

UPDATE.02

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Welcome



Gerresheimer's goal for the coming years is profitable growth and it plans to achieve it predominantly in the emerging markets. The aim is to double the current ten percent contribution to revenues from these countries within a three-year period by taking advantage of growth in demand for pharmaceutical products. This growth in demand has prompted regional and international pharmaceutical manufacturing companies to set up local production operations and, as a drug delivery system and pharmaceutical packaging supplier, we have to stay close to our customers in their markets. In Brazil we have just built a new insulin pen production facility. In China we already have seven plants in operation. This year we opened a representative office in Moscow and we recently founded a subsidiary in India. At the same time, we have published Chinese and Russian versions of our website to optimize our customer service and accessibility in these markets. Our pharma customers are expanding globally – and so are we.

Jens Kürten

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First Gerresheimer Pharma Days in the US

On November 3 and 4, Gerresheimer welcomed pharma customers and business partners to the first Gerresheimer Pharma Days in the US. At this event, Gerresheimer not only presented its entire product portfolio, but also provided visitors with a diverse and interesting framework program.

On the first day participants had the chance to visit the Gerresheimer Medical Plastic Systems site in Peachtree City and get an insight into drug delivery system manufacturing during the tour of the plant and production facilities. They visited the clean room production areas and assembly lines for plastic components and found out about the work of the Technical Competence Center (TCC) next door.

A workshop on the second day provided the participants with an overview of Gerresheimer's state-of-the-art glass and plastic primary packaging product portfolio and drug delivery device contract manufacturing operations. Additional presentations by pharma experts covered the pharma companies' stricter requirements of primary packaging suppliers as well as current developments in the field of anti-counterfeiting and track & trace. Presentations by Gerres-

heimer's own experts in various specialist fields were supplemented by contributions from renowned guest speakers.

"Further events of this type will follow," emphasized Uwe Röhrhoff, CEO of Gerresheimer AG, after positive feedback from both the guests and the host. It is evident that similar events in the future will make an important contribution to the successful development of valuable business relations.



PHARMA DAY ATLANTA

Summaries of the presentations Focus on pharmaceutical topics



Technological progress and current trends in modern pharmaceutical packaging design were the focus of numerous interesting presentations.

On the second day of the event *Uwe Röhrhoff* welcomed participants to an interesting lecture program at the nearby conference hotel which kicked off with contributions from external speakers. The first key note presentation was given by *Dr. Andreas Rothmund*, Qualified Person at Vetter Pharma. He gave a detailed account of customer expectations towards pharmaceutical suppliers, providing a very effective introduction to the topic. Guest speaker *Dr. Michael Eatkins*, Principal Consultant at Eakins & Associated, was the next person to deliver his presentation. He effectively outlined the current legislative situation and the pharma sector's progress in the field of track & trace/anti-counterfeiting.

The next speaker, *Eric de Hennezel*, Key Account Manager Pharma at Gerresheimer Medical Plastic Systems, talked about modern drug delivery device contract manufacturing. The chemical and physical properties of the innovative multilayer COP vials produced by GPP were the topic of a presentation by *Gustav Levander*, Director Business Development & Technical Support at Gerresheimer Plastic Packaging. Although the pharma industry still views cyclic olefins as a new material, they have a number of superior properties compared to glass which makes them the preferred option for several highly sensitive biotech-derived drug products.



Centre photo: Peter Schneider, CEO of Gerresheimer Peachtree City (USA)

Bill Lamanteer, Director Sales at Gerresheimer Tubular Glass, delivered a very interesting account of high quality glass tubing production, followed by an in-depth demonstration of advanced drug delivery systems focusing on RTF® syringes. *Dr. Arno Fries*, Director Product Management at Gerresheimer Tubular Glass, described the different modes of interaction between the drug product and the glass prefilled syringes and possible solutions such as baked-on siliconization and other process improvements. *Norman Angel* and *Ted de Haan* from Gerresheimer US Moulded Glass rounded off the presentations with an overview of state-of-the-art container glass production.



Gerresheimer in North America

Gerresheimer doesn't just have Medical Plastic Systems operations at the Peachtree City plant in North America. All of its divisions are represented in this market. The American subsidiary Gerresheimer Glass Inc. has been operating its Tubular Glass and Moulded Glass Divisions in the North American market for many years now. With a total of six production facilities in the USA and Mexico, including two Moulded Glass factories, Gerresheimer Glass Inc. is a market leader in the region. Another four production plants operated by the Life Science Research Division consolidate Gerresheimer's strong presence in North America.

PHARMA DAY ATLANTA

Gerresheimer Peachtree City (USA) L.P.

Own Technical Competence Center for the US market

Gerresheimer Medical Plastic Systems has substantially expanded its range of operations at the US site in Peachtree City (Georgia) since last year. Besides creating new production and clean room areas, it has also built its own Technical Competence Center. Now the entire process development phase can be implemented on site. This model to facilitate the pooling of all development activities has been successfully in place at the German TCC in Wackersdorf for quite some years now. Like the German Technical Competence Center, which was set up in 2004, the 13.000 sq.ft. US TCC incorporates all the important cross-divisional functions right up to the product's transfer to mass production in one single building. It provides customers with production-ready, feasibility-tested systems. Project managers, tool and special equipment makers, quality managers, pilot plant, product introduction and industrialization personnel work hand-in-hand at the TCC

to shorten critical start-up phases in production transfer and to ensure faster times to market.

Top-quality medication production

The Peachtree City production plant has streamlined its operations over recent years and now only produces medical products such as Boehringer Ingelheim's Handihaler® for the administration of Spiriva®, a COPD (Chronic Obstructive Pulmonary Disease) inhaler (multi usage/single dose), plus high volumes of components for infusion sets. Test cards for the Vitek-2® microbial identification system are manufactured for bioMerieux using the cube molding tool production concept. The TCC has a very full project pipeline which includes programs for surgical endoscopic system components, diagnostic components for clinical processing and further components for donated blood diagnostics. These are supplemented by several relocation projects to transfer diabetes care components from competitors to Peachtree City.



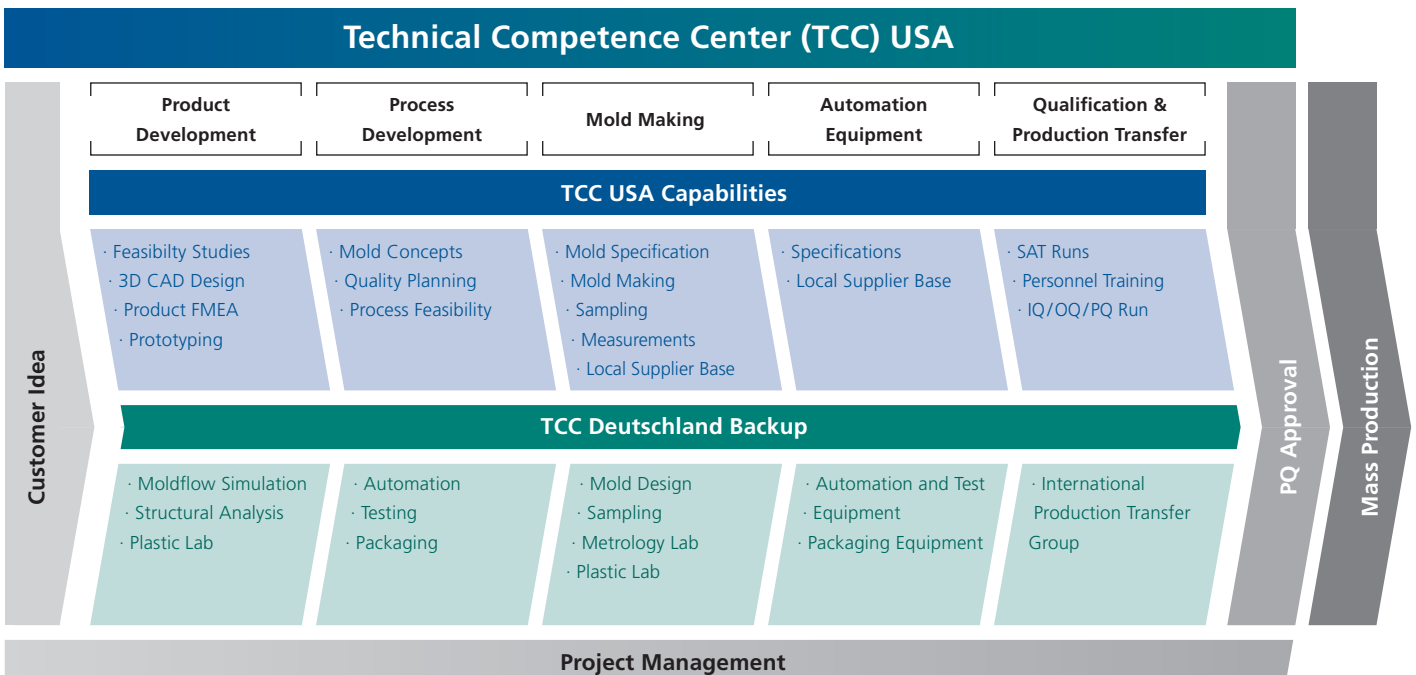
Facts & figures

Highly automated 24/7 production

Property	17 acres
Production area	32,300 sq.ft. thereof
Clean room area:	15,000 sq.ft.
Controlled area:	8,600 sq.ft.
External warehouse	50,000 sq.ft.
Injection molding machines	30
Assembly lines	2
Clamping force	25 – 300 t
Personnel	100

Full Service Approach TCC

World of ideas for products and technologies



GLASS

Tubular Glass Americas

Tekion process



Gerresheimer Tubular Glass Americas (TGA) has developed a proprietary process that again significantly reduces glass particle counts in vials delivered to customers requiring superior PharmaPlus quality. As global standards continuously evolve, quality requirements are getting more stringent.

As a leading supplier of glass packaging for the pharma and healthcare industry Gerresheimer strives through improvement processes not only to meet new quality standards but to exceed them. The production engineers know that glass tubing is primary cause of particulates as the raw material for vial production. TGA has therefore implemented a three-phase plan to further reduce particle counts in vials.

1. Gerresheimer uses various methods to minimize particle counts in the raw tubing.
2. During the vial conversion process, another 90 % of the remaining particulates in the tubing are removed with Tekion technology.
3. Advanced camera technology inspects for reduced particle levels and rejects vials that do not meet that heightened requirement.

The Tekion process allows Gerresheimer to meet and exceed its customers' superior quality specifications regarding glass particulate counts. Integrated in the automatic tube loader, the Tekion system effectively reduces the particle count in the glass tubes by 90 % before they enter the vial conversion process. Tekion does not use any liquids or foreign matter that might introduce contaminants into the glass tubing.

Optimized tubing quality, coupled with the introduction of Tekion technology and the installation of advanced camera inspection systems such as G3, form Gerresheimer's multi-level approach to glass particulate minimization. Proprietary Tekion systems are being built and installed throughout TGA's converting operations.

This is another example of how Gerresheimer's leading technology solves customer problems.

Tubular Glass Europe

2010 Growth Leadership Award for Gerresheimer Bünde



The 2010 Frost & Sullivan European Growth Leadership Award for prefillable syringes has been presented to Gerresheimer. "Advanced technologies give Gerresheimer Bünde an edge over the competition," stated Senior Research Analyst Ranjith Gopinathan. "Expansion into new markets is another of the company's strengths." Gerresheimer Bünde's market share is expected to expand in Europe and the USA over the next few years.

The Frost & Sullivan Award for Growth Leadership is presented to the company that has demonstrated excellence in capturing the highest annual compound growth rate for the last 3 years.

Tubular Glass Europe

Fourth production line for prefillable glass syringes planned at the Bünde plant (Germany)



Double-digit rates of annual growth are being recorded in the prefillable glass syringe market. Gerresheimer, the clear number two in the global market, is now stepping up its production capacity and

investing around EUR 20 million in a fourth production line for prefillable syringes which will be completed in 2012. The new line will then provide annual capacity for up to 120 million syringes.

"We are a successful supplier of syringes to pharmaceutical customers around the world. Now we are investing in this fast-growing market again to consolidate our global market position further. The technical know-how of our Syringe Competence Centre in Bünde makes it the ideal platform for further growth," said Uwe Röhrhoff, CEO of Gerresheimer AG.

Visit the website at www.gerresheimer.com/produkte-services/pharma-healthcare/tubular-glass/spritzensysteme.html for further information about prefillable syringes.

GLASS

Life Science Research

Kimble Chase introduces new KimCote® glassware coating



Scientists often prefer glass because it is transparent, inert to most chemicals and heat resistant as compared to plastics. Now, they can enjoy a new feature: improved safety. Kimble Chase, the largest manufacturer of laboratory glassware products in the world, has introduced KimCote® plastic coated glassware. KimCote® is an ultra-clear coating that is applied to the exterior of laboratory glassware to enhance breakage resistance and contain leakage. The coating provides an important additional level of protection against the risk of exposure to harmful biologics, toxic materials, pressurized fluids and many common laboratory chemicals, including solvents and acids. KimCote® also protects against injury from shattered glass. The durable proprietary coating provides a non-slip surface that improves the grip of KimCote® glassware whether it is wet or dry, thereby further minimizing the risk of handling mishaps and contamination.

Kimble Chase offers the KimCote® coating on many traditional laboratory glassware products including bottles, cylinders, flasks, funnels, tissue grinders and tubes. Application of the KimCote® coating to other glassware is available upon request. All KimCote® glassware is designed to withstand steam autoclave temperatures up to 120°C (250°F) and freezing temperatures up to -20°C (-4°F). KimCote® is safe for dishwashers and microwaves and the coated surface accommodates labeling and marking.

KimCote® is available worldwide from multiple manufacturing facilities located in the US, Europe and Asia which are operated in compliance with ASTM and ISO quality standards. To watch a short video of KimCote® go to www.kimble-chase.com/kimcote.html.

About Kimble Chase:

Founded in July 2007, Kimble Chase Life Science and Research Products LLC is a joint venture that constitutes the Life Science Research Division of Gerresheimer. Ownership is shared between Thermo Fisher Scientific and Gerresheimer Glass Inc., a US subsidiary of Gerresheimer AG. The company is dedicated to the design, manufacture and distribution of a comprehensive range of reusable, disposable and specialty laboratory glassware for the following markets: pharmaceutical, chromatography, environmental, petrochemical, government, life science, and education.

PLASTICS

Medical Plastic Systems

Certification of the Brazilian production plant



Another milestone has been achieved at the Gerresheimer Sistemas Plásticos Mediciniais plant in São Paulo, Brazil. It passed the first-time ISO 9001 and ISO 13485 certification audit at the end of September 2010 with flying colors –

without any major or minor deviations. A new chapter in the Indaiatuba-based plant's success story has now begun. The customer audit in August was equally successful, resulting in the plant being approved for production. Three tools were qualified and further tools are currently in the qualification phase. Production operations with the approved tools have proven to be very efficient and stable.

Gerresheimer Plastic Packaging

New product manager for parenteral business



Wolfgang Dirk, who has a PhD in chemistry, worked in management functions at Schweizerhall Pharma, Indukern Chemie AG and West Pharmaceutical Services after graduating from the RWTH Aachen university. As the new Parenteral Product Manager at Gerresheimer Plastic Packaging, he is focusing on the market launch of our new multilayer plastic vials based on COP and the development of parenteral business.

PRODUCTS & SYSTEMS

Tubular Glass

Clearject™ – ready-to-use plastic prefillable syringe system

Clearject™ is the brand name for a special prefillable syringe system developed to address some very specific needs of a small group of very demanding pharmaceuticals. With Clearject™ syringes Gerresheimer Tubular Glass completes its product portfolio in the field of prefillable syringes. The main difference between the Clearject™ system and our current RTF® and ETF syringe products is that the syringe barrels are made from plastic, not glass. Unlike the familiar disposable plastic syringes made from polypropylene (PP), these syringes are made using a brand new class of polymers called cyclic olefins.

The advantages of cyclic olefins compared to other polymers are

- Glass-like transparency
- Lower gas permeation

Compared to glass, cyclic olefin polymers are characterized by

- Less breakage
- Lower particle count
- Higher pH tolerance
- Practically inert surface

This means that polymer syringes can eliminate some of the disadvantages of borosilicate glass barrels such as breakage, flaking, glass particles and potential pH shifts.

Ready-to-Use Clearject™ syringes satisfy the same regulatory requirements as RTF® syringes. They are manufactured in a non-contact, clean room environment. Our pre-sales team holds technical talks with our customers in advance to ascertain whether Clearject™ syringes are the optimum packaging system for specific pharmaceuticals. These discussions take all the pharmaceutical product's key features into account.

Siliconization is an integral aspect of syringe system functionality. Clearject™ syringes are siliconized with high-viscosity silicone oil

(DC MD 350 12.5000cst). The silicone oil is evenly distributed inside the plastic barrel by wiping.

Clearject™ syringes address the specific requirements of a number of specific pharmaceutical drug categories. Typical examples are cytostatics (oncology), ophthalmic and protein-based pharmaceutical products. The high resistance to breakage of COP syringes is an advantage for cytostatics, while low protein loss through adsorption on the syringe wall and a markedly lower particle count are significant features for protein-based and ophthalmological products.

The current Clearject™ ready-to-use syringes are available in the following sizes:

Syringe volume	Iso type	Customized	LL	LG	Finger grip
1,0 ml	■		■	■	■
2,25 ml		■	■	■	■
5,0 ml		■	■	■	■

Japanese production quality

Ready-to-use Clearject™ syringe systems have the same packaging format as RTF® syringes. They are manufactured by Gerresheimer's Japanese partner Taisei Kako in Osaka, Japan.

Rubber components such as plunger stoppers and tip caps for Clearject™ ready-to-use syringe systems are customized and manufactured by the Japanese pharmaceutical elastomer supplier Sumitomo. Plastic injection molding allows tighter tolerances than the glass forming process, so standard glass syringe rubber components do not provide an optimal fit.

Moulded Glass Completely airtight seals

Many pharmaceutical products require an absolutely airtight primary packaging to guarantee stability, long shelf life and therefore global marketability. Tamper-evident and child-safe closures are also essential packaging requirements.

Powder-form drugs and tablets that are stored for lengthy periods of time or shipped to tropical countries have to be protected against moisture. Some of these are too sensitive for a regular closure to suffice.

Additional protection against moisture and oxygen is provided by supplementing the bottle top with a multilayer closure seal that is incorporated in the cap. In most cases, the barrier material used is a thin layer of aluminum. An in-line induction sealing



machine applies the seal directly to the bottle top before the cap is fitted. Gerresheimer products can either have a fixed, non-peelable seal or a peelable version. In both cases, the seal is absolutely airtight.

NEWS ROUNDUP

Gerresheimer believes India holds promise



Dr. Max Raster, member of the Gerresheimer AG management board, and Vikas Archaraya, Gerresheimer India, opening the new representative office.

Gerresheimer is still expanding its global operations. With the establishment of a representative office in Mumbai/India at the beginning of November 2010 Gerresheimer intends to advance its very promising pharmaceutical primary packaging and drug delivery systems business in the growth market of India. In addition to sales operations, the company is also stepping up its local customer services and technical services.

“Our strategic objective is to achieve above average growth in the emerging markets. We currently generate around ten percent of our revenues in these dynamically growing markets and we aim to double this figure over the next three years. Opening our representative office in India is an important step towards achieving this objective,” said Uwe Röhrhoff, CEO of Gerresheimer AG.

Alongside China, where Gerresheimer already has seven production facilities, the Indian pharma market is continually gaining in significance. There is incessant growth of demand for medicines in India. One reason for this is the improvement of the Indian healthcare system, which gives people greater access to medications. International pharmaceutical groups are now also manufacturing more products in India for other regions. Leading market research institutes expect above average growth rates in emerging nation pharma markets over coming years.

Gerresheimer as a global partner of the perfumery & cosmetics industry



Fascinatingly unique flacons and pots are a consistently nurtured specialty in our company's portfolio. Gerresheimer is well known as a company which enables solutions for the pharma and healthcare industry. However, since health and well-being are so closely related, we use our pharmaceuticals packaging expertise to additionally offer a range of high quality and innovative glass and plastic cosmetic packaging products. Our cosmetics operations, like our other Group operations, have developed strongly and become more globalised. After expansion out of Europe into America and China, we now operate plants which manufacture products specifically for the beauty markets

in these countries. Offering an impressive range of designs (round, oval, square, cylindrical, conical) and finishes (matte, color sprayed, printed, embossed) for its stylish flacons, pots and bottles, Gerresheimer is one of the most important partners of the world-wide perfumery and cosmetics industry.

A special cosmetics issue of our customer newsletter Update is dedicated to our new glass products of fall 2010. Read on by clicking the following link:

www.gerresheimer.com/en/products-services/news/newsletter.html

Moulded Glass

Clean air for Gerresheimer Essen

At the end of August 2010 the new compressed air complex at Gerresheimer Essen, constructed by the local public utility company's subsidiary Mark-E, was officially put into operation. The contracting model will reduce costs and energy consumption during the glass production process. Gerresheimer requires about 21 % less energy thanks to the compressed air complex, which also reduces CO₂ emissions by approx. 3,100 tons a year. The specialists at Mark-E will provide any necessary maintenance during the entire 10-year contract term, which involves an investment of around 2 million euros. Essen plant manager Stephan Arnold takes stock: „The new concept has proved a success. It is far more cost-effective and environmentally friendly.“



Why compressed air?

Compressed air is an important production „raw material“ at the plants. It is used as operating air for production and packaging machines. For the production machines, raw materials conveyance, tool machining in the mold shop and for the testing machines compressed air is also used as control air and exhaust air.

WEB & EVENT

New homepage – new languages: Gerresheimer modernizes and expands its global internet platform



Gerresheimer has modernized its website by focusing on improving the aspect of “usability” in conjunction with an appealing modern design. Now users can access all important content directly from the homepage. Teasers have been incorporated on the homepage for direct click access to Corporate News, Special News, Event & Product News content. Alternatively, the user can click on the quick links in the service column on the right and the individual product sections can still be accessed directly from the image carousel or cover-flow.

Moreover, condensed versions of the website have been localized in the Chinese and Russian languages to enhance customer service and accessibility. The aim is to present the relevant products in the portfolio to website users with the minimum number of clicks and to give existing and potential customers fast access to local contacts.

The Chinese and Russian web pages can be accessed directly via the language selection buttons, or gerresheimer.cn and gerresheimer.ru. The user initially sees an overview

page containing information about the Gerresheimer Group and brief descriptions of the individual divisions consisting of informative images and short texts. The sub-pages feature brief descriptions of individual products or product groups and services. All the relevant contacts are displayed directly underneath. The web pages are rounded off with a map showing local sites, plus photo and contact details.

GERRESHEIMER

EVENT CALENDAR / 1. HALF OF 2011

FEBRUARY 8 – 10

MDM West, Anaheim, CA, USA

FEBRUARY 23 – 24

Pharmapack, Paris, France

MARCH 10 – 11Pre-filled Syringes Forum
Philadelphia, PA (USA)**MARCH 22 – 24**

MedTec Europe, Stuttgart, Germany

MARCH 29 – 31

Interphex, New York, NY, USA

MAY 3 – 6Respiratory Drug Delivery
Berlin, Germany**MAY 12 – 18**

Interpack, Düsseldorf, Germany

MAY 24 – 26

FCE Pharma, São Paulo, Brazil

JUNE 7 – 9

MDM East, New York, USA

JUNE 21 – 23

CPHI China, Shanghai, China

Save the Date:

Interpack 2011

The world's most important packaging trade fair, Interpack, will be opening its doors in Düsseldorf again between May 12 and 18, 2011. We will be exhibiting our comprehensive portfolio of glass and plastic products, ranging from pharmaceutical vials to complex drug delivery systems such as syringe systems, insulin pens and inhalers for safe medication dosage and application. We will also be extending our traditional invite to the informal crackerbarrel at Düsseldorf's famous „Zum Schiffchen“ brewery again in 2011.