

Plate Holder Welding Automation

Technical specifications



Product image

AKWA Technic Plate Holder Welding Automation combines loading, positioning and welding of backbone and pin wires with automatic transfer of finished parts to the output in one production cell. Both types have a 4-second cycle time. The 6-station type with servo-controlled ear bending and the 4-station type without bending are available with 4 × 60 kVA AC or 4 × 111 kVA MFDC welding transformers.

Product features

- 6-station type: Welding and servo-controlled ear bending - 1. Backbone wire loading: The backbone wires forming the plate holder's supporting structure are loaded into the fixture. Guides and clamps hold them in the correct position throughout processing.
- 6-station type: Welding and servo-controlled ear bending - 2. Pin wire loading: The pin wires supporting the plates are transferred to a comb fixture at spacings matching the product geometry.
- 6-station type: Welding and servo-controlled ear bending - 3. Centering and part inspection: Wire position and part presence are checked. The wires are centered and clamped ready for welding.
- 6-station type: Welding and servo-controlled ear bending - 4. Four-head resistance welding: The joints between pin and backbone wires are welded by a four-transformer welding group. AC or MFDC technology is selected to suit production needs.
- 6-station type: Welding and servo-controlled ear bending - 5. Servo-controlled ear bending: The plate holder ears are formed by a servo-controlled bending mechanism, completing ear bending within the welding automation.
- 6-station type: Welding and servo-controlled ear bending - 6. Automatic unloading: The completed plate holder is removed from the fixture and transferred to the output conveyor. The rotary table prepares for the next cycle.

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- 4-station type: Welding automation without bending - 1. Backbone wire loading: The backbone wires forming the plate holder's supporting structure are loaded into the fixture. Guides and clamps hold them in the correct position throughout processing.
- 4-station type: Welding automation without bending - 2. Pin wire loading and position inspection: Pin wires are transferred to the comb fixture; wire arrangement and position are checked before welding.
- 4-station type: Welding automation without bending - 3. Four-head resistance welding: The joints between pin and backbone wires are welded by a four-transformer welding group. AC or MFDC technology is selected to suit production needs.
- 4-station type: Welding automation without bending - 4. Automatic unloading: The completed plate holder is removed from the fixture and transferred to the output conveyor. The rotary table prepares for the next cycle.

6 stations · AC / 6 stations · MFDC / 4 stations · AC / 4 stations · MFDC

Values vary by model and application.

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Technical specifications	6 stations · AC	6 stations · MFDC	4 stations · AC	4 stations · MFDC
Number of stations	6	6	4	4
Cycle time	4 s	4 s	4 s	4 s
Ear bending	Servo-controlled	Servo-controlled	None	None
Number of transformers	4	4	4	4
Rated power per transformer	60 kVA	111 kVA	60 kVA	111 kVA
Rated power duty cycle	50%	20%	50%	20%
Welding technology	Alternating current (AC)	Medium-frequency direct current (MFDC)	Alternating current (AC)	Medium-frequency direct current (MFDC)
Operating frequency	50/60 Hz	1000 Hz	50/60 Hz	1000 Hz
Reference secondary voltage	7,1 V	8,3 V	7,1 V	8,3 V
Cooling type	Water-cooled	Water-cooled	Water-cooled	Water-cooled