

Medical Technology in Saxony-Anhalt Creative Minds

During a press tour, the Investment and Marketing Corporation Saxony-Anhalt provided an overview of the current diversity and strength of innovation in Saxony-Anhalt's medical technology/medical devices sector. In this federal state, the medical technology industry currently comprises seventy-five companies with some 2,700 employees. MTD presents some of the market's key players in this article. What soon became clear is the close involvement of research and science locally, in specific cases, when it comes to developing innovative, forward-thinking medical technology.

Primed Halberstadt Medizintechnik

Having been nationalised during the GDR era, the business became a private family-run company in 1992. Since then, Primed Halberstadt Medizintechnik GmbH has been manufacturing plastic technical medical products using injection, extrusion and blow-moulding production techniques. The product range currently features approximately 2,400 items and covers the following areas: post-operative wound healing, care products, and consumables for ear, nose and throat applications.

These days, the company group owns several production facilities in Germany and abroad, with a total workforce of 500. According to managing director Harry Leibitzki, the company also acts as an OEM manufacturer for several big German names (known to the editors). Exports account for approximately 35 percent of sales, and the company has busi-

ness links in over 50 countries around the globe. In July a brand new warehouse with 5,000 pallet storage slots (investment cost: 3 million euros) was opened. This brought the company's total storage slot capacity to approximately 10,000. Primed currently has about 800 customers.



Harry Leibitzki, managing director of Primed Halberstadt Medizintechnik.



IMG Saxony-Anhalt

The Investment and Marketing Corporation Saxony-Anhalt (IMG) is the economic development and marketing agency of the German federal state of Saxony-Anhalt. IMG offers a full service related to setting up business in the state – from site selection to start of production. Moreover IMG is also responsible for the external marketing of the economic and scientific location and the development of tourism concepts. The service for investors comprises assistance in:

- site selection
- subsidy and financing issues
- permitting assistance
- full line project management

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Managing director Leibitzki emphasised the importance which the company places on future-proofing. Hence it fosters close ties with universities in a range of research and development projects.

HA2 Medizintechnik

As a subsidiary of Primed Halberstadt Medizintechnik, HA2 Medizintechnik GmbH/Halberstadt is these days one of Germany's leading providers of gas sterilisation systems. According to Harry Leibitzki, 120,000 pallets are currently sterilised annually using a multi-stage process (ethylene oxide sterilisation) in one of Europe's most advanced facilities. At present, eight sterilisation chambers are in operation, offering an overall capacity of 32 euro-pallets. Among the 100 or so customers are numerous leading German manufacturers (known to the editors).

The other side of the HA2 Medizintechnik business is manufacturing tracheotomy and laryngectomy consumables. A comprehensive logistics centre with a 4,000 pallet capacity rounds off operations.

Dahlhausen Medizintechnik

11 years ago, the Cologne-based and family-run medical technology company established a logistics and production centre in Halberstadt. The facility includes a 400 square metre clean room and a 2,900 square metre warehouse with 5,400 pallet storage slots.

The Halberstadt site has a 50-strong workforce, currently operating in two shifts. According to Holger Linke (director), the firm concentrates on 3 business areas: providing a logistics service for Dahlhausen/Cologne, OEM manufacturing, and set production for Dahlhausen/Cologne. Overall, the ventilation systems and related accessories (tubing, artificial noses, filters etc.) are assuming a hugely increased share of daily operations in Dahlhausen.

The entire portfolio features some 2,000 products. Every month between 20,000 and 30,000 individual packages destined for hospitals are dispatched from the Dahlhausen facility in Halberstadt. These are joined by an additional

30-40 pallets of goods per day. Moreover, approximately 500 different sets are made up per month.



Holger Linke, director of Dahlhausen.

For the last two years, the facility has also been providing servicing, incl. repair and maintenance, for patient-warming and cooling systems ("temperature management"), which are marketed by Dahlhausen in Cologne.

Adamus Group

Awarded a "Top 100" seal of approval, the Adamus Group/Halberstadt produces internationally patented disposable urinals. According to managing director Marc Collinet, the product range – "Adamus" for men, "Evamus" for women and "Minimus" for children – is suitable for use in both medical and private use. He cites wheelchair users and people with urinary incontinence as an example, but also anyone who undertakes long car journeys or outdoor activities.

Collinet adds that the range is currently experiencing a boom in production and sales. This is due to the first strategically important listing successes with the drugstore chain "dm" and pharmaceutical wholesaler Phoenix, amongst others. Online portals such as "Pro Idee" have also discovered the Adamus product – although in this case it's the 5-pack travel toilet.

Using trade fair appearances and targeted PR campaigns, Collinet aims to introduce the products to an even broader range of consumers. The company is also dedicated to introducing biocompatible versions of its products – a prototype already exists. Until now, the disposable urinal – wrapped in a plastic bag – was thrown away as normal rubbish after use.



Marc Collinet, managing director of Adamus Group.

SN.B Health Technology

SN.B Health Technology/Halberstadt has officially been operating commercially since 1 April 2014. It focuses on the development and manufacture of examination and treatment table systems, characterised by a futuristic design and integrated weight measurement (max. tolerance: 50 g), an alarm function, and Bluetooth compatibility. Eckhard Bangemann is keen to point out that, as a result, the company has found itself a genuine market niche and – holding several Europe-wide patents – a guaranteed USP. As founder of the company, Eckhard Bangemann is responsible for designing the examination tables.

Between them, he and his business partner Ralf Hirschfeld have several

years of development work and market research behind them. Against this background, Eckhard Bangemann is particularly grateful to IMG in Magdeburg, which facilitated the founding of the SN.B-HT development centre.



Eckhard Bangemann, founder of SN.B Health Technology.

The product portfolio features a wide range of examination tables, including versions with a storage base, heavy-duty models and exam tables for veterinary use. According to Bangemann, they made a conscious decision to market the "conventional" examination tables first. A showroom has already opened in southern Germany, and they plan to set up a distribution company for Austria and Switzerland.

SN.B activities in Halberstadt focus on the final assembly of the examination tables. Bangemann explains that all the components are subcontracted to companies in the region, and even the electronic components are supplied by a manufacturer based in Germany.

EKF-diagnostic

The story of EKF-diagnostic GmbH, based in Barleben, is one of remarkable success. From the very beginning, the company, founded by Berthold Walter in 1990 as EKF Industrie-Elektronik GmbH, specialised in sensor technology for devices used to detect glucose, lactate, HbA1C, haemoglobin and haematocrit

levels. This proved so successful that the company operated on an increasingly global scale until, in 2010, it was bought up by a group of British investors. The EKF name was even given to the public limited company. EKF Diagnostics Holdings plc is based in Cardiff.

As Steffen Borlich, managing director of EKF-diagnostic GmbH, emphasises, the takeover by the British investment group (listed on the London Stock Exchange AIM market) has had a positive impact on the company and, by extension, on Barleben itself. Within the group, Barleben has managed to establish itself as a logistics and service centre, while also remaining a production facility. In 2013 the holding company invested approx. 1 million euros in the construction of the service and logistics centre. During the same year, the manufacture of two HbA1c measuring devices, including cartridges, was transferred to Barleben.



Steffen Borlich, managing director of EKF-diagnostic GmbH.

The company currently employs 143 people in Barleben; its turnover in 2013 was 14.2 million euros. EKF's products are exported to over 70 countries worldwide, for the most part via authorised dealers. The main areas of business are the point-of-care market, central laboratories, and molecular diagnostics. Every year, the facility in Barleben produces 65,000 devices and 53 million tests. Borlich points out that the installation of

devices provides a good opportunity for follow-up business – in particular the sale of consumables.

He is also keen to emphasise that the company owes its success in part to the regional economic policy of Saxony-Anhalt. Against this background, he is quick to praise the commitment of the state of Saxony-Anhalt, especially when it came to allocating grants and creating a medical technology cluster. Furthermore, he adds that the numerous first-class educational and research facilities in the state capital, Magdeburg, are a vital resource for high-tech companies such as EKF Diagnostics.

Guenther Bionics

In 2012 Guenther Bionics GmbH, based in Parey, was selected for the "Germany – Land of Ideas" initiative. And not without good reason. The team surrounding company founder and owner Michael Guenther (Dipl.-Ing. FH) mainly focuses on research and development.



Michael Guenther, founder and owner of Guenther Bionics.

It has a proven track record in the field of transfemoral silicone sockets – the Milwaukee TF is a leading product. In addition, the company acts as a service provider for numerous medical supply retailers, specifically in the manufacture of high-quality moulds made of prepreg carbon and silicone (especially hand and foot prostheses). Other product innovations by Guenther Bionics are special adapters for the manufacture of prostheses and a prosthesis socket valve (a completely in-house development).

The company shares its expertise in the treatment and processing of silicone by holding seminars and lectures for interested service providers from the medical devices sector.

Michael Guenther emphasises that the company Guenther Bionics is not itself a service provider in the market. The

company cooperates with some 200 medical supply retailers, especially in the case of the Milwaukee TF socket. At the present time, the majority of patients interested in such a prosthetic socket are referred directly to Parey by the commissioning medical supply retailer. Eight medical supply retailers, however, have

already been certified, i.e. these businesses are qualified to fit a patient with a Milwaukee TF socket themselves. The aim is to continuously expand this network of partners. Guenther encourages all interested service providers to get in touch.

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Fraunhofer Institute for Factory Operation and Automation IFF Current medical technology research projects

The Fraunhofer Institute for Factory Operation and Automation IFF, in Magdeburg, is an independent facility belonging to the Fraunhofer-Gesellschaft, and dedicated to production technology. It offers technological partnership to major industrial clients, small and medium-sized enterprises in the manufacturing and service sectors, and also public bodies.

Production facility planning and operation and automation form the focus of research for the more than 160 scientists employed by Fraunhofer IFF. Particular priority is given to new digital engineering methods and technologies, and their comprehensive application in the development, manufacture and operation of products and production systems.

Taking this as a basis, the institute develops innovative solutions within its research fields: "Intelligent work systems", "Resource-efficient production and logistics" and "Convergent supply infrastructures".

The institute is integrated in national and international economic and scientific networks, and cooperates closely with the Otto-von-Guericke University (OVGU) in Magdeburg. The press tour was the perfect opportunity to present current medical technology research projects.

■ Research campus STIMULATE (Solution Centre for Image Guided Local Therapies): Robotic assistance for medical interventions

As part of the Robotics sub-project, experts at the IFF are developing and implementing a robotic assistance

system for use in positioning radio-frequency ablation electrodes in the treatment of spinal tumours. Here, the IFF – in close cooperation with the OVGU medical faculty – is developing the relevant application scenario in a multi-stage process, ready for integration in a trial phase. The second subject area deals with robotics controlled by a brain/machine interface, in which semi-autonomous systems are directed via brain signals.

■ Collisions with robots – without risk of injury

Humans and robots working as a team is the motto for the future. But, of course, any risk of robots causing injury needs to be ruled out. At the moment, these technical assistants still mostly operate behind protective fencing and mesh guards. But there are also applications where it would be helpful if people and robots could work hand in hand. The cooperation between both is therefore a major focus of robotics research worldwide. For the first time, a Fraunhofer team in Magdeburg is researching precisely where the boundary between a harmless collision and injury lies.

■ Measuring systems to prevent pressure ulcers

When people have to remain in bed or in a wheelchair for long periods of time, this can have severe consequences for their skin. Pressure sores, also known as decubitus, are a serious risk. At the Fraunhofer IFF in Magdeburg, they have come up with an in-



Dr. techn. Norbert Elkmann, Robotic Systems Business Unit Manager, Fraunhofer IFF, presents the assistant robot for medical interventions.

novative answer. A "feel-good cushion" can assess pressure points and provide relief.

■ Dermatological full body scanner

The early detection of skin tumours is extremely important in dermatological diagnostics because with malignant melanoma, for example, it is only in the early stages that there is a realistic chance of cure. Together with their project partners, the researchers at the IFF have developed a dermatological full body scanner. Its main features are an arrangement of multiple cameras and diffuse lighting. The scanner is already in use in the Clinic for Dermatology and Venereology at the Otto-von-Guericke University.