



B-NEWS

THE NEWSLETTER OF BAUER KOMPRESSOREN

BAUER
KOMPRESSOREN

Quality. Our DNA

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EDITORIAL

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

2023 will go down in BAUER's history as a year of enormous challenges for our company – but also opportunities. 2021 and 2022 saw us notching up a high double-digit rise in order volume, and this positive trend is currently continuing almost unabated. Unfortunately, this situation combined with supply chain problems from the pandemic years created backlogs. At the same time, we announced an array of new products during that period. To do justice to these developments, we significantly expanded our production capacities with major investments, including a new facility in Romania complete with production machinery. Now our main challenge will be to work on reducing our delivery backlogs as promptly as possible and returning the delivery situation to our accustomed level of efficiency for our partners and customers. We are well aware of the enormous commitment and effort this will take from everyone in the company, and take this opportunity to express our warmest and most sincere thanks for your hard work and dedication.

Heinz Bauer, Dr. Monika Bayat, Philipp Bayat

BAUER GROUP**BAUER SUMMIT**

After a break enforced by the COVID-19 pandemic, the BAUER GROUP's certified dealers, A Partners and subsidiaries finally had the chance to meet up in person once again and engage in some in-depth shop talk.

Although today's conference technology is highly advanced, there is almost no substitute for personal meetings. Given this, everyone at BAUER was delighted to be able to resume the traditional sales and international management meetings this spring. After such a long break, the agendas were naturally packed. The three-day events were a whirl of technical talks, product training and final exchanges of experience. The first event was the A Partner Meeting in Munich, followed by a Certified Dealer

Meeting in the picturesque town of Aying to the east of Munich and then the International Management Meeting on Lake Starnberg. To enable the participants to relax after the intensity of the events, a varied programme of excursions had been arranged including a visit to the Allianz Arena, a brewery tour in Aying and a boat trip on Lake Starnberg. All participants expressed their appreciation of the excellent organization and are looking forward to attending meetings again in the future.



BAUER – where the world comes together.

A group photo of the Managing Directors



Days of in-depth programmes and talks



A visit to the Allianz Arena and the Bayern Munich museum – one of the standout leisure events at the A Partner Meeting



Philipp Bayat deep in discussion with A Partners



Achieving success together: BAUER sales representatives and certified dealers. New products, a wealth of information, in-depth discussions – and a tour of the traditional brewery in Aying, thoroughly enjoyed by all participants

BAUER KOMPRESSOREN

Product drive for 2023

G60 V – THE NEW HELIUM RECOVERY SOLUTION

Helium has become a scarce commodity in recent years. Given this, recovery of gaseous helium for return to the process cycle is increasingly recognized as the most cost-effective and technically feasible option, even for users with low or lowest helium needs. The new, compact G60 V adds an easy-install turnkey helium recovery system to BAUER's product portfolio. It is ideal for hospitals and clinics, laboratories and other medical institutions. The helium is captured in the integrated collection balloon and compressed to pressures of up to 200 bar by the compressor. Impurities in the medium are removed by the filter system. The compressed gas is then stored, usually in portable storage cylinders.



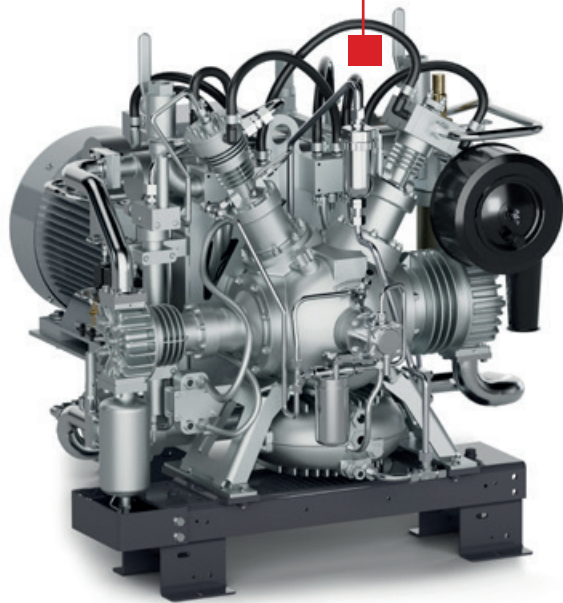
K 22 SERIES: IMPROVED PERFORMANCE AND OPTIMIZED DESIGN

The new K 22 Series is the star of the 22 to 37 kW category. Now extensively optimized, these systems deliver enhanced performance with higher final pressures at lower noise levels. K 22 Series compressors have low-maintenance direct coupling and air cooling. They are now suitable for use as booster systems for nitrogen compression. The versatile series, which is naturally also available for helium and argon applications, offers free air delivery of 600 – 4,200 l/min and a pressure range of 55 to 525 bar.



NEW INDUSTRIAL BLOCK SERIES AT COMVAC 2023

Three new BAUER industrial compressor block series have made their debut at the ComVac trade show in Hanover. Combining performance with compact dimensions, these new models raise the bar even higher. The BM Series features a three-stage pressure range extending to 100 bar, while the K 22 Series with max. 37 kW power rating – likewise air-

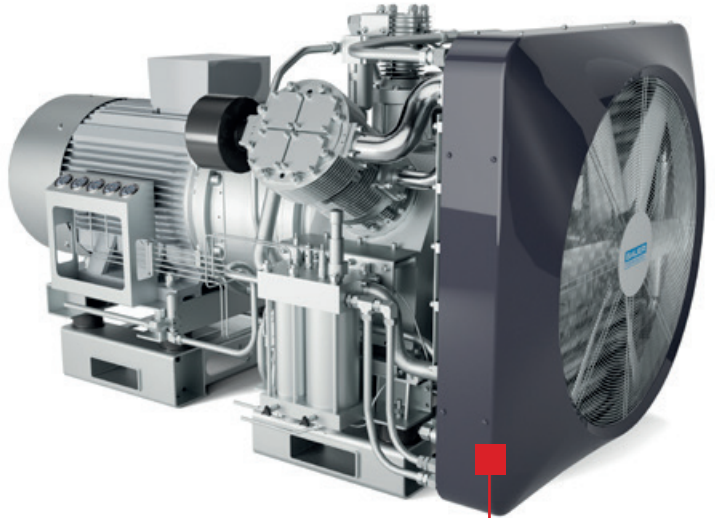


HIGH-POWER WATER-COOLED COMPRESSORS – THE NEW BK 23 SERIES

The water-cooled BK 23 Series now features significantly extended power ratings from 22 to 45 kW. The new series offers an even more compact footprint and reduced vibrations compared to its predecessor, and is available in a pressure- and gas-tight model. Available free air delivery ranges from 45 m³/h to 402 m³/h at final pressures from 25 to 420 bar. The series is suitable for applications involving air, nitrogen, helium, heliox, argon, natural gas and biomethane.

COMPACT PERFORMERS – THE NEW BM MEDIUM-PRESSURE SERIES

The new BM Series from BAUER KOMPRESSOREN is the perfect combination of performance and compact design. With free air delivery from 630 to 6200 l/min and power rating from 11 to 110 kW, these air-cooled directly coupled systems serve an enormously broad range of applications. They deliver pressures of up to 30 bar for the two-stage models, and 40 bar up to 100 bar for the three-stage models. A suite of optional features is available including compressor control unit, pressure and temperature monitoring system for all compressor stages, and air and gas purification systems. This allows bespoke configurations to be tailored to customers' individual needs.



cooled – can be used as boosters for nitrogen compression as well as offering models for helium and argon. With extensive free air delivery ranges up to 4200 l/min and pressures up to 525 bar, they can be used in a wide range of applications. The water-cooled BK 23 Series now features a significantly extended power rating up to 45 kW.



BAUER JAPAN

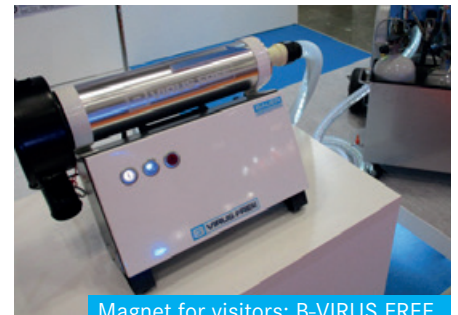
Tokyo International Fire and Safety Exhibition



Japan's leading trade show for the firefighting and disaster protection sector is held only every five years. After a long break imposed by the COVID-19 pandemic, interest in the Tokyo-based event was at its height. In just four days, the trade show attracted almost 168,000 visitors, with a total of 300 companies and organizations exhibiting.

The only manufacturer of breathing air system solutions represented at the show, BAUER's Japanese subsidiary, BAUER KOMPRESSOREN KITAKAMI (BKK), presented an extensive range of new products. The B-VIRUS FREE system on display at the stand was a magnet for visitors. As this high level of interest clearly indicated, COVID-19 and virus protection are still an extremely sensitive topic in Japan. BAUER's patented system is an uncompromisingly safe and efficient solution for eliminating viruses and bacteria of all kinds from the air before it is compressed and purified by a BAUER high-pressure

compressor into pure breathing air for use by firefighters working with breathing apparatus. When the trade show was over, BKK expressed its great satisfaction with the interest shown by visitors and anticipates that numerous concrete projects will result from the event.



Magnet for visitors: B-VIRUS FREE



Dr Monika Bayat and Philipp Bayat with the team from BAUER Japan



The BAUER stand presented a host of interesting new products.

DID YOU KNOW?

How a pressure retention valve works

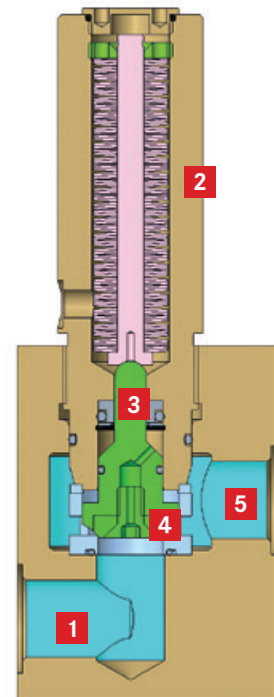
Although a pressure retention valve is one of the most important components in the compressor system, its role is unjustly downplayed. Yet no compressor could operate without it! In this article, we examine why that is, and get to know the task and function of the valve in more detail. The pressure retention valve is located downstream of the final separator and the filter system. Its job is to maintain a predefined minimum pressure in the system; as a rule of thumb, that level is around 60 percent of final pressure. In a system with, say, 300 bar pressure, the pressure retention valve would thus be set at 180 bar. The valve remains closed when the compressor starts up, and only opens when the pre-set pressure is reached. This closed valve prevents the compressor from compressing into a completely depressurized system for too long where there is no counter-pressure in the form of a pressure vessel to be filled (e.g. an empty scuba tank or storage cylinder) or downstream piping system. The pressure retention valve only opens once the pre-set minimum pressure has been reached. This is necessary for various reasons. One is the free piston that can be found in the final stage of all BAUER high-pressure compressor blocks. As it is unconnected to the crankshaft, it requires an appropriate level of counterpressure in order to function. The pressure



Pressure retention valve with check valve

retention valve allows pressure to build rapidly in the relatively low-volume interior of the compressor. This enables the free piston to operate smoothly. But the valve has a further important function for the air purification system. Without the pressure retention valve, the cartridge filter system would undergo a sudden and extreme loss of pressure upon system shutdown, condensate draining or venting of the filling panel piping, followed by a rise in pressure. This process would expose the filter housing – which is made from special aluminium alloy – to high cyclical loads that would result in premature fatiguing of the material over time. The higher the pressure difference, the more extensive the impact of this process. The pressure retention valve

works in tandem with a check valve to minimize loss of pressure, thus significantly increasing the service life of the filter housing.



- 1** The compressed air enters the pressure retention valve through the input bore.
- 2** A spring provides the force necessary for the valve piston **3** to close the through bore **4** while the compressed air is still at a pressure below the pre-set value of the valve.
- 3** Once the pressure setting for the pressure retention valve is reached, the pressure pushes the valve piston up to allow the compressed air to flow through the output **5**.

BAUER KOMPRESSOREN

BAUER in action

Wreck diving – an art in itself

Wreck diving can cause enormous damage if it is not professionally performed. Non-profit diving organization Segeltaucher e.V. is committed to training divers in this field by holding underwater archaeology courses. Both the theoretical and practical parts of the course take place on board a sailing ship – an exciting prospect! The first tour in early summer was destined for the northern Adriatic, where a German “Molch” midget submarine was located and surveyed. Renowned underwater archaeologist Dr Florian Huber personally headed the courses. A portable JUNIOR II diving compressor on board the ship



provided the participants with the breathing air they needed. ■■■

PE 100 goes on a world tour

Fortune favours the brave! In this case the ones with a big, bold plan are Swiss radio journalist Karin Wenger and her German partner, electrical engineer Alexander Kiermayer, who decided to

up sticks and spend several years travelling the oceans of the world in their own sailing boat. Their aim is to investigate and document the ecosystem of the oceans and communicate their knowledge to a broad public. Although the couple only learnt to sail in 2021 during the pandemic, they bought their ocean-going 13-metre sailing boat in 2022 and named it Mabul. They needed a breathing air compressor for their planned diving expeditions which had to be compact



Tense with anticipation of the weeks ahead – the team before setting out on their reconnaissance trip

and rugged, but most of all reliable, functioning smoothly even in the most remote corners of the world and requiring universally available consumables like oil and filter cartridges. No question, then, that the only model that ticked all their boxes was a BAUER. The mobile petrol-powered PE 100 which they chose has already allowed them to go exploring the fascinating underwater world off the Caribbean island of St. Maarten, which they reported in their blog. We will follow the intrepid duo on their world tour and post regular reports as they head to Cuba, Mexico and Guatemala before later crossing the Pacific.



Delighted with their new BAUER PE 100, the team can finally now go underwater!

Complete blog and podcasts:



FireFit with BAUER air

Strong season start in Mainburg – powered by BAUER air

The FireFit Championships Europe are where the toughest members of the firefighting sector pit their strength over an incredibly challenging course of

tasks and obstacles. Fortunately, the weather played along for 2023's opening event in Mainburg on 6 and 7 May. It was a great start to the year's season and saw over one hundred firefighters from Germany, Austria, Poland, Czechia, Slovenia, Hungary, Belgium, Norway, the UK and the USA battle it out to win the coveted trophies. The contestants faced challenges including sprinting while wearing full-scale breathing gear, which consumed the last drop of their energy. As in

previous years, the contest organizers relied on a high-performance VERTICUS 450 high-pressure compressor from BAUER KOMPRESSOREN to meet the enormous need for safe, pure breathing air throughout the contest. The compressor will be in use throughout the entire season.

More information:



BAUER's high-purity breathing air is essential to complete these physical challenges in full face mask.



The new B-FILL filling panel sailed through its first continuous challenge

BAUER events

TRAINING FAIR

The Heinz Schneider Ice Sports Stadium is more accustomed to hosting ice hockey teams as they battle it out on the ice – but for one afternoon, it was taken over by the annual Geretsried Training Fair. BAUER occupied a central position amid the 80 exhibitors present in the hall. The stand featured an animated cutaway model of a compressor block showing all the pistons and rods in motion, which attracted plenty of attention among the young engineering and technology buffs in the crowds. The youthful team at the stand, the majority of them still trainees themselves, were kept busy providing information about the variety of apprenticeships and trainee places on offer at the BAUER GROUP, from mechatronics technicians to degree courses combining work and study. Backed by the knowledge and positive experiences they had gained

during their training, the BAUER team were well able to advise the young fair visitors in detail. And judging by the growing stack of “instant applications” collected throughout the fair, they clearly did a great job of convincing prospective trainees. ■■■



BAUER GROUP AT THE ALPENLAND FUN RUN IN GERETSRIED

The popularity of the Alpenland Company Fun Run in Geretsried has grown so much that the upper limit of 2,500 was almost breached this year. Participation by BAUER GROUP employees was also up by one-third on the previous event, with 33 runners entering the competition under the company name. Local radio station Radio Arabella whipped up a great atmosphere among the spectators and competitors, with non-stop upbeat music and professional DJs. As an event sponsor, the BAUER GROUP kept the flag flying by bringing along its legendary VERTICUS beer dispenser. This unique piece of kit attracted lots of attention; a diving compressor that dispenses beer instead of breathing air was a complete novelty for the crowd. It got hosts of “likes” from the spectators crowding the finishing line and clearly ended up as the unofficial “public’s choice”! ■■■

SCHOOL PROJECT SPONSORING

Geretsried School Centre opens its own MTB trail – with BAUER as sponsor

“Spring is a time of new beginnings!” announced school head Christoph Strödeke at the opening of the school’s new mountain bike trail, which forms part of a project seminar aimed at encouraging the sport. In future, the banked curves, ramps and wooden boardwalks of the 100-metre course next to the school building will enable students to hone their fitness and biking skills. The statistics barely do justice to the huge amount of toil and trouble poured into the trail over the past 18 months

by the project group, headed by sports teacher Moritz Kraus: its construction involved excavating and moving a total of 200 tonnes of soil and gravel. Despite the school’s determination to complete as much of the work as possible in-house, the remaining costs came to almost EUR 13,000. This was where BAUER KOMPRESOREN took part as a sponsor for the funding needed for this outstanding and very worthwhile project. At the opening, BAUER’s representatives Ralf Deichelmann and Peter Ott simply couldn’t resist trying out the course for themselves. Their conclusion? A pretty challenging course that’s a whole lot of fun!



ECO-INCENTIVE FOR EMPLOYEES

When it comes to optimizing processes within a company, the employees are often the leading source of effective ideas. This applies to sustainability as well – and perhaps most of all. It’s a topic that takes centre stage in the BAUER GROUP’s management strategy. To implement the company’s ambitious sustainability goals

and targets even faster and more effectively, an ideas competition for employees was launched – and was a resounding success. Response was overwhelming, and the initiative delivered a wealth of excellent and thoroughly feasible ideas that can be put into practice in the near future. The first prize went to Kristijan Jardas for an innovative recycling concept in the logistics sector. His unique design for reusable packaging will enable significant savings on materials to be made in the future. All other ideas, covering a wide range of areas from eco-friendly mobility to energy-saving, were deemed equally worthy of appreciation – so all other entrants were presented with “second prizes” comprising a certificate plus a cash prize and a jar of organic honey from BAUER’s own beehives in the company grounds.



BAUER CHINA

BAUER KOMPRESSOREN in China



BAUER KOMPRESSOREN CHINA is setting up a new production facility in Jiangsu, near Shanghai. The facility, which will have an area of 7000 sqm, will provide the necessary manufacturing capacity for the successful new BM medium-pressure Series.

Since its debut this April at the industry's leading trade show, ComVac in Hanover, the new BM medium-pressure compressor series has seen instant market success. With numerous enquiries and orders from a wide range of industry sectors including automotive, hydropower, maritime and mining – particularly from the Chinese market – it is clear that demand will grow rapidly in the near future.

To provide the necessary production capacity, BAUER KOMPRESSOREN CHINA (BKC) recently established a custom manufacturing facility in Taicang, Jiangsu, near Shanghai, with an area of 7000 sqm. In the initial phase, the swiftly expanding staff at BAUER KOMPRESSOREN JIANGSU (BKJ) is receiving active support in terms of personnel, with operational and engineering teams from BKC's headquarters at BAUER KOMPRESSOREN SHANGHAI (BKS) providing reinforcements.

Over the next two years, the systems currently on the market will be joined by further products to bring the BM Series up to a total of 18 models in the 50/60 Hz category. The BM Series will then cover the entire pressure range from 3 to 100 bar and can provide tailored and ultra-cost-effective solutions in BAUER's hallmark

quality for virtually all applications and markets in these pressure categories. ■■■

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Ready for shipment –
BM systems from the new facility in Jiangsu