ADDITIVE MANUFACTURING

3D printer

SISMA
MySint 300

The Additive Manufacturing technology is based on a process of accretion of the component layer on layer and allows the creation of very complex geometries, difficult or not achievable with traditional technologies.

Thanks to the advantages offered by design freedom and the continuous expansion of the variety of materials that can be processed, this technology is now beginning to take hold in the field of industrial manufacturing of metal components.

In the context of metallic AM technologies, Selective Laser Melting (SLM) technique has been in particular adopted: after an initial distribution of a layer of metal powder on the building platform, a laser beam melts the powder following a calculated path.

The platform is then lowered in order to permit the subsequent distribution of a new layer of powder. At the end of the process, the manufactured component can be extracted by removing excess unmelted powder.

In such a scenario, Il Sentiero decided to adopt Sisma MySint 100 and MySint 300 machines, which differ only in terms of production capacity (volume and printing time).

MySint 300

- Simple and robust design
- Large printing volume
- High flexibility
- Speed of execution
- Automatic sieving

Specifications

Building volume	ø 300x400 mm
Laser Source	Fiber Laser 500W
Laser spot diameter	From 100 to 500µm (variable)
Layer thickness	30-36 micron
Production rate (Stainless Steel)	Up to 25 cm^3/h
Inert gas supply	Nitrogen, Argon – Azoto, Argon
O_2 concentration	< 100ppm
Compressed air requirement	Min 4 - max 10 atm
Power supply	400V – 3ph – 50/60Hz – 32A
Max power absorbed	15kW
Machine dimensions*	3400 x 1400 x 1970 mm (LxWxH)

* (Filtration unit included)

Materials

Bronze	•
Cobalt Chrome	•
Stainless Steel AISI 316 - 1,4404	•
Maraging Steel M300 - 1,2709	•
Nickel Alloys	•
Aluminium Alloys AlSi 12 - AlSi 10 Mg	•
Titanium Ti6Al-4V gr 23	•

The features and performances are indicative and may change.