



## ***KURTZ*** trimming presses

*We successfully generate pressure – up to 350 t*

### ***MBW & „teamtechnik“***

Close co-operation in equipment  
for medical technology

### ***ERSA trains and qualifies***

workers in hand soldering as per DVS standards

### ***A-LINE on the road to success***

New possibilities in the manufacture  
of moulded parts convince processors

[www.kurtz.info](http://www.kurtz.info)

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# Coming out of the crisis strengthened and in improved shape

## Editorial

The Kurtz Group of Companies had been affected rather heavily by the economic and financial crisis. This crisis had a severe impact on some of our business areas, and we experienced during the first 6 months of 2009 a steep drop in our sales. To combat this threatening situation, the advisory board, the management and the complete staff of the Kurtz Group combined their forces during this difficult time, and together they have seen to it, that by making good and appropriate decisions the Group could be steered back to a future course of success – and that despite an expected lasting decline in sales. This we have achieved, and we are very grateful to our employees, our customers, our suppliers and our business partners for their fair and cooperative approach

during this time towards our group, and for adopting an attitude based on partnership. Through this, they all have contributed to our success. It remains an unfortunate fact, though, that we had to make redundant, on account of the necessary restructuring, more than 300 positions within the group. Cost reduction measures of this magnitude were without precedence in the history of the Kurtz Group, but they were absolutely necessary and there was no alternative to this painful step.

But even during this time of crisis, the Kurtz Group remained committed to their claim to technological leadership. The diversity of our product range remained in tact, and new products were introduced to the market.

The course of the first 6 months of 2010, and the fact that the economy is reviving gives us cause for hope. Still – after all the turmoil brought on by this economic and financial crisis, which we hopefully have left behind us – there remains a general feeling of a hangover over most of the world.

Let us hope that the sceptics and procrastinators, that want to question or downplay this revival, don't succeed in their attempts!

**The Managing Board of  
Kurtz Holding GmbH & Co. Beteiligungs KG:**  
*Uwe Rothaug, Thomas Mühleck, and Rainer Kurtz*





## *Kurtz Group*

# *Newly Positioned*

**By Thomas Mühleck**

In 2009, the complete world economy experienced a slump of historical dimensions. For the Kurtz Group, this translated into a drop of sales of approximately 45 %. As a result of this, an immense challenge had to be faced by the group – to accomplish the quickest possible alignment of the capacities and structures to the sales volume expected in the medium term.

The period of time needed to consolidate has intensively been used to execute changes which would assure that the company emerges with new strength from the crises. Amongst others measures, established processes in all divisions were completely reworked, capacities were aligned, product lines were optimized, new developments were brought to the market, and the finances were rearranged. In total, a programme with more than 100 individual measures was, within a short period of time, put in place and implemented. In addition, during the current year the corporate struc-

ture of the Kurtz Group will be simplified, making it a more transparent entity. After these turbulent times, the Kurtz Group has come out of the crisis strengthened all around. The recent sales figures in terms of volume and return are both surpassing our expectations. Suppliers are paid with the available discounts and numerous new projects are being considered in all business areas. Both, the short- as well as the long-term perspectives look very positive.

The new management steers the corporation now for 1 year into calm waters, and the internal as well as the external co-operation with all business partners functions extremely well.

For this co-operation extended we would like to express our sincere appreciation. In accordance with our long-term strategy, a solid foundation has now been laid for a continued successful collaboration, a foundation, on which a strong future can be built.



# ***KURTZ*** trimming presses

*We successfully generate pressure – up to 350 t*

**By Lothar Hartmann**

The KURTZ Metals Business Division extended its product range by adding trimming presses to its line-up. The trimming presses operate reliably and with the proven KURTZ quality. Numerous satisfied customers prove the success of this new product line. As always, KURTZ does not only focus on the press itself: additional process technology such as trimming tools and peripheral equipment are offered as well to complete the package.

The existing casting know-how at KURTZ combined with trimming technology results in high-quality casting solutions. Professional support regarding the casting process along with trimming and premachining technology enable a continuous process from one source. This leads to an efficient and profitable manufacturing process.

The KURTZ machine concept includes the following models: The KURTZ KP“C” line of so called C-frame presses, the KURTZ KP“S” line as a 4-column version and the KP“R” line built as a frame design. Based on the customer’s requirements, press forces range from 25 tons up to max. 350

tons on the largest press. The basic machine is already equipped with high-quality technology. For example, the hydraulics are state-of-the-art with regards to energy savings and in terms of safety performance.

Further additional equipment and options are available with KURTZ trimming presses, therefore each machine can be adapted to meet each customer’s requirements. The same also applies for special designs and applications – whether in serial production or a jobbing foundry, KURTZ is always the perfect partner.

In addition to trimming presses, KURTZ also offers complete trimming cells including automation and robotics, cooling basins and cooling racks, parts inspection and project engineering.

The great demand for KURTZ trimming presses and positive feedback from “happy owners” leads to high satisfaction of the division managers as well, who can look positively into the future regarding this new product line.

# KURTZ casting cells

*Traditional technology comes to perfection*

By Lothar Hartmann

The roots of the KURTZ foundry machine division lie in gravity and tiltable gravity die casting machines. These machines are operated manually by the foundryman pouring the aluminium into the mould with a ladle. This is tough and dirty work where success depends mainly on the foundryman's skill.

This casting method as well as these machines are still considered current technology and certainly have their advantages. Nevertheless, the development has left its mark here. Today, KURTZ builds tiltable gravity die casting machines with many more possibilities and options. With regards to pouring, the foundryman can be replaced by a robot which casts every part with the same quality, as tilt angle and speed are freely programmable and are more repeatable.

Also, dosing weight and manner are freely programmable. Of course, these adjustments can be saved and recalled again as casting recipes are stored within the KURTZ control system. Together with robot dosing, the proven

KURTZ tiltable gravity die casting machines form the heart of a high-quality casting cell. There are numerous possibilities to equip a foundry machine and its peripherals.

Cooling is an important factor for quality and cycle time. Up to now every casting cell was equipped with its own utility supply system. A utility supply system consists of a maximum of 10 air circuits and 10 water cooling circuits. If the air circuits are control circuits, the water circuits are designed as regulator circuits.

Every circuit can be controlled individually by time and / or temperature. The set flow rate is constantly controlled and regulated. The crucible furnaces are heated via electrical resistance heaters and have a capacity of 1,700 kg. To avoid wasting energy the furnaces are equipped with an insulated lid which is only opened if new aluminium is required.

Due to a manual insertion of the cores, the casting cell becomes extremely

flexible as additional robot gripping devices are not needed. Various products can be cast within a casting cell, i. e. on foundry machine 1 another part can be cast than on foundry machine 2.

Removal of the castings from the foundry machine is done manually with the help of a small crane. Subsequently, the parts are deposited on pallets which are transported on roller conveyors. A core gas suction device mounted on the foundry machine completes the package.

The control system is simple and easy to handle. Modifications to the process and machine parameters are simple and freely programmable. All values are saved and can be recalled anytime. After every casting the relevant data are transferred to a master computer for quality assurance purposes. This is an important aspect for quality management as production history can be reviewed at a later time.

Short and sweet: traditional, proven equipment with high-tech accessories from steel to software.





## MBW HERCULES

*MBW introduces multi-functional load-and-dump transport trough*

On the occasion of their Open House on the factory grounds Reinhardshof in Wertheim, MBW Metallbearbeitung Wertheim GmbH, whose core business is to be a supplier of premium metal parts, presented to the public their first internally designed and manufactured product. It is named the MBW HERCULES, a multifunctional load- and dump transport trough, which can be linked to the three-point hitch of tractors. It is ideally suitable for a variety of transportation tasks.

After a period of extensive market research, MBW developed with the HERCULES a product, which can be manufactured in-house with a high value creation and which possesses, when

compared with similar products available on the market, distinctive advantages for the user. Particularly practitioners and specialists for agricultural machinery attest, that the design of the HERCULES is singularly suitable for its user, that is has a number of smart detail solutions, and that it is of superior workmanship. It therefore meets the highest quality expectations.

The fact, that the first series of the product had been completely sold out during the day of product introduction, delighted the managers responsible at MBW, and makes them look with confidence towards the continued

success of the HERCULES on the market. Further information and technical details of this functional and practical all-rounder are available at: [www.feinblechtechnologie.de](http://www.feinblechtechnologie.de)



## Kurtz Foundries newly oriented

The significant drop in volume in the foundry industry in general has been utilized by the two foundries in the Kurtz Group, the iron- and the aluminium foundry, to reposition themselves in the market.

The target group of products in the aluminium foundry, low-pressure castings with special requirements in regards to mechanical properties, was intensively investigated and subsequently repositioned, and new and very interesting projects in a variety of industries could be won. Internally, many necessary measures and changes were implemented, so for example could the scrap generated be reduced and the productivity could be raised. With these measures and changes having been taken, the aluminium foundry is a very attractive and stable partner for its customers. The target group of products in the iron foundry are hand-moulded castings with a

part weight of between 3 and 7 tons. In this weight range of castings, our foundry has an enormous pool of know-how. And through its excellent performance with respect to quality, price and on-time delivery, the iron foundry has established itself as a preferred supplier to its customers. Its flexibility in terms of capacity assures an economically stable position with sufficient room to breathe and to expand.

Last but not least, the iron foundry succeeded to open the international markets for its products. This market segment offers at this time outstanding potentials.

By applying this consolidation strategy, both foundries could be placed on economically sound footing, and they continue to be for their customers a reliable supplier and a solid partner with a long-term focus.





MBW: In charge of the complete external panelling of TEAMED, the trendsetting system for medical technology

## MBW & „teamtechnik“ – Close cooperation on TEAMED

“teamtechnik Maschinen und Anlagen GmbH”, as a leading supplier of innovative production technology, stands for intelligent and flexible automation solutions dedicated and ideally suitable for the high requirements in medical technology.

MBW Metallbearbeitung Wertheim GmbH developed, designed and manufactured the complete stainless steel panelling for the platform TEAMED, based on the customer’s detailed specification.

Qualified staff of both companies collaborated closely on this project, with the objective to gain a competitive edge for the customer. TEAMED was especially developed to combine the tasks

of assembly and test in the medical technology area. The system operates efficiently and economically when complex and precise process technologies in a clean room environment up to 10 000 (ISO 14644-1, Class 7) are required – as for example for laser welding, metering / dispensing, or force-distance as well as torque tests.

Typical medical technology products are assembled and tested on these platforms are complex inhalation-, pen-, dental- and diagnostic systems.

MBW is very proud of this long-lasting partnership with its customer “teamtechnik” and is already working on follow-up products.





Apart from standard boards, ml&s also produces demanding power electronics for their customers on 3 POWERFLOW wave soldering systems.

which calls for substantial preheat requirements, and therefore the POWERFLOW was the ideal solution for us." A further important advantage was the availability of the "process gas cleaning feature and the stabilization it brought to the environment within the tunnel, a feature which is installed in all three of ml&s' systems", adds Torsten Hellinger, the sales engineer responsible for this customer from ERSA.

ml&s also operates 2 ERSA VERSAFLOW selective soldering systems. The deciding factor for this purchase was the high flexibility provided by the 4 universally deployable solder baths, allowing the parallel use of tin/lead or lead-free alloys while offering short cycle times and therefore assuring a high throughput. Siegfried Laase is aware of further advantages: "Because of the zero-degree angle during soldering, we receive perfectly shaped, reproducible solder joints, together with a full documentation of each individual process parameter. The boards are absolutely stationary during the soldering cycle, and in conjunction with the improved peel-off function we can solder tracks and joints without bridging, even for fine-pitch components."

This lasting collaboration has long ago turned into a win-win situation for both companies. Detlef Krohn summarizes: "ERSA soldering systems operate on a very stable level, with availability for production in excess of 95 %. The new user interface with the graphic image is super." With this latter statement Mr. Krohn points out the fact, that the new innovative user interface has been adapted to all models of the ERSA product line, so that if the programming one system is known, others are easily and intuitively learnable. He continues: "Very important for us was also that, apart from a good and efficient service support, we would have a contact person we could call on with our questions and problems. Spare parts delivery is also optimal – we call up in the evening, and the next morning we receive the part. This is an extremely important factor for us, since it alleviates, to a certain extent, our problem with the adverse geographical location we are in.

(Extract from EPP 5/6, 2010 – Konradin Mediengruppe)

## EMS service provider ml&s, Greifswald

*... ultimate performance in the  
processing of power electronics*

Since its founding, 8 years ago, ml&s in Greifswald, Germany, has seen itself as a service provider offering to its customers the complete range of services, starting from layout and populating printed circuit boards, the configuration of complex systems up until quality assurance, worldwide delivery and complete after sales service, everything provided from one and the same source. By anticipating their customer's requirements, their manufacturing floor is always equipped with the latest production equipment needed for innovative manufacturing processes.

The decision of the management to offer a broad product spectrum was ultimately the decisive fact that allowed us to get through the economically difficult times in good shape. Detlef Krohn, member of management and manager of the production and production technology department, notes: "Through our emphasis on telecommunication, industrial applications, green technology and the automotive industry do we

have a solid base. Since, if one area experiences a weakness, chances are that this weakness can be compensated through one of the other production segments. This farsightedness has led us, in the final result, through the economic downturn." ml&s has about 360 employees, mostly qualified workers and engineers, plus 18 apprentices.

Apart from relying on their technical competence, ml&s relies on lasting partnerships. The company focuses on the production and testing of electronic products as per customer specifications, performing the various manufacturing steps with modern and innovative equipment. Today, between 80 and 90 % of all products handled are in lead-free technology, which was, at the time of change-over, a challenge to the soldering equipment. "Why change the supplier, if one has a functioning partner", commented Siegfried Laase when asked at the time a new system was to be purchased, why he selected an ERSA POWERFLOW wave soldering system. In the meantime, 3 units are installed on the factory floor. And why not: ml&s had made excellent experiences with their previous ERSA EWS and N-Wave soldering systems. As a full-tunnel wave soldering system for demanding lead-free applications, the modular design of the Powerflow N<sub>2</sub> fulfils each and every one of the requirements of ml&s. "Our inverter assemblies are especially large as well as heavy,



# ERSA HOTFLOW 3e series

*Economically priced reflow systems for maximum quality and minimal manufacturing cost*



The HOTFLOW 3/14e and 3/20e are the newest reflow systems in the ERSA HOTFLOW family, and they deliver exceptional soldering results on account of their superior thermal performance, their low transverse profile and their excellent zone separation. The "e" attached to the HOTFLOW lettering stands for "efficiency". Being part of the name of the product, it underlines the importance ERSA has put

on the economic efficiency during the development of these systems. During the systems' designing, ERSA drew on their extensive know-how and experience gained during the 25 years of ERSA's excellent track record in building reflow systems. Numerous economical and technical solutions could ideally be combined, without compromising in any way the reliability and uptime of the system.

At the same time, the high-grade materials and proven components expected to be

found in ERSA equipment are specified, yet, should a component fail, the necessary ease of access to repair and service is available to facilitate these duties.

There was also no compromise made in the selection of the controller. The HOTFLOW 3/14e and 3/20e are equipped with a premium PLC controller, and it offers a PC with Windows 7 operating system as the user interface. The comfortable system visualization simplifies programming and has all necessary operating and process data on board. The solder protocol, available in the standard programme version, is built on the ZVEI standard, which is a prerequisite for future traceability applications. The line of HOTFLOW 3e systems enthralls not only because of its technical features and performance, but also on account of its very attractive price. Considering it all, and taking it together with its high level of machine availability, excellent TCO values and a quick ROI are assured.

## *i-CON nano*

***Small, strong & intelligent: the new soldering station packs a punch!***

The latest model of the *i-CON* product family, the *i-CON nano*, satisfies all needs of today's industrial manufacturing requirements combined with lowest space requirement (footprint only 145 x 80 mm).

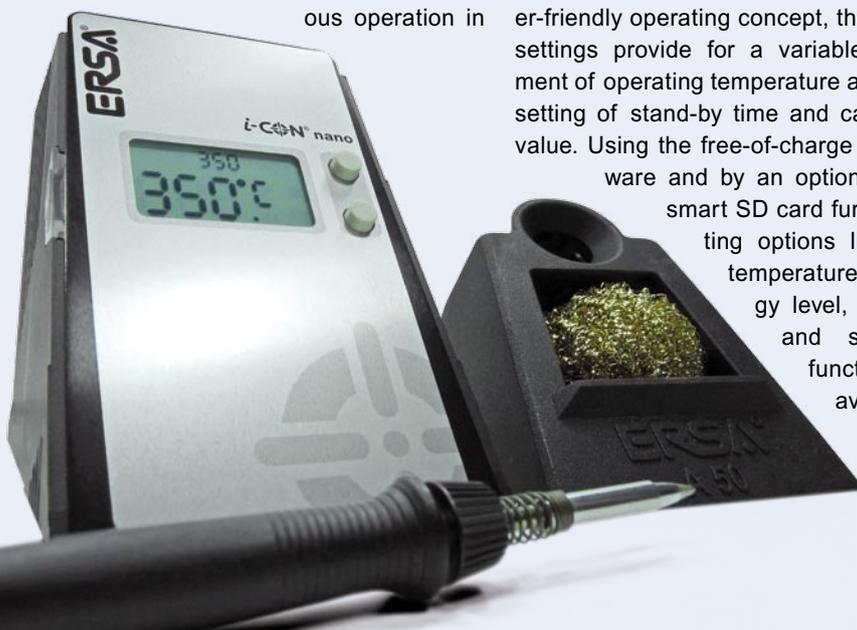
It is predestined for the continuous operation in

the electronic production as well as for special applications in laboratory and development and is fully antistatic according to MIL-SPEC/ESA standards.

Due to the *i-CON nano*'s simple and user-friendly operating concept, the factory settings provide for a variable adjustment of operating temperature as well as setting of stand-by time and calibration value. Using the free-of-charge PC software and by an optional micro smart SD card further setting options like fixed temperatures, energy level, interlock and shutdown functions are available.

The technological master plan of the *i-CON nano* assures that the optimal parameters are used for each application. Hereby the *i-CON nano* stands for highest process stability and quality control with regard to low investment costs and operation expenses. Automatic stand-by and auto sleep functions provide for energy savings and longer tip life.

The *i-CON nano* comes fully equipped with the *i-Tool nano* soldering iron. This ultra light and powerful iron uses exactly the same heating element technology as his larger brother, the ERSA *i-Tool*. A wide range of cost-effective soldering tips is available for both irons. Designed for continuous use in professional industrial companies, the new ERSA *i-CON nano* also offers smaller companies a more budget-oriented solution for top-quality hand soldering applications.



# ERSA ECOCELL

*In- and offline selective soldering system for future-oriented manufacturing layouts*



ERSA, the global technology leader in selective soldering equipment, introduces its newest addition to their product line, a unit, which answers to the needs of modern manufacturing methods. The ECOCELL system operates according to the Toyota principle, with the flow of the printed circuit boards being in the counter-clockwise direction. This U-flow arrangement is ideal for installation as production islands, but, if considered beneficial, it can also be integrated and operated in a more traditional layout.

In the ECOCELL, high throughput and high flexibility are no longer contradictory terms. With two integrated preheaters, up

to 4 boards can be processed simultaneously, and dual solder bath systems offer the possibility to efficiently process multi-up panels. Another feature is – for both the miniwave as well as the multiwave baths – the possibility to use different alloys in the two baths. This function, together with the possibility to perform maintenance on a multiwave bath, while the other bath is operating, reduces downtime to an absolute minimum.

As in all ERSA selective soldering systems, the ECOCELL incorporates the proven precision spray fluxing system. With the integrated spray jet control, the flux deposition on the board, in either single point or track, is effected with high repeatability and high quality.

The short wave IR preheaters, mounted below the boards, can optionally be upgraded with top-side convection preheaters. Thus combined, they assure a thorough and homogeneous temperature distribution through even the most heavy and complex boards. A further optional convection preheater over the miniwave bath will maintain the board temperature at the required level during the solder cycle.

In the solder modules, the “peel-off” effect developed by ERSA for their process of soldering at 0°, virtually eliminates bridging and assures a very low ppm level of defects. For the ECOCELL, manually driven pump systems with impellers are a thing of the past. In both the miniwave as well as the multiwave bath, induction pumps are used to deliver the solder. For this reason, both processes are very low in maintenance and there is very little observable wear and tear.

The intuitively operated system software guarantees simple and effective programming, and it records all production parameters relevant to traceability as per the ZVEI standard. This new software version allows for extremely quick and simple offline programming while the system is running in production. Maximum equipment availability and uptime is given! Additionally, programmes can be generated using DXF data or scanned PCB's. The user administration feature supplied eliminates unauthorized operation of the system.

## “ERSA goes green” - Technology Days

*on October 20<sup>th</sup> and 21<sup>st</sup>*

Illuminating technical presentations, interesting workshops, “Hands-on”-Sessions and plenty of opportunities to exchange and discuss experiences – all this the participants can expect to be part of when taking part in the 2010 ERSA-Technology Days in Wertheim. Present challenges and future developments in the electronic

manufacturing environment will be discussed and innovative, smart solutions and concepts will be identified during these 2 days.

While on the first day of the event SMT lines and the processes and technologies that are connected to this take centre stage, alternative manu-

facturing concepts and through-hole technology (THT) are the focal points of the second day.

Make a note of these days in your calendar, or better yet, call now and make a reservation. Remember: **The number of participants of this free event is limited!**

# ERSA trains and qualifies workers in hand soldering as per DVS standards



Technical training at ERSA, a DVS certified training facility in Wertheim, leading to be a hand-soldering specialist

## By Jürgen Friedrich

Additional costs, arising because of quality problems in the manufacturing process leading to board repair or even rejected products, are no longer viewed as acceptable in a world of declining prices and shrinking profit margins in the electronic manufacturing industry. Rather, the goal is to achieve a superior quality level and to produce, if possible, without any defects. The automated soldering process using state-of-the-art soldering systems with the correct process parameters delivers reproducible and excellent soldering results.

To achieve an equivalent quality level in the hand soldering process has proven to be considerably more difficult! And there are reasons for this: the success in hand soldering rests not only with having the suitable technical tools, but also – and that to a large extent – on the capabilities and qualifications of the operators using the tools. For many years already, there has been an obvious lack of technical training for production workers handling electronic assemblies. Uniform standards did not exist.

Yet, the high complexity of electronic products developed in Germany car-

ries immense challenges, both for the manufacturing facilities as well as the workers. This past neglect of training is surprising, since well-trained workers that understand the process can save costs. They can recognize process deviations and correct them, before they lead to defects. Through optimized use of materials and tools, and through sound process knowledge of the operators, unnecessary rework can be avoided and reproducible quality and a high quality level can be achieved.

New guidelines issued by the DVS (Deutscher Verband für Schweißen und verwandte Verfahren e.V./German Welding Society) now step in to fill this void and serve as uniform standards. The result: a one week training session entitled “Training to lead to the job description hand-soldering specialist”, with a certified final examination in theory and practice. During this training, the hand soldering operator will be taught the basics of manual soldering of electronic assemblies. Material properties and other theoretical knowledge, as well as (in the practical portion of the session) the autonomous and correct making of a solder joint using a soldering iron or a soldering station are being conveyed.

To allow this training to be as intensive as possible and to provide it with the greatest measure of efficiency, a complete manual repair station incl. an ESD protection kit is available in the ERSA Demo Centre for each participant. Completing the list of tools, bottom-side heaters, desoldering and soldering stations, an inspection workplace as well component preparation stations are available.

The progress of the level of skill of each participant is regularly monitored and evaluated during the training. Prior to the end of the training period, the participants have to prove what they have learned in a theoretical and practical final examination. All participants that passed the test receive the certificate confirming their status as “DVS Manual Soldering Specialist / Electronic Manufacturing”.

Contact us for detailed information on ERSA trainings and soldering seminars: [info@ersa.de](mailto:info@ersa.de)



## Multi-TC Welding Tool

*The leader in quality for manual welding devices for synthetic materials*

**By Annette Rohrer,  
BEHA Innovation GmbH, Glottental**

For more than 30 years now, ERSA has been an R&D partner and supplier of mirror welding tools to Messrs. BEHA Innovation. The Multi-TC succeeded the TC 70 and has been a best-seller in the field of welding tools for the drive engineering industry for many years already.

The Multi-TC welding tool with welding blade was specially developed for BEHA Innovation for this exclusive application. It assures a user-friendly and reliable welding process for transport- and drive belts manufactured from synthetic materials, and it is especially suitable where small to medium numbers of welding jobs need to be performed. In the transport- and drive technology, polyurethane and polyester belts are employed, which require

different welding process temperatures. The Multi-TC solves this problem with only one tool!

In contrast to the standard welding tools available the Multi-TC possesses an electronic temperature control, which precisely maintains the optimal welding temperature and therefore allows the welding of both polyurethane and polyester belts. This constant temperature is even maintained during continuous operation.

Heat-up time is very short. The Multi-TC is ready for operation immediately as soon as it reaches welding temperature, which is indicated by an optical signal. It takes only a few steps to weld the belts with this user-friendly tool. And because of its small size, the tool can be used directly in the equipment.

After completing the welding job, the teflon coated welding mirror can be simply cleaned or, if required, be easily replaced.

As a result, the welding of synthetic material profiles with the Multi-TC is always a very simple, reliable and clean procedure.



## In-depth focus

### ImageDoc 3.0 - Inspection software with new functions

It has been for over a decade now, that over 3,000 users worldwide are benefiting from the ability to visually inspect hidden solder joints with the patented ERSASCOPE technology. Whether for inspection under Flip-Chips or for inspection where other microscopes cannot see, the ERSASCOPE technology offers a significant added value to any quality assurance programme.

Well in time for the SMT trade fair in Nuremberg, Germany, Europe's largest manufacturer of soldering systems has equipped its inspection software

with another two functions providing increased comfort and quality in the quality assurance process.

The first one is the "Best Focus" feature allowing the ERSASCOPE user to very easily determine the optimum focus for any detail. This comes in especially useful if image details are to be measured. The second new feature provides for an improved representation and documentation of inspection results: By means of the "Focus Fusion" feature the software automatically generates an overall picture of the

single images taken before. Focus Fusion provides excellent depth of focus - so each ball from an entire row of balls under a BGA, for example, is clear on the image. In this way soldering errors or irregular soldering joints are easy to spot. The inspection results of a high-channel component are documented in only one image.

Both functions are available as of the version 3.0 of the proven ImageDoc EXP inspection software. Existing ERSASCOPE users are offered a software update.



Visit KURTZ at the K 2010 show  
- we have a lot to offer!

No matter what your task in EPS/EPP processing may be: KURTZ provides you with the optimum support for your investment decisions.

## VSD 1000 HP

*New EPP pre-expander generation protects the environment and reduces material and process costs*



**By Peter Lehmann**

In connection with an ever increasing variety of products and the different materials and densities involved, EPP processors are facing difficulties regarding storage and supply on schedule for their various production orders.

Moreover, in the meantime there are a number of applications in the area of EPP processing for which a suitable raw material density cannot be found or can only be found with limitations. The new KURTZ EPP pre-expander development facilitates second pass expansions to the requested raw density to meet the requirements of the variety of different densities.

The world-wide rise in energy costs increasingly forces EPP processors to produce even more cost efficiently. In Europe the transport costs from the raw material producer to the EPP processor almost carry no weight. In the Far East countries and the United States it looks quite differently. Here, large distances can almost never be avoided.

Using a KURTZ EPP pre-expander the quantity per truck can be increased by 5 times per tour meaning an enormous saving in transport costs.

In addition, KURTZ now also offers the possibility to compensate density fluctuations of the raw material of  $\pm 2$  to 3 g/l during the pre-expansion process.

By means of a high-precision weighing device the raw material is weighed-in in batches and for the first time ever a tolerance of  $\pm 1$  g/l is achieved. The saving potential in raw material involved as well as the pre-expander's throughput of approx. 100 t per month makes a pay-off in only 2 years possible.

# KURTZ B-JET Fill Injector

*Economic filling of shape mouldings from particle foam materials*

By Stephan Gesuato

The cost of compressed air, of which a large part is needed in the filling process during the production of shape mouldings, ranges second only after the main cost booster, which is steam. This is why most manufacturers of fill injectors stress air consumption when marketing their products. It is a general rule for fill injectors that the smaller the amount of air needed per unit of time, the better it is.

However, just the air consumption per unit of time does not reveal ANYTHING, as the reference to the conveying performance is essential. A fill injector that needs small amounts of air unfortunately also only conveys small amounts of material. In most cases, therefore, it will need a considerably longer time to complete the filling task. In the end, the air consumption required per filling will be higher. If a processor wishes to optimize his process and save filling time when operating such fill injectors, he is often forced to use additional fill injectors, thus increasing, rather than reducing, his overall air consumption. Sometimes MORE can be LESS! It becomes apparent that a high air consumption does not necessarily mean that the fill injector is of sub-standard performance. It only needs to be designed in such a way that with this larger amount of air consumed a very large amount of material will be transported.

Against this background, the KURTZ B-JET fill injectors were designed. With these units, the higher air consumption per unit of time means that a considerably larger amount of material is being conveyed, resulting in a significant overall reduction of the filling time. This increases the shape moulding machine's output. Also the number of fill injectors required can be reduced, which cuts the investment needed and reduces maintenance costs. However, the shape moulding machine's venting system has to be dimensioned for the increased amount of air dispensed. With insufficiently dimensioned venting cross sections, the increased conveying performance of the injectors cannot be used! There are manufacturers who



The B-JET fill injector is also available as traceless filler. With this injector you can fill around a corner. With its lateral material outlet it is friendly to sensitive surfaces in the mould vis-à-vis the filling point.

promote their fill injectors by pushing the feature of an adjustable filling air quantity. These injectors, however, do not show how much filling air is actually being used, as their scales cannot be reproducibly adjusted. This leads to problems when the moulds are equipped in the workshop. With KURTZ fill injectors the air quantity streaming through the Venturi nozzle stays the same throughout the whole service life. Not even mechanical wear and tear can have an influence as with e.g. fillers with a ring-shaped crack in the piston. Partly, also information is considered on the vacuum capacity a fill injector can achieve with the Venturi. The vacuum generated,

however, does not allow any conclusions on the amount of material transported. It only tells you if the Venturi works. Conclusion: Fill injectors are measured against their capacity, meaning the ratio of the material quantity conveyed to the necessary air quantity. Professionals will always keep an eye on the filling time as well.



KURTZ B-JET Fill Injector

## KURTZ North America Webinars

KURTZ North America (KNA) has recognized a need to assist the customers in their daily moulding processes. In an effort to reach the customers remotely, webinars to view were designed. These webcasts are created on a regular monthly basis and send to customers via email invitation. Each webcast is created to address a specific topic, such as vacuum, media blocks, or hydraulic setting. Topics are designed to last approximately 15 minutes and are intended to cover the basics of the subject. Additionally, power point presentations were recently added as follow along study guides. It is our hope to create the presentations in Spanish in the near future.

These webinars are filmed on site at KNA and produced by a local vendor, Silverwater Productions. It is the KNA's mission to provide client focused service and support, while remaining in the forefront of web conferencing technology. Customers purchase these webinars through their service support programmes. If they do not have any service support programme, a fee is charged to view these programmes. If you are interested in viewing a sample of a KNA webinar, please contact Mrs. Barb Welsh (barb.welsh@kna.net) at KNA. She will assist you to access the programmes you wish to view.



## A-LINE on the road to success!

*New possibilities in the manufacture of moulded parts convince processors*

**By Harald Sommer**

Freedom is one of the most important basic principles of the modern world. This does not only apply to politics or our private lives, but also in our everyday pursuit for an optimum in business life "freedom" is the basis for success. True to this motto KURTZ developed the new machine series A-LINE for the processing of EPS.

**A-LINE shape moulding machines offer: Freedom in regard to mould size.** 4 models with the sizes S, M, L and XL cover the range from 0.2 to 3.0 m<sup>2</sup> moulding area. With this newly developed machine design the steam chambers are no longer a part of the mould closing unit. They can be sized individually to the dimensions of the shape mouldings. This saves mould costs, optimizes the process and enables a production most suitably adapted to the demands.

*Freedom in regard to process technology.* Depending on the quantity of shape mouldings to be manufactured different process technologies can be chosen. The conventional vacuum technology for small and medium-sized quantities, the energy-optimized monoblock technology or the LTH process developed and patented by KURTZ for the most efficient production of medium-sized and large quantities can be chosen from without any compromises. This gives the processor freedom to react to the market requirements.

*Freedom in regard to mould change.* The fast and easily changeable steam chambers are designed according to the chosen process technology and the mould format used. Consequently, all existing mould change systems and all commercially available moulds, even those of competitive brands, can be

used. Defined docking positions allow for the simple connection of media supply and discharge.

In a Product Launch at the end of last year the A-LINE machine concept was demonstrated to the interested expert public.

More than 250 visitors were very impressed by the new freedom this machine design offers to EPS processors.

Before long the advantages of the A-LINE design will also be useable in EPP processing. Just as with the EPS series there will be 4 models for the entire range of moulding areas up to 3 m<sup>2</sup> offering the same freedom.

Of course, also here the KURTZ brand strategy "Best in Class" is realized consistently.



# KURTZ ECO-LTH also for moulded panels

*KURTZ technology saves energy and money*

**By Stephan Gesuato**

High energy costs and raw material price increases continue to give our customers a hard time when it comes to the production of moulded insulation panels. KURTZ addressed this problem with a further development of the especially energy saving ECO-LTH technology well established in the packaging industry so that it can now also be used for this application.

Additionally, this process technology was combined with a fully-automatically operating electromotive adjustment of the panel thickness.

For the production of straight panels, e.g. perimeter panels (without any shiplap edge), a one-sided adjustment is sufficient. To produce panels with shiplap edges both mould halves are adjusted using electric motors. The time needed for the adjustment of one mould half from the thickest to the thinnest

panel is less than 3 minutes. With this KURTZ technology based on a panel with a thickness of 100 mm with 30 kg/m<sup>3</sup> the cycle times range between 60 and 70 seconds, and this includes the automatic demoulding process. Per perimeter panel the steam consumption is approx. 2 kg. The KURTZ A-LINE M for example can be operated with a two-cavity mould and produces 5 to 6 m<sup>3</sup>/h of perimeter panels. The larger models A-LINE L or A-LINE XL can be equipped with moulds with up to four cavities per cycle resulting in a correspondingly increased efficiency.

Of course, KURTZ also offers complete solutions for an economic film wrapping and fully automatic palletizing of the large number of panel stacks immediately subsequent to the stacking equipment.

Your KURTZ contact partners will be pleased to help you in finding and realizing your potential for added value.



K1214 EPS

# New control concept for KURTZ blockmoulds



Intuitive control concept for KURTZ blockmoulds

## By Sebastian Pfers

In 2010 the KURTZ control concept of the blockmould was fundamentally revised to make the operation more user-friendly and to make full use of the blockmoulds potentials. The control is realised on a SIEMENS colour touch

panel with an integrated PLC.

With its high performance the WIN-AC CPU allows for a precise steam pressure regulation and thus reproducible sequences and blocks.

The simplified menu navigation enables an intuitive operation and quick access to numerous sub-functions on the one hand and also a multitude of survey information on the other hand. The parameter adjustments for the moulding process offer new possibilities and are clearly shown with a graphic illustration.

The flexible and freely programmable sequence by the operator enables all

possible steaming variations. The new trending function helps to analyse the steaming cycle and to optimize the expansion result.

The extraordinary visualisation with an animated plant survey facilitates the measuring of the current operation status at one glance and is trend-setting for plants made by KURTZ.



## Walter Kurtz – guest lecturer at the Cooperative State University, DHBW



Together with its subsidiary companies the Kurtz Group is a partner of the Duale Hochschule Baden-Württemberg (Baden-Wuerttemberg Cooperative State University, DHBW) in Mosbach. Several employees of the Kurtz Group are enrolled in this university. In addition to their practical training in an enterprise the students learn theory in the different faculties of the DHBW.

This winter term the member of our advisory board and company partner, Dipl.-Ing. Walter Kurtz contributed to teaching as a lecturer in the faculty engineering for the first time. The lectures dealt with the processing of particle foam materials

in the area of plastics engineering. In a six-hour session the theoretic knowledge of this niche technology was imparted. In an excursion to the KURTZ headquarters in Kreuzwertheim-Wiebelbach the future engineers were able to actively participate in test operations of the particle foam processing machinery. The students were very interested in the processes of pre-expansion and shape moulding. A subsequent tour of the company's foundries and a visit to the historical Kurtz hammer works completed the excursion.

In the next winter term the event will be repeated.



# Machine relocation – Just in Time

## New casting process for MWK Renningen GmbH

### By Christoph Hartmann

MWK Renningen GmbH, a company with a tradition dating back to 1951, casts aluminum parts in many different casting processes.

The first castings of a series are gravity cast in sand moulds. Depending on the product characteristics and quality requirements of the customer, gravity die casting is also used for the production of high-class cast parts.

These parts are for example gearbox housings, suction pipes and further peripheral motor parts for the automobile industry.

Due to several customer inquiries and their requirements for receiving high-quality cast parts while maintaining

profitability, MWK Renningen GmbH decided to expand the foundry by adding the low pressure die casting process.

The first step was to be made with a used machine which could be found within a short period of time. At the same time, orders with a fixed delivery date were accepted due to the great customers' interests.

For the relocation of the machine, MWK Renningen found a qualified partner in KURTZ with decades of experience in project planning and assembly.

The greatest challenges were the disassembly and assembly of the machine given the space restrictions at the ma-

chine's previous location as well as at the plant in Renningen.

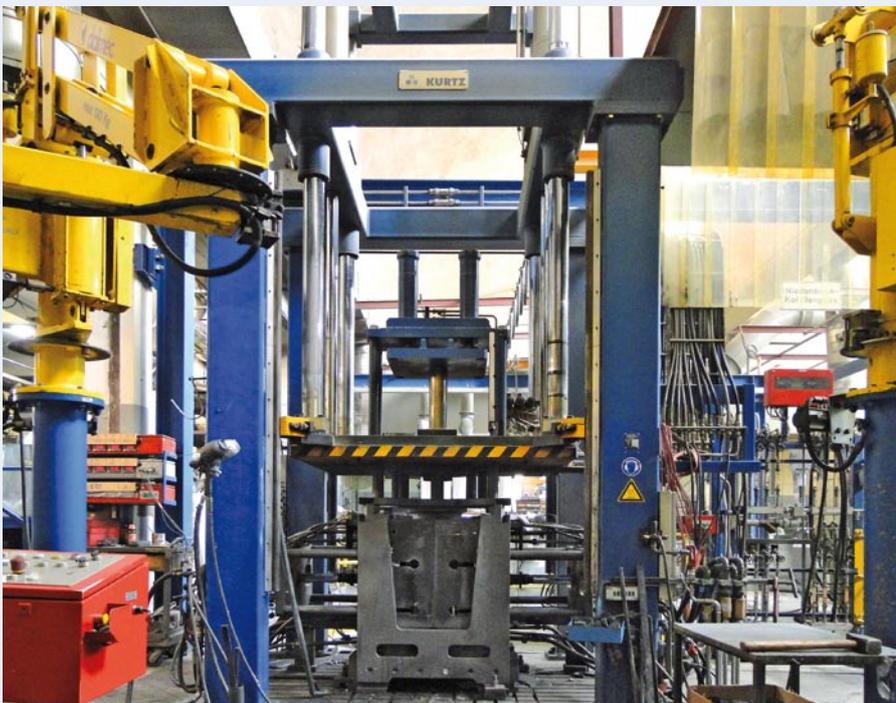
Furthermore the machine had to be integrated into an existing casting hall in Renningen. There was only a free space of 200 mm between the top of the machine and the hall roof according to the architect's plan. Therefore a special crane was required for the assembly.

The great cooperation between MWK Renningen, KURTZ, GIESSEREIPLANUNG BERND LEIPNER and further subcontractors like the architects, concrete workers, steel platform supplier and manufacturer of gas lines as well as a detailed time schedule allowed the machine to be rebuilt within a short time in order to guarantee a fast turnaround.

To provide the customer and all subcontractors with the necessary information including clearly described tasks, KURTZ invested more than 100 hours in layout design and detailed planning. This extensive preliminary work ensured the relocation of the machine within only 16 working days from the start of disassembly until the start of casting.

Consequently, the machine was relocated just-in-time and MWK Renningen could deliver the first cast parts at agreed upon delivery dates. Thus the stage was set for successful series production in low pressure die casting.

We wish MWK Renningen good luck and are always on their side as a reliable and qualified partner.





## ServicePacks

With our target-oriented service offerings we aim to support our customer in all areas of the soldering- and system processes. To accomplish this, we have pooled our considerable technical support in five service packages, which we offer to our customer as flat rate solutions at his facilities.

Our application centres in Europe, the USA and in China are ready to provide this support.



## Useful & Worth Knowing

With the "ERSÄ EXPERT Info" Newsletter, Europe's largest manufacturer of soldering systems provides its customers and other interested readers 6 times a year useful information. In addition, your attention is directed towards developments in the field of electronic manufacturing and board repair that are worth to know. Its "movers" concentrate their attention explicitly on content of substance, which may give the reader a potentially decisive advantage in their everyday professional life. Whether it's for problem solving, process optimization or simply to stay ahead of technology and gain a competitive edge – the "ERSÄ EXPERT Info" provides, at no cost to you and on a regular basis, a channel to transfer know-how and is, for this very reason, very much appreciated by its subscribers.



Kurtz Tractor Tour 2010 during the stop-over in the yard of the Kùhlsheim castle

# „On the road again“

## Kurtz Tractor Tour 2010

Under the slogan „On the road again“ – Kurtz Tractor Tour 2010, more than 40 very cheerful “friends of tractors” from various divisions of the Kurtz Group found themselves with their tractors, in the middle of July, in front of the historical setting of the Bronnbach monastery. They met there for the traditional “preglow”.

Dipl.-Ing. Walter Kurtz, partner of the Kurtz Group and the organizer of the event, was very happy that so many had followed the call. It was indeed a very colourful mix of tractors of a diversity of manufacturers and a large span of years of manufacture. Similar can be said for the drivers and their co-drivers, where there were “newcomers” (3 years of age) and “old timers” (over 70 years of age), and every other age in between.

Before starting the tour, the “friends of tractors” could see for themselves that behind the historical backdrop of the monastery in Bronnbach, there actually is some history to be discovered. The head of the county museum (Grafschaftsmuseum) Wertheim, Dr. Jörg Paczkowski, was kind enough to invite the participants to a special guided tour, and to let them have a peak at the collection of agricultural equipment and implements which are presently being restored in an old barn at the monastery.

After the museum visit, the rally signs were placed on the tractors, a last cup of

coffee was grabbed, and off we went! En route to Kùlsheim, we crossed the Tauber via the stone bridge in Bronnbach, which has, as had been explained previously by Dr. Paczkowski, the largest span of any stone bridge in Europe. Taking “romantic” lanes and alleys through woods and meadows the drivers could really find enjoyment in nature. Especially those drivers that were operating a “convertible”!

Upon arrival in Kùlsheim, the castle courtyard was the ideal place for a hearty snack. As a highlight of this stopover, the old castle tower could be viewed and ascended. From its lofty heights we had an overview of the complete rally course. Unfortunately, by now the initial picture book weather had taken an adverse turn, and as we were finished with our abundant refreshment, and it was supposed to go back on to the rally course, the heavy rains had started.

If before the “convertible” drivers were the lucky ones, it was now the drivers with tractors having cabins. Following the motto “women and children first....”, crews were newly assigned and the tour continued in the direction of Wertheim. The beautiful route, leading via Gamburg to the Hofgarten and finally into Kreuzwertheim, would have probably been more enjoyable if there had been radiant sunshine, but none of the participants allowed the rain to dampen his mood, and all and everyone had a lot of fun.

**120 Mio € Turnover • 850 Employees**

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