

User report



EMS provider from Lower Saxony expands with addition of Ersa SMARTFLOW 2020

Ersa SMARTFLOW 2020 in the VTS electronics manufacturing in Fürstenau.

VTS Elektronik: Top quality and service

VTS Elektronik GmbH, which has its registered offices in the town of Fürstenau in Lower Saxony, is a specialist when it comes to PCB production and SMD mounting, providing comprehensive service in the area of components. SMD mounting, layout, design, mounting and production of circuit boards are all carried out at the highest technological level

– regardless of whether prototypes, medium-sized or large series are involved. With its extensive machinery, the EMS provider is equipped for projects of every dimension – since August 2018, the VTS team has also been using selective soldering technology in the form of an Ersa SMARTFLOW 2020.

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Managing directors of VTS Elektronik GmbH: the brothers Viktor and Sergej Tschernewanow with Ersa Area Sales Manager Philipp Haar (re.).

The consistent aim of Viktor and Sergej Tschernewanow is to offer VTS Elektronik GmbH customers the highest quality combined with outstanding service. In order to honour this promise, and do so even better in the future, the company has expanded its machinery with the addition of a new system – the latest order was for a smart selective soldering system: Ersa SMARTFLOW 2020. But let's not get ahead of ourselves – one thing at a time: It all began in a garage – 16 years ago, in the Osna-brück administrative district or, more precisely, in Fürstenau, a small town with a population of just under 10,000. In 2003, the two brothers Viktor and Sergej Tschernewanow founded their company there under the name Tschernewanow GbR. Initially, all the services and operational procedures were carried out manually, with the brothers able to call on the support of the entire family. Business went well and within just two years the manual trimming, bending and population of leaded components gave way to automation and the use of the first machines.

The range of services also grew and was expanded to include the SMD area. From the very beginning, the Tschernewanows placed enormous emphasis on top quality to establish a firm client base in such branches as the retail trade, engineering, telecommunication, electronics and production. This standard set for themselves by the brothers also helped them successfully weather the 2008 global financial and econom-

ic crisis. Following this difficult phase, manufacturing was relocated to a modern production facility in 2009 – with workplaces, production and inspection areas built to the specifications of the ESD norms. From this point on, the company was able to report a growth rate of over 50 % every year; in 2011 the GbR became VTS Elektronik GmbH.

Along with the change of name came the expansion of the equipment – among other things, it was augmented with a mounting machine, a stencil printer and a drying cabinet.

Within just a few years, the garage start-up had grown into a modern production operation which can meet every order to the highest quality with extensive experience and highly-modern equipment. The mounting of PCBs ensues in SMT, THT and mixed techniques – the VTS machinery is set to produce components measuring up to 460 x 410 mm in one run. On request, VTS Elektronik will look after the entire material procurement to customer specifications through its distributor network, from the PCB to the standard resistor and the highly-complex processor and mechanical components. Of course material supplied by the customer is also processed. "The SMD mounting process is a major benefit, not only in terms of the saving in space and material – from an economic perspective too, SMD mounting often also positively influences the final price of the appliances," explain the VTS owners.

Services

VTS Elektronik

- Conventional, SMD or mixed mounting
- (Semi)automated or manual mounting
- Mounting of THT/SMT
- Component sizes from 0402 to TQFP (RM 0.3 mm) and BGA (0.5 mm)
- Vapour phase soldering
- Reflow soldering with convection oven
- Performance test

www.vts-elektronik.com

Managing directors of VTS Elektronik GmbH: the brothers Viktor and Sergej Tscherneuwanow with Ersa Area Sales Manager Philipp Haar (li.).



FURTHER DEVELOPING THEIR POSITION WITH SMART SELECTIVE SOLDERING SYSTEM

Business in 2018 was also good for VTS Elektronik GmbH, which now has 20 employees on its payroll and can operate on a production area of 1,350 m². For that reason, the two shareholders Viktor and Sergej Tscherneuwanow decided that the time was ripe for investment in a future-oriented soldering system. Initial information was obtained through the Ersa internet platform – the query was geared towards a selective soldering system which would reliably replace hand soldering while at the same time guaranteeing reproducible quality. Further requirements were: a high degree of flexibility, simple operation and great ease of maintenance. Upon receipt of the written inquiry, Ersa Sales Engineer Philipp Haar got in touch with the customer and arranged a first personal appointment. Meeting on an equal footing, Sergej Tscherneuwanow and Philipp Haar examined the requirements and discussed various possible solutions.

Once the right system had been selected – a SMARTFLOW 200 – the next step was scheduled: A practical test under real conditions. An appointment was made to put the VTS boards through their paces on the SMARTFLOW 200 in the fully-equipped Ersa demonstration and application centre in Wertheim am Main. The goal was to test, in a real environment, whether the SMARTFLOW 200 really kept the promises it made on paper: extremely low consumption of nitrogen, fluxing agents, solder and electricity, favourable operating costs,

modern control engineering for simple operation, incorporation of the system into MES/ERP architectures, offline programming and possible remote maintenance.

COMPONENT QUALITY EQUAL TO THAT OF LARGE SYSTEMS

The easy operation of the compact selective soldering system and the fast programming, as well as the support of the Ersa team, impressed VTS managing director Sergej Tscherneuwanow across the board – not to mention a completely convincing component quality, similar to that guaranteed by the high-end selective soldering systems of the Ersa VERSAFLOW family. The SMARTFLOW 200 was first presented in 2015 at the SMT electronics manufacturing fair in Nuremberg and quickly gained great popularity in the market thanks to unbeatable value for price and a footprint of under 2.5 m². The speedy availability meant that the first large order could be accepted and produced on the SMARTFLOW 200.

And as it turned out: The “plug-and-play” concept proved to be much more than just marketing communication; it was a promise honoured directly on site with fast commissioning leading to the immediately availability of the system. Thanks to the professional support from Ersa Service, the VTS team was immediately ready to go – and, without any great lead time, benefited from the ERSASOFT 5 machine software and its user-oriented surface for the next production order.



The compact model among the selective soldering systems: Ersa SMARTFLOW 2020.

And also benefited from the "picture in picture" function which, in conjunction with the process monitoring camera, provides a live image of the soldering process on the touch screen.

QUALITY UP, THROUGH TIMES DOWN

The SMARTFLOW 2020 has now been in operation since August 2018 and has coped with the first major order with outstanding, reproducible quality. Despite its compact dimensions of 1,750 x 1,450 x 1,520 mm, the universal template can cater to a maximum component size of 508 x 508 mm and works in all the process steps with the same proven Ersa technology as the large soldering systems – this means: no compromise in quality or precision. The fluxing agent works with the greatest positioning precision and the lowest order size. Process reliability is ensured by such features as spray jet monitoring and process camera. A full-surface pre-heating system is also integrated

– the lower heater features eight emitters so that the power consumed can be ideally adapted to the heat demand and the size of the board. The upper heater is perfectly adjusted to the lower heater and ensures an effective, reproducible through heating, even with extremely complex components such as multi-layer or heavy-mass. The VTS team is delighted that hand soldering has been replaced by the SMARTFLOW 2020. "We have been able to further enhance our quality and achieve shorter cycle times, but we should stress that, for us at VTS, the quality aspect has the highest priority," explains VTS managing director Sergej Tschernewanow. In the system supplier Ersa, VTS Elektronik GmbH has found a partner who, day for day, lives out and honours the same high quality standard in the dynamic electronics manufacturing sector. Moving forward into the future, it feels good to be accompanied by a reliable partner! ■

www.ersa.com
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ERSASOFT 5 in the SMARTFLOW 2020: Prize-winning, user-oriented menu navigation and PIP function for the ideal overview.



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