Total Solutions

for Soldering Processes and
Automated Production Lines

SEHO MaxiSelective-HS

Selective Soldering System SEHO MaxiSelective-HS

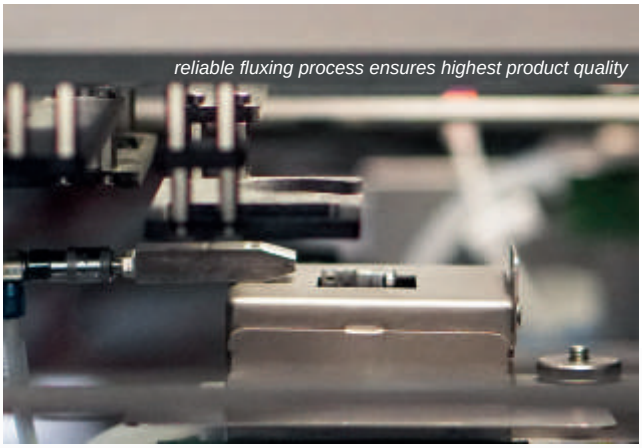
Soldering is our Passion

Reflow I Selective I Wave I Handling Solutions I AOI I Know How & Training

MAXISELECTIVE-HS

Maximum Production Volumes

- **High speed selective soldering system from SEHO that guarantees shortest cycle times less than 20 seconds.**
- **This „one product system“ is the ideal solution for mass production.**
- **Parallel processes in the fluxing, preheating and soldering area + parallel transfer of assemblies to the next work station = shortest throughput times.**
- **High precision miniwave soldering process with product specific multi nozzle tools.**
- **Nitrogen inertion of the multiwaves guarantees highest soldering quality and minimum maintenance.**
- **Maximum process safety: flux quantity monitoring, gradient-controlled preheat process, automatic wave height control and many more.**
- **Simple and comfortable teach process.**
- **Processing of PCBs directly or in carriers.**
- **Two individually configurable basic versions that are flexibly expandable.**



reliable fluxing process ensures highest product quality

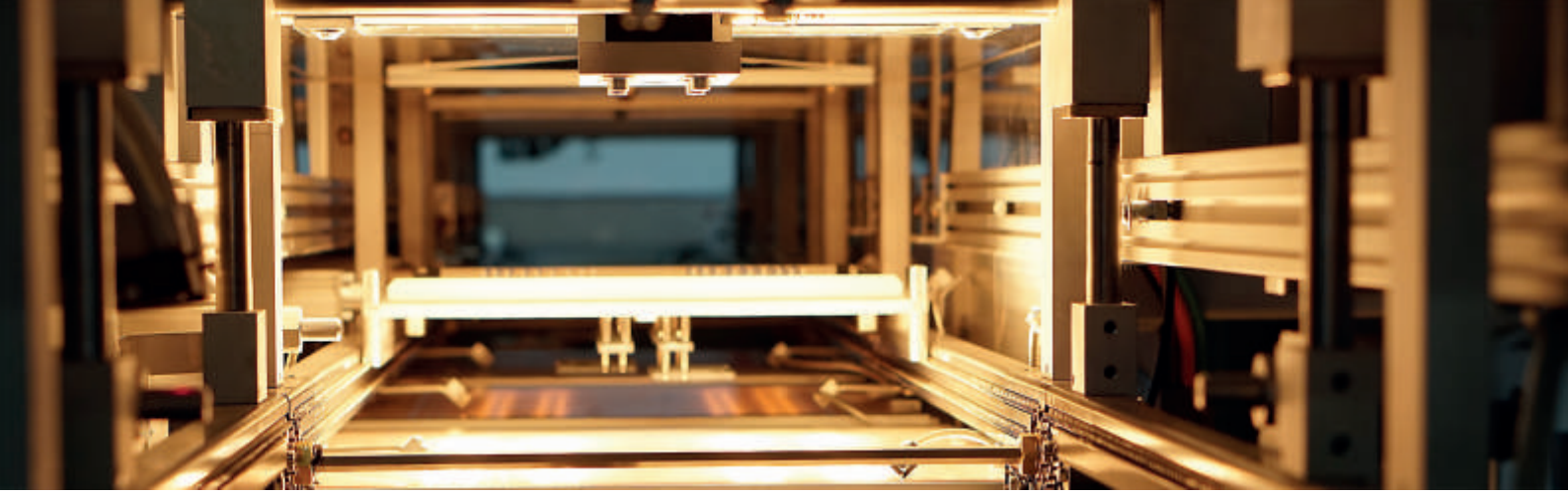
High Speed Selective Soldering: MaxiSelective-HS

The MaxiSelective-HS represents the high speed selective soldering system from SEHO. It is the perfect solution when highest soldering quality and shortest cycle times are required.

Parallel processes in the fluxing, preheating and soldering area, simultaneous contact of all solder joints with product specific multi nozzle soldering tools as well as the parallel transfer of the assemblies to the next work station make this „one product machine“ the ideal system for mass production.

Two basic machine versions of the MaxiSelective-HS that can be equipped with four or six stations working in parallel, offer the flexibility needed to meet your individual production requirements. Additional buffer stations at the inlet and outlet of the machine complete this high speed system. In order to meet complex production challenges or to respond to increasing manufacturing volumes, the MaxiSelective-HS can be expanded with additional modules or it may be combined with other machine types, also at any later date.

SEHO MaxiSelective-HS: The selective soldering system for maximum throughput requirements.



The Process Cycle: Optimum Timing

The MaxiSelective-HS is equipped with a segmented pin-chain conveyor system allowing highest production volumes.

The printed circuit boards or carriers are reliably positioned at the various work stations. After parallel processing of the products at each station they are also parallelly passed on to the next work station.

Using this efficient concept, there are virtually no waiting times and pure handling times are reduced to a minimum. As a result the MaxiSelective-HS provides shortest cycle times of less than 20 seconds.

The Processes: Guarantee for Highest Quality

The MaxiSelective-HS is provided with the micro drop jet fluxing system from SEHO to ensure reliable flux deposition to the point. With this high precision system, surrounding areas will not be wetted and any residues on the printed circuit boards are reduced to a minimum. Serveral nozzle heads and micro drop jet nozzles can be used simultaneously to further reduce cycle time.

The preheat area consists of multiple stations with quartz heaters. It is designed as a closed tunnel thus realizing an outstanding high energy efficiency.
Each emitter of the quartz heatings can be programmed individually. This, on the one hand, includes the individual product specific activation of each emitter, to minimize energy consumption.
Moreover, the heating power and heating time can be programmed for each emitter individually. This ensures a reproducible and very homogeneous temperature profile on the entire assembly, even in case of very different mass.
Using a pyrometer, the preheat temperature profile can be adjusted precisely and gradient-controlled, to correspond to specific temperature requirements of the assemblies.

The innovative soldering area of the SEHO MaxiSelective-HS is equipped with a soldering unit featuring product specific multi nozzle tools. This ensures shortest cycle times.

Multi nozzle tools from SEHO offer unique features that ensure maximum reliability and reproducibility of your soldering processes:

- perfect peel-off due to debridging knives
- ideal hole fill that is achieved with permanently flowing miniwaves and an outstanding high energy transfer rate
- solder ball protection
- quick-release fasteners for shortest maintenance times.

In addition, the solder wave height control ensures a stable process window and guarantees highest quality even in case of very complex assemblies.

Due to the efficient nitrogen inertion in the soldering area that may additionally cover a continuous monitoring of the nitrogen quality, the MaxiSelective-HS guarantees a soldering process that requires minimum maintenance and provides highest soldering quality.

For cooling of assemblies from top side, a cooling area may be installed in the outlet conveyor of the MaxiSelective-HS.

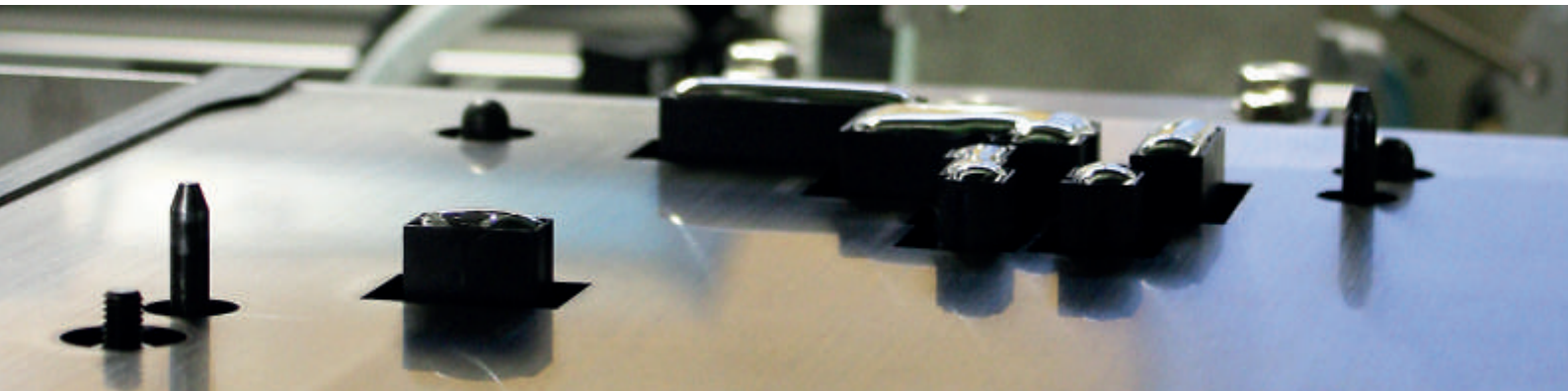
100 % Process Control: Reliable Results

The MaxiSelective-HS is featured with an up-to-date control technology. Sensors and software tools monitor and control all process steps. SEHO‘s unique flux quantity monitoring system monitors the actual flux quantity jetted by the nozzle during the process, without any influence on the cycle time. This award-winning system guarantees highest process reliability and constant process conditions.

Monitoring systems in the preheat area make for reproducible and gradient-controlled temperature profiles.

In the soldering area, the solder level control with automatic wire supply as well as the automatic wave height control ensure reliable processes with excellent soldering results.

All processes can be traced completely with the machine communication software mcServer. mcServer systematically collects, analyzes and prepares statistically all machine and process parameters.



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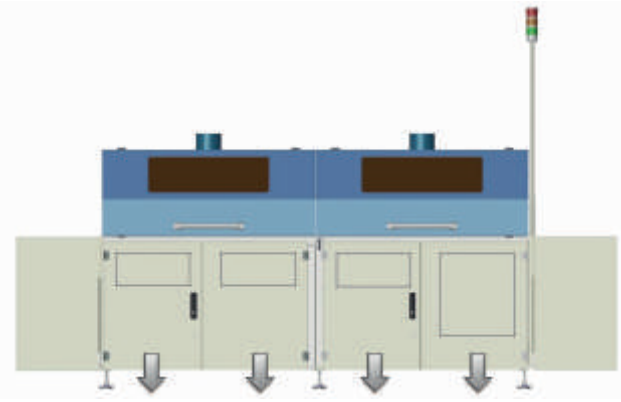
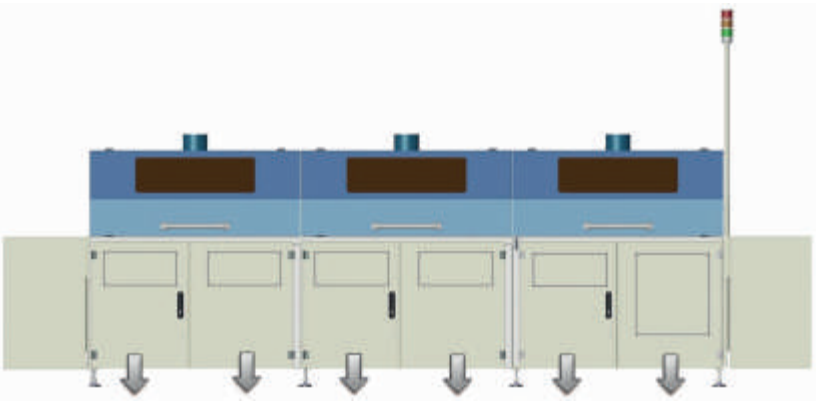


inlet | fluxer | preheat | preheat | soldering unit | outlet cooling

basic machine with two modules



inlet | fluxer | fluxer or preheat | preheat | preheat | preheat | soldering unit | outlet cooling

basic machine with three modules

Technical Data and Options

Fluxer	
micro drop jet fluxer	●
wetting width on PCB	2 - 4 mm
spray jet monitoring	○
SEHO flux quantity monitoring	○
flux types, alcohol or water based	up to 5 % solids content
Preheating	
quartz heating cassettes	○
individual, programmed activation of each emitter	●
pyrometer control	○
Soldering Unit	
miniwave process with product-specific multi-nozzles	●
max. soldering area	240 x 340 mm [9.45" x 13.38"]
nitrogen operation	●
automatic wave height control	○
automatic solder level control and wire supply	○
Control Unit	
automation PC with comfortable user interface	●
display of status messages and password protection	●
real time controller and high precision axes control	●
machine communication software mcServer	○
Handling of Assemblies	
max. PCB or carrier dimensions	350 x 350 mm [13.78" x 13.78"]
inline operation	●
Nitrogen Technology	
nitrogen supply	R 1/4”, to be supplied locally
nitrogen pressure	min. 4 bar
required nitrogen quality	5.0 recommended
monitoring of the nitrogen quality	○
Exhaust	
exhaust volume	500 m³/h per exhaust stack
Electrical Data	
available voltages	230/400 V - 50 Hz - 3 phase + N + PE 3 x 208 V - 60 Hz - 4 wire
Machine Dimensions	
length of basic machine with 2 modules	3670 mm [144.49"]
length of basic machine with 3 modules	4900 mm [192.91"]
width	1437 mm [56.57]

Further options upon request. ● Standard ○ Option

Headquarters Germany

SEHO Systems GmbH
Frankenstrasse 7 - 11
97892 Kreuzwertheim
Germany
Phone +49 (0) 93 42-889-0
Fax +49 (0) 93 42-889-200
E-Mail info@seho.de
Website www.seho.de

Americas

SEHO North America, Inc.
1445 Jamike Avenue, Suite # 1
Erlanger, KY 41018
USA
Phone +1-859-371-7346
Fax +1-859-282-6718
E-Mail sehona@sehona.com
Website www.sehona.com

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