

**Wittmann**

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# innovations

*Technics – Markets – Trends*

*Volume 7 – 1/2013*



**Power  
for the future**

**Battenfeld**

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## WITTMANN innovations (Volume 7 - 1/2013)

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# Editorial



**Michael Wittmann**

Dear Reader,

To take advantage of the first *innovations* issue of this year, I would like to do a short review of last year. The most surprising thing in the year 2012 for us (and maybe for the entire plastics machinery industry) was the very active willingness for investment.

Instead of the economic slowdown that was anticipated by all hands for the near future, a sort of consolidation at a very high stage appeared. This may not be true for all markets, especially when considering the regional distinctions that are becoming noticeable in Europe, but for all our markets considered as a whole, we have achieved a remarkable result. The WITTMANN Group's turnover has risen by 10%, a new maximum value. At this point, once again, I want to thank all of our business partners and staff members for an excellent year 2012.

We ourselves have invested a lot during the past year; our construction activity has been considerable. Due to the rising demand, we have started to extend several of our subsidiaries: Kottlingbrunn (Austria), Querétaro (Mexico), and Taichung (Taiwan). In December 2012, WITTMANN Robot Systeme (Germany) moved into the new building in Nuremberg that is replacing the much smaller former facility in Schwaig.

For 2013, we don't expect a reversal of the trend. The traditional users of injection molding techniques – especially in the automotive industry – moving forward will be forced to invest in new technologies and processes. For us, this is a confident and stimulating perspective, pushing us forward in our own investments. Again, this will lead to manufacturing better products that can meet all the requirements of the future.

For the best opportunity to get a general idea of our newest innovations, you should calendar the 24<sup>th</sup> and 25<sup>th</sup> of April, the date of this year's Competence Days, which will be held again at our main plant for injection molding machines in Kottlingbrunn/Lower Austria. There you can take a closer look at all the aspects of our trendsetting "Power" spectrum. By means of several presentations, we would like to bring home to you the latest state-of-the-art processes and technologies from the world of injection molding manufacturing. And last but not least, we will offer you the opportunity to visit our brand new assembly hall for large machines. We would be very pleased to welcome you in Kottlingbrunn.

Sincerely,

Michael Wittmann

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# Tool case half-shells, manufactured on a *MacroPower* 1000

*At the beginning of 2012, WITTMANN BATTENFELD placed its first MacroPower 1000 injection molding machine with a 13800 injection unit at the GT LINE company, a widely known Italian manufacturer of high-grade tool cases based in Crespellano, Bologna. The most important parameters for GT LINE were the injection pressure and the injection volume, but also the dimensions of the screw.*

**Gabriele Hopf**

**G**T LINE, established in Bologna in the year 1970, is a leading manufacturer of technical hard-shell cases, specializing in the most technical cases in the industry from the very beginning.

In only a few years, the company managed to reach one of the leading positions in Europe with a wide range of extremely robust tool cases, bags and multimedia cases. GT LINE offers 4 different product lines as part of its standard range:

- GT LINE – standard technical tool cases that are made from various materials.
- WORK LINE – tool bags, backpacks, and tool jackets especially designed for the needs of trades people and of do-it-yourself workers.
- EXPLORER CASES – virtually indestructible, waterproof cases for use under extreme conditions.
- @HAND – special bags for multimedia equipment, electronic equipment and laptops.

The ISO 9001-certified company also makes more customized cases to meet customers' specific specifications for a variety of uses, including cases for the electronic, IT and cosmetic industries, cases for medical technology, and cases for use under extreme conditions in the transport, logistics and defense industries.

## *The GT LINE company and WITTMANN BATTENFELD*

GT LINE needed an injection molding machine with an especially high injection pressure, a high injection volume and a large screw with a high stability and break resistance for the production of base parts for tool cases. WITTMANN BATTENFELD has been able to meet the customer's requirements with regard to injection pressure and volume, as well as the screw dimensions, by building

a *MacroPower* 1000 with a 13800 injection unit. Further benefits for the customer include the small footprint of the machine and its high speed.

The latter is a result of the combination of a high pressure build-up time and an extremely short locking period, which is realized through the machine's new, innovative locking system, the so-called *QuickLock* system from WITTMANN BATTENFELD.

Because of the size of the molds used by GT LINE in Crespellano, the *MacroPower* 1000/13800 was also equipped with a tie-bar pulling device.

## *The MacroPower machine from WITTMANN BATTENFELD*

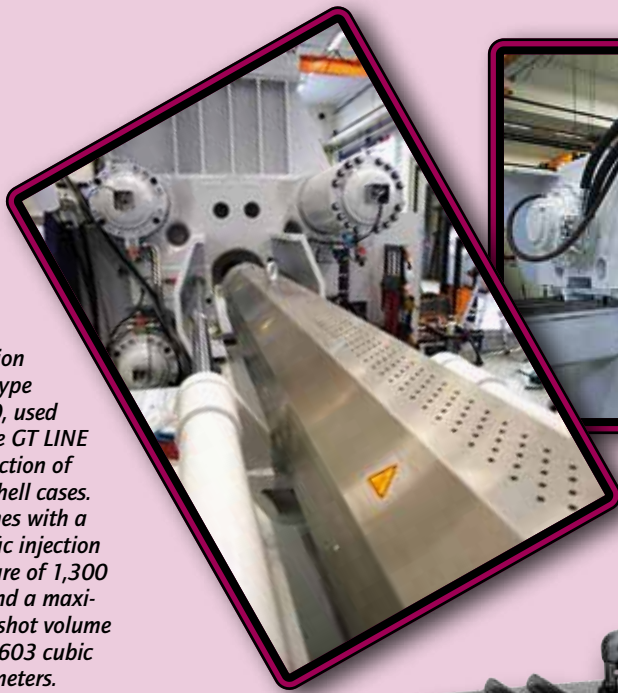
The *MacroPower* injection molding machine offers the shortest footprint, as well as speed, modularity, ultimate precision and absolute cleanliness. The modular design of this new large machine model makes it suitable for a great variety of applications.

The linear guide system of the moving platen ensures a clean mold space and maximum precision in mold protection.

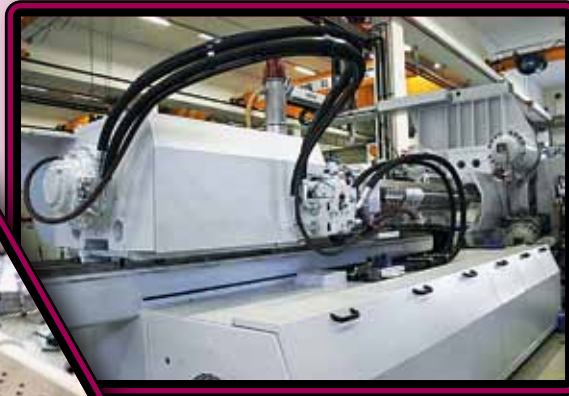
The WITTMANN BATTENFELD *MacroPower* reaches its remarkable high speed with fast movements and minimal locking and high-pressure build-up times. A very special highlight of this new machine generation is the ease with which molds can be inserted sideways from the rear of the machine.

An extended safety gate stroke at the rear of the machine, combined with tie-bars' position at below-average length because of the locking system that has been integrated in the moving platen, allows for the easy insertion of bulky molds, in most cases without the need for a tie-bar pulling device. ♦





*Injection unit type 13800, used for the GT LINE production of half-shell cases. It comes with a specific injection pressure of 1,300 bar and a maximum shot volume of 10,603 cubic centimeters.*



*One example from the GT LINE EXPLORER CASES series: virtually indestructible, waterproof hard-shell case for use under extreme conditions.*



*The MacroPower 1000 from the new large-scale machine series from WITTMANN BATTENFELD with a clamping force of 1,000 tons.*

# Praise for the standard machine!

*The J.D. von Hagen AG company (JDEHA) based in Iserlohn, Germany, was established in 1885. It is a family-owned and owner-managed enterprise, now in its fifth generation. Its current core business comprises of sophisticated component modules for the automobile and motorcycle industries, primarily packaging case systems and motorcycle encasements. For the packaging case systems, J.D. von Hagen uses injection molding machines from WITTMANN BATTENFELD.*

**Gabriele Hopf**

*The development and production of motorcycle cases, top-cases and encasement parts for motorcycles and motor scooters are the core business of J.D. von Hagen AG (JDEHA) in Iserlohn, Germany. In the production of its component portfolio consisting of case shells and accessories, JDEHA relies mostly on WITTMANN BATTENFELD injection molding machines with clamping forces ranging from 60 to 1,600 t.*



**T**oday, 13 of the 18 injection molding machines installed at J.D. von Hagen, with clamping forces ranging from 60 to 1,600 t, have come from WITTMANN BATTENFELD. All machines are standard models, i.e. with standard injection and clamping units.

The machines from the HM series are the backbone of J.D. von Hagen's production. They are available with a hydraulic 3-platen clamping unit in the 35 to 300 t clamping force range, and from 400 to 650 t clamping force with a 2-platen clamping unit. What both versions have in common are their extremely compact clamping units. This is particularly true of the 2-platen version, which keeps its footprint extremely small thanks to an overlapping configuration of the clamping cylinders and the injection unit.

Characteristic features of the machines are their generously dimensioned mold space and their platen support, with highly accurate linear guides. The tie-bars have no guiding function; they are freely retractable, centered and

merely serve as force transmitters. Thanks to the platen support on the linear guides, the guiding precision remains unchanged even with the addition of loads due to heavy molds. The linear guides and the retractable tie-bars are also included in the 3-platen HM machine models.

All in all, these features provide optimal conditions for precision with greatly varying mold sizes, which are a constant factor on von Hagen's production floor.

## *High flexibility demanded*

As the numbers of units per order in motorcycle components are less than those in automobile components by a factor of between 10 and 100, an elaborate system of parts logistics, adequate reserve inventory capacity, flexibility and technical facilities to shorten set-up times are a must. To illustrate, typical order quantities per model and year are about 12,000 units, or 5,000 units per model variant. These

quantities are divided into 12 delivery lots, which results in released quantities between 400 and 1,000 units per month. But consistently, projects requiring special customized models produced in quantities of less than 100 units must be produced simultaneously. Handling this type of program in injection molding production requires user-friendly standard machines with regard to the electronic control system,



as well as easy access to the clamping unit. It also necessitates a user-friendly and flexible quick mold clamping system. Accordingly, the majority of the injection molding machines have been fitted with a magnetic mold clamping system from EAS.

For parts removal, J.D. von Hagen relies on the excellent performance of the standard linear robots from WITTMANN. On the mid-range machines, the UNI-ROB R10S and R20S linear robots have been in operation for many years. The latest machine is equipped with a state of the art WITTMANN W823 servo robot.

**AIRMOULD® for light-weight parts**

Suitcases need handles and stiffening profiles incorporated in the shell. To form these with a rounded cross-section that is gentle on the hand, while simultaneously producing them within economically feasible cycle times, J.D. von Hagen relies on WITTMANN BATTENFELD AIRMOULD® gas injection technology.

Two compressor units combined with nitrogen generators supply several machines. The appropriate mold technology for gas injection molding is produced in-house. The great depth of production and know-how is one of the most impressive characteristics of J.D. von Hagen. According to the company's own figures, it accounts for roughly 74 per cent of the sales figure, a comparatively rare value, but likely is the basis for the automotive and motorcycle subcontractor's flexibility. It ranges from component development, metal part production and plastic injection molding all the way to spray-painting and component assembly.

**A successful partnership**

Where a great variety of models and small production lots demand ultimate flexibility in production, the first choice is always universal, multi-purpose production equipment.

If the highest levels of universality and user-friendliness are already incorporated in the standard equipment, production is even more efficient.

This is also the conclusion drawn by Martin von Hagen, who adds: "Since these are exactly the qualities we find in the BATTENFELD machines, we have become a BATTENFELD customer once again after a break of several years around the takeover of BATTENFELD by WITTMANN. One contributing factor was the excellent support provided by the newly established WITTMANN BATTENFELD organization in Meinerzhagen. They support us in all matters of technology and application technology, which is a vital contribution to the cooperation in view of the great diversity of our products." ♦

*Top-cases for motorcycles and motor scooters constitute the largest proportion of von Hagen's production. The top models are equipped with pneumatic levers to assist with opening, and interior lighting. They are carpeted and have a shell matching the color of the motorcycle.*

*JDEHA Chairman and CEO Martin von Hagen and WITTMANN BATTENFELD's sales partner Frank Höher in front of a "mock-up" encasement system for a standard motorcycle model. Most of the encasement components come from JDEHA's production.*

*The only viable quick mold clamping system is a magnetic system. A visible sign: traces left by the magnetic elements on the molds' contact surfaces.*

**Gabriele Hopf** is the Marketing Manager at WITTMANN BATTENFELD in Kottlingbrunn, Lower Austria.

# Quality assurance through the optimal tempering process

*On its 19 injection molding machines with clamping forces ranging from 270 to 450 t, the Polish company Buzek produces the dishwasher tab wrappings from water-soluble plastics for a well-known detergent manufacturer. Both the material and the process demand a special solution for mold tempering.*

**Wolfgang Glawatsch**

**A**ltogether, 11 of these 19 injection molding machines are HM 270 and HM 400 injection molding machines from WITTMANN BATTENFELD with parts removal handled by WITTMANN W732 robots in each case.

Buzek Plastic manufactures about 1 billion of these parts per year in its injection molding machines, some of which are equipped with 32- or 64-cavity molds. Additionally, processing the special plastic material used already presents quite a challenge in itself. The production requires perfect coordination of tooling and processing machinery. The fully automatic removal of the finished parts by the W732 robots is immediately followed by quality inspection using a camera system.

Finally, defect-free production of these parts also requires precisely controlled mold tempering, including complete monitoring of the tempering parameters.

## **Requirements for the tempering system**

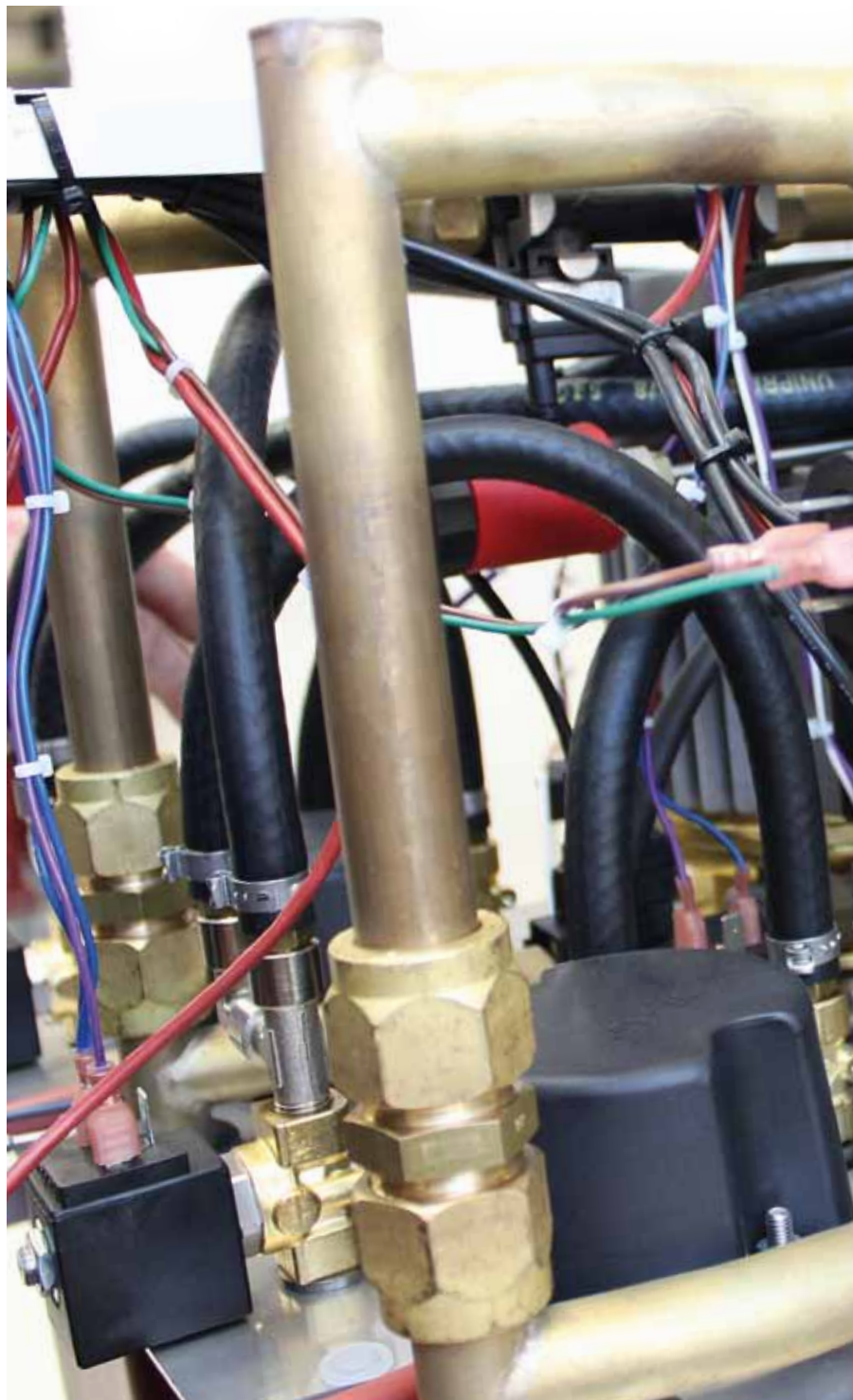
Buzek Plastic's requirements for the necessary tempering equipment to implement this solution were ascertained in the course of detailed discussions. One of several crucial demands was a facility for complete flow control of all tooling channel passages.

Additional requirements included  $\pm 0.2$  °C tempering accuracy, increased cooling capacity and communication of all relevant data to the processing machine. The TEMPRO plus D90 two-circuit temperature controller fulfilled every one

of these requirements. Consequently, there was no further obstacle to implementing this complex solution.

## **WITTMANN temperature controlling**

A self-optimizing micro processor controller integrated in the TEMPRO plus D appliance provides extreme temper-

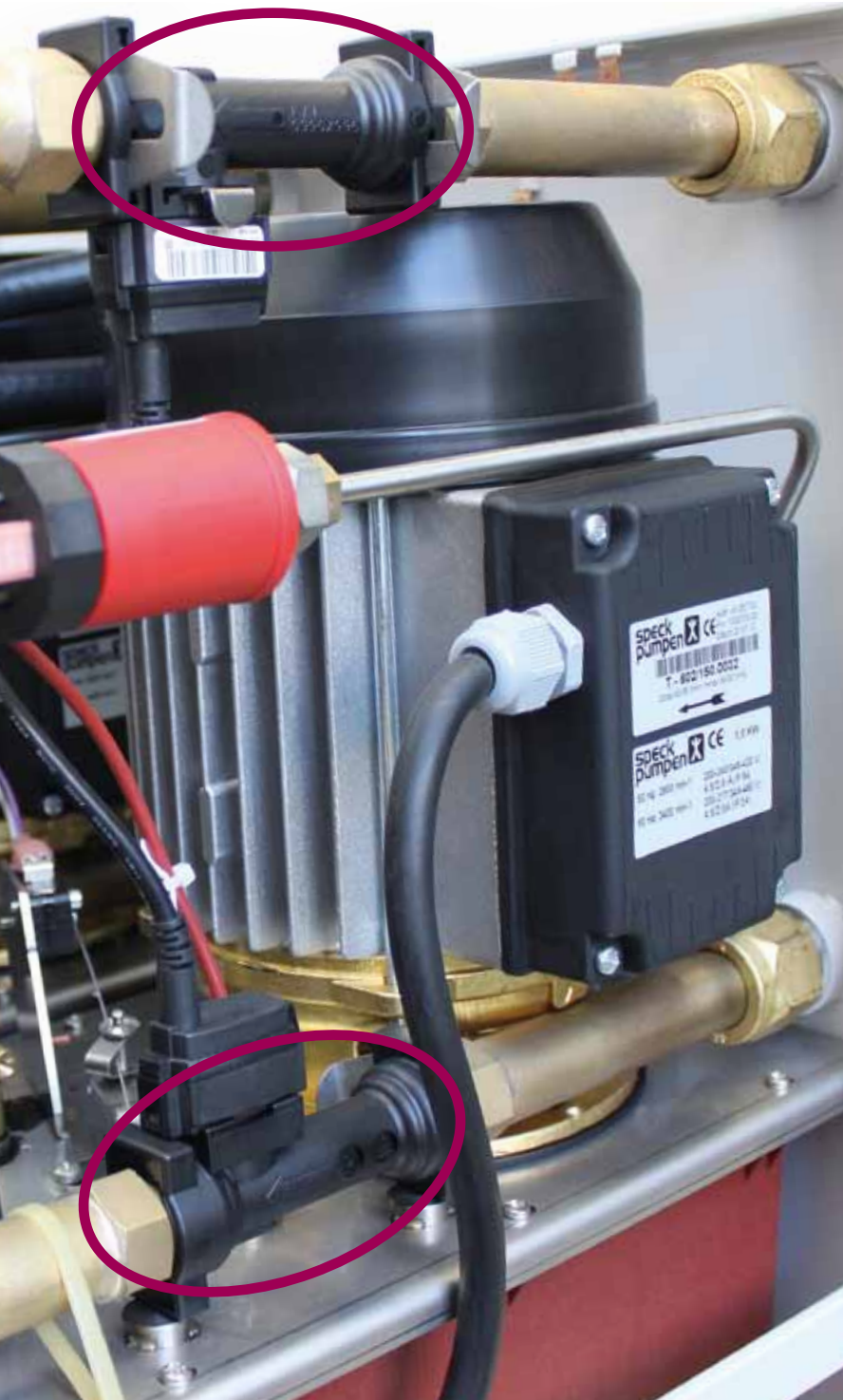


*This picture shows the inside of a WITTMANN TEMPRO plus D two-circuit temperature controller. The circular markings highlight the dual flow measurement devices installed for each temperature control circuit.*



ing accuracy, which ensures that the maximum tolerance margin of  $\pm 0.2\text{ }^{\circ}\text{C}$  is not exceeded. Since this application demands the dissipation of enormous amounts of heat, the flow capacity of the cooling channels must also be increased. This is achieved by using a stronger pump with a displacement capacity of 60 l/min and a 5.8-bar pump pressure.

MANN TEMPRO plus D temperature controller offers clear visualization of all four flow values. Once the tolerance margins have been set, continuous electronic monitoring of the values takes place, which can then be combined with an acoustic error signal if necessary. Either way, constant control of all tooling channels is provided.



Flow control at Buzek was implemented by way of integrated 4-fold flow measurement. To obtain better heat distribution inside the mold, it was necessary to separate the flow per tempering circuit into two flow circuits. The flow measurement device integrated in the temperature controller controls each of the individual flow values. The freely configurable 5.7" color touch screen of the WITT-



*Visualization on the two-circuit temperature controller: the display shows the process temperature and the two flow values measured for each of the temperature control circuits.*

As the final touch, the temperature controller is connected to the processing machine via a serial 20 mA interface, which WITTMANN offers as an optional auxiliary.

#### *On the way to comprehensive process optimization*

Dipl.-Ing. A. Huber expresses his satisfaction with the new tempering solution implemented at Buzek Plastic: "First, we calculated the optimal flow value inside the mold, which is then compared to the deviations caused by deposits forming in the cooling channels in the course of long-term operation, which have now become measurable. This provides us with a simple means to ascertain the optimal timing for servicing the molds."

Furthermore, the adherence to temperature tolerances, and the improvement in heat dissipation by the larger capacity of the pump, both also contribute to improving the process conditions and thus ultimately to higher quality standards for the finished parts.

In summary it can be said that through the use of latest WITTMANN temperature control systems, another decisive step has been taken at the Buzek company towards process optimization and zero-reject production.

Considering that, in addition to injection molding machines from WITTMANN BATTENFELD, WITTMANN robots and the WITTMANN temperature control technology described above are being used as well, this is yet another successful example to demonstrate the WITTMANN Group's corporate motto of "one stop shopping" in practice. ♦

**Wolfgang Glawatsch** is the Regional Sales Manager for Austria of WITTMANN BATTENFELD in Kottlingbrunn, Lower Austria.

# Dosing material on the highest level

*Norsystec GmbH (Nohra-System-Technik) based in Nohra, Thuringia, Germany, is a 100% subsidiary of KKT Holding. Complex parts for the automotive industry are produced on the company's state-of-the-art injection molding machines (with clamping forces ranging from 500 to 10,000 kN). Norsystec very successfully uses the material conveyance and dosing equipment from WITTMANN.*

**Klaus Peter Schmitt**

**A**t Norsystec, the assembly processes following injection molding are carried out either directly on the machine (and by the machine), or the individual components are put together to make up complete assemblies on the company's own assembly floor. Here, state-of-the-art quality assurance methods are practiced.

This is how Norsystec has developed into a well-known automotive supplier capable of providing a complete range of services, from the prototyping of new products, to monitoring of quality in series production.

## *Norsystec and WITTMANN*

In order to meet the ever-increasing demands of the most demanding market, Norsystec found it necessary to seek cooperation with competent partners able to satisfy its own increasingly stringent requirements. Accordingly, when Norsystec was founded in 2008, WITTMANN was chosen as its supplier of material drying and conveyance equipment. Later, a special solution for dosing and the blending of various materials had to be found.

Here again, WITTMANN very quickly crafted the decisive offer, so that it has now also become the primary supplier in matters of dosing technology. In this area too, the high quality, functionality and reliability of the WITTMANN equipment gave immediate conviction.



*This picture taken at the Norsystec production hall shows a GRAVIMAX B14 dosing system from WITTMANN, combined with two FEEDMAX material loaders: a FEEDMAX S3 (mounted on top of the dosing appliance on the left) and a FEEDMAX from the B series.*

Norsystec chose the WITTMANN GRAVIMAX B14 blender from the latest generation of dosing equipment which had only just been rolled out at the end of 2011. The GRAVIMAX blenders proved a complete success from the first time they were fitted to the feed zones of the injection molding machines.

In spite of the vibration caused by the machines, neither the necessary dosing accuracy nor the absolute reliability of the dosing equipment were compromised in any way. "The concept of this equipment is simply perfect", a Norsystec representative comments.



### *The WITTMANN dosing equipment concept*

The technical conception of the new GRAVIMAX, its compact design and the excellent workmanship in the appliance were ideal for Norsystec's needs. One of the particularly impressive features was the easily detachable stainless steel material hopper that was locked into place with quick-release fasteners and equipped with clear-view windows at the corners.

The ingenious positioning of the clear-view windows permits quick visual checking of filling levels inside the hoppers from virtually any angle. The very easy detachability of these windows also makes for quick and easy cleaning of the hoppers. A special benefit of GRAVIMAX is the use of uniform dosing valves in all of its material hoppers.

This means that any and all types of material (whether virgin materials, ready-made compounds or regrinds) can be fed into any of the hoppers without any risk.

The WITTMANN GRAVIMAX material blenders offer extremely easy and comfortable administration of compound formulations and parameter setting on the appliances via their touch screen control system. With the help of this control system and its self-explanatory user interface, even inexperienced operators can make a successful, trouble-free quick start of the system. Thanks to the various material dosing modes, which can be set individually, all aspects of the dosing process can be adapted to suit every material.

Another outstanding feature of GRAVIMAX is its innovative ball mixer – "no angular chamber with sedimentation and non-homogeneous blending" is how Norsystec puts it.

The rounded design of the mixing chamber and the specially developed mixing paddle inside make sure that there are no more "dead corners". The material is mixed into a homogeneous blend and removed from the mixing container without leaving any residue. In this way, it is guaranteed that the entire contents of the mixing chamber are fed into the injection molding machine.

Through the combined use of unique RTLS technology (Real Time Live Scale) and high-precision stainless steel material valves, it becomes possible for every single batch to reach the exact pre-set weight. Every single material batch is weighed in real time, which ensures consistent weighing accuracy.

This in turn contributes to saving material, with the further consequence of reducing costs and increasing earnings. The simple, intuitive operation of the appliance reduces the workload on company staff and improves productivity.

The weighing hopper, which is mounted on two guides, can be detached from the appliance. It is specially designed to prevent any loss of material during the dosing

procedure. The dustproof housing of the mixing chamber supports the effort to keep the production process as clean as possible.

### *Joint success*

The use of top-quality equipment is vital for bringing premium-quality plastic parts to market that can satisfy even the most demanding customers. This is where the dosing technology concept from WITTMANN has proven to be the right choice for Norsystec.

This means that the company, which already has several dosing appliances from WITTMANN in use at present, will continue to benefit from the reliability and competence of WITTMANN in the future. ♦

*The product photos show several examples from the sophisticated automotive portfolio of Norsystec GmbH.*

**Klaus Peter Schmitt**  
is Product Manager for bulk material technology at WITTMANN Robot GmbH in Gross-Umstadt, Germany.

# Fakuma 2012: The fourfold IML with the *EcoPower* injection molding machine

*At the Fakuma trade show 2012 in Friedrichshafen, for the first time ever, an IML application (In-Mold Labeling) was presented in combination with an EcoPower molding machine from WITTMANN BATTENFELD. The fully automated IML system produced plastic cards in a 4-cavity mold. The visitors' attention was particularly drawn to the short cycle time.*

**Bernhard Grabner**



*The fourfold gripper of the W837 robot removes the molded parts from the IML mold. The injection points are clearly visible on the cards (originally small circular openings in the labels).*

**T**he fully electric *EcoPower* is one of the WITTMANN BATTENFELD *PowerSeries* models. It is a highly precise, clean machine with upmost energy efficiency. The braking energy of the drives, normally wasted or recovered by an elaborate process, is totally utilized inside the machine for the power supply of the machine control and the cylinder heating. The fast barrel change facility of the machine and its open design provide the highest flexibility. Thus the handling of robots can be integrated seamlessly in the machine control.

## *IML system with four cavities*

This Fakuma application that was designed for the most challenging requirements, produced plastic bank/loyalty cards applying a double-sided IML process using 4 cavities simultaneously. To process the chosen bio-material (PLA),

an *EcoPower* injection molding machine with a clamping force of 180 tons was used. For each part, the insertion of two labels with different printed artwork was necessary. The insertion of the labels was carried out by a laterally running-in WITTMANN W837 High Speed robot that also removed the finished parts from the mold.

Finally, the plastic cards were carried into an inspection unit, where a camera checked the position of the labels.

## *Perfect interaction*

The cycle time that was needed for the entire process was very short. Overall, it came to no more than four seconds. With this application and its interlocking components, the WITTMANN Group again proved their ability to successfully install and operate high-class production facilities, even in the most specialized fields. ♦

**Bernhard Grabner** is Head of the Graphic Design Department and the Editorial Office at WITTMANN Kunststoffgeräte GmbH in Vienna, Austria.

# A large solution for large parts

**KHW (Kunststoff- und Holzverarbeitungswerk GmbH) in Geschwenda, Germany, is a worldwide leader in the production of snow flyers. For the granulation of plastic parts, KHW has decided to purchase a MC 70-80 heavy-duty granulator.**

**Christina Ebert – Denis Metral**



**T**he success story of KHW started in 1948, where it began as a woodcrafts factory for fence materials, furniture, and ladders.

In the early seventies, plastic production was launched. This production was continuously expanded, as well as wood production for sport equipment (gymnastic and leisure articles).

In 1972, the company was forced into nationalization, and changed into a public-owned factory (a so-called VEB). 18 years later, the company was reprivatized. After 1990, KHW became market leader with their range of sleds (snow flyers). Today, more than 30 models of sleds are produced.



*The KHW central system for the creation of regrind with the WITTMANN MC 70-80 granulator, conveyor belt, and filter station.*

## The requirement

In 2012, a fire destroyed the grinding floor. KHW needed to replace the grinding system as soon as possible, because due to the large part dimensions, the use of regrind is an essential factor for the company's profits. KHW urgently needed a large central granulator with a conveyor belt, metal detection, and dedusting system. The challenge was to immediately construct an installation that would cope with the granulation of snow flyers, garden fences, flower pots, and outdoor toys with dimensions of more than 1 meter. The granulator needed to be able to manage the complete range of KHW parts. The risk of metallic contaminants (loosen tools, metallic handles) was to be eliminated, so a global metal detection before and after the granulation was needed to ensure the best regrind quality as well as a long durability of the cutting tools.

The grinding floor was located next to a private house, so the noise level was a crucial factor to maintaining a good relationship with the neighbors. As a result, an independent company was hired to take noise measurements validating the efficiency of the granulator's sound protection.

## The solution

Adrian Huck, the KHW Technical Manager, very quickly became sure of the WITTMANN MC 70-80 granulator with 55 kW, cutting chamber dimensions of 690 × 800 mm, 570 mm rotor diameter, and a throughput of 850 kg/hr. Easy

cleaning due to the top access to the cutting chamber also was a key selling point for Huck, as it optimized the cleaning time during changes of colors or materials. The electro-assisted opening of the hopper and the screen cradle also allowed for good access and a quick cleaning. The complete installation and start-up was made by WITTMANN to be cost-efficient, and the entire system was given over as a turnkey solution very quickly.

KHW chose a double big bag station to reduce downtime when producing a large amount of regrind off the reel. In regard to the many colors and materials that are processed (ABS, PE, PP, POM, PA, PC/ABS, PBT), General Manager Ralf Groteloh wanted to get high-quality regrind containing the absolute minimum percentage of dust. The WITTMANN experts based in Gross-Umstadt recommended a large filter station to optimize the process of dust removal and to reduce the maintenance time.

The system was designed as a double-stage dedusting solution with an enlarged filtration surface. The filter elements can be accessed very easily by the operators, and there is no need for a technician when undertaking the standard cleaning/maintenance procedures.

After an operation time of six months, Ralf Groteloh was absolutely satisfied with the results provided by the new solution: "The exhausted air is clean, and the regrind quality – compared to the old system – is much better than we had ever expected." ♦

**Christina Ebert** is working for WITTMANN Robot Systeme GmbH in Gross-Umstadt, Germany, for the Temperature and Granulators Sales Department. **Denis Metral** is International Product Manager for granulators at WITTMANN BATTENFELD France SAS in Seyssinet-Pariset.

# Denmark: Wiba Tech ApS announcing further growth

*Despite certain global recession tendencies, Wiba Tech ApS, being the Danish WITTMANN agency, has had a very good year in 2012. And with a nice order book for 2013, Wiba Tech is looking ahead very optimistically.*

**W**iba Tech ApS was taken over by Jesper Skaarup as the new General Manager in May 2011 and it has grown ever since then. The company has been the Danish agent of the WITTMANN Group for 30 years and is a complete sales and service company run by a team of nine experienced employees. Wiba Tech is not only active in Denmark itself,

*Jesper Skaarup (first from the left), General Manager of Wiba Tech ApS in Fredensborg, Denmark, with the bigger part of his team.*

*Not the actual homeland of the Danish WITTMANN agency, but absolutely part of the Danish market: Klaksvík on the Faroe Islands. Picture right: Arrival of the HM 65 injection molding machine at the LOOKNORTH plant in Klaksvík.*

but also beyond its continental frontiers. For instance, shortly before the turn of the year, a new HM 65 injection molding machine was delivered to the LOOKNORTH company, an injection molder based on one

of the Faroe Islands far north in the Atlantic Ocean. This customer is using its plastics processing machinery mainly for the manufacturing of fishing equipment.

“We’ve learned that quite a few of our customers are still growing, especially manufacturers with a global focus,” Jesper Skaarup states.

### *A strong year with good prospects*

During 2012, no less than 75 injection molding machines have been installed in Denmark with 4 different



customers, and “on-site” training for more than 75 people was conducted. The machines that have been sold were from the *ServoPower* series, ranging from 65 to 150 tons, including some *EcoPower* models.

“For a small organization like Wiba Tech, the installation of so many machines was a real logistical challenge. However, with careful planning and excellent teamwork with our colleagues from Kottlingbrunn, we ended up with happy customers and could provide a good basis for future operations”, Jesper Skaarup adds.

Not only was business with WITTMANN BATTENFELD injection molding machines growing in the last year, but the WITTMANN peripheral equipment was as well, especially as far as temperature controllers and robots were concerned.

The most challenging project has been the development of a new W838 “tandem robot” solution, consisting of two robots. However, the first test run of the system was an absolute success and four more systems of the same kind were ordered. This special solution has yet to tap its full potential. ♦

# Guatemala, Honduras, El Salvador: MAPRIMAQ S. A., the WITTMANN Group's agency in Central America

*Launched in 1951, MAPRIMAQ is headquartered in a modern business and conference center in Guatemala City. The company name of the family business is referring to the Spanish "materias primas y maquinaria" – meaning "raw materials and machinery".*

From their Guatemala City headquarters, MAPRIMAQ is servicing the local market and the market of the neighboring Honduras. To be also present in the market in El Salvador, the company is using a sub-agency. Nine people are working at the Guatemala headquarters and four more are representing MAPRIMAQ in El Salvador.

The region in the North of Central America that MAPRIMAQ is responsible for is not vast, and the economic circumstances correspond to this. The three countries in question are, combined, only about 241,500 km<sup>2</sup>, with a total population of approximately 30 million. Due to the relatively lowly developed infrastructure and the high energy costs, it is not easy for Central American manufacturers to succeed in the international plastics market.

## *The market situation*

Most of the technical plastic products are imported from China, Taiwan, the U.S., and Mexico. Thus, the regional plastics industry is focusing on the production of consumer goods such as packaging, containers, closures, and domestic plastic products.

Since 2011, MAPRIMAQ has acted as the regional agency of the WITTMANN Group. The company stands out due to its long lasting regional experience. For the local customers, a wide range of machinery is available, including injection molding and blow molding machines as well as extrusion lines. In addition, MAPRIMAQ is selling special raw materials that are needed when manufacturing films, closures, and shoe soles.

Quite recently, MAPRIMAQ got an order for a complete WITTMANN central material handling system. This



*Untiringly on duty for the plastics industry in Guatemala, Honduras, and El Salvador: the team of MAPRIMAQ S. A. in Guatemala City, the local agency of the WITTMANN Group.*

installation will fully automatically supply two extrusion lines with virgin and regrind material. The cups and plates created from this production will be sold in Central America and in the Caribbean.

Another ongoing project is the mandate to modernize an existing IML system (In-Mold Labeling) that is equipped with a WITTMANN robot. This is the first IML system of the biggest Central American brewery, and it is used for the production of advertising material.

The promotion of WITTMANN BATTENFELD injection molding machines and of WITTMANN peripheral equipment have already attracted the interest of the two biggest plastics groups in this region. They have announced that they will visit the Competence Days that are held in the Austrian WITTMANN BATTENFELD plant in April.

For both of them, the IML technology is of particular importance, and their visit in Austria will contribute to their decision-making in regard to some of their upcoming projects.

## *Future prospects*

In the near future, the region of Northern Central America will intensify the use of all the possibilities that several trade agreements, the North American Free Trade Agreement (NAFTA), the respective agreement with the Dominican Republic (CAFTA), and with the European Union, are providing. No doubt, here lies great potential.

At present, profitable discussions are being held in view of the regional production of complete electric cable systems for the North American automotive industry. So far, these systems have only been assembled from single components coming from North America.

MAPRIMAQ S. A. is regularly taking part in the most important industrial fairs held in North America and Central America. The company was present at the NPE show in the U.S. and will be at the PLASTIMAGEN show in Mexico, as well as the most important European fairs, particularly the K show. ♦

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