AO Metal

POWDER TO PART · INTEGRATED AND SUPPORTED FROM CALIFORNIA

R&D BUNDLE · ATO LAB · CAMSIZER X2 · A50

From your own alloy to a printed part.

An atomiser, a particle analyser and an open LPBF printer in one lab. What used to take months of ordering powder and waiting takes days.

ATOMISE	MEASURE	PRINT	ALLOY TEMPERATURE
PSD 20–120 µm	0.8 µm – 8 mm	Ø50 × 100 mm	above 3000 °C



01 · ATOMISER

ATO Lab

Ultrasonic with plasma, TIG or induction melting. Spherical powder above 0.95 sphericity, waste close to zero, any shape and amount of input material.

02 · ANALYSER

Camsizer X2

Dynamic image analysis to ISO 13322-2. Size and shape from 0.8 µm to 8 mm — you see what you made before you print it.

03 · PRINTER

AO Metal A50

Open LPBF with an optional 455 nm blue laser and a 250 °C build plate. Every parameter yours to set, for the powder you just made.

Why the three belong together: a new alloy is a loop — melt, measure, print, section, change one thing, repeat. Owning the whole loop turns that from a purchasing cycle into a working week.

AO Metal · a brand of Additive Plus · Gardena, California

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R&D BUNDLE · TECHNICAL DATA

Three systems, specified.

01 · ATO Lab — laboratory atomiser

Parameter	ATO Lab
Melting	Ultrasonic + plasma / TIG / induction
Particle size distribution	**20–120 µm**
Sphericity	above 0.95
Max alloy temperature	**above 3000 °C**
Input material	any shape and amount · waste close to zero
Atmosphere	full air-tight ecosystem
Parameters	open
Dimensions (W × D × H)	1994 × 813 × 1138 mm (78.5 × 32 × 44.8 in)
Origin	Made in Poland, patented in the U.S.A.

02 · Camsizer X2 — particle size and shape analyser

Parameter	Camsizer X2
Measuring principle	Dynamic image analysis (ISO 13322-2)
Measuring range	**0.8 µm – 8 mm**
Detection area	approx. 20 × 20 mm (0.78 × 0.78 in)
Dimensions (W × D × H)	850 × 580 × 570 mm (33.5 × 22.8 × 22.4 in)
Origin	Made in Germany

03 · AO Metal A50 — open LPBF printer

Parameter	A50
Build volume	**Ø50 × 100 mm (Ø1.97 × 3.94 in)**
Laser	300 W fiber, 1064 nm · 500 / 1000 W optional
Blue laser	**455 nm, 250 W, optional**
Build plate heating	250 °C · for 900 °C see the A50-HT
Layer thickness · spot	15–100 µm · 75 µm (55 µm optional)
Power supply	120 V, 1 phase, 30 A circuit (300 W) · 208–240 V, 1 phase, 30 A (500 W) or 50 A (1000 W, blue laser)
Dimensions (W × D × H)	1110 × 810 × 2000 mm (43.7 × 31.9 × 78.7 in)
Price	**from $89,000**

MATERIALS THE LOOP IS BUILT FOR

Stainless 316L · 17-4PH | Inconel 625 · 718 | Ti-6Al-4V · TiAl | AlSi10Mg · 6061 | Cobalt chrome

Tool steels H13 · M300 | Copper · CuCrZr | W · Ta · Nb · Mo | Gold · Silver · Platinum | High-entropy alloys

What owning the loop changes

- A custom powder ordered outside is a minimum order and a lead time. Atomised here it is an afternoon and the amount you actually need.
- You see the powder before you print it — size, shape, sphericity — so a bad build is traced to the powder or the parameters, not guessed at.
- Every parameter stays open on all three systems, so the whole loop is yours to change.

Who runs one

- Universities and technical training centres.
- National-lab and corporate R&D groups.
- Engineering programmes and materials teams working on their own alloys.
- Anyone working with scarce, refractory or precious material, where waste is the cost.

AO Metal

Available as a bundle or individually — the three are engineered to work together. Tell us the alloy you want to develop and we will say which parts of the loop you already have.

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