

TUCKER CleanJet TH539

Surface Cleaning For Perfect Aluminium Stud Welding

Sustainability and the protection of resources is becoming increasingly important in the automotive industry. The increasing use of aluminium in car bodies, as well as cost pressures, have led to unstable conditions for the stud welding process resulting in triple-digit PPM (Parts Per Million) rates.

For aluminium stud welding, a clean surface of the workpiece is a basic requirement for a good welding result. Any kind of contamination such as dry lubricants or added oils added to during the part's pressing process must be removed.

Using Tucker CleanJet removes these surface contaminations with a specially designed plasma torch directly prior to the actual stud welding, making it a seamless process with no opportunity for re-contamination.

This results in enhanced process stability, single-digit PPM, increased joint strength, less rework and less washing of components. Completely controllable and evaluable via the Tucker HMI (Human Machine Interface), industry-proven components were used and adapted to the needs of the automotive industry

Tucker CleanJet TH539 - not only to achieve greater cost savings, but also leads to a more sustainable environment.

FACTS

- Automated surface spot cleaning directly prior to the welding process
- Integrated plasma torch
- Dry lube and oil is burned, vaporized and blown aside
- No smoulder, smoke or Ozone
- Cleaning duration ~2s
- Minimal heat transfer
- Passivation stays unaffected

ADVANTAGE

- Single digit PPM
- Increased Joint Strength
- Process Stability

GO GREEN

- Less Part Washing
- Reduced Rework
- Cost Savings



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Facts & Figures

Specification Weld Head

Total Weight of all Components	11,5 kg
Dimensions L x W x H	414 x 120 x 187 mm slightly extended int. contour
Max. Welding Stroke	12 mm
Optimal Slide Stroke	40 – 45 mm
Max. Power Consumption	2,5 A
Protective Gas Pressure	4 bar
Max. Protective Gas Flow	20 l/min

Specification Cleaning Unit

Slide Stroke	40 – 45 mm
Power Consumption Welding Process	2,5 A
Plasma Gas Pressure	4 -5 bar Argon
Max. Plasma Gas Flow	20 l/min

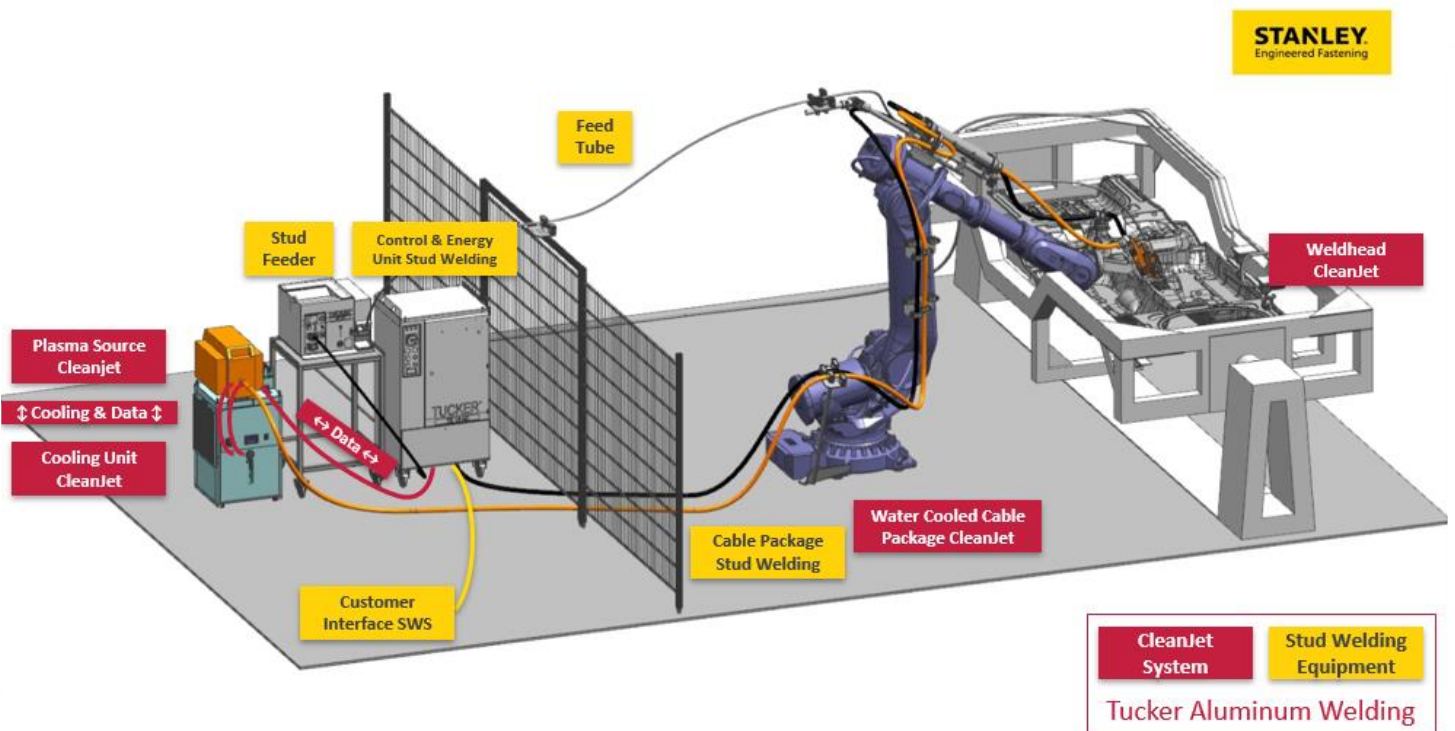
Specification Periphery

Footprint L x B x H (Cooling & Plasma Unit)	650 x 540 x 1300 mm
Power Supply Plasma Unit	16 A / 400 V
Power Supply Cooling Unit	16 A / 400 V



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AC Stud Welding with CleanJet – System Overview



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