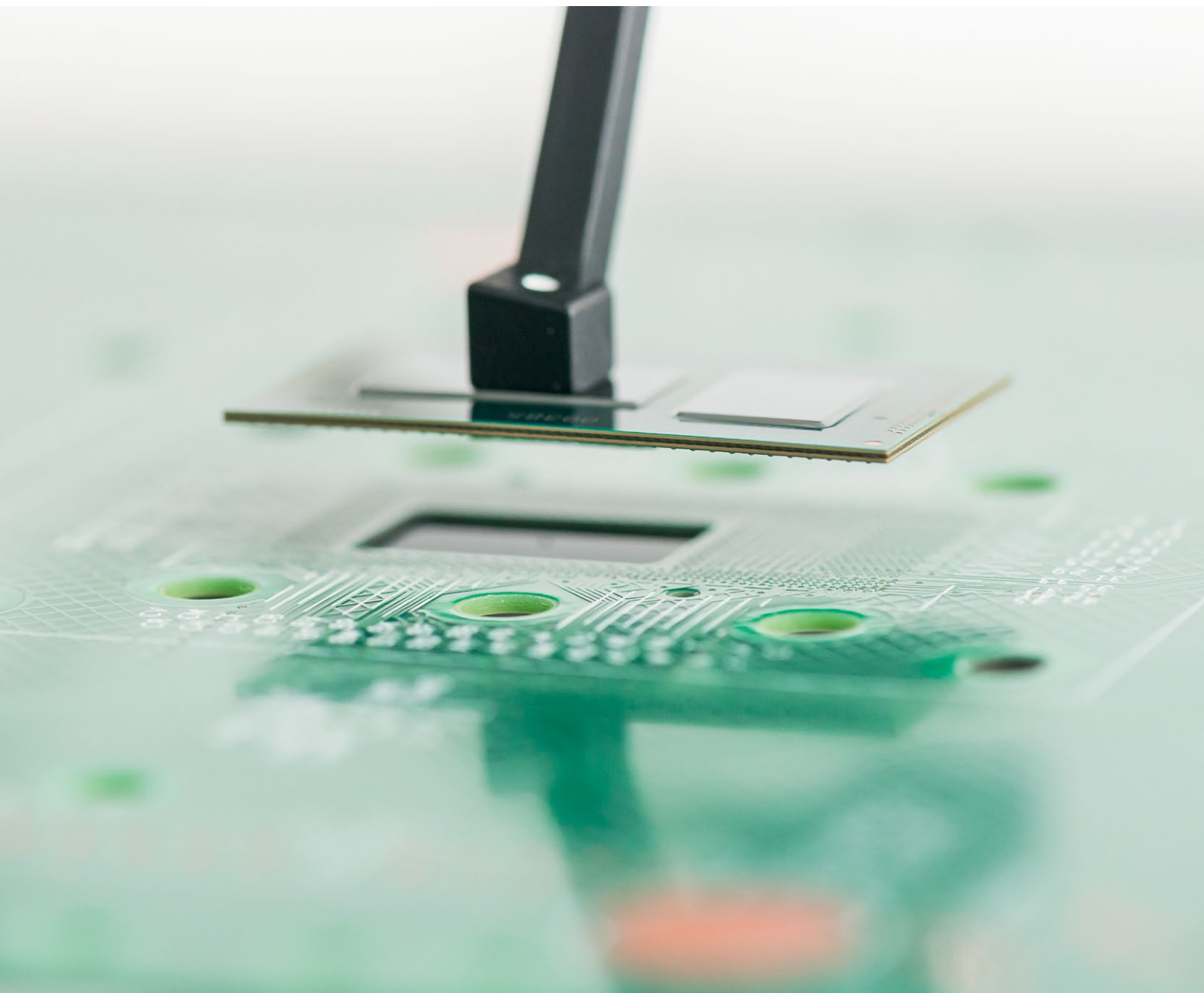


# **SMD Rework Technology**

Complete solutions

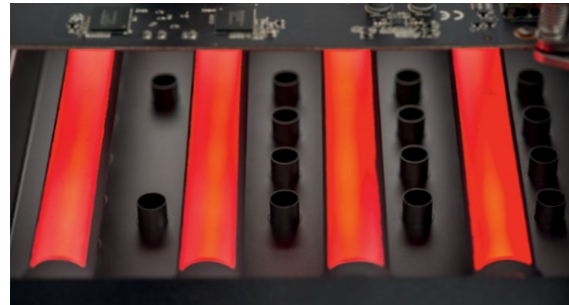


**MARTIN**<sup>®</sup>  
a finetech company

# Reliable rework

All MARTIN rework systems utilize advanced convection and infrared heating technologies, delivering extremely repeatable and efficient heating. HD vision provides high contrast and pin sharp images.

Component alignment and placement is effortless and accurate, performed automatically via Advanced Vision Placement package recognition. New APP Tools support flux dipping, solder paste printing solutions along with the presentation of the smallest  $\mu$ SMD.



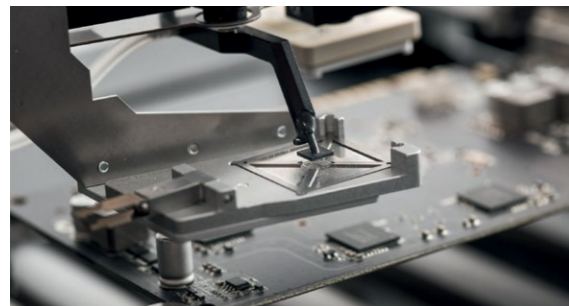
## Hybrid from below

Using the advantages of both convection and infrared technologies, energy is transferred efficiently with uniform heat distribution across the PCB. Controlled heating and cooling of small and large mass assemblies, minimize temperature induced stresses and preheat products for optimized soldering.



## Clear vision

The EXPERT 10.6 vision system displays HD quality images for precise alignment. High-quality optical systems are available for a wide range of applications from  $\mu$ SMDs to large components. The Auto-Lens-Detect function eliminated all vision calibration.



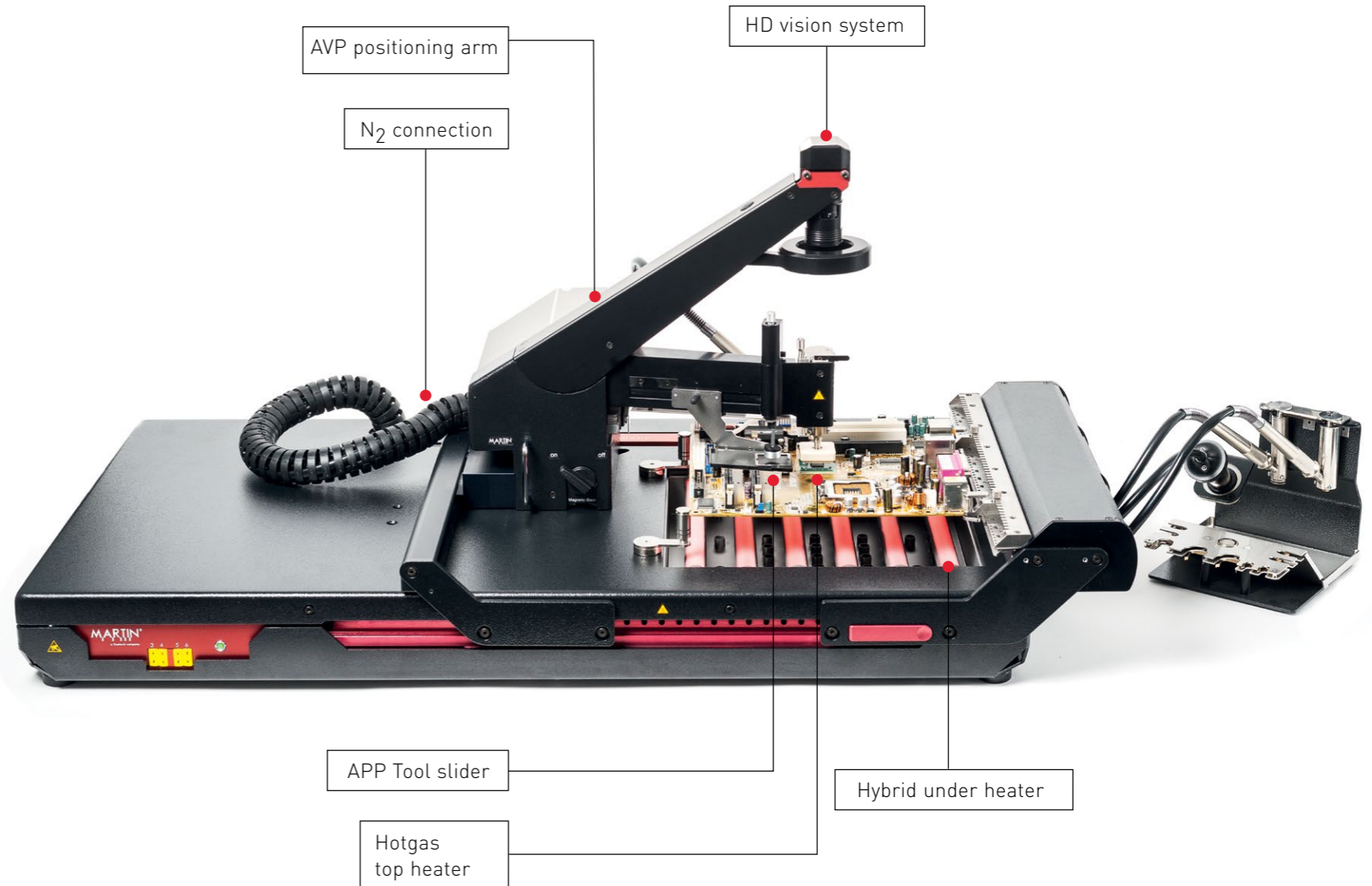
## New APP Tools

DIPPING, PRINTING, HANDLING are supported by the new APP TOOL feature. Whether flux dipping, printing QFNs or presenting  $\mu$ SMDs for placement - all can be accomplished quickly, precisely and without programming.

# Extensive tasks: EXPERT 10.6

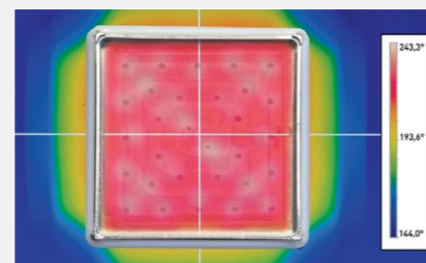
The EXPERT 10.6 rework platform delivers reliable and precise rework of surface mount devices, sockets and connectors. Innovative technologies such as AVP provide repeatable component alignment and soldering automatically, minimizing

operator reliance. Ultra-flexible product support features simplify top-justified PCB positioning. All 10.6 systems are configured for residual solder removal and dispensing of flux or solder paste.



## Soldering tools

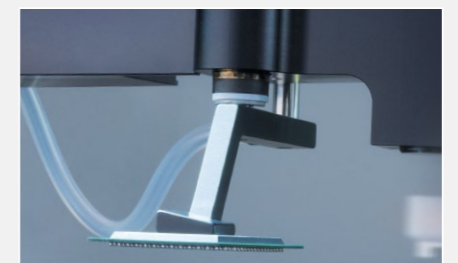
Advanced technologies such as thermal imaging provide optimal nozzle designs to ensure maximum thermal uniformity and heat transfer for all MARTIN rework systems. The specific MARTIN nozzle designs provides maximum thermal isolation of adjacent components.



Optimal Temperature distribution of a BGA solder nozzle soldering tool

## Automated component alignment

With just a few mouse clicks an operator verifies the rework site and component position, then using package recognition AVP performs final component alignment and precisely places the component automatically for subsequent soldering.



AVP-positioning arm with BGA

# Easy-Solder rework software

Easy-Solder rework software is the command center of the entire rework process. All the steps and sequences are logical and intuitive. Operator work instructions can be "paperless" using digital text and images.

Auto-profiler enables quick and easy recipe generation and time-temperature graphical analysis. All necessary elements for proper process traceability and quality control.

## Soldering and desoldering

Several profilers in combination with profiles analysis features support the operator to ensure optimized process development.

Easy-Solder is intuitive and saves valuable time.

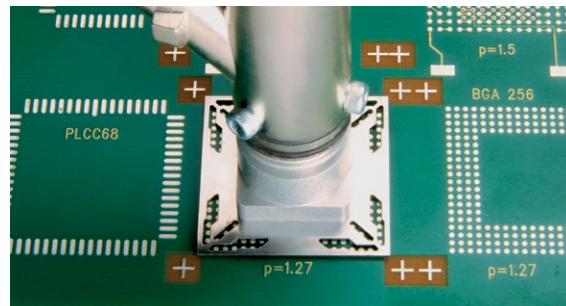
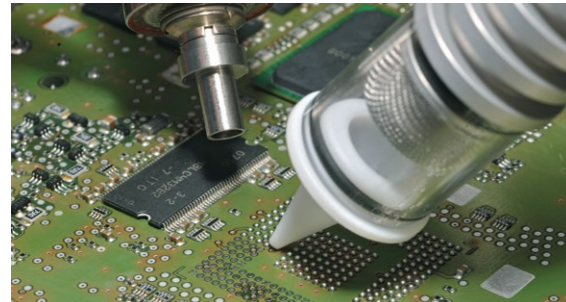
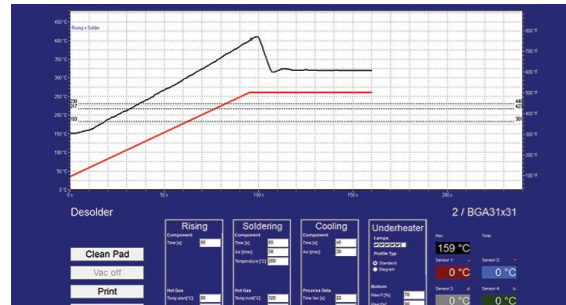
## Residual solder removal

Thanks to integration in the workplace this workstep utilizes the residual heat from the soldering process saving time and energy. Process parameters are stored in the database and managed specifically for each component.

## SHP - rapid placement

Component alignment is made simple by using the innovative "Star-Tool" of the technology EXPERT 04.6. Alignment of the tool to the pads is quick and easy. Mechanical positioning is automatically stored by the SHP positioning arm.

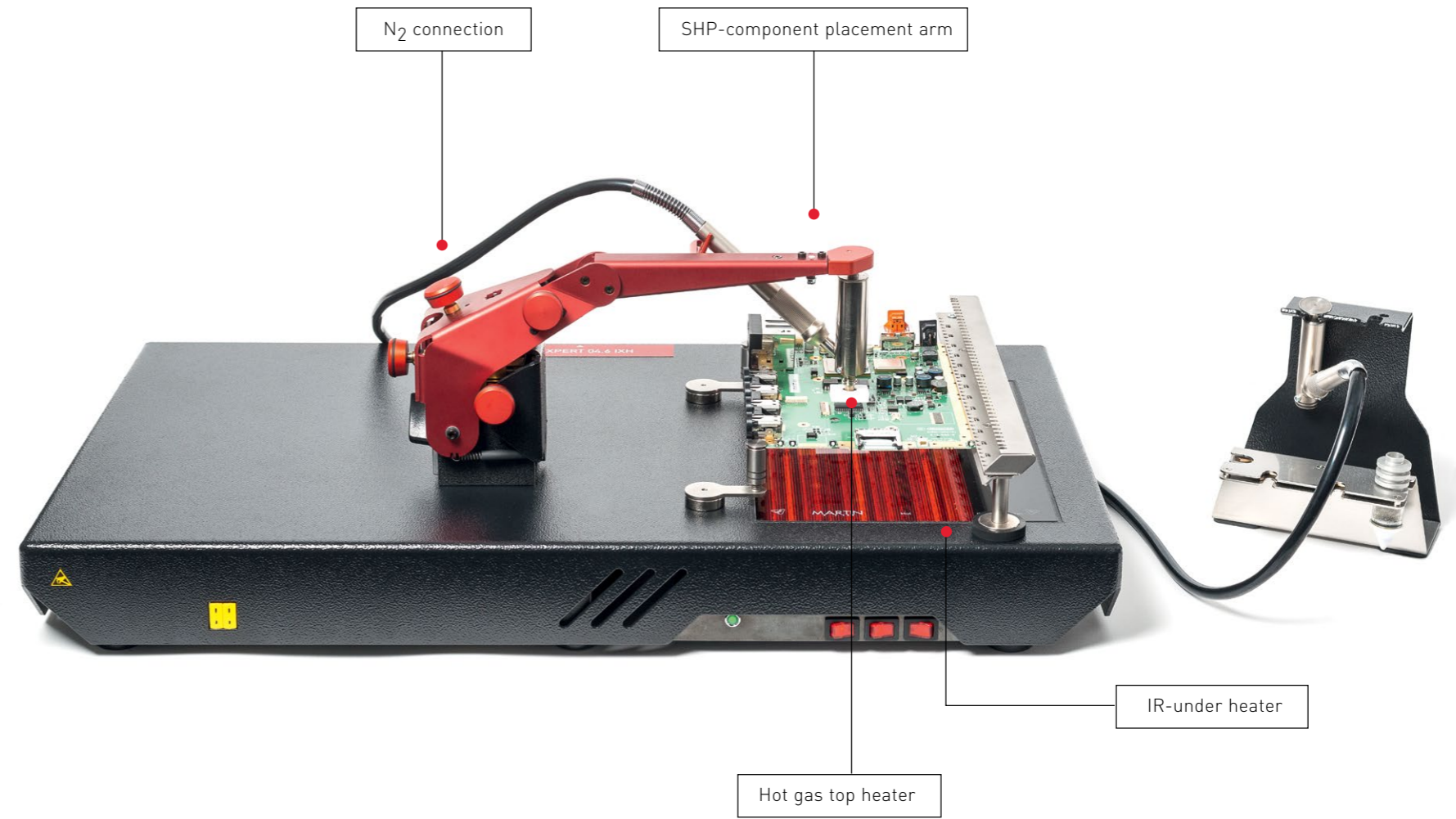
The range of different tools in combination with the Star Tool transform the SHP to a multi-fuctional tool for unusual SMDs.



# Smaller jobs: **EXPERT 04.6**

Rework equipment from the **EXPERT 04.6** is the next step up from manual soldering. The compact design and ergonomic arrangement offer all the functions required for rework: desoldering, removal of residual solder, placement

and soldering. Reliable alignment and placement of components combined with the proven MARTIN heating technology guarantees best soldering results.



## Application-specific accessories

MARTIN provides the proper accessories for any application: from clamping and securing PCBs of any shape to handling miniature components.



PCB-magnet holder



PCB-clip



Tape Feeder  
Feeding of taped components



App Tool μSMD Pocket  
Stencils for pre-sorting of components

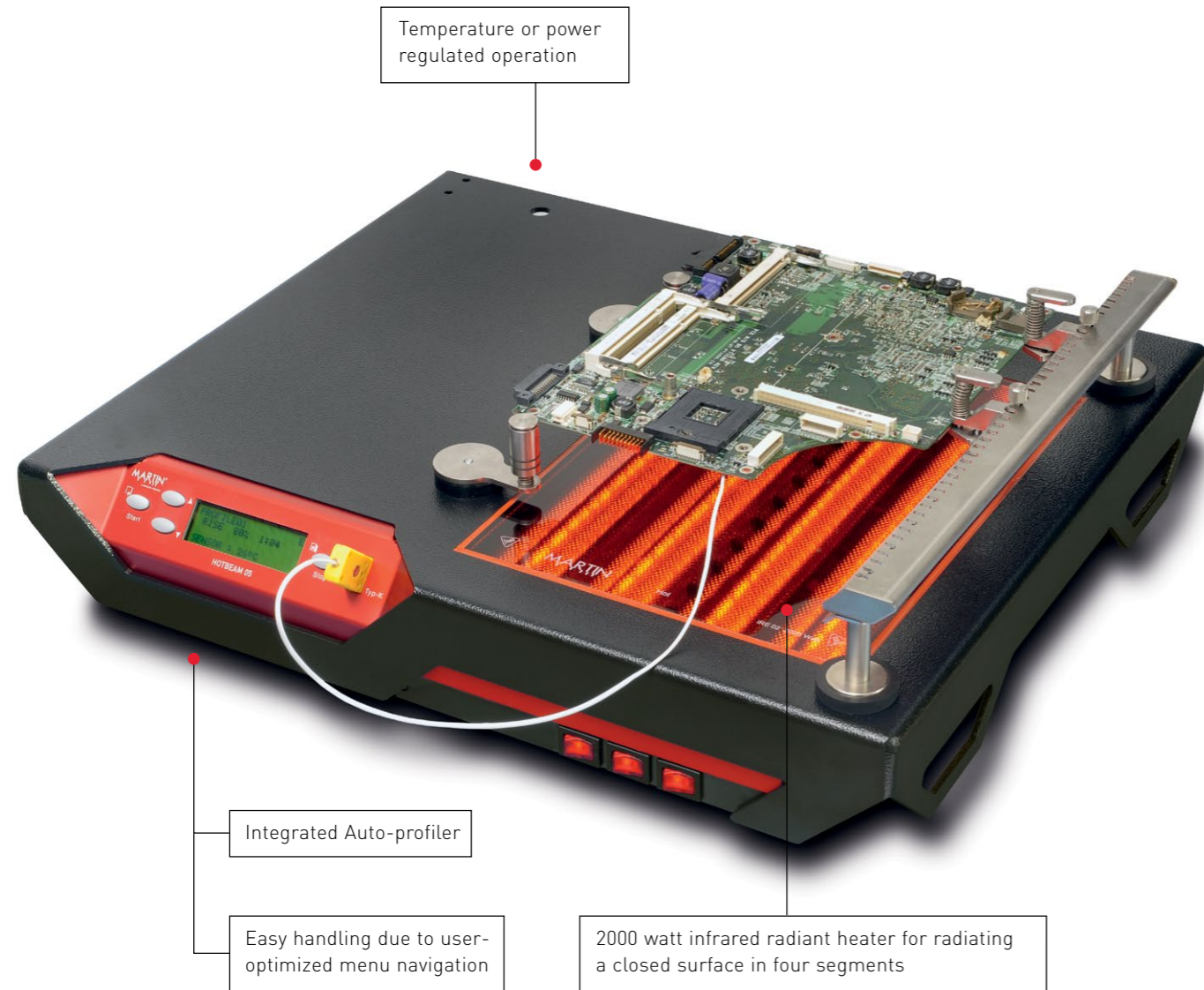


App Tool Basic Dipp with squeegee  
Accessories for defined application of flux

# Preheating: **HOTBEAM 04 / 05**

Applications for under heaters range from supporting manual soldering, preheating in preparation for subsequent rework processes, to curing or cracking of

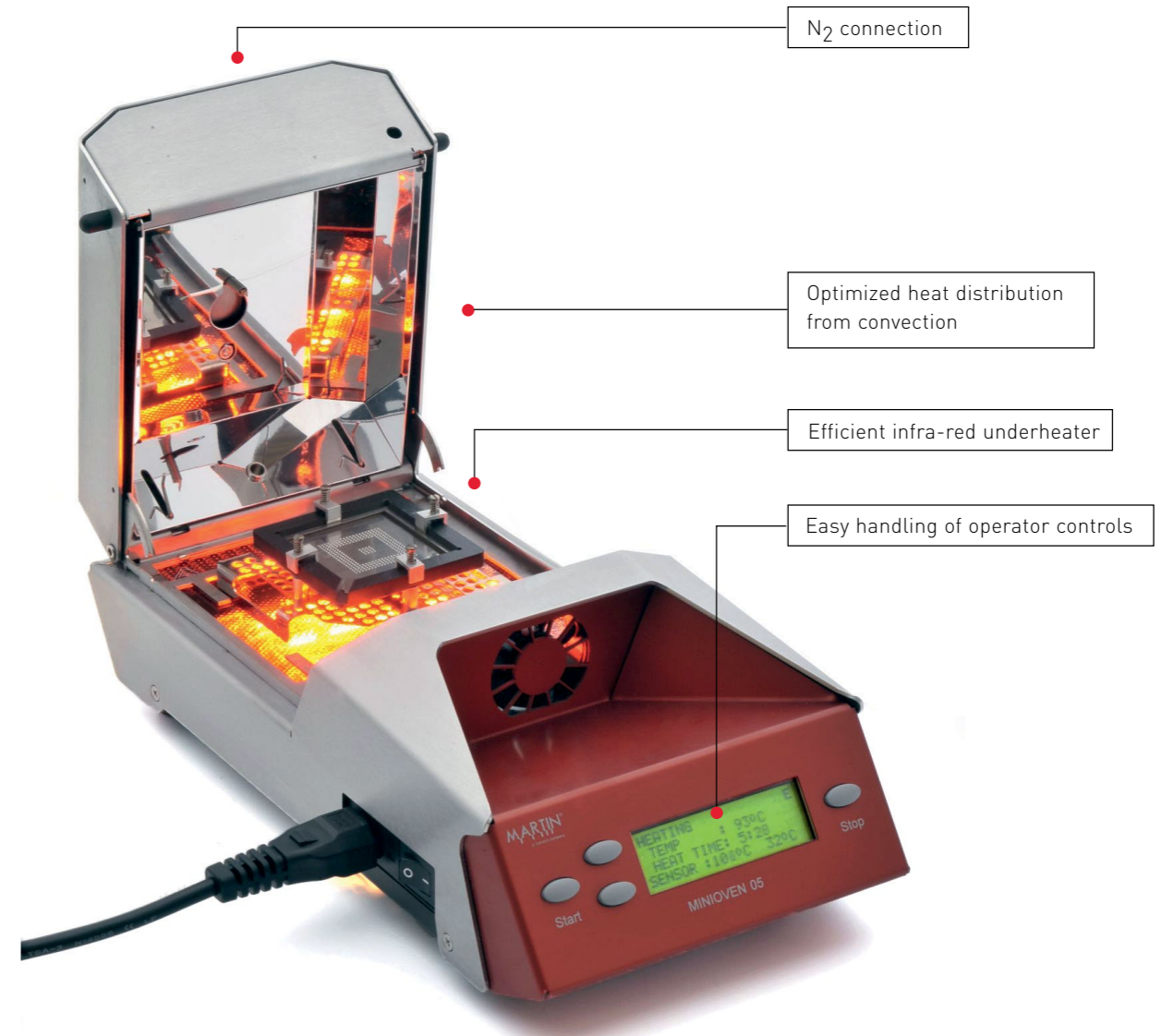
underfill. The heated areas of the MARTIN under heaters can be adjusted according to the PCB or application.



# Precision and quality : **MINIOVEN 05**

The robust design of the **MINIOVEN 05** offers integrated features such as convection circulation, infrared heating source, process gas distribution and a user-friendly operator interface. This configuration yields an optimal rebalancing and prebumping system, heating is extremely uniform across the device.

The use of nitrogen process gas ensures a soldering atmosphere where oxidation is minimized and promotes optimal wetting of solder joints as well as increased component life expectancy.

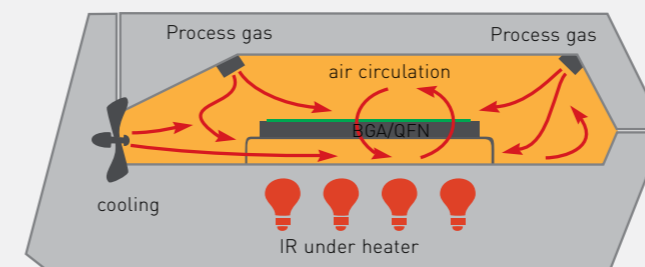


The practice-approved **HOTBEAM 04** does not take much space on your worktable. Due to 40 mm of height it allows particularly ergonomic operation. Table installation frames are available for both systems.

## Simply achieve more

For rework, the **HOTBEAM** under heaters provide the necessary energy for preheating high mass PCB and assemblies requiring manual rework, especially for lead-free soldering.

**HOTBEAMs** provide reduced processing, longer service life of soldering tips, board gentle processing and increased through-put. Various sizes are available and are well suited for multiple applications.



## Uniform heating

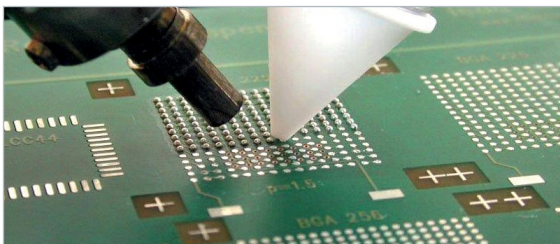
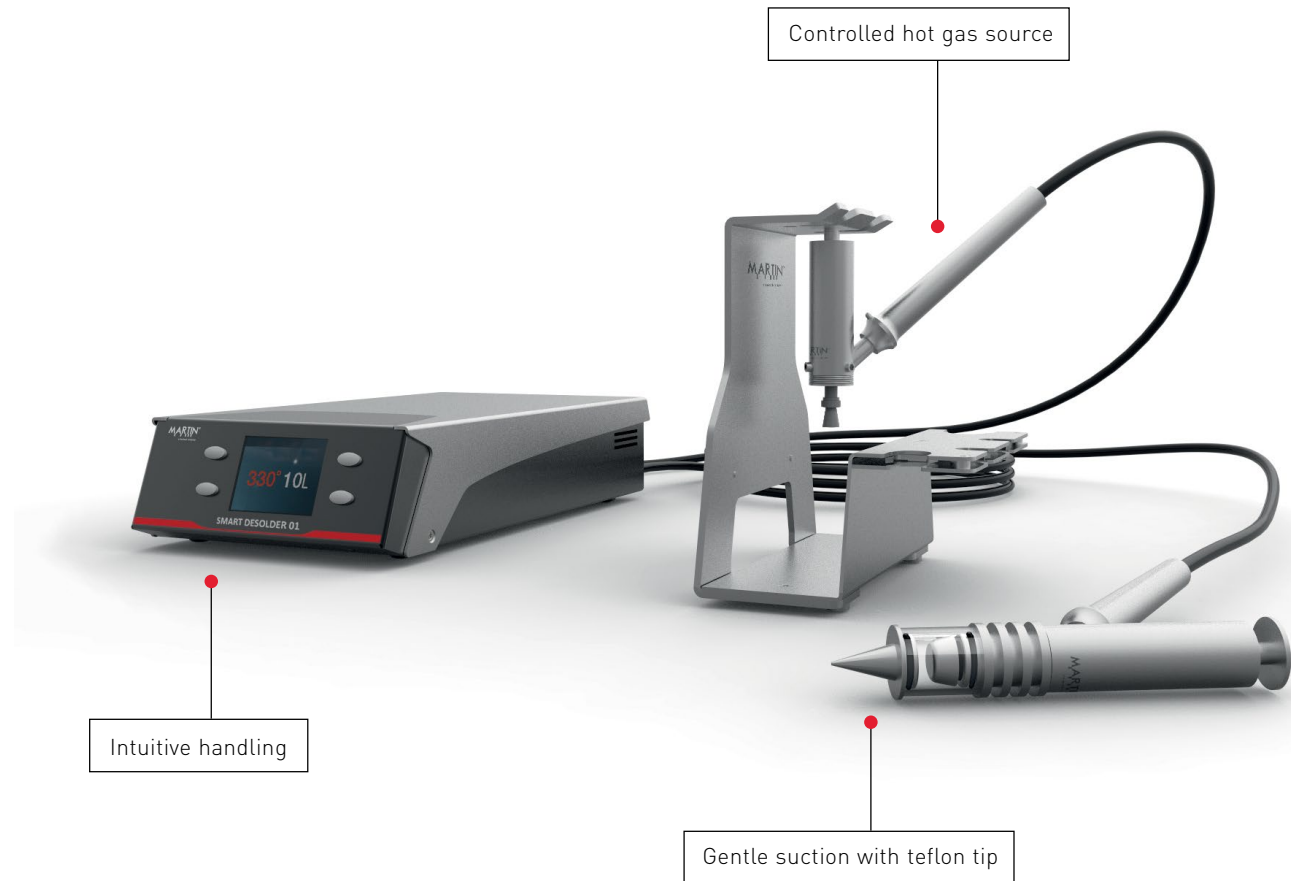
The **MINIOVEN 05** employs a combination of convection and infrared heating for maximum thermal uniformity.

Rebalancing and prebumping benefit from the support of nitrogen process gas to displace oxygen and minimize oxidation while promoting an ideal soldering environment.

# Removing residual solder: **SMART DESOLDER 01**

The **SMART DESOLDER 01** combines a manual hot gas source with a vacuum pen. The remaining solder on the board or on the BGA can be heated systematically and

be removed by the vacuum pen. Due to this gentle procedure damages on the boards caused by overheating or mechanical stress can be avoided.



## Contactless and gentle

The use of teflon in the tip of the vacuum pen persuades with its excellent characteristics such as the non-sticking effect, the temperature stability and the mechanically soft surface of the material.

**MARTIN**<sup>®</sup>  
a finetech company