

## EDITORIAL



*Philipp Bayat, Dr. Monika Bayat, Heinz Bauer (l. to r.)*

How can we make a contribution to protecting our climate and our planet – as individuals, but also as a company? This question preoccupies our thoughts as we try to find the best possible answers. For example, by installing advanced refuelling stations for carbon-neutral biogas all over the world – like the one which recently went into operation in Nepal. Or by recently launching an internal analysis to discover how we can maximize sustainability in our supply chain and minimize the use of plastics in products and packaging. We also support vital environmental protection drives, like the 3Cleanup Day in Vienna and the “Reef Project” initiative, which builds artificial reefs. And we are now promoting eco-friendly mobility for our employees by launching an attractive bike leasing scheme.

Heinz Bauer  
Dr. Monika Bayat  
Philipp Bayat

## BAUER KOMPRESSOREN MAHAWI – ABU DHABI’S NATURAL GAS REFUELLING STATION



*Enormous: the biggest natural gas refuelling station on the Arabian peninsula.*

BAUER opened the “Mahawi” natural gas refuelling station one year ago and named it after the capital city of Abu Dhabi where it is located. The station’s fuelling capacity is a record-breaker on the Arab peninsula; it serves an incredible 50 trailer units plus 1,000 taxis daily, all powered by environmentally friendly CNG (Compressed Natural Gas). During the project planning and construction phases, BAUER was able to draw on a wealth of experience from its previous 35 refuelling-station projects in partnership with the state oil and gas company, ADNOC Distributions. Sand, high humidity and extreme temperatures all require extensive specialist expertise. At Mahawi Station, two Trio III systems are in operation. The “III” in the name indicates that these advanced systems are driven by three CFS IK26.14-90-C kit compres-

sors per building. These compressors are high-performance, high-pressure – and highly reliable. Air-conditioning systems on an appropriate scale provide essential cooling, coping with temperatures that can soar to over 50 degrees in the desert summer.

The enormous volumes of highly compressed gas require generously proportioned buffer storage capacities. This is provided by two high-pressure storage banks combining 300 80-litre cylinders,



*Concentrated power: the natural gas for the refuelling station is compressed and stored here.*



*Fuel pumps for eco-friendly refuelling of CNG vehicles*

which offer a total geometrical volume of 24m<sup>3</sup>. A volume that enables ten trailer units and four passenger vehicles – usually taxis travelling to and from the nearby airport – to refuel simultaneously. The trailer units are transported from the refuelling station to “daughter stations” that do not yet have their own gas supply, or are signposted “City Gas Supply” and positioned in cities to supply CNG to local production facilities and private households. After one year of full-scale operation, the results are outstanding: the systems have clocked up over 5,000 hours of smooth, fault-free operation with availability rates of over 98 per cent! The remaining two per cent were accounted for by regular maintenance works. ■

## BAUER KOMPRESSOREN ACHIEVING SUCCESS – TOGETHER

BAUER congratulates Domeyer on the company’s 100th anniversary. Founded in Bremen in 1919, the family-owned company is now in the hands of the fourth generation, headed by Dr. Heidi Armbruster-Domeyer and



*Management team at Domeyer: Fred Ollerdisen, Jörg Schuber, Heidi Armbruster-Domeyer, Carsten Krüger, Andree Landsiedel, Volker Thomas (l. to r.)*

engineering expert Fred Ollerdisen. As a leading specialist retailer, service provider and manufacturer for fire protection and safety products, Domeyer provides installation and maintenance services for BAUER KOMPRESSOREN breathing air compressors as well as complete gas supply packages for shipping, firefighting and diving. Domeyer also holds training for crew members, firefighters and divers, with detailed hands-on instructions on the correct operation of the compressors. This year BAUER and Domeyer can proudly look back on 41 years of close and successful collaboration.

Ehlgötz is likewise celebrating its one hundredth anniversary this year. Germany’s largest compressed air dealer has been a close partner of BAUER for exactly fifty years. The successful collaboration started in 1968/1969, offering repair services for small-scale one- and two-stage low-pressure compressors with boilers. The Karlsruhe-based company soon built up its role as a sales partner for screw compressors, which were still part of the BAUER product portfolio at the time. As the decades passed, they were joined by many other products including large-scale diesel-powered construction site compressors and high-pressure biogas compression systems. As one of BAUER’s longest-



*Summit at BAUER: Stefan Hacker, Heidrun Ehlgötz, Thorsten Ehlgötz, Heinz Bauer (l. to r.)*

serving German sales partners, Ehlgötz has amassed a wealth of experience and technical expertise in every area, from small compressors for diving use to advanced high-pressure systems for helium recovery. ■

## BAUER KOMPRESSOREN BIOGAS FOR NEPAL

Pokhara is the second largest city in Nepal. The city is located on Phewa Lake, whose waters reflect the lofty chain of stunning snow-capped peaks of the Himalayas, and is a magnet for tourists and mountain fans. But the environment here is fragile and requires careful and strict protection. With this in mind, the Nepalese government is pro-



*Biogas plant*



*BAUER compressors at the biogas plant*

actively investing its limited resources in environmental protection and is focusing more closely on biogas as a climate-neutral fuel.

BAUER COMPRESSORS India won a tender to construct a high-pressure refuelling station as part of the prestigious “Gandaki Urja” biogas project. The company was chosen because of the convincing technical features and rapid delivery time of its products.

Now two proven COMPACT Series C 15.2 systems with gas purification function compress up to 100 cubic metres of purified biogas to a pressure of 300 bar every hour. Trucks and buses can now operate on eco-friendly fuel and contribute to protecting the atmosphere, helping to ensure that future generations of residents and visitors can continue to enjoy the lush natural beauty of Nepal. ■

## ROTORCOMP LOGISTICS CENTER

After an intense supplier selection process, the project was completed within a brisk timeframe and the new ROTORCOMP LOGISTICS CENTER opened on 1 April 2019. The new centre

became necessary when UNICCOMP’s previous distribution warehouse began to reach the limits of its capacity and safety design.

“Our task is to ship around 30,000 compressors around the world within the shortest delivery periods and in the optimum packaging. An in-depth ‘health check’ analysed the full extent of our logistics operations and provided the basis for further project steps”, explains Ralf Ströhle, project lead and director of the ROTORCOMP order centre.

ROTORCOMP joined forces with logistics professionals GLX Logistic Services and packaging company BRENNER to design and build a logistics centre at BRENNER’s Starnberg premises which would be convenient for transport and within easy reach of the company’s sister company, UNICCOMP.

“This redesign of our logistics operations is aimed at enhancing customer satisfaction by shortening our delivery periods and boosting our delivery reliability. The new Logistics Center will enable us to proactively streamline and

smooth our production operations by optimizing buffer stocks and separating customer and production orders more effectively. At the same time as these important goals, the trick will be to achieve necessary reductions in our working capital”, says Dr Stefan Zettl, Managing Director of ROTORCOMP.

At the new centre, all the stages of logistics operations will be carried out by GLX in accordance with ROTORCOMP’s strict specifications, from collection of the compressors from UNICCOMP to their storage, packaging and shipping preparation for customers worldwide. “The project has given us the opportunity to review, develop or change our logistics processes and workflows that were previously in place. Our clear goal is to achieve continuous improvement of our processes and packaging by using lean management methods”, comments Jan-Henrik Dudda, member of the project management team and Supply Chain Manager at ROTORCOMP.

BRENNER Verpackung has been a successful partner of BAUER KOMPRES-



*State-of-the-art storage logistics*



*Truck loading bays at the ROTORCOMP LOGISTICS CENTER*

SOREN for many years. BRENNER is a co-packager for product shipping and also supplies all packaging material. The new hall has been in use as a logistics centre by both BAUER companies since April. As part of the project, IT connections to BAUER's company infrastructure were brought up to state-of-the-art standards and broadband was installed. "Our partnership with GLX places us in the best position to implement cost-efficient end-to-end logistics operations. We can now design flexible and intelligently designed workflows that sustainably increase customer benefit", adds Dr. Zettl. ■

## BAUER KOMPRESSOREN BUSINESS BIKES AT BAUER

The megatrend in Germany today is mobility – not only on the roads, but also in hearts and minds. The flexibility to choose any route you like, the ability to set your own speed and the satisfaction of boosting your physical fitness at the same time all add up to a new sense of freedom for both family



*The first Business Bike in the BAUER GROUP: Alexander Kuhnert and his son Felix*

outings and journeys to work. A collaboration initiated by the Works Council and involving HR Management has borne fruit in a partnership with "Business Bike" – one of Germany's leading providers of corporate cycle leasing services, which works with a network of over 3,000 affiliated retailers.

Information events held at the end of July attracted the interest of around 120 employees from ROTORCOMP, UNICCOMP and BAUER KOMPRESSOREN, all eager to find out more about BAUER's modern and eco-friendly mobility service. The special advantages of the scheme are the user's free choice of cycle dealer and the wide selection of high-quality cycles and e-bikes.

Alexander Kuhnert, a member of the shipping logistics department at BAUER KOMPRESSOREN, was enthusiastic about the offer from the beginning. "I think it's great that the company has offered us this service. I use the e-bike in my leisure time and to take my son to kindergarten, and I'm delighted at the chance to use such a high-quality e-bike in this simple scheme." Under the BAUER GROUP scheme, 25 e-bikes (80%) and cycles (20%) were taken up throughout all BAUER companies in Germany within only eight weeks. "I am

delighted that our scheme has been received so well by our workforce and that we can join in making a valuable contribution to the sustainability debate together", says Dr Monika Bayat, Managing Partner of BAUER GROUP. ■

## BAUER KOMPRESSOREN DIVE4LIFE: NOW WITH B-NITROX AND PUREAIR

After making the most of a six-week closure for renovation, Manfred Narres, Managing Director of "Dive4life" in Siegburg, has now reopened Germany's deepest indoor diving pool with a new and extremely attractive service for his customers.

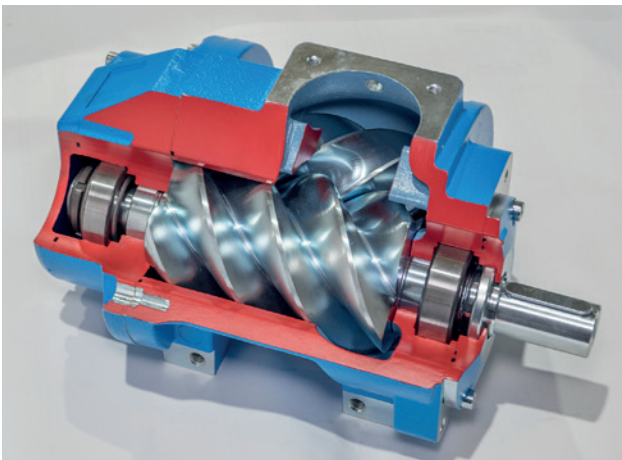
Diving enthusiasts can now dive using nitrox – or, to be precise, B-NITROX 32 from BAUER. Dive4life is currently the only indoor diving centre in Europe to offer this option. For Manfred Narres, safety was the paramount factor in his choice of nitrox system. BAUER's OX range of compressors are the only high-pressure nitrox compressors in the



*The Managing Director of Dive4Life proudly shows off his new B-Nitrox system and PureAir certificate*

**DID YOU KNOW?**

## How the ROTORCOMP EVO® Screw Compressor works



*Cross-section of a ROTORCOMP EVO screw compressor block*

A recent issue already described how a BAUER piston compressor functions, compressing air or gas in multiple stages by the motion of a piston in a cylinder chamber. But how does compression work in an oil-lubricated screw compressor block from our sister company, ROTORCOMP?

Unlike the multi-stage design of a piston compressor, a screw compressor operates in a continuous single-stage compression process.

The compressor housing contains a pair of screws, the male and female rotors. They are designed to mesh like gears so closely that they form a compression chamber. The male rotor is driven by a motor. Air or gas passes through an intake filter to remove particulate and is directed into the intake chamber. The rotary movements of the rotors continuously reduce the size of the compression

chamber, compressing the medium as they do so. After cooling, the oil from the process is returned to the compression chamber for reuse. Compared to piston compressors, the power consumption of screw compressors is generally around eight per cent lower than that of piston compressors because of their internal cooling system. In addition, they operate at significantly higher speeds than piston compressors and thus deliver extremely high volumes. However, their design limits them to pressures of up to 15 bar for single-stage models or 64 bar for two-stage compressors.

The SP Series from BAUER has an upstream screw compressor and downstream high-pressure piston compressor block and thus combines the benefits of piston and screw compressors. Despite their compact size, these compressors supply extremely high free air delivery rates of highly compressed gas or air.

The logo for Heinz Bauer, featuring the name 'Heinz Bauer' in a stylized, cursive blue font. A horizontal line is drawn above the text, starting from the left and ending with a small hook over the 'r'.

Heinz Bauer



*Dive4Life now uses BAUER B-NITROX 32*

world to hold the quality mark of the leading technical testing and certification company, TÜV SÜD.

The safe operation of the four-stage compressor blocks is ensured by gas flow monitors for measuring temperatures at each individual stage plus OX-optimised components and lubricants. Manfred Narres chose BAUER compressor systems from the outset in line with his benchmark of uncompromising safety for breathing air quality. To underpin the importance of this benchmark, Dive4Life obtained BAUER “PureAir Silver Station” certification before reopening.

As soon as customers enter the indoor diving centre, they can now see that the breathing equipment in use there is exclusively filled with top-quality breathing air certified to the DIN EN 12021:2014 standard. ■



*VERTICUS – the newest generation of BAUER compressors*



*A redundant compressor system safeguards production*

## BAUER KOMPRESSOREN BAUER PRO- TECTS AGAINST RADIOACTIVITY

The Institute for Nuclear Medicine at the University of Tübingen relies on BAUER gas-tight helium compressors to neutralize radioactively contaminated air. Cutting-edge imaging procedures including positron emission tomography/computer tomography (PET/CT) provide doctors with outstandingly effective tools, especially in tumour diagnosis. For these procedures, glucose-based radionuclides are processed in “hot cells” for use as biomarkers in diagnostics; their distribution throughout the body can provide indications of the presence of diseased tissue. However, this processing produces volatile radioactive substances which contaminate the air in the hot cells.

The radionuclides have extremely short half-lives and quickly decay, so that this radioactive contamination is only short-lasting, but until decay is over the contaminated air must not be released to the outside. It is stored in high-pressure storage tanks until it is

safe. Compression is performed by a gas-tight sealed helium compressor which compresses the gas to 200 bar. An identical second system provides the necessary backup and takes over when maintenance work is due. ■

## BAUER KOMPRESSOREN 3CLEANUP DAY

A diver rises out of the turbid waters of the Danube, holding an e-scooter covered in mud and algae. It's one of a total of seven rescued from the water during “3Cleanup Days”, a cleanup campaign in Vienna initiated by Austrian mobile phone provider “3”. More than 60 dedicated divers gave up a day of their free time in a concerted move to clear the Danube of accumulated rubbish.

BAUER supported this outstanding commitment by providing the divers with breathing air on site. A team from BAUER KOMPRESSOREN in Austria and Munich took a VERTICUS compressor along to the Cleanup Day supply tent on the riverbank and fired it up. With a charging rate of 540 litres per minute, the VERTICUS easily coped with the breathing air supplies needed for repeated dives, even during the peak midday period.

Well-known photographer and environmental conservationist Martin Aigner from Reef Project brought in the team from Reefvillage ([www.reefvillage.org](http://www.reefvillage.org)) with a huge selection of underwater kit, documenting the activities with underwater photography and joining in the collection work themselves. Christian Redl was also



The BAUER filling station was in constant use as the divers replenished their air supplies.

part of the group. The ten-times free diving world record holder strapped on a diving cylinder to join in the underwater action and help the cleanup team. The event was a huge win for the environment – but casts a less favourable light on our society; by the end of the day, a huge skip had been completely filled with piles of rotting sunbeds, bikes and the like as well as endless drink cans and plastic waste. ■



The divers cleared mountains of litter and debris out of the Danube.

## BAUER KOMPRESSOREN BAUER EXPANDS ITS PRODUCT PORTFOLIO

### Brand-new NITROX compressor series from BAUER

Nitrox divers will be delighted to hear that the brand-new POSEIDON EDITION nitrox compressor series will be launched for the new season. These OX-optimized compressor systems offer charging rates of 320– 700 l/min. They are designed for nitrox membrane systems and are certified by leading technical testing and certification company TÜV SÜD for compression of mixtures with up to 40 per cent oxygen.

The strict standards of the B-NITROX concept require the use of four-stage compressor blocks and oxygen-optimized components and lubricants, as well

as temperature monitoring of the gas flow at each stage and at the oil/water separator.

### Range of new industrial systems

BAUER has added some extremely attractive products to its portfolio of large-scale industrial systems for pressures of up to 500 bar. The BK 26 and BK 52 series are now available as boosters and as the GIB26.5 screw/booster combination for final pressures of up to 500 bar, while the BK 52 is available for pressures up to 420 bar.

A real star in the VERTICUS and PE-VE sector is the GIB15.41 booster system. With free air delivery of up to 830 l/min and maximum final pressure of 350 bar, it sets the standard for this sector. Enhancing cost-effectiveness in a compact design, compressors in the MINI-VERTICUS and VERTICUS series for helium and argon compression are now available in basic configurations with combined intake and condensate reservoirs.

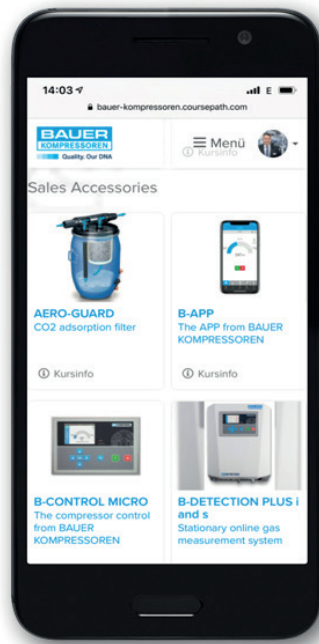


Especially attractive: the new PE Series as PE-NITROX model for membrane systems

## Quality is the paramount standard

Irrespective of the product, BAUER always adheres to uncompromising quality. Even series-produced compressors undergo repeated rigorous inspections at our in-house quality testing centre. The mobile PE 300 TE system has just completed 8000-hour endurance testing to examine the long-term impact of varying temperatures and speeds up to 1800 rpm.

The outstanding results of the tests confirm our experience in practice; no negative effects from higher speeds could be found and in line with expectations, it was once again possible to confirm that the high quality of BAUER compressor blocks makes them ideal for use in the harshest conditions at a variety of speeds. ■



*BAUER ACADEMY E-Learning – auf jedem Endgerät möglich*

## BAUER KOMPRESSOREN E-LEARNINGS FOR GLOBAL SALES

BAUER ACADEMY is striking out in new directions to ensure global sales operations are always at the cutting edge of developments. “Coursepath”, a cloud-based software-as-a-service (SaaS) solution with 24/7 availability, has been used as the basis for the new digital BAUER ACADEMY, where content by highly qualified authors from BAUER KOMPRESSOREN is presented in an appealing and interactive way.

Six e-learning courses have already been produced for the “Sport & Safety” sector, two for “Industry” and six for

“Accessories”, amounting to a total of 14 different e-learning courses available in English at the time of launching. Every e-learning course finishes with a test, in which questions in a variety of single-choice, multiple-choice and ‘hotspot’ image-based formats are dynamically selected from a question pool for each participant.

Participants that complete the test with a minimum score of 75 per cent automatically receive a certificate valid for two years. The test can be repeated three times in total.

Targeted consultations were held with the management of each subsidiary company to determine which training courses should be offered. Sales colleagues around the world were then invited by Petra Meinel, Head of Sales Industry, to take part in the e-learning courses on the academy platform.

The intuitively structured Coursepath training courses enables the partici-

pants to get on board rapidly regardless of their location, preferred device and time. The system offers effective, long-lasting learning throughout the entire BAUER Group.

The aim of the system is to provide long-term support for all branches in the form of e-learning, with the primary focus on key information about our products, new accessories, applications and USPs. Existing video tutorials can be integrated as easily as voice explanations, product presentations or explanatory videos.

“Our e-learning courses enable us to reach all our sales teams all over the world, 7 days a week and 24 hours a day, regardless of whether they use a PC, notebook, tablet or smartphone. Our modern platform optimizes the content and performance to any device. This digital training system will have a long-term positive influence, improving our business and the collaboration between our branches”, affirms Petra Meinel. ■

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