

EDITORIAL



*Philipp Bayat, Dr. Monika Bayat, Heinz Bauer
(from left to right)*

In the sixty-plus years since BAUER launched the UTILUS, and thus became the first manufacturer to introduce a breathing air compressor with integrated filter system, regulations have grown ever more rigorous and customer requirements have become increasingly demanding. Responding to today's need for seamless end-to-end monitoring of air and gas quality, BAUER once again proves it is ahead of its time with its new B-DETECTION gas measurement system. This system sets the industry benchmark for functionality, quality, reliability and cost-effectiveness. We have added gas measurement technology to our core competences of air and gas purification, and are focused on achieving market leadership in this field – in line with BAUER's philosophy that safety is paramount.

Heinz Bauer
Dr. Monika Bayat
Philipp Bayat

BAUER KOMPRESSOREN B-DETECTION – GUARANTEEING SAFE AIR QUALITY



Würzburg Firefighting School relies on B-DETECTION PLUS, the online gas measurement system from BAUER KOMPRESSOREN, to monitor breathing air and ensure 100% quality.

With today's rising levels of environmental pollution and stricter imposition of threshold values for toxins, there is urgent need for systems that reliably and seamlessly monitor the pollutants in ambient air. The same applies to gases produced in industrial manufacturing processes. BAUER was quick to identify this need, and launched an in-depth development process spanning many years. BAUER's engineers used the expertise they had amassed in the field of sensor technology to develop a gas measurement system that delivers outstanding measurement precision and

reliability, even in changing ambient conditions.

B-DETECTION PLUS was initially developed for monitoring breathing air quality for divers and firefighters – such as the Würzburg Firefighting School, which has provided basic and continuing training for Bavarian firefighting services since 1949. Training course participants have the unique opportunity to take part in drills using heavy-duty breathing equipment in a gas-powered 'fire house'. Reliable provision of highly pure breathing air in large volumes is essential for these drills. The supply of



Trainees at Würzburg Firefighting School take part in a realistic drill involving the use of heavy-duty breathing equipment

breathing air is taken care of by four high-performance high-pressure BAUER compressors in soundproof design. With some 70 training courses per year and almost 1,300 students, the consumption of breathing air by trainees and trainers averages 50 cylinders of air every day. In addition, because of the global rise in CO₂ levels in the atmosphere – exacerbated by the basin topography of the Würzburg region – the management of the Firefighters School faces the urgent task of continuously monitoring compliance with the Breathing Air Standard, DIN EN 12021:2014, and keeping legally sound documentation of the results.

This year, the school installed BAUER's new B-DETECTION PLUS system to handle this task. At the same time, maintenance engineers for breathing air equipment can be trained in the use of the B-DETECTION PLUS, and firefighting services are advised on its purchase and installation. After all, few locations offer such favourable conditions for testing the system in intensive continuous use. The broad spectrum of applications

for B-DETECTION PLUS is demonstrated by the two systems designed by BAUER together with its authorised BAUER dealer and breathing-air specialist, HubSys Airtech, for the companies Rehn and Guttroff. Whenever the German police, navy or firefighting services in Hamburg require highly pure breathing air that complies with the DIN EN 12021:2014 but do not have their own compressor to provide it, they turn to Herbert Rehn GmbH as their premium partner. The standards imposed by these official bodies on the purity of their breathing air are extremely high.

Rehn holds BAUER's own quality mark for clean breathing air and currently operates one of Germany's most modern breathing air filling centres: two latest generation BAUER MINI-VERTICUS systems, each with free air delivery of 320 litres, form a master-slave network in 24/7 operation to ensure the authorities are supplied with breathing air around the clock. But the main and most important element in the system is the B-DETECTION PLUS, which checks the breathing air quality for com-

pliance with all threshold levels and rapidly shuts down the system if need be before contaminated air enters the cylinders. Medium-sized family-run company Guttroff produces and sells gases in various purity categories and compositions for a wide variety of applications.

An important area of operations for the company is the production of compressed breathing air for hospitals and medical facilities. The air is delivered by a high-performance latest-generation BAUER VERTICUS compressor with integrated P-Purification system. Once again, breathing-air specialist HubSys Airtech partnered the design and installation of the custom compressor system. Seamless end-to-end monitoring and documentation of the quality of the breathing air supplied is essential if the product is to comply with the rigorous safety standards applied throughout the medical sector.

This task is fulfilled by the online gas measurement system B-DETECTION PLUS, which records measurement values and stores them in a device log to provide legal certainty for the operator. If threshold values are exceeded,



Rehn GmbH in Hamburg operates one of Germany's most modern breathing air filling centres – monitored by B-DETECTION PLUS!

the B-DETECTION PLUS prevents air contaminated with harmful levels of moisture, CO, CO₂, O₂ or VOCs from being filled into the cylinders by diverting the non-conforming air to the outside or, if necessary, shutting down the system. A further safety benefit for Guttroff's customers, who can rely completely on the quality of the air they receive. ■

BAUER KOMPRESSOREN CNG IN SIBERIA

Few places in the world are as isolated as the Russian city of Petropavlovsk in the Siberian region of Kamchatka. Cut off from the country's network of roads, it is only accessible by air or water, on a peninsula with the Bering Sea lapping at its east coast. Extreme weather conditions, ranging from the plummeting temperatures of a Siberian winter to the hot but brief summers, combine with the remote location to create challenging conditions for operating technical equipment. To reflect this, the ruling philosophy is 'reliability without compromise'!

As a result, five years ago BAUER KOMPRESSOREN was invited to tender for a Russian natural gas fuelling station



A CNG-operated truck refuels at the new fuel station at Petropavlovsk.



Even under Arctic conditions of snow and freezing temperatures, BAUER systems continue to operate reliably. The reason why global giant Gasprom chooses technology from the market leader in high-pressure compression.

program; the turnkey project involved the construction of several high-performance gas fuelling stations in Siberia, with Petropavlovsk as the most easterly location. After completion of installation and handover, the station there had to wait to be placed into operation until it could be connected to the existing natural gas grid.

That time finally came at the end of last year, and a maintenance and installation team from BAUER travelled through the onset of the Siberian winter to start up the station at last. The team faced tough challenges, with almost two metres of fresh snow and sub-zero temperatures in the double digits; most of the station was under a heavy blanket of snow, which had to be cleared before work could start.

The team was on tenterhooks to see whether the station would start up smoothly after so long in limbo; to protect the system, the piping had originally been filled with nitrogen as a forming gas and placed under low pressure. But the station started up without a hitch,

as planned and hoped. Despite the extreme fluctuations in temperature and the years of inactivity, pressure levels had remained stable. A great demonstration of BAUER quality! Now connected to the newly laid gas grid, the BAUER system is reliably providing fuel for local truck fleets – whatever the weather. ■

BAUER KOMPRESSOREN BAUER AT BOOT 2018

boot 2018 is sure to go down in history as one of the most successful trade shows of the past decade. The BAUER stand, this time in an all-new 'dive boat' design, attracted crowds of visitors. Its most popular exhibit was the online breathing air measurement system, B-DETECTION PLUS. Headlined 'FOR YOUR PROTECTION', it continuously monitored the composition of the ambient air.



On stage at the prestigious Tauchen Award: Heinz Bauer is greeted by ovations for his lifelong dedication to safety in diving and sports diving.

Many visitors to the stand were shocked at the high levels of carbon dioxide in the hall, which rose again throughout the day as visitor numbers soared; in



Richard Schmidt relies on breathing air from BAUER on his first 'taster' dive.



A powerful BAUER VERTICUS operates continuously to provide breathing air for the Dive Center at boot.

some cases, they were four times as high as the limit values set by the current EN 12021 Breathing Air Standard. Without purification using a BAUER AERO-GUARD System for CO₂ extraction, this air would be unusable for diving purposes.

BAUER KOMPRESSOREN therefore provided a brand-new VERTICUS breathing air compressor for the new Dive Center at boot; combined with AERO-GUARD, the compressor supplied the trade show's diving fans with highly pure breathing air in compliance with the EU standard.

The prestigious Tauchen [Diving] Award turned the spotlight on entrepreneur Heinz Bauer as the guest of honour. Taking the stage to enthusiastic applause, Heinz Bauer reminisced about overseeing the launch of the first working compressor for sports diving under the UTILUS brand. Thomas Sobotta from PADI, receiving an award for the best training organisation, joined many other members of the diving industry in expressing his thanks and recognition of Bauer's achievements.

On a tour of the trade show, Heinz Bauer was treated to a personal presentation of North Sea diver Andi Peters' mini-submarine, a huge attraction in the diving hall. Peters, well-known from his successful DMAX TV series, 'Die Wracktaucher' (The Wreck Divers), has relied on BAUER breathing air compressors for over 20 years. On the Dive Tower stage, he presented his projects and stressed the crucial importance of his reliable and functioning breathing air supply from BAUER as the key to the success of his risky and challenging expeditions.

Frank Schweikert, Chair of the German Ocean Foundation, was present at the campaign stand in Hall 4 which had been set up by the ocean protection initiative, 'Love Your Ocean'. Like Andi Peters, Schweikert's research ship project, 'Aldebaran', has always relied on breathing air from a high-performance BAUER compressor system. ■

BAUER KOMPRESSOREN THE NEW PE-VE INDUSTRY

BAUER's new PE-VE systems are true all-rounders, designed for tough industry conditions. From the basic model upwards, they offer an extensive range of features plus outstanding value for money.

Available with a wide range of compressor options and many accessories, the PE-VE Series enables tailored solutions to be implemented for virtually all uses involving breathing air or nitrogen. The compressors offered in the series cover pressures from 90 bar to 420 bar, and

DID YOU KNOW?

How does the B-APP work?



Available free of charge for IOS from the App Store,
and for Android from Google Play.



The new B-APP from BAUER KOMPRESSOREN is a feature which once again demonstrates the technology leadership of the market leader in high-pressure compression and takes a further leap towards Industry 4.0. The app provides operators with simple, direct remote access to the functions of their high-performance B-CONTROL MICRO compressor control unit. Once the system's control unit is connected by WiFi to the user's smartphone, the system can be started up and shut down with a tap of the phone display.

All the main values of the system – including air quality, final pressure, and key maintenance information – can be accessed at a glance. A major plus for convenience and safety! The operator's data security is a top priority;

data is transmitted using an encrypted TLS network connection with two-way certified authentication, with password prompt before establishing the first connection. The factory setting of the control unit has a randomly generated password, which can be changed by the operator at any time for maximum security.

In addition to compressor system control, the B-APP offers a range of further functions that make it a must-have for all BAUER system operators:

The integrated dealer search rapidly locates the nearest BAUER service partner for maintenance and parts needs. The 'News' section presents useful current information on new products, product changes, service and further topics related to compressed air. The integrated unit converter and other calculation tools are enormously practical, allowing system users to calculate filter service life and determine filling time and condensate volumes.

The 'Video' section includes a direct link to BAUER's YouTube channel, with video tutorials for servicing topics including replacing filter cartridges or changing oil plus informative clips about the company and new products.

And best of all, the app is free to download from the Apple App Store and Google Play!

Heinz Bauer

free air delivery up to 620 l/min – or even up to 750 l/min with booster models – depending on customers’ needs and requirements. The PE-VE Series SUPER SILENT models feature a sophisticated soundproofed design that reduces noise emissions to the minimum.

A special highlight, the newly developed B-APP is an interface with the future. Teamed with the integrated B-CONTROL compressor control unit, the B-APP enables compressor systems to be controlled and monitored from a smartphone. A further new development is the patented B-DRAIN automatic condensate drain system, which ensures that oil/water condensate produced during compression is extracted energy-efficiently with minimum loss of pressure, low noise and low wear.

The high-pressure compressor blocks are designed for reliability in continuous industrial use. Their legendary long life is based on quality right down to the smallest detail, such as the use of plasma-nitrided and plateau-honed cylinders and ultra-low-wear piston rings. To maximise efficiency and economy in



During their exciting 90-minute talk about their wreck diving expeditions, Andi Peters and Thomas Reim invited the audience on a gripping journey to the depths of the North Sea.

operation, the compressor systems are equipped with energy-saving three-phase motors with IE3 energy efficiency rating as standard. ■

BAUER KOMPRESSOREN ANDI PETERS – WRECK DIVER

North Sea diver Andi Peters is a well-known public figure from his many TV appearances. Peters had always wanted to see for himself how the BAUER compressors he uses in his expeditions were made – from rough cast to fully operational system.

After all, in his 20-year career of daredevil ocean exploration, he has always relied on breathing air provided by the market leader for sports diving compressors. Last week the opportunity finally arose for him to travel almost 1,000 kilometres from Flensburg in the far north of Germany to Geretsried, south

of Munich. His new mobile BAUER OCEANUS was ready! The new expedition compressor had been fully tested and was awaiting collection at the BAUER plant before being put into action in the 2018 season. At the BAUER Academy, two places on a compressor maintenance course had been reserved for Peters himself and his team colleague, Thomas Reim.

After one day each learning about the theory and practice of compressors under the watchful eye of the experienced director of the Academy, Martin Stein, the two are now confident that they can carry out all the necessary maintenance tasks on the compressor themselves.



Andi Peters(left) and Thomas Reim proudly show off their new OCEANUS masTim.

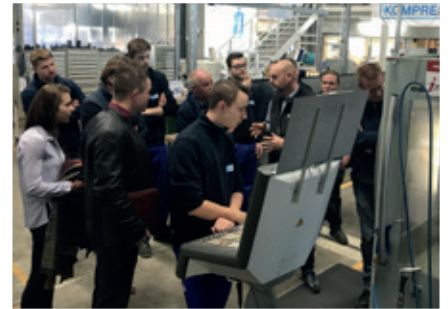


The new PE-VE Industry offers outstanding value for money.

The following day they were taken on a tour of the plant, starting with prefabrication operations and finishing at compressor assembly in the cutting-edge Werk 2 facility. Andi Peters and Thomas Reim were particularly impressed by BAUER's enormous quality assurance efforts and end-to-end quality monitoring throughout the production process.

After the tour, Peters was presented with his brand-new compressor directly at the assembly floor. In the evening, the two diving experts repaid the favour by

staging an exciting two-hour multimedia show for BAUER employees. The talk, accompanied by photos and video clips and presenting numerous original finds, traced personal stories and fates of ships' crews and passengers from history, and impressively documented the huge challenges facing man and material during diving expeditions in the ruthless, raging North Sea. ■



The thrill of technology - students at the BAUER Technology Day

turing, or CAM. In the runup to the Technology Day, new production strategies had been deployed which slashed originally programmed parts production times from 45 to 25 minutes and from 23 to 15 minutes. An important lesson learnt in how to cut unit costs and secure competitive edge. Attendees were impressed by the cutting-edge production technology. Live computer demonstrations showed how complex CNC programs are created from 3D CAD models, and how production processes can be simulated and then optimised.

The Technology Day delivered clear proof that today, training for the skilled profession of machine operator involves high-tech tasks and leads to a challenging, varied and exciting career. ■

BAUER KOMPRESSOREN TECHNOLOGY DAY

The industrial training unit of BAUER KOMPRESSOREN and UNICCOMP joined forces with technology partners SolidCAM GmbH and Max Hufnagel GmbH to welcome over 70 attendees to a Technology Day, held at BAUER ACADEMY in Geretsried in December 2017.

The audience were treated to a high-powered combination of theoretical and practical information about production expertise in computer-aided manufac-

PUBLISHING CREDITS

Published by
BAUER KOMPRESSOREN GmbH
Stäblistr. 8, 81477 München
bauer-kompressoren.de

Editorial Team
Annette Adam, Ralf Deichelmann

Texts
Ralf Deichelmann, Richard Schmidt

Layout
Annette Adam

Photos
Seite 1: Feuerweherschule Würzburg
Seite 2: Feuerweherschule Würzburg/
Hubert Sinzig
Seite 3: Nuri Al
Seite 4: Ralf Deichelmann
Seite 5: Martin Bolle
Seite 6: Ian Hunt / 2W Grafik, Ralf Deichelmann
Seite 7: Richard Schmidt

BAUER Calendar EXHIBITIONS 1ST/2ND QUARTER 2018

Exhibition	Topic	Location	Dates
BAUER COMPRESSORS Asia (BCA)			
DEEP & EXTREME Indonesia	Breathing Air	Jakarta	08.-11.03.2018
ADEX	Breathing Air	Singapur	06.-08.04.2018
Pumps and Valves Asia	Breathing Air	Bangkok	06.-09.06.2018
ProPak Asia	Breathing Air	Bangkok	13.-16.06.2018
InterPlas Thailand	Breathing Air	Bangkok	20.-23.06.2018

BAUER Calendar EXHIBITIONS 1ST/2ND QUARTER 2018

Exhibition	Topic	Location	Dates
BAUER COMPRESSEURS France (BCF)			
Salon de la plongée 2018	Breathing Air	Paris	12.-15.01.2018
Biogaz Europe	Industry	Nantes	07.-08.02.2018
NAPEC North Africa Petroleum Exhibition & Conference	Industry	Oran, Algeria	25.-28.03.2018
BAUER COMPRESSORS U.S.A. (BCI)			
AltFuels Mexico	Industry	Mexico City	23.-26.04.2018
FDIC Exhibition Indianapolis	Breathing Air	Indianapolis	23.-28.04.2018
Offshore Technology Conference	Industry	Houston	30.04.-03.05.2018
Advanced Clean Transportation Expo	Industry	Long Beach	01.-02.05.2018
NPE The Plastics Show	Industry	Orlando	07.-11.05.2018
BAUER COMPRESSORI Italy (BCV)			
EUDI European Dive Show	Breathing Air	Bologna	02.-04.03.2018
PLAST 2018	Industry	Milan	29.05.-01.06.2018
BAUER KOMPRESSOREN China (BKC)			
CIPPE Beijing	Industry	Peking	27.-29.03.2018
BAUER KOMPRESSOREN Spain (BKES)			
Dive Travel Show	Breathing Air	Madrid	17.-18.02.2018
SICUR International Security, Safety and Fire Exhibition	Breathing Air	Madrid	20.-23.02.2018
XIX Salón de la Inmersión	Breathing Air	Barcelona	23.-25.02.2018
BAUER KOMPRESSOREN U.A.E. (BKG)			
INTERSEC	Breathing Air	Dubai	21.-23.01.2018
Dubai International Boat Show	Breathing Air	Seyahi	27.02.-03.03.2018
ISNR	Breathing Air	Abu Dhabi	06.-08.03.2018
FDIC Exhibition Indianapolis	Breathing Air	Indianapolis	23.-28.04.2018
Iran International Oil, Gas and Petrochemical Exhibition	Breathing Air	Teheran	06.-09.05.2018
Beirut Boat Show	Breathing Air	Beirut	09.-13.05.2018
BAUER KOMPRESSOREN India (BKI)			
15th Annual Conference on "Hydro Power in India"	Industry	New Delhi	22.-23.01.2018
National Fire Services Games	Industry	Nagpur	02.-04.02.2018
Oil & Gas World Expo 2018	Industry	Mumbai	21.-23.02.2018
BAUER COMPRESSORS Japan (BKK)			
Tokyo International Fire and Safety Exhibition	Breathing Air	Tokyo	31.05.-03.06.2018
BAUER KOMPRESSOREN GmbH (BKM)			
boot	Breathing Air	Düsseldorf	20.-28.01.2018
BAUER KOMPRESSOREN Russia (BKR)			
International Salon - Integrated Safety and Security	Breathing Air	Moscow	06.-08.06.2018
Neftegaz	Industry/Breathing Air	Moscow	16.-19.04.2018
BAUER KOMPRESSOREN Ges.m.b.H. (POS)			
BOOT TULLN	Breathing Air	Tulln	01.-04.03.2018