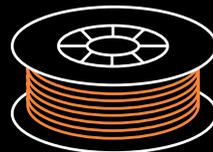
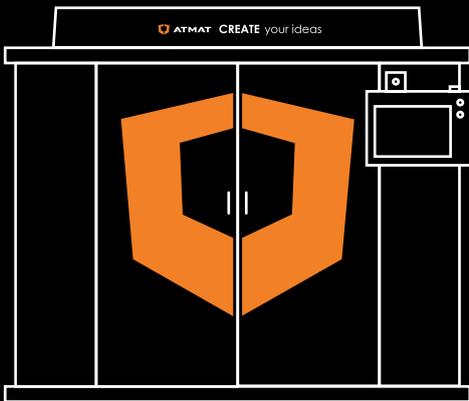


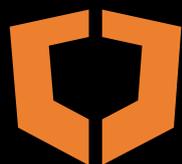
architecture



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ELEMENTS OF THE SET





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