

# COMMUTATOR & COIL WELDING

## Vertical Commutator TIG Welder

### WTIG

Representing the very latest technology, processing enhancements and safety features, RIMAC Vertical TIG welder represents the pinnacle of commutator welding

#### Concept

This new series of RIMAC welding machines has been specifically designed and built for the TIG welding of commutators on high-rotation speed motors marked by significant performances. Particularly suitable for armatures with very high rotation speed as in railway traction, its features have been designed, developed and tested collaborating with leading electric motor manufacturers and repairshops.



#### Main Features

High reduction in the processing time: operations which were usually hours-long and were performed by an experienced welding operator, are now carried out quickly and automatically.

##### WELDING TORCH

High-precision positioning of the welding torch is carried out by means of 3 independent motors allowing a micrometric control of the electrode position.



HSPS System (High Security Protection System): complete isolation of the welding area generating higher operatorsafety

The new welding fumes aspirator, guarantees a silent and healthy working environment for the operator

##### CUTTING UNIT

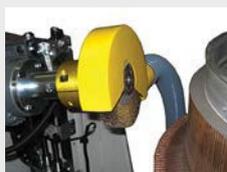
Adjustable-speed cutting unit for a quick and precise removal of the exceeding winding edges



Possibility of using 2 different types of welding gas: Argon for easy arc ignition and Helium for a better copper melting.

##### BRUSHING UNIT

Possibility of mounting a brushing unit for the constant cleaning of the commutator during the welding phase.



##### HMI System (Human Machine Interface)

Intuitive and touch-screen interface, capable of storing an unlimited number of welding programs. It offers a user-friendly machine diagnostic, assisting the operator through every step of the welding process



### Welding methods available

**SPOT WELDING:** during the passage of the welding torch on the mica, the electric power level gets lower. Once the welding area is reached, the rotation stops and the electric power is automatically increased.

**LONG SPOT WELDING:** the commutator continuously turns with adjustable speed. The welding control automatically switches from low to high electric power as needed and for the desired duration.

**SPOT WELDING WITH BAR JUMP:** in order to obtain a better distribution of the temperature on the commutator circumference, reducing the local overheating, it is possible to set a program for the jumping of one or more bars.

**LINE WELDING WITH BAR JUMP:** it is the quickest welding method consisting in applying a continuous bead of weld along the riser bar. Then the commutator turns jumping a defined number of bars before repeating the welding process.

### Technical Data

The machine is available in 3 different sizes according to the maximum workable size of the commutator

Technical Specifications	<i>WTIG 60</i>	<i>WTIG 100</i>	<i>WTIG 150</i>
Armature diameter	80 - 600mm	100 - 1000mm	150 - 1500mm
Riser diameter	50- 500mm	100 - 900mm	120 - 1400mm
Riser height	0 - 200mm	0 - 250mm	0 - 250mm
Shaft length	500 - 1600mm	700 - 1800mm	700 - 2000mm
Max armature weight	2500kg	4000kg	5000kg
Number of bars	0 - 999	0 - 999	0 - 999
Machine weight	1600kg	1850kg	2200kg
Overall dimensions (len. x wid. x he.)	190 x 190 x 210 cm	230 x 230 x 240 cm	280 x 280 x 290 cm
Power	5 kW	6 kW	7 kW
Electric Supply	V 400 3ph + N + G 50Hz		
Pneumatic Supply	Compressed air 6 bar		
Max welding current	400 amp		