

GENESI



The only 3D printer that integrates Artificial Intelligence and Machine Learning. Genesis combines large-scale printing, both in terms of print volume and amount of extruded material, with a technology that makes the process predictive.

bretlon

WHY YOU SHOULD APPROACH ADDITIVE MANUFACTURING

Breton's technology that makes 3D printing evolve uses Machine Learning algorithms and advanced Artificial Intelligence systems to produce printed parts with superior mechanical and aesthetic properties.

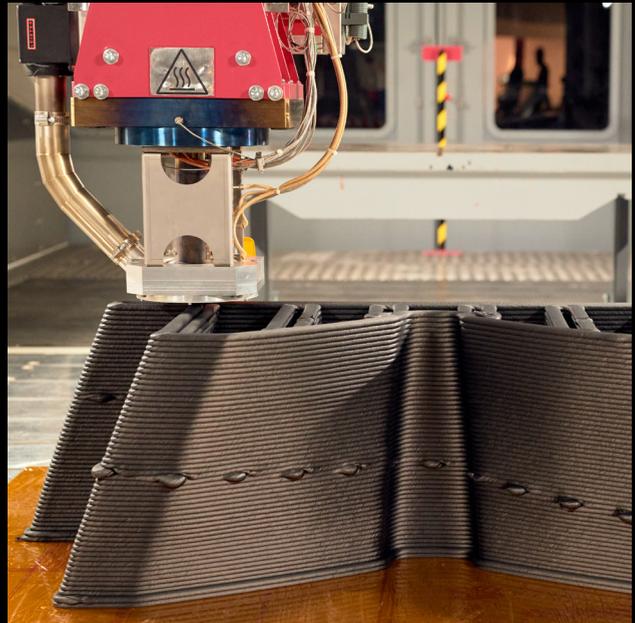
Breton's goal is to help innovative companies transform their business model through the introduction of 3D printing.

up to
200 kg
material/h

Unrivalled
print
capacity

Amazing
print size

up to
150 m²
and
2.5 m
high



WHAT DOES <<LARGE ADDITIVE MANUFACTURING>> MEAN

Extruding more material has many advantages:

- **less time to print the part** and consequently less incidence on the operator and machine cost and on the electricity consumption.
- **higher printing quality:** having a large extrusion *bead* increases both the mechanical quality of the part (greater layer compactness) and the aesthetic quality once milled.

BRETON PREDICTIVE PROCESS

1 PROCESS BASED ON MACHINE LEARNING

Since printing is a thermoplastic process, it is essential to have well-defined and constant parameters throughout the cycle, otherwise there is no certainty of the result. The parameters are defined according to the material used. Breton already provides printing parameters for a series of materials; nevertheless, when the customer uses new materials, the *machine learning* allows Genesi to study their features during printing and thus determine the optimal parameters. In addition, by changing a variable, the machine will automatically adapt the other variables such as geometry, extrusion parameters, speed, behavior on the corners and adhesion temperature of the layers in order to obtain a perfect print.

2 IT INVOLVES A STEP OF REINFORCED LEARNING

While printing, the machine constantly monitors the entire process. In particular, this function controls the parameters of the printed layer, analyzes all the variables and applies to the next layer the necessary variations in order to keep the entire fusion process constant. In this way, no variations are made on the layer being printed, but the process parameters are optimized as the process continues with the next layer.

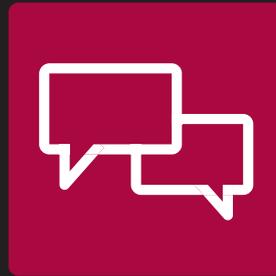
3 IT USES THE POTENTIAL OF ARTIFICIAL INTELLIGENCE

From the various experiences that are made with a particular material, the machine acquires data that are then processed by artificial intelligence and presented again when machining new materials or new forms.

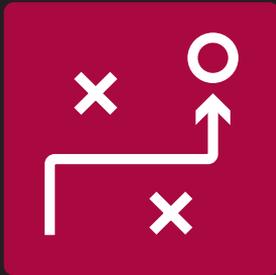
BUILD YOUR PROJECT WITH BRETON



1.
Contact our Additive
Manufacturing department



2.
Tell or send us your project



3.
Together we find the right
strategy



4.
We send you a detailed report
of production costs



5.
We make a prototype or small
batches

BRETON SUPPORT

Breton's goal is to help innovative companies **transform their business model** by introducing 3D printing into their manufacturing and prototyping process.

Breton makes its machines and expertise available to companies who want to join this world, so they can test new ideas without the commitment of purchasing a 3D printer. You just need to bring a project or an idea and the Breton team will follow the development and production of the first pieces, making available its network of partner companies if necessary.



BRETON GENESI

Two available models in two different versions

You can choose between two models, Genesi E2 and Genesi E3, which differentiate both in terms of print volume and extrusion capacity.

GENESI PURE ADDITIVE

This version makes it possible to print large parts in a short time by extruding up to 200 kg of material per hour.

It also allows creating "near net shape" parts, which are close to the final shape but not completely finished, in short times.

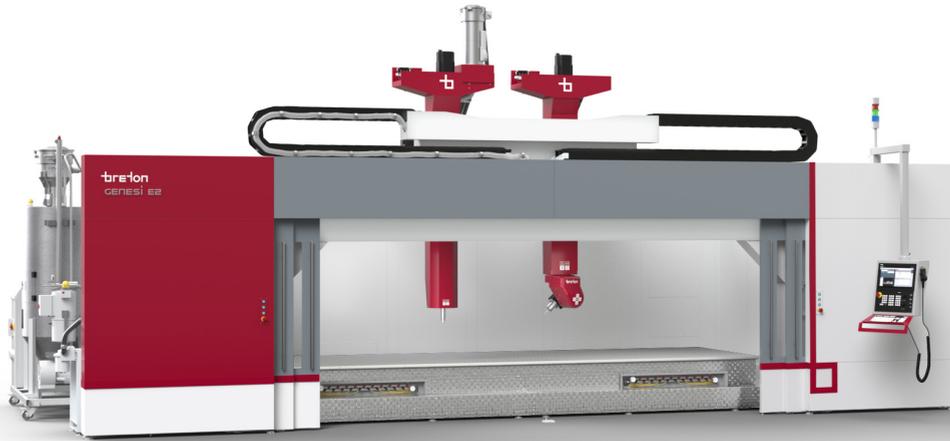
It is ideal for fast prototyping, for production of parts in small batches or when the part has shapes that cannot be realized with other technologies.

GENESI ADDITIVE + MILLING

This version of Genesi is composed of two bridges, one with a dedicated RAM for printing and one for milling.

Besides making "near net shape" parts, it allows the finishing and optimization phase to be carried out through high-speed and high-quality milling, thus obtaining a "ready to use" part.

Having both of these technologies on the same machine brings many advantages, both in terms of machining time and quality of the finished part.



GENESI E2
K40

GENESI E2
K60

GENESI E2+M

Version	pure additive	pure additive	additive + milling
X-axis stroke	4.000 mm	6.000 mm	4.700 mm
Y-axis stroke	1.900 mm	1.900 mm	1.900 mm
Z-axis stroke	1.300 mm	1.300 mm	1.300 mm
Extrusion capacity (max.)	70 kg	70 kg	70 kg
Milling spindle	-	-	18 / 24.000 rpm
Milling tool taper	-	-	HSK - A63
Length	3.200 mm	3.200 mm	3.200 mm
Width	7.070 mm	10.070 mm	10.070 mm
Height	5.650 mm	5.650 mm	5.650 mm



GENESI E3

GENESI E3+M

Version	pure additive	additive + milling
X-axis stroke	4.000 - 30.000 mm	4.000 - 30.000 mm
Y-axis stroke	3.000 - 5.000 mm	3.000 - 5.000 mm
Z-axis stroke	2.000 - 2.500 mm	2.000 - 2.500 mm
Extrusion capacity (max.)	200 kg	200 kg
Milling spindle	-	62 / 24.000 rpm
Milling tool taper	-	HSK - A63

Breton – a pioneering developer of advanced technologies and materials – is an international leader in the design and production of state-of-the-art industrial machinery and systems to create and transform natural stone, ceramics, metals and in the development of engineered stone plants.

Founded in 1963 by Marcello Toncelli, with headquarters in Treviso (Castello di Godego), two other production sites in Italy and six foreign branches (USA, Australia, India, China, UK, Brazil), the company is recognized worldwide thanks to its philosophy always aimed at research.



The aspiration to explore new technologies, as an integral part of the company's DNA, has led to the establishment of the BIT (Breton Institute of Technology), where the various dedicated teams design and test innovative solutions to develop materials that anticipate the industry needs.