BOGE AIR. THE AIR TO WORK.

BOGE
COMPRESSED AIR SYSTEMS

# CONTROLS

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.**

It is estimated that energy costs account for up to 75% of the lifetime costs of compressed air generation. Implementing a controller into the compressed air system is one way to ensure the supply of compressed air remains energy efficient. BOGE compressor or master controllers have been specifically designed for optimum functioning in BOGE compressed air systems and for safe and efficient operation. In addition, BOGE controllers serve to monitor, control and optimise your compressed air system efficiently – an investment bound to pay off!

## CONTENTS


| | |
|---|---|
| COMPRESSOR CONTROLS BASIC, FOCUS, PRIME | 4 |
| BASE LOAD CONTROL TRINITY | 6 |
| MASTER CONTROL AIRTELLIGENCE | 8 |
| MASTER CONTROL AIRTELLIGENCE PROVIS | 10 |

# Compressor controls
# **BASIC, FOCUS** and **PRIME**


## THE ORIGINAL VERSION: BASIC

- 5 parameters in main display
- In situ software update possible
- Code programmable
- Automatic antifreeze operation
- Auto restart
- Potential-free contacts for messages (retrofittable)


## THE VERSATILE VERSION: FOCUS

Additional functionality:

- Remote On/Off facility (e.g. remote control panel)
- Local/remote control via key switch
- Compressed air processing control
- System pressure sensor
- Ring memory (last 30 messages)
- Potential free contacts for error / maintenance messages and operating state
- Base load switch control for up to 4 compressors via RS 485 interface as standard


## THE OPTIMAL VERSION: PRIME

- Large-scale back-lit LC display (320 x 240 pixels) including clear text information
- Volume flow and pressure characteristics freely scalable
- 3 main displays for operating states /operating parameters
- Integrated real-time clock and switch clock function even for external components
- Communication via RS 485 interfaces or potential-free signalling contacts

**Controlling and monitoring according to demand:** The BOGE control and monitoring system operates according to the customer's actual compressed air demand. Our BASIC and FOCUS controls are designed to ensure simple and reliable control for various operating parameters at two levels. Whilst, the PRIME control is a state-of-the-art energy efficient control intended for use with oil free screw compressors.

## THE ADVANTAGES OF BOGE COMPRESSOR CONTROLS



### COMPLETE CONTROL

A large-scale back-lit LC display with clear text information visibly shows error/maintenance messages, operating states and all operating parameters. All relevant values are available at a glance enabling you to specifically configure all essential parameters for efficient operation of your installation.

### COMPLETE DEPENDABILITY

Whether your compressor is due for maintenance or if your compressed air network is malfunctioning, the control display will inform you. This helps to improve the operating safety of your compressed air supply and the service life of all essential component parts.

### COMPLETE EFFICIENCY

BOGE compressor controls use a pressure sensor to control whether or not the requested pressure in your compressor station has been achieved. This enables you to preset minimum and maximum pressures and to control the operation of your compressor station according to demand. The state-of-the-art BOGE compressor controls are engineered to meet the latest control requirements and are continuously being improved and optimised – for safe and efficient operation in all operating conditions.

## INTELLIGENT CONTROLLING PAYS OFF

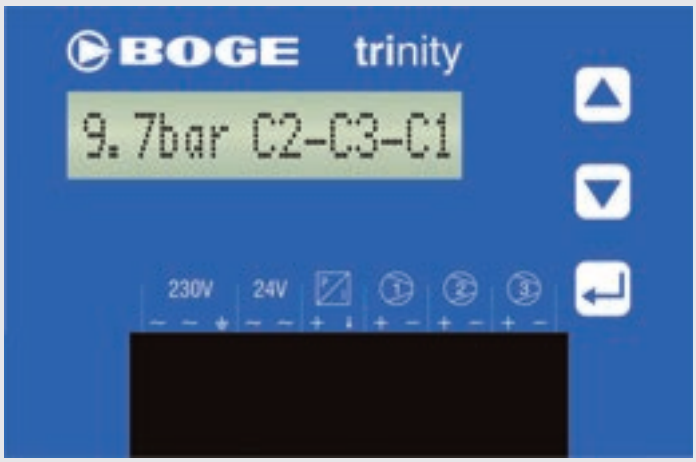
**investment costs**
approx. 15 %

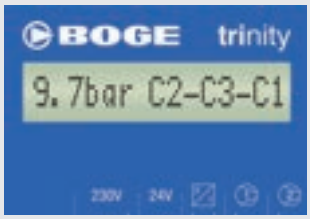
**maintenance and servicing costs**
approx. 10 %

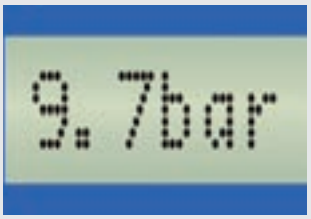
**energy costs**
approx. 75 %

**Your BOGE Advantage:**
**More than a third of possible savings from energy and maintenance costs are generated by using high quality energy efficient components.**

# Base load switch control **tri**nity



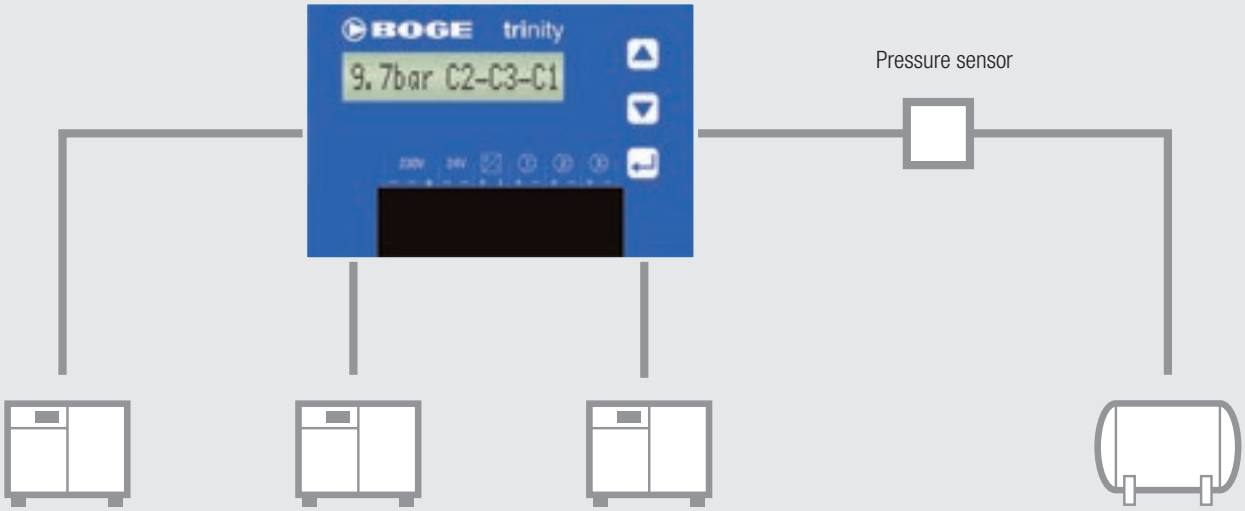

**BACK-LIT LC DISPLAY**
A large-scale back-lit LC display with clear text information shows operating states and operating parameters.

**ACTUAL PRESSURE MEASURING**
The network pressure is measured by a pressure sensor. You only have to input the maximum and minimum pressure values into the **trinity** and all the intermediate pressures of the compressors are automatically calculated and adjusted.

**EFFICIENCY**
**trinity** ensures an even load operation of all compressors minimising service costs. You can choose between cyclic priority change and a weekly timer with 26 channels for easily selectable priorities (incl. cutoffs, e.g. at night).

**SIMPLE RETROFITTING**
**trinity** can be easily connected to a new compressor switch cabinet at the factory or retrofitted. Alternatively, there is a wall mounted version

**A three times better connection:** the BOGE trinity controls up to three compressors of equal or different size or design. The adjustable base load switching cycle enables a constant load operation of all installed compressors. This allows reduced maintenance costs and improved efficiency of your compressed air supply – this is how simple and economical efficiency can be.

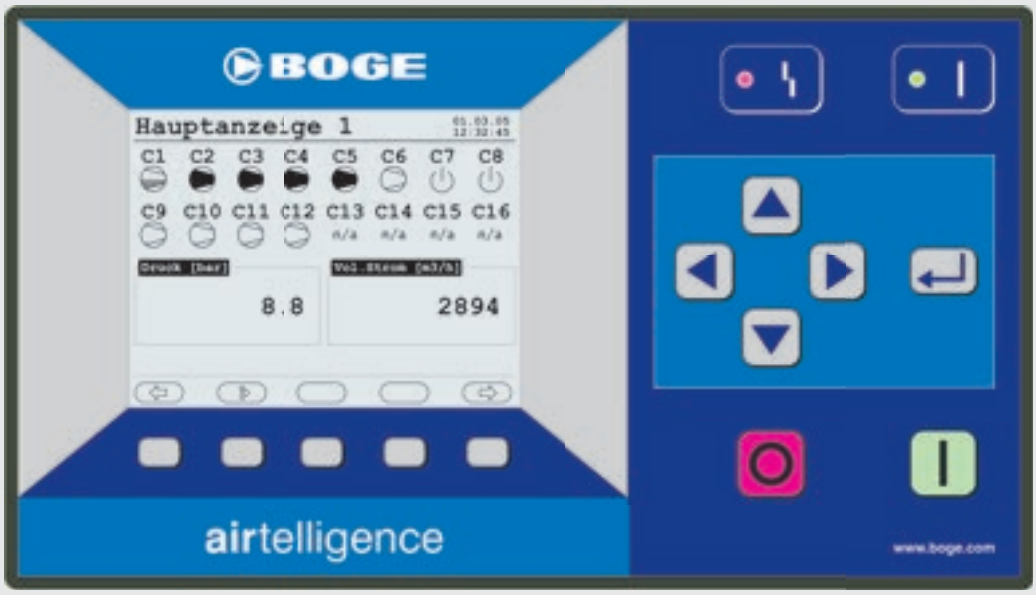


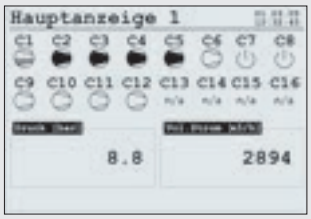

Control up to three compressors depending on demand: that's trinity made by BOGE!

## VISIBLE DATA

- Pressure display combined with display of compressors currently in load operation
- Pressure display combined with current compressor priorities
- Pressure display combined with current cycle rest time
- Pressure display combined with display of weekly timer
- Display of set $P_{min}$ and $P_{max}$ switching points
- Display of actual time
- Display of installed software version

# Master control **air**telligence




### LC DISPLAY WITH TEXT INFORMATION

**air**telligence offers a large-scale back-lit LC display (320 x 240 pixels) that clearly shows text information with function keys for easy and intuitive operation.

### CONSUMPTION OPTIMISATION

**air**telligence controls the entire installation according to demand: Based on the actual consumption, the momentary demand is anticipated and the optimal compressor combination is switched on automatically ensuring load/idle run switch cycles are minimised.

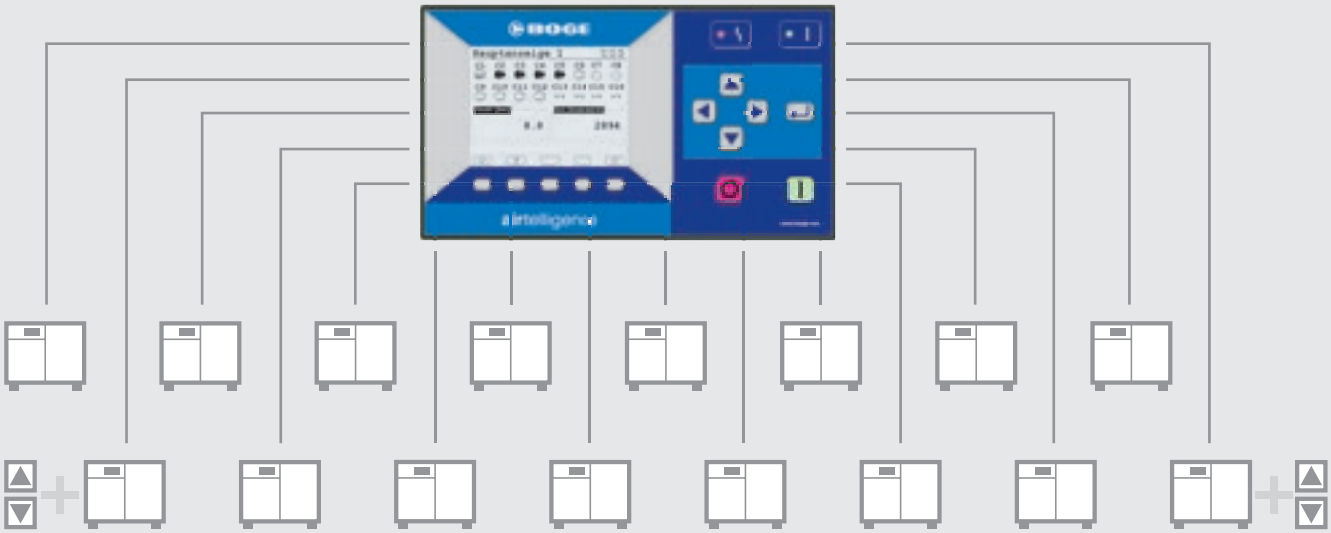
### FLEXIBLE CONFIGURATION

Four modules for 4, 8, 12 or 16 compressors makes **air**telligence very flexible. The system also accepts compressors from all types of makes and manufacturers. Up to two frequency controlled compressors can be operated in a combined compressor system.

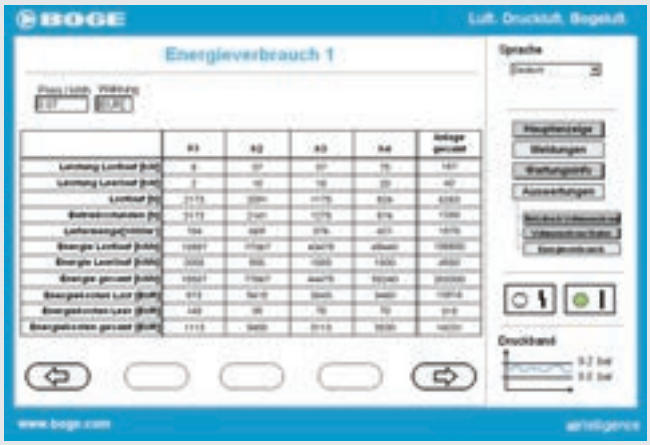
### PC MONITORING

All relevant parameters such as operating data, maintenance intervals, energy consumption and error messages are downloadable onto your PC via a web browser to keep you updated around the clock and to prevent energy costs going off course.

**16 compressors in perfect harmony: If you intend to optimise your operating expenses and to reduce your maintenance costs, air**telligence **is the perfect solution. air**telligence **can configure up to 16 compressors of all sizes in order to achieve the utmost efficiency whilst monitoring the entire range of functions. In addition, air**telligence **is ideally suited for optimising existing compressor stations: the control unit is able to determine the size of the network and to help calculate potential leakages.**

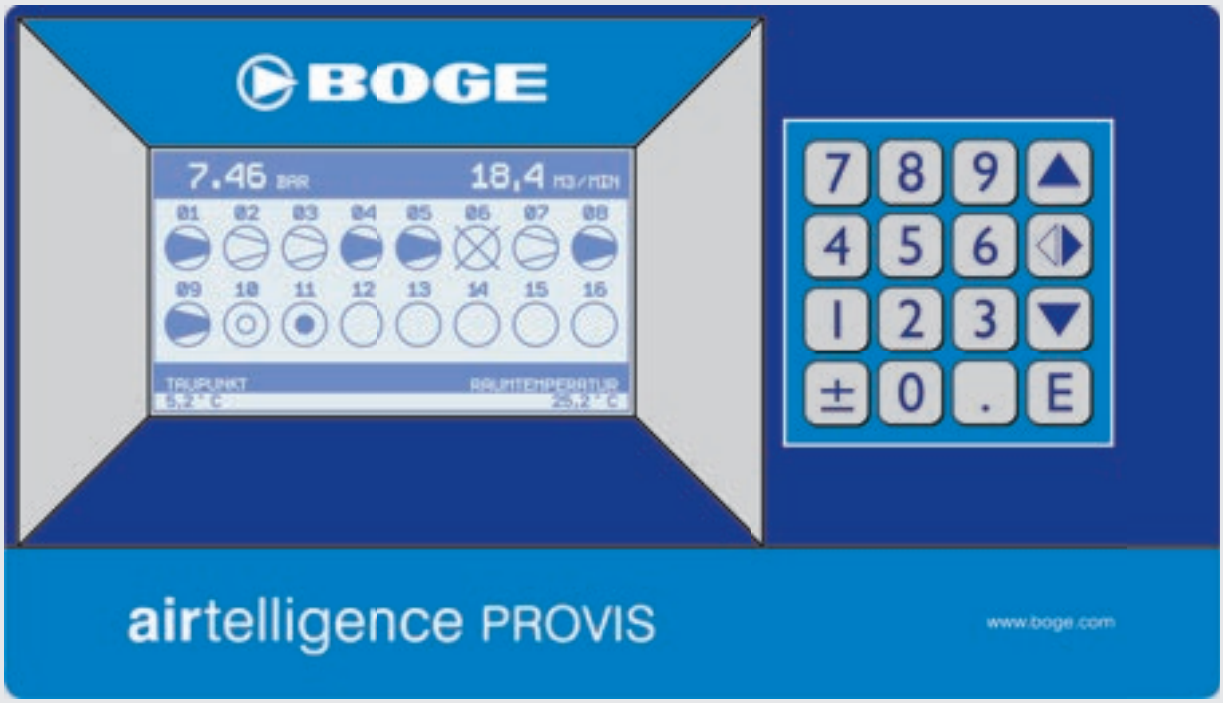


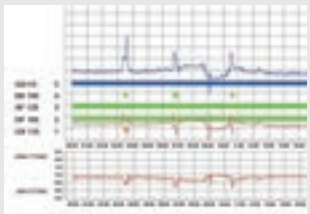
**Energy efficient control:**
**air**telligence **serves to monitor and to optimise up to 16 compressors of different sizes and types in a combined compressor system.**




**Maximum transparency:**
**air**telligence **enables you to access your operating data, maintenance and error messages at any time.**

# Master control
# **air**telligence **PROVIS**



### VISUALISATION
**air**telligence PROVIS is designed to visually display all essential efficiency specific parameters allowing a clear illustration of the operating behaviour of your compressor station providing absolute cost transparency (load operation costs, idling time costs).

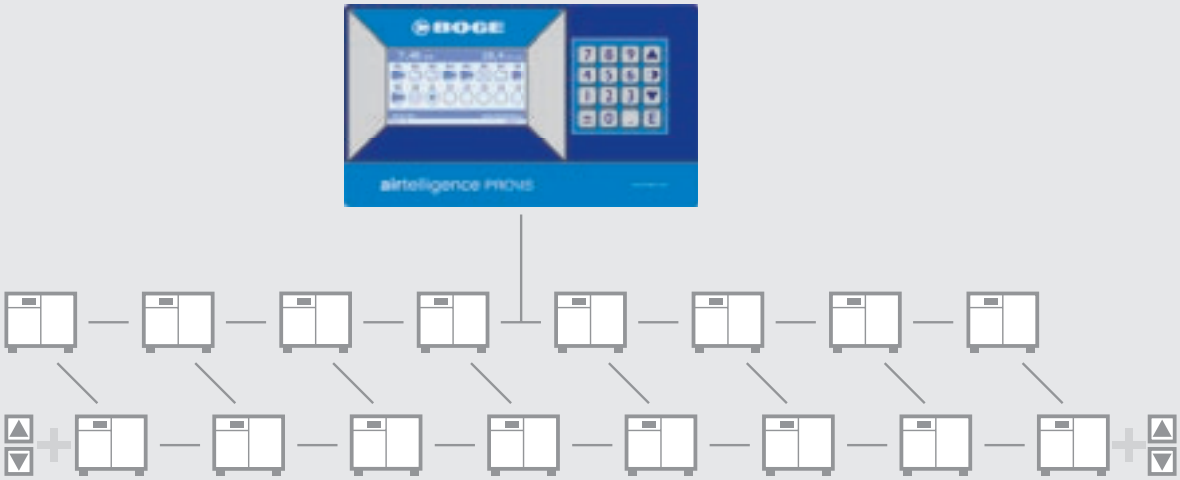
### CONSUMPTION OPTIMISATION
**air**telligence PROVIS enables you to permanently synchronise your production side with your consumption side in order to determine the most economical compressor combination. Idle times are virtually eliminated.

### MULTIFUNCTIONAL
A large number of peripheral equipment (e.g. temperature sensors, flow meters, current meters, pressure dew point meters, compressor station pressure profile, dryers, etc.) can be connected to eight accessory connection modules, 16 external analogue sensors and 24 external digital inputs.

### REMOTE CONTROL
All users have worldwide access via a web server to all relevant data. Furthermore, the Plus web server enables remote programming and a comfortable alarm and service management, e.g. via display, SMS or email.

## Making efficiency not only perceptive but also visible:

**air**telligence **PROVIS predictively optimises up to 16 compressors in a combined compressor system and also visually displays all crucial efficiency parameters providing a clear illustration of the operating behaviour of your installation to keep your operating costs under control at all times. Such information can be accessed any place around the world through an interface with your web server.**




**The BUS system of air**telligence **PROVIS is engineered to combine up to 16 compressors of different sizes and makes.**

**All data is shown in high definition (1x/sec.) and clearly displayed in diagrams for the precise assessment of the entire compressed air station.**

**The entire energy balance of your compressor station is immediately visible: load and idle run cycles, consumed kWh, generated m³, specific performance, energy costs in €, motor starts and load changes.**

BOGE COMPRESSED AIR SYSTEMS

BOGE AIR. THE AIR TO WORK.

**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

GLC CERTIFIED ISO 9001

**BOGE KOMPRESSOREN**
**Otto Boge GmbH & Co. KG**
P.O. Box 10 07 13 · 33507 Bielefeld
Otto-Boge-Straße 1–7 · 33739 Bielefeld
Fon +49 5206 601-0 · Fax +49 5206 601-200
info@boge.com · www.boge.com