

Performance AMRC-S

Performance Additive Manufacturing Robotic Cell - Scalable

The Performance AMRC-S is the first laser wire based scalable additive manufacturing robot cell rated for all common metals, including reactive materials, with a deposition rate as high as 4 kg/hr. The Performance AMRC – S provides all the benefits of a robotic architecture in a scalable cell that allows for multi-robot configurations with multi-deposition heads to achieve scalability. ADDiTEC’s Performance AMRC-S 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. The Performance AMRC-S 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 offers high customizability, enabling users to meet all their parameter requirements. Users can leverage the touch screen functionality to monitor the process and access proven printing profiles for a broad material range.



Technical Data

Deposition Technology

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| 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 | 5.9' x 5.9' x 5.9' |
| Wire feed stock | 0.8 – 1.2 mm Φ |
| 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

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|-------------------------|---|
| Motion axes | 6+1 |
| Robot partners | ABB, FANUC, KAWASAKI and YASKAWA |
| Robotic motion software | Adaxis or Aibuild configured, compatible with other software programs |

Scalable Cell

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|-----------|----------------------------------|
| Cell type | Panel based on-site construction |
| Cell size | 12' x 12' x 12' (Customizable) |