

Refill friction stir spot welding robot

Kawasaki refill friction spot joining welding head and Kawasaki ZX300S robot arm

Single-point, solid-state spot welding technology that creates a virtually flush surface finish without the use of a consumable.

Features and benefits

- Energy savings of more than 90% compared to resistance spot welding
- Superior tensile shear and hardness properties to resistance spot welding
- Suitable for joining dissimilar metals
- Reduced corrosion risk in aluminium due to absence of steel rivets
- Zero net change in work-piece mass after welding
- Near-flush finish offering aerodynamic, hydrodynamic and aesthetic benefits

Some applications

- Primarily suitable for joining thin-section aluminium
- Aerospace fuselage and automotive body panels
- Similar and dissimilar aluminium alloy grades and metals
- Multi-lap/gauge capability

Technical specifications

Refill FSSW gun Drive method: AC servomotor drive (pressure axis/rotating axis/probe axis) Pressure range: 1,470-14,700N RPM range: 0-2,160RPM Pressure shaft stroke: max. 180mm Mass: 190kg

ZX300S robot arm

Axes: Pauload: 300kg Horizontal reach: 2501mm <u>3115mm</u> Vertical reach: Repeatability: ±0.3mm Maximum linear speed: 2500mm/s

six-axis articulating arm

