

**FINEPLACER® core<sup>plus</sup>**

# Hot Air SMD Rework Station

**The All-Round Solution**

- » Unique FINEPLACER® working principle
- » Full hot air rework system



**Industry-leading thermal management**

.....

**Data/media logging and reporting function**

.....

**Sequence control with predefined parameters**

.....

**In-situ process observation in HD**

.....

**Full process access & easy visual programming with touch screen interface**

.....

## Features

Placement accuracy better 10 µm	Rework on high density PCB's or applications with high accuracy demands
Versatile machine platform	Combines all process steps of a SMT production line for rework in OEM quality
Customer specific tooling	Universal and component specific tooling to ensure advanced rework capabilities without limitations
Overlay vision alignment system (VAS) with fixed beam splitter	Precise visual alignment of chip and substrate
3-color LED illumination	Excellent contrast values with different materials for best visibility and recognition
Full process access and easy programming	Flexible and intuitive process composition allows implementing complex applications with little training effort
Synchronized control of all process related parameters	Maximum process control and reproducibility
Software controlled top heater calibration	Ensures high reflow profile reproducibility with low maintenance. Profiles can be shared between machines, same process results are guaranteed
Modular machine platform allows in-field retrofitting during entire service life	Fast and easy upgrade of the rework station to meet new application & technology requirements
Individual configurations with process modules	Machine solutions tailored to your application requirements
Fully manual or semi-automatic machine versions	Get the rework station that suits your application requirements
Force controlled component handling	Allows safe handling of small and sensitive components (e.g. 008004)

## Benefits

## Technologies

- » Surface Mount Technologie (SMT)
- » Through Hole Technologie (THT)
- » Pin in Paste (PiP)

## Processes

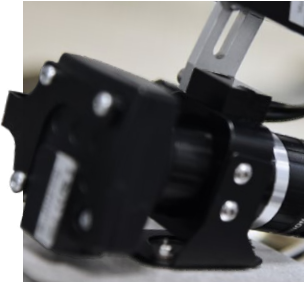
- » Component removal / Desoldering
- » Contactless site cleaning / Solder removal
- » Reballing / Single ball reballing
- » Paste printing (component, PCB)
- » Dipping
- » Dispensing
- » Soldering

## Applications

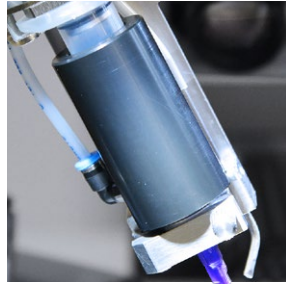
- » BGA, CSP, QFN, DFN, QFP, PGA, SOT etc.
- » Mini BGA and other miniaturized components
- » Small passives down to 008004
- » LED and Mini LED arrays
- » Package on Package (PoP)
- » Daughter boards & Sub assemblies
- » RF shields & RF frames
- » Connectors & Sockets
- » Underfilled and coated components
- » Rework on FR4, flex, glass, ceramic or aluminium carrier

# Modules & Options

- » Bar Code Reader (SmartIdent)
- » Component Presentation
- » Direct Component Printing Module
- » Dispense Module
- » Hot Gas Bottom Heating Module
- » Manual Dipping Unit
- » PCB Support
- » Process Gas Switching Module
- » Process Start Sensor
- » Process Video Module
- » Reballing Module
- » RGW - Illumination
- » Solder Removal Module
- » Split Field Optics
- » Substrate Support
- » Target Finder
- » Top Heating Module (Hot Gas)
- » Touch Screen (SmartControl)



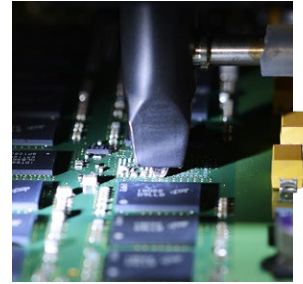
Process Video Module



Dispense Module



Process Start Sensor

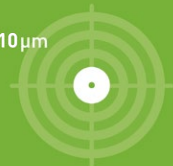


Solder Removal Module



## Accuracy

10  $\mu$ m



## Component

min. 0.1 mm x 0.1 mm  
max. 80 mm x 80 mm



## Board Size

400 mm x 310 mm



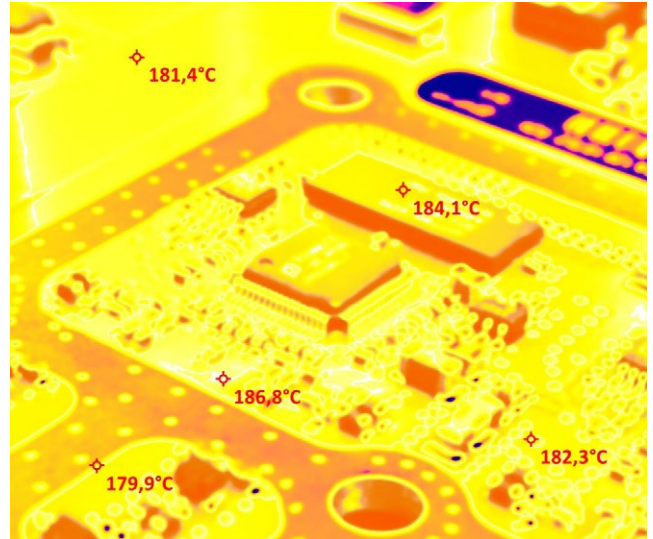
## Operation



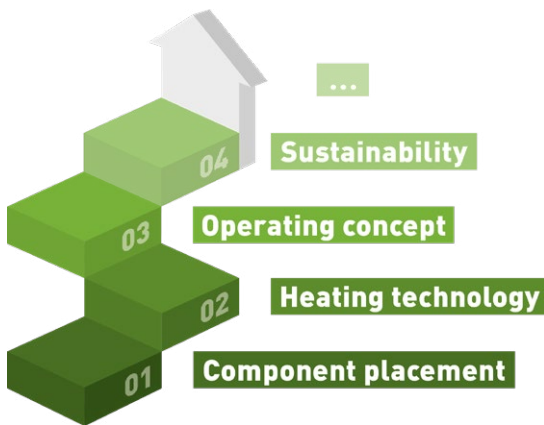
manual semi automatic

# Hot Gas Technology

With hot gas (convection heating), the components and assemblies are heated uniformly, regardless of their color and surface finish. The air flow can be precisely directed to the soldering point, i.e. the energy is input only where needed. This is achieved by using component-specific soldering tools, which act as an interface between the machine and the assembly. They allow processing most SMD components on the market and at the same time protect surrounding components from overheating. Very steep heating and cooling ramps can be driven, which enable shorter cycle times and higher throughput. Another advantage is the option to solder in an inert atmosphere by adding nitrogen to prevent oxidation and ensure a better wetting behavior.



## Which Rework System Fits Your Requirements?



Are you a production or project manager of an OEM company or EMS service provider faced with the task of selecting a professional SMD rework system? To find the solution that fits your needs, there are a number of questions that should be addressed first. Make sure to assess in advance which type of rework system on the market is ideally suited to your production or project requirements. This checklist, developed together with rework customers from different industries, outlines considerations for selecting your future system.



[Download the paper here:](#)

## Customer Feedback

"The trend towards ever increasing data rates demands large bandwidths and thus usage of higher and higher frequencies. ICs are getting smaller and BGA-packages more common in an RF-Engineer's day to day work. The FINEPLACER® core gives us the means to handle those ICs reliably, saving us time and nerves. It is a great extension of our assembly technology."



**Prof. Dr.-Ing. habil. Alexander Kölpin**  
Head of Institute for High Frequency Technology, Hamburg University of Technology