

BAUER ACCESSORY SYSTEMS

THE IDEAL ENHANCEMENT TO YOUR COMPRESSOR



BREATHING AIR

INDUSTRY





BAUER SETS NEW STANDARDS. AGAIN AND AGAIN.

Since its foundation, BAUER KOMPRESSOREN has aimed for leadership in the field of medium and high-pressure compression technology. Our products, and the BAUER accessories that are optimised for them, set new standards in quality and innovative design.

Achieving this goal again and again requires the seamless interaction of many factors. The process starts at the research and development stage in our Engineering Centre, where new products undergo a battery of tests in our in-house quality testing facility. All the results and experiences gained from these tests are immediately incorporated into the development of new products.

The result? Our range of compressors and matching accessory systems, featuring an innovative design, cost-effectiveness and quality that have earned them an outstanding global reputation. BAUER has set new standards. From its earliest beginnings to the present day. Make the most of this know-how and allow this exceptional expertise to benefit your company too.

FOR MORE INFORMATION

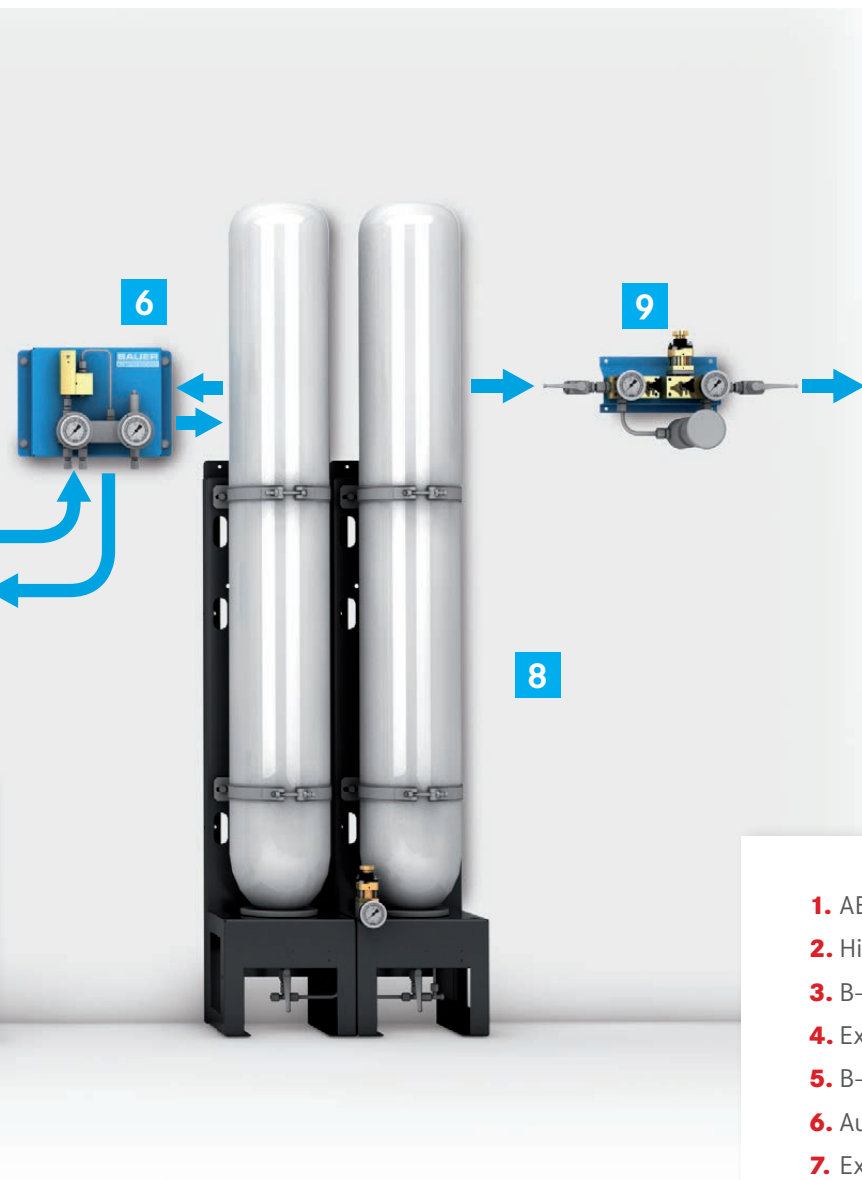
about our product programme and the products shown here, visit our website at www.bauer-kompressoren.de

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SYSTEM SETUP





1. AERO-GUARD
2. High-pressure compressor
3. B-KOOL
4. External display
5. B-DETECTION
6. Automatic selector unit
7. External filling panel
8. Storage cylinder
9. High-pressure reducing station

AERO-GUARD

RELIABLY REMOVES CO₂ FROM BREATHING AIR

The intake air of the compressor is routed through the AERO-GUARD via an ingenious bypass system. This enables the CO₂ content to be reduced to one-third of that of the intake air, with AERO-GUARD-OX version for NITROX membrane units the initial value can even be reduced up to 20%.

The air is humidified in the base of the tank, optimising filter efficiency and significantly extending filter life.



AERO-GUARD

FEATURES

- › CO₂ – removal/reduction
- › Economical operation
- › Flow rate 100 – 1,000 l/min

DESIGNATION/SIZE	SUITABLE FOR FREE AIR DELIVERY RATES ¹	DIMENSIONS (W × D × H)	OPERATING WEIGHT ²
max. 330 bar	l/min	mm	kg
BREATHING AIR			
AERO-GUARD-S	100 - 150	500 × 460 × 720	26
AERO-GUARD-M	160 - 230	500 × 460 × 720	26
AERO-GUARD-L	240 - 320	500 × 460 × 720	26
AERO-GUARD-XL	330 - 450	500 × 460 × 720	26
AERO-GUARD-XXL	460 - 700	500 × 460 × 720	26
AERO-GUARD-Duo 1000	650 - 1000	850 × 625 × 870	54
NITROX			
AERO-GUARD-OX-L	260 - 320	500 × 460 × 720	26
AERO-GUARD-OX-XL	330 - 450	500 × 460 × 720	26

¹ Free air delivery of the connected compressor measured with cylinder filling from 0 – 200 bar ± 5%, 10 l cylinder.

² Includes filter cartridge and 10-litre water ballast.



1. Air inlet
2. Partial air stream (main stream)
3. Water
4. Fill level indicator
5. Granules
6. Partial air stream (bypass)
7. Air outlet

AERO-GUARD

FURTHER INFORMATION

› Cost-effective operation

At a free air delivery rate of up to 680 l/min (AERO-GUARD-OX: 450 l/min) and an intake concentration of 1000 ppm CO₂, the filter cartridge has a service life of approximately 44 hours (AERO-GUARD-OX: 37 hours). If the free air delivery rate of the compressor and/or the CO₂ intake concentration is lower, the service life of the filter cartridge is extended accordingly.

› Easy handling and maintenance-free

The filter cartridge can be replaced quickly with no need for tools.

B-KOOL

SIGNIFICANTLY LONGER FILTER CARTRIDGE LIFE

B-KOOL Refrigeration Dryer cools the compressed air and separates out most of the moisture, collecting it in the B-KOOL and thus preventing it from passing into the filter cartridge.

Particularly in environments with high ambient temperatures, the B-KOOL refrigeration dryer extends filter capacity to an outstanding extent.

The B-KOOL is available in three versions:

- › B-KOOL II 680i: Integrated solution in new design for MINI-VERTICUS and VERTICUS in Super Silent version
- › B-KOOL 680i: Integrated solution for PE-VE in Super Silent version
- › B-KOOL 680s: As standalone solution for compressors with P 41 or P 61 purification system

THE SMART WAY TO SAVE COSTS AND HELP THE ENVIRONMENT!



B-KOOL 680i



B-KOOL-Control



B-KOOL II 680i on top of MINI-VERTICUS



B-KOOL 680s in front of MARINER 320

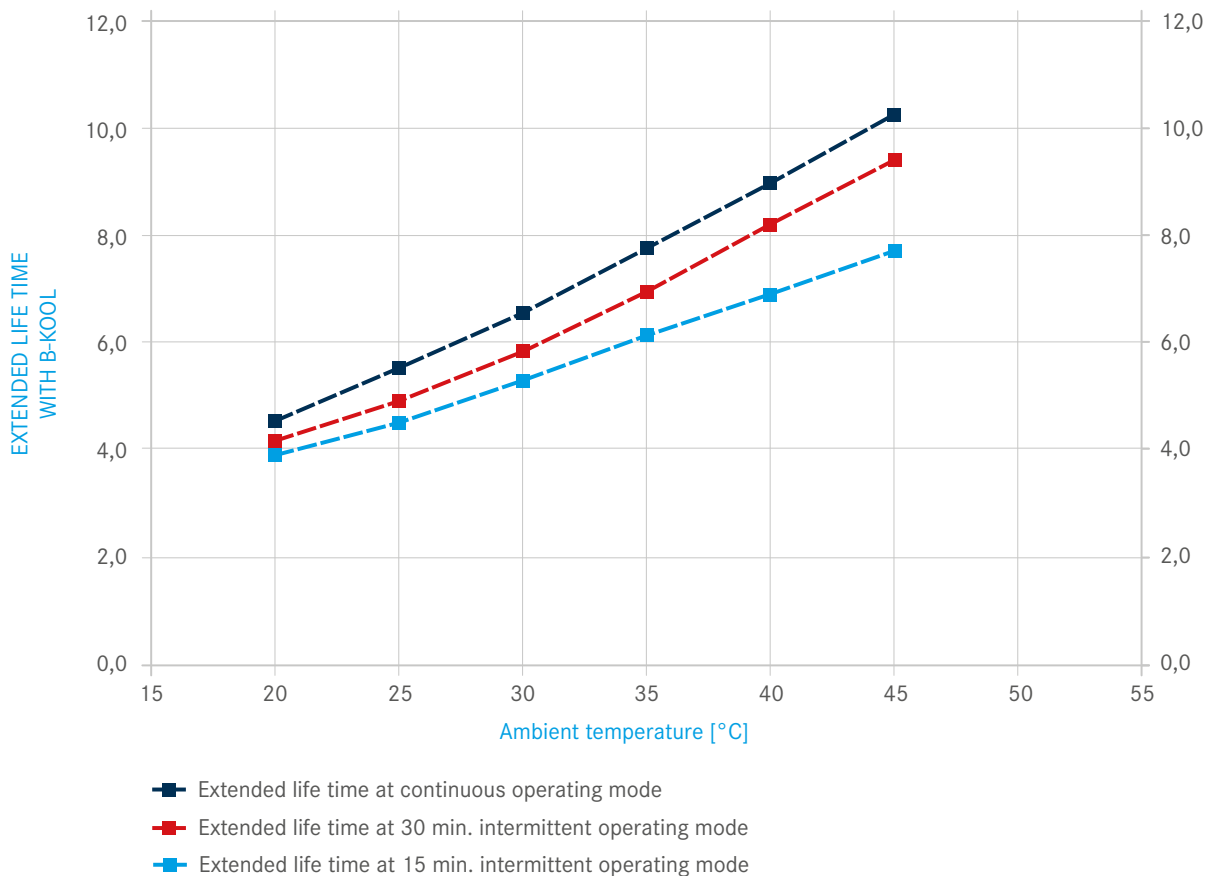
HOW THE B-KOOL REFRIGERATION DRYER WORKS

- 1.** The air saturated with moisture is fed out of the final separator of the compressor into the B-KOOL refrigeration dryer.
- 2.** In the high-efficiency cooling unit, the temperature of the compressed air, and thus its pressure dew-point, are reduced to approx. 3°C. For reasons of physics, the cooled air is no longer able to store the moisture content and the oil and water vapour condenses.
- 3.** The condensate is collected in the integrated separator and thus does not enter the filter cartridge.
- 4.** The condensate is discharged into the compressor unit's collecting container via the automatic condensate drain.
- 5.** The cooled and dried air is fed into the purification system by the B-KOOL refrigeration dryer.
- 6.** The B-KOOL control monitors the function of the integrated cooling technology and controls the condensate drain valve of the automatic condensate drain.

POTENTIAL FOR COST SAVINGS

The following diagram illustrates the huge potential for savings when the B-KOOL refrigeration dryer is used.

EXTENDED LIFE TIME WITH B-KOOL AT VARIOUS OPERATING MODES



Service life calculated for P 61 purification system with B-SECURUS in conjunction with a BAUER compressor; based on 225 bar final pressure (185 bar average filling pressure). Service lives will vary under other operating conditions and with different filling pressures.

TECHNICAL DATA

MODEL	B-KOOL II 680i, B-KOOL 680i AND B-KOOL 680s
Medium	Compressed air & nitrox (up to 40% O ₂)
Ambient temperature	+5 °C to +45 °C
Refrigerant	R 134 a
Compressed air infeed temperature	max. 60 °C
Max. operating pressure compressed air	350 bar/500 bar
Min. operating pressure compressed air	100 bar
Permissible free air delivery, compressor	200 – 700 l/min (10 l cylinder filling from 0-200 bar) 200 – 650 l/min (according to ISO 1217)
Power supply	100 – 127 VAC 50 Hz or 200 – 240 VAC 50/60 Hz
Power consumption	max. 550 W at 50 Hz, 610 W at 60 Hz

P-PURIFICATION SYSTEMS

In use all over the world for the treatment of breathing air, industrial air, nitrogen, helium, argon and methane.

This product series is the undisputed classic among BAUER purification systems, offering significant advantages such as quick and straightforward cartridge change, minimum downtimes and simple, cost-effective deployment!

Depending on the filter cartridge type, residual humidity and oil vapours are reliably removed from the compressed air or gas. Toxic carbon monoxide (CO) can optionally be converted into carbon dioxide (CO₂). As the content of CO₂ is low, the CO₂ concentration increases only slightly.

BAUER's rigorous quality management processes ensure that each and every P filter cartridge complies with the strict quality standards.

OPTIONS

› B-TIMER Filter Cartridge Monitoring System

B-TIMER displays operating times and calculates remaining filter life.

› B-SECURUS Filter Cartridge Monitoring System

continuously measures filter cartridge moisture saturation and displays a timely warning when the cartridge needs to be replaced.

FEATURES

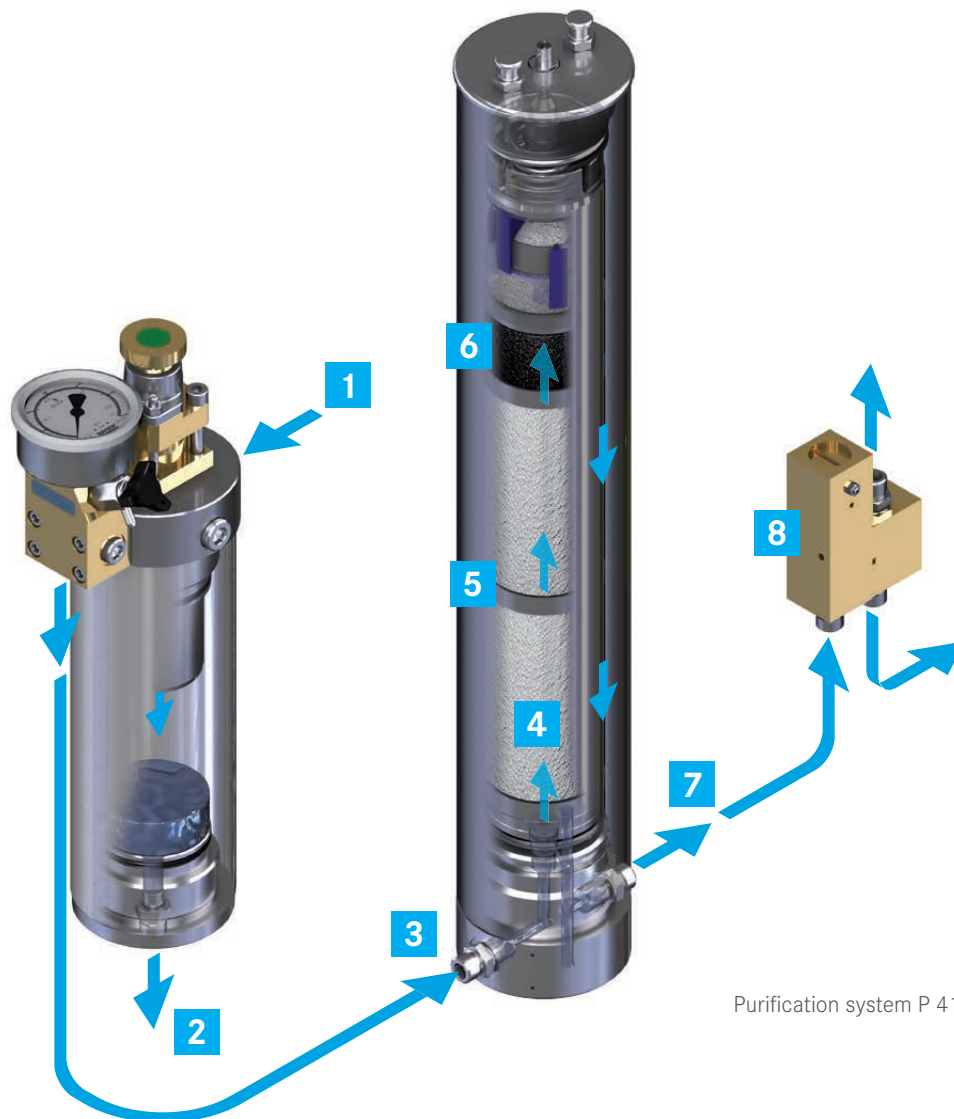
- › Optimises air and gas quality
- › 85 - 3500 l/min
- › 90 - 350 bar/90 - 420 bar/350 - 500 bar



Purification System P 100 with SECURUS, automatic condensate drain system and CO conversion.

SOPHISTICATED TECHNOLOGY FOR OUTSTANDING AIR AND GAS QUALITY.

A look inside a P-Purification system clearly reveals the outstanding expertise in engineering design demonstrated by BAUER to ensure that only pure air and gases leave the filter housing.



Purification system P 41

PURIFICATION SYSTEM	FLOW RANGE	PRESSURE RANGE	NUMBER OF FILTERS
	l/min	bar	
P 21	≤ 300 ¹	90 - 350	1
P 31	≤ 350	90 - 350	1
P 42	≤ 550	90 - 350	1
P 41	≤ 450	90 - 350	1
P 61	≤ 850 ²	90 - 350/420/500	1
P 81	≤ 1000	90 - 350/420/500	2 (3) ³

¹ Use with combustion engines (CO removal) only at charging rate up to 200 l/min.

² Use with combustion engines (CO removal) only at charging rate up to 680 l/min.

³ Additional filter for treatment systems with CO conversion.



Purification system P 120 with SECURUS and automatic condensate drain system

BAUER KOMPRESSOREN IS A CERTIFIED MANUFACTURER OF PRESSURE EQUIPMENT UP TO CATEGORY 4 UNDER THE EU PRESSURE EQUIPMENT DIRECTIVE PED2014/68/EU.

HOW THE P-PURIFICATION SYSTEM WORKS

- 1.** The compressed air is delivered to the final separator, which separates out oil and water droplets.
- 2.** The condensate from the oil- and water droplets is collected at the bottom of the filter housing and is removed via the condensate drain valve.
- 3.** The pre-purified air flows from the bottom of the vessel through the molecular sieve, which adsorbs the remaining gaseous water.
- 4.** The molecular sieve is aligned perfectly to the purification system to ensure optimum purification of the air or gas.
- 5.** The particle filter discs retain all coarse impurities.
- 6.** An activated carbon layer reliably binds harmful organic impurities such as oil vapour and hydrocarbon compounds.
- 7.** Pure air or gas leaves the filter cartridge.
- 8.** The pressure maintaining valve keeps the filter housing continuously under pressure, significantly increasing both the service life of the filter housing and operating safety.

SECCANT

REGENERATION DRYERS FOR AIR AND GAS

The regeneration dryers in the SECCANT series by BAUER KOMPRESSOREN for the pressure range from 90 to 350/420 bar are designed to dry air and gases in applications involving high operating hours, free air delivery rates and ambient temperatures.

OPTIONS

- › **The B-SECURUS filter monitoring system** monitors the saturation of the filter cartridge with moisture.
- › **In the A version (active charcoal)** the regeneration dryer is equipped with an active charcoal filter cartridge to remove oil and hydrocarbons.
- › **The regeneration dryer** features an integrated dew point monitor which continuously measures and displays the humidity of the compressed air.
- › **The gas-tight model** is designed for loss-free treatment of noble gases.
- › **CO conversion:** Toxic carbon monoxide (CO) in the air is converted into carbon dioxide (CO₂). As CO levels in air are low, the increase in CO₂ concentration is minimal.

FEATURES

- › **Safe continuous treatment of air and gas**
- › **Up to 3500 l/min**
- › **90 – 350/420 bar**

FURTHER INFORMATION

- › The compressed air or gas is continuously dried in two drying chambers working in parallel – one in drying mode, the second in regeneration mode.
- › The use of a dedicated control as standard for the regeneration dryers in the SECCANT series means that the dryers are able to operate independently of the compressor control.



SECCANT III-A

- 1.** Air/gas inlet
- 2.** Condensate separator
- 3.** Change-over module
- 4.** Drying chambers
- 5.** Oil removal filter/B-SECURUS
- 6.** Particle filter
- 7.** Air/gas outlet with pressure maintaining valve
- 8.** B-CONTROL

TYPE	FLOW RANGE	PRESSURE RANGE			DIMENSIONS ¹
	l/min	90 - 350	350 - 400	350 - 420	W x D x H [mm]
SECCANT III (-A)	500 - 1500	●		●	1200 x 258 x 1254
SECCANT IV (-A)	1500 - 3500	●	●		1400 x 261 x 1284

¹ Dimensions of SECCANT III-A/SECCANT IV-A (with active charcoal filter), without additional elements. For details, see the data sheet or dimension drawing.

HIGH-PRESSURE STORAGE SYSTEM

ESSENTIAL ELEMENTS OF YOUR SYSTEM

These high-performance storage systems support the short-term availability of large quantities of air and gas and allow a fluctuating air consumption.

At the same time, a carefully selected storage module optimizes runtime of the compressor and also serves as a pulsation damper.

The storage systems are available in pressure stages of 330, 360 and 420 bar. They can be expanded as required by adding 50 or 80 l storage cylinders.

The storage system should be dimensioned to guarantee that the compressor operates continuously for a minimum period of 15 to 30 minutes.

FEATURES

- › 330/360/420 bar
- › 50 l and 80 l cylinders
- › Extendable as required



Storage system B 160 for 330 bar

AUTOMATIC SELECTOR UNIT

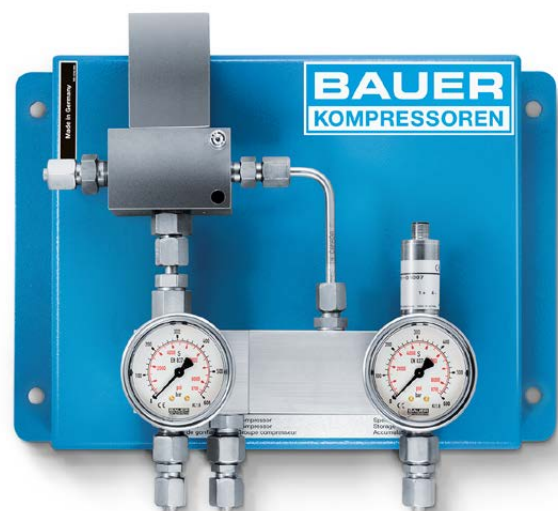
OPTIMISED FILLING PROCESS

The automatic selector unit enables air cylinders to be filled quickly and simultaneously in parallel from a storage system (buffer) and via the compressor.

The storage cylinder connected to the filling panel takes priority for filling, i.e. the storage system and the compressor always start by filling the breathing air cylinders at the filling panel.

Once these cylinders have been filled completely, the storage system is topped up by the compressor.

When the maximum filling pressure is reached in the storage system, the compressor shuts down again entirely automatically. As soon as the next empty air cylinder is connected to the filling panel, the fully automatic filling cycle starts again from the beginning.



Automatic selector unit

B-SAFE 300

TAKING FILLING SAFETY TO A NEW LEVEL

B-SAFE 300 – Uncompromising safety for persons and compressor rooms when filling pressure cylinders.

The stationary safety filling station controls the filling speed of the breathing air cylinders for diving or respiratory applications¹. The cylinders are placed in the B-SAFE 300 and attached to the fill valves. The integrated filling control system then begins the filling process, automatically locking the doors to eliminate the chance of operating errors.

If an incident occurs during filling – such as explosion of a pressurised cylinder – the welded steel safety chamber contains the metal fragments and allows the pressure wave to dissipate through grilles on both sides and in the top cover.

The B-SAFE thus replaces costly protective measures for filling facilities and provides operators with a high level of (legal) security.



B-SAFE 300 Safety filling system

FEATURES

- › **Explosion-proof filling chamber**
- › **6 to 10 cylinders can be filled at the same time**
- › **Operating pressure up to 410 bar**
- › **Optional: simultaneous filling of 225/330 bar**

TECHNICAL DATA

PARAMETERS	DATA
Maximum operating pressure	410 bar
Filling pressures (up to 2)	225/330 bar
Variable pressure rise	20 – 50 bar/min
Number of fill posts	Maximum 10

¹ Optional equipment.

HIGH-PRESSURE REDUCING STATION

FOR OUTSTANDING QUALITY AND FUNCTION

BAUER KOMPRESSOREN high-pressure reducing stations provide you with turnkey enhancements for your storage system. Upstream pressure fluctuations in the storage system are adjusted to provide reduced and consistent output pressure.

Equipped with high-quality pressure reducers, pressure gauges, ball valves and safety valve, they are quick and easy to install and provide outstanding operational reliability.



High-pressure reducing station

INLET PRESSURE, MAX.	OUTLET PRESSURE, ADJUSTABLE ¹	COMMENT
bar	bar	
365 bar	5 - 40 bar	
365 bar	41 - 100 bar	
365 bar	101 - 220 bar	
365 bar	221 - 230 bar	
365 bar	41 - 100 bar	Stainless steel design
365 bar	41 - 230 bar	Increased flow

¹ The output pressure should only ever be set once (no scope for permanent changes) Other designs on request. Fluctuations in primary pressure may result in minor fluctuations in secondary pressure for technical reasons.

EXTERNAL FILLING PANELS

ALIGNED TO YOUR NEEDS

The external BAUER Filling Panels are designed as separate filling panels for wall mounting. When fitted with remote control, they are ideal for situations requiring separation of the filling process and compressor.

The Unimam filling hoses are anti-kink and feature pivoting connections for ease of handling.

The filling panel with pressure reducer enables breathing air cylinders to be filled simultaneously at different pressures.

Rebound protection in the filling valves provides effective personal protection and ensures a high level of operational safety even if the filling valve is opened unintentionally.

OPTIONS

- › Flow rate limiter for controlled filling of breathing air cylinders (e.g. composite cylinders).
- › Remote operating panels or external B-CONTROL display for remote compressor activation, deactivation and monitoring.
- › Filling panel made from stainless steel.

External filling panel



FEATURES

- › Suitable for wall mounting at separate location from the compressor
- › 1, 2, 4, 6 or 10 filling valves
- › Hose or direct filling valves
- › PN 200, PN 300 bar or combined pressure ranges possible

FILLING VALVES	DIMENSIONS (L × W × H)
	mm
1 filling connection	135 × 196 × 140
2 filling connections	446 × 296 × 160
4 filling connections	1140 × 138 × 183
6 filling connections	1200 × 138 × 183
10 filling connections	1120 × 352 × 370

EXTERNAL DISPLAYS

BAUER KOMPRESSOREN external display units are attractive and practical solutions for remote compressor operation – even over long distances. The compact metal housing is designed for wall mounting. The information in the brilliant colour display is available in numerous common languages. The B-CONTROL MICRO resp. B-CONTROL II can be retrofitted as an external unit to all BAUER compressor systems from date of construction 5/2014 onwards that are already equipped with a B-CONTROL MICRO with colour display or B-CONTROL II.

FEATURES

- › B-CONTROL MICRO and B-CONTROL II control units available as external versions
- › Full scope of B-CONTROL functions
- › Suitable for retrofitting



External
B-CONTROL MICRO display

B-CONTROL SUPERIOR



B-CONTROL SUPERIOR

HIGHER-LEVEL MASTER CONTROL UNIT FOR PRESSURE-DEPENDENT BASE AND PEAK LOAD OPERATION.

B-CONTROL SUPERIOR is a separate control unit for interconnected operation of up to five compressors plus SECCANT for pressure-dependent base and peak load operation. The connected compressors are controlled selectively depending on air output needs.

The individual compressors are activated in turn for base loads, ensuring even distribution of operating periods.

B-CONTROL SUPERIOR provides a host of convenient extras such as data logger, USB port and an array of common interfaces including Modbus, CAN bus and Profibus.

EXTERNAL DISPLAYS & B-CONTROL SUPERIOR	DIMENSIONS (W x H x D) ¹
	mm
B-CONTROL MICRO	300 x 180 x 139
B-CONTROL II	310 x 290 x 208
B-CONTROL SUPERIOR	500 x 700 x 250

B-APP

NEW! The B-APP now supports smartphone or tablet-based remote control and monitoring of your compressor!

Read off the current actual status of the BAUER Compressor or integrated B-DETECTION PLUS gas measurement unit in real time on your smartphone or tablet display.

For the technical requirements, visit our website at bauer-kompressoren.com or consult the technical data sheets for the relevant compressor models.

In addition, the B-APP offers further features including product-specific news and video clips with general information on the BAUER GROUP, BAUER products and maintenance and operation of BAUER compressors.

These features are complemented by an integrated dealer search function and a range of useful calculation tools tailored to high-pressure operations.

Available in the App Store (iOS) and on Google Play (Android).



The new B-APP turns your smartphone into a compressor control unit.

¹ With emergency shut-off switch, without cable gland.

AEROTEST

TO MEASURE THE PURITY OF BREATHING AIR

The AEROTEST SIMULTAN HP portable breathing air tester enables you to measure your breathing air simply and rapidly – wherever you are.

Tester tubes simultaneously and accurately measure compliance with the concentration limits for CO, CO₂ and water vapour in the compressed air. The oil content is detected by using the oil impactor.



AEROTEST

FEATURES

- › Reliable and accurate measurement of CO, CO₂ and H₂O
- › Detection of mineral and synthetic oils

B-DETECTION

ONLINE GAS MEASUREMENT SYSTEMS

B-DETECTION gas measurement systems are designed for continuous reliable monitoring of air or gas quality. If the limits of CO, CO₂ and O₂, specified – e.g. in the DIN EN 12021:2014 standard – are exceeded, the compressor automatically shuts down, ensuring that only pure breathing air ends up in your breathing air cylinder!

For ensuring that the humidity is within the limits of the DIN EN 12021:2014 we recommend using the B-SECURUS filter cartridge saturation monitoring system.

B-DETECTION MOBILE

In addition to permanent stationary measurement of CO, CO₂ and O₂ B-DETECTION MOBILE allows a mobile analysis of the breathing air gases on site using a pressure reducer. Packed in a sturdy plastic case.



B-DETECTION MOBILE

FEATURES

- › Continuous measurement
- › For fixed installation or mobile operation
- › Measures CO, CO₂ and O₂
- › Optional: Measurement of absolute humidity

B-DETECTION PLUS

The professional solution: B-DETECTION PLUS for measuring CO, CO₂ and O₂ with optional functions for absolute humidity and total oil value (VOC)¹. High-quality sensors automatically report the necessary calibration point and end of cartridge life.

Available in two versions: Integrated into a MINI-VERTICUS or VERTICUS system showing gas measurement values on the compressor system display, or as a standalone model for all other BAUER compressors and for retrofitting to your existing compressor.



B-DETECTION PLUS

FEATURES

- › **Continuous measurement**
- › **Measurement of CO, CO₂, O₂, absolute humidity and total oil value (VOC)¹**
- › **Smart sensors: display flags up necessary calibration and end of life**

In the case of sudden short-term contamination, a bypass option can automatically direct contaminated air to the outside. Once compliance with tolerances is resumed, filling automatically continues.

BAUER Online Gas Measurement Systems provide system operators with a high level of quality assurance and legal certainty. B-DETECTION systems can easily be retrofitted to your existing BAUER Compressor!

For detailed information on our gas measurement systems, see our B-DETECTION product brochure.

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



**INTERESTED IN OUR
PRODUCTS?**

**CONTACT US – WE ARE HAPPY TO
PROVIDE INFORMATION AND ASSISTANCE.**

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