FLAK Industritrykluft Filterteknik SALG - SERVICE

BOGE S-4

DESIGNED TO TAKE THE LEAD

BOGE S-4
BOGE's latest milestone.

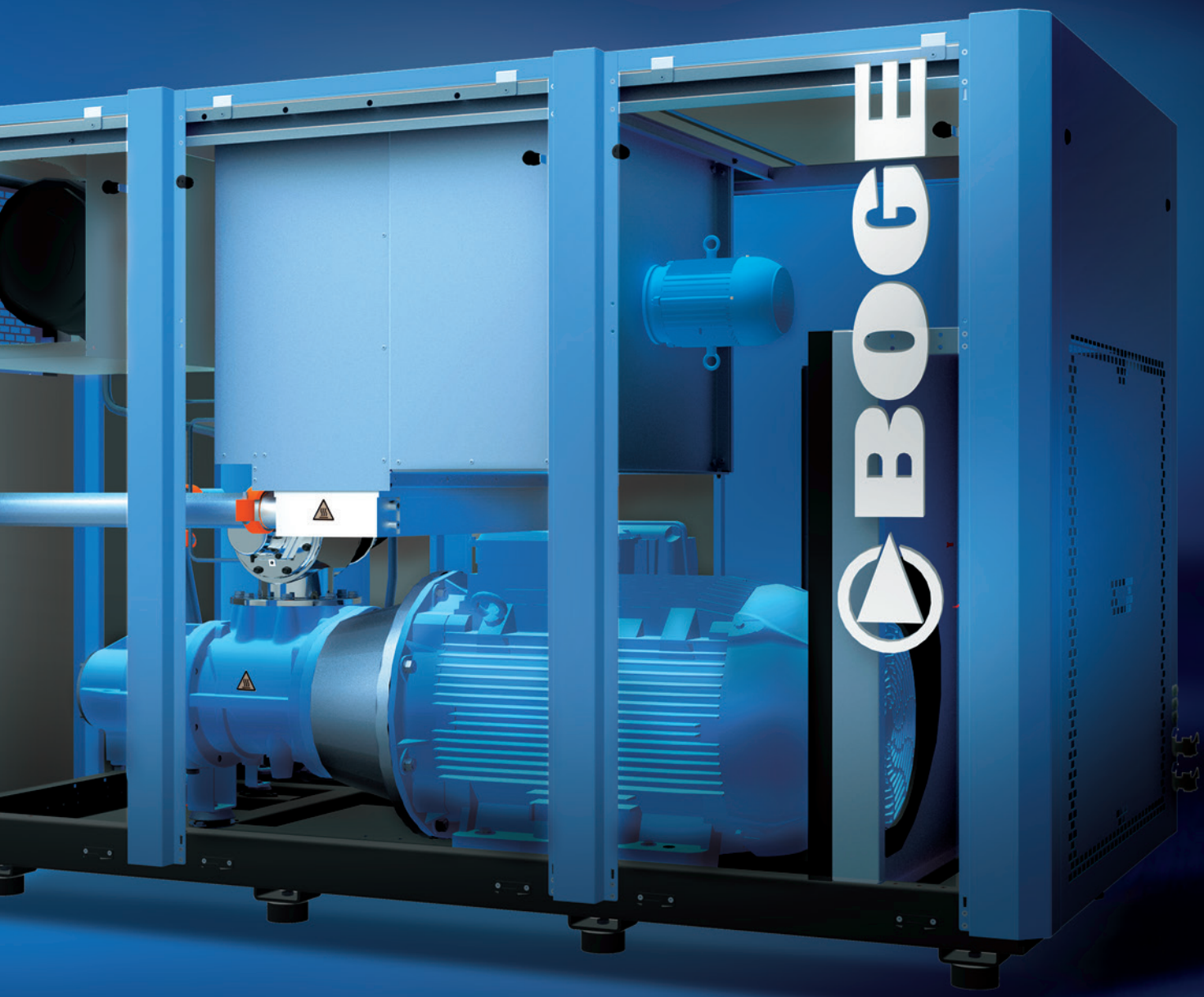
Another breakthrough for BOGE with the new S-4 series – especially with regard to energy consumption. The noticeable quiet running and extremely easy maintenance are the the results of a totally new design. At the core of all the new and future S-4 models is BOGE's own effilence „IntegrateDrive" airend. But it's the package as a whole that cements the reputation of BOGE's new screw compressors as a driving force for industrial progress.

- **BOGE effilence "IntegrateDrive" airend**
- **Noise-optimised cooling air**
- **Low-speed radial fan**
- **Elasticated "SilentMount" bracket**
- **Easy-access, maintenance-friendly design**
- **Innovative separator technology for convenient, safe cartridge change**

BOGE S-4

“Once in a while, it’s alright to let go – especially when you’ve just reached perfection.”

Frank Hilbrink, Product Market Manager, BOGE Compressors

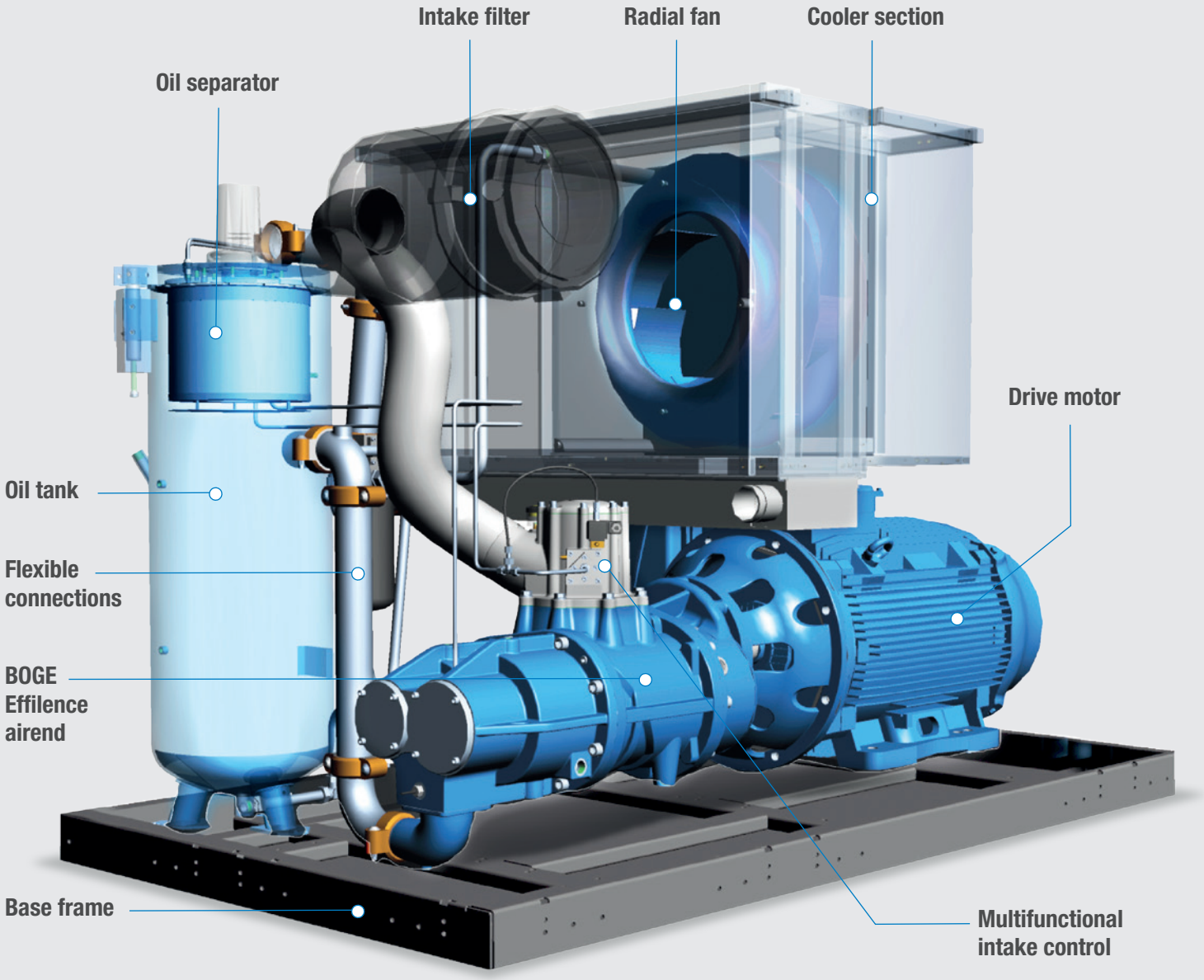


BOGE S-4

Big thinking - right down to the smallest detail.

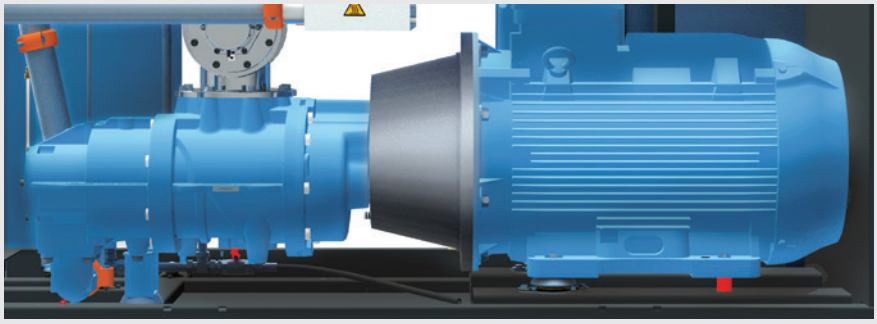
THE DESIGN PRINCIPLE

All the necessary components are integrated in the "IntegrateDrive" airend; all the parts requiring maintenance are within easy reach in the compact module. So no need for pipework or connecting cables. This principle means that the units used in the series are extremely efficient and guarantee high air delivery rates with minimal power consumption. A minimum pressure non-return valve that relieves the compressor after switching off and effectively minimises pressure losses ensures a soft start without counterpressure.



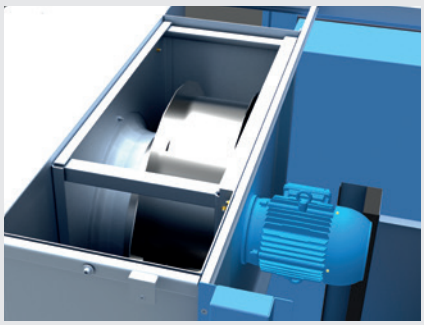
BOGE S-4

We tweaked the system for noticeably better efficiency in the new S-4 series. In order to make significant progress in terms of sound insulation, ease of maintenance and power consumption, our engineers have developed a revolutionary design concept which is extremely tidy and neatly arranged. The latest generation of BOGE screw compressors are, therefore, surprisingly quiet, boasting innovative separator technology, simple maintenance and the best efficiency rates in their class!



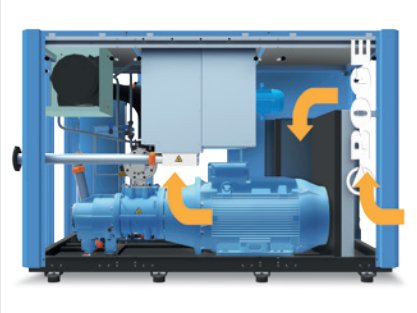
BOGE EFFILENCE "INTEGRATEDRIVE" AIREND

At the core of the new S-4 series, the effilence "IntegrateDrive" is not only the first BOGE airend with integrated gears, it is also a promising test carrier for new technologies to reduce energy consumption and noise levels. The enclosed, low-loss and completely maintenance-free integrated gear is lubricated via the compressor's oil circulation. All of the components are large to ensure low internal pressure losses and maximum efficiency, and because the new airend can be mounted at the optimum operating point, all the performance ranges and pressures can be variably controlled.



RADIAL FAN BENEFITS

The fact that the quiet radial fan runs at a very low speed has not just a positive effect on the sound pressure level: it reduces the drive power of the fan, increases efficiency and reduces energy costs. The fan can also be combined with a speed controller to further reduce the noise level and power consumption

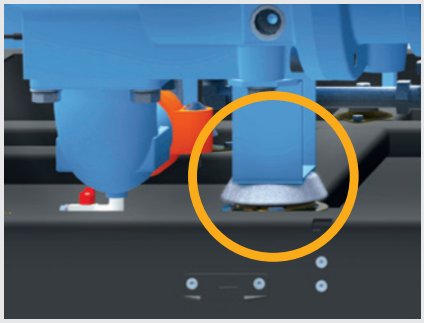


NEW ROLES FOR THE COOLING AIR

The drive and airend by their nature produce high sound levels. No expense was spared ensuring that sound levels have been kept to a minimum with the new S-4; multiple redirection of the cooling air very effectively suppresses the noise. To ensure that this does not lead to losses in the cooling performance, an increased space for the cooling air has also been designed.

ENVIRONMENTALLY-FRIENDLY INSULATING MATERIAL

In addition to redirecting the cooling air for the purposes of sound insulation, a new, environmentally-friendly insulating material was applied directly to the redirection points. It consists of non-flammable recycled material and considerably reduces the sound pressure level thanks to its adsorption capacity.



ELASTICATED"SILENTMOUNT" BRACKET

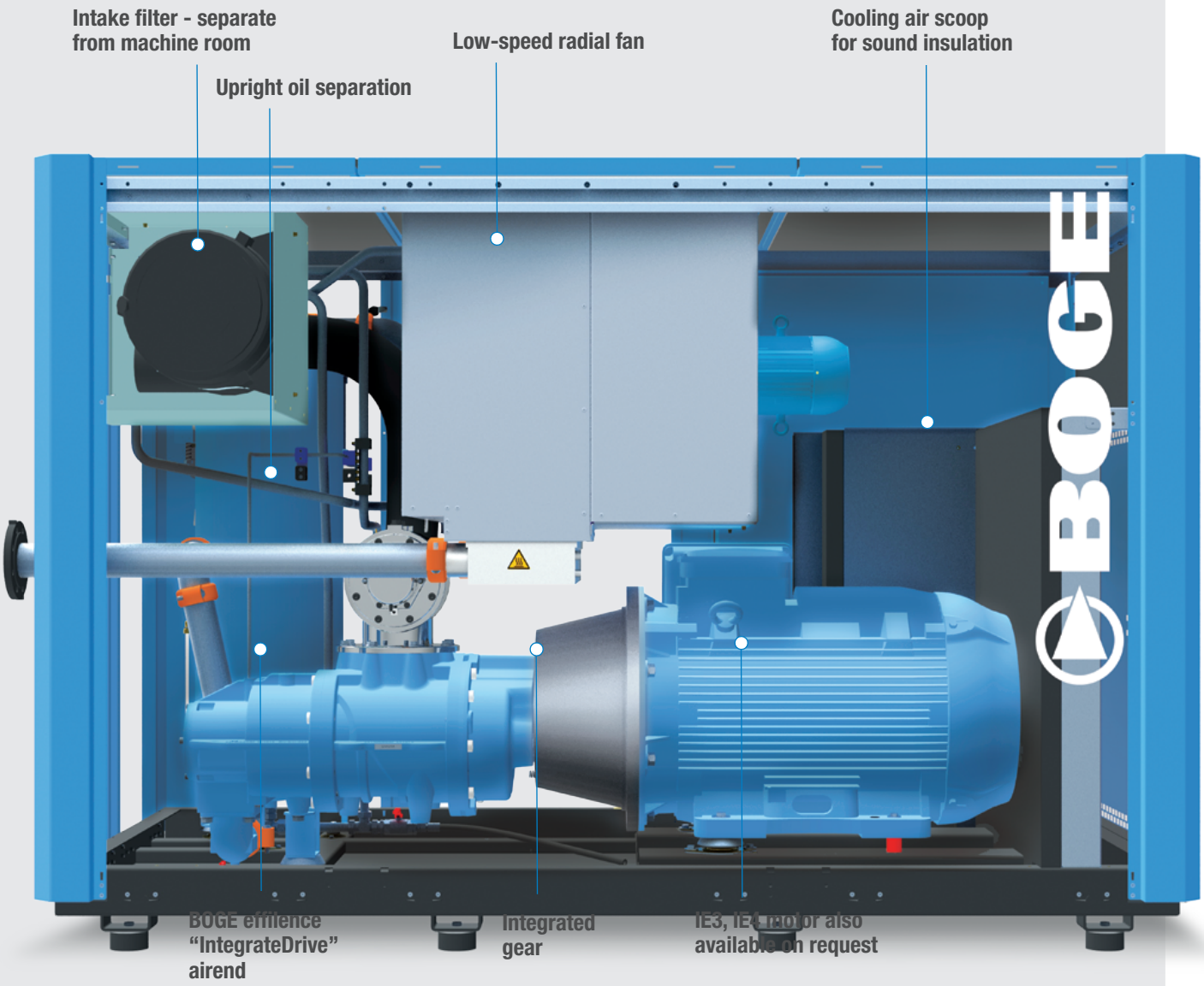
The principle of vibration-control isolation features throughout the whole design of the S-4. This also explains why a vertical oil separator tank is used, because it can effectively suppress vibrations and oscillations through the airend and drive. Even the drive motor and the airend are elastically attached to the base frame as a form of vibration-control isolation. All these measures further reduce noise levels.

BOGE S-4

No stone unturned to meet your demand for easy maintenance.

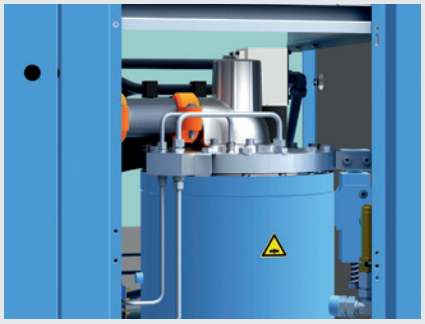
SIMPLICITY AS A MATTER OF PRINCIPLE

Whether inspection of the airend is due or the oil regulator requires maintenance - the S-4 is exemplary in offering quick and easy access to all components: the airend can be removed in just a few hand movements, Victaulic© connections allow easy dismantling, and the oil separator cartridge can be changed quickly and safely thanks to the integrated swivel device.



No other screw compressor considers maintenance so highly.

For example, all the sound insulation panels of the S-4 can be removed with just a few hand movements to allow easy access to all components. All the required maintenance work can be carried out from just two sides, and intelligent details such as the drawer principle for the oil and air cooler or the use of Victaulic©clamped connections are clear evidence of what the product specification said: to create the most maintenance-friendly screw compressor of all time.

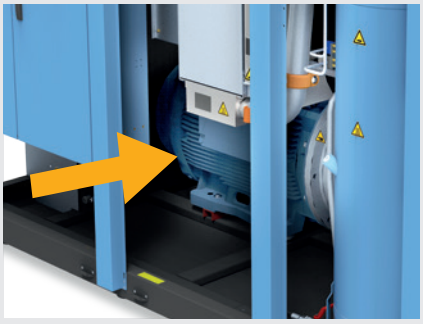


THE OIL SEPARATOR TANK

BOGE's decision to use a vertical solution again in the S-4 after many years is based on the fact that an upright tank offers better vibration-control properties, thus considerably reducing noise levels. The revolutionary oil separation also ensures minimal residual oil content, minimal pressure losses and a long service life of the separator element.

THE SWIVEL DEVICE

To allow easy changing of the internal separator cartridge, we developed a swivel device which conveniently swivels the heavy lid of the oil separator tank to the side. Not only does this speed up the cartridge changing process, it also averts the risk of accidental crushing.



THE EASY-ACCESS PRINCIPLE

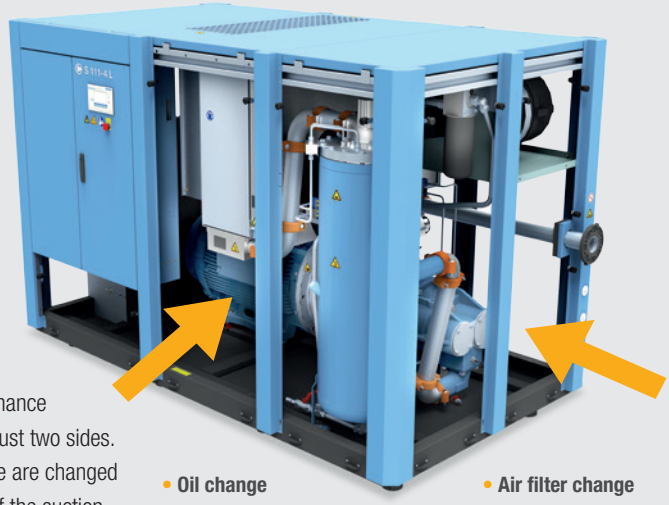
Easy accessibility is a central theme in the design concept of the S-4 series - especially the oil and air cooler: the two coolers can be simply pulled out of the side of the system for easy cleaning. There is only one maintenance door to open.

VICTAULIC© CLAMPED CONNECTIONS

Victaulic© clamped connections are used for the first time in the S-4 for practical reasons. Unlike typical flange connections, which have a multitude of screws to be undone, clamped connections allow the easiest dismantling of maintenance parts: just two screws that don't have to be held at the back undo the connection.

MAINTENANCE FROM JUST TWO SIDES

The sophisticated design of the new S-4 models also means enhanced flexibility in installation: all regular maintenance work can be performed from just two sides. The oil and separator cartridge are changed from the front. Maintenance of the suction regulator, minimum pressure valve and oil regulator is also performed from the front. Only the oil and air filter and the primary intake filter are changed from the side.



- **Oil change**
- **Oil filter change**
- **Cartridge change**
- **Suction regulator, pressure valve, oil regulator maintenance**
- **Air filter change**

BOGE S-4

Everyone’s talking about increased efficiency. But not at this level.

“Our team’s radical new thinking has ultimately impacted on every detail.”

Sven Sternberg, Project manager technical development

WHY IT ALWAYS PAYS TO BREAK NEW GROUND

The revolutionary thinking and the clarity of design of the S-4 have a positive effect on all cost factors - right through to the service life. But as the forerunner of a completely redeveloped line, it is also used for testing new technologies that reduce energy consumption and noise levels in equal measure. From the word go, the new S-4 represented the most efficient, quietest and most economical range of screw compressors in its class.

PERFECTION NEEDS SAFETY: THE BOGE AIRSHIELD CONTROL CONCEPT

The new, intelligent AirShield control concept, which is based on the tried-and-tested focus control 2.0, considerably enhances the operational safety possibilities for the entire system: AirShield can anticipate operating states and adapt early to expected pressure and temperature sequences. This anticipatory type of surveillance offers maximum protection for your compressor unit.

BOGE S-4

Only an intelligent control concept can guarantee vastly increased efficiency. Whilst the focus control 2.0 used to be considered the state-of-the-art control at BOGE because its modular construction meant that it could be optimally integrated into networked production, BOGE's AirShield offers a control function that is virtually in another realm. As it can be perfectly adjusted to the requirements of Industry 4.0, this intelligent, cognitive compressor control system can substantially increase the service life of your system.

CONTROL BY CHOICE

Even the standard base control unit offers superior control options - including automatic frost protection mode and integrated leakage monitor. The optionally available focus control 2.0 can even monitor up to four connected compressors. But the BOGE AirShield, that identifies operating states early on is, by contrast visionary.

SOUND PRESSURE LEVEL MINIMISED

Every design detail of the new BOGE S-4 has been developed with a view to its noise-reducing potential - starting with the low revolutions of the airend and radial fan right through to the elasticated "SilentMount" bracket that effectively isolates all vibrating components. Thanks to all these measures, the sound pressure level of the S-4 is below 74 dB/A.

TOTAL COST OF OWNERSHIP

The ultra-low energy demand not only reduces carbon emissions but also the costs for operating the installation. What also contributes to saving costs is the fact that all components are optimally accessible – this saves you precious time when the necessary maintenance work has to be done. No other screw compressor has ever solved the servicing issue so convincingly!

"There were two developmental goals of overriding importance: to increase efficiency and decrease the acoustic level. These goals were not only met – the new BOGE S-4 is in fact 'best in class' in both categories."

Frank Hilbrink, Product Market Manager, BOGE Compressors

BOGE S-4

Low maintenance costs, minimal downtime - how to be popular in every industry.

THE BOGE S-4-MODEL RANGE

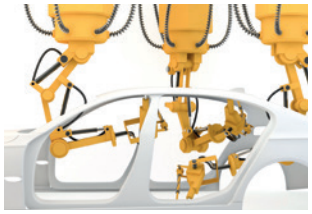
BOGE's new S-series is well prepared for major tasks. Step by step, more models will enter the market which will expand the range to cover smaller output classes too.

S 111-4
S 132-4
S 160-4

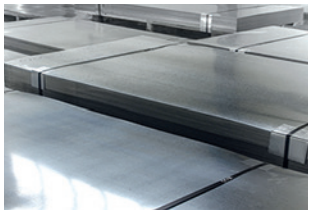
Please note that all technical specifications are listed on the enclosed data sheet.

MADE TO IMPRESS IN EVEN THE MOST DEMANDING OF ENVIRONMENTS

Mining
The S-4 is in its element in mining, where screw compressors have to be particularly safe and reliable in adverse conditions. It scores highly with extremely short downtimes, simple maintenance and a long life expectancy.



Paint shops
The new BOGE S-4s provide a continuous flow of compressed air and are thus perfect for operating spray guns etc. They help apply coats of paint and lacquer reliably and evenly.



Metal working
Oil-free and dry compressed air is vital in metal working. BOGE's new S-4s deliver high-quality air, for example, like that required for treating and processing stainless steel and for laser cutting.

Oil, gas and chemical industry
Compressed air has to work perfectly in the sensitive manufacturing processes of oil and gas as well as in the chemicals industry, where toxic, corrosive and unstable products are often part of the production process. A clear-cut case for the S-4.

The new S-4 series has already passed the test runs in real conditions with flying colours.

As diverse as the operating conditions may be – its robust technology, low maintenance needs and the pioneering achievements to maximize efficiency will let it quickly win over friends wherever a reliable compressed air supply is indispensable.

Initially the 111, 132 and 160 kW models will be available to order – either as a basic compressor with integrated gears, directly coupled or directly coupled with frequency control. The smallest 111 kW model will also be available from the outset in various versions – with gears and dryer, directly coupled with dryer or directly coupled with dryer and frequency control. Sizes 55 to 110 kW as well as versions with direct drive and integrated gears will follow in the next stage of development.

Made By BOGE
In order to meet the highest quality standards, the new S-4 was developed entirely in-house - including the effilence airend with integrated gears.

Outstanding efficiency
The BOGE S-4 series has what it takes to outperform all the screw compressors in its class in terms of efficiency, sound pressure level and CO2 emissions.

Minimal maintenance costs
From maintenance-free gears right through to the drawer principle for the oil and air cooler - a perfect combination of everything that keeps maintenance costs in check.

Premium Engineering
Insisting on premium quality has paid off at BOGE - especially when it comes to rolling out smart innovations. We call it INNOVATIVE QUALITY.

Distributor :

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Best
Of
German
Engineering

The new **BOGE S-4** series.

TECHNICAL DATA OVERVIEW

BOGE type	Max. pressure bar	Effective free air delivery m³/min	Rated output Main drive kW	Rated output Fan motor kW	Dimensions with sound insulation W x D x H (mm)	Com-pressed air outlet	Weight with sound insulation kg	Weight with super sound insulation kg
S 111–4	7.5	20.2	110	3.0	2930 x 1620 x 1990	DN 80	3550	3600
S 111–4	10	17.1	110	3.0	2930 x 1620 x 1990	DN 80	3550	3600
S 111–4	13	14.4	110	3.0	2930 x 1620 x 1990	DN 80	3550	3600
S 111–4 LF	7.5	5.5 - 20.6	110	3.0	2980 x 1620 x 1990	DN 80	3550	3600
S 111–4 LF	10	5.3 - 17.8	110	3.0	2980 x 1620 x 1990	DN 80	3550	3600
S 111–4 LF	13	4.9 - 14.4	110	3.0	2980 x 1620 x 1990	DN 80	3550	3600
S 111–4 L	7.5	19.9	110	3.0	2930 x 1620 x 1990	DN 80	3450	3500
S 111–4 D	7.5	20.2	110	3.0	3490 x 1620 x 1990	DN 80	3750	3800
S 111–4 D	10	17.1	110	3.0	3490 x 1620 x 1990	DN 80	3750	3800
S 111–4 D	13	14.4	110	3.0	3490 x 1620 x 1990	DN 80	3750	3800
S 111–4 LFD	7.5	5.5 - 20.6	110	3.0	3540 x 1620 x 1990	DN 80	3800	3850
S 111–4 LFD	10	5.3 - 17.8	110	3.0	3540 x 1620 x 1990	DN 80	3800	3850
S 111–4 LFD	13	4.9 - 14.4	110	3.0	3540 x 1620 x 1990	DN 80	3800	3850
S 111–4 LD	7.5	19.9	110	3.0	3490 x 1620 x 1990	DN 80	3650	3700
S 132–4	7.5	23.2	132	3.0	2930 x 1620 x 1990	DN 80	3650	3700
S 132–4	10	21.1	132	3.0	2930 x 1620 x 1990	DN 80	3650	3700
S 132–4	13	17.2	132	3.0	2930 x 1620 x 1990	DN 80	3650	3700
S 132–4 LF	7.5	5.5 - 24.0	132	3.0	2980 x 1620 x 1990	DN 80	3650	3700
S 132–4 LF	10	5.3 - 21.0	132	3.0	2980 x 1620 x 1990	DN 80	3650	3700
S 132–4 LF	13	5.0 - 17.9	132	3.0	2980 x 1620 x 1990	DN 80	3650	3700
S 132–4 L	10	19.3	132	3.0	2930 x 1620 x 1990	DN 80	3550	3600
S 160–4	7.5	27.6	160	5.5	2930 x 1620 x 1990	DN 80	3700	3750
S 160–4	10	25.0	160	5.5	2930 x 1620 x 1990	DN 80	3700	3750
S 160–4	13	21.2	160	5.5	2930 x 1620 x 1990	DN 80	3700	3750
S 160–4 LF	7.5	5.5 - 27.3	160	5.5	2980 x 1620 x 1990	DN 80	3750	3800
S 160–4 LF	10	5.3 - 24.6	160	5.5	2980 x 1620 x 1990	DN 80	3750	3800
S 160–4 LF	13	5.0 - 21.2	160	5.5	2980 x 1620 x 1990	DN 80	3750	3800
S 160–4 L	13	19.3	160	5.5	2930 x 1620 x 1990	DN 80	3600	3650

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