

Total Solutions

for Soldering Processes and
Automated Production Lines

SEHO GoReflow

Reflow Soldering System SEHO GoReflow



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

A Small Machine ... But Great Performance

GoReflow

- Compact machine technology for small and medium-sized production series.
- High number of heating zones, exclusively with full convection, to guarantee perfect soldering results.
- Efficient and homogeneous energy transfer with optimized process gas circulation.
- Flux management system ensures minimum maintenance requirements.
- Low costs of ownership.
- High process reliability.
- Inline integration with matching interfaces.
- Unbeatable price-performance ratio.
- Two basic systems are available:
 - GoReflow 1.8: with five heating zones and 1850 mm heated area
 - GoReflow 2.3: with seven heating zones and 2350 mm heated area

SEHO GoReflow: The Powerful Soldering System for Small to Medium-Sized Production Series

With a heating zone length of 1850 mm or 2350 mm the convection reflow soldering systems GoReflow 1.8 and GoReflow 2.3 are ideally suited for small to medium-sized production series.

The machines are not only featured with an outstanding attractive design, above all the GoReflow systems convince with their well-engineered concept and excellent soldering results.

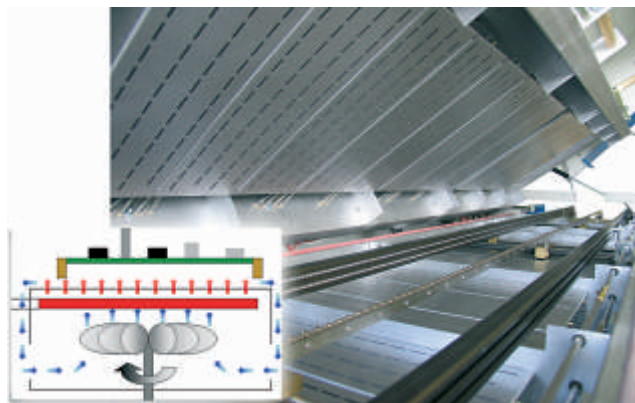
The GoReflow systems are characterized by flexible application for single- or double-sided reflow processes, in high-temperature processes and for curing adhesives and underfills.

	GoReflow 1.8	GoReflow 2.3
Length of heated area [mm]	1850	2350
Length of heated area [inch]	72.8	92.5
Preheat zones top / bottom [pcs]	3 / 0	5 / 0
Peak zones top / bottom [pcs]	2 / 2	2 / 2
Length of cooling area [mm]	600	600
Length of cooling area [inch]	23.6	23.6

The Process Area: High Flexibility is Guaranteed

Five respectively seven heating zones and an average working speed of 0.40 - 0.55 m/min. for the GoReflow 1.8 and 0.55 - 0.70 m/min. for the GoReflow 2.3 provide maximum flexibility in temperature profiling, particularly for the lead-free soldering process.

The GoReflow systems are designed for soldering in ambient atmosphere. A high volume of circulated process gas, which is generated with axial fans, specially adapted slot nozzles and a re-circulation of the process gas on the sides, ensure a very homogeneous heat distribution over the complete trans-



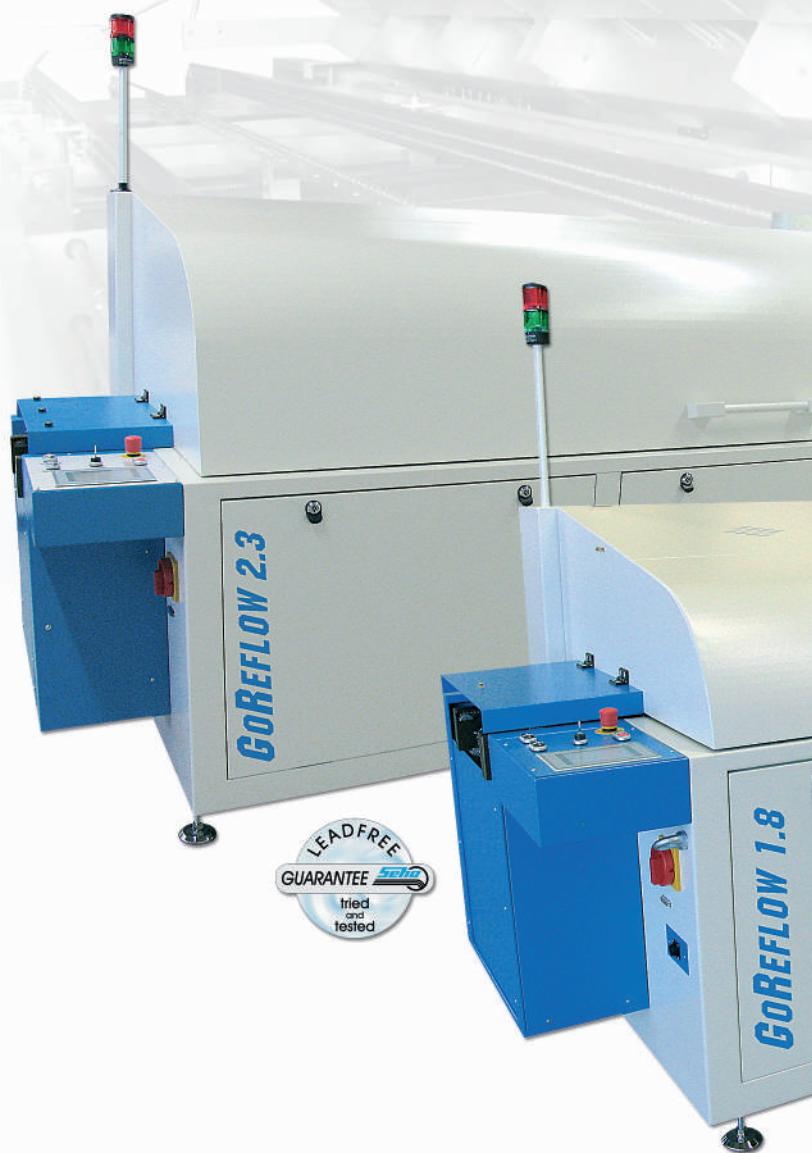
port width at simultaneously low flow velocities.

Thus, a very good heat transfer to the assemblies is realized so that the set temperatures of the oven can remain on a lower level.

This helps a lot to fulfill today's requirements concerning the narrow process window of the lead-free soldering process: all the components will be soldered whereas the temperature impact on the components is reduced significantly.

For special applications requiring nitrogen, the peak area can be inerted.

The GoReflow systems are equipped with a fan cooling unit, circulating ambient air, which is used for cooling of the assemblies after the reflow process. Horizontal slot nozzles ensure a directed air flow and thus an effective cooling of the boards.



**Minimum Costs of Ownership:
Good for the Environment and for Your Budget**

A flux management system which is integrated in the peak and cooling area ensures the lowest possible maintenance requirements and thus maximum machine availability. The process gas thereby is sucked off the process area and directed through a stainless steel filter. Flux residues are collected in a PE plastic bottle and therefore are easy and environmental-friendly to dispose.

The very efficient insulation of the process chamber as well as the well-engineered axial fan concept do not only ensure stable temperature conditions during the process. Moreover, they guarantee an extremely low heat loss and thus lowest possible energy costs.

The average energy consumption during operation is only 8 kW for the GoReflow systems!



Small machine - great performance:
SEHO GoReflow



**The Conveyor System:
Flexible and Reliable**

Depending on the production requirements there is a choice of different conveyor concepts available for the GoReflow systems: a belt conveyor, a chain conveyor or a combination of belt and chain conveyor.

Thus, assemblies with a maximum working width of up to 410 mm can be processed absolutely reliable.

The chain conveyor system is particularly featured with its high parallelism. Maximum reliability is ensured by stable guidings and the compensation of temperature-related expansions.

Width adjustment is made electrically via switches.

Systems with chain conveyor, of course, are available with center support which may be positioned horizontally, using a switch at the machine entrance, and which can be lowered. Thus, warpage of thermally sensitive assemblies is avoided. This special chain center support features a very small surface to ensure that no heat will be withdrawn from the assemblies to be soldered.

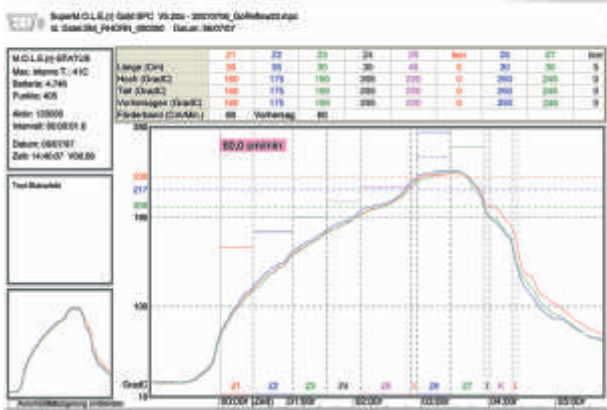
**The Control System:
Versatile and User-Friendly**

The micro processor control of the GoReflow systems is programmed for process reliability and system control. It offers all technical features of a mass production unit. A touch display guarantees the machine operation in a simple and ergonomic manner.

Via USB interface, machine and process data may be recorded easily, and sensors at the inlet and outlet for pass-through control ensure high reliability.

Of course, the GoReflow systems also may be integrated into a fully automated production line. Communication with preceding or subsequent machines is made via a SMEMA interface.





Technical Data and Machine Options

Heating Zones	GoReflow 1.8	GoReflow 2.3
process gas	air	air
total number of heating zones top / bottom	5 / 2	7 / 2
number of preheat zones top / bottom	3 / 0	5 / 0
number of peak zones top / bottom	2 / 2	2 / 2
heating zones in the bottom preheat area	○	○
total length of heated area [mm / inch]	1850 / 72.8	2350 / 92.5
average working speed [m/min]	0.40 - 0.55	0.55 - 0.70
local nitrogen inertion in the peak area	○	○
Available Conveyor Systems		
belt conveyor - max. working width [mm / inch]	410 / 16.14	410 / 16.14
chain conveyor - max. working width [mm / inch]	410 / 16.14	410 / 16.14
electrical width adjustment	●	●
chain center support, electrical width adjustment	○	○
max. lowering of center support [mm/inch]	18 / 0.7	18 / 0.7
combined conveyor-max. working width [mm/inch]	410 / 16.14	410 / 16.14
Cooling Area		
number of cooling zones [pcs]	2	2
length of cooling area [mm / inch]	600 / 23.6	600 / 23.6
fan cooling unit circulating ambient air	●	●
Flux Management		
flux management system with stainless steel filter	●	●
Control Unit		
micro processor control	●	●
operation via touch display	●	●
management data system according to ISO 9000 ff	via interface	via interface
clock timer	●	●
interface for inline integration (SMEMA)	○	○
closed loop control of all relevant functions	●	●
PCB pass-through control	●	●
capacity for 100 soldering programs	●	●
Machine Dimensions		
length [mm / inch]	3200 / 125.98	3700 / 145.67
width [mm / inch]	1250 / 49.21	1250 / 49.21
height [mm / inch]	1600 / 62.99	1600 / 62.99

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