

BOGE AIR. THE AIR TO WORK.



# SCREW COMPRESSORS

OIL-FREE

Over 100,000 compressed air users expect more when it comes to their compressed air supply.

**BOGE air provides them with the air to work.**

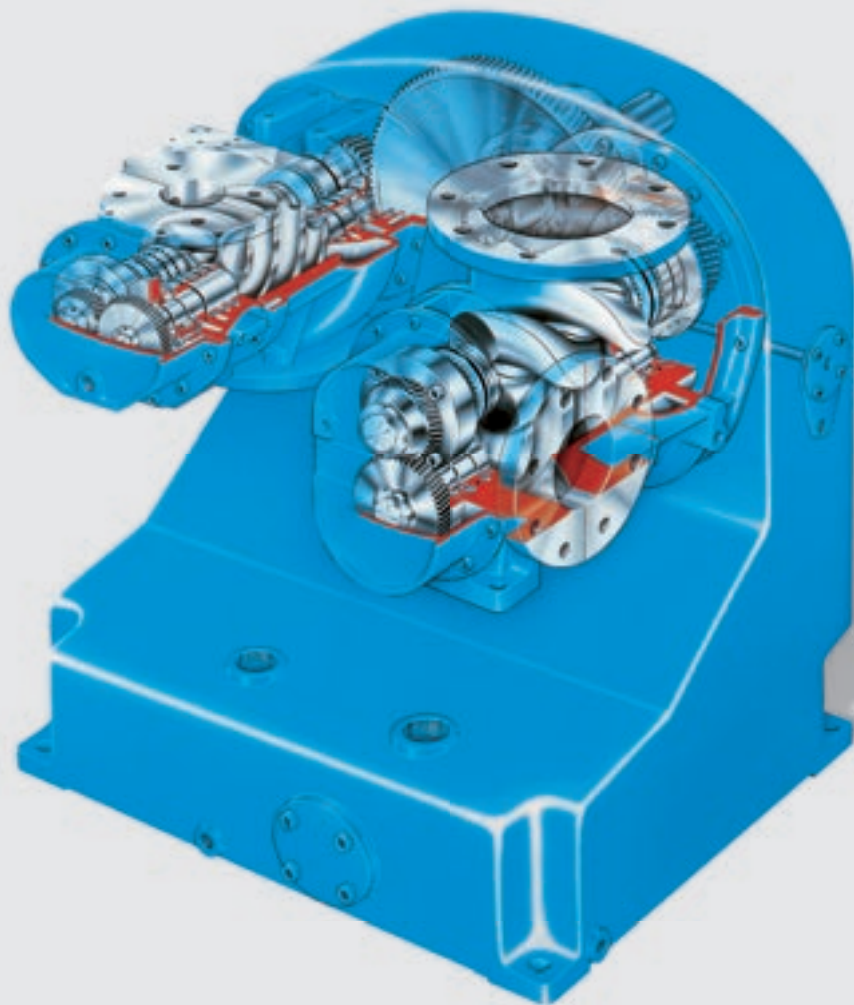
BOGE oil-free screw compressors have long since proved their importance to compressed air users in critical applications such as pharmaceutical, food and semiconductor industries where absolutely oil-free compressed air is prerequisite.

With a BOGE oil-free screw there is no chance that oil can penetrate the compression process that means oil free air from the start. Oil-free air means less expensive downstream air treatment and moreover these compressors have been engineered for the safe and reliable generation of large quantities of oil-free air, energy efficiently, in base load or intermittent mode.

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# Clean and efficient compressed air: With BOGE screw compressors.



## SOPHISTICATED TECHNOLOGY

Using a two-stage airend ensures very low specific power consumption. There are direct drive or belt drive options with frequency control as an option on all machines.

The shafts are sealed by a combination of special sealing rings and a two-stage labyrinth

vented to atmosphere. This system ensures optimum operational reliability. The precision rotors are finished with a durable coating that prevents corrosion.

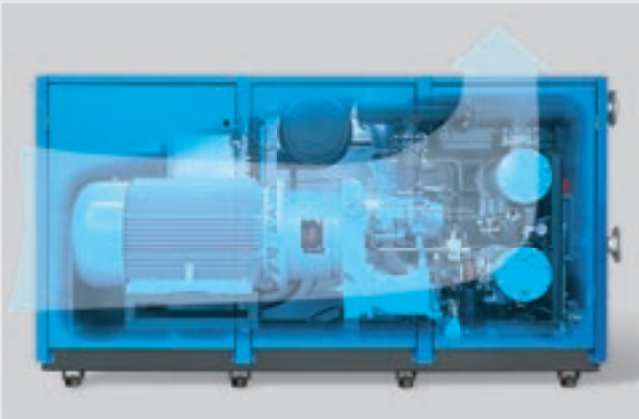
The amply dimensioned airend roller bearings are of the highest quality and very durable giving

the most reliable service life even in the most demanding operational conditions.

These special bearings eliminate the need for other more traditional means of axial thrust compensation.

**Clean air from the start:** BOGE oil-free screws operate at much higher speeds than oil-injected counterparts and the heat of compression is therefore dissipated differently. The special BOGE airend and the cooling concept are the centrepiece of the design. Both components have been designed to provide utmost safety and maximum efficiency – ideally suited for sensitive fields of application.

## SOPHISTICATED CONCEPT



### EFFICIENT COOLING AIR CIRCULATION

BOGE oil-free screw compressors are divided into three clearly defined sections. The component parts are intelligently positioned along the cooling air flow – for increased service life and prompt availability of compressed air. Control electronics, electrical components and motor are located in the coolest part of the machine.

Both airend stages are easily accessible. Because a separate cooling air fan is fitted as standard an optional cowl cooler can be mounted directly on the compressor. As the discharge air is cooled, no additional discharge ducting is required which means the compressor can be installed according to individual requirements



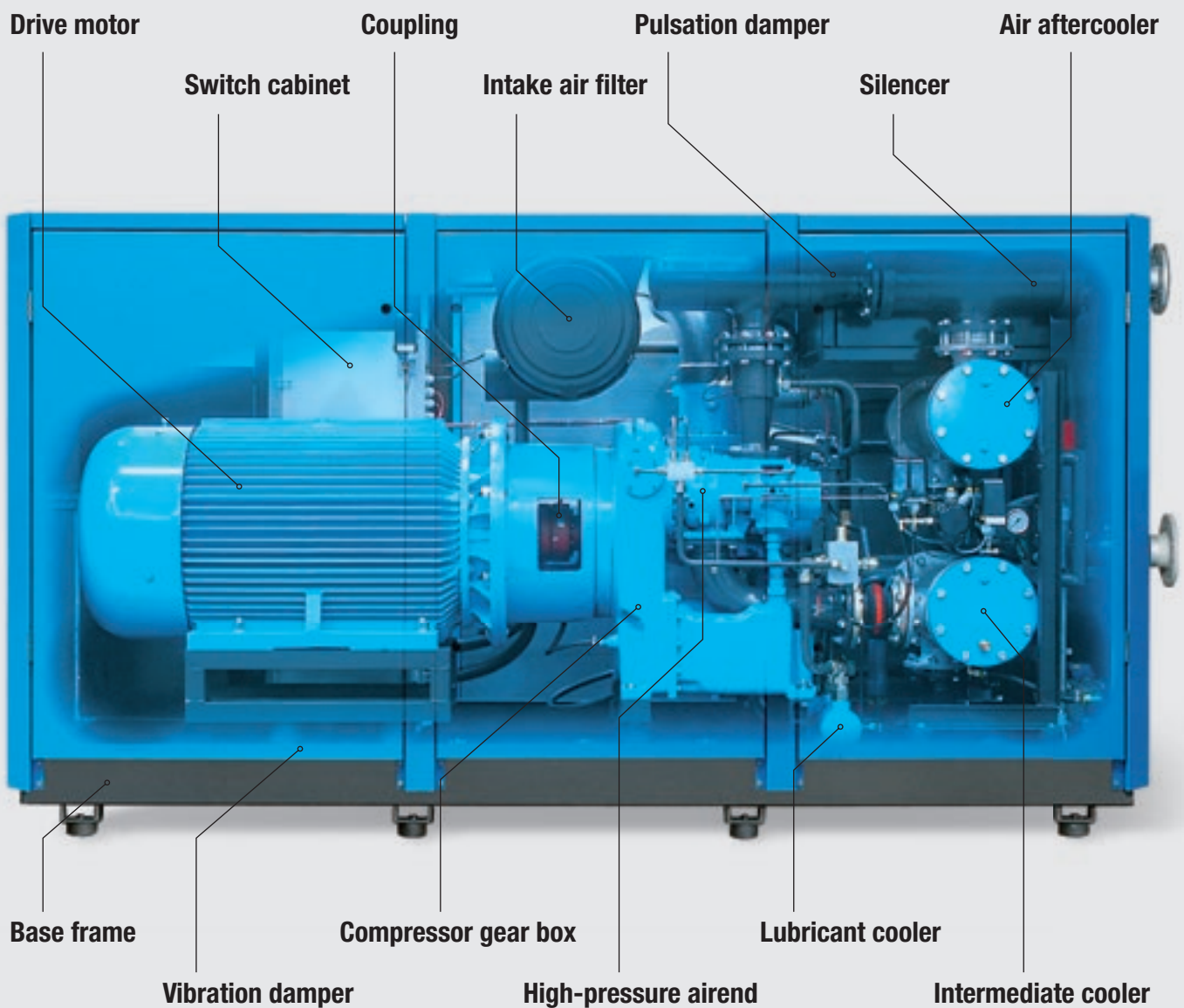
### RELIABLE COOLING CONCEPT

BOGE oil-free screws are available air or water-cooled. A tube in shell principal is used for water cooling. Water flows through the pipes and the compressed air around them, which means that the “dirty” medium passes through the pipes – this facilitates easy maintenance and cleaning. The use of ribbed pipes on the compressed air side and plain pipes on the water-side ensure a high degree of efficiency. Flanged pipes also ensure the replacement of the cooling module without having to remove a single component whereas easily extractable pipe bundles make cleaning in mounted condition simpler than ever. The coolant can be treated to achieve the necessary water quality if required. Where no cooling water is available BOGE can supply a chilling system. Air cooling is possible in many applications which means that a cooling water supply and the associated costs can be totally eliminated.

# The safe way to generate oil-free compressed air:

## Design advantages of the SO series.

### INTELLIGENT DESIGN



(Example shows water cooled system)

**Precise engineering for clean results:** The SO series is characterised by its intelligent design, innovative functional principle and high quality workmanship. Its dependable quality and high efficiency ensure safe and cost effective generation of oil-free compressed air. Air or water-cooled, fixed or variable speed options are available to suit most every site condition.

## CONVINCING ADVANTAGES



### HIGH QUALITY AND MAINTENANCE FRIENDLY DESIGN

Ease of maintenance was one of the crucial design factors when developing the SO series. All component parts are easily accessible which facilitates prompt and hassle free maintenance. The use of high quality materials and the reduced number of wear parts make the BOGE oil-free screw compressors as efficient and reliable as any demanding customer would expect. The entire production process is subject to permanent quality assurance and is closely monitored by an experienced quality team – from receiving inspection of purchased parts to final inspection and testing.



### FREQUENCY CONTROL (OPTIONAL FEATURE)

The SO series is available with frequency control as an option. It is designed to optimise demand fluctuations enabling a particularly energy efficient operation. The frequency converter is supplied either separately or integrated into the switch cabinet. Part load regulation is then achieved by dynamic speed change. Frequency controlled screw compressors are intended for use as stand-alone machines or ideally suited when covering peak loads in multiple compressor systems with high oil-free compressed air demands – ideally in combination with BOGE turbo compressors.



### PRIME COMPRESSOR CONTROL

The PRIME control is the latest state-of-the-art energy efficient controller to come from BOGE. A large-scale back-lit LC display with clear text information shows error/maintenance messages, operating status and all operating parameters on three main menus. Volume flow and pressure characteristics are graphically displayed and freely scalable. The modular design means optional displays – e.g. pressure dew point – can be easily added. The PRIME is fitted with an integral real-time clock and a switch clock function making it possible to control external equipment. Communication is effected via RS 485 interfaces or potential-free contacts.

## Screw compressor **SO 61** to **SO 126**

(air and water cooled)

## Screw compressor **SO 150** to **SO 480** (water cooled)



Free air delivery: 5.25 – 51.4 m<sup>3</sup>/min, 185 – 1815 cfm

Pressure range: 8 – 10 bar, 115 – 150 psig

Motor range: 45 – 355 kW, 60 – 480 HP



SO 126



SO 220



### **MOTOR**

These models are equipped with a three-phase asynchronous motor, ISO class F with additional motor reserves to meet the most challenging operating conditions. The motor is installed in the cool air intake section of the package and is thermistor protected to ensure a long service life.



### **WATER COOLING**

Where large volumes of air are required water-cooling is a must. The intelligent BOGE cooling concept guarantees safe and economical cooling of the compressor with optimum maintenance friendliness.



### **EXHAUST AIR COOLING**

As an option the SO series can be equipped with a cowl cooler eliminating the need for expensive exhaust air ducts.



### **PRIME CONTROL**

The PRIME control is the latest state-of-the-art energy efficient controller to come from BOGE. A large-scale back-lit LC display with clear text information shows error/maintenance messages, operating status and all operating parameters on three main menus.



**Highly efficient oil-free compressed air: Engineered to produce oil-free compressed air at a level of efficiency and safety never seen before with 13 models and 31 variants ensuring there is a version to meet all requirements. Water cooled and air cooled options are available.**

BOGE Model	Max. pressure		Effective free air delivery*		Motor power				Dimensions silenced W x D x H mm	Dimensions super-silenced W x D x H mm	Weight silenced kg	Weight super-silenced kg
	bar	psig	m³/min	cfm	Main drive motor		Fan motor					
					kW	HP	kW	HP				
SO 61 A	8	115	6.65	235	45	60	4.80	6.50	2545x1295x1888	3766x1295x2385	2598	2877
	10	150	5.25	185	45	60	4.80	6.50	2545x1295x1888	3766x1295x2385	2598	2877
SO 76 A	8	115	8.60	313	55	75	4.80	6.50	2545x1295x1888	3766x1295x2385	2634	2913
	10	150	7.70	272	55	75	4.80	6.50	2545x1295x1888	3766x1295x2385	2634	2913
SO 101 A	8	115	12.06	426	75	100	4.80	6.50	2545x1295x1888	3766x1295x2385	2723	3002
	10	150	10.46	369	75	100	4.80	6.50	2545x1295x1888	3766x1295x2385	2723	3002
SO 126 A	8	115	13.01	459	90	125	4.80	6.50	2545x1295x1955	3766x1295x2453	2763	3042
	10	150	13.01	459	90	125	4.80	6.50	2545x1295x1955	3766x1295x2453	2763	3042
SO 61 W	8	115	6.65	235	45	60	0.55	0.75	2666x1310x1846	3072x1310x1846	2150	2183
	10	150	5.25	185	45	60	0.55	0.75	2666x1310x1846	3072x1310x1846	2150	2183
SO 76 W	8	115	8.60	313	55	75	0.55	0.75	2666x1310x1846	3072x1310x1846	2320	2353
	10	150	7.70	272	55	75	0.55	0.75	2666x1310x1846	3072x1310x1846	2320	2353
SO 101 W	8	115	12.06	426	75	100	0.55	0.75	2666x1310x1846	3072x1310x1846	2490	2522
	10	150	10.46	369	75	100	0.55	0.75	2666x1310x1846	3072x1310x1846	2490	2522
SO 126 W	8	115	13.01	459	90	125	0.55	0.75	2666x1310x1846	3072x1310x1846	2540	2573
	10	150	13.01	459	90	125	0.55	0.75	2666x1310x1846	3072x1310x1846	2540	2573
SO 150	8	115	18.60	646	110	150	0.75	1.00	–	3110x1500x1685	–	3400
	10	150	16.00	565	110	150	0.75	1.00	–	3110x1500x1685	–	3400
SO 180	8	115	21.40	756	132	180	0.75	1.00	–	3110x1500x1685	–	3500
	10	150	19.40	685	132	180	0.75	1.00	–	3110x1500x1685	–	3500
SO 220	8	115	26.00	918	160	220	0.75	1.00	–	3110x1500x1685	–	3500
	10	150	23.00	812	160	220	0.75	1.00	–	3110x1500x1685	–	3500
SO 269	10	150	26.00	918	200	270	0.75	1.00	–	3110x1500x1685	–	3800
SO 270	8	115	34.90	1232	200	270	1.10	1.50	–	3650x1800x2150	–	5600
	10	150	28.40	1002	200	270	1.10	1.50	–	3650x1800x2150	–	5600
SO 340	8	115	42.30	1494	250	340	1.10	1.50	–	3650x1800x2150	–	5800
	10	150	35.90	1268	250	340	1.10	1.50	–	3650x1800x2150	–	5800
SO 430	8	115	47.20	1667	315	430	1.10	1.50	–	3650x1800x2150	–	6000
	10	150	46.80	1653	315	430	1.10	1.50	–	3650x1800x2150	–	6000
SO 431	8	115	51.40	1815	315	430	1.10	1.50	–	3650x1800x2150	–	6000
SO 480	10	150	51.40	1815	355	480	1.10	1.50	–	3650x1800x2150	–	6600

\* Free air delivery for the complete package in accordance with ISO 1217, Appendix C, at 20°C ambient temperature and maximum pressure. Emitted sound level as per PN8NTC2.3 from 76 dB(A)  
The technical data is designed for international use: maximum ambient temperature + 40°C, maximum cooling water temperature + 40°C.  
Different demands on request. Dimensions and construction are subject to change.

# Screw compressor **SO 100** to **SO 200** (air and water cooled)



Free air delivery: 9.9 – 22.4 m<sup>3</sup>/min, 350 – 791 cfm  
Pressure range: 8 – 10 bar, 115 – 150 psig  
Motor range: 75 – 145 kW, 100 – 197 HP



SO 125 W



SO 181 A



## GM DRIVE SYSTEM

The patented BOGE GM drive system allows optimal constant belt tension in any operating phase, including start-up. The V-belt never needs to be re-tensioned. This optimised system ensures high delivery outputs.



## COOLING OPTIONS

Both air and water cooled versions are available. The maintenance friendly water-cooled version provides safe and efficient cooling of the compressor.



## FREQUENCY CONTROLLED FAN MOTORS

Air-cooled compressors are equipped with a patented frequency controlled fan, for both the intermediate and after cooler, as standard. Cooling air is then specifically adapted – for optimised energy consumption.



## PRIME CONTROL

The PRIME control is the latest state-of-the-art energy efficient controller to come from BOGE. A large-scale back-lit LC display with clear text information shows error/maintenance messages, operating status and all operating parameters on three main menus.

**Dependable generation of oil-free compressed air:** These efficient screw compressors generate safe, reliable, and dependable oil-free compressed air. With five models and 20 variants there is a version to meet every need. Supreme performance and maximum efficiency are further benefits realised thanks to the inclusion of BOGE's patented technologies such as the GM drive system to the frequency controlled fan motors.

BOGE Model	Max. pressure		Effective free air delivery*		Motor power				Dimensions super-silenced W x D x H mm	Weight super-silenced kg
	bar	psig	m <sup>3</sup> /min	cfm	Main drive motor		Fan motor			
					kW	HP	kW	HP		
SO 100 A	8	115	11.6	410	75	100	6.00	8	3100 x 1670 x 2550	3400
	10	150	9.9	350	75	100	6.00	8	3100 x 1670 x 2550	3400
SO 125 A	8	115	14.2	501	90	125	6.00	8	3100 x 1670 x 2550	3450
	10	150	12.1	427	90	125	6.00	8	3100 x 1670 x 2550	3450
SO 151 A	8	115	18.6	657	110	150	6.00	8	3100 x 1670 x 2550	3700
	10	150	16.2	572	110	150	6.00	8	3100 x 1670 x 2550	3700
SO 181 A	8	115	21.0	742	132	180	6.00	8	3100 x 1670 x 2550	3800
	10	150	19.5	689	132	180	6.00	8	3100 x 1670 x 2550	3800
SO 200 A	8	115	22.4	791	145	197	6.00	8	3100 x 1670 x 2550	3800
	10	150	20.8	734	145	197	6.00	8	3100 x 1670 x 2550	3800
SO 100 W	8	115	11.6	410	75	100	0.75	1	2700 x 1670 x 2100	3100
	10	150	9.9	350	75	100	0.75	1	2700 x 1670 x 2100	3100
SO 125 W	8	115	14.2	501	90	125	0.75	1	2700 x 1670 x 2100	3150
	10	150	12.1	427	90	125	0.75	1	2700 x 1670 x 2100	3150
SO 151 W	8	115	18.6	657	110	150	0.75	1	2700 x 1670 x 2100	3500
	10	150	16.2	572	110	150	0.75	1	2700 x 1670 x 2100	3500
SO 181 W	8	115	21.0	742	132	180	0.75	1	2700 x 1670 x 2100	3600
	10	150	19.5	689	132	180	0.75	1	2700 x 1670 x 2100	3600
SO 200 W	8	115	22.4	791	145	197	0.75	1	2700 x 1670 x 2100	3600
	10	150	20.8	734	145	197	0.75	1	2700 x 1670 x 2100	3600

\* Free air delivery for the complete package in accordance with ISO 1217, Appendix C, at 20°C ambient temperature and maximum pressure. Emitted sound level as per PN8NTC2.3 from 78 dB(A)  
The technical data is designed for international use: maximum ambient temperature + 40°C, maximum cooling water temperature + 40°C.  
Different demands on request. Dimensions and construction are subject to change.

W = water cooled      A = air cooled

# There are many ways to dry compressed air. The most reliable and efficient ones come from us!

## FOUR OPTIONS, COUNTLESS ADVANTAGES

BOGE offers four systems for drying oil-free compressed air. After thorough analysis of your compressed air requirements and quality targets

our experts will be able to recommend the optimal solution to meet your needs whilst achieving the ideal cost-benefit ratio.



## OPTIMISE THE ENERGY FROM THE COMPRESSED AIR DRYER

All BOGE SO series compressors can be supplied with a Heat Of Compression (HOC) adsorption dryer to reach pressure dew points up to  $-40^{\circ}\text{C}$ . The heat recovered, via the intercoolers, provides all the necessary regeneration in a loss free cycle minimising the requirement of auxiliary power.

**Tell us your requirements, we provide the know-how:** The selection of a dryer depends on the required point of use compressed air quality. BOGE experts will ensure the most effective and most efficient dryer solution customised to meet your needs.



#### **REFRIGERANT COMPRESSED AIR DRYER**

The pressure dew point of the refrigerant compressed air dryer is +3°C (DIN ISO 7183). Providing that the system temperature never falls below +3°C and air quality meets the production requirement, then a refrigerant dryer is the ideal choice for compressed air purification.



#### **HEATLESS ADSORPTION DRYER**

Heatless adsorption dryers for pressure dew points to -70°C are necessary when a higher compressed air quality is required. For the regeneration process heatless adsorption dryers require purge air which must be included when sizing the compressor.



#### **HEAT-REGENERATED ADSORPTION DRYERS**

Heat regenerated adsorption dryers with pressure dew points up to -70°C are more economical at higher flow capacities than the heatless type. Regeneration heat is supplied using ambient air heated by an external electrical heater and drawn in as vacuum regeneration.

# READY FOR ACTION WORLDWIDE:

## BOGE Service Support – Worldwide



# SERVICE

### Service / Maintenance

Service support solutions including contracts covering repair and even warranty extension. Routine maintenance according to our flat rate service plan as well as inspection and breakdown cover.

### Extended Warranty

Extension of your factory warranty up to 5 years with the BOGE cairplan: for total security and back-up (see overleaf for more details).

### Comprehensive Service Cover

The comprehensive “cair” package includes a guaranteed reaction time within the warranty period.

### Maintenance & Repair

Options include; long-term fixed cost maintenance plans, a flat rate for all types of service and spare parts with a possible warranty extension up to 10 years.

### Commissioning

Connection and adjustment of all equipment at your facility: a fast and dependable service delivered by qualified BOGE service technicians. Full installation on request.

### 24 Hour Helpline

Emergency helpline for trouble shooting and technical support: available any time around the clock!

### COMPRESSED AIR FLAT RATE

A comprehensive service plan created to satisfy your individual requirements: e.g. taking responsibility for the compressed air station at your facility including complete plant management for a monthly flat rate irrespective of hours of operation (energy costs not included).

## FLEXIBLE SERVICE

This BOGE service programme has been developed to adapt to each customer's unique requirements. It is our objective to create a tailor-made BOGE service package covering inspection, service, breakdown, with customised warranty arrangements as well as complete all-in service contracts.

Please contact us to help you determine the type of service best suited to meet your needs: Just email us at [service@boge.de](mailto:service@boge.de) – our service specialists will be in touch with you shortly!

**Service your added value!** Maximised reliability and economic efficiency are not the only technical advantages that BOGE has to offer. Our comprehensive service support program will ensure your BOGE compressed air system remains in tip top condition. Wherever you need us, whatever we can do for you: BOGE Service Support is always readily available close by – competent, to the highest standards, and always one step ahead.



**BOGE CAIRPLAN**

BOGE cairplan enables you to extend your factory warranty up to 5 years: 2 years factory warranty with 3 years additional cairplan warranty – the choice is yours. Furthermore, cairplan ensures manufacturer's recommended maintenance schedule of new and existing equipment at the specified service intervals.

**For more information email**  
**cairplan@boge.com**



**BOGE ORIGINAL PARTS**

Only original BOGE spare parts have the manufacturer's technological edge. You can be confident when opting for BOGE original spare parts in the service of your BOGE compressed air system will ensure that the integrity of the compressor is maintained, efficiency is retained and your peace of mind is sustained.



**ALWAYS NEARBY**

BOGE has a network of dedicated service technicians and certified partners at its disposal to help you worldwide with your installation, upgrading, commissioning or approval, maintenance, repair, or inspection: You can rely on the know-how and experience of our qualified experts – at all times.

**Hotline Mobile Service: +49 5206 601-130**



**EMERGENCY ASSISTANCE**

In the case of an emergency where immediate technical support is required, the BOGE product support trouble shooters or the BOGE Helpline team are available to you 24/7.

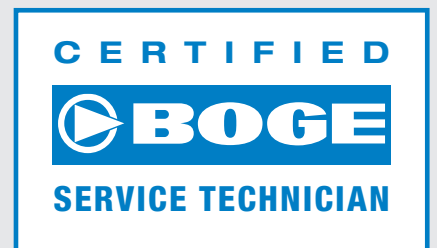
**Product Support Hotline:**  
**+49 5206 601-140**

**BOGE Helpline: +49 170 4400444**



**AIR AUDITS**

By analysing your existing compressed air system, our energy efficiency experts can identify where savings can be made. The BOGE AIRReport includes measurement of: dew point control, vibration control, leakage, noise, oil check and TAN check.



**TRAINING COURSES**

The BOGE Compressed Air College was established in order to train and certify internal employees and external partners as qualified BOGE Service Technicians. Attendance of training courses held in the in-house training centre further assist in refreshing existing BOGE Service Technician's knowledge at regular intervals.

**For four generations, customers from mechanical engineering, industry and trade have relied on BOGE know-how when it comes to planning, developing and manufacturing compressed air systems. They are fully aware of the fact that BOGE AIR is more than just ordinary compressed air: utmost safety, outstanding efficiency, excellent quality, maximised flexibility along with dependable service are the ingredients to transform BOGE AIR into air to work with – in Germany, in Europe and in more than 80 countries around the world.**

**Our ranges of services include the following:**

- Energy efficient systems development
- Plant design and engineering
- System control and visualisation
- Oil-free piston, screw and turbo compressors
- Oil injected screw compressors  
and oil lubricated piston compressors
- Compressed air treatment
- Compressed air distribution and storage
- Compressed air accessories
- Compressed air service



**BOGE KOMPRESSOREN**

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