

Servo-Projection Welding Machine

The modular aluminium design makes the Alligator servo-projection welding machines extremely stable and free from torsion effects. At the same time, they weigh considerably less than comparable systems constructed from steel.

Depending on the welding task, the system can be equipped with one driven servo axle and a fixed counter electrode or with two servo drive axles. The welding current and the control of the servo-drives is provided for example by the *ServoSPATZ+M600* power source. Combined with the built-in MFDC transformer (standard), this system configuration allows welding currents of up to 30 kA. Even more powerful system configurations are available on demand.

Among other things, the projection geometry at the start of weld time defines the weld quality in projection welding applications. If this projection geometry is influenced in a negative way, due to rough approach of the welding electrode (frequently in pneumatically driven systems), effects on the strength of the welded joint are inevitable. The fast travel speed and the soft and controlled touch on the components are advantageous. The integrated measurement of electrode penetration provides data enabling functions such as part recognition and quality control.

Adjustable follow-up devices in the drive axles allow the optimal adaptation of electrode penetration during the weld process and reduce weld spatters. The equipment is, of course, also applicable for standard spot welding applications and is taking advantage of the adaptive **MASTER** control mode provided by *ServoSPATZ* power sources.



Technical Data	One Servo-electrode axle and steady-state welding table	Two Servo-electrode axles
max. throat depth	230 mm / 9.06 in	230 mm / 9.06 in
max. height of weld window	150 mm / 5.91 in	350 mm / 13.78 in
Electrode force drive with resolver / brake		
- max. electrode force	10,000 N	10,000 N
- max. working stroke	150 mm / 5.91 in	150 mm / 5.91 in
- max. traversing speed	500 mm/s / 19.69 in/s	500 mm/s / 19.69 in/s
Transformer 1,000 Hz DC	Type SPATZ TI-120R 120 kVA at 20 % DC	Type SPATZ TI-120R 120 kVA at 20 % DC
Counter electrode	fixed on welding table, height-adjustable	driven with resolver / brake - max. force 10,000 N - max. working stroke 150 mm / 5.91 in - max. speed 500 mm/s / 19.69 in
Quick-change device	optional	optional