



The AMDroid is the first laser-wire based portable additive manufacturing robot cell rated for reactive materials like titanium with a deposition rate as high as 4 kg/hr. The AMDroid provides all the benefits of a robotic architecture in a compact welded cell that is portable, allowing installation and the first printed parts in just one day. The AMDroid features state-of-the-art software tools to accommodate complex multi-axis geometries, making printing easier and more accessible for experienced and new users. It is designed, developed and integrated by our innovative engineering team, and powered by a proprietary user interface command center. ADDiTEC has partnered with major industrial robot brands to allow for seamless integration for large scale robotic 3D printing.



## Technical Data

### Deposition Technology

Maximum laser power	6 kW
Laser type	Fiber laser
Laser wavelength	1032 nm
Layer thickness	0.8 – 1.2 mm
Maximum Deposition rate	4 kg/hr
Build volume	5.8' x 4.1' x 4.5'
Wire feed stock	0.8 – 1.2 mm $\Phi$
Processable materials	Iron, nickel, titanium, copper, and aluminum alloys
Shielding	Localized (Argon or Nitrogen)
Cooling	Active water cooling
Deposition software	ADDiTEC
Process control	Melt pool temperature (Pyrometer) based closed loop laser power modulation along with wire feeder control

### Motion Technology

Motion axes	6+2
Robotic partners	ABB, FANUC and YASKAWA
Robotic motion software	Adaxis or Aibuild configured, compatible with other software programs

### Portable Cell

Cell volume	7.5' x 9' x 10.6'
Inert chamber system	Vacuum and Argon
Oxygen sensor	0% minimum measurable oxygen level
Fume management system	HEPA air filter
Total weight	7000 lbs approx.

