

glasstec 2008

## „We simply can't miss glasstec“

As glasstec celebrates its 20th year, it is obvious that it has lived up to its name as the leading trade fair for the international glass industry. Leading international companies in the glass industry, the manufacturers of glass machines and their suppliers show off their latest developments. For futronic, attending glasstec 2008 is mandatory. The electronic control systems specialist will be presenting its innovative IS machine controller, FMT24S among other things.



„glasstec is the world's largest and therefore most important trade fair,“ explains Marc Meersschaut, responsible for international sales and marketing at futronic. „We meet our customers from all over the world here.“ Anyone who has anything to do with the glass industry comes to Düsseldorf every two years. „The industry is small, almost like a family. We nurture not only our business relationships but also the resulting friendships,“ adds Michael Preuß who, together with Wolfgang Lachmann, is managing director of futronic. „This trade fair is a mood barometer and information exchange for the investment plans of the glass manufacturers. We simply can't miss glasstec.“

### Record numbers of exhibitors and visitors

More than 1200 exhibitors from around 50 countries come to Düsseldorf. Approximately 300 new exhibitors have registered for glasstec 2008. The spectrum extends from global players to niche providers, from low-priced one-size-fits-all offers to customized solutions.

The heavy demand did not come out of nowhere according to Marianne Ingenhoven, project manager at glasstec. „The demand for glass is greater than it's ever been, and of course, companies want to make sure they are present at the world's leading industry event“ (see interview on page 3).

**glasstec**  
Düsseldorf, GERMANY  
October 21-25, 2008  
Hall 13, Booth C41



Wolfgang Lachmann  
Michael Preuß

Dear readers,

The second issue of our futronic journal is ready and just in time for glasstec 2008. We are right in the thick of things and are presenting our product innovations at Booth C 41 in Hall 13. This includes the modular controller FMT24S that we describe in great detail in this issue. Read our title story for more of what awaits you in Düsseldorf. Come pay us a visit. We look forward to it!

The glass industry continues to grow, and our company is also prospering: We have gained new customers in the field of bulk handling systems, a sector which is becoming increasingly important for us. We have also expanded our global network of representatives. Our latest milestone was the move to our new company buildings in Tettmang – which provide us with additional space urgently needed for growth. We would like to extend our heartfelt thanks for the numerous good wishes we have received – and to everyone who was our guest at the opening.

With this in mind, we hope you learn a lot while reading this issue!

Sincerely **Michael Preuß**  
**Wolfgang Lachmann**

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## »Report

Also the interest of professional visitors looking for information on which to base future investment decisions is far from waning. Approximately 54,000 visitors from all over the world came to glasstec 2006 on the Rhine. This year, the directors of the trade fair are expecting a similar storm. The numbers speak for themselves: Glass production in 2007 increased by 3.7 percent over the previous year. Current estimates expect growth in 2008 to be somewhat less. Nevertheless, the industry mood is very positive, reports Ingenhoven.

### A focus on glass and energy

In addition, the potential for innovation in the area of glass has not been exhausted by a long shot. The main theme of this year's glasstec is „Glass and Energy.“ At the forefront are new production technologies that use environmentally-friendly energy sources and therefore contribute to reducing CO2 emissions. Consequently, photovoltaics and solar-thermal energy are considered the most important topic areas. In the latter case, two of the five conference days are dedicated to an industry symposium including a special exhibition „Glass Technology live“. An additional highlight is the architecture congress with the motto „Transparency! Glass and Facade Technology.“ And of course, important new developments in the area of laser technology, functional coatings, nanotechnology, technical glass and specialized glass are expected.



Mandatory date glasstec: As it did two years ago, futronic will be presenting its product innovations at a community booth (Hall 13/C41).

### Upwards trend in container glass continues

The area of hollow and container glass has also increased significantly from the trade fair of two years ago. „Due to increasing energy costs, the production of glass packaging compared to PET has become economically enticing again,“ explains project manager Ingenhoven. This continues the upward trend of the past few years (see also futronic Journal 1/2008).

The largest exhibition area is traditionally reserved for glass machine and system manufac-

turers. Manufacturers and suppliers present themselves and their products in halls 12 to 17. At a community booth in Hall 13 (Booth C41), futronic will present a new range of products and product developments. futronic is one of the top three global providers of complex automation solutions for the glass producing industry.

The main focus will be on the innovative IS machine controller FMT24S (see page 4) as well as on the prototype of a new drive system for conveyer mechanisms used in container glass machines. For the first time, the controller specialists from Tettngang will perform live demonstrations of the servo-technology integrated in the controller using a servo take-out mechanism.



The sector is booming: The Düsseldorf convention center has booked more exhibitors for this year's glasstec than ever before and is counting on a storm of visitors.

### »Imprint

The futronic Journal is the customer magazine for futronic GmbH; it appears twice annually. Circulation: 350, Issue 2/2008

**Publisher:** futronic GmbH, Michael Preuß (V.i.s.d.P.), Tolnauer Straße 3-4, D-88069 Tettngang, Tel.: +49/7542/5307-0, Fax +49/7542/5307-70, Internet: www.futronic.de, E-mail: info@futronic.de

**Editor:** René Kius, Pzwei. Pressearbeit. www.pzwei.eu

**Design:** Frieder Bertele, ZENART::PRAXIS www.z-e-n-a-r-t.com

**Authors:** René Kius, Wolfgang Lachmann, Katrin Neef

**Image credits:** Lisa Berger, fotolia, futronic, René Kius, Messe Düsseldorf, Ritzenhoff

**Printing:** Verlags Druckerei Ehrat Adolf-Kolping-Str. 1, D-88212 Ravensburg

If you have comments or feedback, please write us at info@futronic.de.

An interview with Marianne Ingenhoven

## „Challenges for the supplier are increasing“

glasstec in Düsseldorf is the largest and only international trade fair that displays the entire value-added process for glass in all its facets. In an interview, the project manager, Marianne Ingenhoven, explains the main focus of glasstec 2008 and the innovations that the professionals visiting are expecting.

**futronic Journal:** glasstec 2008 is offering more exhibitors and exhibition space than in all the years previous. What do you attribute this strong demand to?

**Marianne Ingenhoven:** The interest in glasstec 2008 is extremely high; compared to previous years, we have increased at all levels. But this doesn't depend only on the quantity of visitors but also on their quality, that is, on their professional knowledge and their ability and authority to make decisions. And this is very high at glasstec; we know this from experience and we hear it from the exhibitors. In addition, we have apparently tapped into a strong current with this year's featured theme. „Glass and Energy“ comes across as an announcement – the demand for new, energy-efficient glass production and production technologies is always immensely high. This means that glasstec 2008 will be more exciting than ever.

**futronic Journal:** How are the glass manufacturers reacting to this boom? What kind of innovations do the visitors expect?

**Ingenhoven:** Leading glass manufacturers and refiners from all over the world will use glasstec 2008 to present their solutions for the future to the professional world. The bandwidth of their products has again grown considerably: triple-layer insulated glass that fulfills the highest thermal protection requirements, the latest generation of functional coatings that enable the hardening and bending of coated glass among other things. And last but not least, new switchable and light discharging glass will pique the interest of the professionals visiting.

Also in the area of refined glass for use in interiors, the continued development of screen and digital printing as well as the lamination of the most varied materials such as wood, metal and others offer important

new design options. Antibacterial glass is also a new development which enables innovative uses in areas sensitive to hygiene.

**futronic Journal:** How can the suppliers benefit from this?

**Ingenhoven:** The more demanding the glass, the machines and the refining technologies become, the greater the challenges to the suppliers. Integrated photovoltaics, for instance, or switchable glass and ever increasingly precise machines will of course have a positive effect on demand from the suppliers of control and drive units.

**futronic Journal:** Photovoltaics and solar-thermal energy are the main focus of this year's trade fair and its accompanying events. Has the one-time niche market become a mass-market?

**Ingenhoven:** Perhaps we haven't gotten that far, but in these times of exploding energy costs and climate change, the trend is clear. The number of exhibitors who are working with photovoltaics and solar-thermal energy has tripled compared to glasstec 2006.

Not only many energy-efficient products, but also production methods and processes will be presented at this year's glasstec for the first time. The solar business is also a very important market for glass machine manufacturers, since both solar-thermal energy and photovol-



glasstec 2008: Marianne Ingenhoven, project manager for the trade fair in Düsseldorf

taics use sheet glass plates to provide long-term protection to the functional layers of components. In addition, the processes for manufacturing thin layer modules and insulated glass are similar. This allows glass machine technology to take advantage of the many years of experience gained from years of manufacturing insulated glass.

**futronic Journal:** Glass packaging is again playing a more important role, especially for the food industry. Is plastic out again?

**Ingenhoven:** During the 90's of the past century, the demand for glass packaging seemed to be declining: Experts saw plastic as the packaging of the future, especially PET. The trend is now reversed, and the demand in Europe, in the Middle East and in Asia has been continuously increasing. And market leaders such as Coca-Cola and Pepsi, for instance, are now relying more heavily on bottles made of glass.

Glass wins points especially because of its nearly unlimited capacity to be recycled and its outstanding ability to protect the product. It seems the market is appreciating this more and more. And all of this will be reflected back during this year's glasstec: The container glass sector has become increasingly more significant for exhibitors and exhibition space.

I am sure that we will have a greater number of professionals visiting from this sector, who will be there to find out how best to plan their investments for renovating old and building new systems.



FMT24S

## Controllers based on using the principle of modularity

Industrial production is characterized by complex and extensive automatic processes that need to be controlled electronically. This function is usually performed by highly specialized machine controllers adapted to the individual requirements of the various sectors. Because of this, increasingly more concepts from the field of information technology are being implemented in machines for communication between the individual control components used in the glass manufacturing industry.

Isolated solutions and proprietary systems are yesterday's news – today, technologies are in demand, the ones that hit the ground running and that can be flexibly adapted to any approaching technical challenges. Precision and reliability in this process are top priority in order to ensure product quality. futronic took this trend into account during the development of its FMT24S product family.

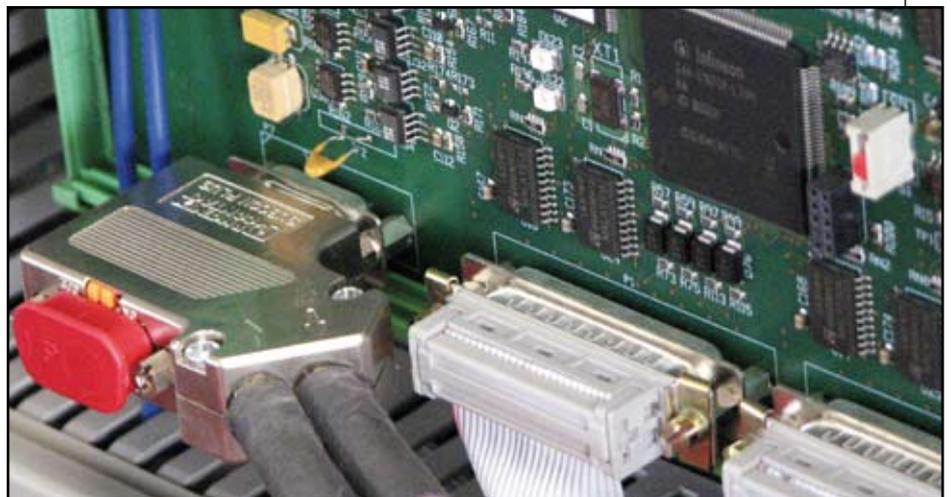
FMT24S stands for "Flexible Modular Timing System", a decentralized machine controller for IS machines with up to 24 sections. It is structured modularly, providing the machine and plant manufacturer with a kind of construction kit. This allows the project engineer to customize the controller with minimal structural effort based on the requirements profile of his customers. If the framework conditions and requirements change during operation, the individual modules can be replaced and extended. FMT24S-specific components are available for this. In addition, other commercially-available digital and analog I/O assemblies, interface converters and other extensions can also be integrated. "The scalability of the system ensures the highest level of flexibility and investment security," explains futronic managing director, Wolfgang Lachmann. This is made possible by the consistent use of bus technology.

### Bus system on three levels

The FMT24S system provides three different bus systems that play against their respective strengths at the various communication levels. The command and visualization level of the controller is represented by commercially-available PC hardware. In order to ensure compatibility with the IT structure of a company, futronic depends on Ethernet technology and the TCP/IP protocol. The ad-

vantages are clear. For one thing, this allows the controller to be integrated over the Internet into the cross-location data structure of a corporation which also lets systems be remotely maintained in a cost-efficient manner. For another, the services provided by IT departments can also be used for administration or data backup. That also saves preventive and corrective maintenance costs.

A CANopen bus system is used at the operative level of the FMT24S system. Modern equipped IS machines, for instance, with ten sections have up to 400 sensor-lamp combinations on both section panels. These can now be connected over section interfaces to a line bus that is pulled through the section panel. CANopen works deterministically and ensures that every key command is implemented within of a tenth of a second. Time-consuming wiring and multi-pole cable and socket systems are unnecessary.



Flexible: Since bus connections such as the CAN bus (image) can be easily adapted to customer-specific requirements, they play a key role in the development of modular, scaleable systems.



Bus stop: Redundant strategies in bus communication guarantee a reliable Category 3 stop as specified in EN ISO 954-1; this also applies to the station maintenance stop.

The third bus system for FMT24S module communication is a futronic in-house development; it is known as the Binary High Speed Bus (BHSB). The bus system with a star topology is able to process all of the currently impending switching commands to the machine within 500  $\mu$ -seconds. This enables the system to run at 30 machine cycles per minute at a resolution of 3600 individual



ped. "The FMT24S controllers manufactured by futronic can very easily be connected to the adjoining systems to create one integrated system," explains Alfred Kruschke, director of the plant in Kleintettau. This comes very close to the plant's "all in one" philosophy. Kruschke emphasizes that one key function is the option of monitoring multiple systems on one screen, even if the systems are from different manufacturers. Since the potential of the system has not yet been exhausted by far, he feels that his plant is well prepared for future requirements.

The engineers at the GPS Glasproduktions-Service GmbH in Essen are also convinced by the performance of the FMT24S. They equip IS machines for the plant manufacturer with futronic controls as standard components. "The controls of the FMT24S family can be customized precisely to our requirements and integrated optimally in our machines," says managing director, Norbert Emrath. He also appreciates the smooth interaction with the company's in-house servo and drive technology.



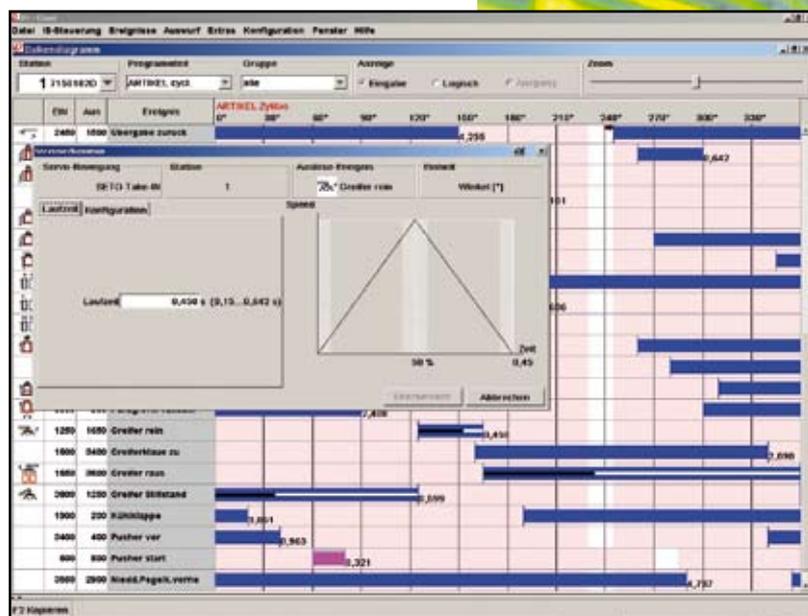
operations each. "Commercially-available, conventional field bus systems cannot match that," Lachmann explains. The FMT24S controller is therefore also up to the challenge of the high requirements that, for instance, are placed on the output to modern actors such as servo-proportional valves or electrical servo-drives.

#### Adaptable software controller

About three quarters of the effort required for developing the FMT24S family of controllers was invested in the software. At the forefront was the human-machine interface and the modularity of the system. This ensures that, based on a client-server architecture, multiple product lines can be networked and that systems can be operated remotely, if necessary. When configuring the controller as part of commissioning a system, it "becomes familiar with" the structure of each application at the customer location and learns customer-specific terminology and manufacturing processes. The data is saved in a SQL-compatible database that can be seamlessly integrated into the existing IT infrastructure.

#### Potential not yet exhausted

FMT24S has already proven itself in practice. Heinz Glas GmbH, with its main production facilities in Kleintettau, Thuringia, manufactures packaging for cosmetics. In 2006, it began the process of replacing its older systems with new FMT24S modules. In the mean time, several domestic and international Heinz Glas plants have been re-equip-



A grip on everything: Integrating different actors in a common bar diagram provides the machine operator a better overview of the production process.



**futronic will be presenting the FMT24S controller at glasstec in Düsseldorf in Hall 14; Booth C41.**

Second foothold

# futronic gains new customers in bulk handling systems

By cooperating with System-Technik GmbH, futronic has gained still another important customer in the area of bulk handling systems. This partnership enables the electronic control systems specialist to continue expanding its market share in this sector.

futronic will be planning and manufacturing control panels for System-Technik. In addition, the company in Tettngang will develop the software for the controller. These futronic control systems are intended for use in systems for end customers in various sectors. System-Technik GmbH with headquarters in Landsberg am Lech, Germany, manufactures pneumatic conveyer systems, for instance, for the pharmaceutical and food industry. These Bavarians are also specialists in systems for weighing and dosing bulk solids.

During the past five years, futronic has successfully completed a number of projects in

the area of bulk handling systems. One milestone was an order at the beginning of 2008 from Zeppelin Silos & Systems for the controller of a fully automatic weighing system for small components used in the manufacture of tires (see futronic Journal 1/2008).

"We already have quite a bit of experience in the area of bulk handling systems and have been continuously expanded our knowledge," says Alexander Körner, department manager for automation technology at futronic. But futronic has only touched the edges of this field, acknowledges Körner. Nevertheless, it is certain that "bulk handling systems will become a second foothold in the medium term."



Responsible for knowledge transfer: Alexander Körner, department manager of automation technology at futronic.



»Newsflash

## futronic delivers controller for rotary machines

On behalf of RC Ritzenhoff Cristal AG with headquarters in Marsberg near Paderborn, futronic will develop an electric control for a rotary machine. The project teams in both companies have already created a functional specification. At the beginning of October, RC Ritzenhoff gave the green light for deployment. This manufacturer of goblets and beakers as well as glass objects and components for industry is considered a pioneer. The company places very high demands on

its suppliers, especially in prototype development. "futronic expertise is currently primarily found in IS machine technology," explains Alexander Körner. "This project is an important step for us in the market segment of rotary machines and opens new perspectives."



## New representative in Teheran

futronic is strengthening its commitment in the Iranian market in order to offer even better customer service. Mehran Vijeh from Teheran has accepted this responsibility. After his studies in the Iranian capital, the chemical engineer started collecting experience at the glass factory, Shisheh Va Gas. After this, he managed production at Gamin Glass for eight years and was responsible for numerous large projects. For more than eight years, he has been a technical advisor for numerous companies in the Iranian glass industry. As a representative, Vijeh also offers his experience and expertise to European companies. "Mehran Vijeh knows the field and has excellent contacts," says Marc Meersschant who is responsible at futronic for international product sales. "I look forward to a successful working relationship."



## Representative for the Maghreb under contract

In order to serve the market in Algeria, Morocco and Tunisia even better in the future, futronic has been working since the end of September with a new representative: Dr. Abderrahmane Henni was professor at the University of Boumerdes near Algiers, where his lectures included glass technology. Most of the engineers and managers in the glassworks of Algeria studied under him. He has contact with almost every glasswork in Algeria, Morocco, Libya and Tunisia. He is also an expert in the domestic glass industry: Dr. Abderrahmane Henni was the project manager for the first float glass system in Africa and in Algeria. This professional views the market in Algeria and the Maghreb countries as being in a phase of expansion: Low energy costs and the large amounts of natural gas available in Algeria offer economically attractive options.

New company location

# More space at the edge of the forest

Last May, futronic made itself at home in the Bürgermoos Industrial Area in Tettang.

On September 26, the company celebrated the opening of the new location by inviting approximately 100 guests from the areas of politics and commerce to a gala. The two company buildings provide ample space.

Space had become an important issue in the past few years. "Our old company headquarters was nearly bursting at the seams," scribes futronic managing director, Michael Preuß. In view of the full order books and the increasing number of employees, it was high time for the move. Preuß reports: "Now we have the space we urgently need for the development of our company." The new location, idyllically situated at the edge of the forest southwest of Tettang, has two functional buildings with 2,500 meters of floorspace. That is about double the space available at the old location.

Both floors of the main building house administrative services including upper management, sales and marketing, financial accounting and human resources. Development is located in the rear part of the building. On the ground floor of the adjoining hall is the area for the development environments for the engineers. "This is where our research department can work to their heart's content," explains Wolfgang Lachmann, managing director for technology. For instance, they can experiment with testing beds or install prototypes for customer demos. And now there is also enough space for the training center – customers can now get practical experience on how to use futronic control technology.



More room for growth: The new company location in Tettang-Bürgermoos doubles the surface area of the old building.

## 1.8 million euros into the future

Production has moved into a different hall in a building opposite headquarters. This is where futronic technicians assemble controls and control panels, perform test runs and quality control. Lachmann is especially proud of the new cable storage area. "This promises us clear time savings during the production process," he explains. As part of remodeling, the offices for

production management, customer service and documentation have been integrated. futronic has invested around 1.8 million euros into the purchase, remodeling and renovation of their new location. The production hall, for instance, was thoroughly renovated, the steel structure was updated, and a new floor was laid. A significant part of the investment was put into the IT infrastructure as well as into building and safety equipment and features.

## Room for growth

On September 26, futronic celebrated the opening of the new company location with a gala event. Approximately 100 guests from politics and commerce, customers and business partners, suppliers and representatives enjoyed the evening. Wolfgang Lachmann opened the evening with a short look back on the history of the company. Martin Jetter, chairman of the board at Jetter AG emphasized the positive economic development of futronic. Jetter AG with headquarters in Ludwigsburg has been the owner of the futronic GmbH since 2006. "The partnership between the two companies has met and exceed all expectations," says Jetter. The new location provides new perspectives and opportunities for a prosperous future. Jetter: "I have absolutely no doubt that we will take advantage of these opportunities."



Among the guests: Benedikt Otte, managing director of the Wirtschaftsförderung Bodenseekreis GmbH, Martin Jetter, chairman of the board at Jetter AG, and Tettang's mayor, Bruno Walter in deep in conversation (from the left).



»Employees in the spotlight

Kurt Schwegler

## Man with an overview

Kurt Schwegler is the new man at futronic. Since the first of October, he has been holding the reins as a project manager in the automation technology department. Schwegler comes from the Chamber of Trade in Ulm, where he had been involved in the vocational training of electronics technicians since 1990. Starting in 1996, the 46-year-old taught prep courses with a focus on system electronics for planning, project engineering and calculation for the master craftsman's examination in the guilds for electronics technicians and electricians. In addition, he is a master craftsman for radio and television maintenance, a member of several testing and professional committees in the area of IT as well as having been an instructor at the school of electronics in Tettngang.

In his spare time, Schwegler sits firmly in the saddle – sitting on the back of a horse galloping through the forest and meadows of Upper Swabia. To balance out his life, he is a member of the music club of Blitzenreute where he plays the French horn. Schwegler is married and lives in Weingarten.



Projectmanager Kurt Schwegler

»Social Sponsoring



Handing over the check: Both futronic managing directors Wolfgang Lachmann and Michael Preuß with food bank board member Klaus Nuber and shop manager Andrea Zwiebler (left to right).

### futronic donates 700 euros to Tettngang food bank

The food bank in Tettngang was very happy to receive a donation of 700 euros. The money was collected at a lottery held by futronic at its open house on September 27th. „We can definitely make good use of this money,“ says a happy Klaus Nuber, board member of the Tettngang food bank as the check was handed over. These funds will be used to acquire a new Renault van equipped with refrigeration. This will ensure that the cooling chain in the transport of food from donors will not be interrupted. „This is a re-

quirement for food banks as well and is strictly monitored,“ explains Andrea Zwiebler, manager of the food bank shop at Montfort Plaza near city hall.

This non-profit organization provides food donations from commercial businesses at low prices to people with limited incomes. „Actually the donation is not from us, but rather from all the many citizens of Tettngang who bought a lottery ticket,“ says Michael Preuß, managing director at futronic.

»Service anniversaries

### Employee loyalty at futronic

futronic is growing and therefore the number of employees is, too. Currently, a total of 57 women and men work for futronic. This represents an increase of 10 percent over last year. Employee turnover is low; this ensures continuity and sustainability. Many who come to us stay a very long time. For this, we would particularly like to thank the following employees for many years of contributing excellent service:



Wolfgang Lachmann managing director

Wolfgang Lachmann came to futronic on October 1, 1988. This year, he is celebrating his 20th year of service at futronic. Together with Michael Preuß, the electronics engineer has been successfully managing the skills of futronic since April 2004.



Manfred Grünvogel purchasing manager

Manfred Grünvogel has also already invested 20 years of service at futronic. As purchasing manager, he makes sure that, during production, only assemblies and components that meet the high price/performance requirements of our customers succeed in completing the manufacturing process.



Sebastian Debernitz construction

Sebastian is a homegrown futronic boy. He completed his three-year training with us as an industrial electronics engineer (majoring in equipment technology). For the past ten years, he has been a permanent component of our engineering design department.