



High-accuracy robotic welding cell

FANUC ARC Mate120iC robot; Fronius TransPulse Synergic 4000 CMT power source; Robacta Drive CMT torch assembly

State-of-the-art robotic cell capable of high-accuracy advanced arc welding and additive manufacturing tasks.

Features and benefits

- High-accuracy robot for manipulation of welding torch and components through complex paths in space and relative orientations
- Advanced welding power source allows AC/DC MIG/MAG welding and brazing with controlled heat input
- Can weld thin sheet materials including aluminium down to 0.3mm, bridge gaps, and reduce spatter, distortion and residual stress
- Controlled bead shape, penetration and dilution
- Capable of high deposition rates and large multi-run welds in MAG spray transfer mode

Some applications

- Fabrication of engineering structures in many materials
- Automotive aluminium, steel and dissimilar material joining
- Aerospace seam and spot welding, plus welding and brazing of thin sheet materials
- High-definition additive manufacturing that can reduce buy-to-fly ratio to 2:1
- Welding nodes for offshore wind jacket structures

Technical specification

- Six-axis robot with reach radius of 1811mm
- Payload capacity at wrist: 20kg
- +/-0.08mm repeatability
- Fully coordinated motion control with two-axis positioner
- Arc welding software and fully integrated weld control
- Offline programming suite for complex path generation
- Advanced 400A welding power source with cold metal transfer capability
- Liquid-cooled torch assembly

