

Manometer



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21 | 2018



Sauer Compressors

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We can do that too!

Dear readers,

In recent years, Sauer Compressors has carved out a leading position in the commercial shipping, industry and naval marine sectors.

Our success formula is based on modern, high-quality products that provide our customers with value and long-term benefits. Our highly motivated employees know what our customers need and speak their language. Last but not least: they show stamina and focus. These are typical features of medium-sized, entrepreneur-led companies, that do not allow themselves to be deflected from the course they have identified as correct by vague trends.

A good example is the Japanese shipbuilding market – an extremely complicated and demanding market that we have been supplying for over 15 years. With our state-of-the-art 3-stage air-cooled compressors, we have achieved a market share of over 25 %. Another example is the navy sector. With the WP 5000 high pressure compressor, as a stand-alone solution or at the heart of a central high pressure system, we now equip almost 80 % of all modern ships from international naval fleets worldwide. We increasingly act as a system provider or turnkey supplier.

Our formula is also helping us make continuous progress in the industrial sector. To be even more effective in this market, we have defined a new target segment in the petro industry. This covers all gases that are produced or used in exploration, transportation or processing of oil.

In this segment, as well as the well-known modular water-cooled compressors from the 6000 series, the oil-free and gas-tight HAUG piston compressors are proving very successful. For example, they are used for environmentally harmful gases, where 100 % tightness is essential.

To serve the petro industry, we have brought in experienced people to strength our sales and technical teams. We can also make use of the HAUG specialists and the know-how of our sister company in the USA.

We are certain that when it comes to the petro industry, we can do that too. Find out for yourself at ACHEMA 2018. We look forward to meeting you!

Yours sincerely,



HARALD SCHULZ

[SAUER SNAPSHOT]





Sauer Compressors China Ltd. opens new headquarters in Shanghai

Major celebrations at Sauer Compressors China Ltd. in Shanghai! The Sauer subsidiary has grown and is now located in extensive facilities on the 4th floor of the China Merchants Shanghai Centre.

A ceremonial opening on February 7, 2018, which according to Chinese tradition will bring good fortune and success, was celebrated by Directors from Kiel, Hendrik Murmann (on right of picture) and Dr. Edgar Schmitt, along with Karsten Jäkel (on left in picture), Director in China, his employees, long-standing trading partner Hoi Tung and other invited guests.



10 years together: Sauer and Induma Máquinas Industriais LDA

The 10-year anniversary of the partnership with Induma Máquinas Industriais LDA was a priority for Sauer Director Harald Schulz. He travelled to Portugal to say a personal “muito obrigado!” for the many years of trust and cooperation.

Expressing his desire for the successful relationship to continue for a long time to come, he presented Induma Director, Mr Joao Abrantes, with a pewter plate depicting the city of Kiel. The photo of the ceremonial occasion shows the two directors, accompanied by Ms Isabel Xarim, head of spare parts sales for Sauer Compressors, and Induma secretary Ms Helena Tomé.



New colleagues: Transport robots R2 and 3PO

In January, R2 and 3PO started work at the Sauer production facilities. Employees chose these names - based on the Star Wars films – although the new arrivals are actually two self-propelled transport robots.

The two vehicles, which can independently navigate, avoid obstructions and automatically stop, will transport small parts from the warehouse to the paint shop. Their technical features only allow movements at walking speed. As a result, they can share the transport routes with people and industrial trucks.

The risk assessment for the transport systems has been documented and will be incorporated into annual safety briefings.



Did you know that ...

... Sauer high pressure compressors do not always require an adsorption dryer? A high pressure refrigeration dryer is often sufficient to achieve the required pressure dew point. Sauer's range now includes a compatible model for every Sauer high pressure compressor. They have additional benefits as they are robust, low maintenance and equipped with an integrated automatic drainage system.

They certainly fit in with the motto: *“As much treatment as possible, but only as much as necessary.”*





Environmentally friendly island hopping with the “Blue Angel” and Sauer Compressors

In the autumn of 2017, the German Institute for Quality Assurance and Certification awarded two car and passenger ferries the “Blue Angel” for environmental friendliness and certified their shipping companies for their consistently developed environmental protection concepts. Sauer was keen to congratulate the companies and join in the celebrations. After all, both of the award-winning ships are equipped with Sauer-Compressors.

The RoPax ferry “Schleswig-Holstein”, completed in 2011 and operated by the Wyker steamship company (W.D.R.), has earned the “Blue Angel” for environmental friendly ship operation. On the most modern ship in the W.D.R. fleet, which travels between the islands off the Northwest German coast at a service speed of 12 knots, two 3-stage air-cooled PASSAT WP 15 L Marine from Sauer provide reliable – and of course clean – compressed air.

The award for the “Frisia III”, built in 2015, was for its environmentally friendly ship design. The largest car and passenger ferry operated by the Norden-Frisia shipping company is on the regular service between the East Frisian island of Norderney and the mainland. An SC 15 screw compressor from Sauer provides tireless service on board.



The Blue Angel is the ecolabel of the federal government of Germany since 1978. The Blue Angel sets high standards for environmentally friendly product design.

TRADE FAIR DATES 2018

- **NAVALIA**
Vigo, Spain
22 – 24.05.2018
- **MECANICA 2018**
Sao Paulo, Brazil
24 – 27.05.2018
- **POSITONIA**
Athens, Greece
04 – 08.06.2018
- **FUTURE SURFACE FLEET 2018**
Portsmouth, GB
05 – 07.06.2018
- **ACHEMA**
Frankfurt, Germany
11 – 15.06.2018
- **MIOGE**
Moscow, Russia
18 – 21.06.2018
- **WORLD GAS CONFERENCE**
Washington D.C., USA
25 – 29.06.2018
- **MARINTEC SOUTH AMERICA**
Rio de Janeiro, Brazil
14 – 16.08.2018
- **ONS STAVANGER**
Stavanger, Norway
27 – 30.08.2018
- **SMM**
Hamburg, Germany
04 – 07.09.2018
- **GASTECH**
Barcelona, Spain
17 – 20.09.2018
- **IINEX**
Tehran, Iran
October 2018
- **ADIPEC**
Abu Dhabi, UAE
November 2018
- **Exponaval**
Valparaiso, Chile
04 – 07.12.2018

Sauer SynLub H1-I – synthetic compressor oil for the food processing industry

It is well known that very strict regulations are in force in the food industry. However, it is less well known that these regulations also apply to lubricants. If contact with the processed product is possible, lubricants must be safe for use with food by law. As a result, lubricants must be safe for consumers while still providing all of the necessary product properties. The thorny issue is that many of the lubricating oils available on the market with the required registration from the NSF (National Sanitation Foundation) are unsuitable for use in piston compressors.

Sauer has responded to this challenge in typical style. In cooperation with a well-known lubricant specialist, we looked for a synthetic lubricating oil specially for use in piston compressors. The numerous endurance tests and trials on the Sauer test stand paid off. A lubricant was ultimately approved that achieves exceptional results in terms of performance and wear compared to standard oils.

Sauer SynLub H1 (viscosity 100 mm²/s @ 40°C)
features:

- Registration under NSF Class H1 (for occasional, technically unavoidable contact with foodstuffs)
- Excellent temperature resistance
- Long service life
- Exceptional anti-wear behaviour

Do you need a lubricating oil safe for use with food? **Sauer SynLub H1-I is available in 10 l canisters for immediate delivery.**

Contact us at
service@sauercompressors.de



Compressor advertising on the road

For two years, a truck has been driving around Sweden and undoubtedly attracting a lot of attention. From the rear, you would think you were looking directly into the cargo area – at a Sauer-Compressor. But appearances are deceptive. You are actually looking at the highly original mobile advertising concept employed by Söders, Sauer's Swedish sales partner for the Scandinavian region.

The idea occurred to Director Mats Söder, when a traffic jam gave him an enforced break in his journey. He found looking at the back of the truck in front of his car, with no indication of what it was transporting, was tedious. He recalled the Sauer show container, in which people can study a compressor "live on 3 stage". And so the advertising idea was born – why not show off the load, when it's something as exciting as a compressor?

No sooner said than done – and the result has been a huge success. Anyone who gets stuck behind this truck in traffic is guaranteed not to get bored.

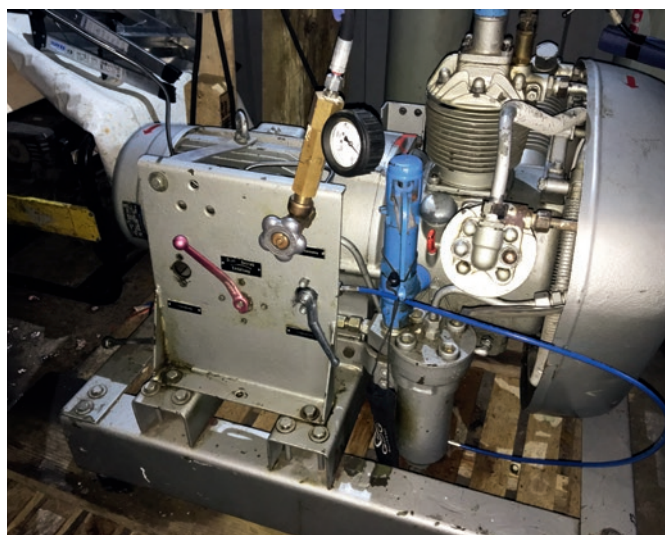


Sauer oldie provides action and enjoyment

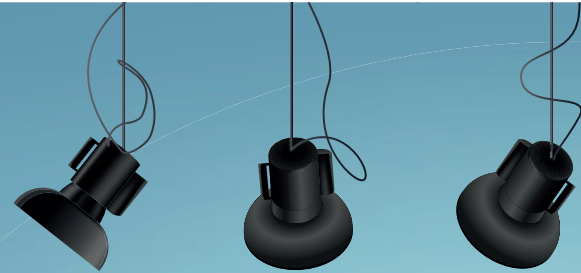
Sauer Compressors can have an extremely varied life. Like this WP 3231 produced in 1962. Even after so many years of service, there's still no sign of its career coming to an end. As a robust 3-stage air-cooled model, it has had a rather unusual job for the past four years.

During this time, the small high pressure compressor has been used in the Megapark Leipzig paintball system. Compressors are essential to for a paint battle to take place, as they fill the weapons – known as markers – with the compressed air that fires the paint balls.

What does director Pierre Röttsch particularly like about the Sauer oldie? The things that all compressors from Kiel-Friedrichsort are notable for – reliability, long running times and minimal maintenance. And of course the fact that spare parts are still readily available after more than 50 years.



"Spare parts for 1962 products are still available. That's typical of Sauer!"



Franck Lallart strengthens senior management in Kiel

On May 1, 2018, HAUG Sauer Director Franck Lallart joined the senior management at the Kiel headquarters of J.P. Sauer & Sohn Maschinenbau GmbH. Mr Lallart is responsible for logistics and production in Kiel and at Žandov in the Czech Republic. He took over this role from Dr. Edgar Schmitt, who will continue as a director in finance, controlling, and other areas. Franck Lallart is taking on his new position alongside his existing role as director of HAUG Sauer.

During his successful career, engineer Franck Lallart held leading positions in France in shipbuilding, the automotive supply industry and then in the compressors sector, before becoming a director of Girodin-Sauer and HAUG Sauer. Mr Lallart handed over his position at Girodin-Sauer to Anton Sutherland.



Anton Sutherland is the new director of Girodin-Sauer

Girodin-Sauer is delighted to welcome Anton Sutherland as its new director. On December 1, 2017 he succeeded Franck Lallart, who has taken on new duties within the Sauer Group. Educated in mechanical engineering and business management, Mr Sutherland has been entrusted with the task of continuing the company's stable growth strategy.

Before joining the Sauer Group, Anton Sutherland proved his technical expertise and leadership capabilities in various sectors. After starting his career as a project manager in a French exploration and oil field service provider, he moved to the OEM industry. He has held several senior positions in product development, business development, and research & development for a manufacturer of computer components. Since 2009, he successfully managed an OEM company specialising in part traceability in production and significantly improved its market position.



Karsten Jäkel takes over at Sauer Compressors China Ltd.

At the beginning of the year, Karsten Jäkel took over as director of Sauer Compressors China Ltd. His responsibility in the Sauer subsidiary is to strengthen Sauer Compressors' already outstanding position in the Chinese market and to expand it into other surrounding areas.

After studying utility engineering and specialising in technical building equipment, he worked for the GEA Group AG and the GÜNTNER Group. During his career, he accumulated 14 years of professional experience in the Asian region, primarily in China. In 2016, he joined Sauer as the sales manager in Shanghai. He now brings the success and experience from this role to his new position as director of Sauer Compressors China Ltd.



Jean-Louis Descles becomes sales manager at Girodin-Sauer

After years in various international positions, Jean-Louis Descles is back in France. In April, he became sales manager at Girodin-Sauer, aiming to utilise his global contacts and sales experience in his new position in the company. Mr Descles started working for Girodin-Sauer back in 1998 as a departmental sales manager, and from 2006 he took over as commercial manager of the Sauer sales office in China.

Jean-Louis Descles previously worked for a well-known French vehicle manufacturer in the maintenance department. He then spent many years as a sales engineer for an international compressor manufacturer, and for two other respected industrial companies.



[ACHEMA 2018 SPECIAL]

Meet Sauer Compressors at ACHEMA 2018

ACHEMA2018

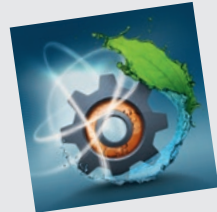
Hall 8, Stand D24 – Sauer Compressors will once again be represented at the leading international trade fair ACHEMA, the most important forum for the process industry, when it opens its doors in Frankfurt from June 11–15.

Pay us a visit! As a complete supplier, our range covers everything from simple air compressors through to complex systems for compression of industrial and process gases. With our brands of oil-lubricated WP compressors and oil-free HAUG compressors of the Sauer Compressors Group, we can provide the right product for any area of the process industry.

A particular highlight awaiting you on our stand is a world première, as we present the HAUG.Sirius HP 450 oil-free high pressure compressor, the first joint development by J.P. Sauer & Sohn Maschinenbau GmbH and the oil-free specialists from HAUG Sauer Kompressoren AG.

We look forward to your visit to Hall 8, Stand D24!

We will be pleased to provide you with a free trade fair ticket:
exhibition@sauercompressors.com



ACHEMA2018

11.–15. Juni 2018

Frankfurt am Main

www.chema.de



The HAUG.Sirius HP 450 contains concentrated know-how

The new high pressure models in the oil-free HAUG.Sirius series combine the best of two worlds – Sauer’s high pressure expertise and the experience of the oil-free pioneer HAUG Sauer.

The incredible result of this combined know-how is an oil-free “anygas” high pressure compressor. Its oil-free, dry running design, totally gas-tight construction and magnetic coupling drive enable the new HAUG.Sirius to compress almost any gas.

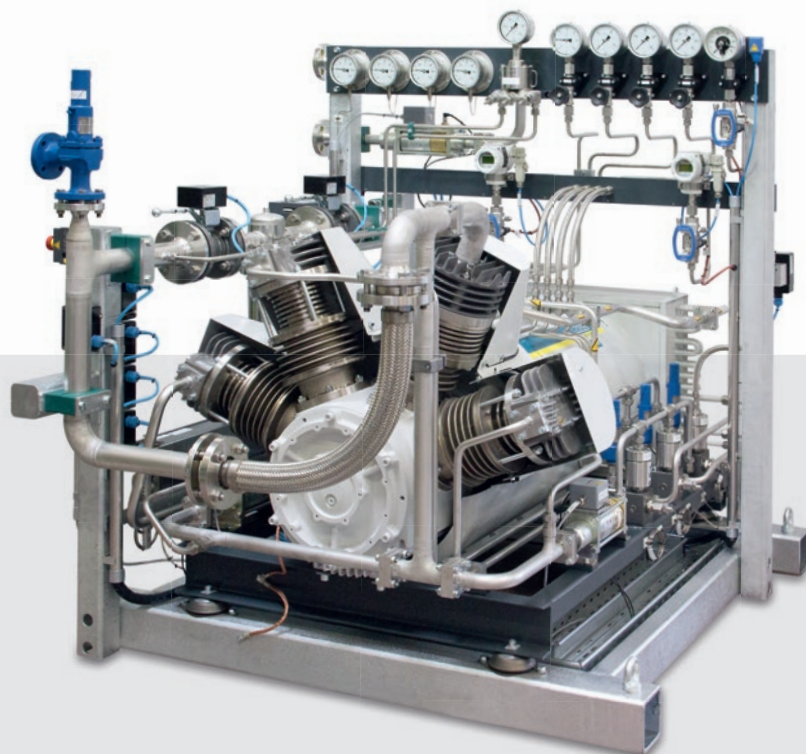
Based on the established HAUG.Sirius series, the new development can achieve the high final pressure of 450 barg through 4-stage compression with an inlet pressure of 5 barg. The flow rate is 60 Nm³/h, and the compressor has a power range of 11 – 30 kW.

This makes the machine ideal for a variety of booster applications. The maximum inlet pressure is currently 10 barg, but versions with an inlet pressure up to 30 barg are already in development.

The HAUG.Sirius HP 450 series was developed collaboratively by specialists from J.P. Sauer & Sohn Maschinenbau GmbH and HAUG Sauer Kompressoren AG. It is the first joint new development since the former HAUG Kompressoren AG was integrated into the Sauer Group.



OIL-FREE – 100 % TIGHT
NOW FINALLY UP TO 450 BAR!



HAUG.Sirius

New focus segment: Petro industry

As our customers' needs change and grow, we are continuously developing the Sauer Compressors product range to ensure that we can always offer optimum solutions and premium quality. With HAUG Sauer Kompressoren, we have hugely extended our expertise in oil-free and gas-tight compressors, putting us in the best possible position to address the varied challenges in our markets in the diverse world of the process industry.

This advance in know-how and performance is now being reflected in a restructuring of our activities. As well as extending the "General Industry" segment to include particularly sensitive areas such as industrial gases, medical technology, biotechnology, chemical technology, pharmaceuticals and the food industry, our previous "Offshore" market is now much more diversified under its new name "Petro Industry".

Both offshore and onshore, Sauer compressors have long been impressive in the oil and gas sector, thanks to their robust construction, and are a byword for maximum reliability under even the toughest conditions, from extreme cold to intense heat. Our products comply with all the relevant standards, e.g. Norsok, ABS and DNV.GL, and are perfectly suited for the loads occurring in 24/7 operation. In addition to our high quality compressors, we offer customised solutions specially tailored to requirements in the oil and gas industry – with the added expertise of HAUG Sauer Compressors, this now extends to oil-free dry running and gas-tight compressors, including the legally required collection of leaked gas.

To fully reflect the specific conditions in the oil and gas industry, our restructured division follows the oil or gas all the way from exploration to processing through to the end use and is split into Upstream, Midstream and Downstream areas. Sauer supplies reliable and exceptional performance for every requirement.



UPSTREAM

Particularly in the field of seismic exploration, Sauer is one of the leading experts and, with its Hurricane, 5000 and 6000 series, offers three high performing series for the high pressure air supply to the air gun. When it comes to compressors for motion compensation, in underwater hammering and for nitrogen boosting, our customers can depend on Sauer's huge breadth of technical expertise.



MIDSTREAM

When it comes to transportation and storage of oil and gas products, Sauer compressors are primarily used in the construction and operation of pipelines, and for sealing gas in gas-carrying turbo compressors. Since acquiring the additional know-how of HAUG Compressors, we also cover the area of boil-off gases. Sauer's proven compressor series provide the optimum solution for a huge range of requirements.



“Dependable up to 500 bar – anywhere, anytime, anygas.” It goes without saying that this promise also applies to the petro industry. What it means to us is offering our customers from the oil and gas and process industry top quality standard products, customised solutions and tailored services. From 0.75 to 230 kW, oil-lubricated or oil-free – the breadth of our capabilities, and the power and pressure range combinations we can offer, are unmatched globally, giving us the perfect platform to meet the diverse challenges of the oil and gas sector.



DOWNSTREAM

In addition to tried and tested high pressure compressors for nitrogen boosting up to 500 barg in refining and processing of oil and gas, Sauer is increasingly addressing the growing significance of compressed natural gas (CNG) as a vehicle fuel. With our high pressure CNG boosters, which are ideally suited for CNG filling stations, we can supply both individual units for OEMs and complete systems.

[SAUER HIGHLIGHTS]

Sauer BREEZE:

New series of industrial compressors up to 40 barg

Since April, the Sauer Compressors range has included the new BREEZE series, initially with two products – the WP 323 LM and WP 221 LM Basic. The 3-stage air-cooled compressors produce a flow rate of up to 420 m³/h at a final pressure of 40 barg [optionally 44 barg] and an installed power of up to 90 kW.

The models are the first two of four medium pressure models in a newly developed compressor series for industrial applications. The BREEZE series is based on a flexible modular system made up of several crankcases with three to five cylinders, and will lay the foundation for further new developments in the coming years. Thanks to its nine cylinder/piston combinations, the series covers a wide power range and meets a huge range of customer requirements.

Innovative series with options

The air-cooled BREEZE compressors offer a number of innovations. They include the first use of the CubeCooler concept. Block coolers arranged radially around the fan enable the recooling temperatures to be reduced by a third. A protective cover comes as standard and has an integrated gauge panel, ensuring outstanding usability and the highest safety standards. It covers the hot parts of the machine while still allowing easy access to the components relevant for maintenance. The industrial compressors from the BREEZE series are generally very low noise, robust and compact.

Alongside the BREEZE series for medium pressure compressors up to 40 barg and high pressure compressors with final pressures up to 500 barg, the Generation 45XX modular system is set to include more series with final pressures up to 500 barg. Look out for more details in future Manometer issues.

 **Breeze**



COMPRESSORS



BIGGER
BETTER
BUT STILL **BASIC**

Experience the advantages of evolution!

[SAUER HIGHLIGHTS]

Ready for Industry 4.0: The new Sauer ecc 4.0 compressor control

Sauer Compressors is offering a new range of controls for fully automated monitoring and control of compressor functions.

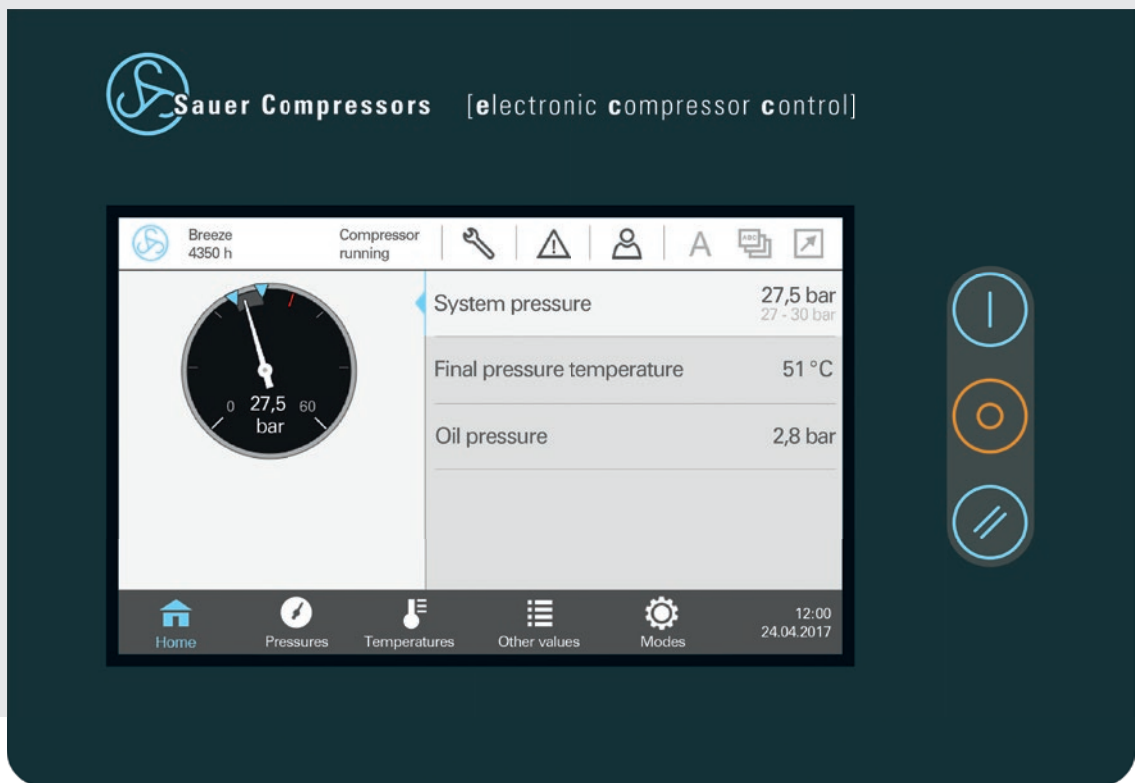
The first model is the Sauer ecc 4.0 – a control for universal use in all compressor series for applications in the naval marine, commercial shipping, industry and petro industry sectors. The software has been completely developed by Sauer Compressors, which enables it to be adapted precisely to the relevant requirements. Particular features can be added and customised for specific projects.

The design of the Sauer ecc 4.0 follows an intelligent modular principle tailored to the compressor type and version. The modular system can be configured over various expansion levels - from the economical basic version through to complete monitoring of all measured values in the fully-featured version.

The Sauer ecc 4.0 can connect up to twelve compressors with one another, enabling communication between them using all standard interfaces. In terms of Industry 4.0, the control can be integrated into higher-level systems.

Convenient operation

The new Sauer ecc 4.0 is operated using a 7" colour touch screen display. The latest generation resistive touch screen display is extremely robust and can be operated wearing gloves. Users benefit from the user-friendly intuitive menu system and step-by-step instructions in 30 languages. All relevant parameters are visible at a glance, represented visually by pressure gauges and texts. In case of faults, the control provides detailed alarm and fault messages including remedial suggestions. A numerical keypad allows easy adjustment of values. Operator login is based on direct code entry.



Ethernet Interface RJ45

All values at a glance

Intuitive interface

7" touch screen

30 languages

Modbus

MicroSD slot

RS485

CAN bus

Profibus

Management of up to 12 compressors

UL Certificate

Industry 4.0 ready

Maintenance Instructor

CE Certificate

Embedded guide

[SAUER HIGHLIGHTS]

The new Sauer LEVANTE series on board state-of-the-art 22,000 TEU ships

The new LEVANTE series from Sauer Compressors has already made a big impact in international shipping. Numerous shipping companies are already fitting their ships with the latest generation of our 3-stage air-cooled starting air compressors. These ships include state of the art mega carriers, among the largest container ships in the world with a capacity of 22,000 TEU.

Sauer LEVANTE for Shipping 4.0

Consistently tailored to the requirements on board ships, the LEVANTE series is the first to be developed exclusively for shipping and is setting new standards. True to our maxim “Bigger, Better, but still Basic”, the filling capacity of the new compressors has been increased to up to 460 m³/h. Added safety and convenience for operators are provided by the protective cover with integrated gauge panel fitted as standard and the human machine interface.

The compressor construction has been kept compact, allowing it to fit into any engine room and freeing up valuable space. The power of the air cooling and the course of the air flow have also been optimised, thanks to the new cooler position between the motor and the compressor. This has improved the inter-cooling efficiency.

Another hugely impressive feature of the LEVANTE series is that it is “still basic” – in other words, our new 3-stage air-cooled compressors are robust, reliable, low maintenance and easy to operate. Just as you have come to expect from Sauer. Combined with our sophisticated Sauer MLC (Marine Logic Control), with the LEVANTE we can offer our customers a credible concept for Shipping 4.0.

Huge successes

Many of our customers have already recognised the advantages of the Sauer LEVANTE and chosen the new 3-stage air-cooled model. Even container ships in the ULCV class will be using the new compressors in the future. Examples include the 22,000 TEU carriers for the MSC Mediterranean Shipping Co. ordered from the South Korean companies Daewoo Shipbuilding & Marine Engineering (DSME) and Samsung Heavy Industries (SHI). Sauer is supplying four WP 320 L Marine compressors from the LEVANTE series to each of eleven new ships.

The world’s third largest container line, the French company CMA CGM, has ordered nine new 22,000 TEU ships, which will be built in China by Hudong-Zhonghua Shipbuilding and Shanghai Waigaoqiao Shipbuilding. These modern mega carriers will be the first to be equipped with an LNG engine. Each of them having four of our LEVANTE WP460 L Marine compressors on board.

Turn to Page 24 to read how the Levante series has been rated in its field test.



SF6 handling in industry

HAUG Sauer Compressors provide leak-free recovery

Sulphur hexafluoride or SF6 is a chemical compound made up of sulphur and fluoride. Because of its exceptional insulating properties, the colourless and odourless gas is used in medium and high voltage technology, primarily in gas-insulated switchgear (GIS).

As one of the six recognised greenhouse gases, it may not be discharged into the atmosphere after use. Recovery of the SF6 during maintenance and manufacture of the switchgear is therefore stipulated by law. Special recovery systems must meet very tough requirements to prevent the harmful gas from escaping. Essential to this process are oil-free compressors with exceptional gas-tightness, such as those supplied by HAUG Sauer.

Reliable recovery for maintenance and production

The greenhouse potential of SF6 is estimated to be 23,000 times higher than that of carbon dioxide. SF6 can remain stable in the atmosphere for up to 3,200 years. As a result, it can only be used in closed circuits in industry.

For maintenance purposes, SF6 must be evacuated from gas insulated switchgear. To do this, the gas is pumped out into portable recovery systems (see photo), where it is then filtered and fed to the compressor, which compresses it. The final pressure is generally 40 bar. Once cooled, the gas can be stored in a liquid state.

HAUG Sauer compressors for maximum gas-tightness

Absolute gas-tightness is essential for handling SF6. This is why well-known operators of high voltage systems use environmentally friendly and reliable recovery systems with permanently tight compressors from HAUG Sauer. Since the introduction of SF6 as a high voltage insulating gas, the dry running compressors have been used successfully for recovery. Over the past 50 years, several thousand compressors have been installed for this purpose. The hermetically gas-tight compressors achieve a leak rate of less than 0.0001 mbar l/s both during operation and when idle. Every SF6 compressor is tested for permanent tightness.

Oil-free compressors for maximum gas purity

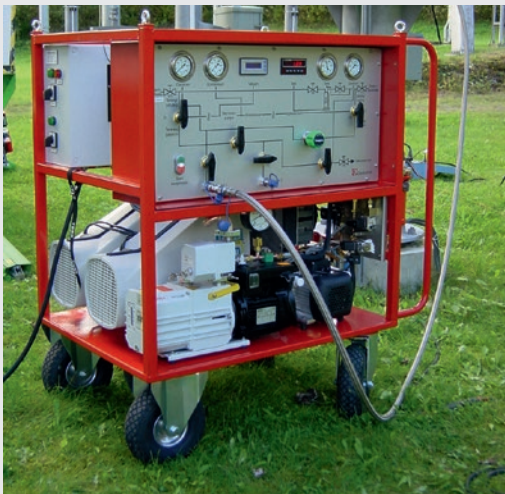
The interior of the HAUG Sauer compressors is completely oil-free, which rules out contamination of the SF6 gas and thus the high voltage systems as a whole. Oil-free recovery is therefore an important safety issue in energy supply.

Oil-free compression also delivers key benefits in terms of the operating reliability and costs of the recovery system – there is no need for frequent filter replacement, oil changes or an oil supply; maintenance is easy and economical. The components of the HAUG Sauer compressors are impressively robust and durable. Even in applications with long downtimes and cold starts, they guarantee reliable operation in all climatic conditions.

Proven technology for individual requirements

HAUG Sauer compressors allow higher inlet pressures than comparable compressors, enabling them to achieve a higher flow rate and faster gas recovery. They also have lower energy consumption. Customised compressors are available for a power range of 0.5 kW to 110 kW, with three or even four-stage models for higher final pressures.

The search for an alternative to the environmentally harmful SF₆ that offers comparable properties remains a big challenge. HAUG Sauer has already supplied adapted compressors for recovery of existing SF₆ alternatives.



For maintenance of gas insulated switchgear, portable recovery units are used, consisting of one or more vacuum pumps, a filter and a HAUG Sauer compressor.



In the manufacture of gas insulated switchgear and in high voltage systems above 700 kV, recovery installations with much larger delivery volumes are used.

[SAUER SERVICE]

Sauer LEVANTE series passes field test

The development process for new products at Sauer Compressors includes extensive internal tests and trials. As well as testing everything on our own test stand, we also run real world field tests.

For a field test, we install newly developed compressors on ships owned by partner shipping companies, allowing us to test and assess the machines under actual operating conditions. Feedback from test customers allows Sauer to add the experience gained from the practical application to the results from testing on the test stand while development is still ongoing. All the findings then go into creating the end product that is ultimately launched.

The process for the newly developed Levante series compressors was as rigorous as ever at Sauer. At the Sauer production facilities in both Kiel and Žandov in the Czech Republic, the Levante test compressors were tested for more than 11,000 hours on specially constructed test stands. Another 8.000 operating hours came around on 6 ships from partner shipping companies, who had Levante compressors on board for the field test. In total, this means that when developing the new 3-stage air-cooled compressors, Sauer had access to data and experience from almost 20,000 hours of operation.

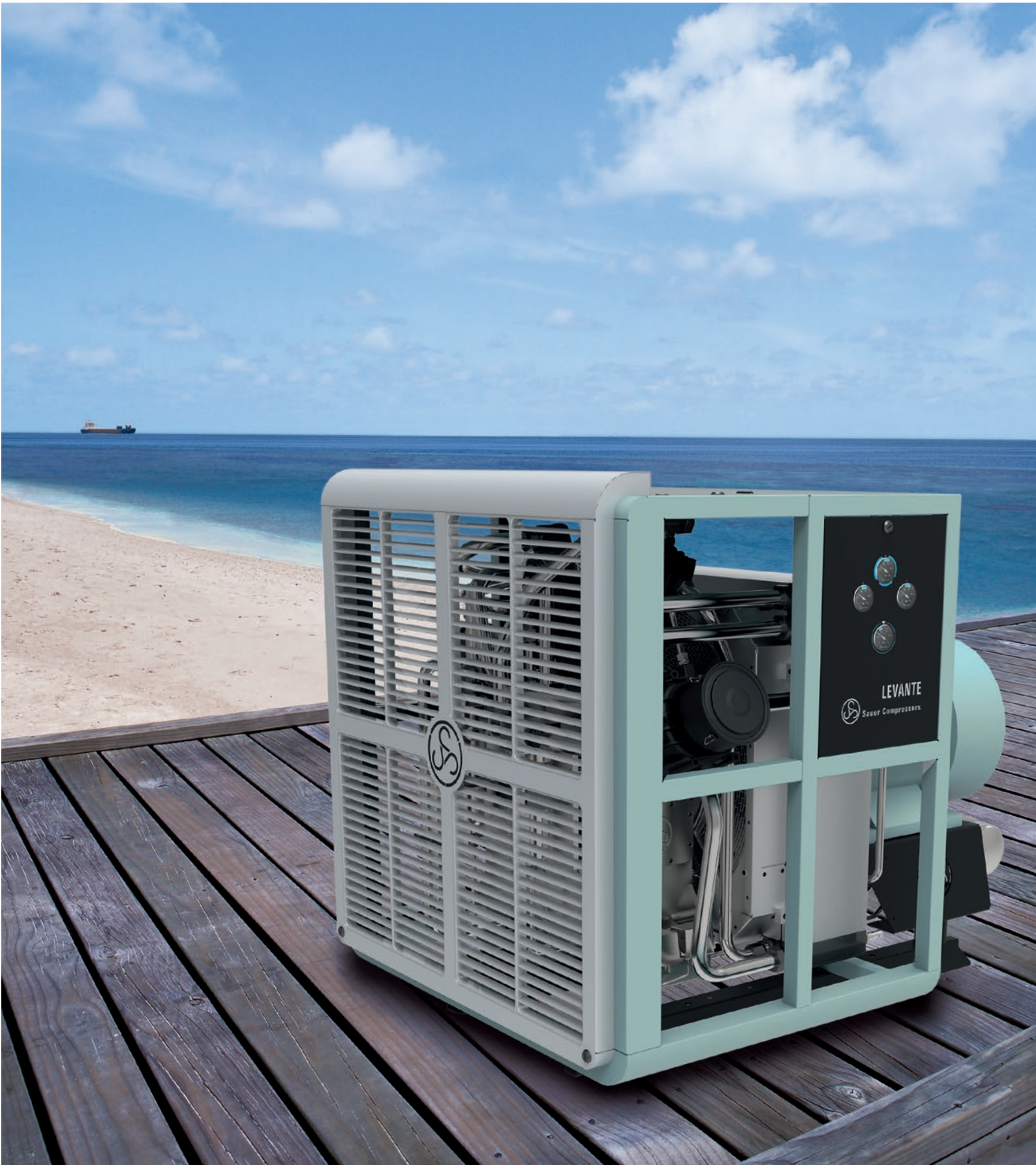
What did our testers discover in the Levante field test? The basic tone was: “No problems. Everything went as smoothly as ever.” The change of compressor on board was not actually noticeable. For Sauer, this kind of result is the greatest praise a new development can have.

The testers concluded that the Levante compressors offer:

- ✓ good running behaviour
- ✓ negligible wear (e.g. to pistons and cylinders)
- ✓ exceptionally clean oil thanks to the new oil filter

We used some of the customer feedback to create and optimise defined maintenance activities. The oil inlet and outlet fittings were improved and the human machine interface was adapted to better suit the conditions on board ship.

We would like to thank our test partners and we are delighted to conclude that our LEVANTE has successfully passed its field test.



[SAUER FAMILY]

Jens Wulf has plenty to say

Jens Wulf has been part of the Sauer team at the Kiel headquarters since 2008. He works in service for German and Danish shipping customers, but they know him better as Jens Koslowski. In April, he got married and took his wife's name.

In his free time, he's involved with another team – since the end of the 1970s he's been a fan of the football team "Kieler Sportvereinigung Holstein von 1900 e.V." – known more informally as "Holstein Kiel". The club celebrated its biggest triumph back in 1912, when they became German champions.

Jens Wulf acted as the press officer for his club for 15 years (1996–2011). He then took over operation of the new LED video screen, which provides spectators with information about team line-ups, the score and other key events in the game, while also displaying advertising.

When Holstein Kiel were promoted to the German 2nd Division in 2017, he also took on the role of stadium announcer for visiting teams. In addition, he is the main stadium announcer for the police control team and makes any emergency announcements required. For this reason, his regular seat is right in the heart of the police control room.

Before the match, his voice can be heard booming across the stadium, announcing the fixtures for that match day, the visiting team line-up, the officials for the match, the ball boys and the mascots.

Of course, during the match itself he gets right behind his own team like all fans. But at the same time he has to look after everything to do with the visiting team, such as their substitutions and goals. Although the latter was not an especially common event last season – as the promotion to Division 2 proves!





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