AO METAL · LPBF SYSTEMS

Three machines. One process.

The same slicer, the same controls, the same file. Choose by the part you have to hold and the alloy you have to melt — not by starting over.

A30	A50	A100	ALL THREE
Ø30 × 60 mm	Ø50 × 100 mm	Ø100 × 100 mm	Argon, < 2 L/min

from $59,000

A50 from $89,000 · A100 from $99,000

A30 · FROM $59,000

The way in

A bench, a wall socket, and an experiment that costs grams. For developing the material itself and for teaching people to run LPBF.

A50 · FROM $89,000

The materials

A 450 nm blue laser and a platform that holds 900 °C: copper, gold, silver and crack-prone alloys become printable.

A100 · FROM $99,000

The space

Four times the plate of an A50, in the same chassis and the same footprint. Small series and parts an A50 cannot hold.

The rule we would give you: develop on the smallest machine that can hold the part. A qualified process moves up the line as a file — not as a new project.

Everything that differs, in one table.

Model	A30	A50	A100
Technology	Laser powder bed fusion (LPBF)		
Build volume	**Ø30 × 60 mm**	**Ø50 × 100 mm**	**Ø100 × 100 mm**
Laser	200 W fiber, 1064 nm 300 W option	300 W fiber, 1064 nm 500 / 1000 W optional	300 W fiber, 1064 nm 500 / 1000 W optional
Optional blue laser	—	450 nm, 250 W	450 nm, 250 W
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		
Build plate heating	not heated	250 °C standard 900 °C optional	250 °C standard 900 °C optional
Inert gas	Argon, < 2 L/min		
Material changeover	**1 hour**	2 hours	3 hours
Software · file format	AO Build Studio + AO Build Slicer · STL		
Power supply	**110 V, 1 phase · 2 kW**	110 V, 1 phase · 4 kW 3-phase for 500 / 1000 W	110 V, 1 phase · 4 kW 3-phase for 500 / 1000 W
Dimensions (W × D × H)	1000 × 620 × 1100 mm	1150 × 730 × 2050 mm	1150 × 730 × 2050 mm
Weight	**≈100 kg (220 lb)**	350 kg (772 lb)	350 kg (772 lb)
Alloys proven to date	9	16+	16+
Price	**$59,000** $64,000 · 300 W	**from $89,000**	**from $99,000**

What an experiment costs on each machine

316L powder	A30	A50	A100
A set of test parts 10 mm tall	**71 g**	**128 g**	**527 g**
A build of 20 mm parts	143 g	256 g	1.05 kg
Dispenser filled to full height	453 g	2.69 kg	10.53 kg
Metal in the part itself — a 10 mm cube	7.9 g	7.9 g	7.9 g

Titanium needs about 0.58 of the steel figure, aluminium about 0.35. The dispenser rows are what it takes to fill a machine to full build height — the number that decides whether a new alloy gets tried this month or next year.

Every system comes with

- AO Build Studio and AO Build Slicer, with proven parameter sets for the alloys you order.
- **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 is 8–14 weeks.

Every system needs

- **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.

AO Metal

Designed and manufactured by Additive Plus in Gardena, California. Tell us the part and the alloy, and we will say which of the three is the right one — including when it is the smallest.

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