



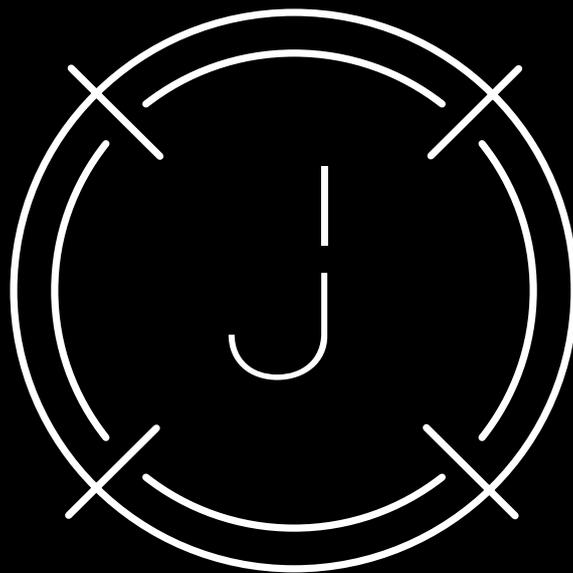
JUPITER



**UNLIMITED SPACE
OF OPPORTUNITIES**

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

The **ATMAT Jupiter** printer is the first commercial, heavy-duty 3D printer to have a work platform with dimensions of 2000 x 1000 x 1000 mm. Creating a machine with a large-format work surface gives a wide range of printing options for spatial models, while limiting the production capacity. The device has been designed to improve the production process of various industries, becoming a competitor for large-size CNC machines. Systematic use of the printer allows the company to reduce the costs and production time of specialized tools. The development of a 6-zone heating system for the granite working table contributes to uniform distribution of heat on the entire table surface, ensuring perfect adhesion. Bearing in mind all the HSE requirements in place, we have created an industrial machine that can be operated in a workshop environment.

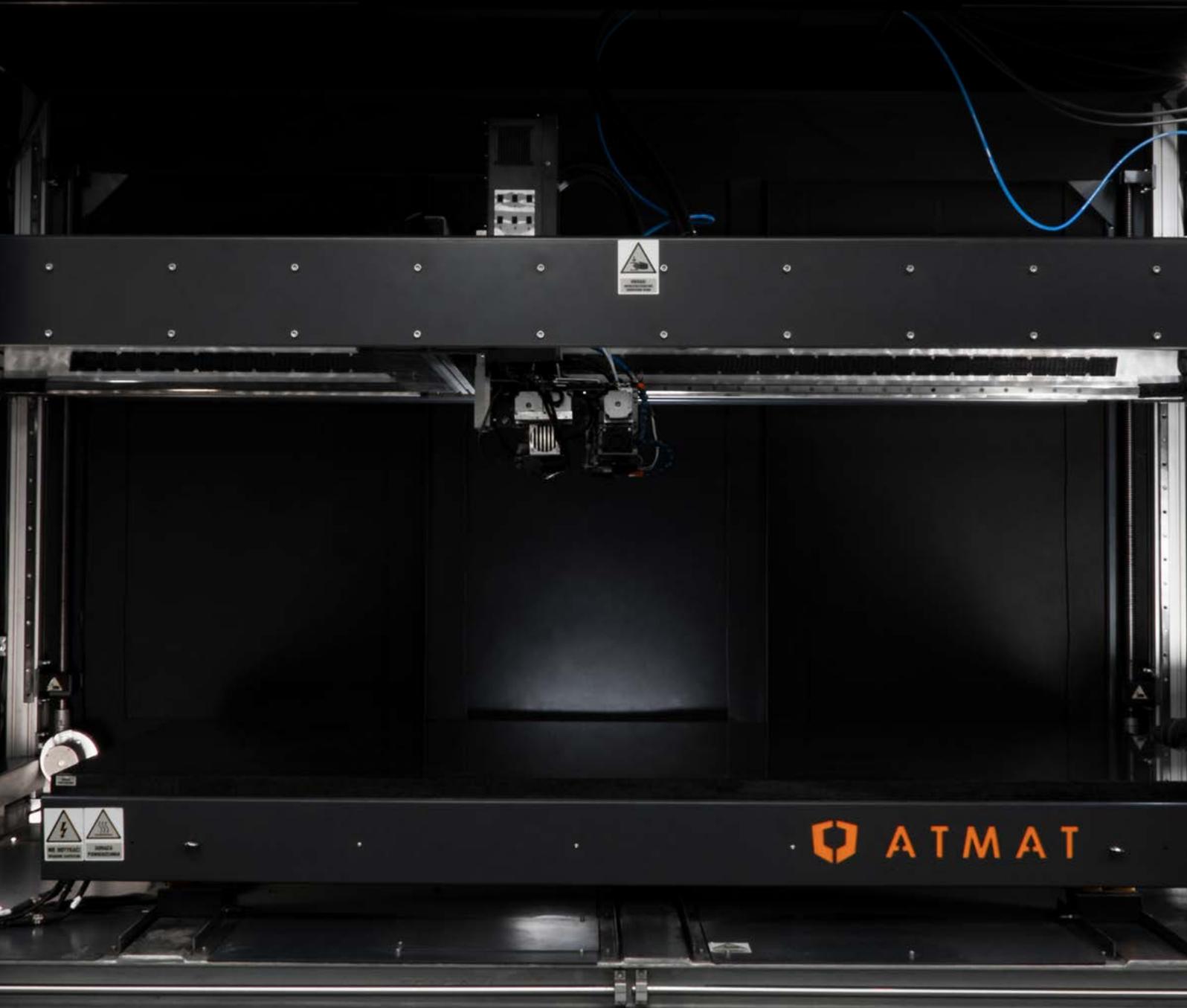


J U P I T E R

WORKING AREA

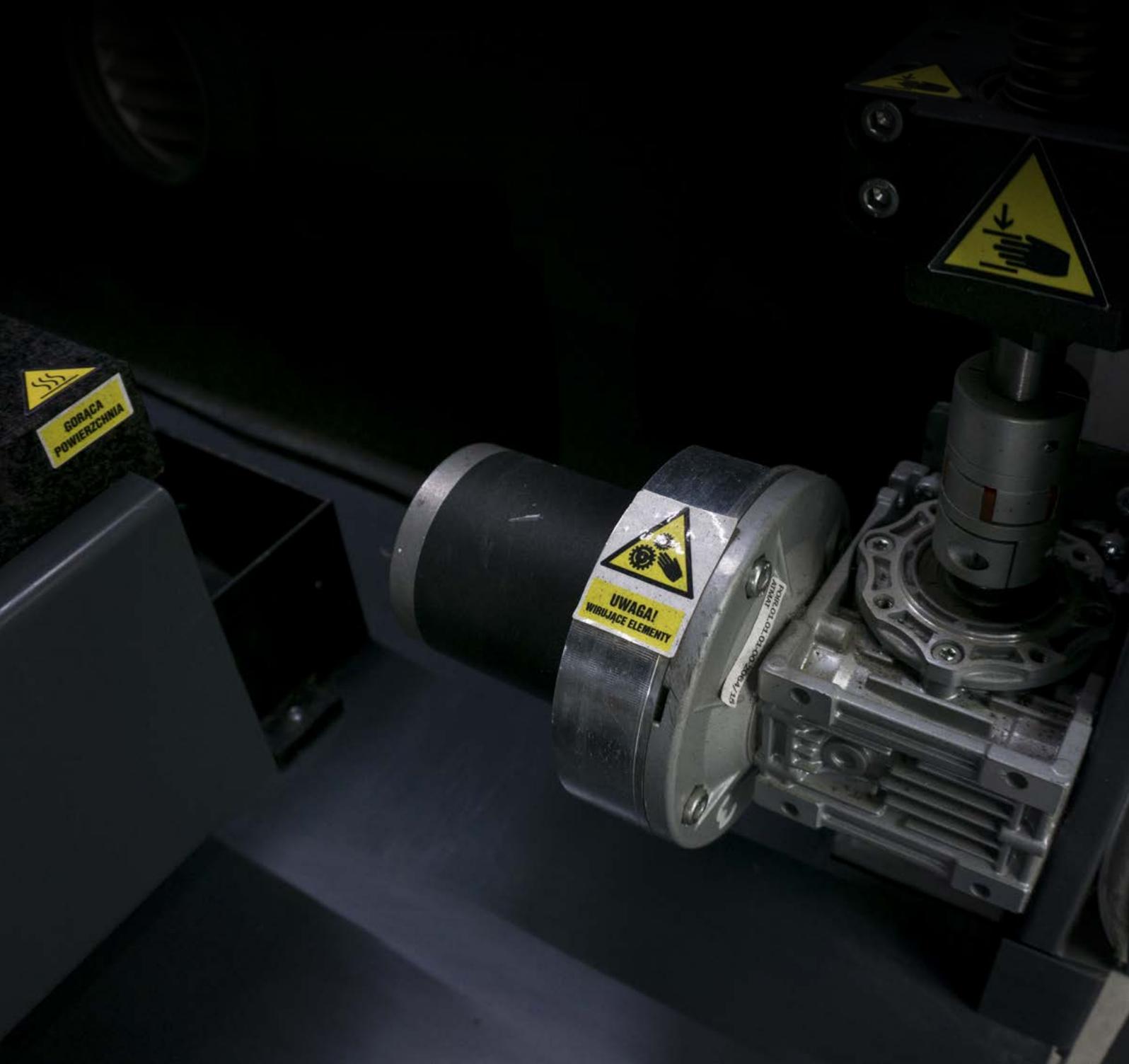
ATMAT Jupiter printer was created in order to eliminate the biggest limitation in 3D printing technology, which is the size of the working field. The work platform with dimensions 2000 x 1000 x 1000 mm is **one of the largest currently available on the commercial market**. Its implementation allows the user to create large-size printouts easily, without the need for further processing. This allows you to reduce production time and user workload, resulting in a significant reduction in production costs.

ATMAT CREATE your ideas.



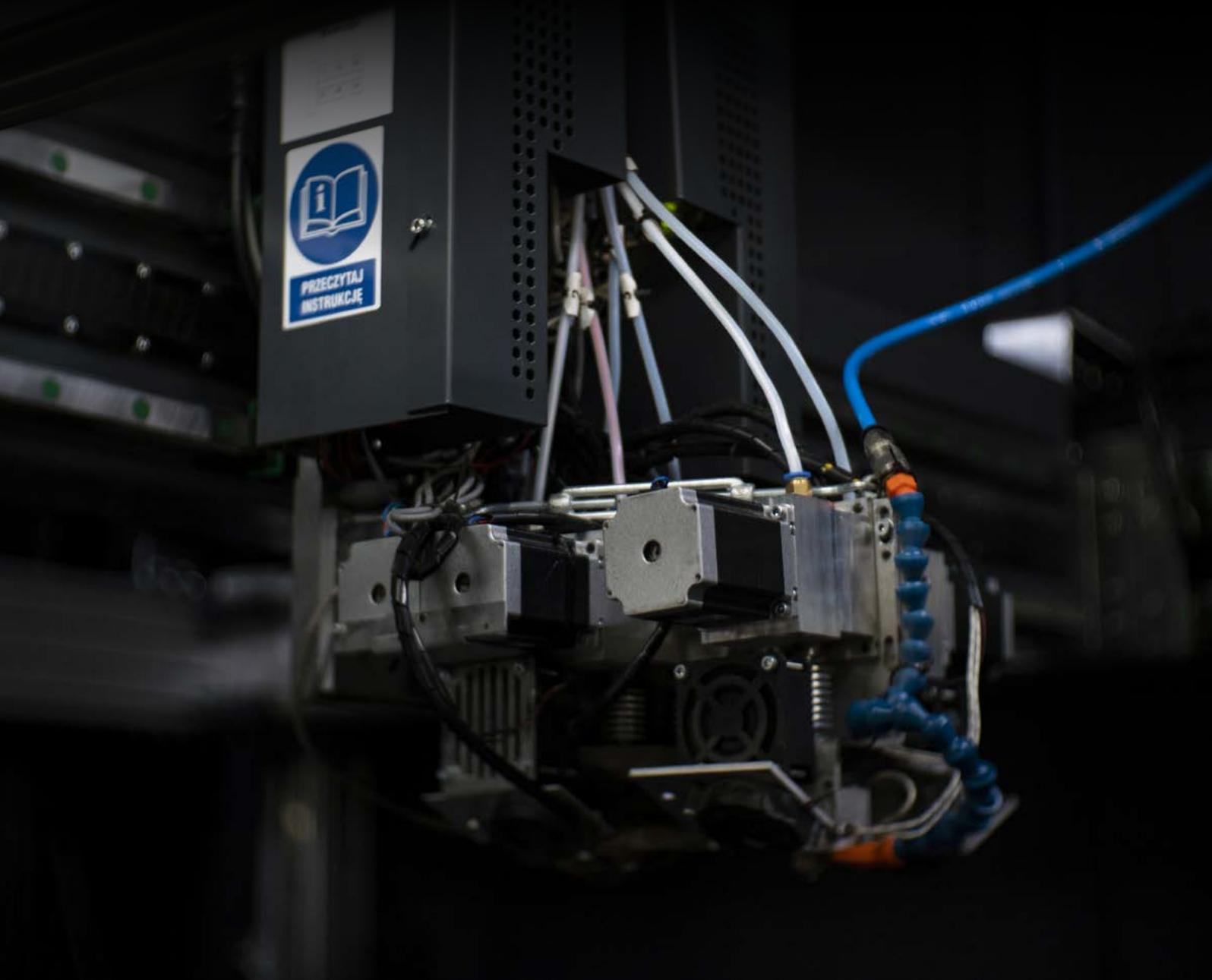
FULFILLED HSE REQUIREMENTS

To ensure HSE requirements are fully met, at the stage of design **all the strict health and safety requirements have been considered**, including a luminous signal indicating stages of the printer's operation, specialized marking on dangerous elements and appropriate emergency buttons allowing for immediate stoppage of the machine. It makes the printer a heavy-duty, professional machine, **suitable for use in production workshop environment**.



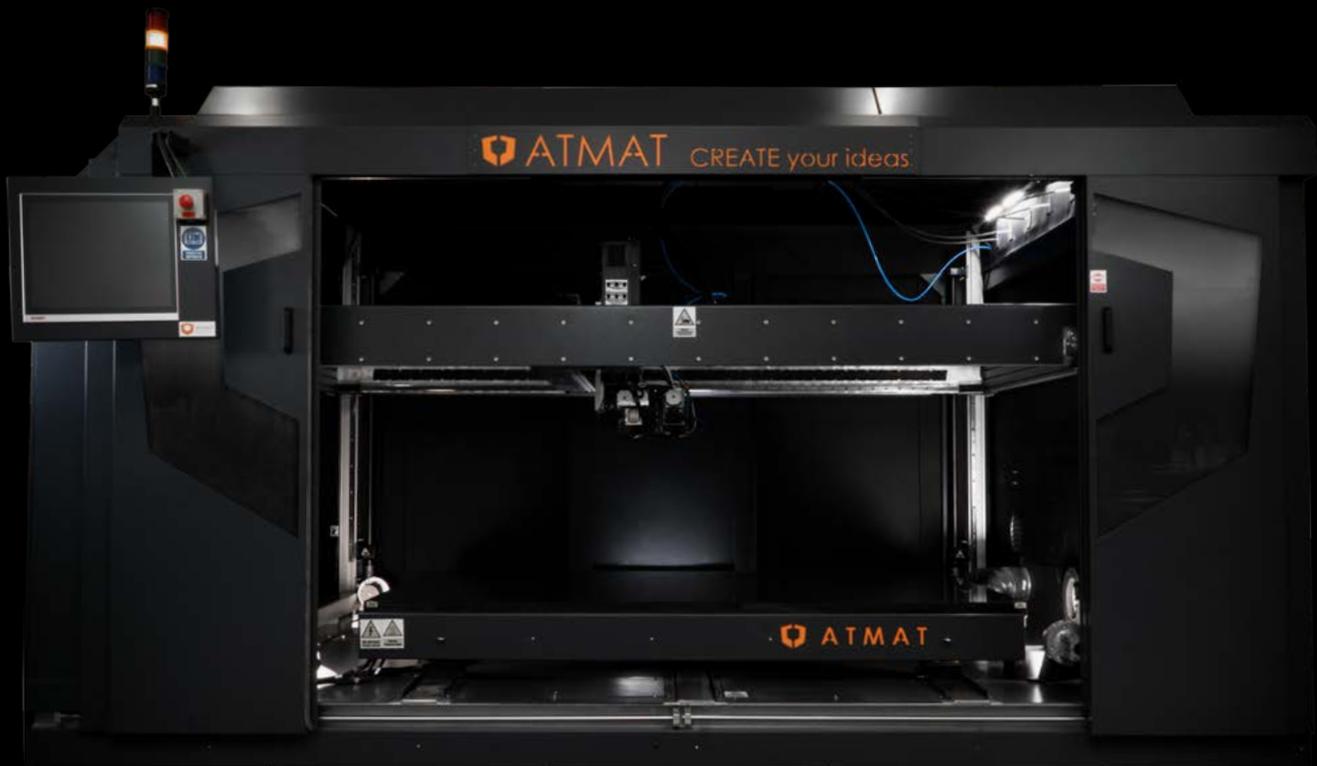
MULTI-PORT PRINTING HEAD AND EXTRUDER SUPPORT

Highly innovative, high-performance multi-port head system has become a breakthrough in the large-scale 3D printing. When designing those heads, we tried to supply them with a quadruple and a single extruder and two nozzles, **ultimately creating 5 extruders**. The use of the 4 + 1 system allowed to achieve excellent results of the device's working time without compromising on the printout surface quality. **The fluidity of the material flow** guarantees appropriate implementation of the basic 3D printer design assumption - **an uninterrupted work**. As a result, it translates into high efficiency, accelerating and streamlining the production process.



THERMO-INSULATED, HEATED CHAMBER

Most filament materials currently available on the market require a heated working chamber to achieve the best results. **Maintaining constant temperature inside the working chamber** is a fundamental aspect affecting the visual appearance and all material properties. Equipping the device with thermal insulation means that a constant temperature is maintained inside the chamber all the time, **creating an appropriate working environment** and the vapours emitted in printing are removed by the forced ventilation system.



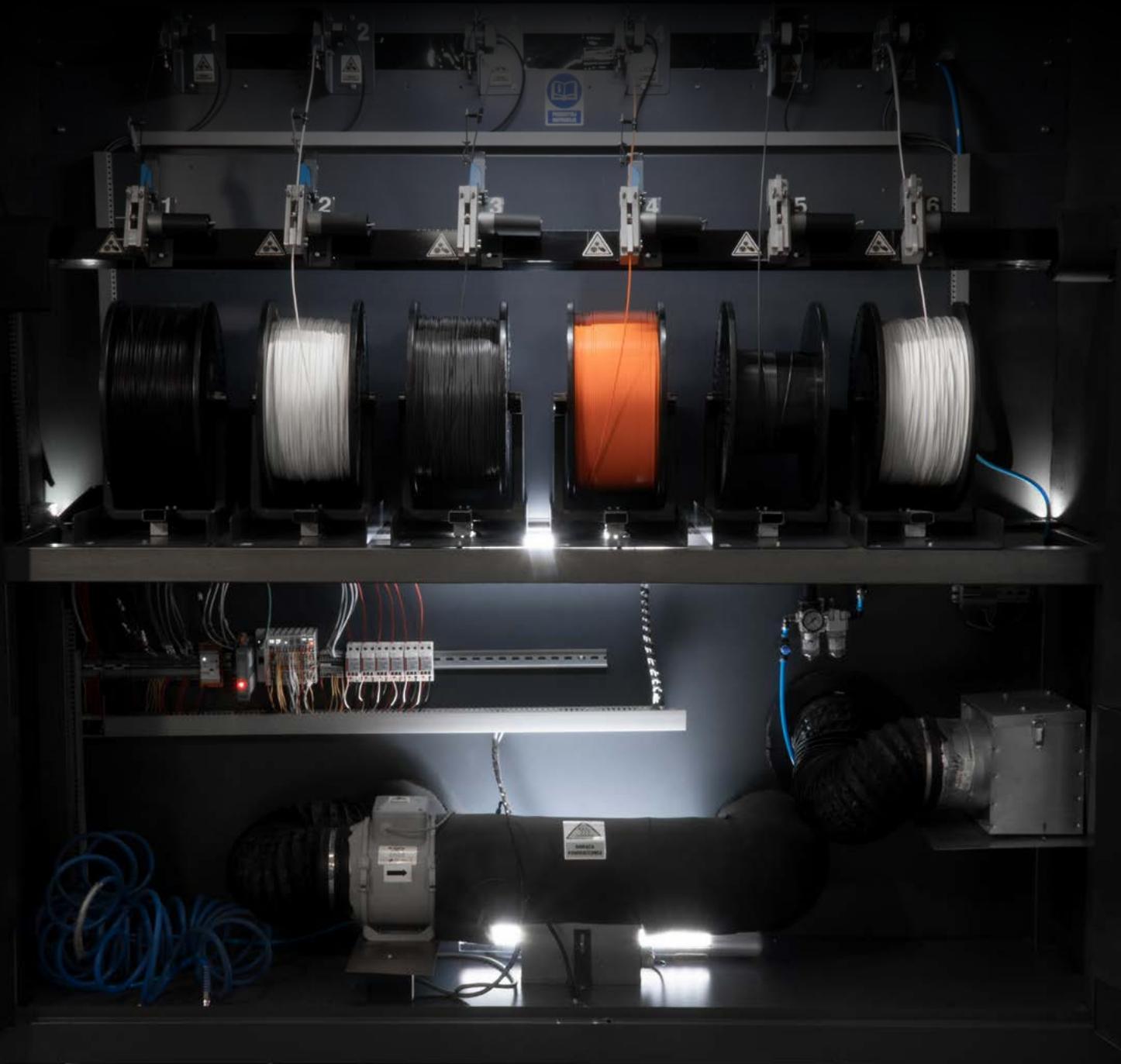
GRANITE WORK TABLE WITH 6-ZONE HEATING SYSTEM

When designing the work platform, an important aspect was to provide a stable structure that would guarantee adequate adhesion between the table and the model being printed. The granite table we used has been additionally **equipped with a 6-zone heating system**, ensuring quick operational readiness of the device, while reducing the energy consumption needed to heat such a large work platform. The table structure, which is easy to disassemble, enables quick cleaning of surfaces having a significant impact on the printing process.



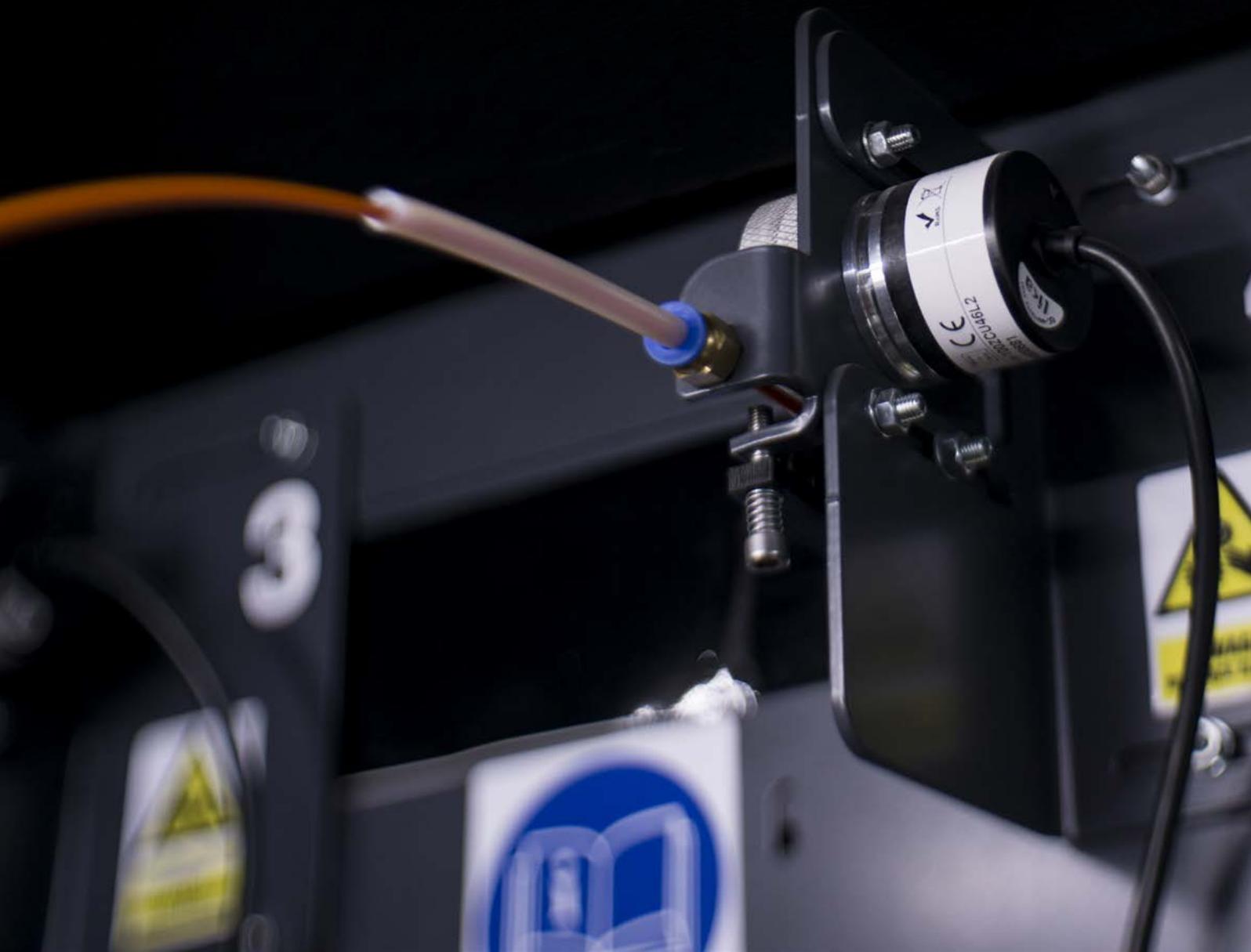
CAPACIOUS FILAMENT CABINET

When designing a large-size 3D printer, we took care of its uninterrupted work, which is a fundamental principle to print large format printouts . We have created a filament cabinet housing 5 specially designed reels with **filaments having total weight of 50 kg**. This solution will guarantee **long-lasting printing and constant operation** without having to replace reels with material.



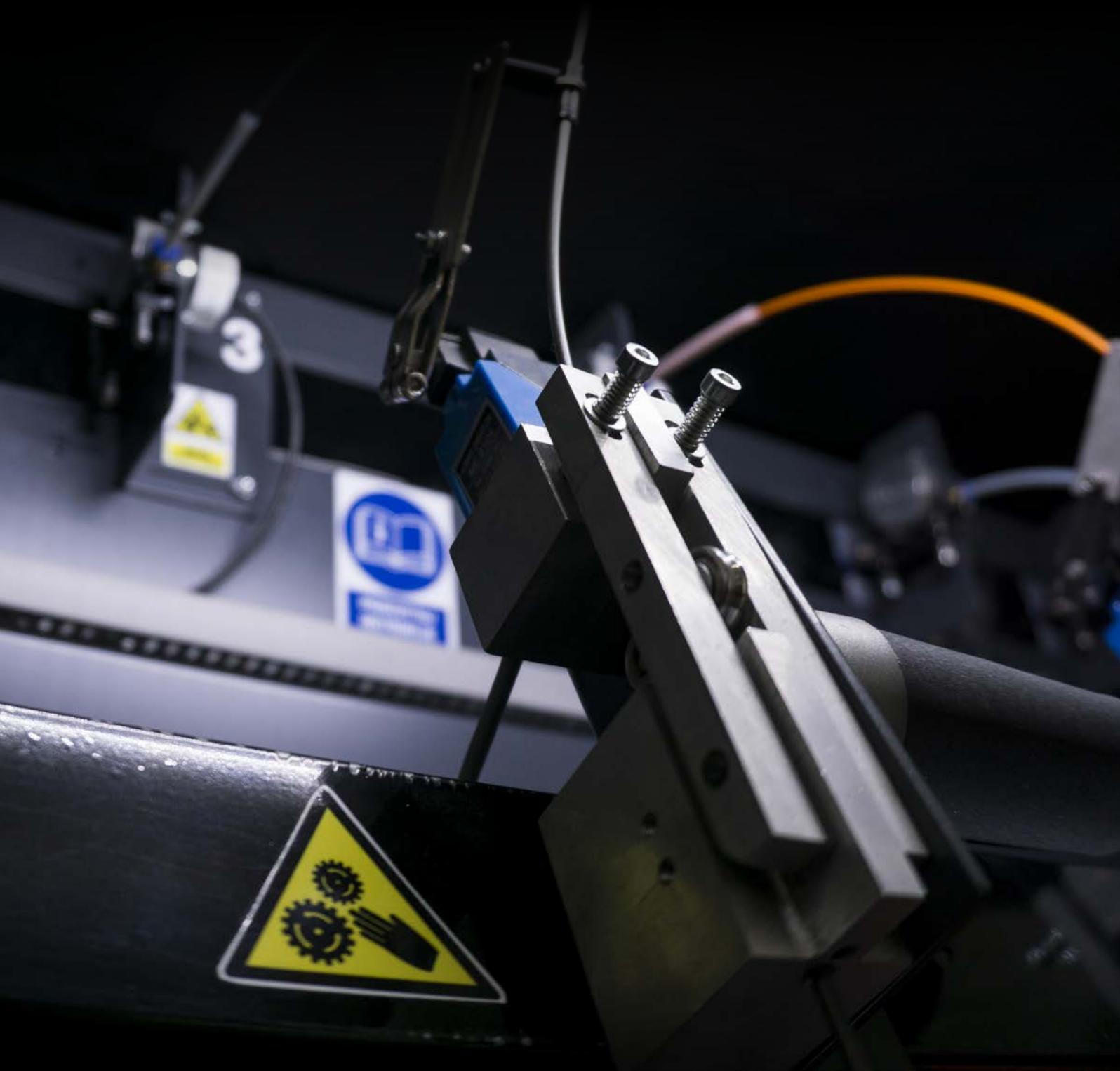
FILAMENT NO-FLOW SENSOR

Filament flow is controlled by means of five specially designed sensors placed in the cabinet of the device. During operation, the sensors monitor the flow of material uncoiled from the reel, and, in case of anomalies, inform the user by displaying a message on the control panel. At the same time, the printing process is stopped and remembered by the machine. Printing will be continued once the failure or breakdown is rectified. Thanks to the intelligent sensor systems collecting key information about the device's operation, **the machine can react immediately.**



FILAMENT AMOUNT CONTROL

In the production of large-size prints, **the amount of filament used must be controlled** in order to avoid process failure. For this purpose, a system measuring weight of the filament was created and it measures the amount of remaining material on the reel located in the cabinet. **The system allows for early detection of failures** related to material shortage and diagnose the printer's operating status, making possible the multi-week printing.



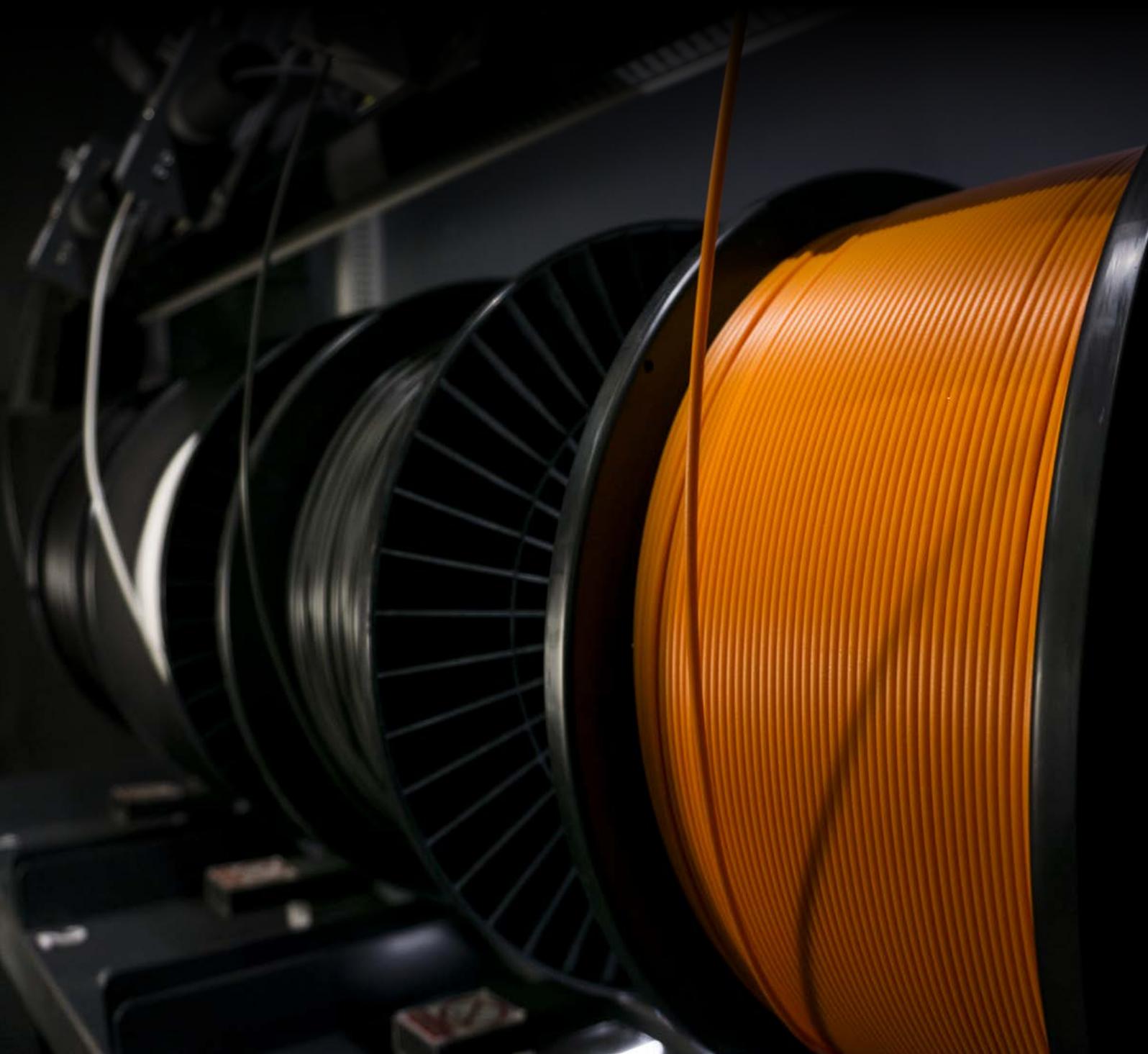
INNOVATIVE SYSTEM OF XY SYSTEM DRIVE

We equipped our device with an innovative system for **driving the XY system with linear drives**. This improvement is unprecedented in 3D printers but allows for seamless development of high speed and precise positioning resulting from the lack of play that appears in screw drives, belt drives and transmissions.



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 Jupiter**, 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.



FORD MUSTANG

CAR PRINTOUT IN 1:1 SCALE

During this year's X edition of The 3D Printing Days, a car print modelled on the famous 2005 Ford Mustang in the 1:1 scale was presented. It was an individual project printed on ATMAT Jupiter, ATMAT Saturn and ATMAT Signal printers. The printout consists of **70 plastic parts** having a **total weight of 400 kg** including supports, design and wheels while the weight of the car body is about 150 kg. Printing of all components took about **30 working days**, and the **whole work including assembly took 2 months**. Components of the model have been glued together using a resin reinforced with glass fibre. The model was smoothed with a putty, spray putty, and polished. Then the model was painted in a professional car paint shop.



SPECIFICATION

DEVICE OPERATION

print technology	FFF (FDM)
number of heads	2
number of extruders	3 - 5 (depending on the version)
working area	X: 2000 Y: 1000 Z: 1000 mm
layer height	0,2 - 2 mm (depending on nozzle diameter)
filament diameter	2,85 mm
nozzle diameter	0,5 - 5 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	4100 x 2300 x 2600 mm, 2600 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
average power consumption in operation (for PLA)	2500 W
max. power consumption	15000 W
software package	Simplify 3D, Cura
supported formats	.gcode

USAGE



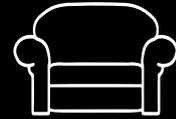
industry



automotive

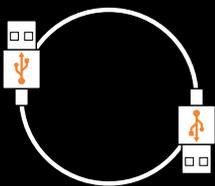
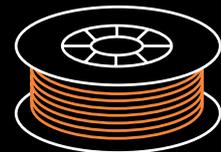
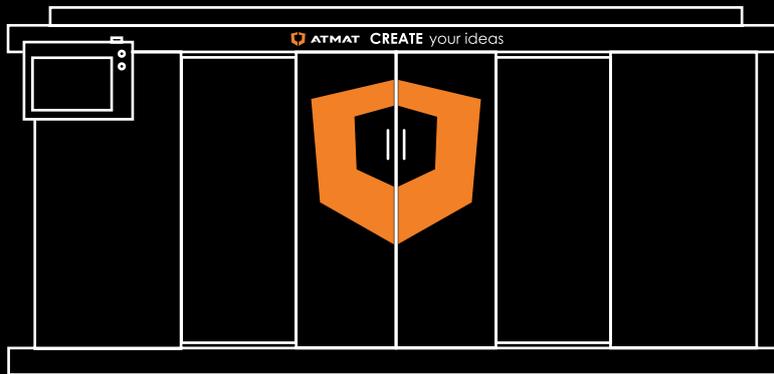


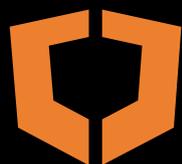
aviation



furniture

ELEMENTS OF THE SET





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