

**THE BAUER P-FILTER SYSTEM**

**THE LUNGS OF YOUR COMPRESSOR**



No matter whether you count on the purest breathing air as a diver or fire-fighter or if you have to trust in perfectly purified process air in the industrial field: 60 years of BAUER experience in purification, intensive research and the toughest material tests guarantee uncompromising quality and absolute safety.

## FILTER SYSTEMS MADE BY BAUER

## NO COMPROMISE REGARDING SAFETY !

### Safety starts with processing quality.

BAUER manufactures **filter housings** only from costly **special aluminium alloy** or **tempered high-alloy steel**. This guarantees that the filter housings survive the **highest** of **pressures** up to 500 bar with tens of **thousands** of **filling cycles**.

Starting from the raw material up to the final filter housing the **manufacturing process** is subject to **perfect control** supervised by TÜV and **documented** with **stamped material-** and **production numbers**.



*Production- and material numbers guarantee a perfect production control*

### Your life is at risk with fake cartridges!

Only **original cartridges** made by BAUER guarantee that **oil, humidity** or **hydrocarbons** in the compressed air are **completely removed**. The **limiting values** of BAUER filter systems comply with and exceed **all major national** and **international standards** such as DIN EN 12021 and medical air acc. to European

Pharmacy Requirements. **Only** the most appropriate **filter media** of the **highest quality** are used.

In the BAUER Testing- and Research Centre the **composition** for the **respective application** is calculated, optimized and **extensively tested**.

### Those who buy cheap, buy expensive!

**Self-filling** is not only **dangerous** but **uneconomical**.

To achieve a **germfree** and **unsaturated** condition, a filter cartridge can only be filled under industrial production conditions. The **balance** of carbon and molecular sieve of BAUER original cartridges is **adjusted perfectly**. **Mechanical filling** guarantees **exact dosing** and **piling** to create the perfect cross-flow of the cartridge for **optimum air purification**.

After filling the cartridges are vacuumized and the density is checked.

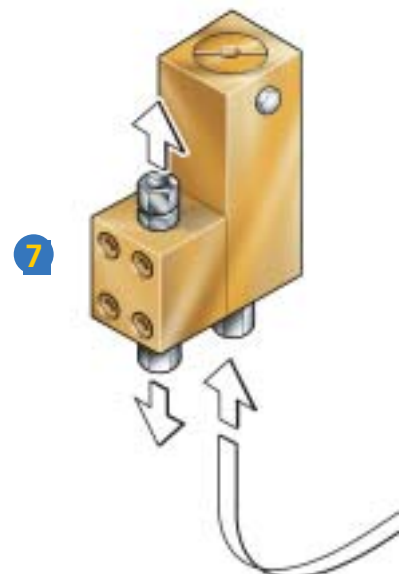
**Self-filled** and **replacement cartridges** from **uncontrolled sources** threaten your **health** not only creating poor filter performance and icing of the breathing regulator, but also producing **corrosion**, which will rapidly **ruin** the **equipment**.



*Final separator assembly at BAUER*



*The quality seal of an original BAUER cartridge stands for purest breathing air*



### 1 The compressed air

from the compressor block is delivered to the final separator. The separator effectively separates oil- and water droplets.

### 2 The condensate

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.

molecules.

The molecular sieve used by BAUER matches perfectly the granule and pore size for the filter system. This is the only way to comply with the strict limiting values of breathing air norms.

### 3 The pre-purified air

flows from the bottom of the vessel through the molecular sieve, which adsorbs the remaining gaseous water. The pores of the granules are minute in diameter in order to provide continuous filtration and total removal of the water

### 4 Particle filter

holds all impurities and particles.

### 5 An activated carbon layer

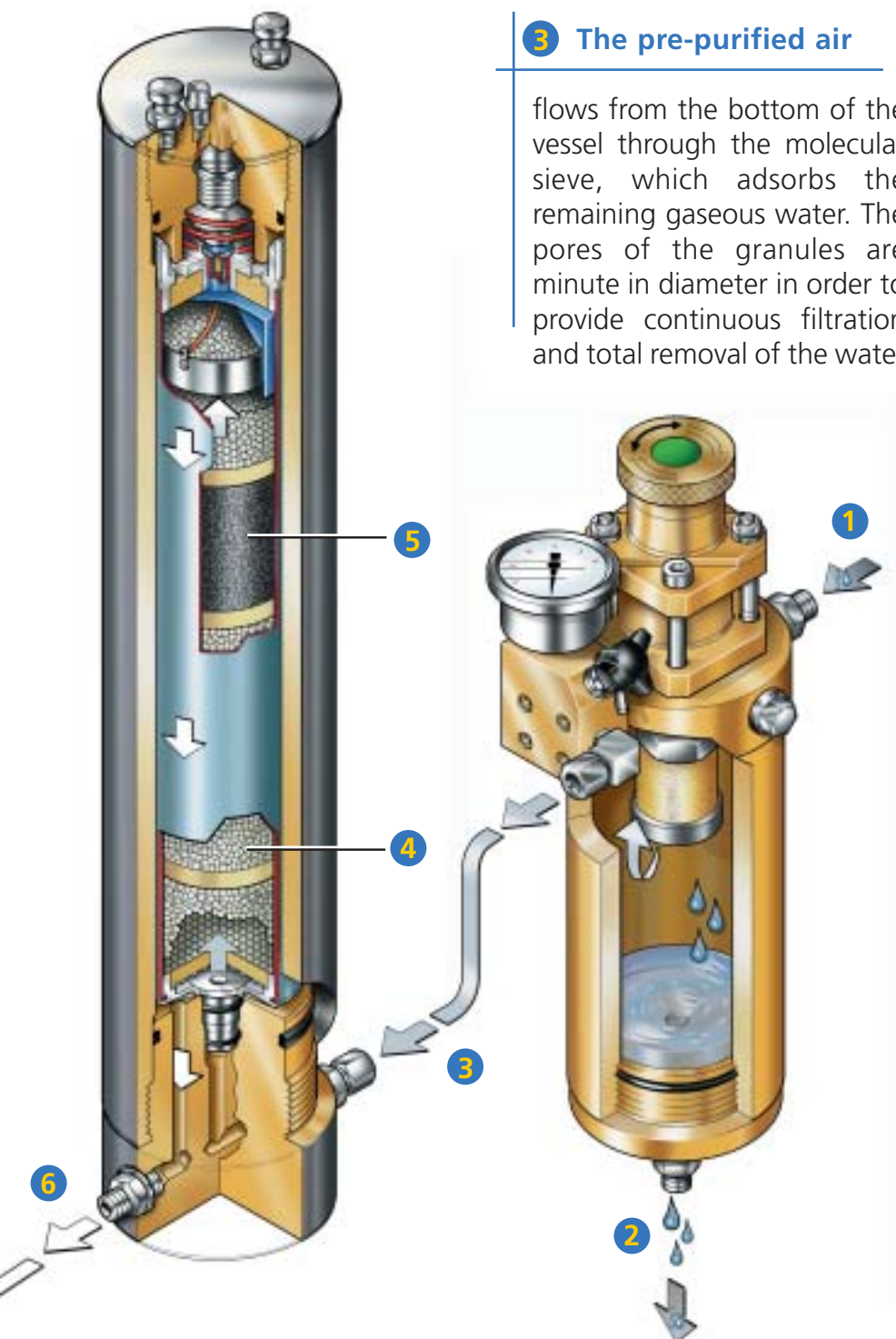
for breathing air applications removes all organic impurities such as oil vapour and hydrocarbons.

### 6 Purest air or gas

leave the filter cartridge and are ready for the application.

### 7 The pressure maintaining valve

keeps the filter housing continuously under pressure to increase the partial pressure on the molecular sieve. So the speed of the flow through the cartridge is reduced, which increases the purification effect even more. Load cycles are reduced, too - a positive effect on the lifetime of the filter housings and the operating safety.



## SECURUS FILTER MONITORING

### THE BODYGUARD OF YOUR FILTER SYSTEM

#### **SECURUS protects against damage:**

All filter cartridges have a limited life, which must be monitored.

The patented SECURUS system takes away from you the important but annoying responsibility of monitoring the cartridge for the necessary timely replacement.

With SECURUS it is impossible to overuse the filter, which would damage the following system with oil and water.

This can only be achieved with a patented sensor technology, which is integrated in the filter cartridge. The integrated sensor indicates the necessity for cartridge change prematurely, warning in time about the exhaustion of the cartridge capacity and, finally switches the compressor off.

Competitors systems, which are available in the market, which are fitted after the purification system, provide false safety!

They only warn the user when it is too late: When the cartridge is already damaged and impurities have occurred.

#### **SECURUS helps to save money:**

The cartridge can be used until complete saturation, without any safety reserve.

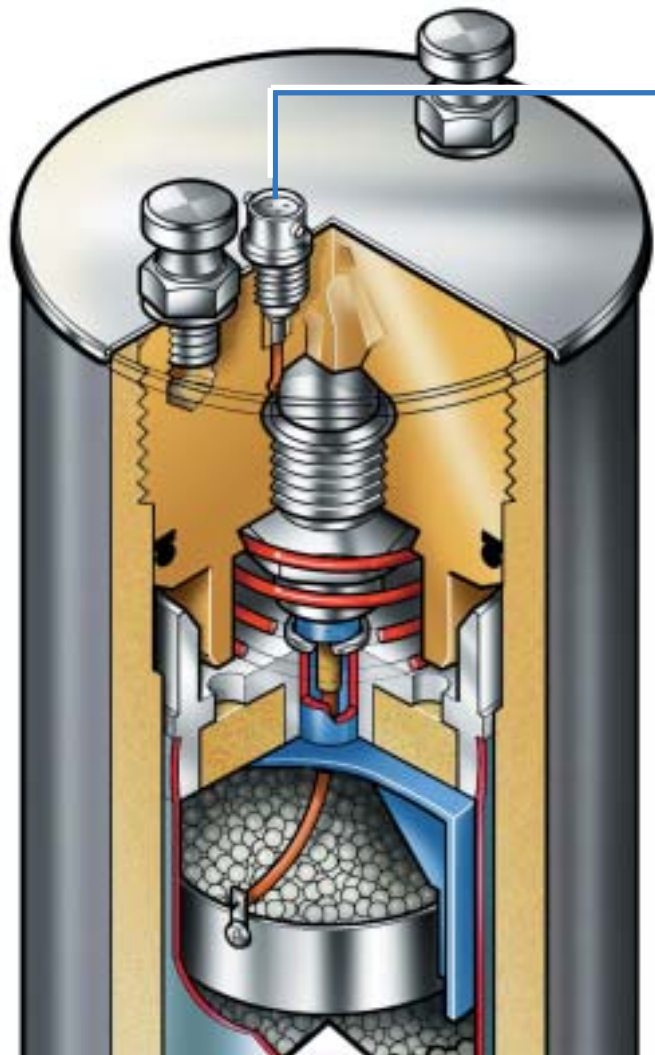
#### **SECURUS is simple to operate**

Mobile units, and those of the Mini-Verticus range have a control- and monitoring unit, which provides information about the saturation status of the cartridge, similar to a traffic light.

#### **SECURUS and B-Control: full control - even online.**

If the VERTICUS range is equipped with the SECURUS option, all messages are shown on the display of the electronic compressor B-CONTROL.

Operators, who make use of the new B-MESSENGER can receive information via SMS on their mobile telephone, via fax or even online via email!





with B-CONTROL compressor control



Compressor units

without B-CONTROL compressor control



**RED**  
The filter cartridge is saturated and must be exchanged. In this mode the compressor will be automatically switched off.

**YELLOW**  
Cartridge change will be required soon.

**GREEN**  
Cartridge has still sufficient capacity.

## WITH SYSTEM TECHNOLOGY

## FOR A CUSTOMISED SOLUTION

Mobile and stationary compressor units from JuniorII up to Verticus 5 are equipped with P - filter systems of different capacities according to the model type. Some can be upgraded with additional or larger filter housings.

Large units from the K 22 up to the K 28 type need a separate P - filter system on the panel.

All units, both mobile and stationary can be combined with P - filter systems on the panel depending on the requirements and application, e.g. inter-connected operation. Apart from the filter systems on the panel all filter systems are available for direct mounting on the compressor unit, also for upgrading of existing units depending on the maximum flow rate.

Our Departments Projecting as well as Sales are eager to support you with their know-how for the correct choice of your air-/gas purification system. So you can be sure to receive an economic and technically customised solution for your application.



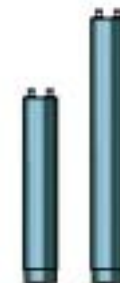
## Integrated filter systems



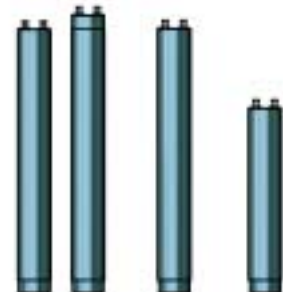
P21 (TRIPLEX)



P 21 P 31 P 41

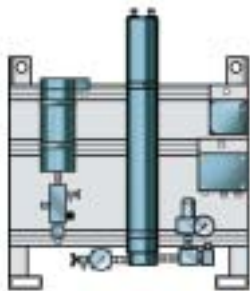


P41 P61

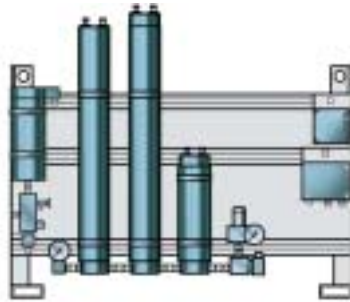


P81 P61 P41

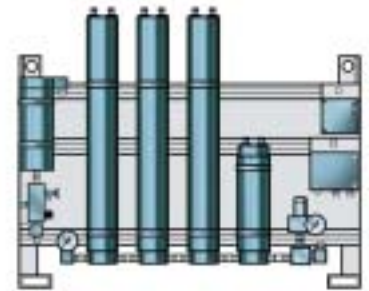
additional external filter systems - modular design on the panel.



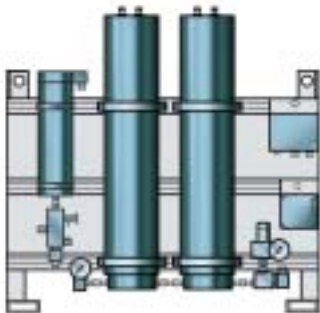
filter system P60



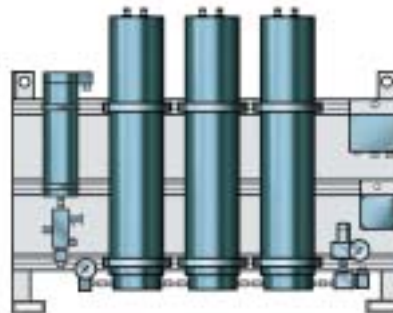
filter system P80



filter system P100



filter system P120



filter system P140

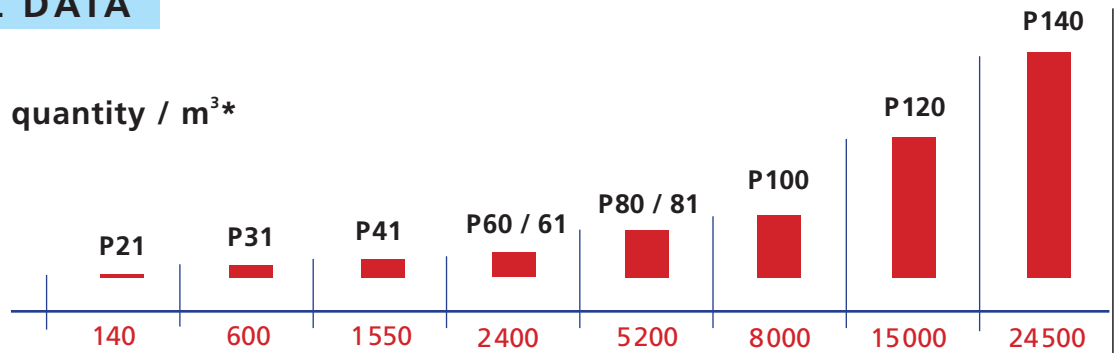
Filter System for	P21	P31	P41	P60	P61	P80	P81	P100	P101	P120	P140	SECURUS <sup>1)</sup>
JUNIOR II / OCEANUS	●											
CAPITANO 140 MARINER 200 / 250	●	○	○									○
MARINER 320		●	○									○
MINI VERTICUS II			●		○							○
VERTICUS 5 / KAP			● <sup>2)</sup>		●		○					○
K 22 Range						● <sup>3)</sup>		● <sup>3)</sup>		○	○	●
K 23 Range										● <sup>3)</sup>	○	●
K 28-25 Range											○	●

- standard scope of supply of breathing air compressors
- optional

- 1) only as of P 41- not for units with combustion engine
- 2) KAP- F / V 15.1 - F range with P 41 as standard
- 3) standard scope of supply for breathing air units

## TECHNICAL DATA

processable air quantity / m<sup>3</sup>\*



	P21	P31	P41	P60 / 61	P80 / 81	P100	P120	P140
no. of filter housings	1	1	1	1	2/3	3/4	2/3	3/4
max. flow l/min.	200	350	450	680	1000	1000	2200	3500
nominal pressure / bar	140-350	140-350	90-420	90-420	90-420	90-420	90-350	90-350
dimensions L x W x H / mm	160 x 110 x 380	160 x 210 x 560	530 x 120 x 600	530 x 120 x 600	780 x 260 x 1000	1080 x 260 x 1000	1080 x 260 x 1000	1230 x 260 x 1000
weight / kg	5	10	18	20/60	30/70	40/90	140	180

The P-range of BAUER air- and gas purification adsorbs according to the cartridge type chosen:

residual humidity (H<sub>2</sub>O) - oil vapour - gas traces on hydrocarbon basis (C<sub>x</sub>H<sub>y</sub>), carbon monoxide (CO)

All filter systems can be equipped with different BAUER cartridges.

\*referring to PN 300 and ambient temperature +20°C

Purification focus on	Drying De-oiling	Drying De-oiling SECURUS	Drying De-oiling SECURUS CO-conversion	De-oiling	De-oiling Drying SECURUS	CO2 removal with AERO-GUARD
<b>Breathing air</b> acc. to DIN EN 12021	●	○	○ <sup>1)</sup>			● <sup>2)</sup>
<b>Medical air</b> acc. to European Pharmacy Regulations	●	○	○ <sup>3)</sup>			● <sup>2)</sup>
<b>Purest air for cryogenic applications</b> acc. to MILR81202D/ DEF Std. 58-96			● <sup>3)</sup>			●
<b>Industrial air, simple</b> e.g. brake testing						
<b>Industrial air</b> acc. to DIN EN ISO 8573-1 Oil content class 2 Particles and humidity class 3	●	○				
<b>Nitrogen</b>	●			●	○	
<b>Rare gases</b>				●	○	

● required to fulfill the regulation ○ recommended

- 1) for units with combustion engine if applicable
- 2) if intake air has a high CO<sub>2</sub> content
- 3) if intake air has a high CO content



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