

BAUER
KOMPRESSOREN

Quality. Our DNA



BAUER PURE AIR
SAFETY FOR YOUR DIVES

OIL

breeding-ground for bacteria,
damages lung functions

H₂O

results in severe damage
to materials from corrosion
and icing

CO

can block absorption of
oxygen, with fatal results

CO₂

causes impaired perception
or even unconsciousness

WHY POOR BREATHING AIR QUALITY IS SO DANGEROUS

“The breathing air I use is pure!” It’s great to have full confidence in your equipment before embarking on your next dive. There’s one thing that must never be allowed to happen when you take the plunge into fascinating underwater worlds – and that’s to endanger your health.

Poor-quality breathing air is the biggest risk in that situation. The problem is exacerbated by the rising partial pressure of the individual gases, which increases the overall concentration. Carbon monoxide (CO) is the most deadly of all.

The odourless and tasteless gas prevents oxygen from being absorbed by the blood and can be fatal in high doses. Excessive levels of CO₂ can also cause symptoms of poisoning such as headaches, impaired judgement and even loss of consciousness.

Too much moisture in the air may result in severe damage to materials, corroding metal diving cylinders from the inside. There is also a risk of diving regulators icing up during a dive. Contamination of breathing air by oil residues (aerosols) is also far from harmless; minor consequences include headaches, but when levels significantly overstep threshold limits, they may cause oil residues to be permanently deposited in the lungs, where they damage the alveoli.



PureAir certified:

Atlantis Dive Shop, Berlin | Christian Wendt, General Manager

HOW BREATHING AIR BECOMES **CONTAMINATED**

Responsible, experienced diving centre owners know the causes of polluted breathing air and are therefore able to exclude the risks.

Where do the greatest dangers lurk during cylinder filling?

- › Cartridges supplied by other parties and not matched to the purification system and cartridges that are not replaced promptly are unable to absorb some, or even any of the pollutants.
- › During the self-filling of cartridges, incorrect filter materials are used, or the materials are layered in the wrong order or in the wrong proportions. Or the drying agent is already saturated before being used due to improper storage.
- › Incorrect installation conditions within the compressor room (e.g. overheating or air intake locations with excessive pollution) may result in oversaturation of the filter cartridge and thus pollution of the breathing air filled into the cylinders.



PURE AIR SILVER AND GOLD – CERTIFICATION THAT ENSURES SAFE BREATHING AIR

Breathing air is the most important part of equipment, the basic condition for ensuring safe dives.

As the market leader in the breathing air industry, we and our products have always been synonymous with the very best breathing air quality. With high-efficiency purification systems, the AERO-GUARD System to reduce carbon dioxide (CO₂) in compliance with breathing air standards, and B-SECURUS to monitor moisture saturation in filter cartridges. And, above all, with the new B-DETECTION PLUS System for seamless monitoring and logging of breathing air quality that complies with the EN 12021:2014¹ standard.

Our PureAir certification allows you to see this quality at a glance – diving centres with BAUER PureAir certification provide visible proof that they are especially safety-conscious and trustworthy.

To mark the highest safety level, we have now added PureAir Gold to BAUER's family of certification standards. This certification demonstrates that the breathing air filling routine at your diving centre or filling station is continuously monitored throughout operation by B-DETECTION PLUS, the new online gas measurement system. You can be sure that the breathing air supplied complies with the Breathing Air Standard, and can rely on flawless top-quality breathing air in every cylinder.

1 Absolute humidity and residual oil (VOC) monitoring optional. Residual oil measurement based on volatile organic compounds (VOCs) only. Sensor calibration based on isobutene.

PURE AIR SILVER UND GOLD OUR **TWO** CERTIFICATION LEVELS

“PureAir Silver” certification represents an enormous leap in breathing air safety compared to uncertified diving centres.

You can be secure in the knowledge that installation conditions have been tested, original filter cartridges are used, and our B-SECURUS system monitors filter cartridge life and alerts operators when a cartridge needs to be changed.

The new top standard is “PureAir Gold”. The Gold standard includes the conditions applying to PureAir Silver, but additionally requires the use of a B-DETECTION PLUS Gas Measurement System.

This ensures that PureAir Gold delivers the very highest safety and security – enabling you to verify the purity of the air in your cylinders live at any time.



The owner of the indoor diving centre Y-40, Emanuele Boaretto (centre) together with his family team Giovanni Boaretto (right) and Antonio Gomiero (left)





MEASUREMENT ONCE A YEAR

of O₂, CO, CO₂, absolute humidity as well as oil¹

MEASUREMENT SYSTEMS:

- > **B-DETECTION PLUS m**
- > **Dräger AEROTEST**
- > **FACTAIR**



CONTINUOUS MEASUREMENT

of O₂, CO, CO₂, absolute humidity as well as oil¹

MEASUREMENT SYSTEM:

- > **B-DETECTION PLUS i/s**

Integrated into the compressor or standalone version, sensors report automatically scheduled calibration and end of their life.

¹ Measurement of total oil value in B-DETECTION based on volatile organic compounds (VOCS) only.



HOW BAUER PURE AIR DELIVERS SAFE, PURE BREATHING AIR

How can you make sure that your cylinder will be filled with perfect breathing air? The BAUER PureAir system has been developed to provide reliability worldwide:

BAUER PureAir, the seal of quality for pure breathing air, exclusively for BAUER breathing air filling centres.

As part of the certification process, correct installation and air quality of the unit are checked and the result is registered in a test log. The water content and as the oil, oxygen, carbon dioxide and carbon monoxide concentrations in the breathing air are measured acc. to DIN EN 12021:2014. This European standard defines the purity of compressed breathing air. Only authorised BAUER partners that have completed PureAir training at the BAUER headquarters in Munich are permitted to carry out the certification. Each PureAir station is reviewed every twelve months at the latest. Any filling centre no longer meeting the requirements will lose its certification. For this reason, BAUER PureAir is the worldwide seal of quality for diving centres using BAUER breathing air compressors. And breathing air filling stations that hold PureAir GOLD certification complement the mandatory annual review of the breathing air with continuous monitoring of CO, CO₂, O₂, total oil values and humidity!¹

Because we have your safety at heart.

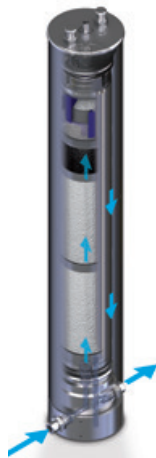
¹ Residual oil measurement based on volatile organic compounds (VOCs) only. Sensor calibration based on isobutene.

BAUER TECHNOLOGY FOR SAFE BREATHING AIR

- AERO-GUARD is the reliable way to ensure that CO₂ levels in compressed breathing air never exceed the permissible limit. To do this, the system uses a sophisticated bypass system which routes the air from the compressor intake through the AERO-GUARD before it is compressed. A special filter cartridge reduces the CO₂ content to approx. one-third of the level in the intake air



- The purification system is at the heart of every BAUER breathing air compressor. The standard filter cartridge prevents water or oil from penetrating into the breathing air during air compression. Compressors with combustion engines have a special filter cartridge with catalytic converter to counteract any critical rise in CO from an accidental intake of exhaust gas.





- » B-DETECTION PLUS ensures complete certainty by monitoring breathing air continuously and seamlessly to verify compliance with the DIN EN 12021:2014 Breathing Air Standard.

Smart sensors measure the content of CO, CO₂, O₂ and, optionally, absolute moisture and total oil values (VOC)¹. Automatic, continuous and outstandingly reliable. If limit values are exceeded, B-CONTROL displays a visual warning and shuts down the system before contaminated air can pass into the cylinders being filled. A data logger function enables all measurement values within a defined period to be logged and exported as an Excel file for archiving and evidence, ensuring that the quality of the filled breathing air is traceable at a later stage.

¹ Oil measurement based on volatile organic compounds (VOCs) only. Sensor calibration based on isobutene.

FIND PUREAIR DIVING CENTRES ALL OVER THE WORLD

Are you planning a diving holiday and wish to know which diving centres are PureAir certified? Our website, bauerpureair.com, provides the information you need at just a few clicks.

A world map shows all diving centres currently certified as official BAUER PureAir stations: diving schools, diving centres and filling centres which prioritise the highest quality standards of your breathing air.

This map is continuously updated, and is thus always up to date. Enter full-text search terms in the input field to search for individual diving centres.

Click on the marker flag to receive address information for the corresponding diving centre. Via a link, you can directly access their website or contact them by e-mail.

[\) bauerpureair.com](http://bauerpureair.com)

PUREAIR STATIONS WORLDWIDE

Auf der Karte sehen Sie identische Füllstationen, die mindestens als offizielle PureAir Stationen zertifiziert sind.

Zum Zoomen der Karte, klicken Sie die Navigationsinstrumente im linken Bereich benutzen. Um den Kartenmaßstab zu ändern, klicken Sie bitte auf die Karte und ziehen Sie sie dann in die gewünschte Richtung.

Wenn Sie mehr Informationen zu einer Füllstation erhalten möchten, klicken Sie bitte auf die entsprechende Markierung / Legende.

Stationen die einem PureAir Gold Status haben, d.h. bei welchem eine kontinuierliche Messung von Sauerstoff, Kohlendioxid, Kohlenstoff, O₂ und Feuchte erfolgt, erkennen Sie nach dem Anblicken an dem Logo „Gold certified“.

*Messung von Sauerstoff, Feuchte und Sauerstoff (PO2) optional. Nachmessung nur auf Basis der Messungen Kohlendioxid, CO2 (CO2) - Sauerstoffmessung auf Nachfrage.

Find PureAir Stations

Filter





Look for these symbols

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