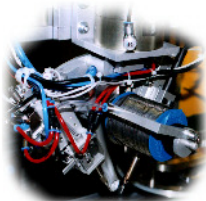


vario

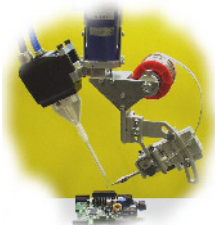
inline-soldering system



LightBeam



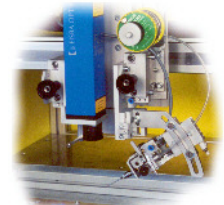
hot iron



induction



dispenser



laser



flame

- *3-axes robot with PC-control*
- *extendable up to 6 axes*
- *modular conception with flexible moving ranges*
- *programming system WinControl*
- *soldering system LightBeam*

Technical description

The inline-station vario based on the modular concept with different kind of axes.

According to the application 4 sizes with 3 different speed and moving ranges from 100 up to 1000mm are available. Standard configuration are 3 axes, optionally up to 6 axes can be integrated.

Caused by the modular concept different kinds of handling modules are available. PCB-conveyors like SMEMA-standard are also available as customer specific transports systems like BOSCH TS2.

For stand-alone systems with manual handling of the components a double cassette system improves the throughput.

The control based on Industrial-PC and allows a comfortable handling of programs and process parameters. The programming system WinControl operates as a Windows Under Interface. A Teach-In modes allows a simple input of coordinates. The positioning is aid by the visual camera system. The comfortable program editor is optimised for point base processes. For every point various predefined process can be selected.

Communication to sensors and actors can be don by "Multi-Pol"-Connect, Interbus or ASI-Standard. For the communication to other stations of a complete assembly line the different network of Ethernet or Profi-Bus is available.

Main component of the station is the soldering system LightBeam. With an input-power of 250 W (150 W optionally) the ray reaches 10-15 W (8-10 W) soldering power in the focal point. The diameter of the focal point is 2-3 mm. The soldering temperature is realised by absorption of the beam at the focal point.

The solder is supplied by solder paste ore solder wire. The feeder for the solder wire is very precise. It can handle solder wire with a diameter of 0.3 up to 1.5 mm. His weight is 120g only.

The advantages of soldering with IR-light are:

- precise heat distribution
- high process-security
- low running costs

Applications



Line with three Vario-Modules for Dispensing Assembly and Soldering



customer specific production center with BOSCH-Conveyor-System and 2 automatic soldering stations,

Technical Data

Control

- Industrial-PC; Ethernet, 3.5"FDD, HDD, CD-Rom
15" TFT-Screen, Keyboard
- Serial interface: 2xRS232, (opt. 4xRS232/485)
- 16 digital inputs (opt. 64) isolated, 5-24V
- 16 digital outputs (opt. 64) isolated, 5-30V

Programming

- programming software WinControl
- free programmable processes (in C++)
- templates for light-, iron-, microflame-, laser-, induction soldering, dispensing, drilling, screwing, ...

Positioning:

Quantity of axes: 1-6
drives: stepper motors with encoder
power unit: 24V, max. 2,5A (per axis)
moving range: (x/y/z): 200-1000 / 200-500 / 50-200 mm
max. speed. (L/M/H): 150 / 300 / 600 mm/s
repeating accuracy: $\pm 0,02$ mm

work piece handling (optional)

- SMEMA-conveyor, (3 segments, width 50-270 mm
- variant for manual feeding

Station

dimensions: B * T * H X+500 x Y+450 x 1.700 mm
weight : ca. 600 kg
air pressure: 5-6 bar
current: 230V, 50Hz

Light Soldering System LightBeam

light source: halogen lamp 250W / 150W
power output: 10-15W / 8-10W
diameter of focal point: 2,5-3,5 mm / 2,0-3,0 mm
control unit: based on μ -Controller

solder wire feeder MosquitoA25:

diameter of solder wire: 0,5-1,5mm
drive: 12V-Motor

rotary valve for solder paste:

pressure for reservoir: 0-2 bar
valve drive: DC-Motor, 10-24V, 3W