

DRAGON 2

ROBOTIC INDUCTION BRAZING STATION

EFFICIENT POWER FOR INDUCTION HEATING

FEATURES

- Power: 24 kW at 100 % duty cycle
- Standard coils for 1/8" to 1 1/2" tube
- Fully automatic process with no operator assistance required
- Programmable to braze multiple joints in complex assemblies
- Flexible system, easily re-programmed to accommodate different process requirements
- Advanced 5" Color LCD touch control panel
- Digital I/O Interface, Remote Start/Stop or PLC Control
- SmartBraz AI (optional)
- Built-in temperature monitoring & control with IR Pyrometer (optional)
- Automatic Coil Changing System (optional)

BENEFITS

- Consistent, repeatable braze quality on every joint, with the same coil position, power and heat cycle regardless of operator skill
- Higher, predictable throughput: cycle time is set by the program, not by how many trained brazers are on shift
- Inspection before heating, so missing braze rings, misplaced parts and bends are caught before the coil fires instead of at final leak test
- Precise quality control is possible by monitoring the energy applied to braze each joint and comparing with reference value
- Environmentally clean and safe process with no flames or toxic gases



- Universal Robots or Fanuc controller integrated.
- Separate robot station with 1 m and 0.5 m pedestals (custom heights available)
- RS485 (MODBUS) serial interface for remote computer monitoring, control, data logging and diagnostics

- High productivity rates are achievable, based on the tube sizes and the type of brazing alloy
- Faster changeover to new assemblies; with SmartBraz AI the vision system locates the joints and writes the coordinates, so teach-point programming is minimal
- Full traceability, logging energy per joint, temperature and vision results to the plant quality system
- High quality and repeatability of the brazed joints, achieved by precisely controlled positioning, coil power, and heat cycle
- The patented automatic coil changing system enables easy coil replacement for assemblies where different brazing coils are needed

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Dragon 2 integrates the SmartPower SOLO 24 kW induction power supply with a collaborative robot, either Universal Robots or Fanuc CRX series, with the robot controller built into the station to achieve a fully automated brazing process. The induction heating system has been successfully used to replace the outdated and unsafe torch brazing widely used in the industry.

The integrated induction coil mounted directly onto the robotic arm is capable of reliably brazing multiple joints by applying controllable heat precisely positioned by the robotic arm.

Dragon 2 can automatically and consistently braze multiple joints located in predefined positions in an assembly. Brazing alloy rings are assembled onto the joints prior to the brazing process.

The robotic system is pre-programmed to move to each joint and to apply power for a pre-programmed time to ensure a repeatable and reliable brazing process.

The system can accommodate different production line speeds and multiple assemblies. It can be equipped with SmartBraz AI, capable of recognizing a variety of assemblies and positioning the brazing coil always at the correct joint location.

The Dragon 2 Robotic Station is suitable for brazing copper-to-copper, copper-to-steel, brass-to-copper, and aluminum tubes. It is ideal for flameless brazing of refrigerator compressors, heat exchangers, home appliance components, and complex HVAC assemblies.

SmartPower SOLO cabinet



Robot stations



0.5 m pedestal



1 m pedestal

APPLICATIONS

Brazing, soldering, bonding, sealing, preheating, special applications

HEADQUARTERS

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