

LASER POWDER BED FUSION

Cast quality. Printed overnight.

The ultimate Metal printing solution for
Dental labs.



500_w
FIBRE LASER

Φ120
BUILD PLATE

7 m/s
SCAN SPEED

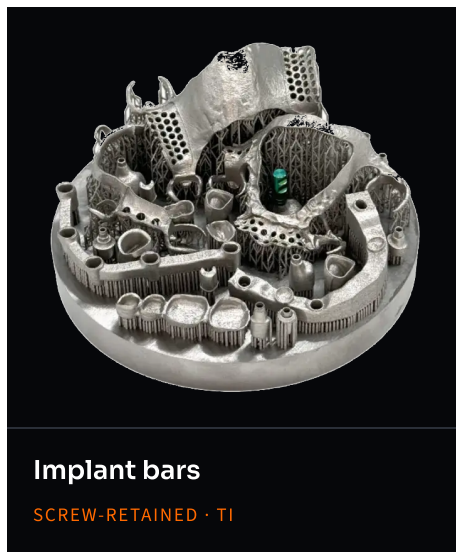
120 kg
BENCH MOUNTED

ONE PLATE, ONE NIGHT

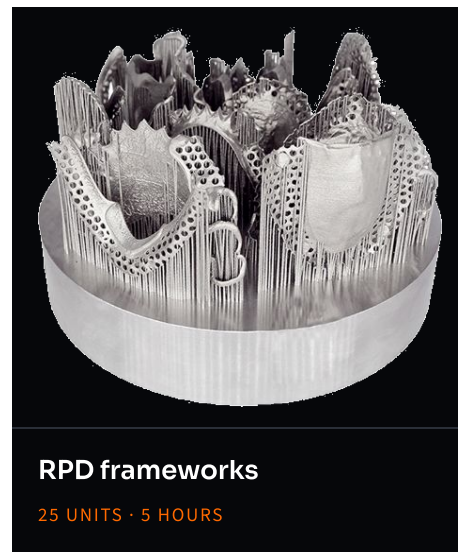
What comes off the plate.


Crowns & copings

300 UNITS · 4 HOURS


Implant bars

SCREW-RETAINED · Ti


RPD frameworks

25 UNITS · 5 HOURS

WHAT YOU CAN MAKE

- Crowns, bridges and copings
- Implant-supported restorations, abutments and bars
- Fixed dental prosthetic frameworks
- Removable partial denture frameworks
- Telescopic and precision-attachment work

CoCr

NiCr

Ti

15–45 µm

THROUGHPUT

300 /4h Crowns and copings from a single full plate, unattended.

25 /5h Removable partial denture frameworks per plate.

20 /5h Metal bars with custom abutments.

WHY LABORATORIES CHOOSE IT

Built for margins, not for prototypes.

500 W laser, F-theta optics

Accurate beam control edge-to-edge across the full $\Phi 120$ plate, with beam quality held at $M^2 \leq 1.1$.

40–80 μm beam

Layers from 20 to 100 μm — margins and fissures that need minimal hand finishing.

7 m/s scanning

Up to 50 cm^3/h build rate on a single laser, so a full plate finishes inside a night shift.

≤ 100 ppm oxygen

Under argon or nitrogen, for dense, oxide-free metallurgy across every unit on the plate.

30,000-hour filter

A long service interval and low consumable cost per unit produced.

Modular design

Serviceable in place — no crated return to the factory for routine maintenance.

01

Design

Nest the case in your existing CAD.

02

Print

Plate builds
unattended overnight.

03

Heat treat

Stress relief before cut-off.

04

Finish

Separate, fit and polish.

One plate replaces a full day of casting — investing, burnout, melt and devest — with a single unattended build.

CoCr

NiCr

Ti

EQUIPMENT PARAMETERS

Every number, on one page.

BUILD & PROCESS

Materials	CoCr · NiCr · Ti alloy
Build dimension	Φ120 mm
Powder bed thickness	20–100 μm
Powder laying mechanism	Single, variable speed
Building efficiency	25 / 50 cm ³ per hour
Gas support	Argon or nitrogen
Working oxygen content	≤ 100 ppm

OPTICS & LASER

Laser type	500 W fibre
Scanning system	High-precision galvanometer
Focusing system	F-theta optical field mirrors
Beam quality	M ² ≤ 1.1
Beam diameter	40–80 μm
Max scanning speed	7 m/s

THROUGHPUT, FULL PLATE

Crowns	300 in 4 hours
RPD frameworks	25 in 5 hours
Bars with abutments	20 in 5 hours

INSTALLATION

Mainframe dimension	640 × 600 × 880 mm
Equipment weight	120 kg
Power supply	AC 220 V, single phase
Power consumption	4 / 5 kW
Control system	Integrated print suite

CONSUMABLES

Filter cartridge life	30,000 hours
Powder cuts	15–45 · 15–53 · 10–30 μm

OPEN SYSTEM TO VALIDATED MATERIALS

The X sinter is not locked to a single powder supplier. Parameter sets are open, so any validated alloy can be qualified and run on the machine — you keep the freedom to source from whichever supplier suits your lab. We supply our own validated powders, each lot shipped with a certificate of analysis.


COBALT CHROME
5 KG

NICKEL
TITANIUM
5 KG

EVERYTHING AROUND THE PRINTER

A working cell, not just a machine.



Vibrating powder sieve

Reclaims and grades used powder between builds.



Industrial vacuum

Wet-separation unit for safe powder handling.



Oscillating saw

Support removal and separation from the plate.



Heat-treatment furnace

Programmable stress relief before cut-off and fitting.



Nitrogen generator

On-demand inert gas feed to the build chamber.



Validated powder

CoCr, NiCr or Ti, with certificates of analysis.

INSTALLATION

- 640 × 600 × 880 mm on a bench
- AC 220 V single phase, 4–5 kW
- Argon or nitrogen supply
- 120 kg — no floor reinforcement

CONSUMABLES

- Filter cartridge to 30,000 hours
- Reclaimed powder graded on site
- Single recoater, variable speed

POWDER CUTS

- 15–45 µm — CoCr, general
- 15–53 µm — NiCr
- 10–30 µm — Ti, fine detail

Auxiliary equipment is configurable — items are specified per order and may be supplied separately from the printer. Confirm the final package list on your quotation.



Tested, trusted CAD/CAM for the dental laboratory.



FRONT



THREE-QUARTER



REAR - I/O PANEL

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