

IBL - Your Partner in Soldering Technology

Vapor Phase Soldering machines

VAC 645/665

Highest quality in lead free soldering

Overheating of boards physically impossible
100% inert protective atmosphere without use of nitrogen
Optimum wetting properties and smooth temperature rise
through pre-adjustable profiles using the patented Soft
Vapor Phase Technology

IBL Löttechnik

For more than 25 years IBL sets its focus on development,
production and sales of vapor phase soldering machines
and suiting periphery.
Patented reference technology Soft Vapor Phase (SVP)
provides highest quality, robustness, repeatability and
flexibility.
More than 30 national and international patents document
the market and technology leadership of IBL Löttechnik.
Utmost quality requirements are fulfilled by the in-house
production starting from raw material until the finished
system.



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Leading in Vapor Phase Technology

IBL

Soft Vapor Phase with Vacuum

Vacuum Process

The IBL Vacuum Vapor Phase Soldering system operates in a complete inert atmosphere through the entire reflow and vacuum process. The combination of the vapor phase soldering process with a vacuum chamber significantly increases the reliability of the finished product. Large area soldering of power electronics and lead free solder causes a higher incidence of voids and larger voids. Vapor Phase Soldering combined with vacuum minimises voids. This increases the electrical and thermal conductance, improving the function and reliability of the products. The vacuum machine can be operated with vacuum or without in a complete inert area through the entire process.



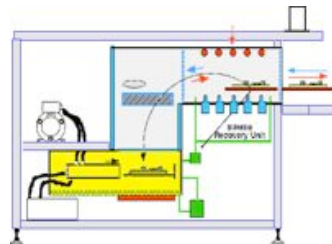
Inline Vacuum Vapor Phase System

The loading and unloading of the Inline -machines is conducted outside the process chambers, ensuring trouble-free production. Fast changeover between different products through fully automatic track adjustment in combination with interactive machine control. Precise and highest product quality at maximum performance on one- and double sided boards. Easy line integration with standardized SMEMA interface.



Features

- 2-chamber Vapor Phase Soldering Machine
- Reduction of voids, even for large soldering
- Evacuation of the assemblies in the Vapor Phase
- Lead and lead free soldering with fast changeover
- Maximum process window at minimum temperature (lead free soldering at max. temperature at 235°C)
- Easy and comfortable operation through Touch screen monitor for programming.
- Live temperature profile monitoring, documentation and optimization with IBL Software VP-Control
- Rapid Cooling System (RCS, patented, optional)
- IR heater unit (ideal for glue hardening optional)
- Energy management system for lowest energy consumption.
- Lowest fluid consumption
- Maintenance free transport unit (TPS, patented)
- Observation window into process chamber



Modes of Operation

Soft-Vapor-Phase-Mode (SVP-Mode)

The Soft Vapor process mode enables variable temperature profile adjustments for a wide range of soldering demands. An adjusted temperature profile (e.g. 1K/sec.) can prevent the so-called tombstone effect of passive components. The patented Soft Vapor Phase (SVP) allows adjustment of temperature profiles to nearly any required temperature gradient. The Soft Vapor Phase mode enables the user to create e.g. "Plateau"-profiles or to generate low temperature gradients. The Soft Vapor mode can be used in combination with the vacuum process.



Automatic mode

For the optimization of the solder-process the integrated premium-solder-automatic can be activated in addition in both modes. This automatically controls the adaptation of the solder time or the maximum solder-temperature.



Rapid Cooling System (RCS, patented)

The rapid cooling system (optional) helps cool down even the heaviest PCB's, immediately after leaving the vapor phase.

Vibration free Transport system

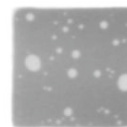
All moving parts are placed outside the process chamber for fast and easy maintenance and continuous operation. Fully automatic product change without set-up time.

Traceability

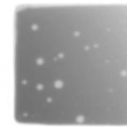
Production data can be stored using the IBL VP-Control software of IBL.

Lowest operation costs

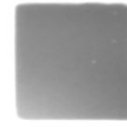
- Lowest energy consumption.
- Lowest fluid consumption
- Low-maintenance production.
- Inert reflow soldering atmosphere without nitrogen.



Without Vacuum
Linear Profile



Without Vacuum
Plateau Profile



Vacuum process
50 mbar