

QUADRON

High specification, PLC, rotary soldering machine



















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A versatile rotary benchtop soldering machine ideally suited for high or low volume production, the Quadron combines well proven pumped soldering techniques with advanced PLC-controlled movement technology.

Much of its versatility is owed to the specially designed programming system which allows the user access to all fluxing and soldering parameters at any time. In addition, rapid product changeover is achieved quickly and easily through simple tooling design and program identification.

The machine is at home processing both coils / sub-assemblies / transformers or small PCB's, in either small or large batches.

The Quadron uses a well proven solder pump system and incorporates a solder nozzle which can be of various designs to suit the product. Dross is removed from the nozzle prior to the next soldering operation by increasing the pump speed and bursting solder from the nozzle, this occurs during the index operation and does not impede the overall cycle time. The component is dipped in the solder by means of the precision stepper driven tooling slide, which provides precise, accurate and repeatable results. Also, for the optimum soldered joint, Pillarhouse is able to provide a Nitrogen shroud which makes the soldering operation totally inert and helps prevent bridging, reduces dross, and provides an improved quality. One major advantage the Quadron has is the ability to tilt a component out of the solder, this facility will help to prevent solder bridging of fine pitched connectors and the like. The flux is applied to the terminals via a crucible which is lifted from the bath to the component, this provides high quality and consistent repeatability. Flux application is of paramount importance, this is where the Quadron has an advantage, as it is able to control the application and avoid bobbin contamination by applying flux accurately. Excess flux and insulation residue is kept to a minimum by careful control of the dip height and immersion time, this being achieved through a microprocessor and stepper drive motors. The Quadron can be supplied with either a fixed flux bath or self-contained recycling flux tank which helps reduce the evaporation of the flux thinners.





FLUXING STATION



PLC PROGRAMMING

The Quadron can be quickly and easily programmed to solder a wide range of different products, e.g., coils, transformers, wire terminations and small PCB's. The fluxing and soldering parameters are entered via 7" LCD display and a keyboard, to give full control of: solder bath temperature, flux and solder dip heights (increments of 0.1mm), and flux and solder immersion time (to within 0.1 of a second). Additional operations can also be controlled, e.g., adjustment of the cycle time etc. A twenty-four-hour wake-up timer is included as standard equipment which enables the machine to be automatically powered-on and bought up to temperature prior to the start of a working shift.







SOLDERING STATION

SYSTEM OPTIONS

The optional turnover facility enables components with terminals on numerous sides to be handled on the same tooling, with fluxing and soldering performed at the same time without the need for the component to be re-loaded. Also, if a component has different soldering requirements on each side, the Quadron will identify different programming parameters for each.

An interface is provided, as standard, to allow the integration of continuity testers and/or unload facilities, offering components the ability to be tested for electrical continuity or resistance prior to the component being automatically or manually ejected as a pass or fail.

The optional solder top-up ensures the solder level in the bath is kept constant; the level is continually monitored using a temperature differential system which instructs the system to automatically top-up the solder.

The wire feeder uses a reel of 3mm diameter solder which is mounted on the rear of the machine; the solder is fed into the bath pneumatically.



CUSTOM SOLDER NOZZLES



ADDITIONAL SYSTEM OPTION - PillarCARE

Pillarhouse's comprehensive after-sale service and process programme, available for all machines



QUADRON



SPECIFICATIONS

1750 mm/69" Height:

Width: 800mm/32" (1310mm/52" for maintenance access) 770mm/31" (1300mm/52" for maintenance access) Depth:

Weight: 282kg unpacked, 380kg packed

160mm/9.9" dia. Extraction: Fan:

191CFM Rating:

All commonly used solder types - including lead-free Solder:

Applicators: Special dedicated nozzles

25kg Solder pot capacity: Flux tank capacity: 2 Litre

Dip axis: 0.1mm resolution accuracy

Repeatability: 0.05 mm

50-100 litres/min. typically Nitrogen usage:

Nitrogen supply pressure: 5 bar/72 psi

Nitrogen purity: 99.998% or better

Air consumption: Variable 5 bar/72 psi Air supply pressure:

Power supplies: Single phase +PE

Voltage: 210V - 240V Frequency: 50/60Hz Power: 3 kVA Solder Thimbles: Various

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