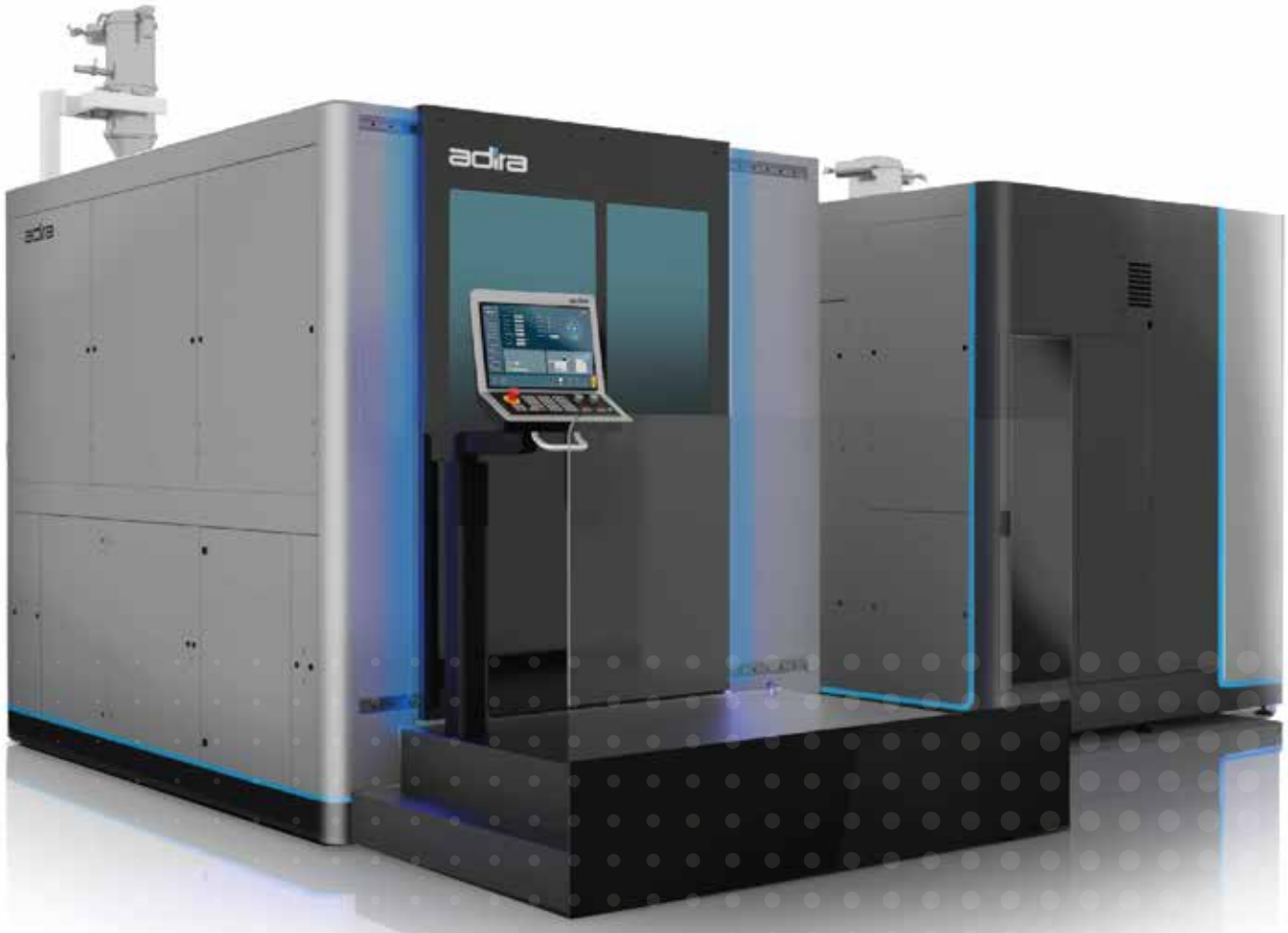
AC addcreator

Large metal printer solution



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addcreator

>>> FEATURES

NEW ADDED FEATURES
multi-laser system (4x)

LARGEST AM PLATFORM
for metallic parts 1000x1000x500

IMPROVED PRODUCTIVITY
bigger processing speed and improved setup

EXCLUSIVE AND SCALABLE
adaptable for the user's needs

1. **TLM Powder Bed Fusion (PBF) technology**
2. **Independent recoater**
3. **Powder system with re-circulation**
4. **Integrated cooling system**
5. **Automated feeding and sieving**
6. **Extractable powder bed (optional)**

>>> APPLICATIONS

THE NEW AC (ADDCREATOR) SYSTEM, BRINGING ADDITIVE MANUFACTURING TO HIGH-END INDUSTRIES:

Aerospace
Fuel injection, structural elements, blades

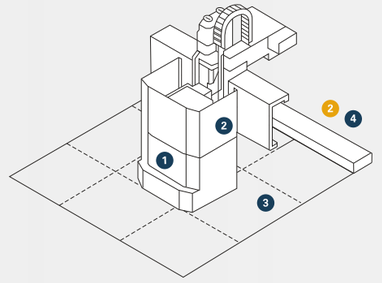
Automotive
Air ducts, formula 1 components

Tooling
Tooling inserts

>>> TECHNOLOGY TLM® Tiled Laser Melting TLM®

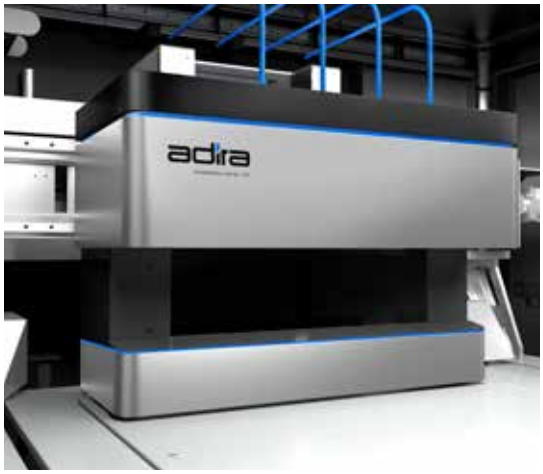
The Adira Add Creator AC additive manufacturing machine is focused on the building large metal parts through powder bed laser fusion of non-reactive alloys.
Adira's novel approach of Adira to powder bed fusion solution is through the patented method of TLM - Tiled Laser Melting ®.

This revolutionary method has a movable chamber that that builds the parts in segments (tiles). If the part is larger than the tile, the chamber moves to the other sections of the part. The inert atmosphere and the gas flow inside the chamber ensure the minimum O2 content and that the spatter originated during the melting process is removed effectively from the processing zone.



SYSTEMS

complex aerospace parts printed on Adira machines (courtesy of Poly-Shape)



4 laser TLM chamber

full machine control

1. **Controlled Processing Conditions**
2. **Modular Process Chamber**
3. **Powder Bed (Tiles)**
4. **Independent Recoater**

Scalable concept
Segmented build, dividing the workspace into different tiles, with local atmosphere control.

Modular concept
Mobile chamber with a full processing head, including the necessary optical components.

ADIRA has been designing, developing, manufacturing and installing state-of-the-art machine tools since 1956.

ADIRA is a Portuguese manufacturer specialising in the development of sheet metal processing solutions, with worldwide projection of its own technology: ADIRA's Press Brakes and Shears. In existence for over 60 years, ADIRA entered the additive manufacturing market, with ambitious and disruptive products, following the Industry 4.0 revolution "revolution standards", especially in terms of Large-Part Additive Manufacturing.

BY NUMBERS

10k machines sold

30 markets

60 years of experience

Technical specifications

ADIRA TECHNOLOGY

1956
Adira starts (small lathes, milling and planing machines)

1961
First mechanical shear

1964
First hydraulic press-brake

2001
First laser cutting machine

2016
Large PBF conceptual machine

2019
AC200

TECHNICAL SPECIFICATION

Powder bed system for metal additive manufacturing

Overall dimensions (LxWxH)	mm	8000 x 8500 x 4000	
Process Technology	mm	Tiled laser melting (TLM)	Powder Bed Fusion (PBF) AM ProcessPowder Bed Fusion (PBF) AM Process
Build Envelope	mm	1000 x 1000 x 500	Considering 80mm thick substrate
Tile Scan Field	mm	680 x 230	
Process Parameters			
Max. Build Rate	cm^3/h	up to 100 *	
Layer Thickness	µm	50 - 150	
Focus Diameter	µm	50 - 80	
Geometric Tolerances	µm	+/- 100	
Inert Gas	L/min	60	
Laser resonator			
Type	-	Fiber	
Power	kW	400 - 1000 W per Laser	
Configuration	-	4 laser scanner systems	
Numerical Control	-	SIEMENS Sinumerik 840D	
Electrical Requirements	-	25 kW 3PH+PE 400V AC ±5%	50Hz / 60Hz ±1%
Compressed Air Requirements	-	3200 L/min 7 bar 3.4.3 (ISO8573-1:2010)	

All features are approximate. Specifications shown are subject to change without notice. Specifications of models shown may vary from country to country. For different configurations consult your Adira specialist.

** depending on parameters, layer thickness, and geometry.*

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