



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:	six-axis articulating arm
Payload:	300kg
Horizontal reach:	2501mm
Vertical reach:	3115mm
Repeatability:	±0.3mm
Maximum linear speed:	2500mm/s

