AO Metal

LASER POWDER BED FUSION · DESIGNED AND BUILT IN CALIFORNIA

A30 METAL 3D PRINTER

Real metal printing a lab can simply buy.

A 120 V circuit, a bench you already own, and every process parameter open to you.

BUILD VOLUME	LASER	LAYER	POWER
Ø30 × 60 mm	200 or 300 W fiber	15–100 µm	120 V · 1.8–2.3 kW

$59,000

200 W · 300 W is $64,000



- **An experiment costs grams**
  71 g of steel or 41 g of titanium for a set of test parts.
- **It sits on a bench**
  About 100 kg on a standard laboratory bench, 120 V single phase. No three-phase, no dedicated room.
- **Reproduce any process**
  Rebuild another machine's settings, qualify small, scale later.
- **One hour to change material**
  Print, section and measure a new composition in a day.
- **Open where it matters**
  Our own slicer, every parameter exposed, proven sets included.
- **It grows with the work**
  The larger printers share the software and controls — what you develop here transfers.

NINE ALLOYS PROVEN TO DATE. THE LIST IS NOT CLOSED.

Stainless steel	Tool steels H13 · M300	Inconel 625 · 718	Ti-6Al-4V	Cobalt chrome
Aluminium	Magnesium alloys	Gold	Silver	

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

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A30 · TECHNICAL DATA

Specifications and what it takes to run one.

71 g of 316L powder to run a set of test parts 10 mm tall.

POWDER TO START A BUILD	316L STEEL	TI-6AL-4V	ALUMINIUM
Test parts, 10 mm tall	**71 g**	**41 g**	**25 g**
A build of 20 mm parts	**143 g**	**82 g**	**49 g**
Dispenser filled to full height	**453 g**	**260 g**	**156 g**
Metal in the part itself — a 10 mm cube	**7.9 g**	**4.5 g**	**2.7 g**

Model	A30-200	A30-300
Technology	Laser powder bed fusion (LPBF)	
Build volume	**Ø30 × 60 mm (Ø1.18 × 2.36 in)**	
Laser	200 W fiber, 1064 nm	300 W fiber, 1064 nm
Laser spot size	75 µm (55 µm optional)	
Scan system	Galvo scan head + F-theta lens	
Max scanning speed	up to 12 m/s	
Layer thickness	15–100 µm	
Inert gas	Argon, < 2 L/min	
Material changeover	**1 hour**	
Software · file format	AO Build Studio + AO Build Slicer · STL	
Power supply	**120 V AC, 1 phase, 60 Hz · NEMA 5-20, 20 A circuit**	**120 V AC, 1 phase, 60 Hz · NEMA L5-30, 30 A circuit**
Peak power, estimated	about 1.8 kW	about 2.3 kW
Dimensions (W × D × H)	1000 × 620 × 1100 mm (39.4 × 24.4 × 43.3 in)	
Weight	**about 100 kg (220 lb)**	
Alloys proven to date	9 — not a fixed list	
Price	**$59,000**	**$64,000**

What a system comes with

- AO Build Studio and AO Build Slicer, with proven parameter sets for the alloys you order.
- Build plate, powder dispenser, filters, seals and the tools for a material change.
- **Installation and operator training,** with a named engineer on the account.
- **Warranty:** 12 months on laser, scanner, blower, motors and electrical systems.
- **Lead time:** some configurations ship from stock; built to order in 8–14 weeks. Your quotation confirms the date.

What you will also need

- **Required:** wet vacuum cleaner (explosion-proof for reactive metals) and a sieving machine.
- **Recommended:** heat-treatment furnace, bandsaw or small lathe, polishing tool.
- **Serviceable in your own lab:** filters, seals, hoses and recoater blades are ordinary components you can source locally.

The rest of the line, when the work outgrows the A30

A30
Ø30 × 60 mm · 200 or 300 W fiber · 120 V, single phase
from $59,000

A50
Ø50 × 100 mm · 300–1000 W · optional 455 nm blue laser
from $89,000

A100
Ø100 × 100 mm · 300–1000 W · optional 455 nm blue laser
from $99,000

A50-HT
Ø50 × 100 mm · 300–1000 W · 900 °C induction-heated plate
Quoted

A100-HT
Ø100 × 100 mm · 300–1000 W · 900 °C induction-heated plate
Quoted

The same slicer, the same controls, the same file. A process developed on an A30 transfers to the larger machines without being rebuilt.

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Designed and manufactured by Additive Plus in Gardena, California — spares, service and your engineer are all here. Tell us the alloy and the part, and we will say what an A30 does with it.

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