



The extremely resistant titanium impeller is a symbol of the high quality of the BOGE HST series.

HIGHLIGHTS

- The beginning of a new era:
Series production
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"Driven to change ..." is now "ready to roll"!

Successful series production start-up

Dear Readers,

The model offensive, begun in 2014, has come to fruition, and we don't just mean the sudden brilliant success of the new BOGE HST series. Whilst the development was significantly inspired by aviation, BOGE's Marine Products division is now looking at conquering the sea: The starting air compressors for diesel ship motors, sea-worthy screw compressors for the process air on board and nitrogen generators are specially geared to needs aboard ship. You can find out why we feel like we are in our element here on the next pages.

Other new technologies from BOGE – such as the oil-free scroll compressors in the EO series – were also greeted with great enthusiasm. Obviously the revision and expansion of our product range has hit the target with great success!

We hope you enjoy reading our magazine.

Wolf D. Meier-Scheuven
Wolf D. Meier-Scheuven,
Managing Director

Thorsten Meier
Thorsten Meier,
Managing Director

The extremely rewarding resonance to BOGE HST technology after it was unveiled in Hanover triggered a complete rethinking of more than just the size of the scheduled manufacturing.

Of course, we had high hopes for the product innovation, but the extent of the enthusiasm exceeded all expectations. Compared to the last ComVac, we had many more visitors – including requests for interviews every 5 minutes – and the entire trade fair team surpassed itself coping with the crowds at the BOGE stand. It quickly became evident that the internal time schedule for the roll-out was going to need rethinking in view of the actual demand. But fortunately, the flurry of activity that BOGE unleashed in Hanover transferred itself to the entire team in the main plant in Bielefeld. We were able to deliver the first models from the series production right on schedule.

All evaluations positive in the press

The "Neue Westfälische" newspaper reported in its online portal that BOGE "makes its competition nervous", and the trade journal "Process" even introduced BOGE's new HST compressor with the title "Game Changer?". Whether in Europe, USA, Australia or New Zealand – all the news scoops

about BOGE sounded practically euphoric. The detailed reporting in the most important trade journals, such as those for the chemical, auto and food industries, gave us particular satisfaction.

Clever campaign management

The fact that a medium-sized company from Bielefeld could create so much excitement with its provocative message "Driven to change the established" also shows how well prepared the BOGE trade fair team was. Weeks ahead of the effective media unveiling at the ComVac, BOGE had whetted appetites for the

upcoming presentation: Weekly mail shots carefully revealed isolated bits without giving away too much. In the end, BOGE was able to register 23% more leads from this year's Hanover trade fair than in 2013! Surrounded by clusters of people during its demo run, the HST show object "Optimus" turned out to be just as big a hit as the virtual roller coaster ride through the interior of the BOGE HST compressor using Oculus Rift 3D glasses or the 'shower of sound' which demonstrated the noise difference between an oil-free screw compressor and a BOGE HST model.

Continued on page 2



Focus on the BOGE HST prototype "Optimus" surrounded by the highly motivated trade fair team.

Continuation from page 1

Mature, but potential far from exhausted

Roll-out for the BOGE HST series has begun

Our high speed turbo compressors satisfactorily passed almost a hundred thousand operating hours of hard beta testing in many different sectors. After perfecting the production processes, the series production began with models HST 220, HST 110 and HST 55, as planned.

Not a single doubt remained at the end of the extensive test programme concerning whether the BOGE HST compressors are only for "fair weather" use: these models

had proven themselves in demanding day-to-day conditions. Even exceptional requirements presented no unmanageable obstacles for the high speed turbo technology: A large chemicals company had us equip a BOGE HST 220 with stainless steel coolers in order to resist the aggressive water used on location...as well as to help improve the efficiency rating, even under more difficult conditions. The advantages of the absolutely oil-free quality of the BOGE HST technology is predestined for many other industries and sectors as well,

such as painting lines, food production, pharmaceuticals or the semiconductor industry.

Betting on "downsizing" for reaching new heights

The fact that less is sometimes more is never as evident as with the BOGE HST series: Permanent-magnet motors are used to



Only half as big as an oil-free screw compressor: BOGE HST-55



Shaping up for special tasks with stainless steel coolers: BOGE HST 220 ready for chemical companies roll-out

eliminate gearing, and design engineers at the same time cleverly devised an air-supported drive shaft which also saves on the high-maintenance oil system. Oil pumps and fan motors also disappeared from BOGE HST technology and the number of remaining bearings and seals were successfully minimised. The consequences resulting in a significant reduction in overall size. It also made a quantum leap in performance possible, with up to 30% savings in the overall costs.

Idea with broad effect

To leverage BOGE's cutting edge HST technology to an international breakthrough,

and to convince people of the new product's system advantages, it was sent off on a 'roadshow'. Resonance was unilaterally outstanding, and the positive reporting in the trade press provided the best musical accompaniment that we could have imagined.



To learn about it with no obligation simply scan the QR code. Or, go to boge.com/hst to find out more.

International shipping industry in sights:

Launching of BOGE Marine Products

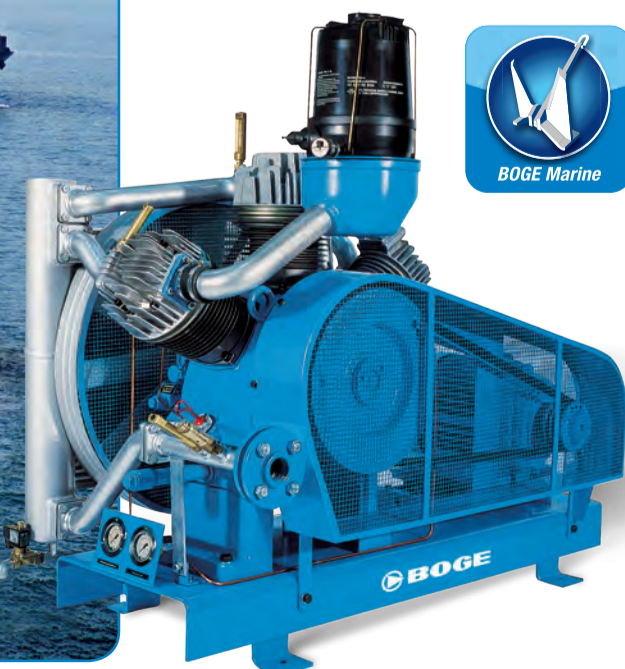
After months of adjustments to selected components for the specific requirements of sea travel and procuring the necessary certifications, nothing more is standing in the way of the "Marine Products" programme launch. And with a first-rate captain on board, there is every indication for a successful launch: Ronald Engberts – employed

with Atlas Copco in the marine sector for more than ten years – will be at the helm of this unit.

BOGE is on course for the shipping sector as of immediately: The products, which were specially developed for the challenging conditions at sea, include starting air compressors (SRH and RH series), process air compressors (special marine screw compressors), nitrogen generators (PSA and membrane) and integrated systems. Ronald Engberts knows exactly what the commercial marine trade particularly values, thanks to his many years of



Reliability whilst on the high seas is indispensable – and that speaks for the success of BOGE's new business segment, Marine Products.



"Stricter regulations have brought a lot of things into motion in the marine sector ...which plays right into our hand".

Assuming the helm of the BOGE Marine Products in April 2015: Ronald Engberts

experience and his good contacts to various international shipping companies.

Ready-to-go systems with high life expectancy

Port docking time means high fees, which is why BOGE is delivering complete, plug-and-play compressed air systems on board. Irrespective of whether a receiver, dryer or oil level monitor is included - everything is already pre-installed and wired. All typical requirements at sea have been thought through: Besides the starting air for the ship's diesel motors, air for maintenance and repair work is needed as well as for cleaning the tanks (with nitrogen). The starting air compressors in the SRH / RH series play a central

role and have a few tricks 'up their sleeves': They supply consistently high pressure, are immune to the high operating temperatures in the machine room and promise a long lifespan thanks to air-cooled pistons. Minimal maintenance, high reliability and recognised high efficiency – these are arguments that put wind in the sails on any of the high seas/oceans of the world. BOGE will be officially baptising its Marine Products at the "Europort Maritime" in Rotterdam, Holland in November



To learn about it with no obligation simply scan the QR code. Or, go to boge.com/marine to find out more.

From the S, SL and SLF series development

Already a level further in terms of efficiency

It is no coincidence that the compressed air world is following the development of the BOGE S offshoots 110 kW & above with excitement: All models in this fifth version will soon have a new 'effilence' airend, which should set standards for efficiency ratings in this segment. The first prototypes have already confidently proven that the high expectations are justified.

What usually sounds like 'business as usual' in the dry words of commonly taciturn project managers, is in reality a small sensation: "At the beginning of this year we were able to complete the development of a new airend in the 132 to 315 kW output range". This means the beginning of a new era for BOGE, even though some derivatives in the S series had to be fitted with outsourced "airends". Now, for the first time, there is also an 'effilence' airend of this same magnitude which successfully passed the tough continuous test in an SLF271 for many months.

In-house development with perspective

The new airend is predestined to gradually replace the models in use up to now. A recently completed test run in a BOGE SL 181 was very promising and confirms the superiority of this new 'effilence' – both for the efficiency ratings as well as the noise emissions. These new models appeal especially to companies with a high demand for compressed air. The prototypes, which are currently in service in a power plant, a plastics manufacturer and the meat processing industry, certainly meet all expectations in this regard. All BOGE screw compressors will gradu-



The new BOGE 'effilence' airend covers the output range from 132 to 315 kW.

ally be equipped with this particularly energy-efficient, in-house airend development.

A tight schedule

The ambitious expansion of the S series is currently moving ahead briskly, and the next-stage goals have already been incorporated into the schedule. According to it, the next round of ideas begins with the direct drive SL181 to the SL271, which goes into series production in October 2015. Shortly thereafter, the first

frequency controlled models, SLF181-SLF271, as well as the S271-S341, will be delivered, and, before the end of this year, the S151-S220 and the SL431-SL480 should be ready for series production. This fast-paced schedule can be explained by the fact that many parts currently in production can be used: For instance, the new SL models fall back on the predecessor design for the coupling housing, the coupling and the oil receiver and they even use the intake controller from the current airend.

Oil-free up to 40 bar: K 15 Booster ready for service

With its proven push-rod principle, the new BOGE K 15 Booster ensures immediate high pressure for optimal cost effectiveness. Not only is it slow to wear with its oil-free booster piston compressor in the up-to-11 kW class, it simply has no competition.

Effective sound insulation

PO compressed air systems are surprisingly quiet

An optional supplement to the PO series – a specially developed sound insulation hood which reduces the noise level by up to 10 dB(A) using intake and outlet sound insulation – has been available to order since 1 October.

Development in process: New S series



The detailed information about the design changes in the existing S series was clearly part of the 'hot news' for many visitors at the BOGE trade fair stand in Hanover. The development phase for the 4th generation of this successful build series is not yet complete, but some of the important goals for certain stages have already been achieved. A behind-the-scenes look:

The lively feedback on the announcements at the ComVac show why the development of the future S series has a high priority for BOGE. The S series is not only a technology carrier, it is also a pioneer for all further advancements in the area of screw compressors in the 22 to 355 kW range.

The standards have been set purposely high

With the next S series BOGE wants to introduce the quietest models of its type. This goal has already been achieved, according to Frank Hilbrink, Head of Product Market Management: "The radial fan, the redirection of the cooling air and the separation of compressor and receiver perceptibly lower the noise level". Anticipation of 35-40,000 hours of maintenance-free drive operation, however, seems to be even more electrifying. Although the efficiency ratings have already been reached, completing all the developments still has a long way to go. Which is why availability for orders has currently been cautiously set for the second half of 2016.



Finally proven in the laboratory:

EO series is ready to go

BOGE's new EO series must have passed the last tests with bravura: Whilst the series production had been set for the end of 2015, surprisingly, the first BOGE compressors of this build series were ready for order on 1 October.

The specification guidelines for the new compressor type were clear: It should be possible to use it directly in the workplace, i.e., it has to fit through a normal doorway, and staff exposure to noise or vibration should be as low as possible. Dealing with highly sensitive applications in laboratories or clinics requires a great deal of concentration. In addition, the high levels of pressure needed must naturally be 100% oil-free. This quickly caused BOGE engineers to think of a scroll compressor.

Ideal for easily adapting to needs

Scroll compressors (also known as spiral compressors) not only produce 100% oil-free compressed air, but also deliver high

pressures thanks to a very variable arrangement of the worm gear – optimal for easily adapting to needs. That's how the first BOGE EO series got its start (eccentric, oil-free). This has nothing to do with an eccentric nature, however, as the name might imply, but rather its quiet operation and modest needs for maintenance. Compact, almost free of any vibration and quiet as a whisper – these properties will make the BOGE EO compressors quickly enliven the up-to-22 kW segment.



To learn about it with no obligation simply scan the QR code. Or, go to boge.com/eo to find out more.

Compact and undemanding thanks to a minimum number of moveable parts: BOGE EO 22 D





From traditional C-Day to ComVac 2015

A festival of innovation



The stand-outs from the in-house C-Day prior to the trade fair carried over to the ComVac fair in spring 1:1. In a lively and relaxed atmosphere, one met as equals, laughed, and speculated with pleasure what BOGE might have cooking.



Sometimes it takes a neutral glance to discover the difference: Commentary from many ComVac 2015 visitors said the mood at the

BOGE trade fair stand was clearly more upbeat, hearty and exuberant than with some of its competitors. In addition to the fireworks ignited by the new HST series, the product offensive covering a wider spread and the innovative concepts for controlling the after-market were responsible for this. BOGE was well-prepared, especially for the theme of the trade fair, Industry 4.0.



It pays off: reliability
Energy-saving option FU fan



The BOGE S series will be available with a frequency controlled fan starting with model S61-3 and upwards. The advantage of regulating the generation of cooling air flow in relation to your needs is that it qualifies the unit for subsidies from the BAFA programme.

- Reduced energy costs
- Lower sound pressure level
- Smaller CO2 footprint

BAFA INCENTIVES*

* Federal Office of Economics and Export Control (BAFA) makes subsidies available to the German market

Promising order start for C 15 (D)R

Trend toward integrated solutions

The gratifyingly positive feedback for the new BOGE C 15 (D)R proves that **plug-and-play integrated solutions are in trend. Especially when they are so convincingly combined in every aspect as here: Compressor, dryer and receiver all share scarce floor area; even F.P- / F.M filters and oil-water separators are pre-installed on request.**

The C 15 (C)R is also a great demonstration of what happens when a practical orientation is carried through: Because all essential components are integrated into the package as an option to satisfy each customer's specific needs, installation time is minimal. And since piping and connecting lines are dispensed with, leaks are virtually eliminated.

Flexibility that pays off

Thanks to the intelligent arrangement of the components, the C 15 (D)R is about 2-3 dB (A) quieter than the C 15 –

which makes it ideal for placing the compact unit even closer to the working area. The build height was also limited to 2 m maximum so that the undertaking doesn't end up failing at the first standard-sized door it encounters. With its minimal space requirement and low noise emissions, this flexible 'plug-and-play' solution meets some of the most important specifications of the development. The new BOGE C 15 (D)R promises to quickly penetrate the market, as can be seen by not only the attractive price structure, which is one of the strongest arguments, but also the reduced installation costs.



Here it becomes even easier to read - just scan it and learn more. boge.com/cdr



Efficient, compact and ready to connect with everything attached – the C 15 (D)R is ready to start ordering

Success through consistent customer orientation

Interview with Jonathan Zhang of BOGE China

China is again playing a big role in BOGE's global growth strategy. Jonathan Zhang, General Manager at BOGE China Ltd. explains why the company's market potential is far from exhausted in spite of a cooler domestic economy.



AIRMAG: Many insiders are concerned about the current economic development in China. Is BOGE's involvement in this market at risk?

Jonathan Zhang: Just the opposite. Economic growth in our country did not just start slowing down yesterday. Contrary to the trend, our operating results for 2014 were significantly higher than the previous year in spite of a general cooling. The consequences for our specialised market are being felt more by others who are not positioned as well as we are. While it's true that competition has become harder, we

look at it as a welcome challenge. For instance, up until recently, we were dealing with about 250 competitors. Now we can see that the deceleration has also led to a market shakedown. Incidentally, most economists would be happy about the growth figures that China is recording now as before.

AIRMAG: Where do you see the biggest opportunities for BOGE?

Jonathan Zhang: At the moment, our government is in the process of setting the course for increasing the percentage of oil-free compressed air over the medium term, among other things. But we are already seeing that our high reputation in the oil-free sector is reviving demand. Our strategy of putting the focus on oil-free is already paying off. In addition, BOGE has a series of growth drivers ready to continue vitalising the business in the future as well. We are moving in a lucrative field of high-end markets, from the automotive and pharmaceutical industries through to special gases and the PET industry.

AIRMAG: Which BOGE products and services are particularly in demand in China?

Jonathan Zhang: The latest expansions in our portfolio have put us in the fortunate position of being able to cover the changed demand in an ideal way. The new BOGE HST series hit the bull's eye precisely. But other high-tech products, such as oil-free compressors in the SO series, the

BLUEKAT converter technology, and large oil-injected screw compressors are also highly in demand. It's also helpful that we can now supply oxygen and nitrogen generators as a total package. And of course, the topic of 'energy recovery' is becoming a real driving force.

AIRMAG: Then, the strategic market positioning of BOGE China has proven itself?

Jonathan Zhang: It certainly has. Our commitment to a consistent customer orientation and qualitatively high-end compressor solutions in the oil-free segment will increasingly bear fruit. Besides our differentiated product portfolio, our services which specifically contribute to energy savings are currently popular. That is what makes us so confident that our market share will continue to grow.

AIRMAG: Thank you for the interview and we wish you lots of continued success!



Baton passed in BOGE America board

Spirit of optimism in the USA

It was already back in August 2015 that Nitin G. Shanbhag was appointed new Vice President and General Manager of BOGE America, Inc. For Gavin Monn, Senior Vice President Sales at BOGE and CEO of BOGE America, the appointment of Shanbhag is the "key to further growth in the whole of America".

Nitin G. Shanbhag brings with him more than 18 years' experience in the American compressor industry. At Ingersoll Rand, the graduate engineer initially concentrated on system technology as was to be expected with his qualification. But he soon discovered his interest in the commercial side, and there followed periods of working in sales and product management at the company. When Hitachi America offered him the chance to build up the compressor division, he seized the opportunity and soon took over central managerial tasks at Hitachi. Now that BOGE was able to take Nitin G. Shanbhag under contract, the first thing on the agenda for him was to make an inaugural visit to Bielefeld and Großenhain. Although, regrettably, the time was too short for an interview, **AIRMAG** was still able to put a few questions to him. We wanted to know what opportunities Shanbhag sees for BOGE in this gigantic market that also takes in Canada and South America.



"I am quite impressed with the culture of innovation and the people at BOGE. A group I am glad to be part of."

Nitin G. Shanbhag, since August 2015 new General Manager and Vice President of BOGE America, Inc.

We were also, of course, interested to know which goals he intended to pursue first.

"It's important to market the added value more intense".

"Of course, I've been following closely what BOGE America has done since it was founded in 1999", writes Shanbhag. "The successes that BOGE has met is reflected in our partnerships with Top-Tier Distributors. Growth of sales partners to a higher standard will be critical for increased success in the marketplace. Our cutting edge technology advances are directly mapped to customer value. This value is a prime goal to communicate more intensive – in direct interactions with customers, via the web,

in advertisements, sales literature, social media, etc."

A Stronger Team & Result in the America's

Currently, Shanbhag is strengthening his team so that, in 2016, all the product innovations that are ready can be introduced to the various markets. He is pursuing ambitious targets for consolidating earnings and profitability, but he is aware that, "this can only be achieved with a dedicated team. That's why we are currently optimizing internal processes. In view of the high technological benchmark aspired to in Bielefeld and Großenhain, our market opportunities are likely to be understated, however."

IMMERTECHNIK

TEN YEARS OF BOGE IN RUSSIA

How time flies: It's already been ten years since the JSC Immertechnik company was founded, and our Russian business partner has been steadily supplying the domestic market with BOGE products ever since. Wassili Kornelsen, BOGE Area Sales Manager, is particularly pleased about this year's anniversary because he was the one who was so enthusiastic about this potential business partner's company concept that he spontaneously invited them to the Hannover Messe 2005. The figures prove that his intuition was right. Immertechnik became one of the authorised business partners with the strongest sales revenues.



Immertechnik Sales Head, Vladimir Alyakin and Company Owner Mikhail Litvinov beside BOGE Managing Director Wolf D. Meier-Scheuven, Gavin Monn, BOGE Senior Vice President Sales and Wassili Kornelsen, Area Sales Manager at the presentation of the anniversary certificate at ComVac 2015

Full service according to BOGE

The company not only handles delivering and installation, but also takes care of technical support, spare parts and aftermarket service. With BOGE products and our service concept, JSC Immertechnik has meanwhile made a name for itself on the Russian compressor market as a problem solver in the area of industrial compressed air. BOGE warmly congratulates the JSC Immertechnik company and wishes them lots of continued success!

Einhaus is betting on BOGE BLUEKAT

Container solution for innovative painting company

The Heinz Einhaus GmbH Industrie lackierung is a prominent player for many notable system suppliers in the auto industry. When developing a new coating technology, only one company – for many reasons – came under consideration for compressed air: BOGE.

At Einhaus, all parts that make up an automobile, whether metal or plastic, big or small, are painted. From attached parts for the bumper to the outside mirrors. When BASF, one of the largest paint and varnish manufacturers in the world, brought a new coating technology (valure™) onto the market in 2014, the requirements for compressed air quickly shot up: valure™ makes it possible to apply soft touch paint coatings, leather grains and many other types of surface qualities to the most varied substrate material, but the compressed air must be completely free of any substances

which could interfere with the paint spraying, such as silicone, oil, dust or water.

A case for BOGE BLUEKAT

This is where BOGE comes on the scene because currently there is only one technology that can combine all of these requirements in one machine – BOGE BLUEKAT technology. These models work with an integrated converter, which reliably oxidises hydrocarbons (oil) into water and CO₂, and simultaneously eliminates micro-organisms and bacteria, which is also seen as a plus-point for painting operations. No residues are left, and the converter, which has an overload protective device, cannot exceed its capacity, thereby eliminating any chance of an oil breakthrough. The outcome: Class 0 oil-free compressed air and water-white condensate.



Ultra-clean atmosphere, thanks to BLUEKAT: The integrated converter also eliminates micro-organisms and bacteria



The compressor container is insulated to withstand winter conditions and shields the space underneath it as well

Everything in a 20 foot compressed air container

At Einhaus, it was decided that a BOGE container solution would be the right one for the space because, in addition to the demanding compressed air treatment

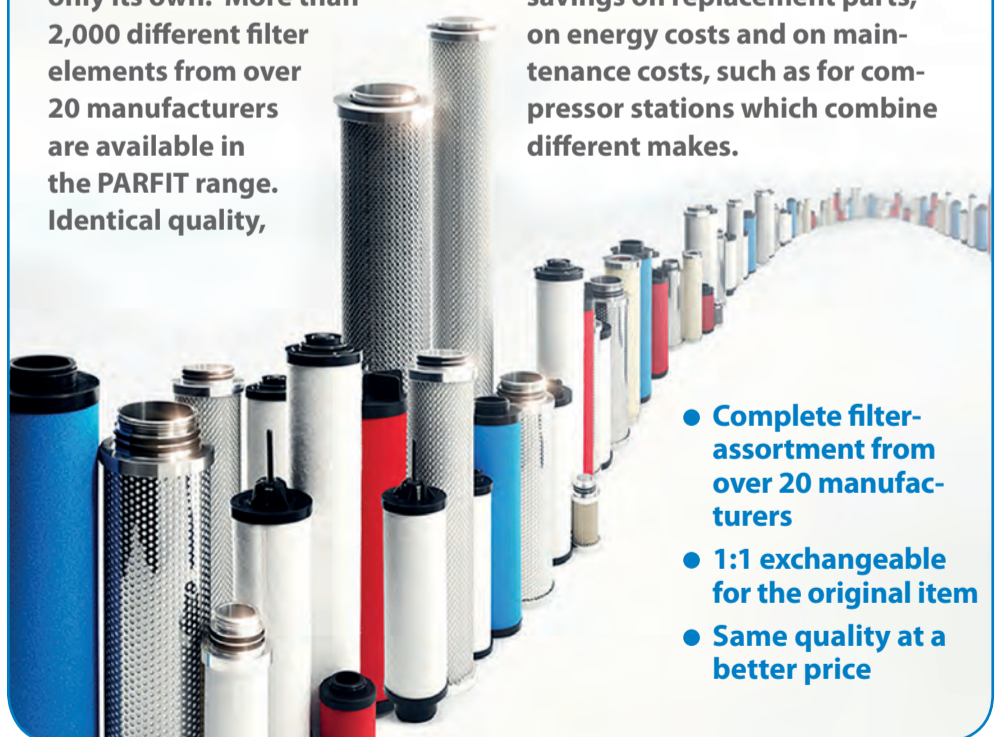
concept, the SLF 40-3 BLUEKAT also has a cyclone separator (both 8 bar), mains isolator switch, inlet and pre-filters, a refrigerant dryer, micro-filter and receiver. From sub-distribution and electrical installation to pipes and the ventilation and venting, everything is cabled ready to plug in.

Filter assortment from over 20 manufacturers

Filter exchange? BOGE 'parfit'

As of immediately, BOGE now supplies exchange filters for all common compressors – not only its own. More than 2,000 different filter elements from over 20 manufacturers are available in the PARFIT range. Identical quality,

but at sometimes significantly better prices than the original. That means multiple savings: savings on replacement parts, on energy costs and on maintenance costs, such as for compressor stations which combine different makes.



- Complete filter-assortment from over 20 manufacturers
- 1:1 exchangeable for the original item
- Same quality at a better price

Beverage industry bets on

BrauBeviiale2015

Raw Materials | Technologies | Logistics | Marketing

BOGE shows the energy-intensive beverage industry multiple ways to combine production of class 0 oil-free compressed air with significant savings at the Brau Beviiale in Nürnberg

flexible: They can be configured as a duplex unit on one receiver or as a central compressed air unit with receiver and dryer.

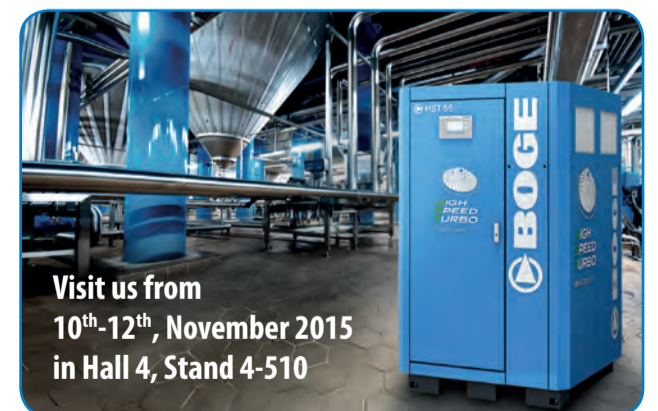
Not only oil-free, but clean

Of course the proven BOGE BLUEKAT technology will also be present at this trade fair, as the converter even has it in for micro-organisms.



The focus here is the innovative BOGE High Speed Turbo compressors which are not only quieter, lighter and more compact

than conventional oilfree screw compressors, but can also reduce overall costs by up to 30%. The new EO models with scroll compressors and the particularly energy efficient PO series also come into play here. Whilst the compact models in the EO series shine with minimum vibration and run as quiet as a whisper, the piston compressors in the oil-free PO series are particularly



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Feedback

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