

Intelligent Radio Controls

Manufactured using Soldering Processes from a Single Source

ERSA GmbH, Wertheim & ELDAT GmbH, Zeesen

ELDAT GmbH is one of the leading manufacturers of radio controlled products in Europe. The Corporation was founded more than 30 years ago, and in that time it has contributed heavily to shaping the industry by repeatedly setting new standards with its line of intelligent radio controls.

Founded 1979 in Berlin-Wilmersdorf, ELDAT moved its headquarter in 1992, after the completion of its new building, to Zeesen on the southern fringes of Berlin. Then, in 2007, a new and modern building was occupied, and this is where today, on 5500 m² floor space, 100 employees produce its products utilizing the most modern manufacturing methods while adhering to the highest quality standards.



Fig. 1: ELDAT Factory Building in Zeesen, Brandenburg

A large proportion of its total sales stems from the manufacture of in-house developed ELDAT radio control products. Their range of application is the intelligent control of lights, shutters and blinds, entry- and alarm systems as well as controls for doors, gates and windows. Radio control systems are also offered for standard light switches and door bells, systems, which can be installed quickly and without the need to lay additional cables. As a result of their installation, the end users quality of life and comfort will undoubtedly be raised through the different push-button or hand-held transmitters, and he will benefit from the improved energy efficiency (energy consumption is reduced).

Energy efficiency and resources also play an important role in the daily operations of Eldat's facilities. To optimize the use of the resources available is of particular importance in a high-wage manufacturing location such as Germany. This implies that the manufacturing equipment uptime should be as high as possible, and that operator interventions and product change over times should be reduced to a minimum. All that without compromising quality! The focus, therefore, has to be on a high FPY (First Pass Yield), so not to generate additional costs through rework. Each fault arising from the manufacturing process increases manufacturing costs.

These considerations are particularly applicable for companies involved in the very competitive contract assembly business, a service recently entered quite successfully by ELDAT. If requested, ELDAT is also able to put at the disposal of their customers its own company-internal development and design capabilities.

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In 2010 ELDAT invested in an additional SMT line, and selected, after carefully investigating the equipment offered on the market, the ERSA VERSAPRINT S1 stencil printer and the ERSA HOTFLOW 3/14 reflow system as the equipment that most matched their needs and requirements.



Fig. 2: ELDAT SMT-Line with VERSAPRINT S1, the patented ERSA stencil printer with integrated 100% AOI at line speed

In addition to the important advantages of having only one contact for the printer and the reflow process, and for perfectly attuned system software and line control, the key consideration for the decision in favor of ERSA was the superior technology of the ERSA VERSAPRINT. It is this type of technological superiority that results in energy- and resource efficiency, giving rise to the envisioned and desired cost reduction for ELDAT's production department.

“The full-area inspection of the pcb and the stencil with the VERSAPRINT is a tremendous advantage”, states Roland Mante, production manager of ELDAT since 2002. With the 100% inspection of the boards and the stencil taking place immediately after having been printed, any defect present can be detected at the location of the occurrence – the printer - without loss of time. Then the VERSAPRINT can intervene immediately. For example, the cleaning interval for the stencil could be started automatically, without operator intervention. Of course, it is a standard feature that all process relevant parameters can be called up at any time; respectively can they be stored for future use and reference. It is also possible to perform a 100% scan of the board to quickly generate the inspection program. The change over to a different product is optimally supported, and time and therefore money is being saved. Time indeed is money!

The excellent system availability for production of the HOTFLOW 3/14 reflow system equally convinced ELDAT's staff. “With over 500 different assemblies to process, it was extremely important for us that the profile change-over was quick and simple”, states Roland Mante. The need to achieve high productivity while processing the most diverse assemblies calls for an especially quick and efficient adaptation of the reflow process to the new products requirements. With this feature, production up-time can be gained and costs of the reflow process can be reduced, since the system is up and producing different products within a very short period of time.

Since the HOTFLOW 3/14 was explicitly developed to provide maximum availability for production, the present generation of reflow systems is equipped with the possibility to clean the main process gas filter

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while the production continues to run. Maintenance on the fly! Maintaining the system is further facilitated through the quick-change nozzle plate, the heat distribution cassette and the easily to remove cleaning modules, such as, for example, the heat exchangers installed in the system and the granulate filter cartridge. “The modularity of those areas of the HOFLOW 3/14 that do require maintenance simplifies the maintenance immensely”, is the positive feedback of Roland Mante. In addition, profiles for new solder programs are generated off-line easily and quickly thanks to the ERSA- Autoprofiler.



Fig. 3: ERSA HOFLOW 3/14 – Reflow System with superior thermal performance, highest equipment availability and lowest operating cost, installed in the ELDAT SMT line

With ERSA and ELDAT – where, by the way, ERSA’s wave soldering technology is also in use – two corporations successfully collaborate, both being leaders in their industry through their modern and energy efficient technologies, ELDAT for more than 30 years, ERSA already for more than 90 years.

For additional information please visit: www.eldat.de and www.ersa.de