ASSCON
Dynamic Profiling

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Active Profiling Control

asscon.de

Dynamic Profiling

Process Reliability and Quality Assurance

As the leading manufacturer of vapor phase reflow soldering systems, ASSCON develops and produces advanced innovative solutions for modern soldering technology. The centerpiece of the vapor phase soldering technique is the controlled transfer of energy developed by ASSCON to set flexible temperature profiles, thus resulting in dynamic profiling.

One of the major challenges in the soldering process is to set the optimum soldering profile for every product. This applies both when developing prototypes and in series production, where a reliable constant temperature profile is required, not to mention guaranteed traceability and monitoring of every profile.

ASSCON dynamic profiling permits real time measuring of every soldering process on product level, and the automatic creation and control of the soldering profile. A measuring standard is used, which is heated in the system together with the solder product. The temperature profiles of the measuring standard and product are virtually identical. The temperature and heating behavior of the product can thus be ascertained and recorded with no risk of destruction. Prior to every soldering process the temperature of the measuring standard is matched to the temperature of the product (ambient temperature) by active cooling.

The measuring standard behavior is used as a variable for active profile control during the soldering process. Influences on the process, caused for instance by different loads or workpiece carrier temperature, can thus be compensated.

Guaranteed traceability, monitoring and checking of the soldering profiles is thus ensured by the ASSCON-BDE software tool using a database.

Dynamic profiling permits production line optimization. ASSCON has already installed more than thousand vapor phase soldering systems worldwide. Prestigious companies are among its customers.

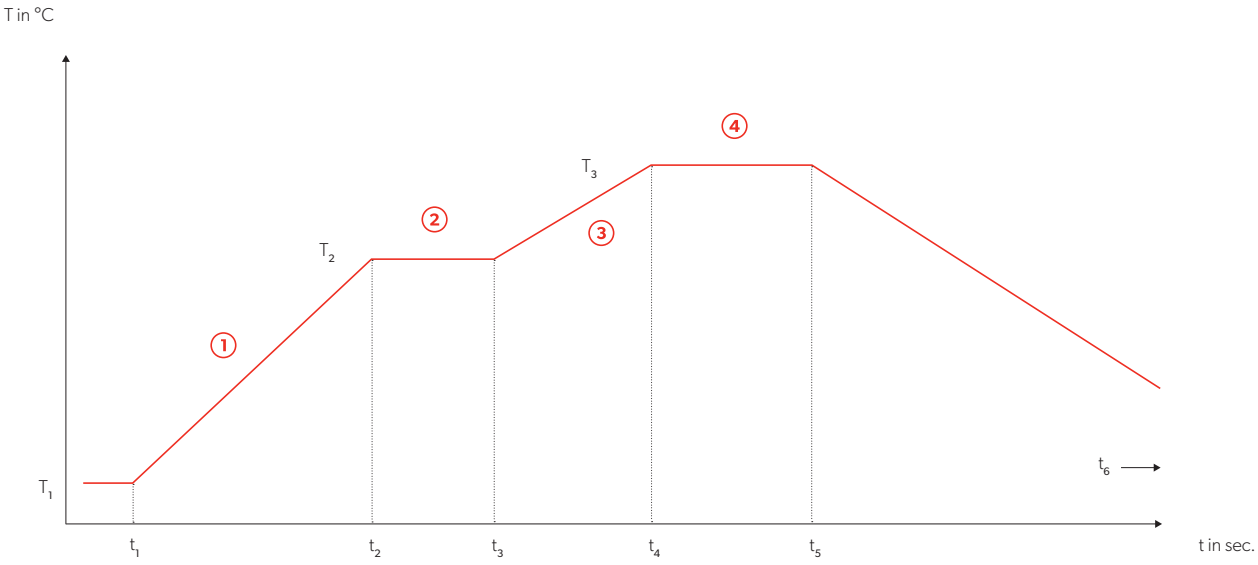
CUSTOMER BENEFITS

Dynamic profiling guarantees fast and easy temperature profile creation and full process reliability in series production.

- The operator enters the required temperature in the system control.
- The soldering system automatically sets the required control parameters.
- The product is soldered automatically with the set parameters on the basis of the measuring standard temperature profile.
- This procedure ensures that all other products in the series are soldered according to the set temperature profile.
- Three different measuring standards ensure that the entire product spectrum is covered.
- Cooling of the reference measuring points prior to every soldering process ensures that the process temperatures are always recorded in the same measuring conditions.
- The recorded data is available for traceability and documentation purposes
- Dynamic profiling also offers the option of processing both leaded and lead-free products with the same process media.

THE FOUR KEY INPUTS FOR CREATING TEMPERATURE PROFILES

1 Power setting to determine pre-heat gradient (T2)
2 Start temperature of the soak zone in °C and soaking time (in sec.)
3 Power setting to determine solder gradient (T3)
4 Soaking time after reaching the end temperature



Tomorrow's electronics: Powerful and reliable


RENEWABLES


SATELLITE TECHNOLOGY


AVIATION


AEROSPACE


MEDICAL ENGINEERING


ELECTRIC VEHICLES

SMD components are already used today in many sectors. In the future they will assume an increasingly important role in EV, the distribution of electricity generated by renewables, in aerospace, medical engineering and military applications. These implementation areas call for the highest standards of performance. So the guaranteed consistency of the solder profile achieved by dynamic profiling is vital. Manufacturers can thus enhance the reliability and service life of their products.

Our Product Series

Dynamic Profiling for Active Profiling Control

IMPLEMENTATION AREA	SERIES PRODUCTION		LARGE SERIES PRODUCTION
			
PRODUCT	**VP1000**	**VP6000 VACUUM**	**VP2000/7000 VACUUM**
TECHNICAL DATA			
Maximum solder material format (mm)	VP1000-64: 610 x 460 VP1000-66: 610 x 610	600 x 600	VP2000-100: 600 x 520 (750 x 520*) VP2000-200: 600 x 520 VP2000-300: 600 x 620 (750 x 620*) VP2000-400 dual-lane: 600 x 275 (per lane) VP7000: 520 x 450
Supply voltage	400 V/3/PE/N - 50 Hz/60 Hz	400 V/3/PE/N - 50 Hz/60 Hz	400 V/3/PE/N - 50 Hz/60 Hz
Average energy consumption per hour	2.0 kWh	3.0 kWh	3.5 kWh
Ready for operation	ca. 25 min.	ca. 35 min.	ca. 30 min./ca. 45 min. (VP7000)
Operating mode	Batch	Batch/Inline upgradeable	Inline single lane/dual lane
Vacuum up to	–	0.5 mbar	–/0.5 mbar

* option

Automatic creation and control of the soldering profile in real time

Process reliability and quality assurance

OUR CERTIFICATES

ASSCON permits compliance with the statutory provisions (WEEE and RoHS) for the conversion of all electronic products to lead-free technology. All systems are suitable for lead-free solder temperatures.

The quality management of ASSCON Systemtechnik-Elektronik GmbH has been certified to DIN EN ISO 9001:2008 (ZN: 01 100 060704) by TÜV Rheinland since 2007. In May 2008 the first ASSCON soldering systems were qualified and certified as series systems to UL and CSA standard (as per mark control no. 3147382; Intertek Testing Services NA Inc.).

TÜVRheinland ZERTIFIZIERT Management System ISO 9001:2008 www.tuv.com ID 9105039291

Intertek

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