Prima Additive

Print Sharp 150

POWDER BED FUSION

COMPACT AND PRECISE POWDER BED FUSION MACHINE

Print Sharp 150 is a machine for additive manufacturing with a build volume of Ø150 x 160 mm for the fabrication of small sized components.
Easy to use, is equipped with advanced process monitoring sensors. Thanks to the open laser parameters, this machine is particularly suitable for new material exploration.

FLEXIBLE

Suitable for a wide range of materials for R&D development thanks to an "open" system for process and machine parameters configuration and a pre-heating system to warm up the upper surface of the powder bed.

ACCURATE

Adaptive collimator for beam size shaping to reach very high quality of accuracy in the printed part.

RELIABLE

Monitoring system for a good control and repeatability of the process thanks the possibility to mount as option 2 cameras for process monitoring and to a high speed coaxial pyrometer for temperature control of the bed.

USER FRIENDLY

Simple operating process, intuitive software interface as well as easy maintenance and set up activities.

Technical Specifications

Print Sharp 150

DIMENSIONS (LxWxH)	1700 (L) - 1000 (W) - 1900 (H)
WEIGHT	1800 kg.
POWER SUPPLY	380 V / 50 Hz / 8 kW
LASER IR	Laser Yb (Itterbio) 250 W IR single mode
LASER POWER	250 W
LASER FOCUS DIAMETER	40 - 300 µm (adjustable with software)
BEAM WAVELENGTH	1060 - 1080 nm
BUILDING VOLUME	Ø 150 mm * H=160 mm
BEAM DEFLECTION SPEED (DUAL SCANNER)	8 m/s
POSITIONING SPEED	10 m/s
BUILD RATE *	12 - 30 cm^3/h
LAYER THICKNESS	0.01 mm - 0.1 mm
LAYER WIDTH	40 - 300 µm (typical 100)
BUILDING PLATFORM Z-AXIS	Travel: 160 mm / Speed: max 6 mm/s / Res: 0.01 mm
HEATING PLATFORM	up to 250°C
MONITORING OF O2 LEVEL	Below 100 ppm (0.01%)
PERMISSIBLE ROOM TEMPERATURES	15 - 30°C
GAS (Consumption - running / filling)	3 L/min (running)
SYSTEM FILL CONSUMPTION	10 L / min. (up to filling)
CAM SOFTWARE	Materialise Magics
CONTROL & OTHER SOFTWARE	OPEN / Materialise
INDUSTRIAL INTERFACES	Ethernet

*Dependent on process parameters and material used

Size & Power
Laser
Machine and additive process details
Peripheral & auxiliaries - Software