

FRITSCH μ Placer 907

Universal Handlingstation for BGAs,
 μ BGAs, CSPs and FinePitch Components

Leadfree



μPlacer 907.250 with Bottom Heater

► Visionsystem

► Easy Operation

► Rework Module

► 100 Profiles "on board"

► 2 Thermo Couples

► Software Interface

► Leadfree soldering

μPlacer 907

The 907 Series combines the two aspects of very simple operation with the highest precision.

BGA and μBGA Placement

The solid construction of the Handling Head insures highly precise placement of BGA and Fine Pitch Components. Thus, the Basic Version of the μPlacer has no problem handling components down to a pitch size of 0,5 mm.

The optional Splitt Field Vision System provides enough accuracy to handle even smaller pitch sizes.

Vision System

The specialised vision system allows two pictures to be viewed simultaneously: The printed circuit board and the underside of the BGA. This ensures simple and precise placement.

Rework Module

Equipped with a highly accurate rework module, the μPlacer provides a workstation for placement and rework of BGAs and QFPs.

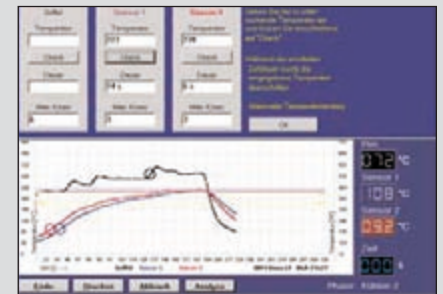
Programmable temperature profiles allow gentle and precise soldering and desoldering. Standard programs can be stored in the control unit.



Software Interface

The management of temperature profiles is rapidly enhanced with this option. The user can edit and store these profiles directly in the PC.

The two thermocouples allow the operator to see the actual temperatures on the screen. Therefore it is possible to check the actual temperature at the component. The quality of the soldering can be proven by the print-out of the actual temperature profile.



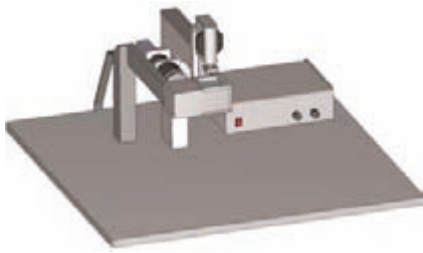
Leadfree Soldering

The FRITSCH Rework System is optimal suitable for leadfree soldering. The exact process will be guaranteed by a multi-zone profile, a precise hot-air controlling and an automatic calibrated bottom heater. The expenditure for the adaptation to leadfree is only to change or create the new profiles for leadfree soldering



VD-Software

Using this Software, the complete rework process can be documented. It starts with the establishing or selecting of a Project, identifying the operator, selecting or establishing the component and storing the pictures, obtained during positioning, of the components.



907.150 µPlacer

Basic Placement Machine for BGA, µBGA, CSPs and Fine Pitch Components.

Consisting of:

- I µPlacer
 - I Vision System with Camera and 14" Color Monitor alternative: VD-Software (incl. Framegrabber)
 - I Control Unit
- Without PCB Holder

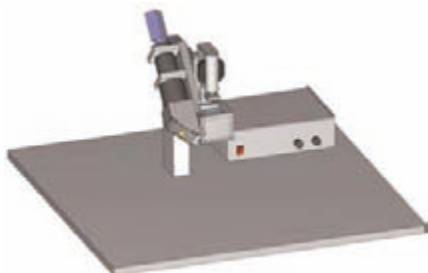


907.250 µPlacer

Rework & Placement Machine for BGA, µBGA, CSPs and Fine Pitch Components.

Consisting of:

- I µPlacer
 - I Vision System with Camera and 14" Color Monitor or VD-Software
 - I Control Unit
 - I Rework Unit
- Without PCB Holder

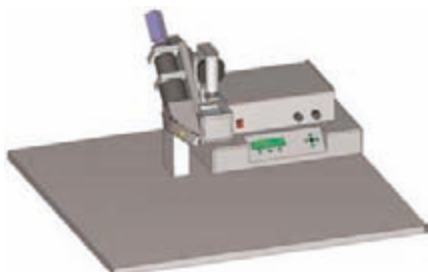


907.151 µPlacer

Basic Placement Machine for BGA, µBGA, CSPs and Fine Pitch Components.

Consisting of:

- same as 907.150, but
- I Splitt Field Vision System with Camera and 14" Color Monitor alternative: VD-Software (incl. Framegrabber)

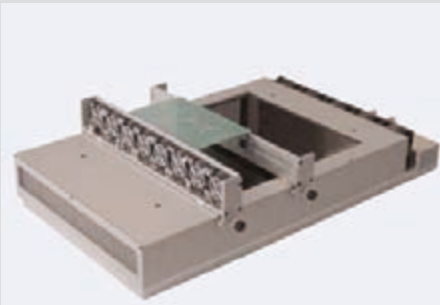


907.251 µPlacer

Rework & Placement Machine for BGA, µBGA, CSPs and Fine Pitch Components.

Consisting of:

- same as 907.250, but
- I Splitt Field Vision System with Camera and 14" Color Monitor alternative: VD-Software (incl. Framegrabber)



IR Underheater 0-1500 W

Max. PCB size 420x330 mm. Max. heated area 260x280 mm, heated area automatically adjusts to PCB size. The large heating area permits uniform and rapid heating of the PCB for stress free placement or rework. This Underheater is particularly suitable for Motherboards.



IR Underheater 0-500 W

Max. heated area 104x130 mm. Underheater for medium sized PCBs, eg PC Cards



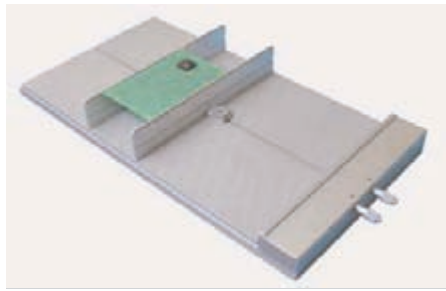
IR Underheater 0-120 W

Max. heated area 33x40 mm. Underheater for spot heating or for small boards, such as for Mobile Phones.



Mini Stencil Printer

By using the optical alignment feature of the μ Placer, solder paste for FinePitch and BGA components can be applied with this additional attachment.



Air Glide PCB Support

For board sizes up to 230x340mm or 300x500mm. Effortless pre-adjustment with Air Glide and fine adjustments with micrometer screws.

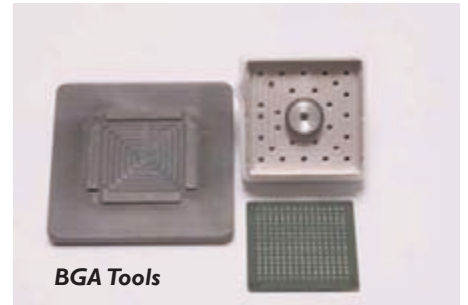


Universal Soldering Tools

This kind of Soldering Tools should be used, if the tools must be placed above the components without enclosing it. This could be necessary, if small components are sold in closed to the BGA or QFP



Tools for Mini Stencil Printer



BGA Tools



QFP Tools



universal placing Tools

Tool and Centring Inserts

For the placing, soldering and desoldering of components, tools and centring inserts are available for all common types. Specials can be custom made.



Vacuum, Hot Air and Dispensing Module

The Vacuum Module is used in conjunction with the Hot Air Module for the removal of unwanted molten solder in rework process.. In addition the Hot Air Module can also be used for manual soldering and reballing. The Dispensing Module serves the purpose of processor-controlled application of solder paste or adhesives.

Machine function description of the μ Placer 907

BGA-Placer to the positioning of BGA, μ BGA, CSP and Fine Pitch components.

Positioning of SMD-Components with optical support.

Selective nondestructive soldering of SMD-Components by means of profile-regulated temperature contributing to the quality constance with repeatabel-rework.

Gentle, exact old plumb removal by means of teflon top to the prevention from damages of the connection surfaces.

Complex' dispensing system with compensation of temperature influences.

LxWxH 790x760x400mm

Measurements

Board Size

max: 230x340mm

optional: 300x500mm

Clearance between PCB and Bottom Heater

space downward - to the infra-red heating 10mm

- to the base-plate 48mm

space upward - to the z-axis 26mm

- to the prism 36mm

optional: - to the prism 52mm

Heating Unit

conductor plate holders with air glider and XY-fine tuning through micrometric screws (scaling of 0,01mm reading) adjust-area + / - 3mm.

PCB mount by means of two variable rails.

optional: simple version of air glider without XY- adjustment

Corner alignment

fine tuning of the corner axis from the pick&place head + / - 3°

by means of micrometric screws (scaling of 0,01mm reading)

Component Range

CSP and BGA from 3x3mm to 48x48mm

Fine Pitch components of 40x40mm/Pitch 0,4mm

Positioning Accuracy

+ / - 5 μ m

Placement precision

component edge length 20mm angular error <0,1mm (0,3°)

Positioning Control

positioning accuracy on the basis of pad-pin-assignment by means of 1/2" CCD

color camera pixels: (HxW) 752x582 resolution (horiz. lines) 480

zoom lens: 6- x zoom focal length: 18-108mm

Monitor: 14" color monitor resolution: (horiz. lines) 700

Heating Source

Top

locally restricted contribution of heat to convection,

alternatively with air as well as inert gas

Heating Source

Bottom

completely - or part-flat warming of the PCB underside by means of infra-red heating to the avoidance of thermal tensions. Heating area dependent on sub heater.

33x40mm (small), 104x130 as well as 104x65mm (middle), 260x280mm (big)

Temperature control

temperature-profile control and -measurement

Optional: PC-based (visual profiling, documentable, storable)

pre-heating - heating - cooling

with freely selectable temperature-time-airflow courses. temperature

profile - ability to teach-in by means of thermocouples and editable programs

Heating-Power

air: 1 - 25 l/min Temp: 150 - 400°C IR-Strahler: 50 - 1500 watts

Component delivery

pre locating fixtures

Illumination

variable light brightness controll for top and bottom.