



MiniWAAM®: Small but mighty

State-of-the-art hardware finally made available affordably to the wider WAAM® community

MiniWAAM® can be deployed to produce prototypes and end-use parts. It is also the perfect companion for process development, metallurgical characterization, production of mechanical test pieces, exploration of new wires, and testing of new sensors.

MiniWAAM® is:

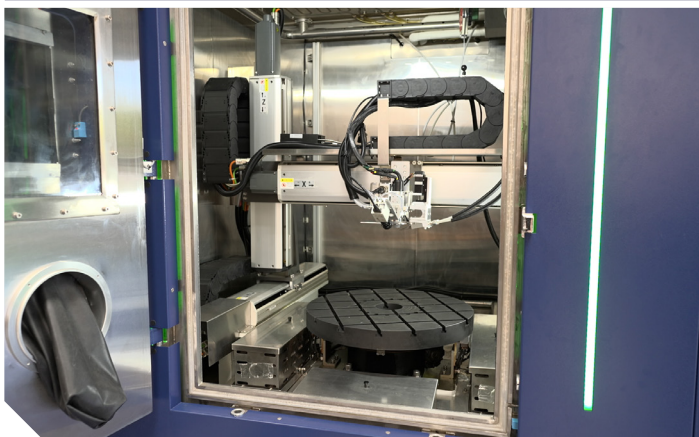
- Easy to master / MiniWAAM® comes with our established dual-wire Plasma Transferred Arc process, a Siemens controller, and all of our dedicated software. You can focus on delivering excellent prints from day 1.
- Innovative / MiniWAAM® ships natively with multi-material capabilities to produce functionally graded components or new alloys in-situ.
- Intelligent / MiniWAAM® packs the same monitoring and control features available on RoboWAAM® to give you extra confidence in the quality of your parts or the results of your R&D campaigns.

MiniWAAM® summary:

- Fume extraction and filtration enhance the workspace environment
- Global argon shielding ensures the quality of printed parts
- Internal chamber gas circulation paired with active cooling facilitates continuous deposition
- Comprehensive process monitoring and data logging
- Cutting-edge dual-wire deposition for increased deposition rates and multi-material printing
- Real-time process control to prevent failures
- User-friendly interface and system, suitable for beginners and experts alike
- Premier WAAM technical support

MiniWAAM® specification:

Technical specification	Details and optional upgrades (marked with *)
Machine size	L2400 x W2100 x H2300 mm
Print envelope	L600 x W600 x H500 mm
Control system	Siemens PLC
Inner chamber size	Fixed enclosure with fume management and filtration L1600 x W1500 x H1600 mm
WAAM variant	Plasma Transferred Arc (PTA) or *Dual Wire Plasma Transferred Arc (PMAx)
Axes	Siemens 3 cartesian (overhead) + 1 rotational
Materials	Titanium alloys, stainless steel, nickel alloys, and others *Multi-material functionality
Rotational table	60kg payload; 500 mm diameter
Sensors	Process camera, Weld sensors *Pyrometer, *IR camera, *Shapetech
Controls	Manual wire position control *Auto wire control using images based AI *Auto arc start with interlayer temperature control *Auto layer height correction



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